

**APPENDIX A**

**DRAFT CONTRACT**

This Contract ("Contract") is made as of \_\_\_\_\_, 202X by and between \_\_\_\_\_  
FieldTurf USA, Inc. ("Contractor") and Region 4 Education Service Center  
("Region 4 ESC") for the purchase of \_\_\_\_\_ ("the  
products and services").

**RECITALS**

WHEREAS, Region 4 ESC issued Request for Proposals Number R\_\_\_\_\_ for \_\_\_\_\_ ("RFP"),  
to which Contractor provided a response ("Proposal"); and

WHEREAS, Region 4 ESC selected Contractor's Proposal and wishes to engage Contractor in  
providing the services/materials described in the RFP and Proposal;

WHEREAS, both parties agree and understand the following pages will constitute the Contract  
between the Contractor and Region 4 ESC, having its principal place of business at 7145 West  
Tidwell Road, Houston, TX 77092.

WHEREAS, Contractor included, in writing, any required exceptions or deviations from these  
terms, conditions, and specifications; and it is further understood that, if agreed to by Region 4  
ESC, said exceptions or deviations are incorporated into the Contract.

WHEREAS, this Contract consists of the provisions set forth below, including provisions of all  
attachments referenced herein. In the event of a conflict between the provisions set forth below  
and those contained in any attachment, the provisions set forth below shall control.

WHEREAS, the Contract will provide that any state and local governmental entities, public and  
private primary, secondary and higher education entities, non-profit entities, and agencies for the  
public benefit ("Public Agencies") may purchase products and services at prices indicated in the  
Contract upon the Public Agency's registration with OMNIA Partners.

- 1) Term of agreement. The term of the Contract is for a period of three (3) years unless  
terminated, canceled or extended as otherwise provided herein. Region 4 ESC shall have the  
right to renew the Contract for two (2) additional one-year periods or portions thereof. Region  
4 ESC shall review the Contract prior to the renewal date and notify the Contractor of Region  
4 ESC's intent renew the Contract. Contractor may elect not to renew by providing three  
hundred sixty-five days' (365) notice to Region 4 ESC. Notwithstanding the expiration of the  
initial term or any subsequent term or all renewal options, Region 4 ESC and Contractor may  
mutually agree to extend the term of this Agreement. Contractor acknowledges and  
understands Region 4 ESC is under no obligation whatsoever to extend the term of this  
Agreement.

The anticipated full term of the contract is five (5) years. The Contractor shall have the right  
to enter local "service" agreements with Participating Public Agencies accessing the contract  
through OMNIA Partners, so long as the effective date of such agreement is prior to the  
expiration of the Contract. All local agreements may have a full potential term (any  
combination of initial and renewal periods) not to exceed five years. Any tasks or  
project agreements executed against this Master Agreement during the effective term may

CONTRACT

survive beyond the expiration of the Master Agreement as established and agreed to by both parties.

- 2) Scope: Contractor shall perform all duties, responsibilities and obligations, set forth in this agreement, and described in the RFP, incorporated herein by reference as though fully set forth herein.
- 3) Form of Contract. The form of Contract shall be the RFP, the Offeror's proposal and Best and Final Offer(s).
- 4) Order of Precedence. In the event of a conflict in the provisions of the Contract as accepted by Region 4 ESC, the following order of precedence shall prevail:
  - i. This Contract
  - ii. Offeror's Best and Final Offer
  - iii. Offeror's proposal
  - iv. RFP and any addenda
- 5) Commencement of Work. The Contractor is cautioned not to commence any billable work or provide any material or service under this Contract until Contractor receives a purchase order for such work or is otherwise directed to do so in writing by Region 4 ESC.
- 6) Entire Agreement (Parol evidence). The Contract, as specified above, represents the final written expression of agreement. All agreements are contained herein and no other agreements or representations that materially alter it are acceptable.
- 7) Assignment of Contract. No assignment of Contract may be made without the prior written approval of Region 4 ESC. Contractor is required to notify Region 4 ESC when any material change in operations is made (i.e. bankruptcy, change of ownership, merger, etc.).
- 8) Novation. If Contractor sells or transfers all assets or the entire portion of the assets used to perform this Contract, a successor in interest must guarantee to perform all obligations under this Contract. Region 4 ESC reserves the right to accept or reject any new party. A change of name agreement will not change the contractual obligations of Contractor.
- 9) Contract Alterations. No alterations to the terms of this Contract shall be valid or binding unless authorized and signed by Region 4 ESC.
- 10) Adding Authorized Distributors/Dealers. Contractor is prohibited from authorizing additional distributors or dealers, other than those identified at the time of submitting their proposal, to sell under the Contract without notification and prior written approval from Region 4 ESC. Contractor must notify Region 4 ESC each time it wishes to add an authorized distributor or dealer. Purchase orders and payment can only be made to the Contractor unless otherwise approved by Region 4 ESC. Pricing provided to members by added distributors or dealers must also be less than or equal to the Contractor's pricing.
- 11) TERMINATION OF CONTRACT
  - a) Cancellation for Non-Performance or Contractor Deficiency. Region 4 ESC may terminate the Contract if purchase volume is determined to be low volume in any 12-month period. Region 4 ESC reserves the right to cancel the whole or any part of this Contract due to failure by Contractor to carry out any obligation, term or condition of the contract. Region

4 ESC may issue a written deficiency notice to Contractor for acting or failing to act in any of the following:

- i. Providing material that does not meet the specifications of the Contract;
- ii. Providing work or material was not awarded under the Contract;
- iii. Failing to adequately perform the services set forth in the scope of work and specifications;
- iv. Failing to complete required work or furnish required materials within a reasonable amount of time;
- v. Failing to make progress in performance of the Contract or giving Region 4 ESC reason to believe Contractor will not or cannot perform the requirements of the Contract; or
- vi. Performing work or providing services under the Contract prior to receiving an authorized purchase order.

Upon receipt of a written deficiency notice, Contractor shall have ten (10) days to provide a satisfactory response to Region 4 ESC. Failure to adequately address all issues of concern may result in Contract cancellation. Upon cancellation under this paragraph, all goods, materials, work, documents, data and reports prepared by Contractor under the Contract shall immediately become the property of Region 4 ESC.

- b) Termination for Cause. If, for any reason, Contractor fails to fulfill its obligation in a timely manner, or Contractor violates any of the covenants, agreements, or stipulations of this Contract Region 4 ESC reserves the right to terminate the Contract immediately and pursue all other applicable remedies afforded by law. Such termination shall be effective by delivery of notice, to the Contractor, specifying the effective date of termination. In such event, all documents, data, studies, surveys, drawings, maps, models and reports prepared by Contractor will become the property of the Region 4 ESC. If such event does occur, Contractor will be entitled to receive just and equitable compensation for the satisfactory work completed on such documents.
- c) Delivery/Service Failures. Failure to deliver goods or services within the time specified, or within a reasonable time period as interpreted by the purchasing agent or failure to make replacements or corrections of rejected articles/services when so requested shall constitute grounds for the Contract to be terminated. In the event Region 4 ESC must purchase in an open market, Contractor agrees to reimburse Region 4 ESC, within a reasonable time period, for all expenses incurred.
- d) Force Majeure. If by reason of Force Majeure, either party hereto shall be rendered unable wholly or in part to carry out its obligations under this Agreement then such party shall give notice and full particulars of Force Majeure in writing to the other party within a reasonable time after occurrence of the event or cause relied upon, and the obligation of the party giving such notice, so far as it is affected by such Force Majeure, shall be suspended during the continuance of the inability then claimed, except as hereinafter provided, but for no longer period, and such party shall endeavor to remove or overcome such inability with all reasonable dispatch.

The term Force Majeure as employed herein, shall mean acts of God, strikes, lockouts, or other industrial disturbances, act of public enemy, orders of any kind of government of the United States or the State of Texas or any civil or military authority; insurrections; riots; epidemics; landslides; lighting; earthquake; fires; hurricanes; storms; floods; washouts; droughts; arrests; restraint of government and people; civil disturbances; explosions, breakage or accidents to machinery, pipelines or canals, or other causes not reasonably within the control of the party claiming such inability. It is understood and agreed that the settlement of strikes and lockouts shall be entirely within the discretion of the party having the difficulty, and that the above requirement that any Force Majeure shall be remedied with all reasonable dispatch shall not require the settlement of strikes and lockouts by

acceding to the demands of the opposing party or parties when such settlement is unfavorable in the judgment of the party having the difficulty.

- e) Standard Cancellation. Region 4 ESC may cancel this Contract in whole or in part by providing written notice. The cancellation will take effect 30 business days after the other party receives the notice of cancellation. After the 30th business day all work will cease following completion of final purchase order.
- 12) Licenses. Contractor shall maintain in current status all federal, state and local licenses, bonds and permits required for the operation of the business conducted by Contractor. Contractor shall remain fully informed of and in compliance with all ordinances and regulations pertaining to the lawful provision of services under the Contract. Region 4 ESC reserves the right to stop work and/or cancel the Contract if Contractor's license(s) expire, lapse, are suspended or terminated.
- 13) Survival Clause. All applicable software license agreements, warranties or service agreements that are entered into between Contractor and Region 4 ESC under the terms and conditions of the Contract shall survive the expiration or termination of the Contract. All Purchase Orders issued and accepted by Contractor shall survive expiration or termination of the Contract.
- 14) Delivery. Conforming product shall be shipped within 7 days of receipt of Purchase Order. If delivery is not or cannot be made within this time period, the Contractor must receive authorization for the delayed delivery. The order may be canceled if the estimated shipping time is not acceptable. All deliveries shall be freight prepaid, F.O.B. Destination and shall be included in all pricing offered unless otherwise clearly stated in writing.
- 15) Inspection & Acceptance. If defective or incorrect material is delivered, Region 4 ESC may make the determination to return the material to the Contractor at no cost to Region 4 ESC. The Contractor agrees to pay all shipping costs for the return shipment. Contractor shall be responsible for arranging the return of the defective or incorrect material.
- 16) Payments. Payment shall be made after satisfactory performance, in accordance with all provisions thereof, and upon receipt of a properly completed invoice.
- 17) Price Adjustments. Should it become necessary or proper during the term of this Contract to make any change in design or any alterations that will increase price, Region 4 ESC must be notified immediately. Price increases must be approved by Region 4 ESC and no payment for additional materials or services, beyond the amount stipulated in the Contract shall be paid without prior approval. All price increases must be supported by manufacturer documentation, or a formal cost justification letter. Contractor must honor previous prices for thirty (30) days after approval and written notification from Region 4 ESC. It is the Contractor's responsibility to keep all pricing up to date and on file with Region 4 ESC. All price changes must be provided to Region 4 ESC, using the same format as was provided and accepted in the Contractor's proposal.

Price reductions may be offered at any time during Contract. Special, time-limited reductions are permissible under the following conditions: 1) reduction is available to all users equally; 2) reduction is for a specific period, normally not less than thirty (30) days; and 3) original price is not exceeded after the time-limit. Contractor shall offer Region 4 ESC any published price reduction during the Contract term.

- 18) Audit Rights. Contractor shall, at its sole expense, maintain appropriate due diligence of all purchases made by Region 4 ESC and any entity that utilizes this Contract. Region 4 ESC reserves the right to audit the accounting for a period of three (3) years from the time such purchases are made. This audit right shall survive termination of this Agreement for a period of one (1) year from the effective date of termination. Region 4 ESC shall have the authority to conduct random audits of Contractor's pricing at Region 4 ESC's sole cost and expense. Notwithstanding the foregoing, in the event that Region 4 ESC is made aware of any pricing being offered that is materially inconsistent with the pricing under this agreement, Region 4 ESC shall have the ability to conduct an extensive audit of Contractor's pricing at Contractor's sole cost and expense. Region 4 ESC may conduct the audit internally or may engage a third-party auditing firm. In the event of an audit, the requested materials shall be provided in the format and at the location designated by Region 4 ESC.
- 19) Discontinued Products. If a product or model is discontinued by the manufacturer, Contractor may substitute a new product or model if the replacement product meets or exceeds the specifications and performance of the discontinued model and if the discount is the same or greater than the discontinued model.
- 20) New Products/Services. New products and/or services that meet the scope of work may be added to the Contract. Pricing shall be equivalent to the percentage discount for other products. Contractor may replace or add product lines if the line is replacing or supplementing products, is equal or superior to the original products, is discounted similarly or greater than the original discount, and if the products meet the requirements of the Contract. No products and/or services may be added to avoid competitive procurement requirements. Region 4 ESC may require additions to be submitted with documentation from Members demonstrating an interest in, or a potential requirement for, the new product or service. Region 4 ESC may reject any additions without cause.
- 21) Options. Optional equipment for products under Contract may be added to the Contract at the time they become available under the following conditions: 1) the option is priced at a discount similar to other options; 2) the option is an enhancement to the unit that improves performance or reliability.
- 22) Warranty Conditions. All supplies, equipment and services shall include manufacturer's minimum standard warranty and one (1) year labor warranty unless otherwise agreed to in writing.
- 23) Site Cleanup. Contractor shall clean up and remove all debris and rubbish resulting from their work as required or directed. Upon completion of the work, the premises shall be left in good repair and an orderly, neat, clean, safe and unobstructed condition.
- 24) Site Preparation. Contractor shall not begin a project for which the site has not been prepared, unless Contractor does the preparation work at no cost, or until Region 4 ESC includes the cost of site preparation in a purchase order. Site preparation includes, but is not limited to: moving furniture, installing wiring for networks or power, and similar pre-installation requirements.
- 25) Registered Sex Offender Restrictions. For work to be performed at schools, Contractor agrees no employee or employee of a subcontractor who has been adjudicated to be a registered sex offender will perform work at any time when students are or are reasonably expected to be present. Contractor agrees a violation of this condition shall be considered a


material breach and may result in the cancellation of the purchase order at Region 4 ESC's discretion. Contractor must identify any additional costs associated with compliance of this term. If no costs are specified, compliance with this term will be provided at no additional charge.

- 26) Safety measures. Contractor shall take all reasonable precautions for the safety of employees on the worksite and shall erect and properly maintain all necessary safeguards for protection of workers and the public. Contractor shall post warning signs against all hazards created by its operation and work in progress. Proper precautions shall be taken pursuant to state law and standard practices to protect workers, general public and existing structures from injury or damage.
- 27) Smoking. Persons working under the Contract shall adhere to local smoking policies. Smoking will only be permitted in posted areas or off premises.
- 28) Stored materials. Upon prior written agreement between the Contractor and Region 4 ESC, payment may be made for materials not incorporated in the work but delivered and suitably stored at the site or some other location, for installation at a later date. An inventory of the stored materials must be provided to Region 4 ESC prior to payment. Such materials must be stored and protected in a secure location and be insured for their full value by the Contractor against loss and damage. Contractor agrees to provide proof of coverage and additionally insured upon request. Additionally, if stored offsite, the materials must also be clearly identified as property of Region 4 ESC and be separated from other materials. Region 4 ESC must be allowed reasonable opportunity to inspect and take inventory of stored materials, on or offsite, as necessary. Until final acceptance by Region 4 ESC, it shall be the Contractor's responsibility to protect all materials and equipment. Contractor warrants and guarantees that title for all work, materials and equipment shall pass to Region 4 ESC upon final acceptance.
- 29) Funding Out Clause. A Contract for the acquisition, including lease, of real or personal property is a commitment of Region 4 ESC's current revenue only. Region 4 ESC retains the right to terminate the Contract at the expiration of each budget period during the term of the Contract and is conditioned on a best effort attempt by Region 4 ESC to obtain appropriate funds for payment of the contract.
- 30) Indemnity. Contractor shall protect, indemnify, and hold harmless both Region 4 ESC and its administrators, employees and agents against all claims, damages, losses and expenses arising out of or resulting from the actions of the Contractor, Contractor employees or subcontractors in the preparation of the solicitation and the later execution of the Contract. Any litigation involving either Region 4 ESC, its administrators and employees and agents will be in Harris County, Texas.
- 31) Marketing. Contractor agrees to allow Region 4 ESC to use their name and logo within website, marketing materials and advertisement. Any use of Region 4 ESC name and logo or any form of publicity, inclusive of press releases, regarding this Contract by Contractor must have prior approval from Region 4 ESC.
- 32) Certificates of Insurance. Certificates of insurance shall be delivered to the Region 4 ESC prior to commencement of work. The Contractor shall give Region 4 ESC a minimum of ten (10) days' notice prior to any modifications or cancellation of policies. The Contractor shall require all subcontractors performing any work to maintain coverage as specified.

33) Legal Obligations. It is Contractor's responsibility to be aware of and comply with all local, state, and federal laws governing the sale of products/services and shall comply with all laws while fulfilling the Contract. Applicable laws and regulation must be followed even if not specifically identified herein.

**OFFER AND CONTRACT SIGNATURE FORM**

The undersigned hereby offers and, if awarded, agrees to furnish goods and/or services in strict compliance with the terms, specifications and conditions at the prices proposed within response unless noted in writing.

Company Name Fieldturf USA, Inc.  
Address 175 N. Industrial Blvd NE  
City/State/Zip Calhoun, GA 30701  
Telephone No. (503) 563-6390  
Email Address sarah.morehead@smartbuycoperative.com  
Printed Name Eric Dallere  
Title President  
Authorized signature 

**Accepted by Region 4 ESC:**

Contract No. \_\_\_\_\_

Initial Contract Term \_\_\_\_\_ to \_\_\_\_\_

\_\_\_\_\_  
Region 4 ESC Authorized Board Member

\_\_\_\_\_  
Date

\_\_\_\_\_  
Print Name

\_\_\_\_\_  
Region 4 ESC Authorized Board Member

\_\_\_\_\_  
Date

\_\_\_\_\_  
Print Name





OMNIA Solicitation 22-05 Pricing

Sept. 2021

Proposed item pricing							
Line #	FieldTurf USA, Inc.		All Pricing is NOT TO EXCEED (Ceiling price) and includes supply, install, and freight within continental US and all Arizona Regions. FieldTurf will offer the lowest price possible for each customer based on their location, project details, economies of scale opportunities, and wage rate requirements. The pricing provided below is the maximum per unit cost.				
			Turf , track, court unit pricing is for the sports surfacing only on a previously prepared base. Base construction and Sports Equipment Assessoris priced via RS MEANS.				
			Volume Discounts are available but will be equally determined on a case by case basis.				
			All unit pricing includes labor.				
			9% Discount off of MSRP offered on all unit pricing in line items below.				
Manufacturer item or part number	Supplier item or part number (if Different than Manufacturer part number)	Description	Unit of Measure	Manufacturer list Price	Discount %	Proposed OMNIA Contract Price	
<b>Turf Surfacing on existing stable base</b>							
1	FieldTurf Vertex Prime CORE 2.5"	FTVTP -CORE-1	FieldTurf Vertex Prime CORE 2.5" VertexCORE features all of FieldTurf's exclusive system technology: CORE & Classic HD Fibers for performance, heavyweight infill for safety and SureLock coating drainage for durability and usage. From top to bottom, the system is designed to deliver at the elite level.	Cost Per Sq. Ft.	\$6.27	9.00%	\$5.71
2	FieldTurf Vertex Prime CORE 2.25"	FTVTP -CORE-57	FieldTurf Vertex Prime CORE 2.25" VertexCORE features all of FieldTurf's exclusive system technology: CORE & Classic HD Fibers for performance, heavyweight infill for safety and SureLock coating drainage for durability and usage. From top to bottom, the system is designed to deliver at the elite level.	Cost Per Sq. Ft.	\$5.87	9.00%	\$5.34
3	FieldTurf Vertex Prime CORE 2"	FTVTP -CORE-2	FieldTurf Vertex Prime CORE 2" VertexCORE features all of FieldTurf's exclusive system technology: CORE & Classic HD Fibers for performance, heavyweight infill for safety and SureLock coating drainage for durability and usage. From top to bottom, the system is designed to deliver at the elite level.	Cost Per Sq. Ft.	\$5.65	9.00%	\$5.14
4	FieldTurf CORE 2.5"	FT-CORE 2.5"	Synthetic turf; Artificial turf; All weather turf. Produced in FieldTurf's own fiber manufacturing plant, the FieldTurf CORE fiber is a proprietary dual-polymer formulation that resists splitting and degradation and includes industry leading ultraviolet inhibitor technology. A state-of-the-art extrusion process provides an intricate and thick construction for superior tear resistance and resilience. The CORE fiber was designed to provide extraordinary durability and longevity. Includes FieldTurf's patented infill and SureLock Coating System.	Per Sq. Ft.	\$6.17	9.00%	\$5.61
5	FieldTurf CORE 2.25"	FT-CORE 2.25"	Synthetic turf; Artificial turf; All weather turf. Produced in FieldTurf's own fiber manufacturing plant, the FieldTurf CORE fiber is a proprietary dual-polymer formulation that resists splitting and degradation and includes industry leading ultraviolet inhibitor technology. A state-of-the-art extrusion process provides an intricate and thick construction for superior tear resistance and resilience. The CORE fiber was designed to provide extraordinary durability and longevity. Includes FieldTurf's patented infill and SureLock Coating System.	Per Sq. Ft.	\$5.76	9.00%	\$5.24

6	FieldTurf CORE 2.0"	FT-CORE 2"	Synthetic turf; Artificial turf; All weather turf. Produced in FieldTurf's own fiber manufacturing plant, the FieldTurf CORE fiber is a proprietary dual-polymer formulation that resists splitting and degradation and includes industry leading ultraviolet inhibitor technology. A state-of-the-art extrusion process provides an intricate and thick construction for superior tear resistance and resilience. The CORE fiber was designed to provide extraordinary durability and longevity. Includes FieldTurf's patented infill and SureLock Coating System.	Per Sq. Ft.	\$5.54	9.00%	\$5.04
7	FieldTurf Revolution 360 2.5"	FTRV-1 360	1L x 1W (SF), Synthetic turf; Artificial turf; All weather turf. Produced in FieldTurf's own fiber manufacturing plant, the FieldTurf Revolution 360 fiber is a proprietary polymer formulation that resists splitting and degradation and includes industry leading ultraviolet inhibitor technology. A state-of-the-art extrusion process provides an intricate and thick construction for superior tear resistance and resilience. The Revolution 360 fiber was designed to provide extraordinary durability and longevity. Includes FieldTurf's patented infill and SureLock Coating System.	Per Sq. Ft.	\$5.87	9.00%	\$5.34
8	FieldTurf Revolution 360 2.25"	FTRV-57 360	1L x 1W (SF), Synthetic turf; Artificial turf; All weather turf. Produced in FieldTurf's own fiber manufacturing plant, the FieldTurf Revolution 360 fiber is a proprietary polymer formulation that resists splitting and degradation and includes industry leading ultraviolet inhibitor technology. A state-of-the-art extrusion process provides an intricate and thick construction for superior tear resistance and resilience. The Revolution 360 fiber was designed to provide extraordinary durability and longevity. Includes FieldTurf's patented infill and SureLock Coating System.	Per Sq. Ft.	\$5.46	9.00%	\$4.97
9	FieldTurf Revolution 360 2.0"	FTRV-2 360	1L x 1W (SF), Synthetic turf; Artificial turf; All weather turf. Produced in FieldTurf's own fiber manufacturing plant, the FieldTurf Revolution 360 fiber is a proprietary polymer formulation that resists splitting and degradation and includes industry leading ultraviolet inhibitor technology. A state-of-the-art extrusion process provides an intricate and thick construction for superior tear resistance and resilience. The Revolution 360 fiber was designed to provide extraordinary durability and longevity. Includes FieldTurf's patented infill and SureLock Coating System.	Per Sq. Ft.	\$5.24	9.00%	\$4.77
10	FieldTurf Classic HD 2.5"	FTOSI-1	Classic HD is the newest slit-film fiber from FieldTurf. It was carefully crafted to maximize durability and safety, as well as being aesthetically pleasing. Coupled with FieldTurf's patented heavy 3-layer infill system and state-of-the-art SureLock coating method, the FieldTurf Classic HD turf system has been designed to be the very best synthetic turf system with unparalleled player safety and turf drainage rates.	Per Sq. Ft.	\$5.87	9.00%	\$5.34
11	FieldTurf Classic HD 2.25"	FTOSI-57	Classic HD is the newest slit-film fiber from FieldTurf. It was carefully crafted to maximize durability and safety, as well as being aesthetically pleasing. Coupled with FieldTurf's patented heavy 3-layer infill system and state-of-the-art SureLock coating method, the FieldTurf Classic HD turf system has been designed to be the very best synthetic turf system with unparalleled player safety and turf drainage rates.	Per Sq. Ft.	\$5.46	9.00%	\$4.97
12	FieldTurf Classic HD 2.0"	FTOSI-2	1L x 1W (SF), Synthetic turf; Artificial turf; All weather turf. Classic HD is the newest slit film fiber from FieldTurf. It was carefully crafted to maximize durability and safety, as well as being aesthetically pleasing. Couples with FieldTurf's patented heavy 3-layer infill system and state-of-the-art SureLock coating method, the FieldTurf Classic HD turf system has been designed to be the very best synthetic turf system with unparalleled player safety and turf drainage rates.	Per Sq. Ft.	\$5.24	9.00%	\$4.77
13	FieldTurf XM7-65 (2.5")	XM7-65	1L x 1W (SF), Synthetic turf; Artificial turf; All weather turf. The FieldTurf XM7 system is built with a proven, in-house ridged-monofilament fiber technology, providing your surface with durability and resilience characteristics that match the top products in the industry. The infill in the XM7 system is FieldTurf's 2-layer SBR Rubber and Silica Sand infill that has been installed on hundreds and hundreds of fields worldwide to ensure proper safety and athlete cushion.	Per Sq. Ft.	\$5.18	9.00%	\$4.71
14	FieldTurf XM7-57 (2.25")	XM7-57	1L x 1W (SF), Synthetic turf; Artificial turf; All weather turf. The FieldTurf XM7 system is built with a proven, in-house ridged-monofilament fiber technology, providing your surface with durability and resilience characteristics that match the top products in the industry. The infill in the XM7 system is FieldTurf's 2-layer SBR Rubber and Silica Sand infill that has been installed on hundreds and hundreds of fields worldwide to ensure proper safety and athlete cushion.	Per Sq. Ft.	\$4.95	9.00%	\$4.50

15	FieldTurf XM7-50 (2.0")	<b>XM7-50</b>	1L x 1W (SF) Synthetic turf; Artificial turf; All weather turf. The FieldTurf XM7 System is built with a proven, in-house ridged-monofilament fiber technology, providing your surface with durability and resilience characteristics that match the top products in the industry. The infill in the XM7 system is FieldTurf's 2-layer SBR Rubber and Silica Sand infill that has been installed on hundreds and hundreds of fields worldwide to ensure proper safety and athlete cushion.	Per Sq. Ft.	\$4.74	9.00%	\$4.31
16	FieldTurf XT 65 (2.5")	<b>XT65</b>	1L x 1W (SF), Synthetic turf; Artificial turf; All weather turf. The XT System features a slit-film fiber that has been designed to be the best of the best in terms of slit-film durability and softness, coupled with a 2-layer infill system of SBR Rubber and Silica Sand to provide a proper cushion.	Per Sq. Ft.	\$5.16	9.00%	\$4.70
17	FieldTurf XT 57 (2.25")	<b>XT57</b>	1L x 1W (SF), Synthetic turf; Artificial turf; All weather turf. The XT system has been designed to be the best of the best in terms of slit-film durability and softness, coupled with a 2-layer infill system of SBR Rubber and Silica Sand to provide a proper cushion.	Per Sq. Ft.	\$4.88	9.00%	\$4.44
18	FieldTurf XT 50 (2.0")	<b>XT50</b>	1L x 1W (SF), Synthetic turf; Artificial turf; All weather turf. The XT system has been designed to be the best of the best in terms of slit-film durability and softness, coupled with a 2-layer infill system of SBR Rubber and Silica Sand to provide a proper cushion.	Per Sq. Ft.	\$4.75	9.00%	\$4.32
19	FieldTurf Vertex Prime 2.5"	<b>FieldTurf Vertex Prime 2.5"</b>	FieldTurf Vertex Prime 2.5" is comprised of specially designed slit-film fibers and high performance ridged monofilament fibers. The fibrillation process of the slit-film component allows for proper infill encapsulation while the monofilament fibers facilitate grass-like ball roll and a better aesthetic appearance. Both fibers are tufted together in the same stitch for a superior aesthetic appearance. Elite Infill . 8 year warranty. Price applicable for fields that are greater than 45,000 sf.	Per Sq. Ft.	\$5.87	9.00%	\$5.34
20	FieldTurf Vertex Prime 2.25"	<b>FieldTurf Vertex Prime 2.25"</b>	FieldTurf Vertex Prime 2.0" is comprised of specially designed slit-film fibers and high performance ridged monofilament fibers. The fibrillation process of the slit-film component allows for proper infill encapsulation while the monofilament fibers facilitate grass-like ball roll and a better aesthetic appearance. Both fibers are tufted together in the same stitch for a superior aesthetic appearance. Elite Infill . 8 year warranty. Price applicable for fields that are greater than 45,000 sf.	Per Sq. Ft.	\$5.46	9.00%	\$4.97
21	FieldTurf Vertex Prime 2.0"	<b>FieldTurf Vertex Prime 2"</b>	FieldTurf Vertex Prime 2.0" is comprised of specially designed slit-film fibers and high performance ridged monofilament fibers. The fibrillation process of the slit-film component allows for proper infill encapsulation while the monofilament fibers facilitate grass-like ball roll and a better aesthetic appearance. Both fibers are tufted together in the same stitch for a superior aesthetic appearance. Elite Infill . 8 year warranty. Price applicable for fields that are greater than 45,000 sf.	Per Sq. Ft.	\$5.24	9.00%	\$4.77
22	FieldTurf Vertex 2.5"	<b>FieldTurf Vertex 2.5"</b>	FieldTurf Vertex is comprised of specially designed slit-film fibers and high performance monofilament fibers. The fibrillation process of the slit-film component allows for proper infill encapsulation while the monofilament fibers facilitate grass-like ball roll and a better aesthetic appearance. Both fibers have withstood stringent testing and were designed to resist matting. Prestige Infill. 8 year warranty. Price applicable for fields that are greater than 45,000 sf.	Per Sq. Ft.	\$5.87	9.00%	\$5.34
23	FieldTurf Vertex 2.25"	<b>FieldTurf Vertex 2.25"</b>	FieldTurf Vertex is comprised of specially designed slit-film fibers and high performance monofilament fibers. The fibrillation process of the slit-film component allows for proper infill encapsulation while the monofilament fibers facilitate grass-like ball roll and a better aesthetic appearance. Both fibers have withstood stringent testing and were designed to resist matting. Prestige Infill. 8 year warranty. Price applicable for fields that are greater than 45,000 sf.	Per Sq. Ft.	\$5.46	9.00%	\$4.97
24	FieldTurf Vertex 2.0"	<b>FieldTurf Vertex 2"</b>	FieldTurf Vertex is comprised of specially designed slit-film fibers and high performance monofilament fibers. The fibrillation process of the slit-film component allows for proper infill encapsulation while the monofilament fibers facilitate grass-like ball roll and a better aesthetic appearance. Both fibers have withstood stringent testing and were designed to resist matting. Prestige Infill. 8 year warranty. Price applicable for fields that are greater than 45,000 sf.	Per Sq. Ft.	\$5.24	9.00%	\$4.77

25	Hockey Speed	Hockey Speed	Hockey Speed by FieldTurf was engineered specifically for field hockey, however, numerous sports can benefit from this all weather system and its uniform, predictable levels of traction. In designing Hockey Speed, we consulted with experts in the hockey world to determine the best characteristics desired for superior play at the elite level. The Hockey Speed product was developed for field hockey by focusing on three key hockey-specific-elements: Superior Ball Control, Easy Stick Movement, and Excellent Traction. Hockey Speed takes field hockey surfacing to a new level of performance, quality, and value. Designed to provide the best playing characteristics of nylon "wet performance" systems, Hockey Speed is more economical and better designed than competing systems. Pad or foam underlayment required and additional cost.	Per Sq. Ft.	\$9.70	9.00%	\$8.83
26	FieldTurf Hockey Gold	FieldTurf Hockey Gold	The FieldTurf Hockey Gold System is a revolutionary turf system- designed specifically for the highest levels of field hockey play. It is the industry's premiere field hockey offering. The product is built with the Elliptic fiber- a uniquely engineered filament with the same reliable, built-in durability characteristics that FieldTurf products have become known for. Shaped like a lens, the fiber is texturized through a high heat process to create its crimped effect. Within the water-based and sand-dressed FieldTurf Hockey Gold System, the Elliptic fiber retains its memory to hold its shape, providing a truly uniform and non-directional surface with exceptional durability. Excellent ball performance and low abrasion, better non-directional ball roll and speed than other traditional field hockey turfs, premium hockey performance, water based or sand dressed options for desired performance. Pad or foam underlayment required and additional cost.	Per Sq. Ft.	\$8.65	9.00%	\$7.87
27	EasyField - Removeable Tray System (10,000 sf minimum)	<b>EasyField - Removeable Tray System (10,000 sf minimum)</b>	FieldTurf's Removeable Tray System has proven to be a viable performance solution for a facility's customized conversion needs. FieldTurf's removable trays consist of portable sect.	Per Sq. Ft.	\$25.00	9.00%	\$22.75
28	FieldTurf	FieldTurf Genius- Supply equipment (does not include monthly plan or pole)	FieldTurf Genius uses the latest in computer technology to document real time field usage and participation. Data is provided to owner's facilities department that identifies trends in field usage, peak/off peak times, and attendance. Through intelligent maintenance alerts and schedules, this technology will help you maintain a constant high level of surface performance throughout the life of the turf to maximize usage.	Cost per Unit	\$ 40,000.00	9%	\$ 36,400
29	FieldTurf	FieldTurf Genius supply with 8 year Monthly plan	FieldTurf Genius uses the latest in computer technology to document real time field usage and participation. Data is provided to owner's facilities department that identifies trends in field usage, peak/off peak times, and attendance. Through intelligent maintenance alerts and schedules, this technology will help you maintain a constant high level of surface performance throughout the life of the turf to maximize usage. Includes 8 year monthly fee.	Cost per Unit	\$ 60,000.00	9%	\$ 54,600
30	FieldTurf	FieldTurf Re-Cover (Replacement Overlay)	Install a new FieldTurf field on top of an eligible existing synthetic field. Process allows for consistent footing, ball-to-surface interaction and performance on Re-Cover, the existing field is carefully leveled to ensure planarity. A surfactant is then applied to the existing infill to lower surface tension and aid in reducing long-term compaction. (Additional costs may apply for additional leveling/base remediation).	Per Sq. Ft.	\$1.50	9%	\$1.37
31	FieldTurf	FieldTurf Double Play Speed	Baseball turf product designed for a "fast" field. Our development program pushed past the standard infield/outfield options to deliver optimal performance specifically for your field. DoublePlay allows you to design your entire field, start to finish, with precision. Pricing applies to a minimum purchase of 40,000 sf.	Per Sq. Ft.	\$6.22	9%	\$5.66
32	FieldTurf	FieldTurf Double Play Natural	Baseball turf product designed to play like a natural grass field. Our development program pushed past the standard infield/outfield to deliver optimal performance specifically for your field. DoublePlay allows you to design your entire field, start to finish, with precision. Pricing applies to a minimum purchase of 40,000 sf.	Per Sq. Ft.	\$5.63	9%	\$5.12
33	FieldTurf Triple Threat Speed	Triple Threat Speed	Softball turf product designed for a "fast" field. Our development program pushed past the standard infield/outfield options to deliver optimal performance specifically for your field. Triple Threat Speed allows you to design your entire field, start to finish, with precision. Pricing applies to a minimum purchase of 40,000 sf.	Per Sq. Ft.	\$6.22	9%	\$ 5.66
34	FieldTurf Triple Threat Natural	FieldTurf Triple Threat Natural	Softball turf product designed to play like a natural grass field. Our development program pushed past the standard infield/outfield to deliver optimal performance specifically for your field. Triple Threat Natural allows you to design your entire field, start to finish, with precision. Pricing applies to a minimum purchase of 40,000 sf.	Per Sq. Ft.	\$5.63	9%	\$ 5.12
35	FieldTurf	Removable Batter/Umpire baseball system	Our Velcro system offers a quick and simple solution to replacing your batter and umpire areas. We equip you with the spare pieces upfront, allowing your team to exchange when needed.	Per Unit	\$22,000.00	9%	\$20,020.00

36	FieldTurf	Pitching Mound and Home Plate	Pitching Mound and home plate (Vintage 40-90 + 6mm pad) FieldTurf Pitching Mound and Home plate unit is specifically designed to be suitable for multiple levels of play. Constructed using Vintage 40 slit-film and thatch turf, Toughback Coating, with 80% sand and 20% SBR or Olive infill on ¼" exposed fiber on a Firm 6mm Rubber Pad. Price is for purchase of both mound and homeplate unit)	Cost Per Sq. Ft.	\$ 5,000.00	9.00%	\$ 4,550.00
37	<b>Product/Manufacturer</b>	<b>Product #</b>	<b>Turf Ancillary Items</b>	<b>Unit</b>	<b>MSRP</b>	<b>% Discount</b>	<b>Price per Unit</b>
38	FieldTurf- Numbers and Arrows	Numbers and Arrows	Permanent Turf Football numbers and Arrows.	Per Unit	\$8,000.00	9.00%	\$7,280.00
39	FieldTurf- Soccer Markings	Soccer Markings	Permanent Soccer Markings	Per Unit	\$8,000.00	9.00%	\$7,280.00
40	FieldTurf-Hash Markings	Hash Marks	Permanent Football Hash Markings	Per Unit	\$8,000.00	9.00%	\$7,280.00
41	FieldTurf-Logo	Logo	Permanent Turf Logo (35' x 35' Approx. Dimension) 1-2 Colors	Per Unit	\$27,000.00	9.00%	\$24,570.00
42	FieldTurf-Endzone Letters	Endzone Letters	Permanent Turf EndZone Letters (20' High Letters)	Per Unit	\$1,925.00	9.00%	\$1,751.75
43	FieldTurf-FieldHockey Lines	FieldHockey Lines	Permanent Field Hockey Lines	Per Unit	\$8,000.00	9.00%	\$7,280.00
44	FieldTurf-Lacrosse Lines	Lacrosse Lines	Permanent Lacrosse Lines	Per Unit	\$8,000.00	9.00%	\$7,280.00
45	FieldTurf-Baseball Lines	Baseball Lines	Permanent Baseball lines	Per Unit	\$8,000.00	9.00%	\$7,280.00
46	FieldTurf-Flag Football Lines	Flag Football Lines	Permanent Flag Football lines	Per Unit	\$8,000.00	9.00%	\$7,280.00
47	FieldTurf-Softball Lines	Softball Lines	Permanent Softball lines	Per Unit	\$8,000.00	9.00%	\$7,280.00
48	FieldTurf-Football Restraining Lines	Football Restraining Lines	Permanent Football Restraining Lines	Per Unit	\$8,585.00	9.00%	\$7,812.35
49	FieldTurf-Lacrosse Tick Marks	Lacrosse Tick Marks	Permanent Tick Marks for Lacrosse	Per Unit	\$1,500.00	9.00%	\$1,365.00
50	FieldTurf-GMAX	GMAX	Impact testing as per ASTM F355 and 1936.	Per Unit	\$1,800.00	9.00%	\$1,638.00
51	FieldTurf Preshipment Testing	Preshipment Testing	Preshipment Testing	Per Unit	\$3,000.00	9.00%	\$2,730.00
52	<b>Product/Manufacturer</b>	<b>Product #</b>	<b>Turf alternate infills, underlayment options and miscellaneous (only available with the purchase of a FieldTurf field.)</b>	<b>UNIT</b>	<b>MSRP</b>	<b>% Discount</b>	<b>Price per Unit</b>
53	Beynon- E-layer	E-Layer	Elastic-Layer (E-Layer): A paved-in-place, permeable, synthetic field surface base consisting of rubber granules, gravel aggregate and moisture cured polyurethane binder. Elastic-Layer system shall have demonstrated resistance to rot, mildew, water, freeze-thaw and compression set associated with normal athletic field use. Elastic Layer shock pads provide durability for synthetic fields, great ball roll and bounce and a lower G-MAX.	Per Sq. Yard	\$ 32.97	9%	\$ 30.00
54	Rondi-PDS Drain Tiles	PDS Drain Tiles	PDS delivers the Precision Performance and Maximized Drainage that the player and the facility demand. Consistent response throughout the field ensures that elite levels of play can always be reached. Maximizing the drainage ensures the on field performance when the weather gets tough. Wet or dry, your level of play remains the same. The installation of the PDS system is user friendly and reduces base installation time by approximately 30% while reducing base costs by up to 50%. Your players and facility demand the best. PDS delivers. Product only available with purchase of FieldTurf turf surface.	Per Sq. Ft.	\$1.26	9.00%	\$1.15
55	Schmitz Proplay- ProPlay 23mm	ProPlay 23mm	Shock pad system from Schmitz Foam Products, used as an underlayment to artificial turf system. Designed to reduce gmax. Product only available with purchase of FieldTurf turf surface.	Per Sq. Ft.	\$1.55	9.00%	\$1.41
56	ThermaGreen 23mm	ThermaGreen 23mm	Shock pad system from ThermaGreen, used as an underlayment to artificial turf system. Designed to reduce gmax.	Per Sq. Ft.	\$1.55	9.00%	\$1.41
57	ThermaGreen- V	ThermaGreen- V	Shock pad system from ThermaGreen, used as an underlayment to artificial turf system. Designed to reduce gmax.	Per Sq. Ft.	\$2.30	9.00%	\$2.09
58	BROCK POWERBASE	BROCK POWERBASE	Brock PowerBase is a molded expanded polypropylene underlayment that is engineered for specific applications, primarily shock and drainage layers under artificial turf athletic fields and playgrounds. Product only available with purchase of FieldTurf field. PowerBase provides ideal shock absorption and field stiffness for elite athletes such as NCAA, Professional Soccer, and Pro Football.	Per Sq. Ft.	\$2.75	9.00%	\$2.50
59	BROCK - SP 14	Brock SP 14	The original panel underlayment designed specifically for artificial turf. It can replace most of the traditional stone base and has a perfect track record for field drainage. Product only available with purchase of FieldTurf turf surface.	Per Sq. Ft.	\$2.17	9.00%	\$1.97
60	Beynon- Shock Base	Shock Base (26mm)	Shockbase Elayer is an elastic layer shock pad that is 26mm in normal thickness and provides an energy absorbing elastic layer for use with athletic field surfaces. Composition to be comprised of SBR rubber granules and moisture cured polyurethane binder. Pricing for 90,000 sf feet minimum. 8 year warranty.	Per Sq. Ft.	\$ 4.95	9.00%	\$4.50

61	Beynon- Shock Base	Shock Base (19 mm)	Shockbase Elayer is an elastic layer shock pad that is 19mm in normal thickness and provides an energy absorbing elastic layer for use with athletic field surfaces. Composition to be comprised of SBR rubber granules and moisture cured polyurethane binder. Pricing for 90,000 sf feet minimum. 8 year warranty.	Per Sq. Ft.	\$ 4.95	9.00%	\$4.50
62	Rondi-Versatile	Versatile	The ultimate drainage and shock underlayment/pad system. VersaTile installed under the turf system and above the base to provide added drainage and improved Gmax. Product only available with purchase of FieldTurf turf surface.	Per Sq. Ft.	\$1.65	9.00%	\$1.50
63	FieldTurf	Removal and Disposal	Work involves the removal and disposal of an existing synthetic turf athletic field. This work can only be performed in preparation for the installation of a new FieldTurf Field.	Per Sq. Ft.	\$1.50	9.00%	\$1.37
64	Natural Grass Field: Sod or Seed	Sod or Seed	Supply and Install a natural grass field via either sod or seed. Price does not include any preparation of ground. Grow in is not guaranteed.	Per Sq. Ft.	\$1.50	9.00%	\$1.37
65	TrueBlend	TrueBlend	<b>TRUEBLEND: BLENDED TO CREATE A SUPERIOR SOLUTION:</b> Made from natural cork and premier-grade elastomers, TrueBlend is produced by fusing these materials into one. The result is an infill that provides natural-like playing characteristics, aesthetics and the added benefit of easy upkeep. Natural materials and sophisticated engineering blended into one.	Per Sq. Ft.	\$2.40	9.00%	\$2.18
66	CoolPlay	CoolPlay V3	CoolPlay utilizes FieldTurf's exclusive and innovative Extruded Cork Composite top dressing which allows the system to deliver the same behavior and overall stability as the elite systems but with an added heat reduction feature - up to 35 degrees cooler! No change in playability vs. sand/cryogenic rubber system. Natural UV resistance. (No additional pad required)	Per Sq. Ft.	\$0.75	9.00%	\$0.68
67	E-Core/EPDM	EPDM	A copolymer of ethylene and propylene having diene linkages that can be cross-linked with peroxides or sulfur. Similar feel and performance to SBR. No additional pad needed. High to medium resiliency depending on filter level. (no additional shock pad required)	Per Sq. Ft.	\$1.50	9.00%	\$1.37
68	EasyFill	EASY FILL Coated Sand	Acrylic internal coated sand. Can be colored, UV resistant. (Shock pad required at an additional cost).	Per Sq. Ft.	\$4.05	9.00%	\$3.69
69	EnviroFill	EnviroFill	Composed of coated sand (granules), our EnviroFill infill offers an alternative solution that is environmentally and maintenance friendly. Engineered to replicate the look and feel of a natural grass surface, this system will provide a safe and durable solution for your facility. (Shock pad required at an additional cost).	Per Sq. Ft.	\$2.65	9.00%	\$2.41
70	Sustainable Performance Solutions- ECO Grind	ECO-GRIND	ECO GRIND (no additional pad required) is one of the most cost-efficient alternatives to SBR. Made from post-industrial recycled products (running shoes) these reclaimed materials are ground-up to create a new, clean ,eco-friendly infill and another alternative to crumb rubber. EcoGrind is the ideal answer for high use facilities looking for a proven infill solution.	Per Sq. Ft.	\$ 2.20	9.00%	\$2.00
71	SOFTER SPA- EcoGreen Plus Environmental Infill (TPE Infill)	ECOGREEN	EcoGreen is built from premium, virgin TPE that have been selected for their characteristics to deliver a stable surface over the long-term. Each pellet has built-in memory and rebounds back to its original shape after compression. Resistant to UV degradation, it is a durable and fully recyclable infill alternative. (Shock pad required at an additional cost).	Per Sq. Ft.	\$3.25	9.00%	\$2.96
72	Colorex- ECO MAX Infill	ECOMAX	EcoMax is an extruded composite of recycled materials and thermoplastic elastomer (TPE). It is a new, impact absorbing infill that offers safe and comfortable performance and the best value in its category regarding durability, price, and performance. (Shock pad required at an additional cost)	Per Sq. Ft.	\$3.00	9.00%	\$2.73
73	DOF Cork-Purefill Infill	PUREFILL (Cork)	FieldTurf's PureFill cork infill is an all-natural infill. It is an organic, recyclable and sustainable product that is harvested from the cork oak tree every nine years, without harming the trees. It is 100% environmentally-friendly and non-toxic. (Shock pad required at an additional cost).	Per Sq. Ft.	\$1.80	9.00%	\$1.64
74	Pure Elite Olive	PURESELECT (Olives)	<b>PureSelect- Olive Cores</b> Organic (Fiber Based). Fully organic material, proven heat reduction, natural UV resistance. Infill looks like natural soil. Natural product- not chemically produced. Provides playing characteristics similar to natural turf. (Shock pad required at additional cost)	Per Sq. Ft.	\$2.65	9.00%	\$2.41
75	Pure GEO	Pure GEO (Coconut)	<b>PURE GEO</b> - Environmentally Friendly and Sustainable - Made from coconut peat and cork, our infill provides natural-like playing characteristics all while offering heat reduction benefits and an aesthetic that is close to natural turf. Proven and reliable, this organic option is a great fit if you are searching for something more...natural! (Shock pad required at additional cost)	Per Sq. Ft.	\$2.15	9.00%	\$1.96
76	<b>Turf Grooming Equipment and Maintenance Care packages</b>			<b>Unit</b>	<b>MSRP</b>	<b>Discount</b>	<b>Cost to Customer</b>

77	FieldTurf GroomRight	FieldTurf GroomRight	FieldTurf GroomRight	Per Unit	\$ 10,000.00	9%	\$9,100.00
78	FieldTurf SweepRight	FieldTurf SweepRight	FieldTurf SweepRight (Standard or Allied)	Per Unit	\$ 5,000.00	9%	\$4,550.00
79	FieldTurf SweepRight Pro	FieldTurf SweepRight Pro	FieldTurf SweepRight Pro	Per Unit	\$ 10,000.00	9%	\$9,100.00
80	GroomRight Wings	GroomRight Wings	Removable and adjustable brush extensions extend the unit to 14 feet in order to level off infill and raise fibers for better playability.	Per Unit	\$ 7,000.00	9%	\$6,370.00
81	Tow Behind Magnet	Tow Behind Magnet	Tow behind magnet system for synthetic infill turf. Pull handles allow debris to be released from magnet Powder Coated Steel and aluminum construction. Compatible with FieldTurf SweepRight and GroomRight.	Per Unit	\$ 6,000.00	9%	\$5,460.00
82	FieldTurf Static Brush	FieldTurf Static Brush	FieldTurf Static Brush has a 7 static brush and spring tine system. Designed to lift synthetic fibers and level infill material. Brush height and spring tines are independently adjustable.	Per Unit	\$ 10,000.00	9%	\$9,100.00
83	FieldTurf	FieldTurf Field Sweep	FieldTurf Field Sweep	Per Unit	5,000.00	9%	\$4,550.00
84	Fieldcare 1	Fieldcare 1	1 Yr. Contract – 2 Visits per Year (Continental US only, excludes Alaska and Hawaii). FieldCare is a national maintenance program geared towards making FieldTurf synthetic turf field systems perform at their optimal level for even longer. FieldTurf's FieldCare Maintenance Program will support years of consistent, high performance to your field and let you maximize your investment. Consult with your FieldCare Service Manager to find the FieldCare program that's right for you. (Additional charges may apply for alternate infill fields)	Per Package	\$ 6,500.00	9%	\$5,915.00
85	Fieldcare 5	Fieldcare 5	5 Yr. Contract – 2 Visits per Year (Continental US only, excludes Alaska and Hawaii). FieldCare is a national maintenance program geared towards making FieldTurf synthetic turf field systems perform at their optimal level for even longer. FieldTurf's FieldCare Maintenance Program will support years of consistent, high performance to your field and let you maximize your investment. Consult with your FieldCare Service Manager to find the FieldCare program that's right for you. (Additional charges may apply for alternate infill fields)	Per Package	\$ 30,000.00	9%	\$27,300.00
86	Fieldcare 8	Fieldcare 8	8 Yr. Contract – 2 Visits per Year (Continental US only, excludes Alaska and Hawaii). FieldCare is a national maintenance program geared towards making FieldTurf synthetic turf field systems perform at their optimal level for even longer. FieldTurf's FieldCare Maintenance Program will support years of consistent, high performance to your field and let you maximize your investment. Consult with your FieldCare Service Manager to find the FieldCare program that's right for you. (Additional charges may apply for alternate infill fields)	Per Package	\$ 44,000.00	9%	\$40,040.00
87	PURE CARE 1	PURE CARE 1	<b>PureCare 1 year- (3 times a year)</b> Field Assessment summary, infill depth measurements, select warranted seam and inlay repairs (not to exceed 8), perimeter debris cleaning, Cork infill replenishment (max 1 supersack of cork at 1500lbs per year across the 3 visits) if necessary for infill topdressing material, field infill decompaction (only if needed), field magnet sweeping for metal debris, surface temperature reading, static brush in multiple directions to redistribute infill, application of Anti-static spray during and after maintenance service (5 bottles per session). G-Max testing: one per year to be performed right after 2nd maintenance visit.	Per Package	\$ 10,000.00	9%	\$9,100.00



88	PURE CARE 5	PURE CARE 5	<b>PureCare 5 years- (3 times a year)</b> Field Assessment summary, infill depth measurements, select warranted seam and inlay repairs (not to exceed 8), perimeter debris cleaning, Cork infill replenishment (max 1 supersack of cork at1500lbs per year across the 3 visits) if necessary for infill topdressing material, field infill decompaction (only if needed), field magnet sweeping for metal debris, surface temperature reading, static brush in multiple directions to redistribute infill, application of Anti-static spray during and after maintenance service (5 bottles ber session). G-Max testing: one per year to be performed right after 2nd maintenance visit.	Per Package	\$ 50,000.00	9%	\$45,500.00
89	PURE CARE 8	PURE CARE 8	<b>PureCare 8 years- (3 times a year)</b> Field Assessment summary, infill depth measurements, select warranted seam and inlay repairs (not to exceed 8), perimeter debris cleaning, Cork infill replenishment (max 1 supersack of cork at1500lbs per year across the 3 visits) if necessary for infill topdressing material, field infill decompaction (only if needed), field magnet sweeping for metal debris, surface temperature reading, static brush in multiple directions to redistribute infill, application of Anti-static spray during and after maintenance service (5 bottles ber session). G-Max testing: one per year to be performed right after 2nd maintenance visit.	Per Package	\$ 80,000.00	9%	\$72,800.00
90	FieldTurf SaniSport	SaniSport	<b>FieldTurf's Facility Shield Sani Sport</b> is the ultimate Athletic Facility Sanitization program. The Sani Sport Technology significantly reduces harmful bacteria and viruses on personal protective gear, sports equipment and enclosed spaces. 3200 times more powerful than bleach. Customers can select the appropriate Sani Sport size that fits their needs.	Per Unit	\$ 30,000.00	9.00%	\$ 27,300.00
91	FieldTurf Cleanse Complete	FieldTurf Cleanse Complete	<b>FieldCleanse Complete:</b> Our FieldTurf Service Experts will provide a full service cleanse with sanitization utilizing EPA Approved mPerial sanitizer. EPA APPROVED CORONAVIRUS (COVID-19) SANITIZER FieldTurf's NEW FieldCleanse program will help deep clean your surface to combat COVID-19. Pricing based on minimum of 40,000 sf field. Utilizing an EPA approved coronavirus sanitizer: mPerial™, by MPact™ Environmental Solutions, LLC, which confirms results that demonstrates the ability of the mPact™ technology to prevent and protect against the spread of the COVID-19 Virus. mPerial™ is EPA registered with multiple studies across many industries proving its safety and efficacy.	Per Sq. foot	\$ 0.17	9.00%	\$ 0.15
92	<b>Running Track Surfacing on existing stable base</b>			<b>Units</b>	<b>MSRP</b>	<b>% Discount</b>	<b>OMNIA Price Per sq. yard</b>
93	L-2000 (Black only)	L-2000 (Black only)	To install a Latex running track include all material and labor (L-2000)	Per Sq . Yard	\$ 27.47	9.00%	\$ 25.00
94	Black Polyresin (Black only) - 1/2" depth (13mm)	Black Polyresin (Black only) - 1/2" depth (13mm)	To resurface a Black Polyresin running track include all material and labor. 1/2" depth (13mm)	Per Sq . Yard	\$ 42.86	9.00%	\$ 39.00
95	Poly-4000 - 3/8" depth (10mm)	Poly-4000 - 3/8" depth (10mm)	To resurface a latex/polyurethane hybrid running track include all material and labor (Poly-4000 3/8" depth)	Per Sq . Yard	\$ 39.56	9.00%	\$ 36.00
96	Red Polyresin - 1/2" depth (13mm)	Red Polyresin - 1/2" depth (13mm)	To resurface a Red Polyresin running track include all material and labor (1/2" depth)	Per Sq . Yard	\$ 49.45	9.00%	\$ 45.00
97	Beynon-BSS 50	BSS 50	BSS 50: Economical, durable, and easy to maintain the Beynon Sports BSS 50 is the cost effective track surface solution for schools and local communities who are in search of an all-weather track system. The Beynon Sports BSS 50 is a porous, paved-in-place system, utilizing a machine installed base of single-component polyurethane binder, SBR granules or EPDM granules.	Per Sq . Yard	\$ 50.00	9.00%	\$ 45.50

98	Beynon-BSS 100	BSS 100	All-Weather track surface. The BSS 100 is the cost effective solution local schools and communities who are in search of an all-weather track system. This IAAF certified system is paved in place utilizing a machine installed base of single compound polyurethane binder and SBR rubber granules. The surface is finished with multiple spray applications of 100% solids, pigmented polyurethane and EPDM granules or environmentally friendly BEYPUR 160 water-based structural spray that only Beynon offers.	Per Sq . Yard	\$ 60.00	9.00%	\$ 54.60
99	Beynon- BSS 200	BSS 200	All-weather track surface. The IAAF certified BSS 200 running track allows for safe, long-term training while providing an excellent surface to meet virtually every level of competition. The BSS 200 starts with a paved-in-place base layer of high performance polyurethane and SBR rubber granules. It's then coated with our two component polyurethane sealer, making the surface impermeable. Pigmented EPDM granules and single component polyurethane structural spray combine to form the spray applied top layer.	Per Sq . Yard	\$ 75.00	9.00%	\$ 68.25
100	Beynon-BSS 300	BSS 300	All weather track surface. The IAAF Certified BSS 300 running track is a durable, all-weather, flood and chip sandwich system with excellent shock absorption and the highest return of energy. It's impervious resilient, and fast, and can take on anything that comes its way. The Dual Durometer Sandwich system features a paved-in-place polyurethane basecoat, topped with a two-component seal coat and finished with a flow-applied layer of two-component polyurethane and embedded or encapsulated texture.	Per Sq . Yard	\$ 90.00	9.00%	\$ 81.90
101	Beynon-BSS 1000 10mm	BSS 1000 10mm	All-weather track surface. The BSS 1000 is a full pour polyurethane surface that allows athletes to perform at their highest level while training or in competition. Its bio-engineered force reduction layer integrates very fine SBR rubber granules with environmentally friendly polyurethane to create an impermeable shock-absorbing cushion. The BSS 1000 can be found at some of the world's most prestigious and renowned facilities in your choice of embedded, encapsulated or Hobart textured EPDM granules mixed throughout the top layer to give your athletes total control.	Per Sq . Yard	\$ 95.00	9.00%	\$ 86.45
102	Beynon- BSS 1000 13mm	BSS 1000 13mm	All-weather track surface. The BSS 1000 is a full pour polyurethane surface that allows athletes to perform at their highest level while training or in competition. Its bio-engineered force reduction layer integrates very fine SBR rubber granules with environmentally friendly polyurethane to create an impermeable shock-absorbing cushion. The BSS 1000 can be found at some of the world's most prestigious and renowned facilities in your choice of embedded, encapsulated or Hobart textured EPDM granules mixed throughout the top layer to give your athletes total control.	Per Sq . Yard	\$ 98.00	9.00%	\$ 89.18
103	BSS-1000 ML	BSS-1000 ML	BSS 1000 ML: The BSS 1000 ML is an IAAF Certified full pour multilayered track and field surface for schools and Universities that desire a full pour track surface to meet competitive bidding requirements. Comprised of UV stabilized two-component polyurethane, recycled SBR granules and EPDM, the BSS 1000 ML is a three (3) layer system that exceeds the requirements of IAAF performance standards. The BSS 1000 ML starts with the application of BEYPUR 250 two-component polyurethane, upon which SBR granules are broadcasted and reclaimed. The next layer is comprised of BEYPUR 270, a specialty polyurethane elastomer with superior physical properties that give the final product outstanding resiliency. The wear layer of UV stabilized, BEYPUR 250 is then applied with your choice of embedded, encapsulated or Beynon's specialized Hobart texture. The BSS 1000ML is IAAF Certified at 14.1mm and is backed by an industry leading 5-year warranty. The BSS 1000 ML polyurethane materials are manufactured in our ISO 9001:2008 certified facility.	Per Sq . Yard	\$ 98.00	9.00%	\$ 89.18

104	Beynon- BSS 2000 13 mm	BSS 2000 13mm	All-weather track surface. The BSS 1000 is a full pour polyurethane surface that allows athletes to perform at their highest level while training or in competition. Its bio-engineered force reduction layer integrates very fine SBR rubber granules with environmentally friendly polyurethane to create an impermeable shock-absorbing cushion. The BSS 1000 can be found at some of the world's most prestigious and renowned facilities in your choice of embedded, encapsulated or Hobart textured EPDM granules mixed throughout the top layer to give your athletes total control.	Per Sq . Yard	\$ 110.00	9.00%	\$ 100.10
105	<b>Product/Manufacturer</b>	<b>Product #</b>	<b>RESURFACING ON an existing rubber running track</b>	<b>Unit</b>	<b>MSRP</b>	<b>% Discount</b>	<b>Price per sq. yard</b>
106	Top-Coat (latex tracks)	Top-Coat (latex tracks)	To resurface a Latex running track include all material and labor	Per Sq . Yard	\$ 24.18	%	22.00
107	Black Polyresin Resurfacing	Black Polyresin Resurfacing	To resurface a Black Polyresin running track include all material and labor	Per Sq . Yard	\$ 21.98	%	20.00
108	Red Polyresin Resurfacing	Red Polyresin Resurfacing	To resurface a Red Polyresin running track include all material and labor	Per Sq . Yard	\$ 28.57	%	26.00
109	BSS-50 RE	BSS-50 RE	To resurface a Polyurethane Tracks Base Mat running track include all material and labor	Per Sq . Yard	\$ 40.00	%	36.40
110	Beynon-BSS 100 RE	BSS 100 RE	BSS 100 RE Economical and durable, the Beynon Sports BSS 100 RE is a permeable resurfacing system that features; a two coat structural spray application that is used to resurface an existing polyurethane base mat or structural spray track surface. The BSS 100 RE is applied to tracks that are showing wear but still have structural integrity. The resulting finish is a virtually seamless textured wearing coat that will rejuvenate and extend the life of the track surface.The resurfacing application consists of 100% solids, pigmented polyurethane and EPDM granules or the environmentally friendly BEYPUR 160 water-based structural spray that only Beynon offers.	Per Sq . Yard	\$ 45.00	9%	\$ 40.95
111	Beynon-BSS 200 RE	BSS 200 RE	BSS 200 RE The Beynon Sports BSS 200 RE is an impermeable resurfacing system that features; a two component polyurethane seal coat layer and two coats of polyurethane structural spray to resurface an existing polyurethane base mat or structural spray track surface. The BSS 200 RE adds structural integrity and a uniform seal layer to protect the existing track base and provides greater wear-ability than only a structural re-spray. The resulting finish is a seamless textured wearing coat that will rejuvenate and extend the life of your track surface. Pigmented EPDM granules and single component polyurethane structural spray combine to form the spray applied top layer. Also available in the environmentally friendly BEYPUR 160 water-based structural spray that only Beynon offers.	Per Sq . Yard	\$ 55.00	9%	\$ 50.05
112	Beynon-BSS 300 RE	Beynon-BSS 300 RE	BSS 300 RE The Beynon Sports BSS 300 RE is an impermeable resurfacing system that features; a two component polyurethane seal coat layer and two component polyurethane with 1.3mm embedded EPDM granules to resurface an existing polyurethane base mat or structural spray track surface. The resulting finish is an impermeable, seamless embedded textured wearing coat that will rejuvenate and extend the life of your track surface. It is also available in encapsulated and Hobart textures.	Per Sq . Yard	\$ 75.00	9%	\$ 68.25
113	Beynon-BSS 2000 RE 5 mm	BSS 2000 RE 5 mm	BSS 2000 RE 5mm TOP-COATING OF EXISTING SURFACES OF 4,500 SQ.YDS OR MORE .The Olympic-caliber BSS 2000 RE 5mm is IAAF certified and offers athletes the highest level of control and maximum energy return. It makes training more manageable and allows athletes to compete at their best. The BSS 2000 RE 5mm running track can be TUNED to meet the precise durometer required to meet the desires and needs of your coaching staff, athletes and facility managers. The BSS 2000 RE 5mm is designed and manufactured for optimal competitive performance with either an embedded, encapsulated or Hobart textured topcoat for unmatched traction and durability for improved response times and total control by athletes.	Per Sq . Yard	\$ 85.00	9%	\$ 77.35
114	Beynon- BSS 2000 RE 7mm	BSS 2000 RE 7mm	BSS 2000 RE 7mm: The Olympic-caliber BSS 2000 RE 7mm is IAAF certified and offers athletes the highest level of control and maximum energy return. It makes training more manageable and allows athletes to compete at their best. The BSS 2000 RE 7mm running track can be TUNED to meet the precise durometer required to meet the desires and needs of your coaching staff, athletes and facility managers. The BSS 2000 RE 7mm is designed and manufactured to re-energize your track surface by installing a uniform 2 mm impermeable seal coat + 5mm embedded overlay for optimal competitive performance with either an embedded, encapsulated or Hobart textured topcoat for unmatched traction and durability for improved response times and total control by athletes.	Per Sq . Yard	\$ 95.00	9%	\$ 86.45

115	WBSS	WBSS	To resurface a running track using the Beynon Water Based Spray- BeyPur 160. Price is to be ADDED to the BSS-100 RE, BSS-200 RE, BSS-100, BSS-200 RED track options only.	Per Sq. Yard	\$2.76	9%	\$ 2.51
116	Beynon- Hobart Coating	Hobart Coating	To resurface a running track using the Hobart Coating for Polyurethane tracks include all material and labor	Per Sq. Yard	\$ 44.00	9.000%	\$ 40.04
117	Beynon- In situ Base	In-Situ Base	In-Situ Base: Combination of pea-gravel rock and polyurethane binder can be installed in lieu of asphaltic concrete to make a porous sub base. The In-Situ Base can also be used as a quick cure over concrete or asphalt prior to receiving synthetic track surfacing. Depth can range from 1/2" - 4" thick.	Per Sq. Yard	\$ 18.68	9%	\$ 17.00
118	Track Restriping	Track Restriping	• <b>Track Re-Striping:</b> Track striping to bring your track's lines back to life. Six, eight or nine lane tracks ranging from non-competition tracks, middle and high school level competition facilities and College and Universities. Matching of all associated line striping for your facility includes lane lines, event markings and lettering.	Lump Sum	\$ 15,000.00	9%	\$ 13,650.00
119	Track Cleaning	Track Cleaning	• <b>Track Cleaning (FastTrack):</b> Cleaning your track free of dirt and debris to protect your track surface from abrasive materials and aesthetically enhancing it. Sweepers and blowers are used to clean topical debris and water can be used (Owners choice) for deeper cleaning.	Per Sq. Yard	\$ 5.00	9%	\$ 4.55
120	Track surface removal and Disposal	Track surface removal and Disposal	Work involves the removal and disposal of an existing synthetic track surface up to 13mm in thickness. This work can only be performed in preparation for the installation of a new FieldTurf or Beynon track surface. Price applies to projects that are 3500 sy or more.	Per Sq. Yard	\$ 8.35	9%	\$ 7.60
121	Fast Track 1	Fast Track 1	<b>FAST TRACK 1:</b> One (1) time track maintenance visit to wash and restripe the synthetic running track. Inspection site report included.	Per Package	\$ 35,000.00	9%	\$ 31,850.00
122	Fast Track 3	Fast Track 3	<b>FAST TRACK 3:</b> Three (3) year track maintenance program. Services include annual site visits to maintain the synthetic running track and include three (3) track washings and one (1) line restripe to the synthetic running track. Inspection site report included per visit.	Per Package	\$ 50,000.00	9%	\$ 45,500.00
123	Fast Track 5	Fast Track 5	<b>FAST TRACK 5:</b> Five (5) year track maintenance program. Services include annual site visits to maintain the synthetic running track and include five (5) track washings and one (1) line restripe to the synthetic running track. Inspection site report included per visit.	Per Package	\$ 85,000.00	9%	\$ 77,350.00
124	Fast Track 8	Fast Track 8	<b>FAST TRACK 8:</b> Eight (8) year track maintenance program. Services include annual site visits to maintain the synthetic running track and include eight (8) track washings and one (1) line restripe to the synthetic running track. Inspection site report included per visit.	Per Package	\$ 110,000.00	9%	\$ 100,100.00
125	<b>Product/Manufacturer</b>	<b>Product #</b>	<b>Greenscapes</b>	<b>UNIT</b>	<b>MSRP</b>	<b>% Discount</b>	<b>Price per sq. foot</b>
126	FieldTurf- EasyTurf AirField Turf	AirFieldTurf	Patented Air FieldTurf is the leader in aviation-grade artificial turf solutions and has been rigorously tested to ensure the system meets and exceeds all United States Federal Aviation Administration (FAA) requirements for airside applications of synthetic turf per FAA AC 150/5370-15. As the leading global provider in aviation-grade artificial turf systems, we are your co-pilot in improved ground safety and lower maintenance. We offer the planning, applications and options to ensure a safe, low maintenance artificial turf surface that pays for itself quickly. Most clients can expect a return on their initial investment in as little as 3 years.	Per Sq. Ft.	\$ 6.99	9%	\$ 6.36
127	FieldTurf Command CORE	FieldTurf Command CORE	COMMAND CORE is comprised of a blend of monofilament and slit-film blades surrounded by an olive and nutmeg "texturized" thatch layer that closely simulates the look and feel of natural grass. It is made using 100% polyethylene fiber construction containing no nylon and features the proprietary AquaFlow Drainage System.	SF	\$ 12.48	9%	\$ 11.36
128	FieldTurf Command Play Nutmeg	FieldTurf Command Play Nutmeg	COMMAND Play Nutmeg is comprised of premium multi-colored blades surrounded by a nutmeg "texturized" thatch layer that closely simulates the look and feel of natural grass. It is made using 100% polyethylene fiber construction containing no nylon and features the proprietary AquaFlow Drainage System.	SF	\$ 12.25	9%	\$ 11.15
129	FieldTurf Command Play Olive	FieldTurf Command Play Olive	COMMAND Play Olive is comprised of premium multi-colored blades surrounded by an olive "texturized" thatch layer that closely simulates the look and feel of natural grass. It is made using 100% polyethylene fiber construction containing no nylon and features the proprietary AquaFlow Drainage System.	SF	\$ 12.25	9%	\$ 11.15
130	FieldTurf Command Duo	FieldTurf Command Duo	COMMAND Play Duo is comprised of premium multi-colored blades surrounded by an olive and nutmeg "texturized" thatch layer that closely simulates the look and feel of natural grass. It is made using 100% polyethylene fiber construction containing no nylon and features the proprietary AquaFlow Drainage System.	SF	\$ 11.85	9%	\$ 10.78
131	FieldTurf Power Play Fit Turf	FieldTurf Power Play Fit Turf	PowerPlay Fit Turf is comprised of premium multi-colored slit-film blades surrounded by an olive "texturized" thatch layer and includes a 5mm foam backing. This turf is designed to be used indoors and does not require infill. It is made using 100% polyethylene fiber construction containing no nylon.	SF	\$ 14.99	9%	\$ 13.64
132	FieldTurf Olive Premium	FieldTurf Olive Premium	Olive Premium is comprised of premium multi-colored blades surrounded by an olive "texturized" thatch layer that closely simulates the look and feel of natural grass. It is made using 100% polyethylene fiber construction containing no nylon and features the proprietary MaxxFlow Drainage System.	SF	\$ 11.85	9%	\$ 10.78

133	FieldTurf Nutmeg Premium	FieldTurf Nutmeg Premium	Nutmeg Premium is comprised of premium multi-colored blades surrounded by a nutmeg "texturized" thatch layer that closely simulates the look and feel of natural grass. It is made using 100% polyethylene fiber construction containing no nylon and features the proprietary MaxxFlo Drainage System.	SF	\$	11.85	9%	\$	10.78
134	FieldTurf Versa Lush	FieldTurf Versa Lush	Versa Lush is comprised of 1" multi-colored blades surrounded by an olive "texturized" thatch layer that simulates the look and feel of natural grass. It is made using 100% polyethylene fiber construction containing no nylon and features the proprietary MaxxFlo Drainage System.	SF	\$	12.15	9%	\$	11.06
135	FieldTurf All Purpose Blend	FieldTurf All Purpose Blend	simulates the look and feel of natural grass. It is made using 100% polyethylene fiber construction containing no nylon and features the proprietary MaxxFlo Drainage System.	SF	\$	11.55	9%	\$	10.51
136	FieldTurf Olive Ultra	FieldTurf Olive Ultra	Olive Ultra is comprised of high quality multi-colored blades surrounded by a nutmeg "texturized" thatch layer that simulates the look and feel of natural grass. It is made using 100% polyethylene fiber construction containing no nylon and features the proprietary MaxxFlo Drainage System.	SF	\$	11.55	9%	\$	10.51
137	FieldTurf Nutmeg Ultra	FieldTurf Nutmeg Ultra	Nutmeg Ultra is comprised of high quality multi-colored blades surrounded by a nutmeg "texturized" thatch layer that simulates the look and feel of natural grass. It is made using 100% polyethylene fiber construction containing no nylon and features the proprietary MaxxFlo System.	SF	\$	11.55	9%	\$	10.51
138	FieldTurf Ultra Pet	FieldTurf Ultra Pet	simulates the look and feel of natural grass. It is made using 100% polyethylene fiber construction containing no nylon and features the proprietary MaxxFlo Drainage System.	SF	\$	11.55	9%	\$	10.51
139	FieldTurf General Purpose Thatch	FieldTurf General Purpose Thatch	General Purpose Thatch is comprised of multi-colored blades surrounded by a nutmeg/olive "texturized" thatch layer that simulates the look and feel of natural grass. This thatch layer reduces requirements for sand or sand/rubber mix infill between the blades, which makes this product ideal for applications where lower infill is desired. It is made using 100% polyethylene fiber construction containing no nylon and features the proprietary MaxxFlo Drainage System.	SF	\$	8.25	9%	\$	7.51
140	FieldTurf EasyPlay	FieldTurf EasyPlay	EasyPlay is comprised of a single-color premium UV-resistant polyethylene fibrillated slit-film blades. It is made using 100% polyethylene fiber construction containing no nylon. Each fiber is cut into a unique interior honeycomb pattern, making EasyPlay one of the strongest and most resilient synthetic grass options for high-use areas.	SF	\$	10.48	9%	\$	9.54
141	FieldTurf EasyPlay Color	FieldTurf EasyPlay Color	EasyPlay Color is comprised of a single-color premium UV-resistant polyethylene fibrillated slit-film blades. It is made using 100% polyethylene fiber construction containing no nylon. Each fiber is cut into a unique interior honeycomb pattern, making EasyPlay one of the strongest and most resilient synthetic grass options for high-use areas.	SF	\$	11.96	9%	\$	10.88
142	FieldTurf Classic HD Sports Turf	FieldTurf Classic HD Sports Turf	Classic HD Sports Turf is a comprised of single-color premium UV-resistant polyethylene fibrillated slit-film blades. It is made using 100% polyethylene fiber construction containing no nylon, and the backing is made of dual-layer woven polypropylene.	SF	\$	11.08	9%	\$	10.08
143	FieldTurf Classic HD Sports Turf Color	FieldTurf Classic HD Sports Turf Color	Classic HD Sports Turf is a comprised of single-color premium UV-resistant polyethylene fibrillated slit-film blades. It is made using 100% polyethylene fiber construction containing no nylon, and the backing is made of dual-layer woven polypropylene.	SF	\$	12.58	9%	\$	11.45
144	FieldTurf Tru-Roll Putting Green	FieldTurf Tru-Roll Putting Green	Tru-Roll Putting Greens are constructed of polypropylene blades that closely simulate the look and feel of natural grass golf greens. Every Tru-Roll Putting Green project is designed for functionality and to meet professional standards. Tru-Roll Putting Greens stay picturesque with only minimal attention and care.	SF	\$	14.87	9%	\$	13.53
145	FieldTurf EasyTurf Signature Pro Tee Turf	FieldTurf EasyTurf Signature Pro Tee Turf	EasyTurf Signature Pro Tee Turf is constructed of the highest quality polypropylene blades that closely simulate the look and feel of natural grass golf tee box areas. Every Signature Pro Golf project is designed for functionality and to meet professional standards. Signature Pro Tee Turf stays picturesque with only minimal attention and care.	SF	\$	15.64	9%	\$	14.23
146	FieldTurf EasyTurf Signature Pro Driving Range Turf	FieldTurf EasyTurf Signature Pro Driving Range Turf	EasyTurf Signature Pro Driving Range Turf is constructed of the highest quality polyethylene slit film blades that closely simulate the look and feel of natural grass golf driving areas. Every Signature Pro Golf project is designed for functionality and to meet professional standards. Signature Pro Driving Range Turf stays picturesque with only minimal attention and care.	SF	\$	7.50	9%	\$	6.83
147	FieldTurf Playground Pad 12'	FieldTurf Playground Pad 12'	Playground Pad is a water-permeable safety pad that is installed beneath synthetic playground turf. One layer of EasyTurf Playground Pad is rated for fall height safety of up to 8 feet, and exceeds all ASTM requirements. Padding can also be double stacked to provide fall height safety ratings of up to 12 feet.	SF	\$	3.85	9%	\$	3.50
148	FieldTurf Playground Pad 5'	FieldTurf Playground Pad 5'	Playground Pad is a water-permeable safety pad that is installed beneath synthetic playground turf. One layer of EasyTurf Playground Pad is rated for fall height safety of up to 5 feet, and exceeds all ASTM requirements.	SF	\$	3.50	9%	\$	3.19
149	EasyTurf Putting Green Pad is a green cushion pad that is 1/4" thick and used to cushion and support synthetic putting green surfaces.	EasyTurf Putting Green Pad is a green cushion pad that is 1/4" thick and used to cushion and support synthetic putting green surfaces.	EasyTurf Putting Green Pad is a green cushion pad that is 1/4" thick and used to cushion and support synthetic putting green surfaces.	SF	\$	1.27	9%	\$	1.16
150	<b>Product/Manufacturer</b>	<b>Product #</b>	<b>Indoor Court Surfacing Minimum purchase 5000 sf.</b>	<b>UNIT</b>	<b>MSRP</b>	<b>% Discount</b>	<b>Price per sq. foot</b>		
151	Omnisports	Compact	Sheet Vinyl Single Color	SF	\$ 8.80	9%	\$ 8.01		
152	Omnisports	Speed	Sheet Vinyl Single Color	SF	\$ 14.85	9%	\$ 13.51		
153	Omnisports	Multi-Use	Sheet Vinyl Single Color	SF	\$ 15.40	9%	\$ 14.01		
154	Omnisports	Active +	Sheet Vinyl Single Color	SF	\$ 15.95	9%	\$ 14.51		
155	Omnisports	PurePlay	Sheet Vinyl Single Color	SF	\$ 16.50	9%	\$ 15.02		
156	Omnisports	Extreme	Sheet Vinyl Single Color	SF	\$ 17.33	9%	\$ 15.77		
157	Omnisports	Dancefloor	Sheet Vinyl Single Color	SF	\$ 14.85	9%	\$ 13.51		
158	Omnisports	HPL 7 mm with Compact	Sheet Vinyl Single Color	SF	\$ 17.05	9%	\$ 15.52		
159	Omnisports	HPL 9 mm with Compact	Sheet Vinyl Single Color	SF	\$ 17.60	9%	\$ 16.02		

160	Omnisports	Tarkolay	Underlayment	SF	\$ 4.95	9%	\$ 4.50
161	Omnisports	Weld Rod 5 mm	Weld Rod	Per Spool	\$ 95.72	9%	\$ 87.11
162	Adhesive	Multi-Set	Adhesive	Per Pail	\$ 246.35	9%	\$ 224.17
163	Adhesive	Multi-Poxy	Adhesive	Per Kit	\$ 653.48	9%	\$ 594.66
164	Adhesive	Tarkotape	Adhesive	Per Box	\$ 1,458.37	9%	\$ 1,327.12
165	Game Line Paint	Gen-U-Line	Game Line Paint	Per Kit	\$ 245.03	9%	\$ 222.97
166	Game Line Paint Primer	Gen-U-Line	Game Line Paint Primer	Per Kit	\$ 176.83	9%	\$ 160.91
167	Linospport	2.5 mm	Linoleum Single Color	SF	\$ 8.80	9%	\$ 8.01
168	PolyTurf Plus Pad and Pour	ReStart	Polyurethane Single Color	SF	\$ 11.00	9%	\$ 10.01
169	PolyTurf Plus Pad and Pour	4+2	Polyurethane Single Color	SF	\$ 14.85	9%	\$ 13.51
170	PolyTurf Plus Pad and Pour	7+2	Polyurethane Single Color	SF	\$ 15.95	9%	\$ 14.51
171	PolyTurf Plus Pad and Pour	9+2	Polyurethane Single Color	SF	\$ 16.50	9%	\$ 15.02
172	PolyTurf Plus Pad and Pour	12+4	Polyurethane Single Color	SF	\$ 19.80	9%	\$ 18.02
173	Adhesive	BeyBond 50	Adhesive	Per Pail	\$ 286.00	9%	\$ 260.26
174	Dancefloor	Dancefloor 3.5mm	Sheet Vinyl	SF	\$ 14.85	9%	\$ 13.51
175	Dancefloor	Inspiration with Dancefloor	Combination	SF	\$ 32.45	9%	\$ 29.53
176	Dancefloor	Inspiration Pro with Dancefloor	Combination	SF	\$ 32.45	9%	\$ 29.53
177	Lumaflex	Classic with Omnisports Compact	Combination	SF	\$ 27.39	9%	\$ 24.92
178	Lumaflex	Classic with Linospport 2.5mm	Combination	SF	\$ 27.39	9%	\$ 24.92
179	Lumaflex	Elite with Omnisports Compact	Combination	SF	\$ 27.39	9%	\$ 24.92
180	Lumaflex	Elite with Linospport 2.5mm	Combination	SF	\$ 27.39	9%	\$ 24.92
181	Lumaflex	Fit with Omnisports Compact	Combination	SF	\$ 32.45	9%	\$ 29.53
182	ClutchCourt	Performance	Wood 2nd and Better Maple	SF	\$ 23.38	9%	\$ 21.27
183	ClutchCourt	Performance Anchor	Wood 2nd and Better Maple	SF	\$ 25.30	9%	\$ 23.02
184	ClutchCourt	FlexLock	Wood 2nd and Better Maple	SF	\$ 23.38	9%	\$ 21.27
185	ClutchCourt	Trainer 3	Wood 2nd and Better Maple	SF	\$ 23.93	9%	\$ 21.77
186	ClutchCourt	Trainer 2	Wood 2nd and Better Maple	SF	\$ 22.55	9%	\$ 20.52
187	Dropzone	Speckle 8 mm Rolls	Rubber Up To 30% EPDM Color	SF	\$ 11.00	9%	\$ 10.01
188	Dropzone	Speckle 8 mm Interlocking Tiles	Rubber Up To 30% EPDM Color	SF	\$ 11.00	9%	\$ 10.01
189	Dropzone	Comfort 10.5 mm	Rubber Single Color	SF	\$ 18.15	9%	\$ 16.52
190	Dropzone	Comfort 14.5 mm	Rubber Single Color	SF	\$ 18.70	9%	\$ 17.02
191	Dropzone	Elite	Rubber	SF	\$ 22.00	9%	\$ 20.02
192	Dropzone	Power	Rubber	SF	\$ 19.80	9%	\$ 18.02
193	Dropzone	Flex	Rubber	SF	\$ 17.60	9%	\$ 16.02
194	Dropzone	Impact	Rubber	SF	\$ 17.60	9%	\$ 16.02
195	Dropzone	Droptile	Rubber Up To 30% EPDM Color	SF	\$ 19.80	9%	\$ 18.02
196	Dropzone	Droptile Max	Rubber Up To 30% EPDM Color	SF	\$ 32.45	9%	\$ 29.53
197	Dropzone	DropTurf	Indoor Artifical Turf	SF	\$ 8.80	9%	\$ 8.01
198	Dropzone	DropTurf Inlay	Turf Lines and Logos		Custom	1%	RS MEANS
199	EasyCourt	EasyCourt	Portable Flooring	EA	\$ 371.25	9%	\$ 337.84
200	EasyCourt	EasyField	Portable Flooring	EA	\$ 371.25	9%	\$ 337.84
201	ADA Transition	EasyCourt/Easyfield ADA Transitions	Accessory 1.75" x 22" x 36" - Black Only	EA	\$ 247.50	9%	\$ 225.23
202	Transition	EasyCourt/Easyfield Non - ADA Trans	Accessory Transition	EA	\$ 88.00	9%	\$ 80.08
203	Game Line Painting	Basketball Game Line Painting	Painting Labor	Per Court	\$ 2,420.00	9%	\$ 2,202.20
204	Game Line Painting	Volleyball Game Line Painting	Painting Labor	Per Court	\$ 1,650.00	9%	\$ 1,501.50
205	Game Line Painting	Pickleball Game Line Painting	Painting Labor	Per Court	\$ 1,650.00	9%	\$ 1,501.50
206	Game Line Painting	Badminton Game Line Painting	Painting Labor	Per Court	\$ 1,650.00	9%	\$ 1,501.50
207	Game Line Painting	Tennis Game Line Painting	Painting Labor	Per Court	\$ 1,650.00	9%	\$ 1,501.50
208	Game Line Painting	Table Tennis Game Line Painting	Painting Labor	Per Court	\$ 1,650.00	9%	\$ 1,501.50
209	Game Line Painting	Logos	Painting Labor		Custom	1%	RS MEANS
210	Coved Base 4"	Resilient Base Standard Colors	Resilient Base 4" with Toe	LF	\$ 3.85	9%	\$ 3.50
211	Vented Coved Base	Vented Coved Base Standard Colors	Vented Resilient Base	LF	\$ 12.10	9%	\$ 11.01
212	<b>Product/Manufacturer</b>	<b>Product #</b>	<b>Outdoor Court Surfacing (4 Coat Plexipave)</b>	<b>UNIT</b>	<b>MSRP</b>	<b>% Discount</b>	<b>Per Court</b>
213	<b>Outdoor Court Surfacing (4 Coat Plexipave)</b>	Outdoor Court Surfacing	4 coat system that provides a long wearing color surface of uniform texture. Systems are suitable for all climatic conditions and protect asphalt from ultraviolet ray deterioration. Based on 100% acrylic water vehicle coatings. 1 court is 7200sf.	Per Court	\$ 14,000.00	0.09	\$ 12,740.00
214			Open Market Items or Sourced Goods: Site Work to build or construct base for Turf, track, or court to install a FieldTurf/Beynon sports surface and other necessary site work/accessories and ancillary items.	<b>UNIT</b>	<b>MSRP</b>	<b>% Discount</b>	<b>RS MEANS Coefficient</b>

215	Site Work to build or construct base for Turf, track, or court to install a FieldTurf/Beynon sports surface <b>Normal HOURS.</b>	Site Work	Any cut and fill, excavation, asphalt, lighting, fencing, sidewalks, concrete work, drainage systems, tie in to existing drainage, windscreens, aggregate base, top rock, conduits, crack repair, demolition or any other necessary related site work will be priced via RS MEANS.	Per Unit as listed in RS MEANS NORMAL HOURS	RS MEANS	0.01	0.99
216	Site Work to build or construct base for Turf, track, or court to install a FieldTurf/Beynon sports surface <b>Non-Normal HOURS.</b>	Site Work	Any cut and fill, excavation, asphalt, lighting, fencing, sidewalks, concrete work, drainage systems, tie in to existing drainage, windscreens, aggregate base, top rock, conduits, crack repair, demolition or any other necessary related site work will be priced via RS MEANS.	Per Unit as listed in RS MEANS NON-NORMAL HOURS	RS MEANS		1.15
217			<b>Professional Services</b>	<b>UNIT</b>	<b>MSRP</b>	<b>% Discount</b>	<b>Cost to Customer</b>
218	FieldTurf	Design/Mgt	Project Design, Development or Consultant/Construction Management.	Per Hour	\$ 250.00	9%	\$ 227.50
219	FieldTurf	Engineering	Professional Engineering Services: Geo Technical, Survey, boring testing, etc.	Per Hour	\$ 200.00	9%	\$ 182.00
220	FieldTurf	Admin.	Installer/Admin (Tradesman)(Not related to turf, track, or court installation) Project Administrator costs for Site Work.	Per Hour	\$ 150.00	9%	\$ 136.50
221	<b>Description of Cost Factors</b>	<b>Unit of Measure</b>	<b>Offeror's Base Bid</b>				
222	Performance and payment bond - bonding rate (percent of project)	Percent	1.5000%				
223	Bonding capacity - total amount of capacity available	Dollar Amount	\$75,000,000.00				
224	OMNIA Discounts offered on individual manufacturer's published price lists/catalogs	Percent	NA				
225	Alternative methods of costing - percent of overhead/markup to cost	Percent	25%	(e.g. \$100 + 25% P&O = \$125)			
226	Discounts offered of alternative costing methods (cost + profit & overhead) Rate of discount.	Percent	10%	(e.g. \$125 - 10% Discount = \$112.50)			
227	R.S. Means Multiplier/Factor - Normal Hours	Coefficient	0.99	Additional Discount on RS Means available based on dollar volume			
228	R.S. Means Multiplier/Factor - Out Side of Normal Hours	Coefficient	1.15				
229	Offeror's Support for OMNIA Pricing, Percent off the Offeror's Support for OMNIA pricing Page	Percent	9.0%				
230	FieldTurf Financial	Municipal Financing Options	Based prime for size of project				
231	<b>Field Equipment and Accessories</b>	<b>Unit of Measure</b>	<b>MSRP</b>	<b>Discount</b>	<b>Cost to Customer</b>		
232	Pole Vault Pit	Each	\$ 2,500.00	9.00%	\$ 2,275.00		
233	Take-Off Boards	Each	\$ 2,000.00	9.00%	\$ 1,820.00		
234	Shot Put Toe Boards	Each	\$ 1,000.00	9.00%	\$ 910.00		
235	Shot Put Rings	Each	\$ 3,000.00	9.00%	\$ 2,730.00		
236	Discus Rings	Each	\$ 3,000.00	9.00%	\$ 2,730.00		
237	Combination Hammer/Discus Cage and cage must meet IAAF rules	Each	\$ 60,000.00	9.00%	\$ 54,600.00		
238	Hammer/Discus Conversion Ring	Each	\$ 6,000.00	9.00%	\$ 5,460.00		
239	Water Jump Hurdle with sleeves	Each	\$ 25,000.00	9.00%	\$ 22,750.00		
240	Water Jump Cover	Each	\$ 15,000.00	9.00%	\$ 13,650.00		
241	Removable Track Curbing. The curb shall meet the requirements of the IAAF.	Linear Foot	\$ 17.00	9.00%	\$ 15.47		
242	Long Jump Sandpits and Traps.	Each	\$ 25,000.00	9.00%	\$ 22,750.00		
243	Sand for Sand Pits and Traps	Cost per yard	\$ 75.00	9.00%	\$ 68.25		
244	Football Goal Posts - Set	Each	\$ 35,000.00	9.00%	\$ 31,850.00		
245	Access Frame Kit with Infill retainer System for Adjust Right Football Goal Post - Set	Each	\$ 6,000.00	9.00%	\$ 5,460.00		
246	Soccer Goals - Set	Each	\$ 20,000.00	9.00%	\$ 18,200.00		
247	SGMobile Integrated Soccer Goal Wheel Kit for Round post Soccer Goal - Set	Each	\$ 5,000.00	9.00%	\$ 4,550.00		
248	Batting Cages	Each	\$ 25,000.00	9.00%	\$ 22,750.00		

Total 12.5% mark up once discount is applied

Additional discount on Alternative costing available based on dollar volume.

Pricing above does account for OMNIA related fees. FieldTurf does reserve the right to request reduced remittance of fee on case-by-case mutually agreed upon circumstances.



## TAB 2-Products and Pricing

### a) Products/Pricing

i) Offerors shall provide pricing based on a discount from a price list or catalog, or fixed price, or a combination of both with indefinite quantities. Prices listed will be used to establish the extent of an Offeror's product lines, services, warranties, etc. that are available from Offeror and the pricing per item. Multiple percentage discounts are acceptable if, where different percentage discounts apply, the different percentages are specified. Discounts proposed should remain the same for the first 12 months after the contract award. Additional pricing and /or discounts may be included. Products and services proposed are to be priced separately with all ineligible items identified. Offerors may elect to limit their proposals to any category or categories.

ii) Include an electronic copy of the catalog form which discount, or fixed price, is calculated. Electronic price lists must contain the following: (if applicable)

- Manufacturer or Other Part #
- Offeror's Part # (if different from the above part #)
- Description
- Suggested List Price and Net Price
- Net price to Region 4 ESC (including freight)

Media submitted for price list must include the Offerors' company name, name of the solicitation, and date on a Flash Drive.

**RESPONSE:** [See attached Product/Price Spreadsheet](#)

iii. Provide a national co-efficient for standard and non-standard hours that may be used when the UPB is being utilized. For clarification, additional co-efficient are not being requested as an awarded Contractor(s) may utilize the UPB's city index.

**RESPONSE:** [See attached Product/Price Spreadsheet RS MEANS line items contain UPB's national co-efficient for standard and non-standard working hours.](#)

iv. Is pricing available for all products and services?

**RESPONSE:** [See attached Product/Price Spreadsheet which contains pricing for all products and services.](#)

v. Describe any shipping charges.

RESPONSE: See attached Product/Price Spreadsheet.

Shipping costs are included in our customer proposals. Shipping to Alaska or Hawaii can cause the shipping price to rise as noted on our pricing notes.

Shipping and Freight to Canada, Hawaii, Alaska or other areas outside of the continental US is not included in standard Primary pricing and will be an additional cost based on site location. Additional shipping costs will be based on the cost to transport equipment and materials from the closest US port to the job site. Additional costs may also be added for crew transportation and accommodations to any site outside of the continental US.

vi. Provide Pricing Warranties on all products and services.

RESPONSE: See attached Product/Price Spreadsheet. Standard Warranty for turf/track/courts included in price of product at no additional charge. See included sample warranty information for details.

INSURED WARRANTY- for complete peace of mind. FieldTurf was the first company in the industry to offer a third-party insured warranty. And while you'll probably never need to use it, you can rest easy knowing that you are protected by the industry's best warranty. It's peace of mind that sets FieldTurf apart from the competition.

vii. Describe any additional return and restocking fees.

RESPONSE: Not applicable to this type of product/service. If additional attic stock is requested it is priced on a case-by-case basis.

If the product has not been manufactured then there is no cost to restock. Owner provides a signed layout confirming the product, color, game lines etc before manufacturing begins.

viii. Describe any additional discounts or rebates available. Additional discounts or rebates may be offered for large quantity orders, single ship to location, growth, annual spend, guaranteed quantity, etc.

RESPONSE: Discounts are offered on a case by case basis. OPTIONAL Pricing (Hot List Pricing): Volume Discounts are available on supply and installation of turf surfacing and related site work on a case-by-case basis and will be discussed with owner and OMNIA to determine an acceptable discount based on the applicable volume.

ix. Describe how customers verify they are receiving Contract pricing.

RESPONSE: Upon request, FieldTurf/SmartBuy will provide a breakdown spreadsheet that links the approved OMNIA pricing with the proposal provided. Below is an example.

Any OMNIA related proposals that are generated will be reviewed by a FieldTurf SmartBuy representative who approves the proposal for approved OMNIA pricing compliance. Furthermore, an OMNIA breakdown can also be provided that proves to the customer which product line and price are shown on the proposal for audit and full transparency purposes. Below is a sample FieldTurf OMNIA breakdown.

City of Long Beach - El Dorado Park West Soccer OMNIA Breakdown.xlsx - Excel

Line #	OMNIA Line #	ITEMS ON FIELDTURF OMNIA CONTRACT:	MRSP	9% OMNIA Discount	OMNIA Base Price	QTY	Unit	Total Extended	Additional Courtesy Discount	Final Cost to Customer
OMNIA/TCPN Breakdown										
1	18	FieldTurf Classic HD 2"	5.24	9%	4.77	83,490	SF	\$ 398,114		
1	76	FieldTurf Purefill (must be purchased with turf)	1.80	9%	1.64	83,490	SF	\$ 136,757		
1		<b>Turf and Purefill Sub Total</b>						<b>\$ 534,870</b>	<b>-133,304.31</b>	<b>\$ 401,566.03</b>
2	43	Inlaid Soccer Markings	8000	9%	7280.00	1	EA	\$ 7,280	-1,280.00	\$ 6,000
3	43	Inlaid Soccer Markings (Mini Markings)	8000	9%	7280.00	1	EA	\$ 7,280	-7,280.00	\$ -
4	76	Versatile Drainage Tiles	165	9%	1.50	83,490	SF	\$ 125,360	-8,474.23	\$ 116,886.01
5		Payment and Performance Bonds								\$ 5,900.08
		<b>TOTAL</b>								<b>\$ 530,352.11</b>

All distributors, internal project managers, sales teams, etc know that OMNIA proposals must go through a rigorous evaluation process to confirm compliance with OMNIA Master Agreement pricing.

x. Describe payment methods offered.

**RESPONSE:** ACH or check to Calhoun headquarters.

xi. Propose the frequency of updates to the Offeror's pricing structure. Describe any proposed indices to guide price adjustments. If offering a catalog contract with discounts by category, while changes in individual pricing may change, the category discounts should not change over the term of the Contract.

RESPONSE: Price change requests are usually based on increases in raw material price and shipping. If a price change request is needed, FieldTurf will submit a formal request to Region 4/OMNIA and provide justification for requested increase. Category discounts will not change over the term of the Contract.

xii. Describe how future product introductions will be priced and align with Contract pricing proposed.

RESPONSE: If new products need to be added to the contract, FieldTurf will submit a formal request to Region 4/OMNIA and will provide price comparison explanation based on current products and pricing. Normally any product add has similar pricing structure and comparability to existing products/services.

xiii. Provide any additional information relevant to this section.

RESPONSE: See General Pricing Notes included with pricing and below.

#### **FieldTurf OMNIA General Pricing Notes:**

1. Shipping and Freight to Canada, Hawaii, Alaska or other areas outside of the continental US is not included in standard Primary pricing and will be an additional cost based on site location. Additional shipping costs will be based on the cost to transport equipment and materials from the closest US port to the job site. Additional costs may also be added for crew transportation and accommodations to any site outside of the continental US.
2. FieldTurf offers financing options for customers who qualify.
3. OPTIONAL Pricing (Hot List Pricing): Volume Discounts are available on supply and installation of turf surfacing and related site work on a case-by-case basis and will be discussed with owner and OMNIA to determine an acceptable discount based on the applicable volume.
4. Price per unit cost accounts for domestic shipping, use tax, state specific tax and wage rates (Davis Bacon, non-prevailing wages, prevailing wages).
5. FieldTurf works with OMNIA to track sales by sending OMNIA copies of quarterly reports on status of administrative fee remittance.
6. If site work is required: Alternative Method of Costing covers any product and/or service not covered by catalog pricing, published price list, line-item price list, automated system for pricing, or is a product and /or service due to the projects or applications specifications, conditions and /or requirements that need to be custom designed, developed, manufactured and /or produced to meet the requirements of an individual project or sole source.
7. If site work is required: Unit Price Book via RS MEANS estimate will be obtained for projects with site work line items not included in FieldTurf OMNIA product pricing spreadsheet. RS MEANS is self contained and consists of a turn-key solution that

includes a complete line-item listing of all the products, supplies, material, equipment, services, accessories and options with their description, specification, terms, conditions and associated pricing for each item, sub-assemblies and/or assemblies. FieldTurf reserves the right to offer a discount to the RS MEANS calculation to account for volume discounts or to stay within standard market pricing.

8. FieldTurf maintains the right to add Administrative Management fees to projects that include site work .

9. OMNIA Pricing applies to turf fields that are 45,000sf or more. For projects less than 45,000 sf, owner, RS MEANS pricing will be used. Landscaping/Playground product sq. foot pricing applies for a minimum purchase of 5000 sf. For projects that do not meet the minimum requirement, owner, OMNIA will use RS MEANS. Pricing is for track projects over 4000 sy and applies to only standard black or red colors. Custom color track surfacing is available at an increased price per square yard.

10. New Construction – Sq. foot/yard pricing is for surfacing only. FieldTurf is prepared to offer turn key solutions for the construction of running tracks, courts, and fields through use of Alternative Costing and RS Means. The best value pricing for base or civil work is obtained through these costing methods.

Site work or new construction may include but is not limited to: removal and disposal of existing sports surface, lighting, demolition, excavation, rock base aggregate, top rock, asphalt, concrete, sidewalks, turf shock absorption underlayment such as e-layer or padding, tie in to existing drainage, drainage systems, conduits, fencing, crack repair, asphalt repair, etc. which can be purchased through RS MEANS or Alternative Costing based on the owner's preference.

11. FieldTurf works with several subcontractors who supply and install Fieldturf/Beynon products or services related to sports construction and they promote the FieldTurf cooperative purchasing program: SmartBuy. These Subcontractors include but are not limited to: Beynon Sports Surfaces, Renner Sports Surfaces, American Athletic Court Inc. , Copeland Coating Company Inc., The Landtek Group, Clark Companies, Chenango Contracting, ELA Group, Inc.; Hinding Tennis, Halecon, FieldTurf Northwest, Deluxe Athletics, King Sports, Ace Tennis, Maser Consulting, O Sports, NIDY, Vasco, Shaker Flats, Cape and Island, Midwest Turf, Mountain West, RS Global, Desso Sports, CrafcO.

#### Federal Funding Pricing

Due to products and services potentially being used in response to an emergency or disaster recover situation in which federal funding may be used, provide alternative pricing that does not include cost plus a percentage of cost or pricing based on time and materials; if time and materials is necessary, a ceiling price that the contractor exceeds at its own risk will be needed as determined and set by the Participating Public Agency. Products and services provided in a situation where an agency is eligible for federal funding , Offeror is subject to and must comply with all federal requirements applicable

to the funding including, but not limited to the FEMA Special Conditions section located in the Federal Funds Certifications Exhibit.

**RESPONSE:** FieldTurf pricing provided is not cost plus or time and materials. Submitted pricing is applicable for Federally funded projects.

Not to Exceed Pricing.

Region 4 ESC requests pricing be submitted as not to exceed pricing. Unlike fixed pricing, the Contractor can adjust submitted pricing lower if needed but, cannot exceed original pricing submitted. Contractor must allow for lower pricing to be available for similar product and service purchases. Cost plus pricing as a primary pricing structure is not acceptable.

**RESPONSE:** FieldTurf acknowledges and accepts. See FieldTurf Price spreadsheet

**FieldTurf OMNIA General Pricing Notes:**

1. Shipping and Freight to Canada, Hawaii, Alaska or other areas outside of the continental US is not included in standard Primary pricing and will be an additional cost based on site location. Additional shipping costs will be based on the cost to transport equipment and materials from the closest US port to the job site. Additional costs may also be added for crew transportation and accommodations to any site outside of the continental US.
2. FieldTurf offers financing options for customers who qualify.
3. OPTIONAL Pricing (Hot List Pricing): Volume Discounts are available on supply and installation of turf surfacing and related site work on a case-by-case basis and will be discussed with owner and OMNIA to determine an acceptable discount based on the applicable volume.
4. Price per unit cost accounts for domestic shipping, use tax, state specific tax and wage rates (Davis Bacon, non-prevailing wages, prevailing wages).
5. FieldTurf works with OMNIA to track sales by sending OMNIA copies of quarterly reports on status of administrative fee remittance.
6. If site work is required: Alternative Method of Costing covers any product and/or service not covered by catalog pricing, published price list, line-item price list, automated system for pricing, or is a product and /or service due to the projects or applications specifications, conditions and /or requirements that need to be custom designed, developed, manufactured and /or produced to meet the requirements of an individual project or sole source.
7. If site work is required: Unit Price Book via RS MEANS estimate will be obtained for projects with site work line items not included in FieldTurf OMNIA product pricing spreadsheet. RS MEANS is self contained and consists of a turn-key solution that includes a complete line-item listing of all the products, supplies, material, equipment, services, accessories and options with their description, specification, terms, conditions and associated pricing for each item, sub-assemblies and/or assemblies. FieldTurf reserves the right to offer a discount to the RS MEANS calculation to account for volume discounts or to stay within standard market pricing.
8. FieldTurf maintains the right to add Administrative Management fees to projects that include site work .
9. OMNIA Pricing applies to turf fields that are 45,000sf or more. For projects less than 45,000 sf, owner, RS MEANS pricing will be used. Landscaping/Playground product

sq. foot pricing applies for a minimum purchase of 5000 sf. For projects that do not meet the minimum requirement, owner, OMNIA will use RS MEANS. Pricing is for track projects over 4000 sy and applies to only standard black or red colors. Custom color track surfacing is available at an increased price per square yard.

10. New Construction – Sq. foot/yard pricing is for surfacing only. FieldTurf is prepared to offer turn key solutions for the construction of running tracks, courts, and fields through use of Alternative Costing and RS Means. The best value pricing for base or civil work is obtained through these costing methods.

Site work or new construction may include but is not limited to: removal and disposal of existing sports surface, lighting, demolition, excavation, rock base aggregate, top rock, asphalt, concrete, sidewalks, turf shock absorption underlayment such as e-layer or padding, tie in to existing drainage, drainage systems, conduits, fencing, crack repair, asphalt repair, etc. which can be purchased through RS MEANS or Alternative Costing based on the owner's preference.

11. FieldTurf works with several subcontractors who supply and install Fieldturf/Beynon products or services related to sports construction and they promote the FieldTurf cooperative purchasing program: SmartBuy. These Subcontractors include but are not limited to: Beynon Sports Surfaces, Renner Sports Surfaces, American Athletic Court Inc. , Copeland Coating Company Inc., The Landtek Group, Clark Companies, Chenango Contracting, ELA Group, Inc.; Hinding Tennis, Halecon, FieldTurf Northwest, Deluxe Athletics, King Sports, Ace Tennis, Maser Consulting, O Sports, NIDY, Vasco, Shaker Flats, Cape and Island, Midwest Turf, Mountain West, RS Global, Desso Sports, Crafc0.

Updated Nov. 10, 2020



**FieldTurf Product Offering – See pricing sheet for descriptions, details, and prices**

## **Turf Products:**

### **FieldTurf Synthetic Turf Systems**

FieldTurf CORE 2.5"/2.25"/2.0"  
FieldTurf Revolution 360 2.5"/2.25"/2.0"  
FieldTurf Classic HD 2.5"/2.25"/2.0"  
FieldTurf XM7 2.5"/2.25"/2.0"  
Fieldturf XT 2.5"/2.25"/2.0"  
FieldTurf Vertex Prime 2.5"/2.25"/2.0"  
FieldTurf Vertex Prime CORE 2.5"/2.25"/2"  
FieldTurf Vertex 2.5"/2.25"/2.0"  
FieldTurf Hockey Speed  
FieldTurf Hockey Gold  
FieldTurf EasyField – Removable Tray System  
FieldTurf DoublePlay Speed Baseball Infield/Outfield  
Fieldturf Double Play Natural Baseball Infield/Outfield  
FieldTurf TripleThreat Speed Softball Infield/Outfield  
FieldTurf TripleThreat Natural Softball Infield/Outfield  
FieldTurf Recover – Replacement Overlay  
FieldTurf Removable Batter/Umpire Area Baseball System

### **Turf Inlaid Markings and Ancillary Items**

FieldTurf Inlaid Football Numbers/Arrows  
FieldTurf Inlaid Hash marks  
FieldTurf Inlaid Soccer Markings  
FieldTurf Logo  
FieldTurf – Endzone Letters  
FieldTurf - Field Hockey Lines  
FieldTurf - Lacrosse Lines  
FieldTurf - Baseball Lines  
FieldTurf – Flag Football Lines  
FieldTurf - Softball Lines  
FieldTurf – Football Restraining Lines  
FieldTurf – Lacrosse Tick Marks

### **Testing/Field Monitoring/Misc Services:**

FieldTurf – GMAX  
FieldTurf Preshipment Testing  
FieldTurf Genius  
Turf removal/Disposal  
Supply and Installation of Natural Grass

### **FieldTurf Underlayment Options**

Beynon E-Layer  
PDS Drain Tiles  
Proplay – Proplay  
ThermaGreen

Brock Powerbase  
Brock SP 14  
Beynon Shock Base 19mm-26mm  
Versatile

**FieldTurf Alternate Turf Infill Options:**

FieldTurf CoolPlay  
EPDM  
EASY Fill – Coated Sand  
EnviroFill  
ECO-GRIND  
ECO-GREEN  
ECO-MAX  
PUREFILL – Cork  
PURESELECT – Olive Pits  
PURE GEO- Coconut  
TrueBlend

**FieldTurf Turf Grooming and Maintenance Options**

FieldTurf GroomRight  
FieldTurf SweepRight  
FieldTurf SweepRight Pro  
FieldTurf Groomright Wings  
FieldTurf Tow Behind Magnet  
FieldTurf Static Brush  
FieldTurf Sweep  
FieldCare Maintenance Packages: 1, 5, 8  
PureCare Maintenance Packages 1, 5, 8

**FieldTurf Landscaping and Golf Options –EASYTURF**

AirFieldTurf  
FieldTurf Command CORE  
FieldTurf Command Play Nutmeg  
FieldTurf Command Play Olive  
FieldTurf Command Play Fit Turf  
FieldTurf Olive Premium  
FieldTurf Nutmeg Premium  
FieldTurf Versa Lush  
FieldTurf All Purpose Blend  
FieldTurf Olive Ultra  
FieldTurf Nutmeg Ultra  
FieldTurf Ultra Pet  
FieldTurf General Purpose Thatch  
FieldTurf EasyPlay  
FieldTurf EasyPlay Color  
FieldTurf Classic HD Sports Turf  
FieldTurf Classic HD Sports Turf Color  
FieldTurf Tru-Roll Putting Green  
FieldTurf EasyTurf Signature Pro Tee Turf  
FieldTurf EasyTurf Signature Pro Driving Range Turf  
FieldTurf Playground Pad 12'

FieldTurf Playground Pad 5'  
EastTurf Putting Green Pad

## **Running Track Surfacing Solutions**

### **Latex and Beynon Urethane Track Surfaces**

L-2000

Black or Red Polyresin (13mm)

Poly-4000

Beynon - BSS 50

Beynon- BSS-100

Beynon-BSS-200

Beynon-BSS-300

Beynon- BSS-1000 10mm

Beynon- BSS-1000 13mm

Beynon-BSS-1000 ML

Beynon-BSS-2000 13mm

### **Resurfacing on an Existing Rubber Running Track**

Top-Coat (latex track)

Black or Red Polyresin Resurfacing

Beynon BSS-50RE

Beynon-BSS -100RE

Beynon-BSS-200RE

Beynon-BSS-300RE

Beynon-BSS-2000 RE 5mm

Beynon-BSS-2000 RE 7mm

Beynon WaterBased Spray WBSS

Beynon Hobart Coating

### **Track Misc. items**

Beynon- In-situ-Base

Track Restriping

Track Cleaning

Fast Track 1

Fast Track 3

Fast Track 5

Fast Track 8

### **Field/Track/Court Equipment and Accessories**

Pole Vault Pit

Take off Boards

Shot Put Toe Boards

Shot Put Rings

Discus Rings

Combination Hammer/Discus Cage

Hammer/Discus Conversion Ring

Water Jump Hurdle with Sleeves

Water Jump Cover

Removable Track Curbing

Long jump Sand pits and traps

Sand for Sand Pits and Traps  
 Football Goal Posts-Set  
 Access Frame Kit with Infill retainer System for Adjust Right Football Goal Posts Set  
 Soccer Goals-Set  
 Soccer Goal Wheel Kit  
 Batting Cages  
 SaniSport  
 FieldTurf Cleanse Complete

## Indoor/Outdoor Court Options

Outdoor Court Surfacing – Plexipave

Tarkett Indoor Court Systems:

Omnisports	Compact	Sheet Vinyl Single Color
Omnisports	Speed	Sheet Vinyl Single Color
Omnisports	Multi-Use	Sheet Vinyl Single Color
Omnisports	Active +	Sheet Vinyl Single Color
Omnisports	PurePlay	Sheet Vinyl Single Color
Omnisports	Extreme	Sheet Vinyl Single Color
Omnisports	Dancefloor	Sheet Vinyl Single Color
Omnisports	HPL 7 mm with Compact	Sheet Vinyl Single Color
Omnisports	HPL 9 mm with Compact	Sheet Vinyl Single Color
Omnisports	Tarkolay	Underlayment
Omnisports	Weld Rod 5 mm	Weld Rod
Adhesive	Multi-Set	Adhesive
Adhesive	Multi-Poxy	Adhesive
Adhesive	Tarkotape	Adhesive
Game Line Paint	Gen-U-Line	Game Line Paint
Game Line Paint Primer	Gen-U-Line	Game Line Paint Primer
Linosport	2.5 mm	Linoleum Single Color
PolyTurf Plus Pad and Pour	ReStart	Polyurethane Single Color
PolyTurf Plus Pad and Pour	4+2	Polyurethane Single Color
PolyTurf Plus Pad and Pour	7+2	Polyurethane Single Color
PolyTurf Plus Pad and Pour	9+2	Polyurethane Single Color
PolyTurf Plus Pad and Pour	12+4	Polyurethane Single Color
Adhesive	BeyBond 50	Adhesive
Dancefloor	Dancefloor 3.5mm	Sheet Vinyl
Dancefloor	Inspiration with Dancefloor	Combination
Dancefloor	Inspiration Pro with Dancefloor	Combination
Lumaflex	Classic with Omnisports Compact	Combination
Lumaflex	Classic with Linosport 2.5mm	Combination
Lumaflex	Elite with Omnisports Compact	Combination
Lumaflex	Elite with Linosport 2.5mm	Combination
Lumaflex	Fit with Omnisports Compact	Combination
ClutchCourt	Peformance	Wood 2nd and Better Maple

ClutchCourt	Performance Anchor	Wood 2nd and Better Maple
ClutchCourt	FlexLock	Wood 2nd and Better Maple
ClutchCourt	Trainer 3	Wood 2nd and Better Maple
ClutchCourt	Trainer 2	Wood 2nd and Better Maple
Dropzone	Speckle 8 mm Rolls	Rubber Up To 30% EPDM Color
Dropzone	Speckle 8 mm Interlocking Tiles	Rubber Up To 30% EPDM Color
Dropzone	Comfort 10.5 mm	Rubber Single Color
Dropzone	Comfort 14.5 mm	Rubber Single Color
Dropzone	Elite	Rubber
Dropzone	Power	Rubber
Dropzone	Flex	Rubber
Dropzone	Impact	Rubber
Dropzone	Droptile	Rubber Up To 30% EPDM Color
Dropzone	Droptile Max	Rubber Up To 30% EPDM Color
Dropzone	DropTurf	Indoor Artificial Turf
Dropzone	DropTurf Inlay	Turf Lines and Logos
EasyCourt	EasyCourt	Portable Flooring
EasyCourt	EasyField	Portable Flooring
ADA Transition	EasyCourt/Easyfield ADA Transitions	Accessory 1.75" x 22" x 36" - Black On
Transition	EasyCourt/Easyfield Non - ADA Transitions	Accessory Transition
Game Line Painting	Basketball Game Line Painting	Painting Labor
Game Line Painting	Volleyball Game Line Painting	Painting Labor
Game Line Painting	Pickleball Game Line Painting	Painting Labor
Game Line Painting	Badminton Game Line Painting	Painting Labor
Game Line Painting	Tennis Game Line Painting	Painting Labor
Game Line Painting	Table Tennis Game Line Painting	Painting Labor
Game Line Painting	Logos	Painting Labor
Coved Base 4"	Resilient Base Standard Colors	Resilient Base 4" with Toe
Vented Coved Base	Vented Coved Base Standard Colors	Vented Resilient Base

## **Site Work:**

**Site Work includes but is not limited to any construction necessary to build base for Turf, Track, or Court surfaces to be placed on.**

New Construction – Sq. foot/yard pricing is for supply and installation of sports surfacing only. FieldTurf is prepared to offer turn-key solutions for the construction of the base of running tracks, courts, indoor flooring projects and fields through use of RS Means. The best value pricing for base or civil work is obtained through this costing method.

Site work or new construction may include but is not limited to: removal and disposal of existing sports surface, lighting, demolition, excavation, rock base aggregate, top rock, asphalt, concrete, sidewalks, turf shock absorption underlayment such as e-layer or padding, tie in to existing drainage, drainage systems, conduits, fencing, crack repair, asphalt repair, etc. which can be purchased through RS MEANS.

RS MEANS is self-contained and consists of a turn-key solution that includes a complete line-item listing of all the products, supplies, material, equipment, services, accessories and options with their description, specification, terms, conditions and associated pricing for each item, sub-assemblies and/or assemblies. FieldTurf reserves the right to offer a discount or "adjustment down" to the RS MEANS calculation to account for volume discounts or to stay within standard market pricing.

**Professional Services for any site work project**

1. Project design, development or consultant/construction management.
2. Professional engineering services.
3. Installer/admin (tradesman) (not related to turf, track, or court installation. Project Administrator costs for site work

**Manufacturer's Limited Warranty**

FieldTurf warrants that if **FieldTurf product code** (Product) for multi-sport use synthetic turf proves to be defective in material or installation workmanship, therefore, resulting in premature wear, during normal and ordinary use of the Product for the sporting activities provided herein or for any other uses for which FieldTurf has provided its written authorization, within **eight (8) years** from the date of completion of installation as indicated in this Warranty, FieldTurf shall either repair or replace the affected area of the Product in accordance with the terms of this Warranty. FieldTurf's sole liability under this Warranty shall be limited to either repair or replacement of the affected area of the Product, at its sole discretion, and FieldTurf shall have no other obligations or liabilities with respect to defects of the Product. FieldTurf will, at FieldTurf's option, either repair or replace the affected area to the extent required to meet the Warranty period, but no cash refunds will be made. This Warranty shall commence upon the date of completion indicated in this Warranty. The accompanying Warranty service will not come into effect unless and until FieldTurf's Certificate of Completion is sent for validation to the corporate office of FieldTurf indicated herein within thirty (30) days of the date of completion or Purchaser's first use, whichever occurs first. In all cases, the Warranty shall be deemed to commence upon the date of completion indicated in this Warranty. The acceptance form of the terms and conditions contained in FieldTurf's Maintenance Guidelines must also be provided to FieldTurf's corporate office within thirty (30) days of completion of installation. This Warranty is limited to the remedies of repair or replacement, which shall constitute the exclusive remedies available under this Warranty; all other remedies or recourses which might otherwise be available are hereby waived by the Purchaser. FieldTurf will have no other obligations or liability for damages arising out of or in connection with the use or performance of the Product, including, but without limitation, damages for personal injury and/or economic losses. This Warranty shall not come into effect, and FieldTurf shall have no obligations under this Warranty, unless and until FieldTurf is paid in full for the Product to be warranted hereunder.

**Field Markings:** (sport markings to be specified)

**Other Exclusions**

EXCEPT AS EXPRESSLY SET FORTH IN THE MANUFACTURER'S LIMITED WARRANTY ABOVE, FIELDTURF DISCLAIMS ALL OTHER WARRANTIES OF AN IMPLIED OR IMPLIED IN FACT OR IN LAW INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

THIS WARRANTY SHALL BECOME NULL AND VOID IF THE PURCHASER FAILS TO MAINTAIN THE FIELD IN ACCORDANCE WITH THE FIELDTURF MAINTENANCE GUIDELINES AND SCHEDULE PROVIDED FIELDTURF THEREIN. ALL MAINTENANCE SHALL BE PERFORMED BY FIELDTURF-TRAINED AND OR FIELDTURF-AUTHORIZED MAINTENANCE PERSONNEL ONLY.

Furthermore, this Manufacturer's Limited Warranty **does not cover:**

1. Any damage resulting, directly or indirectly, from *force majeure*, accident, misuse, intentional and unintentional abuse, infill displacement, neglect; or from usage, unintentional or otherwise, that cannot reasonably be considered as normal play or ordinary use of the Product. For purposes of this Warranty, normal play and ordinary use shall mean usage up to 3,000 hours per year of regular play and utilization for the sporting activities provided herein; normal play and ordinary use also includes a reasonable number of users or participants, but does not include repetitive marching, repetitive training or high-intensity drills on the same part of the field, especially in the areas including, but not limited to, home plate, pitcher's mound, base areas, base paths, soccer penalty mark/spot areas, goal areas, sideline areas and lacrosse crease areas, all of which require frequent maintenance in accordance with FieldTurf Maintenance Guidelines and which may require regular replacement. This Warranty is expressly conditioned upon the Customer completing and submitting the FieldTurf Maintenance Log provided in FieldTurf's Maintenance Guidelines.
2. Damage resulting from failure to maintain the Product in accordance with FieldTurf's Maintenance Guidelines provided to the Purchaser. The Purchaser shall keep a log of all maintenance performed on the Product and supply FieldTurf with a copy upon request.



**Manufacturer's Limited Warranty**

3. Damage resulting from repair, attempted repair and/or maintenance by anyone other than FieldTurf, an authorized FieldTurf distributor or an authorized FieldTurf maintainer.
4. Damage due to causes which include, but are not limited to, the application of chemicals and/or cleaning agents, adhesive backing, dirt, traffic, negligence, vandalism, fire, flood, windstorm, animals, improper care and Acts of God.
5. Failure and/or improper design of the base; depression of the soil, subsurface or other matter upon which the base or Product rests; and any and all resulting damage to the Product arising therefrom.
6. FieldTurf does not warrant the percolation rate, long term planarity and/or compaction of the base which the product is installed. **FIELDTURF DISCLAIMS ALL WARRANTIES AS TO THE USE OR PRESSURE OR IMPLIED AND ANY AND ALL RESULTING DAMAGE TO THE PRODUCT ARISING THEREFROM.**
7. Damage resulting from the use of improper footwear such as long-spiked track shoes, regular and repeated use of steel cleats, and flat-soled shoes. Standard molded soccer or football cleats are recommended.
8. Damage resulting from the inadequate installation, improper maintenance and/or other failure of any third party shock pad or underlayment pad installed beneath the Product, including, but not limited to, detachment of the Product caused by expansion and/or contraction of the third party shock pad or underlayment pad.

All synthetic turf is subject to normal wear and tear, which does not constitute a manufacturing defect and is not covered by this Warranty. In addition to the other factors listed in this Warranty and without limitation, the extent of the wear and tear depends on the construction of synthetic turf (fiber face weight, stitch rate, fiber pile height and gauge, infill components and maintenance of the field) and the intensity of use of the synthetic turf. The Product will be stable to light fading with the maximum fading of the Product during the Warranty period not to exceed fifteen percent (15%) of color loss annually based upon an acceptable grey scale. This Warranty does not cover slight variations or gradations of color within the Product and/or face distortion. Normal behavior of the fiber and infill with respect to the wear pattern of a field is more fully explained in the "Field Settling" document, provided in the FieldTurf After-Sales Service Package.

FieldTurf disclaims all liability for incidental and consequential damages for breach of any express or implied warranty, including any implied warranty of merchantability, with respect to the Product. In the event that the Product be used for purposes other than the sporting activities provided herein or for any other uses for which FieldTurf has provided its written authorization, FieldTurf shall not be responsible for damages resulting therefrom and, therefore, this Warranty, as well as any and all applicable legal warranties, shall become **null and void** as Purchaser understands that FieldTurf has tested the Product for use in connection with the said sporting activities and/or uses, and that it may not have tested the Product for other such uses. Any Product repairs or replacements performed under the terms of this Warranty shall not extend the term of this Warranty.

Name of Purchaser:  
Date of Completion:  
Location:  
Address:  
State:  
Tel:  
Signature:

Sporting Activities: Multi-Sport Use  
Installed by: FieldTurf USA, Inc.  
City:  
Zip:  
Fax/email:

Date:

Name :

Reference:

*Disclaimer. The information in this document is subject to change without notice and should not be construed as a commitment by FieldTurf USA, Inc. FieldTurf assumes no responsibility for any errors that may appear in this document.*

**This warranty is insured by a third party.**

For more information please contact Customer Service at FieldTurf at the number listed below.  
7445 Côte-de-Liesse Road Suite 200, Montreal, QC, Canada H4T 1G2 • Toll Free: 1-800-724-2969 •





### **Manufacturer's Limited Warranty**

FieldTurf warrants that if **FieldTurf product code** (Product) for multi-sport use synthetic turf proves to be defective in material or installation workmanship, therefore resulting in premature wear, during normal and ordinary use of the Product for the sporting activities provided herein or for any other uses for which FieldTurf has provided its written authorization, within **five (5) years** from the date of completion of installation as indicated in this Warranty, FieldTurf shall either repair or replace the affected area of the Product in accordance with the terms of this Warranty. FieldTurf's sole liability under this Warranty shall be limited to either repair or replacement of the affected area of the Product, at its sole discretion, and FieldTurf shall have no other obligations or liabilities with respect to defects of the Product. FieldTurf will, at FieldTurf's option, either repair or replace the affected area to the extent required to meet the Warranty period, but no cash refunds will be made. This Warranty shall commence upon the date of completion indicated in this Warranty. The accompanying Warranty service will not come into effect unless and until FieldTurf's Certificate of Completion is sent for validation to the corporate office of FieldTurf indicated herein within thirty (30) days of the date of completion or Purchaser's first use, whichever occurs first. In all cases, the Warranty shall be deemed to commence upon the date of completion indicated in this Warranty. The acceptance form of the terms and conditions contained in FieldTurf's Maintenance Guidelines must also be provided to FieldTurf's corporate office within thirty (30) days of completion of installation. This Warranty is limited to the remedies of repair or replacement, which shall constitute the exclusive remedies available under this Warranty; all other remedies or recourses which might otherwise be available are hereby waived by the Purchaser. FieldTurf will have no other obligations or liability for damages arising out of or in connection with the use or performance of the Product, including, but without limitation, damages for personal injury and/or economic losses. This Warranty shall not come into effect, and FieldTurf shall have no obligations under this Warranty, unless and until FieldTurf is paid in full for the Product to be warranted hereunder. **As concerns the designated high-traffic areas, which include but are not limited to: Home Plate, Pitcher's Mound, Base areas and paths; and all synthetic turf installed anywhere on the infield, the foregoing Warranty applies except that the applicable Warranty period shall be limited to a two (2) year Manufacturer's Warranty.**

**Field Markings:** (sport markings to be specified)

#### **Other Exclusions**

**EXCEPT AS EXPRESSLY SET FORTH IN THE MANUFACTURER'S LIMITED WARRANTY ABOVE, FIELDTURF DISCLAIMS ALL OTHER WARRANTIES OF ANY KIND, EXPRESS OR IMPLIED, IN FACT OR IN LAW, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.**

**THIS WARRANTY SHALL BECOME NULL AND VOID IF THE PURCHASER FAILS TO MAINTAIN THE FIELD IN ACCORDANCE WITH THE FIELDTURF MAINTENANCE GUIDELINES AND SCHEDULE PROVIDED BY FIELDTURF THEREIN. ALL MAINTENANCE SHALL BE PERFORMED BY FIELDTURF-TRAINED AND/OR FIELDTURF-AUTHORIZED MAINTENANCE PERSONNEL ONLY.**

Furthermore, this Manufacturer's Limited Warranty **does not cover:**

1. Any damage resulting, directly or indirectly, from *force majeure*, accident, misuse, intentional and unintentional abuse, infill displacement, neglect; or from usage, unintentional or otherwise, that cannot reasonably be considered as normal play or ordinary use of the Product. For purposes of this Warranty, normal play and ordinary use shall mean usage up to 3,000 hours per year of regular play and utilization for the sporting activities provided herein; normal play and ordinary use also includes a reasonable number of users or participants, but does not include repetitive marching, repetitive training or high-intensity drills on the same part of the field, especially in the areas of, but not limited to, home plate, pitcher's mound, base areas, base paths all of which require frequent maintenance in accordance with FieldTurf Maintenance Guidelines and may require regular replacement.
2. Damage resulting from failure to maintain the Product in accordance with FieldTurf's Maintenance Guidelines provided to the Purchaser, including without limitation, the baseball specific maintenance and use instructions. Given the nature of baseball, this warranty shall be conditional upon the Purchaser carrying out regular baseball specific field maintenance as specified in FieldTurf's applicable maintenance



**Manufacturer's Limited Warranty**

manuals/guidelines and maintaining written logs showing same. The Purchaser understands the particular baseball requirement for frequent in-fill replenishment and maintenance on bases, base paths and anywhere else in-fill is naturally displaced.

3. Damage resulting from repair, attempted repair and/or maintenance by anyone other than FieldTurf, an authorized FieldTurf distributor or an authorized FieldTurf maintainer.
4. Damage due to causes which include, but are not limited to, the application of chemicals and/or cleaning agents, adhesive backing, dirt, traffic, negligence, vandalism, fire, flood, windstorm, animals, improper care and Acts of God.
5. Failure and/or improper design of the base; depression of the soil, subsurface or other matter upon which the base or Product rests; and any and all resulting damage to the Product arising therefrom.
6. FieldTurf does not warrant the percolation rate, long term planarity and/or compaction of the base which the product is installed. **FIELDTURF DISCLAIMS ALL WARRANTIES AS TO THE BASE, EXPRESS OR IMPLIED, AND ANY AND ALL RESULTING DAMAGE TO THE PRODUCT ARISING THEREFROM.**
7. Damage resulting from the use of improper footwear such as long-spiked track shoes, regular and repeated use of steel cleats, and flat-soled shoes. Standard molded soccer or football cleats are recommended.
8. Damage resulting from the inadequate installation, improper maintenance and/or other failure of any third party shock pad or underlayment pad installed beneath the Product, including, but not limited to, detachment of the Product caused by expansion and/or contraction of the third party shock pad or underlayment pad.

All synthetic turf is subject to normal wear and tear, which does not constitute a manufacturing defect and is not covered by this Warranty. In addition to the other factors listed in this Warranty and without limitation, the extent of the wear and tear depends on the construction of synthetic turf (fiber face weight, stitch rate, fiber pile height and gauge, infill components and maintenance of the field) and the intensity of use of the synthetic turf. The Product will be stable to light fading with the maximum fading of the Product during the Warranty period not to exceed fifteen percent (15%) of color loss annually based upon an acceptable grey scale. This Warranty does not cover slight variations or gradations of color within the Product and/or face distortion. Normal behavior of the fiber and infill with respect to the wear pattern of a field is more fully explained in the "Field Settling" document, provided in the FieldTurf After-Sales Service Package.

FieldTurf disclaims all liability for incidental and consequential damages for breach of any express or implied warranty, including any implied warranty of merchantability, with respect to the Product. In the event that the Product be used for purposes other than the sporting activities provided herein or for any other uses for which FieldTurf has provided its written authorization, FieldTurf shall not be responsible for damages resulting therefrom and, therefore, this Warranty, as well as any and all applicable legal warranties, shall become **null and void** as Purchaser understands that FieldTurf has tested the Product for use in connection with the said sporting activities and/or uses, and that it may not have tested the Product for other such uses. Any Product repairs or replacements performed under the terms of this Warranty shall not extend the term of this Warranty.

Name of Purchaser:  
Date of Completion:  
Location:  
Address:  
State:  
Tel:  
Signature:  
Date:

Sporting Activities: Multi-Sport Use  
Installed by: FieldTurf USA, Inc.  
City:  
Zip:  
Fax/email:  
Name :  
Reference:

*Disclaimer. The information in this document is subject to change without notice and should not be construed as a commitment by FieldTurf USA, Inc. FieldTurf assumes no responsibility for any errors that may appear in this document.*

**This warranty is insured by a third party.**

For more information please contact Customer Service at FieldTurf at the number listed below.  
7445 Côte-de-Liesse Road Suite 200, Montreal, QC, Canada H4T 1G2 • Toll Free: 1-800-724-2969 •



### Manufacturer's Limited Warranty

FieldTurf warrants that if **FieldTurf product code** (Product) for multi-sport use synthetic turf proves to be defective in material or installation workmanship, therefore resulting in premature wear, during normal and ordinary use of the Product for the sporting activities provided herein or for any other uses for which FieldTurf has provided its written authorization, within **eight (8) years** from the date of completion of installation as indicated in this Warranty, FieldTurf shall either repair or replace the affected area of the Product in accordance with the terms of this Warranty. FieldTurf's sole liability under this Warranty shall be limited to either repair or replacement of the affected area of the Product, at its sole discretion, and FieldTurf shall have no other obligations or liabilities with respect to defects of the Product. FieldTurf will, at FieldTurf's option, either repair or replace the affected area to the extent required to meet the Warranty period, but no cash refunds will be made. This Warranty shall commence upon the date of completion indicated in this Warranty. The accompanying Warranty service will not come into effect unless and until FieldTurf's Certificate of Completion is sent for validation to the corporate office of FieldTurf indicated herein within thirty (30) days of the date of completion or Purchaser's first use, whichever occurs first. In all cases, the Warranty shall be deemed to commence upon the date of completion indicated in this Warranty. This Warranty is limited to the remedies of repair or replacement, which shall constitute the exclusive remedies available under this Warranty; all other remedies or recourses which might otherwise be available are hereby waived by the Purchaser. FieldTurf will have no other obligations or liability for damages arising out of or in connection with the use or performance of the Product, including, but without limitation, damages for personal injury and/or economic losses. This Warranty shall not come into effect, and FieldTurf shall have no obligations under this Warranty, unless and until FieldTurf is paid in full for the Product to be warranted hereunder. **As concerns the designated high-traffic areas which include but are not limited to: Home Plate Pitcher's Mound base areas and paths and all synthetic turf installed any here on the infield the foregoing warranty applies except that the applicable warranty period shall be limited to a two (2) year Manufacturer's Warranty.**

**Field Markings:** (sport markings to be specified)

#### Other Exclusions

**EXCEPT AS EXPRESSLY SET FORTH IN THE MANUFACTURER'S LIMITED WARRANTY ABOVE, FIELDTURF DISCLAIMS ALL OTHER WARRANTIES OF AN IMPLIED OR IMPLIED IN FACT OR IN LAW INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.**

**THIS WARRANTY SHALL BECOME NULL AND VOID IF THE PURCHASER FAILS TO MAINTAIN THE FIELD IN ACCORDANCE WITH THE FIELDTURF MAINTENANCE GUIDELINES AND SCHEDULE PROVIDED FIELDTURF THEREIN. ALL MAINTENANCE SHALL BE PERFORMED BY FIELDTURF-TRAINED AND OR FIELDTURF-AUTHORIZED MAINTENANCE PERSONNEL ONLY.**

Furthermore, this Manufacturer's Limited Warranty **does not cover:**

1. Any damage resulting, directly or indirectly, from *force majeure*, accident, misuse, intentional and unintentional abuse, infill displacement, neglect; or from usage, unintentional or otherwise, that cannot reasonably be considered as normal play or ordinary use of the Product. For purposes of this Warranty, normal play and ordinary use shall mean usage up to 3,000 hours per year of regular play and utilization for the sporting activities provided herein; normal play and ordinary use also includes a reasonable number of users or participants, but does not include repetitive marching, repetitive training or high-intensity drills on the same part of the field, especially in the areas of, but not limited to, home plate, pitcher's mound, base areas, base paths all of which require frequent maintenance in accordance with FieldTurf Maintenance Guidelines and may require regular replacement.
2. Damage resulting from failure to maintain the Product in accordance with FieldTurf's Maintenance Guidelines provided to the Purchaser, including without limitation, the baseball specific maintenance and use instructions. Given the nature of baseball, this warranty shall be conditional upon the Purchaser carrying out regular baseball specific field maintenance as specified in FieldTurf's applicable maintenance manuals/guidelines and maintaining written logs showing same. The Purchaser understands the particular baseball requirement for frequent in-fill replenishment and maintenance on bases, base paths and anywhere else in-fill is naturally displaced.
3. Damage resulting from repair, attempted repair and/or maintenance by anyone other than FieldTurf, an authorized FieldTurf distributor or an authorized FieldTurf maintainer.



**Manufacturer's Limited Warranty**

4. Damage due to causes which include, but are not limited to, the application of chemicals and/or cleaning agents, adhesive backing, dirt, traffic, negligence, vandalism, fire, flood, windstorm, animals, improper care and Acts of God.
5. Failure and/or improper design of the base; depression of the soil, subsurface or other matter upon which the base or Product rests; and any and all resulting damage to the Product arising therefrom.
6. FieldTurf does not warrant the percolation rate, long term planarity and/or compaction of the base which the product is installed. **FIELDTURF DISCLAIMS ALL WARRANTIES AS TO THE USE OR PRESSURE OR IMPLIED AND ANY AND ALL RESULTING DAMAGE TO THE PRODUCT ARISING THEREFROM.**
7. Damage resulting from the use of improper footwear such as long-spiked track shoes, regular and repeated use of steel cleats, and flat-soled shoes. Standard molded soccer or football cleats are recommended.
8. Damage resulting from the inadequate installation, improper maintenance and/or other failure of any third party shock pad or underlayment pad installed beneath the Product, including, but not limited to, detachment of the Product caused by expansion and/or contraction of the third party shock pad or underlayment pad.

All synthetic turf is subject to normal wear and tear, which does not constitute a manufacturing defect and is not covered by this Warranty. In addition to the other factors listed in this Warranty and without limitation, the extent of the wear and tear depends on the construction of synthetic turf (fiber face weight, stitch rate, fiber pile height and gauge, infill components and maintenance of the field) and the intensity of use of the synthetic turf. The Product will be stable to light fading with the maximum fading of the Product during the Warranty period not to exceed fifteen percent (15%) of color loss annually based upon an acceptable grey scale. This Warranty does not cover slight variations or gradations of color within the Product and/or face distortion. Normal behavior of the fiber and infill with respect to the wear pattern of a field is more fully explained in the "Field Settling" document, provided in the FieldTurf After-Sales Service Package.

FieldTurf disclaims all liability for incidental and consequential damages for breach of any express or implied warranty, including any implied warranty of merchantability, with respect to the Product. In the event that the Product be used for purposes other than the sporting activities provided herein or for any other uses for which FieldTurf has provided its written authorization, FieldTurf shall not be responsible for damages resulting therefrom and, therefore, this Warranty, as well as any and all applicable legal warranties, shall become **null and void** as Purchaser understands that FieldTurf has tested the Product for use in connection with the said sporting activities and/or uses, and that it may not have tested the Product for other such uses. Any Product repairs or replacements performed under the terms of this Warranty shall not extend the term of this Warranty.

Name of Purchaser:  
Date of Completion:  
Location:  
Address:  
State:  
Tel:  
Signature:  
Date:

Sporting Activities: Multi-Sport Use  
Installed by: FieldTurf USA, Inc.  
City:  
Zip:  
Fax/email:  
  
Name :  
Reference:

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For more information please contact Customer Service at FieldTurf at the number listed below.  
7445 Côte-de-Liesse Road Suite 200, Montreal, QC, Canada H4T 1G2 • Toll Free: 1-800-724-2969 •



### Manufacturer's Limited Warranty

FieldTurf warrants that if **FieldTurf FT CORE** (Product) for multi-sport use synthetic turf proves to be defective in material, installation workmanship, therefore resulting in premature wear, during normal and ordinary use of the Product for the sporting activities provided herein or for any other uses for which FieldTurf has provided its written authorization, within **ten (10) years** from the date of completion of installation as indicated in this Warranty, FieldTurf shall either repair or replace the affected area of the Product in accordance with the terms of this Warranty. FieldTurf's sole liability under this Warranty shall be limited to either repair or replacement of the affected area of the Product, at its sole discretion, and FieldTurf shall have no other obligations or liabilities with respect to defects of the Product. FieldTurf will, at FieldTurf's option, either repair or replace the affected area to the extent required to meet the Warranty period, but no cash refunds will be made. This Warranty shall commence upon the date of completion indicated in this Warranty. The accompanying Warranty service will not come into effect unless and until FieldTurf's Certificate of Completion is sent for validation to the corporate office of FieldTurf indicated herein within thirty (30) days of the date of completion or Purchaser's first use, whichever occurs first. In all cases, the Warranty shall be deemed to commence upon the date of completion indicated in this Warranty. The acceptance form of the terms and conditions contained in FieldTurf's Maintenance Guidelines must also be provided to FieldTurf's corporate office within thirty (30) days of completion of installation. This Warranty is limited to the remedies of repair or replacement, which shall constitute the exclusive remedies available under this Warranty; all other remedies or recourses which might otherwise be available are hereby waived by the Purchaser. FieldTurf will have no other obligations or liability for damages arising out of or in connection with the use or performance of the Product, including, but without limitation, damages for personal injury and/or economic losses. This Warranty shall not come into effect, and FieldTurf shall have no obligations under this Warranty, unless and until FieldTurf is paid in full for the Product to be warranted hereunder.

**Field Markings:** (sports markings to be specified)

### Other Exclusions

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Furthermore, this Manufacturer's Limited Warranty does not cover:

1. Any damage resulting, directly or indirectly, from *force majeure*, accident, misuse, intentional and unintentional abuse, infill displacement, neglect; or from usage, unintentional or otherwise, that cannot reasonably be considered as normal play or ordinary use of the Product. For purposes of this Warranty, normal play and ordinary use shall mean usage up to 3,000 hours per year of regular play and utilization for the sporting activities provided herein; normal play and ordinary use also includes a reasonable number of users or participants, but does not include repetitive marching, repetitive training or high-intensity drills on the same part of the field, especially in the areas including, but not limited to, home plate, pitcher's mound, base areas, base paths, soccer penalty mark/spot areas, goal areas, sideline areas and lacrosse crease areas, all of which require frequent maintenance in accordance with FieldTurf Maintenance Guidelines and which may require regular replacement. This Warranty is expressly conditioned upon the Customer completing and submitting the FieldTurf Maintenance Log provided in FieldTurf's Maintenance Guidelines.
2. Damage resulting from failure to maintain the Product in accordance with FieldTurf's Maintenance Guidelines provided to the Purchaser. The Purchaser shall keep a log of all maintenance performed on the Product and supply FieldTurf with a copy upon request.





**Manufacturer's Limited Warranty**

3. Damage resulting from repair, attempted repair and/or maintenance by anyone other than FieldTurf, an authorized FieldTurf distributor or an authorized FieldTurf maintainer.
4. Damage due to causes which include, but are not limited to, the application of chemicals and/or cleaning agents, adhesive backing, dirt, traffic, negligence, vandalism, fire, flood, windstorm, animals, improper care and Acts of God.
5. Failure and/or improper design of the base; depression of the soil, subsurface or other matter upon which the base or Product rests; and any and all resulting damage to the Product arising therefrom.
6. FieldTurf does not warrant the percolation rate, long term planarity and/or compaction of the base which the product is installed. **FIELDTURF DISCLAIMS ALL WARRANTIES AS TO THE USE OR PRESSURE OR IMPLIED AND ANY AND ALL RESULTING DAMAGE TO THE PRODUCT ARISING THEREFROM.**
7. Damage resulting from the use of improper footwear such as long-spiked track shoes, regular and repeated use of steel cleats, and flat-soled shoes. Standard molded soccer or football cleats are recommended.
8. Damage resulting from the inadequate installation, improper maintenance and/or other failure of any third party shock pad or underlayment pad installed beneath the Product, including, but not limited to, detachment of the Product caused by expansion and/or contraction of the third party shock pad or underlayment pad.

All synthetic turf is subject to normal wear and tear, which does not constitute a manufacturing defect and is not covered by this Warranty. In addition to the other factors listed in this Warranty and without limitation, the extent of the wear and tear depends on the construction of synthetic turf (fiber face weight, stitch rate, fiber pile height and gauge, infill components and maintenance of the field) and the intensity of use of the synthetic turf. The Product will be stable to light fading with the maximum fading of the Product during the Warranty period not to exceed fifteen percent (15%) of color loss annually based upon an acceptable grey scale. This Warranty does not cover slight variations or gradations of color within the Product and/or face distortion. Normal behavior of the fiber and infill with respect to the wear pattern of a field is more fully explained in the "Field Settling" document, provided in the FieldTurf After-Sales Service Package.

FieldTurf disclaims all liability for incidental and consequential damages for breach of any express or implied warranty, including any implied warranty of merchantability, with respect to the Product. In the event that the Product be used for purposes other than the sporting activities provided herein or for any other uses for which FieldTurf has provided its written authorization, FieldTurf shall not be responsible for damages resulting therefrom and, therefore, this Warranty, as well as any and all applicable legal warranties, shall become **null and void** as Purchaser understands that FieldTurf has tested the Product for use in connection with the said sporting activities and/or uses, and that it may not have tested the Product for other such uses. Any Product repairs or replacements performed under the terms of this Warranty shall not extend the term of this Warranty.

Name of Purchaser:  
Date of Completion:  
Location:  
Address:  
State:  
Tel:  
Signature:  
Date:

Sporting Activities: Multi-Sport Use  
Installed by: FieldTurf USA, Inc.  
City:  
Zip:  
Fax/email:  
Name :  
Reference:

*Disclaimer. The information in this document is subject to change without notice and should not be construed as a commitment by FieldTurf USA, Inc. FieldTurf assumes no responsibility for any errors that may appear in this document.*

**This warranty is insured by a third party.**

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7445 Côte-de-Liesse Road Suite 200, Montreal, QC, Canada H4T 1G2 • Toll Free: 1-800-724-2969 •



**Manufacturer's Limited Warranty**

FieldTurf warrants that if the **FieldTurf EasyField** ("Product") for multi-sport use synthetic turf proves to be defective in material or initial installation workmanship, resulting in premature wear, during normal and ordinary use of the Product for the sporting activities provided herein, or for any other uses for which FieldTurf provides its written authorization, within one (1) year from the Date of Purchase (as indicated in this Warranty), FieldTurf shall either repair or replace the affected area of the Product in accordance with the terms of this Warranty. FieldTurf's sole liability under this Warranty shall be limited to either repair or replacement of the affected area of the Product, at its sole discretion, and FieldTurf shall have no other obligations or liabilities with respect to defects of the Product. FieldTurf will, at FieldTurf's option, either repair or replace the affected area to the extent required to meet the Warranty period, but no cash refunds will be made. This Warranty shall commence upon the Date of Purchase indicated in this Warranty. This Warranty is limited to the remedies of repair or replacement, which shall constitute the exclusive remedies available under this Warranty; all other remedies or recourse which might otherwise be available are hereby waived by the Purchaser. FieldTurf will have no other obligations or liability for damages arising out of or in connection with the use or performance of the Product, including, without limitation, damages for personal injury, economic losses and/or damages related to base/subgrade, utilities, business interruption, lost revenue, increased costs, and downtime costs. In no event shall FieldTurf be liable for indirect, special, consequential and/or incidental damages of any kind, no matter what the cause. This Warranty shall not come into effect, and FieldTurf shall have no obligations under this Warranty, unless and until FieldTurf is paid in full for the Product to be warranted hereunder.

Any modification to the Product may void this warranty. Should the Product be discontinued, FieldTurf will replace the defective material with a FieldTurf product of equal value. Any product repairs or replacements performed under the terms of this warranty shall not lead to any extension whatsoever of the warranty period. This warranty is exclusive to the original purchaser, is not transferable, and in lieu of all other warranties, expressed or implied, and all other remedies, guarantees and/or liabilities arising by law or otherwise.

**Other Exclusions**

**EXCEPT AS EXPRESSLY SET FORTH IN THE MANUFACTURER'S LIMITED WARRANTY ABOVE, FIELDTURF DISCLAIMS ALL OTHER WARRANTIES OF ANY KIND EXPRESS OR IMPLIED IN FACT OR IN LAW INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.**

**THIS WARRANTY SHALL BECOME NULL AND VOID IF (A) THE PURCHASER FAILS TO MAINTAIN THE FIELD IN ACCORDANCE WITH THE FIELDTURF MAINTENANCE GUIDELINES AND SCHEDULE PROVIDED FIELDTURF THEREIN AND OR (B) THE PURCHASER FAILS TO INSTALL REMOVE AND OR RE-INSTALL THE PRODUCT IN ACCORDANCE WITH FIELDTURF'S RECOMMENDED INSTALLATION PROCEDURES.**

Furthermore, this Manufacturer's Limited Warranty **does not cover**:

1. Any part of the installation procedure by the Purchaser and/or end user. FieldTurf is not responsible for any labor costs incurred for installation of the Product. This warranty does not cover damage caused by improper installation, negligence, water intrusion and/or flooding, abrasion, extreme heat, impact, cutting, freight damage, alteration, or any wear or damage caused by Acts of God.
2. Damage resulting from accident, *force majeure*, misuse, intentional and unintentional abuse, and neglect or from other than normal play and ordinary use of the Product. For purposes of this Warranty, normal play and ordinary use shall mean usage up to 3,000 hours per year of regular play and utilization for the sporting activities provided herein; normal play and ordinary use also includes a reasonable number of users or participants, but does not include repetitive marching, repetitive training or high-intensity drills on the same part of the field, especially in the areas of, but not limited to, home plate, pitcher's mound, base areas, base paths, soccer penalty mark/spot areas, goal areas, sideline areas and lacrosse crease areas, all of which require frequent maintenance in accordance with FieldTurf Maintenance Guidelines and may require regular replacement.
3. Damage resulting from failure to maintain the Product in accordance with FieldTurf's Maintenance Guidelines provided to the Purchaser, a copy of which has been made available to Purchaser. Purchaser shall keep a log of all maintenance performed on the Product and supply FieldTurf with a copy upon request.



**Manufacturer's Limited Warranty**

4. Damage resulting from the Purchaser's failure to install, remove and/or re-install the Product in accordance with FieldTurf's Recommended Installation Procedures, a copy of which has been made available to Purchaser. Purchaser shall limit Product conversions, including installation, removal and re-installation to a reasonable and suitable number of conversions, in the sole discretion of FieldTurf, as the failure of Purchaser to limit all such Product conversions to a reasonable and suitable number may cause damage to the Product, which is not covered under this Warranty. Purchaser shall keep a log of all Product conversions.
5. Damage resulting from repair, attempted repair and/or maintenance by anyone other than FieldTurf or an authorized FieldTurf distributor or authorized FieldTurf maintainer.
6. Damage due to causes which include, but are not limited to, the application of chemicals and/or cleaning agents, adhesive backing, dirt, traffic, negligence, vandalism, fire, flood, windstorm, animals, improper care and Acts of God.
7. Failure and/or improper design of the base; depression of the soil, subsurface or other matter upon which the base or Product rests; and any and all resulting damage to the Product arising therefrom.
8. FieldTurf does not warrant the percolation rate, long term planarity and/or compaction of the base which the product is installed. **FIELDTURF DISCLAIMS ALL WARRANTIES AS TO THE USE OR PRESSURE OR IMPLIED AND ANY AND ALL RESULTING DAMAGE TO THE PRODUCT ARISING THEREFROM.**
9. Damage resulting from the use of improper footwear such as long-spiked track shoes, regular and repeated use of steel cleats, and flat-soled shoes. Standard molded soccer or football cleats are recommended.
10. Damage resulting from the inadequate installation, improper maintenance and/or other failure of any third party shock pad or underlayment pad installed beneath the Product, including, but not limited to, detachment of the Product caused by expansion and/or contraction of the third party shock pad or underlayment pad.
11. Any additional warranties and/or promises offered by a third party. No unauthorized person, fabricator, installer, agent or employee of FieldTurf is entitled to assume any liability on behalf of FieldTurf relating to the sale of the Product or has the authority to increase or alter the obligations or limitations of this warranty.

All synthetic turf is subject to normal wear and tear, which is not a manufacturing defect and is not covered by this Warranty. In addition to the other factors listed in this Warranty, wear and tear depends on, without limitation, the construction of synthetic turf (fiber face weight, stitch rate, fiber pile height and gauge, and maintenance of the field) and the intensity of use of the synthetic turf. The Product will be stable to light fading with the maximum fading of the Product during the Warranty period not to exceed fifteen percent (15%) of color loss annually based upon an acceptable grey scale. This Warranty does not cover slight variations or gradations of color within the Product and/or face distortion.

FieldTurf disclaims all liability for incidental and consequential damages for breach of any express or implied warranty, including any implied warranty of merchantability, with respect to the Product. In the event that the Product is used for purposes other than the sporting activities provided herein or any other uses for which FieldTurf gives its written authorization, it being understood that FieldTurf has tested the Product for use in connection with these sporting activities and may not have tested it for other uses, FieldTurf shall not be responsible for any and all damages incurred and the Manufacturer's Limited Warranty, as well as all legal warranties, shall become null and void. Any Product repairs or replacements performed under the terms of this Warranty shall not extend the term of this Warranty.

<i>Name of Purchaser:</i>	<b>CLIENT NAME</b>	<i>Sporting Activities:</i>	Multi-Sport Use
<i>Date of Completion:</i>		<i>Installed by:</i>	FieldTurf USA, Inc.
<i>Location:</i>		<i>City:</i>	
<i>Address:</i>		<i>Zip:</i>	
<i>State:</i>		<i>Fax/email:</i>	
<i>Tel:</i>			
<i>Signature:</i>		<i>Name :</i>	Darren Gill

**This warranty is insured by a third party.**

For more information please contact Customer Service at FieldTurf at the number listed below.  
7445 Côte-de-Liesse Road Suite 200, Montreal, QC, Canada H4T 1G2 • Toll Free: 1-800-724-2969 •





**Manufacturer's Limited Warranty**

*Date:* February 17, 2020

*Reference:* 8800

SAMPLE

**This warranty is insured by a third party.**

For more information please contact Customer Service at FieldTurf at the number listed below.  
7445 Côte-de-Liesse Road Suite 200, Montreal, QC, Canada H4T 1G2 • Toll Free: 1-800-724-2969 •



### **Manufacturer's Limited Warranty**

FieldTurf warrants that if **FieldTurf product code** (Product) for multi-sport use synthetic turf proves to be defective in material or installation workmanship, therefore, resulting in premature wear, during normal and ordinary use of the Product for the sporting activities provided herein or for any other uses for which FieldTurf has provided its written authorization, within **five (5) years** from the date of completion of installation as indicated in this Warranty, FieldTurf shall either repair or replace the affected area of the Product in accordance with the terms of this Warranty. FieldTurf's sole liability under this Warranty shall be limited to either repair or replacement of the affected area of the Product, at its sole discretion, and FieldTurf shall have no other obligations or liabilities with respect to defects of the Product. FieldTurf will, at FieldTurf's option, either repair or replace the affected area to the extent required to meet the Warranty period, but no cash refunds will be made. This Warranty shall commence upon the date of completion indicated in this Warranty. The accompanying Warranty service will not come into effect unless and until FieldTurf's Certificate of Completion is sent for validation to the corporate office of FieldTurf indicated herein within thirty (30) days of the date of completion or Purchaser's first use, whichever occurs first. In all cases, the Warranty shall be deemed to commence upon the date of completion indicated in this Warranty. The acceptance form of the terms and conditions contained in FieldTurf's Maintenance Guidelines must also be provided to FieldTurf's corporate office within thirty (30) days of completion of installation. This Warranty is limited to the remedies of repair or replacement, which shall constitute the exclusive remedies available under this Warranty; all other remedies or recourses which might otherwise be available are hereby waived by the Purchaser. FieldTurf will have no other obligations or liability for damages arising out of or in connection with the use or performance of the Product, including, but without limitation, damages for personal injury and/or economic losses. This Warranty shall not come into effect, and FieldTurf shall have no obligations under this Warranty, unless and until FieldTurf is paid in full for the Product to be warranted hereunder.

**Field Markings:** (sport markings to be specified)

### **Other Exclusions**

**EXCEPT AS EXPRESSLY SET FORTH IN THE MANUFACTURER'S LIMITED WARRANTY ABOVE, FIELDTURF DISCLAIMS ALL OTHER WARRANTIES OF ANY KIND, EXPRESS OR IMPLIED, IN FACT OR IN LAW, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.**

**THIS WARRANTY SHALL BECOME NULL AND VOID IF THE PURCHASER FAILS TO MAINTAIN THE FIELD IN ACCORDANCE WITH THE FIELDTURF MAINTENANCE GUIDELINES AND SCHEDULE PROVIDED BY FIELDTURF THEREIN. ALL MAINTENANCE SHALL BE PERFORMED BY FIELDTURF-TRAINED AND/OR FIELDTURF-AUTHORIZED MAINTENANCE PERSONNEL ONLY.**

Furthermore, this Manufacturer's Limited Warranty **does not cover:**

1. Any damage resulting, directly or indirectly, from *force majeure*, accident, misuse, intentional and unintentional abuse, infill displacement, neglect; or from usage, unintentional or otherwise, that cannot reasonably be considered as normal play or ordinary use of the Product. For purposes of this Warranty, normal play and ordinary use shall mean usage up to 3,000 hours per year of regular play and utilization for the sporting activities provided herein; normal play and ordinary use also includes a reasonable number of users or participants, but does not include repetitive marching, repetitive training or high-intensity drills on the same part of the field, especially in the areas including, but not limited to, home plate, pitcher's mound, base areas, base paths, soccer penalty mark/spot areas, goal areas, sideline areas and lacrosse crease areas, all of which require frequent maintenance in accordance with FieldTurf Maintenance Guidelines and which may require regular replacement. This Warranty is expressly conditioned upon the Customer completing and submitting the FieldTurf Maintenance Log provided in FieldTurf's Maintenance Guidelines.
2. Damage resulting from failure to maintain the Product in accordance with FieldTurf's Maintenance Guidelines provided to the Purchaser. The Purchaser shall keep a log of all maintenance performed on the Product and supply FieldTurf with a copy upon request.



**Manufacturer's Limited Warranty**

3. Damage resulting from repair, attempted repair and/or maintenance by anyone other than FieldTurf, an authorized FieldTurf distributor or an authorized FieldTurf maintainer.
4. Damage due to causes which include, but are not limited to, the application of chemicals and/or cleaning agents, adhesive backing, dirt, traffic, negligence, vandalism, fire, flood, windstorm, animals, improper care and Acts of God.
5. Failure and/or improper design of the base; depression of the soil, subsurface or other matter upon which the base or Product rests; and any and all resulting damage to the Product arising therefrom.
6. FieldTurf does not warrant the percolation rate, long term planarity and/or compaction of the base which the product is installed. **FIELDTURF DISCLAIMS ALL WARRANTIES AS TO THE BASE, EXPRESS OR IMPLIED, AND ANY AND ALL RESULTING DAMAGE TO THE PRODUCT ARISING THEREFROM.**
7. Damage resulting from the use of improper footwear such as long-spiked track shoes, regular and repeated use of steel cleats, and flat-soled shoes. Standard molded soccer or football cleats are recommended.
8. Damage resulting from the inadequate installation, improper maintenance and/or other failure of any third party shock pad or underlayment pad installed beneath the Product, including, but not limited to, detachment of the Product caused by expansion and/or contraction of the third party shock pad or underlayment pad.

All synthetic turf is subject to normal wear and tear, which does not constitute a manufacturing defect and is not covered by this Warranty. In addition to the other factors listed in this Warranty and without limitation, the extent of the wear and tear depends on the construction of synthetic turf (fiber face weight, stitch rate, fiber pile height and gauge, infill components and maintenance of the field) and the intensity of use of the synthetic turf. The Product will be stable to light fading with the maximum fading of the Product during the Warranty period not to exceed fifteen percent (15%) of color loss annually based upon an acceptable grey scale. This Warranty does not cover slight variations or gradations of color within the Product and/or face distortion. Normal behavior of the fiber and infill with respect to the wear pattern of a field is more fully explained in the "Field Setting" document, provided in the FieldTurf After-Sales Service Package.

FieldTurf disclaims all liability for incidental and consequential damages for breach of any express or implied warranty, including any implied warranty of merchantability, with respect to the Product. In the event that the Product be used for purposes other than the sporting activities provided herein or for any other uses for which FieldTurf has provided its written authorization, FieldTurf shall not be responsible for damages resulting therefrom and, therefore, this Warranty, as well as any and all applicable legal warranties, shall become **null and void** as Purchaser understands that FieldTurf has tested the Product for use in connection with the said sporting activities and/or uses, and that it may not have tested the Product for other such uses. Any Product repairs or replacements performed under the terms of this Warranty shall not extend the term of this Warranty.

Name of Purchaser:  
Date of Completion:  
Location:  
Address:  
State:  
Tel:  
Signature:  
Date:

Sporting Activities: Multi-Sport Use  
Installed by: FieldTurf USA, Inc.  
City:  
Zip:  
Fax/email:  
Name :  
Reference:

*Disclaimer. The information in this document is subject to change without notice and should not be construed as a commitment by FieldTurf USA, Inc. FieldTurf assumes no responsibility for any errors that may appear in this document.*

**This warranty is insured by a third party.**

For more information please contact Customer Service at FieldTurf at the number listed below.  
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## TRACK WARRANTY (FULL DEPTH)

Beynon Sports Surfaces guarantees the installation of the rubber athletic surface to be free from defects in materials and workmanship for a period of (5) years from completion of installation. Should any defect occur, repairs will be made free of charge. This guarantee covers only the work performed by Beynon Sports Surfaces.

The guarantee covers track and field use only, and shall not be interpreted as holding Beynon Sports Surfaces responsible for any deterioration of the work due to normal use or the abuses of the installation. Abuse of the installation specifically includes, but is not limited to:

- 1) Use of the track by motor vehicles or equipment.
- 2) Use of the track for other than track and field activity (i.e. parades, assembly, and bleachers).
- 3) Damage to the surface caused by football, soccer, or baseball.
- 4) Vandalism.

The owner acknowledges that the sub-base and the base are a completely separate installation and are not covered by this guarantee. This guarantee does not cover the base asphalt or problems in the Beynon rubber track surface which are a result of defect, cracking, shifting or deterioration of the base asphalt or vegetation growth through the base asphalt.

The track striping, when provided by Beynon Sports Surfaces is guaranteed as above to be free from defects in materials and workmanship. Fading due to normal use is excluded.

This warranty is the exclusive and sole remedy of the owner. Prior to warranty being effective, all bills associated with the installation of the track system must be paid in full.

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Beynon Sports Surfaces

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Project

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Date

## MAINTENANCE TRACK SURFACE WARRANTY

Beynon Sports Surfaces. guarantees the installation of the rubber athletic surface to be free from defects in materials and workmanship for a period of (1) one year from completion of installation. Should any defect occur, repairs will be made free of charge. This guarantee covers only the work performed by Beynon Sports Surfaces.

The guarantee covers track and field use only, and shall not be interpreted as holding Beynon Sports Surfaces responsible for any deterioration of the work due to normal use or the abuses of the installation. Abuse of the installation specifically includes, but is not limited to:

- 1) Use of the track by motor vehicles or equipment.
- 2) Use of the track for other than track and field activity (i.e. parades, assembly, and bleachers).
- 3) Damage to the surface caused by football, soccer, or baseball.
- 4) Vandalism.

The owner acknowledges that the sub-base and the base are a completely separate installation and are not covered by this guarantee. This guarantee does not cover the base asphalt or problems in the Beynon rubber track surface which are a result of defect, cracking, shifting or deterioration of the base asphalt or vegetation growth through the base asphalt.

The track striping, when provided by Beynon Sports Surfaces is guaranteed as above to be free from defects in materials and workmanship. Fading due to normal use is excluded.

This warranty is the exclusive and sole remedy of the owner. Prior to warranty being effective, all bills associated with the installation of the track system must be paid in full.

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Beynon Sports Surfacing

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Project

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Date



**10-YR WARRANTY**

**– TRACK SURFACE**

**INSTALLED AT**



A Tarkett Sports Company

19600 SW 129<sup>th</sup> Ave. Suite A

Tualatin, OR. 97062

503-691-2484

1-800-423-5875

## 10-YR WARRANTY

**WARRANTOR:** Beynon Sports Surfaces, Inc. ("BSS")  
19600 SW 129<sup>th</sup> Ave., Suite A  
Tualatin, OR 97062

**OWNER:**

**PROJECT:** B.S.S. \_\_\_\_ – Synthetic Track Surface (the "Surface")

**WARRANTY:** BSS warrants to Owner, subject to the terms and conditions contained in this Warranty, that the above-described Surface is free from defects in materials and workmanship under normal use and service, and that the Surface was installed in accordance with the drawings, plans and specifications for the Surface. Beynon Sports Surfaces, Inc. will replace the high stress areas one (1) time within the warranty period and re-stripe all lane and event markings one (1) time at the owner's direction. The high stress areas are defined as 1) The start area at the beginning of the chute for the sprint events, 2) The plant area for the pole vault event, 3) The plant area(s) for the long / triple jump events and 4) The plant area(s) for the high jump event.

**WARRANTY PERIOD:** This Warranty shall be in force for a period of ten years from the Effective Date as defined below.

**RESPONSE FOR WARRANTY REPAIRS:** BSS agrees to perform all repairs required by this Warranty within a reasonable time upon receiving proper written notice from Owner as provided below and after BSS carries out all inspections and tests which it may deem necessary or advisable.

**LIMITATIONS AND EXCLUSIONS:** This Warranty does not apply to any defect, failure, damage, or undue wear in or to the Surface caused by or connected with: (a) improper or insufficient design or engineering, or improper or insufficient project drawings, plans or specifications which were not provided by BSS; (b) an inadequate or defective pre-existing base or surface under the Surface covered by this Warranty, including but not limited to separations of concrete slab(s) or deterioration of asphalt not installed by BSS ; (c) the inherent characteristics of the surface or other supporting materials upon which the Surface is installed; (d) misuse, abuse, or deliberate acts of vandalism; (e) accident, negligence, or acts of God; (f) excessive static or dynamic loads; (g) use of improper cleaning methods; (h) moisture accumulation under the Surface after installation which may cause: 1) bubbles under the Surface, 2) adhesion problems or failures, or 3) other problems or failures not related to defects in materials; or (i) Owner's failure to care for and maintain the Surface in accordance with BSS's written instructions.

This Warranty does not cover any staining, discolorations, or other damage caused by excessive moisture from such things as flooding, plumbing and appliance leaks, or other water leakage. BSS does not warrant

or guarantee the accuracy or sufficiency of any drawings, plans or specifications not prepared by BSS and which were used in connection with installing the Surface. This Warranty shall not apply to the Surface, or any part thereof, which has been repaired or altered without BSS's prior written consent. No allowance or credit will be granted for any repairs or alterations to the Surface made by Owner except as authorized by this Warranty.

THIS WARRANTY IS EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES, EXPRESS, IMPLIED OR ARISING BY OPERATION OF LAW, INCLUDING (BUT NOT LIMITED TO) ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE AND OF ALL OTHER OBLIGATIONS OR LIABILITIES ON BSS'S PART. BSS SHALL NOT BE LIABLE FOR ANY INCIDENTAL, CONSEQUENTIAL, SPECIAL OR INDIRECT DAMAGES UNDER THIS WARRANTY, INCLUDING BUT NOT LIMITED TO ANY ACTIONS ALLEGING DAMAGES UNDER TORT, CONTRACT OR STRICT LIABILITY. THIS WARRANTY SHALL BE VOID IF CONTRACTOR HAS NOT BEEN PAID IN FULL FOR ITS WORK.

BSS'S SOLE OBLIGATION UNDER THIS WARRANTY IS TO REPAIR OR REPLACE AT ITS SOLE DISCRETION ALL OR ANY PORTION OF THE SURFACE WHICH MAY BE DETERMINED TO BE DEFECTIVE. BSS'S LIABILITY FOR ANY SUCH REPAIR OR REPLACEMENT SHALL IN NO EVENT EXCEED THE AMOUNT OF THE PURCHASE PRICE ATTRIBUTABLE TO THE DEFECTIVE PORTION OF THE SURFACE WHICH IS REPAIRED OR REPLACED.

BSS neither assumes nor authorizes any person to assume for it any other liability in connection with the sale, installation or use of the Surface. This Warranty shall not be construed to be an obligation of any performance or other bond furnished by any party in connection with BSS's contract for the Surface and shall not be enforceable against any such party. Labor and materials needed for any repair work not covered by this Warranty will be billed to Owner at BSS's regular hourly rates and materials charges.

**WARRANTY DISCLAIMER ON PRE-EXISTING BASE AND UNDERLYING SURFACE COATING:** All pre-existing base and surface coating (if any) upon which the new BSS Surface has been installed is specifically excluded from any coverage under this Warranty. BSS's previous acceptance of any such pre-existing base or surface coating for installation of the Surface shall not be deemed to constitute a warranty or other guaranty thereof. Depressions in any pre-existing base or surface coating have been patched by BSS only as specified in the written plans and specifications for the Surface. Owner further acknowledges and agrees that any damage caused to the Surface by (a) any pre-existing base or surface coating and (b) any cracks which are now in or which may develop hereafter in the pre-existing base or surface coating are specifically excluded from any coverage under this Warranty.

**MAINTENANCE INSTRUCTIONS:** BSS has supplied Owner with a copy of the written Maintenance Instructions containing directions for the care and maintenance of the Surface. Owner acknowledges receipt of said Instructions and agrees to comply with and carry out the directions contained in it as a condition of this Warranty. The terms of the Instructions are incorporated in this Warranty by reference.

**CLAIMS:** All claims by Owner under this Warranty must be made in writing to the following address within thirty calendar days after Owner learns of any defect giving rise to the claim: Contract Administrator,



(Synthetic Floors), Beynon Sports Surfaces, Inc., 19600 SW 129<sup>th</sup> Ave., Suite A Tualatin, OR 97062.

**INSPECTION AND TESTS:** BSS shall be allowed to inspect the Surface during reasonable business hours regarding any claim which Owner makes under this Warranty; to be present at and to analyze the results of all tests conducted by Owner or others; and to conduct such tests as BSS in its discretion may deem advisable. Owner shall promptly furnish BSS with a copy of all written reports of any tests performed by Owner or on Owner's behalf. BSS shall not be responsible for any costs or expenses incurred by Owner or others with respect to such tests, except that BSS shall pay for the costs of all tests and analyses conducted or directed by BSS's representatives.

**EFFECTIVE DATE:** The Effective Date of this Warranty is \_\_\_\_\_

**GOVERNING LAW:** This Warranty shall be governed by and interpreted in accordance with the laws of the State of Oregon.

**BEYNON SPORTS SURFACES, INC. ("BSS")**

By: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

## COURT WARRANTY

Beynon Sports Surfaces and California Products Corp. guarantees the installation of the tennis court surface to be free from defects in materials and workmanship for a period of (1) one year from completion of installation. Should any defect occur, repairs will be made free of charge. This guarantee covers only the materials and work performed by Beynon Sports Surfaces and their sub-contractors.

The guarantee covers tennis court use only, and shall not be interpreted as holding Beynon Sports Surfaces or California Products Corp. responsible for any deterioration of the work due to normal use or the abuses of the installation. Abuse of the installation specifically includes, but is not limited to:

- 1) Use of the tennis/basketball court by motor vehicles or equipment.
- 2) Use of the tennis court for other than tennis activity.
- 3) Damage to the surface caused by vandalism.

The owner acknowledges that the sub-base and the base are a completely separate installation and are not covered by this guarantee. This guarantee does not cover the base asphalt/concrete or problems in the court surfacing system which are a result of defect, cracking, shifting or deterioration of the base asphalt/concrete or vegetation growth through the base asphalt/concrete.

The court striping, when provided by Beynon Sports surfaces is guaranteed as above to be free from defects in materials and workmanship. Fading due to normal use is excluded.

This warranty is the exclusive and sole remedy of the owner. Prior to warranty being effective, all bills associated with the installation of the court system must be paid in full.

\_\_\_\_\_  
Beynon Sports Surfaces                      California Products Corp.

\_\_\_\_\_  
Project

\_\_\_\_\_  
Date



# VERTEX CORE



# YOU CAN HAVE IT ALL

.....

This is one of those rare moments when you can truly have it all. We created Vertex CORE to deliver the perfect combination of performance and beauty. Vertex CORE delivers leading agility, safety, durability and aesthetics.

We equipped the system with, not only one of our legendary fibers, but two! We utilized our renowned Classic HD slit-film fiber and teamed it up with our CORE monofilament super fiber to construct Vertex CORE.

We strive to only deliver excellence. Our unwavering dedication to quality continues to fuel us to Change The Game.

## ALL THE BELLS AND WHISTLES

Vertex CORE features all of FieldTurf's exclusive system technology: CORE & Classic HD fibers for performance, heavyweight infill for safety and SureLock coating drainage for durability and usage. From top to bottom, the system is designed to deliver at the elite level. The system can also be equipped with our renowned cooling infill, CoolPlay.

### EXCLUSIVE SUPER FIBER



CORE's multi-layer dual-polymer fiber design optimizes the system's performance, delivering a more realistic, textured, grass-like shape with optimal durability and resiliency

### PROVEN SAFETY



The findings of long-term independent research show that FieldTurf's heavyweight systems are safer than, or equal to, competitive systems.

### INDUSTRY LEADING WARRANTY



We're not scared to back up what we preach. Vertex CORE comes with an industry leading 10-year warranty. Don't jeopardize your energy, time, and investment; protect it.

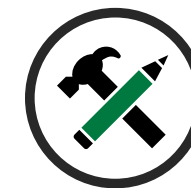
### CERTIFIED ELITE



Tested and certified by leading international governing bodies, Vertex CORE is optimal for football, soccer and rugby.

\*Vertex CORE is available in several World Rugby, FIFA Quality Pro & Quality systems.

### DESIGNED BEAUTIFUL



As both fibers are tufted together in the same stitch, the system delivers a superior aesthetic appearance. Make your field the talk of the town

### LEADING DRAINAGE



FieldTurf's SureLock backing delivers premier strength, stability and drainage. The patented finger-unit seals only the rows of fibers, leaving the backing 40% porous, allowing for leading drainage.

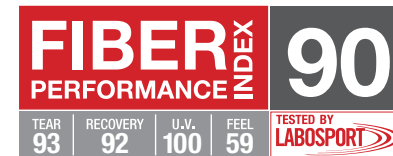
# TWO OF THE WORLD'S LEADING FIBERS

.....

We equipped the system with not only one of our legendary fibers, but two! We utilized our renowned Classic HD slit-film fiber and teamed it up with our CORE monofilament super fiber to construct Vertex CORE.

# PERFORMANCE AND SAFETY BACKED BY SCIENCE

FIELDTURF  
INNOVATION+  
PERFORMANCE  
CENTER



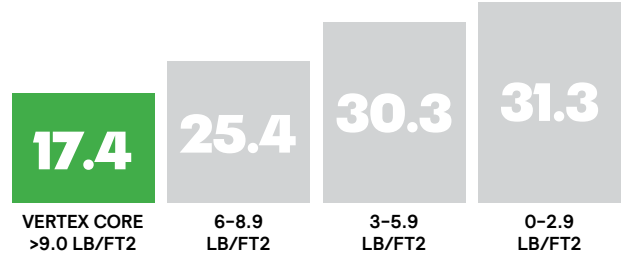
\*Score for CORE2 fiber. Averages based on 37 certificates issued in 2016.



TEST	QUALITY PRO	VERTEX CORE
Ball Roll	4m - 8m	✓
Ball Rebound	0.6m - 0.85m	✓
Shock Absorption	62% - 68%	✓
Vertical Deformation	6mm - 10mm	✓
Rotational Resistance	32nm - 43nm	✓



CYCLES	SCORE
50,000	PERFECT: 10/10
100,000	PERFECT: 10/10
150,000	PERFECT: 10/10



Results based on 2.5" Vertex CORE system. Original Research Incidence, Mechanisms, and Severity of Game-Related High School Football Injuries Across Artificial Turf Systems of Various Infill Weights.



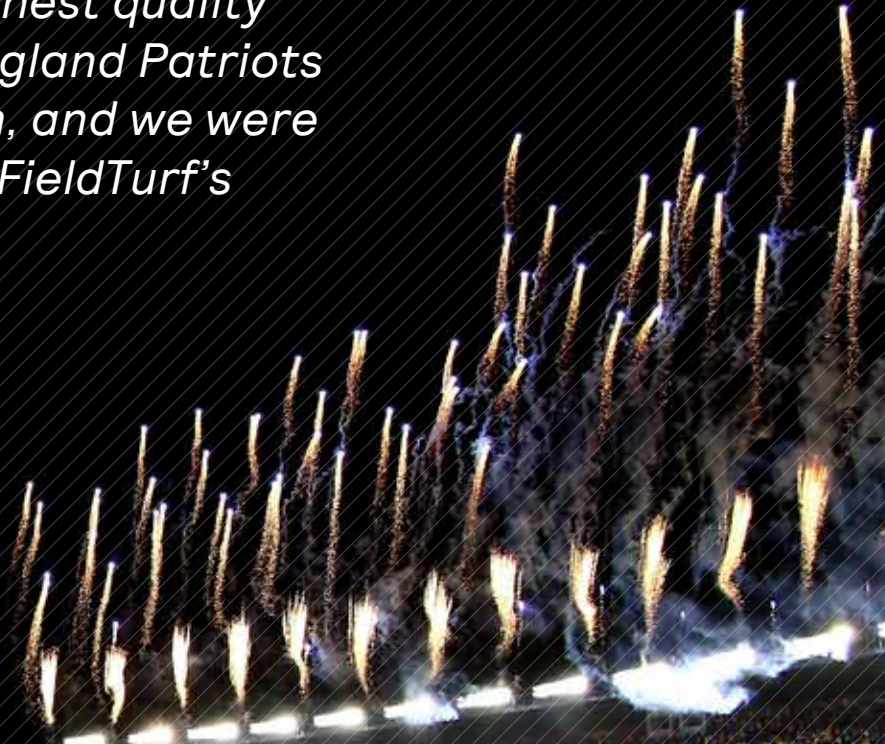
*We are excited to upgrade our game field to the latest FieldTurf technology. It is our goal each year to provide the highest quality surface for both the New England Patriots and New England Revolution, and we were eager to take advantage of FieldTurf's latest innovations."*

**Jim Nolan**

CHIEF OPERATING OFFICER  
GILLETTE STADIUM



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# CHANGE THE GAME

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**TECHNICAL PRODUCT SPECIFICATION**
**VERTEX CORE**

**MONOFILAMENT/SLIT-FILM 2.5**

PROPERTY	VALUE	UNITS	METHOD
Product Stock Code	FTVTC-1		
Pile Yarn Type	UV-resistant polyethylene		n/a
Yarn Structure 1	Ridged Monofilament		n/a
Yarn Denier 1	14000	Denier	D1577
Tape Thickness 1	380	Microns	
Yarn Structure 2	Slit-Film		
Yarn Denier 2	5000	Denier	D1577
Tape Thickness 2	130	Microns	
Pile Height	2.5	inches	D5823
Pile Weight	47	oz/yd <sup>2</sup>	D5848
Primary Backing Weight	7+	oz/yd <sup>2</sup>	D5848
Secondary Backing Weight (Finger-Unit)	14+	oz/yd <sup>2</sup>	D5848
Total Carpet Weight	68	oz/yd <sup>2</sup>	D5848
Stitch Gauge	3/4 inch centers		D5793
Tuft Bind	8+	lbs/force	D1335
Grab Tear Length	>200	lbs/force	D5034
Grab Tear Width	>200	lbs/force	D5034
Pill Burn Test	Pass		D2859
Impact Attenuation (Gmax)	<200	gmax	F1936
Water Permeability	>40	inch/hour	DIN 18-035
Cryogenic SBR Rubber Infill	3	Lbs/ft <sup>2</sup>	
Sand	6.2	Lbs/ft <sup>2</sup>	
Total Product Weight	1393	oz/yd <sup>2</sup>	

Issue Date: 7/29/2020

Disclaimer: Variation of +/-5% on above listed property values is within normal manufacturing tolerances





**TECHNICAL PRODUCT SPECIFICATION**
**VERTEX CORE**

**MONOFILAMENT/SLIT-FILM 2.5**

PROPERTY	VALUE	UNITS	METHOD
Product Stock Code	FTVTC-1		
Pile Yarn Type	UV-resistant polyethylene		n/a
Yarn Structure 1	Ridged Monofilament		n/a
Yarn Denier 1	14000	Denier	D1577
Tape Thickness 1	380	Microns	
Yarn Structure 2	Slit-Film		
Yarn Denier 2	5000	Denier	D1577
Tape Thickness 2	130	Microns	
Pile Height	2.5	inches	D5823
Pile Weight	47	oz/yd <sup>2</sup>	D5848
Primary Backing Weight	7+	oz/yd <sup>2</sup>	D5848
Secondary Backing Weight (Finger-Unit)	14+	oz/yd <sup>2</sup>	D5848
Total Carpet Weight	68	oz/yd <sup>2</sup>	D5848
Stitch Gauge	3/4 inch centers		D5793
Tuft Bind	8+	lbs/force	D1335
Grab Tear Length	>200	lbs/force	D5034
Grab Tear Width	>200	lbs/force	D5034
Pill Burn Test	Pass		D2859
Impact Attenuation (Gmax)	<200	gmax	F1936
Water Permeability	>40	inch/hour	DIN 18-035
CoolPlay Infill	0.6	Lbs/ft <sup>2</sup>	
Cryogenic SBR Rubber Infill	2.4	Lbs/ft <sup>2</sup>	
Sand	6.2	Lbs/ft <sup>2</sup>	
Total Product Weight	1393	oz/yd <sup>2</sup>	

Issue Date: 7/29/2020

Disclaimer: Variation of +/-5% on above listed property values is within normal manufacturing tolerances



**TECHNICAL PRODUCT SPECIFICATION**
**VERTEX CORE**

**MONOFILAMENT/SLIT-FILM 2**

PROPERTY	VALUE	UNITS	METHOD
Product Stock Code	FTVTC-2		
Pile Yarn Type	UV-resistant polyethylene		n/a
Yarn Structure 1	Ridged Monofilament		n/a
Yarn Denier 1	14000	Denier	D1577
Tape Thickness 1	380	Microns	
Yarn Structure 2	Slit-Film		
Yarn Denier 2	5000	Denier	D1577
Tape Thickness 2	130	Microns	
Pile Height	2	inches	D5823
Pile Weight	39	oz/yd <sup>2</sup>	D5848
Primary Backing Weight	7+	oz/yd <sup>2</sup>	D5848
Secondary Backing Weight (Finger-Unit)	14+	oz/yd <sup>2</sup>	D5848
Total Carpet Weight	60	oz/yd <sup>2</sup>	D5848
Stitch Gauge	3/4 inch centers		D5793
Tuft Bind	8+	lbs/force	D1335
Grab Tear Length	>200	lbs/force	D5034
Grab Tear Width	>200	lbs/force	D5034
Pill Burn Test	Pass		D2859
Impact Attenuation (Gmax)	<200	gmax	F1936
Water Permeability	>40	inch/hour	DIN 18-035
Cryogenic SBR Rubber Infill	2.6	Lbs/ft <sup>2</sup>	
Sand	3.65	Lbs/ft <sup>2</sup>	
Total Product Weight	960	oz/yd <sup>2</sup>	

Issue Date: 7/29/2020

Disclaimer: Variation of +/-5% on above listed property values is within normal manufacturing tolerances



**TECHNICAL PRODUCT SPECIFICATION**
**VERTEX CORE**

**MONOFILAMENT/SLIT-FILM 2**

PROPERTY	VALUE	UNITS	METHOD
Product Stock Code	FTVTC-2		
Pile Yarn Type	UV-resistant polyethylene		n/a
Yarn Structure 1	Ridged Monofilament		n/a
Yarn Denier 1	14000	Denier	D1577
Tape Thickness 1	380	Microns	
Yarn Structure 2	Slit-Film		
Yarn Denier 2	5000	Denier	D1577
Tape Thickness 2	130	Microns	
Pile Height	2	inches	D5823
Pile Weight	39	oz/yd <sup>2</sup>	D5848
Primary Backing Weight	7+	oz/yd <sup>2</sup>	D5848
Secondary Backing Weight (Finger-Unit)	14+	oz/yd <sup>2</sup>	D5848
Total Carpet Weight	60	oz/yd <sup>2</sup>	D5848
Stitch Gauge	3/4 inch centers		D5793
Tuft Bind	8+	lbs/force	D1335
Grab Tear Length	>200	lbs/force	D5034
Grab Tear Width	>200	lbs/force	D5034
Pill Burn Test	Pass		D2859
Impact Attenuation (Gmax)	<200	gmax	F1936
Water Permeability	>40	inch/hour	DIN 18-035
CoolPlay Infill	0.6	Lbs/ft <sup>2</sup>	
Cryogenic SBR Rubber Infill	2	Lbs/ft <sup>2</sup>	
Sand	3.65	Lbs/ft <sup>2</sup>	
Total Product Weight	960	oz/yd <sup>2</sup>	

Issue Date: 7/29/2020

Disclaimer: Variation of +/-5% on above listed property values is within normal manufacturing tolerances



**TECHNICAL PRODUCT SPECIFICATION**
**VERTEX CORE**

**MONOFILAMENT/SLIT-FILM 2.25**

PROPERTY	VALUE	UNITS	METHOD
Product Stock Code	FTVTC-57		
Pile Yarn Type	UV-resistant polyethylene		n/a
Yarn Structure 1	Ridged Monofilament		n/a
Yarn Denier 1	14000	Denier	D1577
Tape Thickness 1	380	Microns	
Yarn Structure 2	Slit-Film		
Yarn Denier 2	5000	Denier	D1577
Tape Thickness 2	130	Microns	
Pile Height	2.25	inches	D5823
Pile Weight	43	oz/yd <sup>2</sup>	D5848
Primary Backing Weight	7+	oz/yd <sup>2</sup>	D5848
Secondary Backing Weight (Finger-Unit)	14+	oz/yd <sup>2</sup>	D5848
Total Carpet Weight	64	oz/yd <sup>2</sup>	D5848
Stitch Gauge	3/4 inch centers		D5793
Tuft Bind	8+	lbs/force	D1335
Grab Tear Length	>200	lbs/force	D5034
Grab Tear Width	>200	lbs/force	D5034
Pill Burn Test	Pass		D2859
Impact Attenuation (Gmax)	<200	gmax	F1936
Water Permeability	>40	inch/hour	DIN 18-035
Cryogenic SBR Rubber Infill	2.2	Lbs/ft <sup>2</sup>	
Sand	6.2	Lbs/ft <sup>2</sup>	
Total Product Weight	1274	oz/yd <sup>2</sup>	

Issue Date: 7/29/2020

Disclaimer: Variation of +/-5% on above listed property values is within normal manufacturing tolerances



**TECHNICAL PRODUCT SPECIFICATION**
**VERTEX CORE**

**MONOFILAMENT/SLIT-FILM 2.25**

PROPERTY	VALUE	UNITS	METHOD
Product Stock Code	FTVTC-57		
Pile Yarn Type	UV-resistant polyethylene		n/a
Yarn Structure 1	Ridged Monofilament		n/a
Yarn Denier 1	14000	Denier	D1577
Tape Thickness 1	380	Microns	
Yarn Structure 2	Slit-Film		
Yarn Denier 2	5000	Denier	D1577
Tape Thickness 2	130	Microns	
Pile Height	2.25	inches	D5823
Pile Weight	43	oz/yd <sup>2</sup>	D5848
Primary Backing Weight	7+	oz/yd <sup>2</sup>	D5848
Secondary Backing Weight (Finger-Unit)	14+	oz/yd <sup>2</sup>	D5848
Total Carpet Weight	64	oz/yd <sup>2</sup>	D5848
Stitch Gauge	3/4 inch centers		D5793
Tuft Bind	8+	lbs/force	D1335
Grab Tear Length	>200	lbs/force	D5034
Grab Tear Width	>200	lbs/force	D5034
Pill Burn Test	Pass		D2859
Impact Attenuation (Gmax)	<200	gmax	F1936
Water Permeability	>40	inch/hour	DIN 18-035
CoolPlay Infill	0.6	Lbs/ft <sup>2</sup>	
Cryogenic SBR Rubber Infill	1.6	Lbs/ft <sup>2</sup>	
Sand	6.2	Lbs/ft <sup>2</sup>	
Total Product Weight	1274	oz/yd <sup>2</sup>	

Issue Date: 7/29/2020

Disclaimer: Variation of +/-5% on above listed property values is within normal manufacturing tolerances



PRODUCT  
TECHNICAL  
SPECIFICATION

**CORE**

**Monofilament 2.5"**

Property	Value	Units	ASTM
Product Stock Code	FTCORE-1		
Pile Yarn Type	UV-resistant polyethylene		n/a
Yarn Structure	Ridged Monofilament		n/a
Yarn Denier	14000	Denier	D1577
Tape Thickness	380	Microns	D3218
Pile Height	2.5	inches	D5823
Pile Weight	42	oz/yd <sup>2</sup>	D5848
Primary Backing Weight (3-Layer)	8+	oz/yd <sup>2</sup>	D5848
Secondary Backing Weight (Finger-Unit)	14+	oz/yd <sup>2</sup>	D5848
Total Carpet Weight	64	oz/yd <sup>2</sup>	D5848
Stitch Gauge	3/4 inch centers		D5793
Tuft Bind	8+	lbs/force	D1335
Grab Tear Length	>200	lbs/force	D5034
Grab Tear Width	>200	lbs/force	D5034
Pill Burn Test	Pass		D2859
Impact Attenuation (Gmax)	<200	gmax	F1936
Water Permeability	>40	inch/hour	DIN 18-035
Cryogenic SBR Rubber Infill	3	Lbs/ft <sup>2</sup>	
Sand	6.2	Lbs/ft <sup>2</sup>	
Total Product Weight	1389	oz/yd <sup>2</sup>	

*Variation of +/- 5% on above listed property values is within normal manufacturing tolerances*

**Issue Date: 6/9/17**

PRODUCT  
TECHNICAL  
SPECIFICATION

# CORE

## Monofilament 2.25"

Property	Value	Units	ASTM
Product Stock Code	FTCORE-57		
Pile Yarn Type	UV-resistant polyethylene		n/a
Yarn Structure	Ridged Monofilament		n/a
Yarn Denier	14000	Denier	D1577
Tape Thickness	380	Microns	D3218
Pile Height	2.25	inches	D5823
Pile Weight	38	oz/yd <sup>2</sup>	D5848
Primary Backing Weight (3-Layer)	8+	oz/yd <sup>2</sup>	D5848
Secondary Backing Weight (Finger-Unit)	14+	oz/yd <sup>2</sup>	D5848
Total Carpet Weight	60	oz/yd <sup>2</sup>	D5848
Stitch Gauge	3/4 inch centers		D5793
Tuft Bind	8+	lbs/force	D1335
Grab Tear Length	>200	lbs/force	D5034
Grab Tear Width	>200	lbs/force	D5034
Pill Burn Test	Pass		D2859
Impact Attenuation (Gmax)	<200	gmax	F1936
Water Permeability	>40	inch/hour	DIN 18-035
Cryogenic SBR Rubber Infill	2.2	Lbs/ft <sup>2</sup>	
Sand	6.2	Lbs/ft <sup>2</sup>	
Total Product Weight	1270	oz/yd <sup>2</sup>	

*Variation of +/- 5% on above listed property values is within normal manufacturing tolerances*

**Issue Date: 6/9/17**

PRODUCT  
TECHNICAL  
SPECIFICATION

**CORE**

**Monofilament 2"**

Property	Value	Units	ASTM
Product Stock Code	FTCORE-2		
Pile Yarn Type	UV-resistant polyethylene		n/a
Yarn Structure	Ridged Monofilament		n/a
Yarn Denier	14000	Denier	D1577
Tape Thickness	380	Microns	D3218
Pile Height	2	inches	D5823
Pile Weight	36	oz/yd <sup>2</sup>	D5848
Primary Backing Weight (3-Layer)	8+	oz/yd <sup>2</sup>	D5848
Secondary Backing Weight (Finger-Unit)	14+	oz/yd <sup>2</sup>	D5848
Total Carpet Weight	58	oz/yd <sup>2</sup>	D5848
Stitch Gauge	3/4 inch centers		D5793
Tuft Bind	8+	lbs/force	D1335
Grab Tear Length	>200	lbs/force	D5034
Grab Tear Width	>200	lbs/force	D5034
Pill Burn Test	Pass		D2859
Impact Attenuation (Gmax)	<200	gmax	F1936
Water Permeability	>40	inch/hour	DIN 18-035
Cryogenic SBR Rubber Infill	2.6	Lbs/ft <sup>2</sup>	
Sand	3.65	Lbs/ft <sup>2</sup>	
Total Product Weight	958	oz/yd <sup>2</sup>	

*Variation of +/- 5% on above listed property values is within normal manufacturing tolerances*

**Issue Date: 6/9/17**



PRODUCT  
TECHNICAL  
SPECIFICATION

# CORE CoolPlay

Monofilament 2.5"

Property	Value	Units	ASTM
Product Stock Code	FTCORE-1-CoolPlay		
Pile Yarn Type	UV-resistant polyethylene		n/a
Yarn Structure	Ridged Monofilament		n/a
Yarn Denier	14000	Denier	D1577
Tape Thickness	380	Microns	D3218
Pile Height	2.5	inches	D5823
Pile Weight	42	oz/yd <sup>2</sup>	D5848
Primary Backing Weight (3-Layer)	8+	oz/yd <sup>2</sup>	D5848
Secondary Backing Weight (Finger-Unit)	14+	oz/yd <sup>2</sup>	D5848
Total Carpet Weight	64	oz/yd <sup>2</sup>	D5848
Stitch Gauge	3/4 inch centers		D5793
Tuft Bind	8+	lbs/force	D1335
Grab Tear Length	>200	lbs/force	D5034
Grab Tear Width	>200	lbs/force	D5034
Pill Burn Test	Pass		D2859
Impact Attenuation (Gmax)	<200	gmax	F1936
Water Permeability	>40	inch/hour	DIN 18-035
CoolPlay Composite	0.6	Lbs/ft <sup>2</sup>	
Cryogenic SBR Rubber Infill	2.4	Lbs/ft <sup>2</sup>	
Sand	6.2	Lbs/ft <sup>2</sup>	
Total Product Weight	1389	oz/yd <sup>2</sup>	

Variation of +/- 5% on above listed property values is within normal manufacturing tolerances

**Issue Date: 10/30/17**

PRODUCT  
TECHNICAL  
SPECIFICATION

# CORE CoolPlay

Monofilament 2.25"

Property	Value	Units	ASTM
Product Stock Code	FTCORE -57 CoolPlay		
Pile Yarn Type	UV-resistant polyethylene		n/a
Yarn Structure	Ridged Monofilament		n/a
Yarn Denier	14000	Denier	D1577
Tape Thickness	380	Microns	D3218
Pile Height	2.25	inches	D5823
Pile Weight	38	oz/yd <sup>2</sup>	D5848
Primary Backing Weight (3-Layer)	8+	oz/yd <sup>2</sup>	D5848
Secondary Backing Weight (Finger-Unit)	14+	oz/yd <sup>2</sup>	D5848
Total Carpet Weight	60	oz/yd <sup>2</sup>	D5848
Stitch Gauge	3/4 inch centers		D5793
Tuft Bind	8+	lbs/force	D1335
Grab Tear Length	>200	lbs/force	D5034
Grab Tear Width	>200	lbs/force	D5034
Pill Burn Test	Pass		D2859
Impact Attenuation (Gmax)	<200	gmax	F1936
Water Permeability	>40	inch/hour	DIN 18-035
CoolPlay Composite	0.6	Lbs/ft <sup>2</sup>	
Cryogenic SBR Rubber Infill	1.6	Lbs/ft <sup>2</sup>	
Sand	6.2	Lbs/ft <sup>2</sup>	
Total Product Weight	1270	oz/yd <sup>2</sup>	

Variation of +/- 5% on above listed property values is within normal manufacturing tolerances

**Issue Date: 10/30/17**

PRODUCT  
TECHNICAL  
SPECIFICATION

# CORE CoolPlay

Monofilament 2.5"

Property	Value	Units	ASTM
Product Stock Code	FTCORE-1-CoolPlay		
Pile Yarn Type	UV-resistant polyethylene		n/a
Yarn Structure	Ridged Monofilament		n/a
Yarn Denier	14000	Denier	D1577
Tape Thickness	380	Microns	D3218
Pile Height	2.5	inches	D5823
Pile Weight	42	oz/yd <sup>2</sup>	D5848
Primary Backing Weight (3-Layer)	8+	oz/yd <sup>2</sup>	D5848
Secondary Backing Weight (Finger-Unit)	14+	oz/yd <sup>2</sup>	D5848
Total Carpet Weight	64	oz/yd <sup>2</sup>	D5848
Stitch Gauge	3/4 inch centers		D5793
Tuft Bind	8+	lbs/force	D1335
Grab Tear Length	>200	lbs/force	D5034
Grab Tear Width	>200	lbs/force	D5034
Pill Burn Test	Pass		D2859
Impact Attenuation (Gmax)	<200	gmax	F1936
Water Permeability	>40	inch/hour	DIN 18-035
CoolPlay Composite	0.6	Lbs/ft <sup>2</sup>	
Cryogenic SBR Rubber Infill	2.4	Lbs/ft <sup>2</sup>	
Sand	6.2	Lbs/ft <sup>2</sup>	
Total Product Weight	1389	oz/yd <sup>2</sup>	

Variation of +/- 5% on above listed property values is within normal manufacturing tolerances

**Issue Date: 10/30/17**

PRODUCT  
TECHNICAL  
SPECIFICATION

# CORE CoolPlay

Monofilament 2.25"

Property	Value	Units	ASTM
Product Stock Code	FTCORE -57 CoolPlay		
Pile Yarn Type	UV-resistant polyethylene		n/a
Yarn Structure	Ridged Monofilament		n/a
Yarn Denier	14000	Denier	D1577
Tape Thickness	380	Microns	D3218
Pile Height	2.25	inches	D5823
Pile Weight	38	oz/yd <sup>2</sup>	D5848
Primary Backing Weight (3-Layer)	8+	oz/yd <sup>2</sup>	D5848
Secondary Backing Weight (Finger-Unit)	14+	oz/yd <sup>2</sup>	D5848
Total Carpet Weight	60	oz/yd <sup>2</sup>	D5848
Stitch Gauge	3/4 inch centers		D5793
Tuft Bind	8+	lbs/force	D1335
Grab Tear Length	>200	lbs/force	D5034
Grab Tear Width	>200	lbs/force	D5034
Pill Burn Test	Pass		D2859
Impact Attenuation (Gmax)	<200	gmax	F1936
Water Permeability	>40	inch/hour	DIN 18-035
CoolPlay Composite	0.6	Lbs/ft <sup>2</sup>	
Cryogenic SBR Rubber Infill	1.6	Lbs/ft <sup>2</sup>	
Sand	6.2	Lbs/ft <sup>2</sup>	
Total Product Weight	1270	oz/yd <sup>2</sup>	

Variation of +/- 5% on above listed property values is within normal manufacturing tolerances

**Issue Date: 10/30/17**

PRODUCT  
TECHNICAL  
SPECIFICATION

# Revolution 360

## Monofilament 2.5"

Property	Value	Units	ASTM
Product Stock Code	FTRV360-1		
Pile Yarn Type	UV-resistant polyethylene		n/a
Yarn Structure	Ridged Monofilament		n/a
Yarn Denier	14500	Denier	D1577
Tape Thickness	380	Microns	D3218
Pile Height	2.5	inches	D5823
Pile Weight	42	oz/yd <sup>2</sup>	D5848
Primary Backing Weight	7+	oz/yd <sup>2</sup>	D5848
Secondary Backing Weight (Finger-Unit)	14+	oz/yd <sup>2</sup>	D5848
Total Carpet Weight	63	oz/yd <sup>2</sup>	D5848
Stitch Gauge	3/4 inch centers		D5793
Tuft Bind	8+	lbs/force	D1335
Grab Tear Length	>200	lbs/force	D5034
Grab Tear Width	>200	lbs/force	D5034
Pill Burn Test	Pass		D2859
Impact Attenuation (Gmax)	<200	gmax	F1936
Water Permeability	>40	inch/hour	DIN 18-035
Cryogenic SBR Rubber Infill	3	Lbs/ft <sup>2</sup>	
Sand	6.2	Lbs/ft <sup>2</sup>	
Total Product Weight	1388	oz/yd <sup>2</sup>	

*Variation of +/- 5% on above listed property values is within normal manufacturing tolerances*

**Issue Date: 11/04/16**

PRODUCT  
TECHNICAL  
SPECIFICATION

# Revolution 360

Monofilament 2.25"

Property	Value	Units	ASTM
Product Stock Code	FTRV360-57		
Pile Yarn Type	UV-resistant polyethylene		n/a
Yarn Structure	Ridged Monofilament		n/a
Yarn Denier	14500	Denier	D1577
Tape Thickness	380	Microns	D3218
Pile Height	2.25	inches	D5823
Pile Weight	38	oz/yd <sup>2</sup>	D5848
Primary Backing Weight	7+	oz/yd <sup>2</sup>	D5848
Secondary Backing Weight (Finger-Unit)	14+	oz/yd <sup>2</sup>	D5848
Total Carpet Weight	59	oz/yd <sup>2</sup>	D5848
Stitch Gauge	3/4 inch centers		D5793
Tuft Bind	8+	lbs/force	D1335
Grab Tear Length	>200	lbs/force	D5034
Grab Tear Width	>200	lbs/force	D5034
Pill Burn Test	Pass		D2859
Impact Attenuation (Gmax)	<200	gmax	F1936
Water Permeability	>40	inch/hour	DIN 18-035
Cryogenic SBR Rubber Infill	2.2	Lbs/ft <sup>2</sup>	
Sand	6.2	Lbs/ft <sup>2</sup>	
Total Product Weight	1269	oz/yd <sup>2</sup>	

*Variation of +/- 5% on above listed property values is within normal manufacturing tolerances*

**Issue Date: 11/04/16**

PRODUCT  
TECHNICAL  
SPECIFICATION

# Revolution 360

## Monofilament 2"

Property	Value	Units	ASTM
Product Stock Code	FTRV360-2		
Pile Yarn Type	UV-resistant polyethylene		n/a
Yarn Structure	Ridged Monofilament		n/a
Yarn Denier	14500	Denier	D1577
Tape Thickness	380	Microns	D3218
Pile Height	2	inches	D5823
Pile Weight	36	oz/yd <sup>2</sup>	D5848
Primary Backing Weight	7+	oz/yd <sup>2</sup>	D5848
Secondary Backing Weight (Finger-Unit)	14+	oz/yd <sup>2</sup>	D5848
Total Carpet Weight	57	oz/yd <sup>2</sup>	D5848
Stitch Gauge	3/4 inch centers		D5793
Tuft Bind	8+	lbs/force	D1335
Grab Tear Length	>200	lbs/force	D5034
Grab Tear Width	>200	lbs/force	D5034
Pill Burn Test	Pass		D2859
Impact Attenuation (Gmax)	<200	gmax	F1936
Water Permeability	>40	inch/hour	DIN 18-035
Cryogenic SBR Rubber Infill	2.6	Lbs/ft <sup>2</sup>	
Sand	3.65	Lbs/ft <sup>2</sup>	
Total Product Weight	957	oz/yd <sup>2</sup>	

Variation of +/- 5% on above listed property values is within normal manufacturing tolerances

**Issue Date: 12/30/16**

PRODUCT  
TECHNICAL  
SPECIFICATION

# Classic HD

Slit-Film 2.5"

Property	Value	Units	ASTM
Product Stock Code	FTHD-1		
Pile Yarn Type	UV-resistant polyethylene		n/a
Yarn Structure	Slit-Film		n/a
Yarn Denier	10800	Denier	D1577
Tape Thickness	130	Microns	D3218
Pile Height	2.5	inches	D5823
Pile Weight	36	oz/yd <sup>2</sup>	D5848
Primary Backing Weight	7+	oz/yd <sup>2</sup>	D5848
Secondary Backing Weight (Finger-Unit)	14+	oz/yd <sup>2</sup>	D5848
Total Carpet Weight	57	oz/yd <sup>2</sup>	D5848
Stitch Gauge	3/4 inch centers		D5793
Tuft Bind	8+	lbs/force	D1335
Grab Tear Length	>200	lbs/force	D5034
Grab Tear Width	>200	lbs/force	D5034
Pill Burn Test	Pass		D2859
Impact Attenuation (Gmax)	<200	gmax	F1936
Water Permeability	>40	inch/hour	DIN 18-035
Cryogenic SBR Rubber Infill	3	Lbs/ft <sup>2</sup>	
Sand	6.2	Lbs/ft <sup>2</sup>	
Total Product Weight	1382	oz/yd <sup>2</sup>	

*Variation of +/- 5% on above listed property values is within normal manufacturing tolerances*

**Issue Date: 11/04/16**



PRODUCT  
TECHNICAL  
SPECIFICATION

# Classic HD

Slit-Film 2.25"

Property	Value	Units	ASTM
Product Stock Code	FTHD-57		
Pile Yarn Type	UV-resistant polyethylene		n/a
Yarn Structure	Slit-Film		n/a
Yarn Denier	10800	Denier	D1577
Tape Thickness	130	Microns	D3218
Pile Height	2.25	inches	D5823
Pile Weight	33	oz/yd <sup>2</sup>	D5848
Primary Backing Weight	7+	oz/yd <sup>2</sup>	D5848
Secondary Backing Weight (Finger-Unit)	14+	oz/yd <sup>2</sup>	D5848
Total Carpet Weight	54	oz/yd <sup>2</sup>	D5848
Stitch Gauge	3/4 inch centers		D5793
Tuft Bind	8+	lbs/force	D1335
Grab Tear Length	>200	lbs/force	D5034
Grab Tear Width	>200	lbs/force	D5034
Pill Burn Test	Pass		D2859
Impact Attenuation (Gmax)	<200	gmax	F1936
Water Permeability	>40	inch/hour	DIN 18-035
Cryogenic SBR Rubber Infill	2.2	Lbs/ft <sup>2</sup>	
Sand	6.2	Lbs/ft <sup>2</sup>	
Total Product Weight	1264	oz/yd <sup>2</sup>	

*Variation of +/- 5% on above listed property values is within normal manufacturing tolerances*

**Issue Date: 11/04/16**

PRODUCT  
TECHNICAL  
SPECIFICATION

# Classic HD

Slit-Film 2"

Property	Value	Units	ASTM
Product Stock Code	FTHD-2		
Pile Yarn Type	UV-resistant polyethylene		n/a
Yarn Structure	Slit-Film		n/a
Yarn Denier	10800	Denier	D1577
Tape Thickness	130	Microns	D3218
Pile Height	2	inches	D5823
Pile Weight	30	oz/yd <sup>2</sup>	D5848
Primary Backing Weight	7+	oz/yd <sup>2</sup>	D5848
Secondary Backing Weight (Finger-Unit)	14+	oz/yd <sup>2</sup>	D5848
Total Carpet Weight	51	oz/yd <sup>2</sup>	D5848
Stitch Gauge	3/4 inch centers		D5793
Tuft Bind	8+	lbs/force	D1335
Grab Tear Length	>200	lbs/force	D5034
Grab Tear Width	>200	lbs/force	D5034
Pill Burn Test	Pass		D2859
Impact Attenuation (Gmax)	<200	gmax	F1936
Water Permeability	>40	inch/hour	DIN 18-035
Cryogenic SBR Rubber Infill	2.6	Lbs/ft <sup>2</sup>	
Sand	3.65	Lbs/ft <sup>2</sup>	
Total Product Weight	951	oz/yd <sup>2</sup>	

*Variation of +/- 5% on above listed property values is within normal manufacturing tolerances*

**Issue Date: 11/04/16**

PRODUCT  
TECHNICAL  
SPECIFICATION

# Classic HD CoolPlay

Slit-Film 2.5"

Property	Value	Units	ASTM
Product Stock Code	FTHD-1-CoolPlay		
Pile Yarn Type	UV-resistant polyethylene		n/a
Yarn Structure	Slit-Film		n/a
Yarn Denier	10800	Denier	D1577
Tape Thickness	130	Microns	D3218
Pile Height	2.5	inches	D5823
Pile Weight	36	oz/yd <sup>2</sup>	D5848
Primary Backing Weight	7+	oz/yd <sup>2</sup>	D5848
Secondary Backing Weight (Finger-Unit)	14+	oz/yd <sup>2</sup>	D5848
Total Carpet Weight	57	oz/yd <sup>2</sup>	D5848
Stitch Gauge	3/4 inch centers		D5793
Tuft Bind	8+	lbs/force	D1335
Grab Tear Length	>200	lbs/force	D5034
Grab Tear Width	>200	lbs/force	D5034
Pill Burn Test	Pass		D2859
Impact Attenuation (Gmax)	<200	gmax	F1936
Water Permeability	>40	inch/hour	DIN 18-035
CoolPlay Composite	0.6	Lbs/ft <sup>2</sup>	
Cryogenic SBR Rubber Infill	2.4	Lbs/ft <sup>2</sup>	
Sand	6.2	Lbs/ft <sup>2</sup>	
Total Product Weight	1382	oz/yd <sup>2</sup>	

*Variation of +/- 5% on above listed property values is within normal manufacturing tolerances*

**Issue Date: 9/8/17**

PRODUCT  
TECHNICAL  
SPECIFICATION

# Classic HD CoolPlay

Slit-Film 2"

Property	Value	Units	ASTM
Product Stock Code	FTHD-2-CoolPlay		
Pile Yarn Type	UV-resistant polyethylene		n/a
Yarn Structure	Slit-Film		n/a
Yarn Denier	10800	Denier	D1577
Tape Thickness	130	Microns	D3218
Pile Height	2	inches	D5823
Pile Weight	30	oz/yd <sup>2</sup>	D5848
Primary Backing Weight	7+	oz/yd <sup>2</sup>	D5848
Secondary Backing Weight (Finger-Unit)	14+	oz/yd <sup>2</sup>	D5848
Total Carpet Weight	51	oz/yd <sup>2</sup>	D5848
Stitch Gauge	3/4 inch centers		D5793
Tuft Bind	8+	lbs/force	D1335
Grab Tear Length	>200	lbs/force	D5034
Grab Tear Width	>200	lbs/force	D5034
Pill Burn Test	Pass		D2859
Impact Attenuation (Gmax)	<200	gmax	F1936
Water Permeability	>40	inch/hour	DIN 18-035
CoolPlay Composite	0.6	Lbs/ft <sup>2</sup>	
Cryogenic SBR Rubber Infill	2.0	Lbs/ft <sup>2</sup>	
Sand	3.65	Lbs/ft <sup>2</sup>	
Total Product Weight	951	oz/yd <sup>2</sup>	

Variation of +/- 5% on above listed property values is within normal manufacturing tolerances

Issue Date: 9/8/17

PRODUCT  
TECHNICAL  
SPECIFICATION

# Classic HD CoolPlay

Slit-Film 2.25"

Property	Value	Units	ASTM
Product Stock Code	FTHD-57-CoolPlay		
Pile Yarn Type	UV-resistant polyethylene		n/a
Yarn Structure	Slit-Film		n/a
Yarn Denier	10800	Denier	D1577
Tape Thickness	130	Microns	D3218
Pile Height	2.25	inches	D5823
Pile Weight	33	oz/yd <sup>2</sup>	D5848
Primary Backing Weight	7+	oz/yd <sup>2</sup>	D5848
Secondary Backing Weight (Finger-Unit)	14+	oz/yd <sup>2</sup>	D5848
Total Carpet Weight	54	oz/yd <sup>2</sup>	D5848
Stitch Gauge	3/4 inch centers		D5793
Tuft Bind	8+	lbs/force	D1335
Grab Tear Length	>200	lbs/force	D5034
Grab Tear Width	>200	lbs/force	D5034
Pill Burn Test	Pass		D2859
Impact Attenuation (Gmax)	<200	gmax	F1936
Water Permeability	>40	inch/hour	DIN 18-035
CoolPlay Composite	0.6	Lbs/ft <sup>2</sup>	
Cryogenic SBR Rubber Infill	1.6	Lbs/ft <sup>2</sup>	
Sand	6.2	Lbs/ft <sup>2</sup>	
Total Product Weight	1264	oz/yd <sup>2</sup>	

Variation of +/- 5% on above listed property values is within normal manufacturing tolerances

**Issue Date: 9/8/17**

PRODUCT  
TECHNICAL  
SPECIFICATION

**XM7**

**Monofilament 2.5"**

Property	Value	Units	ASTM
Product Stock Code	XM7-65		
Pile Yarn Type	UV-resistant polyethylene		n/a
Yarn Structure	Ridged Monofilament		n/a
Yarn Denier	12000+	Denier	D1577
Tape Thickness	360	Microns	D3218
Pile Height	2.5	inches	D5823
Pile Weight	36	oz/yd <sup>2</sup>	D5848
Primary Backing Weight	7+	oz/yd <sup>2</sup>	D5848
Secondary Backing Weight (Perforated)	16+	oz/yd <sup>2</sup>	D5848
Total Carpet Weight	59	oz/yd <sup>2</sup>	D5848
Stitch Gauge	3/4 inch centers		D5793
Tuft Bind	8+	lbs/force	D1335
Grab Tear Length	>200	lbs/force	D5034
Grab Tear Width	>200	lbs/force	D5034
Pill Burn Test	Pass		D2859
Impact Attenuation (Gmax)	<200	gmax	F1936
Water Permeability	>40	inch/hour	DIN 18-035
SBR Rubber Infill	3.5	Lbs/ft <sup>2</sup>	
Sand	4	Lbs/ft <sup>2</sup>	
Total Product Weight	1139	oz/yd <sup>2</sup>	

*Variation of +/- 5% on above listed property values is within normal manufacturing tolerances*

**Issue Date: 9/12/17**

PRODUCT  
TECHNICAL  
SPECIFICATION

**XM7**

**Monofilament 2.25"**

Property	Value	Units	ASTM
Product Stock Code	XM7-57		
Pile Yarn Type	UV-resistant polyethylene		n/a
Yarn Structure	Ridged Monofilament		n/a
Yarn Denier	12000+	Denier	D1577
Tape Thickness	360	Microns	D3218
Pile Height	2.25	inches	D5823
Pile Weight	33	oz/yd <sup>2</sup>	D5848
Primary Backing Weight	7+	oz/yd <sup>2</sup>	D5848
Secondary Backing Weight (Perforated)	16+	oz/yd <sup>2</sup>	D5848
Total Carpet Weight	56	oz/yd <sup>2</sup>	D5848
Stitch Gauge	3/4 inch centers		D5793
Tuft Bind	8+	lbs/force	D1335
Grab Tear Length	>200	lbs/force	D5034
Grab Tear Width	>200	lbs/force	D5034
Pill Burn Test	Pass		D2859
Impact Attenuation (Gmax)	<200	gmax	F1936
Water Permeability	>40	inch/hour	DIN 18-035
SBR Rubber Infill	3	Lbs/ft <sup>2</sup>	
Sand	3	Lbs/ft <sup>2</sup>	
Total Product Weight	920	oz/yd <sup>2</sup>	

*Variation of +/- 5% on above listed property values is within normal manufacturing tolerances*

**Issue Date: 9/12/17**

PRODUCT  
TECHNICAL  
SPECIFICATION

**XM7**

**Monofilament 2"**

Property	Value	Units	ASTM
Product Stock Code	XM7-50		
Pile Yarn Type	UV-resistant polyethylene		n/a
Yarn Structure	Ridged Monofilament		n/a
Yarn Denier	12000+	Denier	D1577
Tape Thickness	360	Microns	D3218
Pile Height	2	inches	D5823
Pile Weight	30	oz/yd <sup>2</sup>	D5848
Primary Backing Weight	7+	oz/yd <sup>2</sup>	D5848
Secondary Backing Weight (Perforated)	16+	oz/yd <sup>2</sup>	D5848
Total Carpet Weight	53	oz/yd <sup>2</sup>	D5848
Stitch Gauge	3/4 inch centers		D5793
Tuft Bind	8+	lbs/force	D1335
Grab Tear Length	>200	lbs/force	D5034
Grab Tear Width	>200	lbs/force	D5034
Pill Burn Test	Pass		D2859
Impact Attenuation (Gmax)	<200	gmax	F1936
Water Permeability	>40	inch/hour	DIN 18-035
SBR Rubber Infill	3	Lbs/ft <sup>2</sup>	
Sand	2	Lbs/ft <sup>2</sup>	
Total Product Weight	773	oz/yd <sup>2</sup>	

*Variation of +/- 5% on above listed property values is within normal manufacturing tolerances*

**Issue Date: 9/12/17**



PRODUCT  
TECHNICAL  
SPECIFICATION

**XT**

**Slit-Film 2.5"**

Property	Value	Units	ASTM
Product Stock Code	XT-65		
Pile Yarn Type	UV-resistant polyethylene		n/a
Yarn Structure	Slit-Film		n/a
Yarn Denier	10800	Denier	D1577
Tape Thickness	130	Microns	D3218
Pile Height	2.5	inches	D5823
Pile Weight	36	oz/yd <sup>2</sup>	D5848
Primary Backing Weight	7+	oz/yd <sup>2</sup>	D5848
Secondary Backing Weight (Perforated)	16+	oz/yd <sup>2</sup>	D5848
Total Carpet Weight	59	oz/yd <sup>2</sup>	D5848
Stitch Gauge	3/4 inch centers		D5793
Tuft Bind	8+	lbs/force	D1335
Grab Tear Length	>200	lbs/force	D5034
Grab Tear Width	>200	lbs/force	D5034
Pill Burn Test	Pass		D2859
Impact Attenuation (Gmax)	<200	gmax	F1936
Water Permeability	>40	inch/hour	DIN 18-035
SBR Rubber Infill	3.5	Lbs/ft <sup>2</sup>	
Sand	4	Lbs/ft <sup>2</sup>	
Total Product Weight	1139	oz/yd <sup>2</sup>	

*Variation of +/- 5% on above listed property values is within normal manufacturing tolerances*

**Issue Date: 11/04/16**

PRODUCT  
TECHNICAL  
SPECIFICATION

**XT**

**Slit-Film 2.25"**

Property	Value	Units	ASTM
Product Stock Code	XT-57		
Pile Yarn Type	UV-resistant polyethylene		n/a
Yarn Structure	Slit-Film		n/a
Yarn Denier	10800	Denier	D1577
Tape Thickness	130	Microns	D3218
Pile Height	2.25	inches	D5823
Pile Weight	33	oz/yd <sup>2</sup>	D5848
Primary Backing Weight	7+	oz/yd <sup>2</sup>	D5848
Secondary Backing Weight (Perforated)	16+	oz/yd <sup>2</sup>	D5848
Total Carpet Weight	56	oz/yd <sup>2</sup>	D5848
Stitch Gauge	3/4 inch centers		D5793
Tuft Bind	8+	lbs/force	D1335
Grab Tear Length	>200	lbs/force	D5034
Grab Tear Width	>200	lbs/force	D5034
Pill Burn Test	Pass		D2859
Impact Attenuation (Gmax)	<200	gmax	F1936
Water Permeability	>40	inch/hour	DIN 18-035
SBR Rubber Infill	3	Lbs/ft <sup>2</sup>	
Sand	3	Lbs/ft <sup>2</sup>	
Total Product Weight	920	oz/yd <sup>2</sup>	

*Variation of +/- 5% on above listed property values is within normal manufacturing tolerances*

**Issue Date: 11/04/16**

PRODUCT  
TECHNICAL  
SPECIFICATION

**XT**

**Slit-Film 2"**

Property	Value	Units	ASTM
Product Stock Code	XT-50		
Pile Yarn Type	UV-resistant polyethylene		n/a
Yarn Structure	Slit-Film		n/a
Yarn Denier	10800	Denier	D1577
Tape Thickness	130	Microns	D3218
Pile Height	2	inches	D5823
Pile Weight	30	oz/yd <sup>2</sup>	D5848
Primary Backing Weight	7+	oz/yd <sup>2</sup>	D5848
Secondary Backing Weight (Perforated)	16+	oz/yd <sup>2</sup>	D5848
Total Carpet Weight	53	oz/yd <sup>2</sup>	D5848
Stitch Gauge	3/4 inch centers		D5793
Tuft Bind	8+	lbs/force	D1335
Grab Tear Length	>200	lbs/force	D5034
Grab Tear Width	>200	lbs/force	D5034
Pill Burn Test	Pass		D2859
Impact Attenuation (Gmax)	<200	gmax	F1936
Water Permeability	>40	inch/hour	DIN 18-035
SBR Rubber Infill	3	Lbs/ft <sup>2</sup>	
Sand	2	Lbs/ft <sup>2</sup>	
Total Product Weight	773	oz/yd <sup>2</sup>	

*Variation of +/- 5% on above listed property values is within normal manufacturing tolerances*

**Issue Date: 11/04/16**

PRODUCT  
TECHNICAL  
SPECIFICATION

# Vertex Prime

Monofilament/Slit-Film 2.5"

Property	Value	Units	ASTM
Product Stock Code	FTVTP-1		
Pile Yarn Type	UV-resistant polyethylene		n/a
Yarn Structure 1	Ridged Monofilament		n/a
Yarn Denier 1	12000+	Denier	D1577
Tape Thickness 1	360+	Microns	
Yarn Structure 2	Slit-Film		
Yarn Denier 2	5000	Denier	D1577
Tape Thickness 2	120+	Microns	
Pile Height	2.5	inches	D5823
Pile Weight	47	oz/yd <sup>2</sup>	D5848
Primary Backing Weight	7+	oz/yd <sup>2</sup>	D5848
Secondary Backing Weight (Finger-Unit)	14+	oz/yd <sup>2</sup>	D5848
Total Carpet Weight	68	oz/yd <sup>2</sup>	D5848
Stitch Gauge	3/4 inch centers		D5793
Tuft Bind	8+	lbs/force	D1335
Grab Tear Length	>200	lbs/force	D5034
Grab Tear Width	>200	lbs/force	D5034
Pill Burn Test	Pass		D2859
Impact Attenuation (Gmax)	<200	gmax	F1936
Water Permeability	>40	inch/hour	DIN 18-035
Cryogenic SBR Rubber Infill	3	Lbs/ft <sup>2</sup>	
Sand	6.2	Lbs/ft <sup>2</sup>	
Total Product Weight	1393	oz/yd <sup>2</sup>	

Variation of +/- 5% on above listed property values is within normal manufacturing tolerances

**Issue Date: 9/12/17**

PRODUCT  
TECHNICAL  
SPECIFICATION

# Vertex Prime

Monofilament/Slit-Film 2.25"

Property	Value	Units	ASTM
Product Stock Code	FTVTP-57		
Pile Yarn Type	UV-resistant polyethylene		n/a
Yarn Structure 1	Ridged Monofilament		n/a
Yarn Denier 1	12000+	Denier	D1577
Tape Thickness 1	360+	Microns	
Yarn Structure 2	Slit-Film		
Yarn Denier 2	5000	Denier	D1577
Tape Thickness 2	120+	Microns	
Pile Height	2.25	inches	D5823
Pile Weight	43	oz/yd <sup>2</sup>	D5848
Primary Backing Weight	7+	oz/yd <sup>2</sup>	D5848
Secondary Backing Weight (Finger-Unit)	14+	oz/yd <sup>2</sup>	D5848
Total Carpet Weight	64	oz/yd <sup>2</sup>	D5848
Stitch Gauge	3/4 inch centers		D5793
Tuft Bind	8+	lbs/force	D1335
Grab Tear Length	>200	lbs/force	D5034
Grab Tear Width	>200	lbs/force	D5034
Pill Burn Test	Pass		D2859
Impact Attenuation (Gmax)	<200	gmax	F1936
Water Permeability	>40	inch/hour	DIN 18-035
Cryogenic SBR Rubber Infill	2.2	Lbs/ft <sup>2</sup>	
Sand	6.2	Lbs/ft <sup>2</sup>	
Total Product Weight	1274	oz/yd <sup>2</sup>	

Variation of +/- 5% on above listed property values is within normal manufacturing tolerances

**Issue Date: 9/12/17**

PRODUCT  
TECHNICAL  
SPECIFICATION

# Vertex Prime

## Monofilament/Slit-Film 2"

Property	Value	Units	ASTM
Product Stock Code	FTVTP-2		
Pile Yarn Type	UV-resistant polyethylene		n/a
Yarn Structure 1	Ridged Monofilament		n/a
Yarn Denier 1	12000+	Denier	D1577
Tape Thickness 1	360+	Microns	
Yarn Structure 2	Slit-Film		
Yarn Denier 2	5000	Denier	D1577
Tape Thickness 2	120+	Microns	
Pile Height	2	inches	D5823
Pile Weight	39	oz/yd <sup>2</sup>	D5848
Primary Backing Weight	7+	oz/yd <sup>2</sup>	D5848
Secondary Backing Weight (Finger-Unit)	14+	oz/yd <sup>2</sup>	D5848
Total Carpet Weight	60	oz/yd <sup>2</sup>	D5848
Stitch Gauge	3/4 inch centers		D5793
Tuft Bind	8+	lbs/force	D1335
Grab Tear Length	>200	lbs/force	D5034
Grab Tear Width	>200	lbs/force	D5034
Pill Burn Test	Pass		D2859
Impact Attenuation (Gmax)	<200	gmax	F1936
Water Permeability	>40	inch/hour	DIN 18-035
Cryogenic SBR Rubber Infill	2.6	Lbs/ft <sup>2</sup>	
Sand	3.65	Lbs/ft <sup>2</sup>	
Total Product Weight	960	oz/yd <sup>2</sup>	

Variation of +/- 5% on above listed property values is within normal manufacturing tolerances

**Issue Date: 9/12/17**

PRODUCT  
TECHNICAL  
SPECIFICATION

# Vertex

## Monofilament/Slit-Film 2.5"

Property	Value	Units	ASTM
Product Stock Code	FTVT-65		
Pile Yarn Type	UV-resistant polyethylene		n/a
Yarn Structure 1	Ridged Monofilament		n/a
Yarn Denier 1	12000+	Denier	D1577
Tape Thickness 1	360+	Microns	
Yarn Structure 2	Slit-Film		
Yarn Denier 2	5000	Denier	D1577
Tape Thickness 2	120+	Microns	
Pile Height	2.5	inches	D5823
Pile Weight	47	oz/yd <sup>2</sup>	D5848
Primary Backing Weight	7+	oz/yd <sup>2</sup>	D5848
Secondary Backing Weight (Perforated)	16+	oz/yd <sup>2</sup>	D5848
Total Carpet Weight	70	oz/yd <sup>2</sup>	D5848
Stitch Gauge	3/4 inch centers		D5793
Tuft Bind	8+	lbs/force	D1335
Grab Tear Length	>200	lbs/force	D5034
Grab Tear Width	>200	lbs/force	D5034
Pill Burn Test	Pass		D2859
Impact Attenuation (Gmax)	<200	gmax	F1936
Water Permeability	>40	inch/hour	DIN 18-035
SBR Rubber Infill	3.5	Lbs/ft <sup>2</sup>	
Sand	4	Lbs/ft <sup>2</sup>	
Total Product Weight	1150	oz/yd <sup>2</sup>	

Variation of +/- 5% on above listed property values is within normal manufacturing tolerances

**Issue Date: 9/12/17**

PRODUCT  
TECHNICAL  
SPECIFICATION

# Vertex

## Monofilament/Slit-Film 2.25"

Property	Value	Units	ASTM
Product Stock Code	FTVT-57		
Pile Yarn Type	UV-resistant polyethylene		n/a
Yarn Structure 1	Ridged Monofilament		n/a
Yarn Denier 1	12000+	Denier	D1577
Tape Thickness 1	360+	Microns	
Yarn Structure 2	Slit-Film		
Yarn Denier 2	5000	Denier	D1577
Tape Thickness 2	120+	Microns	
Pile Height	2.25	inches	D5823
Pile Weight	43	oz/yd <sup>2</sup>	D5848
Primary Backing Weight	7+	oz/yd <sup>2</sup>	D5848
Secondary Backing Weight (Perforated)	16+	oz/yd <sup>2</sup>	D5848
Total Carpet Weight	66	oz/yd <sup>2</sup>	D5848
Stitch Gauge	3/4 inch centers		D5793
Tuft Bind	8+	lbs/force	D1335
Grab Tear Length	>200	lbs/force	D5034
Grab Tear Width	>200	lbs/force	D5034
Pill Burn Test	Pass		D2859
Impact Attenuation (Gmax)	<200	gmax	F1936
Water Permeability	>40	inch/hour	DIN 18-035
SBR Rubber Infill	3	Lbs/ft <sup>2</sup>	
Sand	3	Lbs/ft <sup>2</sup>	
Total Product Weight	930	oz/yd <sup>2</sup>	

Variation of +/- 5% on above listed property values is within normal manufacturing tolerances

**Issue Date: 9/12/17**



PRODUCT  
TECHNICAL  
SPECIFICATION

# Vertex

## Monofilament/Slit-Film 2"

Property	Value	Units	ASTM
Product Stock Code	FTVT-50		
Pile Yarn Type	UV-resistant polyethylene		n/a
Yarn Structure 1	Ridged Monofilament		n/a
Yarn Denier 1	12000+	Denier	D1577
Tape Thickness 1	360+	Microns	
Yarn Structure 2	Slit-Film		
Yarn Denier 2	5000	Denier	D1577
Tape Thickness 2	120+	Microns	
Pile Height	2	inches	D5823
Pile Weight	39	oz/yd <sup>2</sup>	D5848
Primary Backing Weight	7+	oz/yd <sup>2</sup>	D5848
Secondary Backing Weight (Perforated)	16+	oz/yd <sup>2</sup>	D5848
Total Carpet Weight	62	oz/yd <sup>2</sup>	D5848
Stitch Gauge	3/4 inch centers		D5793
Tuft Bind	8+	lbs/force	D1335
Grab Tear Length	>200	lbs/force	D5034
Grab Tear Width	>200	lbs/force	D5034
Pill Burn Test	Pass		D2859
Impact Attenuation (Gmax)	<200	gmax	F1936
Water Permeability	>40	inch/hour	DIN 18-035
SBR Rubber Infill	3	Lbs/ft <sup>2</sup>	
Sand	2	Lbs/ft <sup>2</sup>	
Total Product Weight	782	oz/yd <sup>2</sup>	

*Variation of +/- 5% on above listed property values is within normal manufacturing tolerances*

**Issue Date: 9/12/17**

PRODUCT  
TECHNICAL  
SPECIFICATION

# Hockey Speed

Property	Value	Units	ASTM
Product Stock Code	Hockey Speed		
Pile Yarn Type	Nylon		n/a
Yarn Denier	4400	Denier	D1577
Pile Height	0.5	inches	D5823
Pile Weight	50	oz/yd <sup>2</sup>	D5848
Primary Backing Weight	7	oz/yd <sup>2</sup>	D5848
Secondary Backing Weight	20	oz/yd <sup>2</sup>	D5848
Total Weight	77	oz/yd <sup>2</sup>	D5848
Tuft Bind	8+	lbs/force	D1335
Stitch Gauge	3/16 inch centers		
Grab Tear Length	>200	lbs/force	D5034
Grab Tear Width	>200	lbs/force	D5034
Pill Burn Test	Pass		
Impact Attenuation (Gmax)	<200	Gmax	F1936

Variation of +/- 5% on properties listed above is within normal manufacturing tolerances  
A separate shockpad is necessary under this system. Ask us for details.

**Issue Date: 11/04/16**

PRODUCT  
TECHNICAL  
SPECIFICATION

# Hockey Gold

Property	Value	Units	ASTM
Product Stock Code	Hockey Gold WB		
Tufting Pattern	Straight		
Pile Yarn Type	Polyethylene		n/a
Green Yarn Color	Field Green		
Yarn Denier	7200	Denier	D1577
Pile Height	0.5	inches	D5823
Pile Weight	50	oz/yd <sup>2</sup>	D5848
Primary Backing Weight	9	oz/yd <sup>2</sup>	D5848
Secondary Backing Weight (Latex)	35	oz/yd <sup>2</sup>	D5848
Total Weight	94	oz/yd <sup>2</sup>	D5848
Tuft Bind	8+	lbs/force	D1335
Stitch Gauge	3/16 inch centers		
Grab Tear Length	>200	lbs/force	D5034
Grab Tear Width	>200	lbs/force	D5034
Pill Burn Test	Pass		
Impact Attenuation (Gmax)	<200	Gmax	F1936

Variation of +/- 5% on properties listed above is within normal manufacturing tolerances  
A separate shockpad is necessary under this system. Ask us for details.

**Issue Date: 11/04/16**

PRODUCT  
TECHNICAL  
SPECIFICATION

# Hockey Multi

Property	Value	Units	ASTM
Product Stock Code	Hockey Multi		
Pile Yarn Type	UV-resistant polyethylene		n/a
Yarn Structure	Slit-Film and Texturized		n/a
Slit-Film Yarn Denier	10800	Denier	D1577
Texturized Yarn Denier	5000	Denier	D1577
Pile Height	1	inches	D5823
Pile Weight	62	oz/yd <sup>2</sup>	D5848
Primary Backing Weight	7+	oz/yd <sup>2</sup>	D5848
Secondary Backing Weight	20+	oz/yd <sup>2</sup>	D5848
Total Weight	89	oz/yd <sup>2</sup>	D5848
Stitch Gauge	3/8 inch centers		D5793
Tuft Bind	8+	lbs/force	D1335
Grab Tear Length	>200	lbs/force	D5034
Grab Tear Width	>200	lbs/force	D5034
Pill Burn Test	Pass		D2859
Impact Attenuation (Gmax)	<200	gmax	F1936
Water Permeability	>40	inch/hour	DIN 18-035
Sand	4.5	Lbs/ft <sup>2</sup>	

Variation of +/- 5% on above listed property values is within normal manufacturing tolerances  
A separate shockpad is necessary under this system. Ask us for details.

**Issue Date: 4/17/18**

PRODUCT  
TECHNICAL  
SPECIFICATION

# FieldTurf EasyField

## SYNTHETIC TURF COMPONENT

Property	Value	Units	ASTM
Pile Yarn Type	UV-resistant polyethylene		n/a
Yarn Structure	Slit-Film/Texturized		n/a
Yarn Denier	5000/5000/7500	Denier	D1577
Pile Height	1.125	inches	D5823
Pile Weight	72	oz/yd <sup>2</sup>	D5848
Primary Backing Weight	7	oz/yd <sup>2</sup>	D5848
Secondary Backing Weight	20	oz/yd <sup>2</sup>	D5848
Total Weight	99	oz/yd <sup>2</sup>	D5848
Stitch Gauge	1/4 inch centers		D5793
Tuft Bind	8+	lbs/force	D1335
Impact Attenuation (Gmax)	<200 (with shockpad)	gmax	F1936

*Variation of +/- 5% on above listed property values is within normal manufacturing tolerances*

## INTERLOCKING SHOCKPAD COMPONENT

Property	Value	Units	ASTM
Density	2.8	Lb/ft <sup>3</sup>	D3575
Dimensions (Turf Area)	3.44ft X 5.17ft	Ft	
Weight – Pad and Turf	21	lbs	
Pad Thickness	45	mm	D3575
Compressive Strength @ 25%	42	Psi	D3575
Compressive Strength @ 50%	54	Psi	D3575
Compressive Strength @ 75%	111	Psi	D3575
Tensile Strength	67	Psi	D3575
Tensile Elongation	16	%	D3575
Tear Strength	16	Lbs/in	D3575
Compressive Set @ 25%	7	%	D3575
Compressive Set @ 50%	12	%	D3575
Thermal Conductivity	0.26	(K) BTU-in/ft <sup>2</sup> -hr-F	C177
Thermal Stability	<1.0	%	D3575
Coefficient of Linear Thermal Expansion	5.4		D3575
Service Temperature	212	F (Max)	D3575
Water Absorption	<0.01	Lb/ft <sup>2</sup>	D3575
Compressive Creep	<1.5	1000hr, % (at 2psi)	D3575
Flammability	Meets	<4.0 in/min	FMVSS-302

# THE WORLD'S FIRST SMART SPORTS FIELD



# Genius

Imagine a sports field that could automatically track the number of athletes playing, hours of use and send maintenance alerts when needed. Imagine that it could then deliver in-depth reporting on executed maintenance and usage, allowing you to optimize scheduling, utilization and care.

**THE FUTURE HAS ARRIVED. INTRODUCING FIELDTURF GENIUS, POWERED BY INTELLIGENT PLAY.**

The world's first smart sports field.

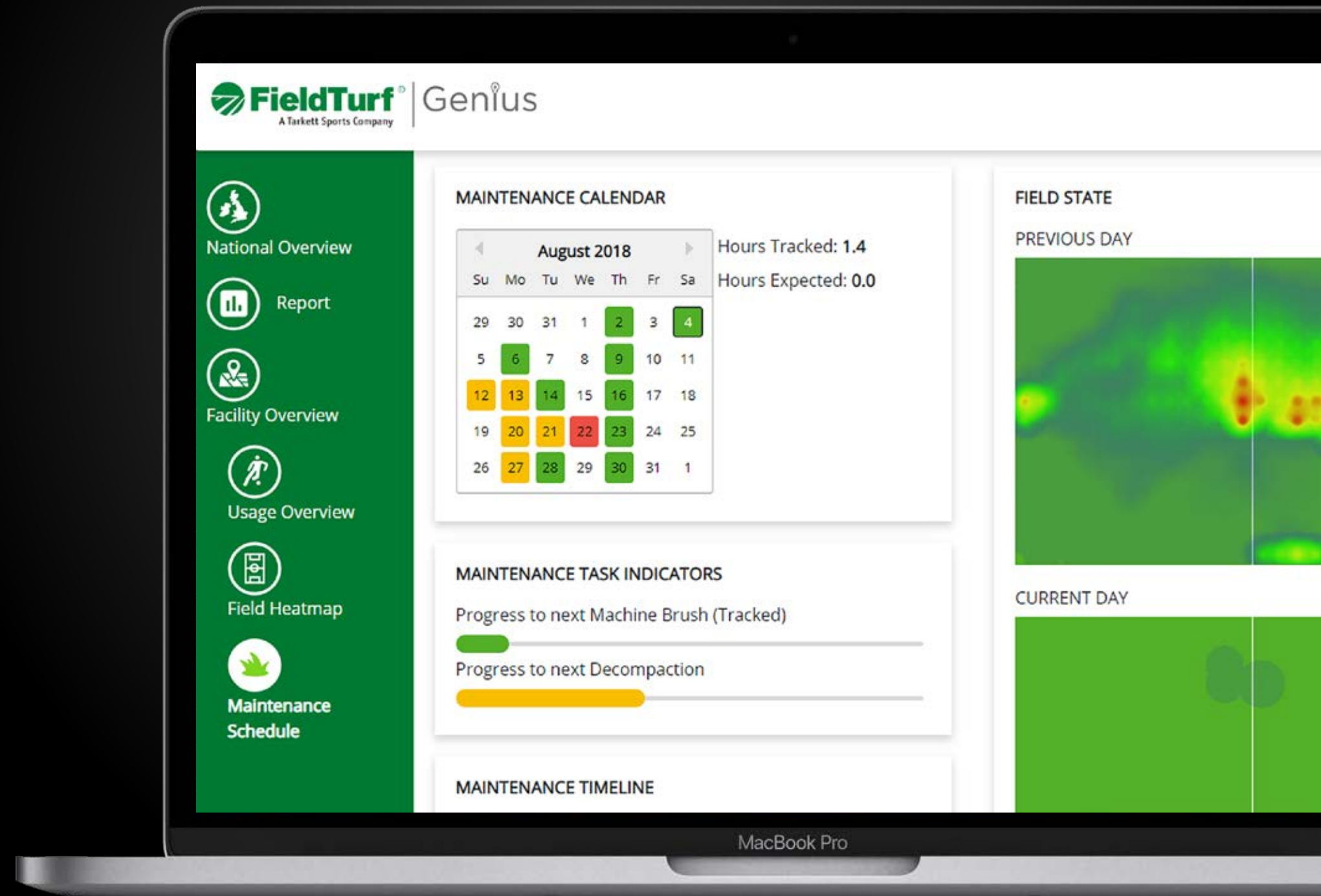
▶ **EASY MAINTENANCE MANAGEMENT & SCHEDULING**

▶ **OPTIMIZED FACILITY USAGE**

▶ **HELPS IMPROVE PERFORMANCE, SAFETY & LONGEVITY**

▶ **IN-DEPTH RECORD MANAGEMENT**

# YOUR FIELD IS ONE TOUCH AWAY



# GAME-CHANGING TECHNOLOGY TO CONNECT WITH YOUR FIELD



## FIELD LONGEVITY

An intelligently maintained surface can significantly contribute to extended product life. Prolonged usage allows for a greater return on investment.



## SAFETY & PERFORMANCE

A properly maintained surface allows for more consistent planarity and proper infill levels, which can contribute to improved player safety and performance.



## EASY MAINTENANCE

The automated maintenance alerts and live dashboard eliminate forms and human input. The system does the planning and enables you to track and monitor service, all from your desk.



## INCREASED REVENUE

The advanced reporting allows you to track usage, optimize field scheduling, increase the possibility of rentals and improves facility management.



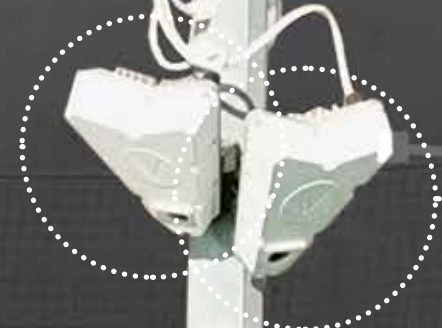
## LIVE MONITORING

FieldTurf Genius allows you to have eyes on your field at all times. Know when, where, how long and how many athletes are using your field.





# POWERING THE MISSING LINK



**2** INTELLIGENT SENSORS PER FIELD

# HOW DOES IT WORK?



## THE SENSORS

Two sensors are mounted to the facility lights or stadium press box and automatically process and convert the recordings into anonymous data for analysis. Through advanced computer vision and deep learning algorithms, live field participation is translated into tangible data.

## THE MONITORING

The system monitors all on-field activity and translates it into Equivalent Usage Hours (EUH)

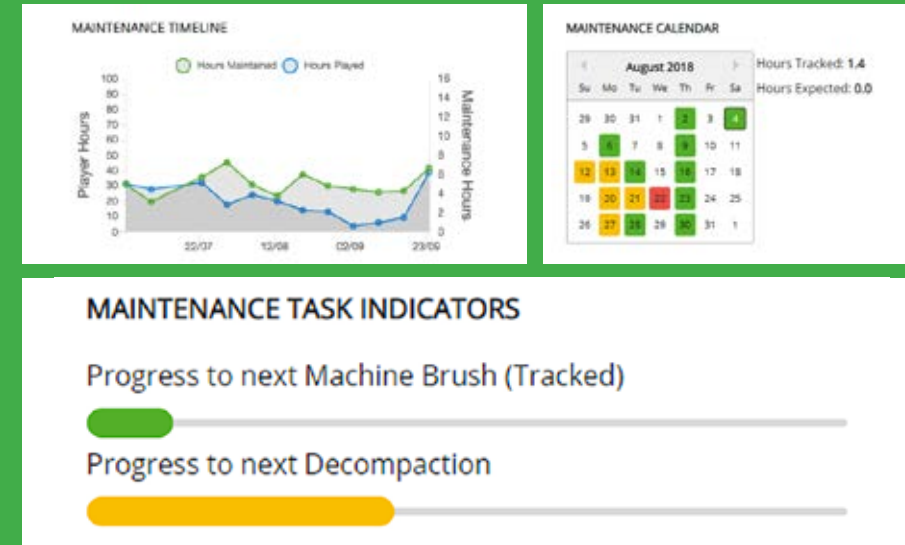
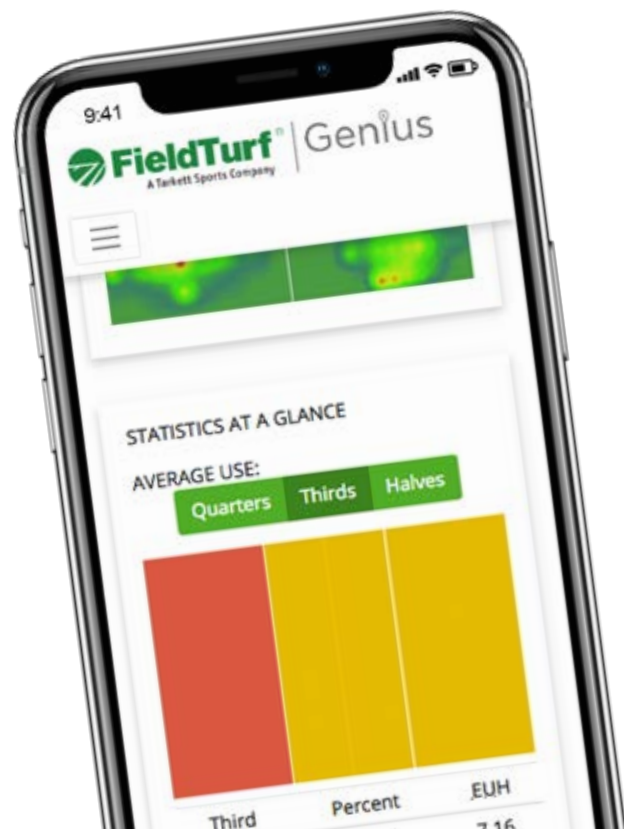
22 PLAYERS PLAYING FOR 1 HOUR = 1 EUH  
11 PLAYERS PLAYING FOR 1 HOUR = 0.5 EUH

By determining a quantifiable usage amount, proper maintenance and usage recommendations can be made. Live monitoring allows for accurate recommendations.

## THE MAINTENANCE ALERTS

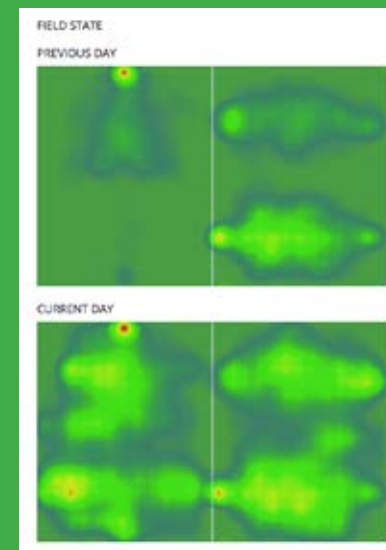
When your field reaches certain milestones, a maintenance alert is issued indicating the needed service: brushing, aerating, raking or sweeping. After the maintenance is completed, an updated heatmap allows you to track the efficiency of the session. A calendar and tracker help your team plan and ensure your field receives the proper care based on its true usage.

**NO MORE FORMS.  
NO HUMAN INPUT.**



## THE DASHBOARD

Using the online dashboard, advanced facility reporting is at your fingertips. Easily access field usage history, trends, planned and executed maintenance sessions and detailed heatmaps. Manage and compare multiple facilities using one platform from any device, from any location.



## MAINTENANCE HUB

Using the live heatmap, you can easily identify areas of high use to help properly maintain and care for your surface.

## USAGE HUB

Quickly access and sort field usage by quarters, thirds or halves to help balance utilization.



## ADVANCED FACILITY REPORTING

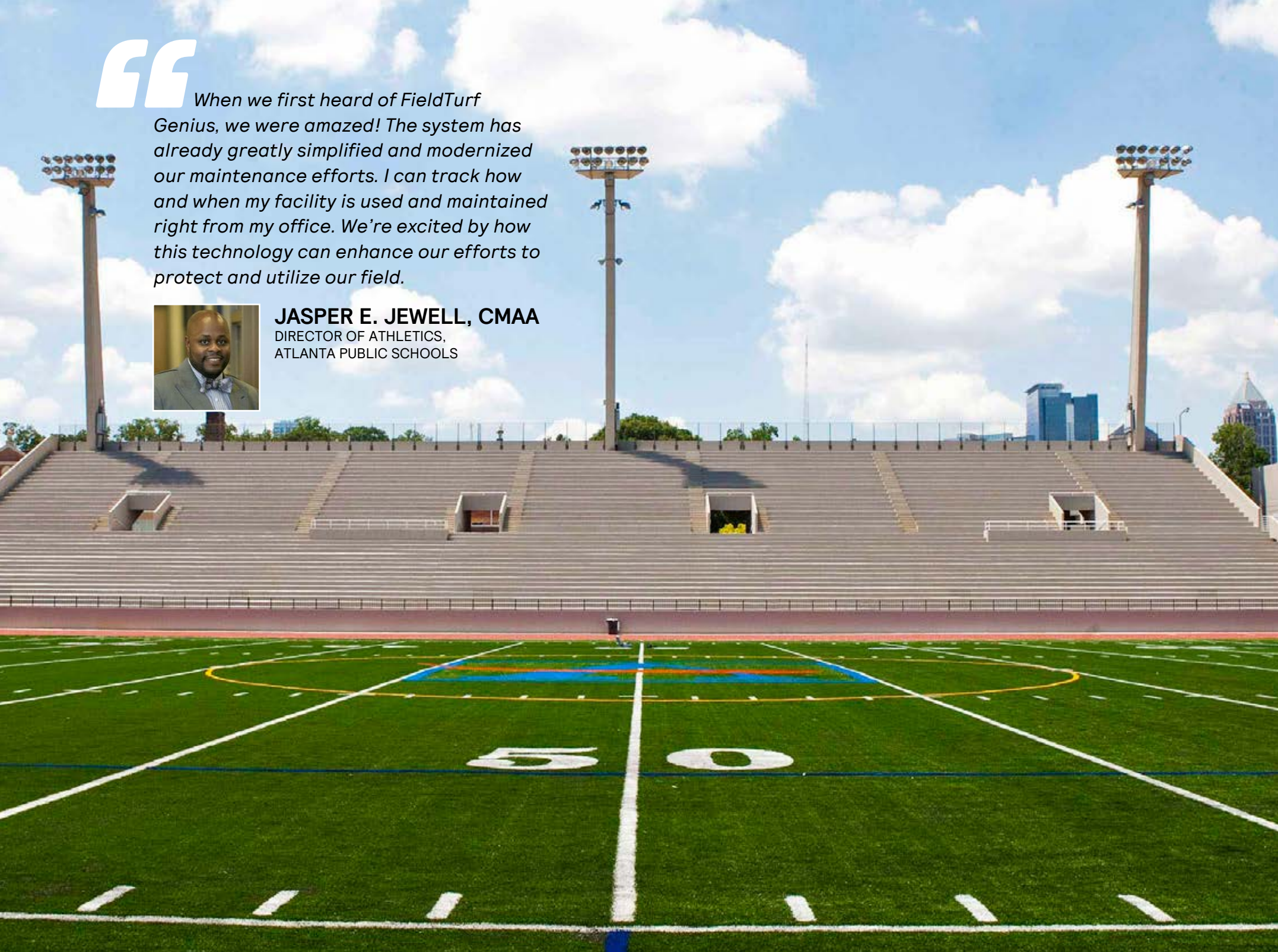
Generate advanced reports integrating weekly or monthly averages and custom date ranges to gain in-depth knowledge on your facility. The tool can help identify areas for additional rental and aid justify investment.

“

When we first heard of FieldTurf Genius, we were amazed! The system has already greatly simplified and modernized our maintenance efforts. I can track how and when my facility is used and maintained right from my office. We're excited by how this technology can enhance our efforts to protect and utilize our field.



**JASPER E. JEWELL, CMAA**  
DIRECTOR OF ATHLETICS,  
ATLANTA PUBLIC SCHOOLS



## LET'S GET STARTED WITH OUR MOST FREQUENT QUESTIONS

▶ **DOES FIELDTURF GENIUS USE FACIAL RECOGNITION TECHNOLOGY?**

**NO.** Our sensors record in low-resolution from far and elevated positions making facial recognition impossible. The recordings are automatically processed and converted into anonymous data, then discarded.

▶ **CAN I USE FIELDTURF GENIUS AS A SECURITY CAMERA?**

**NO. BUT IT CAN ALERT YOU.** Our sensors record in low-resolution from far and elevated positions, making facial recognition impossible. An alert can be programmed to advise you of off-hour usage to help protect from unauthorized use and vandalism.

▶ **CAN FIELDTURF GENIUS BE INSTALLED ON EVERY FIELD?**

**YES.** Pending the approval of the site suitability assessment, the system is easily installed. FieldTurf Genius requires only a low voltage power supply and two mount points (one per sensor), typically on the facility lights or stadium press box. Installation is normally completed in less than a day.

▶ **HOW IS THE DATA TRANSFERRED / COMMUNICATED?**

The system is connected to the network via a 3G/4G connection, which updates remotely for the life of the unit. In cases where 3G/4G connectivity is an issue, a WIFI connection can be established to run the unit.

Intelligent Play. Installed at:



POWERED BY



Intelligent Play.

THE TARKETT SPORTS FAMILY - LEADERS IN SPORTS SURFACING



800-724-2969 | [info@fieldturf.com](mailto:info@fieldturf.com) | [fieldturf.com](http://fieldturf.com)

# 1 FIELD INSPECTION

To start, FieldTurf experts perform a full facility inspection to warrant that your surface meets the Re-Cover qualifications. Ensuring proper drainage, planarity and curb design is key to preparing your field for Re-Cover. An initial site visit is conducted by a FieldTurf technician for pre-approval and a second visit is conducted by an independent laboratory to ensure that the field is fit for Re-Cover.

# 2 EXISTING FIELD IS LEVELED

To allow for consistent footing, ball-to-surface interaction and performance on Re-Cover, the existing field is carefully leveled to ensure planarity. A surfactant is then applied to the existing infill to lower surface tension and aid in reducing long-term compaction.

# 3 NEW FIELD IS LAID

Once the existing surface is prepared, the new field is installed following the same procedure as a standard installation.

# 4 EDGING IS ADJUSTED

To ensure your Re-Cover field meets with your curb correctly, the infill of the existing field is tapered to allow for a natural slope. Then the Re-Cover carpet is attached to the nailer board and infilled completing the edging adjustment.



PRODUCT  
TECHNICAL  
SPECIFICATION

# DoublePlay

Property	Value	Units	ASTM
Product Stock Code	FTHD-45-DoublePlay		
Pile Yarn Type	UV-resistant polyethylene		n/a
Yarn Structure	Slit-Film		n/a
Yarn Denier	10800	Denier	D1577
Tape Thickness	130	Microns	D3218
Pile Height	1.75	inches	D5823
Pile Weight	30	oz/yd <sup>2</sup>	D5848
Primary Backing Weight	7+	oz/yd <sup>2</sup>	D5848
Secondary Backing Weight	14+	oz/yd <sup>2</sup>	D5848
Total Weight	51	oz/yd <sup>2</sup>	D5848
Stitch Gauge	3/4 inch centers		D5793
Tuft Bind	8+	lbs/force	D1335
Grab Tear Length	>200	lbs/force	D5034
Grab Tear Width	>200	lbs/force	D5034
Pill Burn Test	Pass		D2859
Water Permeability	>40	inch/hour	DIN 18-035
SBR Rubber	1.5	Lbs/ft <sup>2</sup>	
Silica Sand	5.4	Lbs/ft <sup>2</sup>	
Total Product Weight	1045	oz/yd <sup>2</sup>	

*Variation of +/- 5% on above listed property values is within normal manufacturing tolerances*

**Issue Date: 12/11/17**

PRODUCT  
TECHNICAL  
SPECIFICATION

# DoublePlay

Property	Value	Units	ASTM
Product Stock Code	XT-45-DoublePlay		
Pile Yarn Type	UV-resistant polyethylene		n/a
Yarn Structure	Slit-Film		n/a
Yarn Denier	10800	Denier	D1577
Tape Thickness	130	Microns	D3218
Pile Height	1.75	inches	D5823
Pile Weight	30	oz/yd <sup>2</sup>	D5848
Primary Backing Weight	7+	oz/yd <sup>2</sup>	D5848
Secondary Backing Weight (perforated)	16+	oz/yd <sup>2</sup>	D5848
Total Weight	53	oz/yd <sup>2</sup>	D5848
Stitch Gauge	3/4 inch centers		D5793
Tuft Bind	8+	lbs/force	D1335
Grab Tear Length	>200	lbs/force	D5034
Grab Tear Width	>200	lbs/force	D5034
Pill Burn Test	Pass		D2859
Water Permeability	>40	inch/hour	DIN 18-035
SBR Rubber	1.5	Lbs/ft <sup>2</sup>	
Silica Sand	5.4	Lbs/ft <sup>2</sup>	
Total Product Weight	1047	oz/yd <sup>2</sup>	

Variation of +/- 5% on above listed property values is within normal manufacturing tolerances

**Issue Date: 12/11/17**



# CHANGE THE *Game*



gettyimages<sup>®</sup>  
Dmytro Aksonov



REDEFINE

# HOME FIELD *Advantage*



Our goal was simple... design an artificial turf baseball system that replicates the best ballparks in America. But like every road to greatness, creating the perfect surface took time and patience.

We started by testing and analyzing the nation's elite clay, grass and turf facilities to study ball surface interaction, speed and consistency. Then designed our new series to emulate the best results.

Our journey rewrote the book on testing and product development. Introducing our new baseball line, DoublePlay Speed and DoublePlay Natural.

**IF YOU SWING, MAKE IT COUNT.**

**“** Man, this stuff is good. I believe that playing on our FieldTurf field has helped in terms of getting our guys used to consistent play and focusing on making plays. It has been a contributor to our success and has helped Oregon State Baseball strive to reach the next level.”

**PAT CASEY**  
OREGON STATE BEAVERS



# TECHNOLOGY FUELED OUR PURSUIT OF EXCELLENCE

Our journey had us push the boundaries of testing and product innovation like never before. We used science to analyze ball-surface interaction on a variety of systems and through the use of advanced high tech motion video cameras, we were able to translate it in real-life data. Never before has there been a way to build your FieldTurf baseball field with such precision.

**THE RESULT?**  
**USING OUR THREE CRITICAL PERFORMANCE CRITERIA: SPEED, LINE & BOUNCE – YOU CAN BUILD YOUR FIELD TO PLAY FAST OR PLAY LIKE A NATURAL SURFACE.**

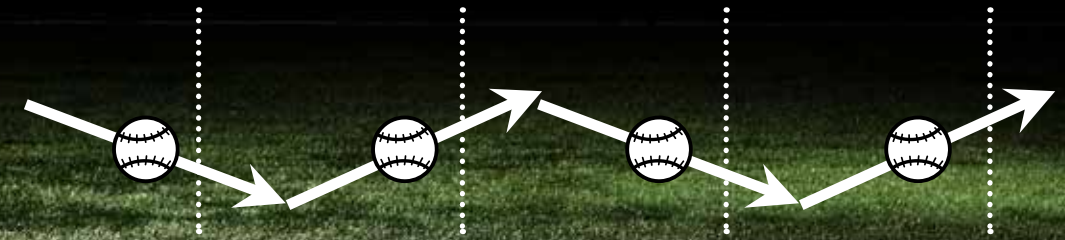


## 1

### SPEED

Speed is a total average of the ball speed-in and ball speed-out at the bounce points. Measured in feet per second.

**WHY IS THIS IMPORTANT?**  
 The *SPEED* rating allows you to select a system that either plays fast or plays like a natural surface.

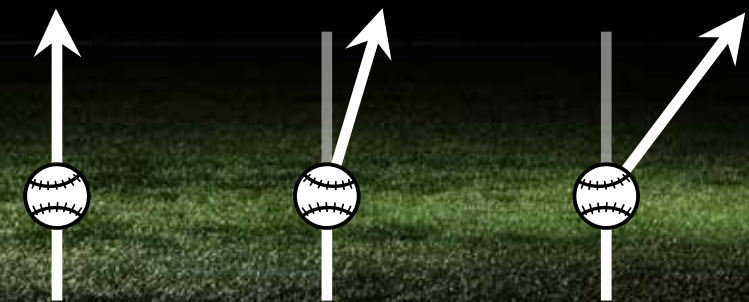


## 2

### LINE

Line is a total average of the ball bounce straightness variation. Measured in degrees.

**WHY IS THIS IMPORTANT?**  
 The *LINE* rating indicates if the hop plays true.

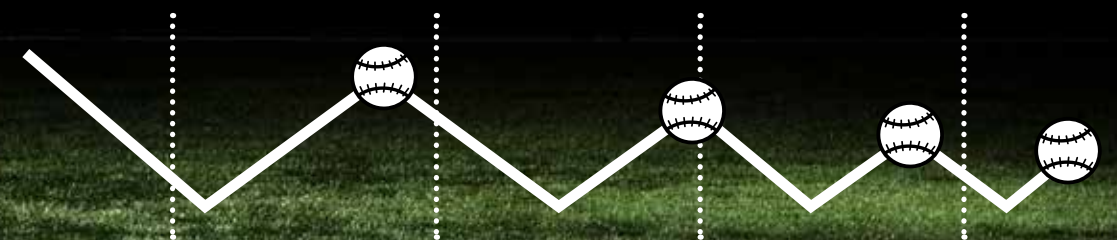


## 3

### BOUNCE

Bounce height is a total average of the max height obtained at the bounce points. Measured in feet.

**WHY IS THIS IMPORTANT?**  
 The *BOUNCE* rating indicates if the ball plays like a natural surface



# WHICH SYSTEM IS RIGHT FOR YOU?

## DOUBLEPLAY *Speed*

PLAYS: FAST

## DOUBLEPLAY *Natural*

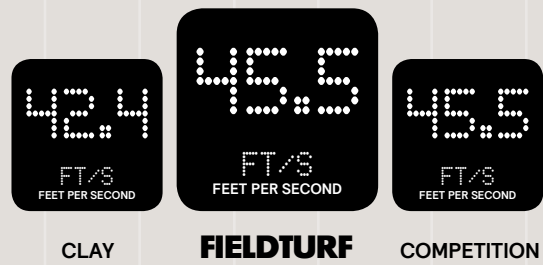
PLAYS: LIKE A NATURAL SURFACE

INFIELD

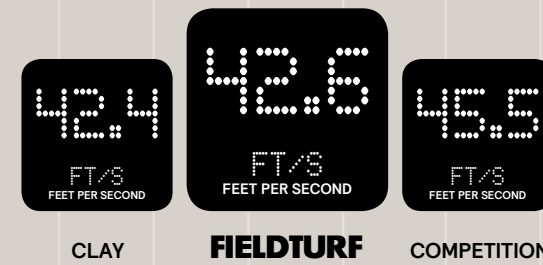
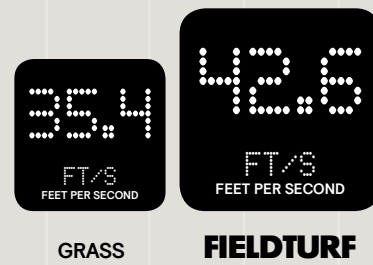
OUTFIELD

INFIELD

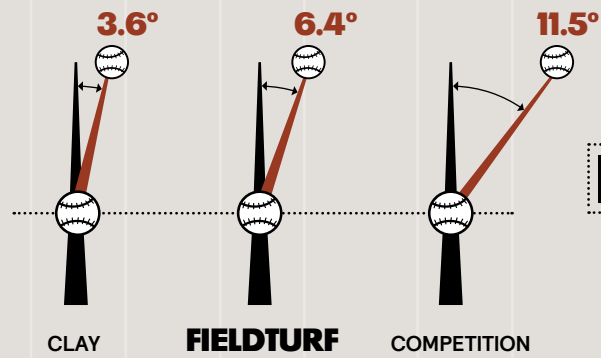
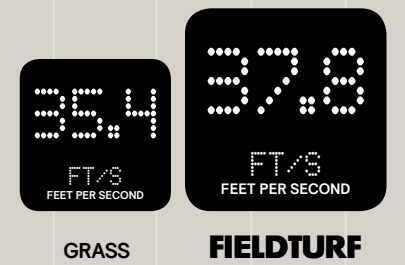
OUTFIELD



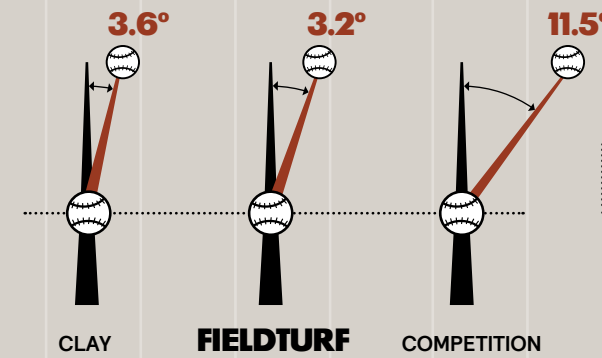
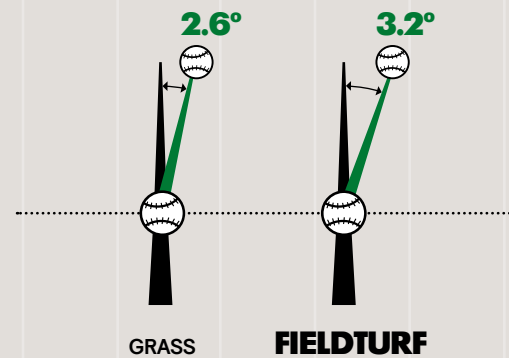
SPEED



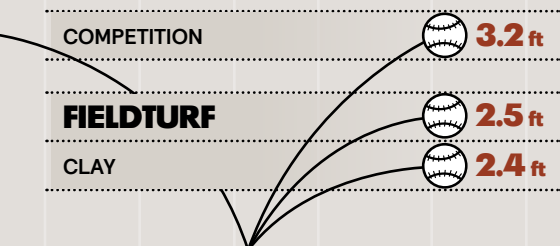
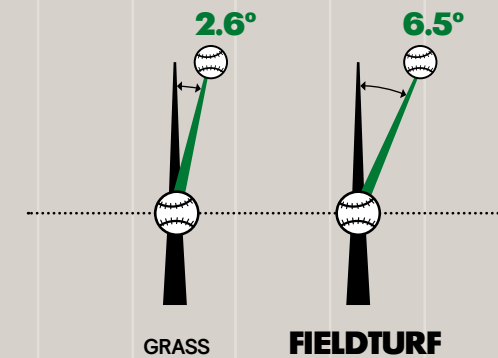
SPEED



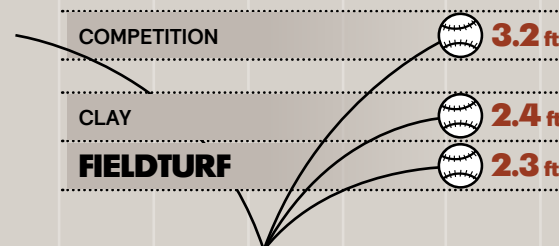
STRAIGHTNESS



STRAIGHTNESS



BOUNCE



BOUNCE



Our development program pushed past the infield to deliver optimal performance specifically for your outfield. DoublePlay allows you to design your entire field, start to finish, with precision.

Our development program pushed past the infield to deliver optimal performance specifically for your outfield. DoublePlay allows you to design your entire field, start to finish, with precision.

TRUSTED AT

Every Level



MAJOR LEAGUE



MINOR LEAGUE



COLLEGIATE



# MAKE IT YOURS!

WE'VE NEVER BEEN FANS OF THE COOKIE CUTTER APPROACH. IT'S YOUR FIELD, SO MAKE IT YOURS! FROM DESIGN TO COLOR PATTERNS, WE'RE HERE TO HELP MAKE YOUR DIAMOND THE TALK OF THE TOWN.

## MOUND OPTIONS

When it comes to mounds, several options are open to you depending on your preference. FieldTurf recommends these three options:

## WARNING TRACKS OPTIONS

Changing the feeling under foot by substituting the infill material is key to alert your athletes of the transition from the outfield to the warning track. FieldTurf recommends these three options.

## BASE PATHS COLORS

FieldTurf offers three standard colors options to design your base paths. Custom colors are available upon request.

## ON-FIELD LOGOS

As we produce the logos for every FieldTurf field, nothing is left to a third party. Nothing is left to chance. This provides you with a level of quality assurance that simply cannot be matched.



**PORTABLE**



**ALL SAND**



**PERMANENT**



**TURFACE®  
PRO  
LEAGUE**



**CLAY /  
NATURAL  
PRODUCT**



**LAVA  
ROCK**



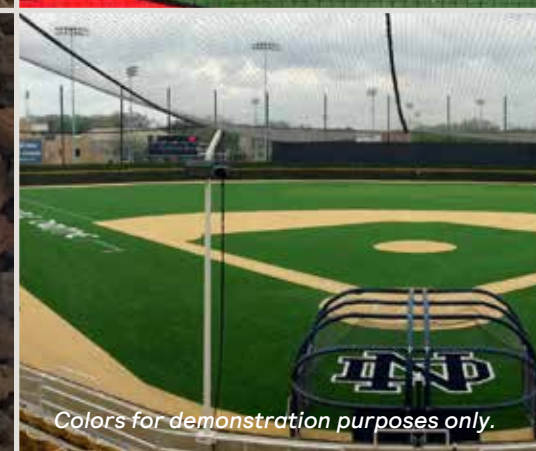
**FIELDTURF  
DARK  
BROWN**

---  
PANTONE  
4625 C



**FIELDTURF  
RUST**

---  
PANTONE  
174 C



**FIELDTURF  
TAN**

---  
PANTONE  
728 C

*Colors for demonstration purposes only.*



# GAME CHANGING

# Technology

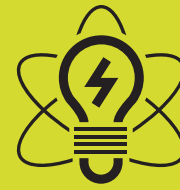
## TOUGHBACK

High-use areas are a challenge for any turf system, and baseball fields are no exception. Cleats dig deep into the turf, right down to backing layers, often puncturing right through them. The damaged areas must then be replaced.

What's the solution? Meet ToughBack, a unique layer applied to the system backing, resulting in a super tough layer once hardened.



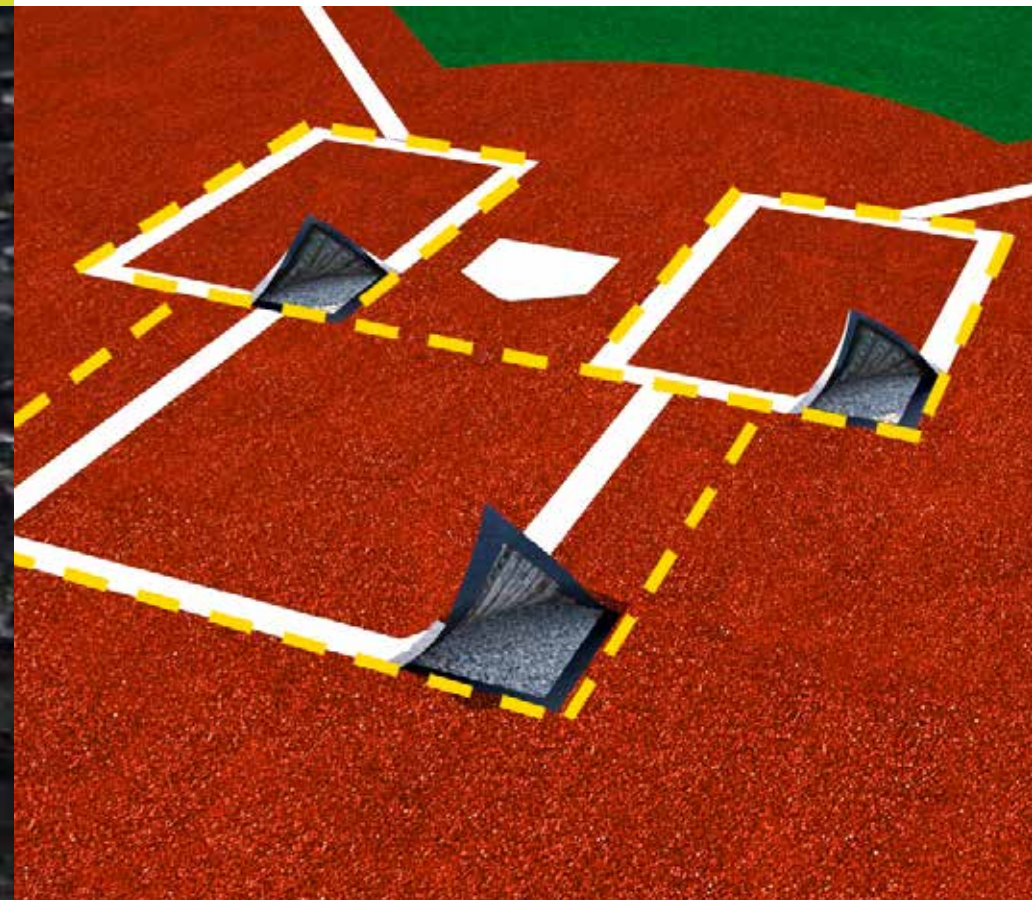
Equipped on all fieldturf DoublePlay systems



## FIELDTURF INNOVATION+ PERFORMANCE CENTER

Our Velcro system offers a quick and simple solution to replacing your batter and umpire areas. We equip you with the spare pieces upfront, allowing your team to exchange when needed.

## FTVELCRO



*“ We have had the Field Turf replaceable home plate batter's box set now for over a year. This is a great product, and it really holds up well. We no longer have to worry about holes in our turf as it is simple to replace that area. Also, the customer service from these guys is absolutely incredible. They are on the ball whenever we call! ”*

**JOHN ARNTSON**  
CLACKAMAS HIGH SCHOOL  
HEAD BASEBALL COACH

*“ University of North Georgia Softball hosted 12 NCAA DII games last week over a 5-day period, and the pitching lane area is holding up great. FieldTurf has it figured out!”*

**MIKE DAVENPORT**  
UNIVERSITY OF NORTH GEORGIA



# WHY

## FieldTurf



### VERTICALLY INTEGRATED

FieldTurf controls all aspects of the manufacturing value chain. From start to finish, we're in control of your field.



### EXPERIENCED

With over 20,000 installations worldwide, FieldTurf has been the surface of choice for the last 20+ years.



### LEADING DURABILITY

Manufactured and installed with the highest attention to detail, FieldTurf systems showcase proven durability. There are over 2,000 FieldTurf fields still in use that are 8+ years old.



### FINANCIALLY STABLE

Part of Tarkett Sports, a division of the Tarkett Group, a worldwide leader of innovative flooring and sports surface solutions, FieldTurf has unprecedented financial support and stability. You can rest easy.



### TRUSTED

Regardless of the sport, FieldTurf is the trusted surface of the most elite programs in the world.



### ENDLESS PURSUIT OF INNOVATION

From the original 3-layer infill system; to our SureLock coating drainage application; to our game-changing CoolPlay infill - our innovations continue to change the game.

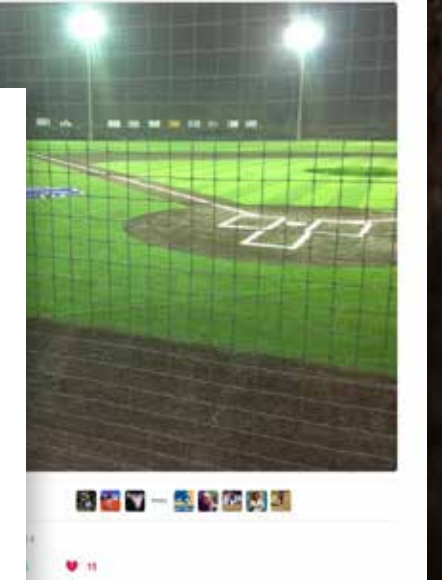
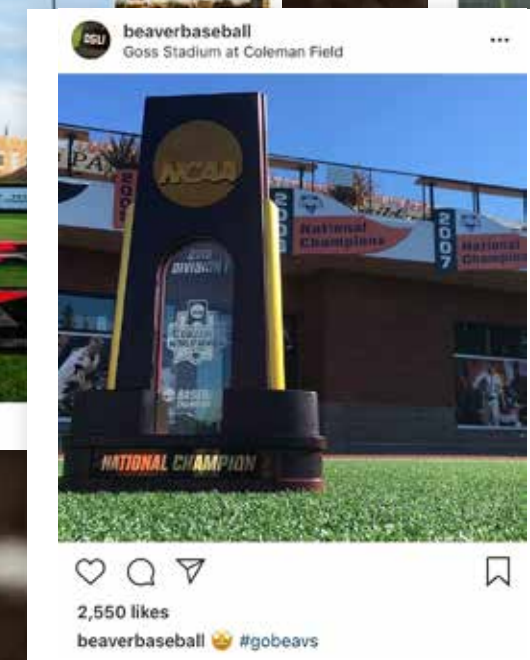
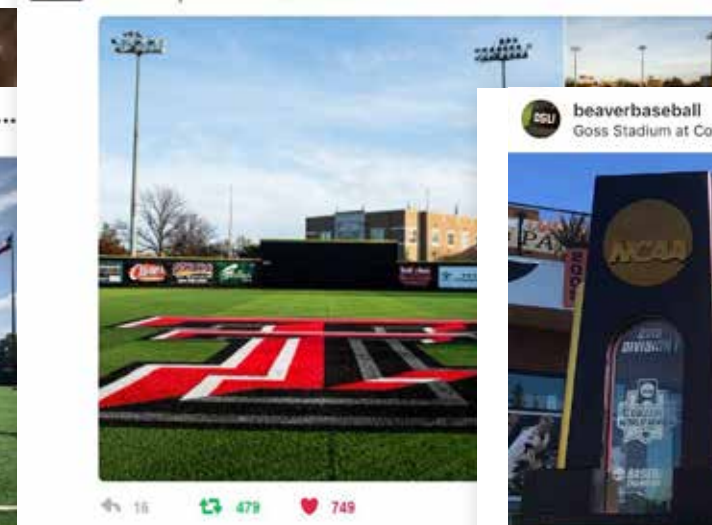
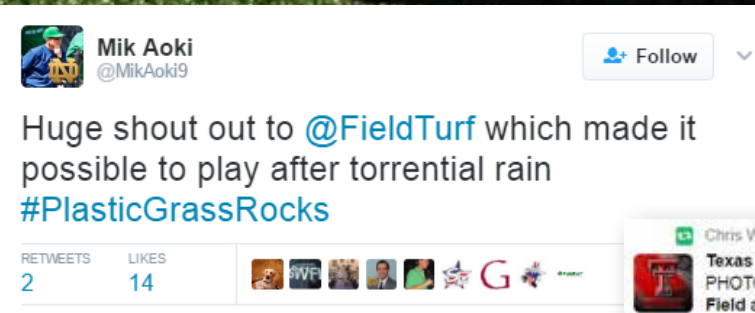


### SERVICE

We are as committed to your program as you are; and we're with you for the long term. When you buy a field from FieldTurf, you're buying from a company that knows how to take care of you. It's what we do best.

“Once our field was installed, it was obvious that the speed of play in our infield and the overall look of our ballfield was exactly what we wanted. We are now on our second FieldTurf surface after our first field went 8 years with great performance.”

DAN MCDONNELL  
HEAD COACH, LOUISVILLE CARDINALS





THE TARKETT SPORTS FAMILY - LEADERS IN SPORTS SURFACING



800-724-2969 | [info@fieldturf.com](mailto:info@fieldturf.com) | [fieldturf.com](http://fieldturf.com)



TECHNICAL

# DOUBLEPLAY Baseball

SPECIFICATION



## Clutch Infield 2"

PROPERTY	VALUE	UNITS	METHOD
Product Stock Code	XT-50-3/8		
Pile Yarn Type	UV-resistant polyethylene		n/a
Yarn Structure	Slit-Film		n/a
Yarn Denier	10800	Denier	D1577
Tape Thickness	130	Microns	D3218
Pile Height	2	inches	D5823
Pile Weight	42	oz/yd <sup>2</sup>	D5848
Primary Backing Weight	7+	oz/yd <sup>2</sup>	D5848
Secondary Backing Weight (Perforated)	16+	oz/yd <sup>2</sup>	D5848
Total Carpet Weight	65	oz/yd <sup>2</sup>	D5848
Stitch Gauge	3/8 inch centers		D5793
Tuft Bind	8+	lbs/force	D1335
Grab Tear Length	>200	lbs/force	D5034
Grab Tear Width	>200	lbs/force	D5034
Pill Burn Test	Pass		D2859
Water Permeability	>40	inch/hour	DIN 18-035
Ambient Rubber	1.5	Lbs/ft <sup>2</sup>	
Sand	5.4	Lbs/ft <sup>2</sup>	
Total Product Weight	1059	oz/yd <sup>2</sup>	

Issue Date: 9/12/2018

Disclaimer: Variation of +/-5% on above listed property values is within normal manufacturing tolerances



TECHNICAL

# DOUBLEPLAY Baseball

SPECIFICATION



Clutch Outfield 2"

PROPERTY	VALUE	UNITS	METHOD
Product Stock Code	FTVT-50		
Pile Yarn Type	UV-resistant polyethylene		n/a
Yarn Structure 1	Ridged Monofilament		n/a
Yarn Denier 1	12000	Denier	D1577
Tape Thickness 1	360	Microns	
Yarn Structure 2	Slit-Film		
Yarn Denier 2	5000	Denier	D1577
Tape Thickness 2	130	Microns	
Pile Height	2	inches	D5823
Pile Weight	39	oz/yd <sup>2</sup>	D5848
Primary Backing Weight	7+	oz/yd <sup>2</sup>	D5848
Secondary Backing Weight (Perforated)	16+	oz/yd <sup>2</sup>	D5848
Total Carpet Weight	62	oz/yd <sup>2</sup>	D5848
Stitch Gauge	3/4 inch centers		D5793
Tuft Bind	8+	lbs/force	D1335
Grab Tear Length	>200	lbs/force	D5034
Grab Tear Width	>200	lbs/force	D5034
Pill Burn Test	Pass		D2859
Impact Attenuation (Gmax)	<200	gmax	F1936
Water Permeability	>40	inch/hour	DIN 18-035
Ambient Rubber	2.6	Lbs/ft <sup>2</sup>	
Sand	3.65	Lbs/ft <sup>2</sup>	
Total Product Weight	962	oz/yd <sup>2</sup>	

Issue Date: 8/17/2018

Disclaimer: Variation of +/-5% on above listed property values is within normal manufacturing tolerances



# AMORIM CORK COMPOSITES

## Amorim 405CR 6mm Rubber Flooring Specifications

	Test Method	Amorim Typical Value
<b>Durometer, Shore A, points of hardness</b>	ASTM D2240-97	60
<b>Density, lbs/ft<sup>3</sup></b>	ASTM D297-93 Part A, Section 16.3	64
<b>Compressibility @ 100 psi, %</b>	ASTM F36-95	12
<b>Recovery, % after 100 psi compression</b>	ASTM F36-95	85
<b>Flexibility</b>	ASTM F137-71(1994)	F=1
<b>Tensile, psi</b>	ASTM D412-98a, die C @ 20 ipm	
<b>With grain</b>		600
<b>Against grain</b>		450
<b>Tear, ppi</b>	ASTM D624-98, die C @ 20 ipm	
<b>With grain</b>		150
<b>Against grain</b>		120
<b>Compression Set, %, 22 hours at 158°F</b>	ASTM D395-98, Method B	
<b>25% deflection</b>		40%
<b>50% deflection</b>		30%
<b>Coefficient of Friction</b>	ASTM D1894-95	
<b>Dry</b>		1.33
<b>Wet</b>		1.56
<b>Critical Radiant Flux</b>	ASTM E 648-99	0.1 W/cm <sup>2</sup>
<b>Flammability and Flame Spread</b>	DOC FFI-70 C8PC	Pass
<b>Indoor Abrasion, % of Material Loss</b>	ASTM C501-84(1996)	0.24
<b>Resistance to Chemical Attack</b>	ASTM F925-97	
<b>Ammonia</b>		No surface attack or color change
<b>Bleach</b>		No surface attack or color change
<b>Disinfectant</b>		No surface attack or color change
<b>Alcohol</b>		No surface attack or color change
<b>Tide</b>		No surface attack or color change
<b>5% NaOH Solution</b>		No surface attack or color change
<b>Human Sweat</b>		No surface attack or color change
<b>Instrumented Impact, absorbed energy at rupture, ft/lbs</b>	ASTM D3763-00	20
<b>Static Load Limit, residual compression</b>	ASTM F970-98	.0016"
<b>Rubber In Compression, % deflection</b>	ASTM D575-91, 500 lb. Load	43
<b>Compression Endurance</b>	10,000 fatigue cycles at 50% displacement	5% set

# DOUBLEPLAY *Baseball*

## TECHNICAL SPECIFICATION



### SLIT-FILM/THATCH 1.6"

PROPERTY	VALUE	UNITS	METHOD
Product Stock Code	Vintage 40		
Pile Yarn Type	UV-resistant polyethylene		n/a
Yarn Structure 1	Slit-Film		n/a
Yarn Denier 1	10000+	Denier	D1577
Yarn Structure 2	Texturized Thatch		
Yarn Denier 2	5000	Denier	D1577
Pile Height	1.6	inches	D5823
Pile Weight	90	oz/yd <sup>2</sup>	D5848
Primary Backing Weight	7+	oz/yd <sup>2</sup>	D5848
Secondary Backing Weight (Perforated)	20	oz/yd <sup>2</sup>	D5848
Total Weight	117	oz/yd <sup>2</sup>	D5848
Stitch Gauge	3/8 inch centers		D5793
Tuft Bind	8+	lbs/force	D1335
Water Permeability	>40	inch/hour	DIN 18-035
Grab Tear (Length)	>200	lbs/force	D5034
Grab Tear (Width)	>200	lbs/force	D5034
Olive Core Infill	1.2	lb/ft <sup>2</sup>	
Sand Infill	6	lbs/ft <sup>2</sup>	

Issue Date: 9/21/2020

**Disclaimer:** Variation of +/-5% on above listed property values is within normal manufacturing tolerances



# DOUBLEPLAY *Baseball*

## TECHNICAL SPECIFICATION



### SLIT-FILM/THATCH 1.6"

PROPERTY	VALUE	UNITS	METHOD
Product Stock Code	Vintage 40		
Pile Yarn Type	UV-resistant polyethylene		n/a
Yarn Structure 1	Slit-Film		n/a
Yarn Denier 1	10000+	Denier	D1577
Yarn Structure 2	Texturized Thatch		
Yarn Denier 2	5000	Denier	D1577
Pile Height	1.6	inches	D5823
Pile Weight	90	oz/yd <sup>2</sup>	D5848
Primary Backing Weight	7+	oz/yd <sup>2</sup>	D5848
Secondary Backing Weight (Perforated)	20	oz/yd <sup>2</sup>	D5848
Total Weight	117	oz/yd <sup>2</sup>	D5848
Stitch Gauge	3/8 inch centers		D5793
Tuft Bind	8+	lbs/force	D1335
Water Permeability	>40	inch/hour	DIN 18-035
Grab Tear (Length)	>200	lbs/force	D5034
Grab Tear (Width)	>200	lbs/force	D5034
SBR Rubber Infill	1.2	lb/ft <sup>2</sup>	
Sand Infill	4.5	lbs/ft <sup>2</sup>	

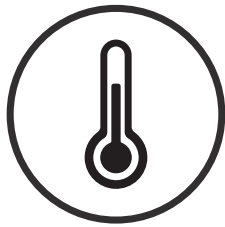
Issue Date: 9/8/2020

**Disclaimer:** Variation of +/-5% on above listed property values is within normal manufacturing tolerances



# NATURALLY FUSED

**BLENDED TO CREATE A SUPERIOR SOLUTION:** Made from natural cork and premier-grade elastomers, TrueBlend is produced by fusing these materials into one. The result is an infill that provides natural-like playing characteristics, aesthetics and the added benefit of easy upkeep. Natural materials and sophisticated engineering blended into one.



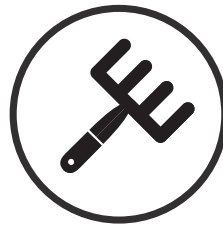
## COOLING PROPERTIES

The natural materials used in TrueBlend are designed to offer a beneficial cooling effect.



## ENVIRONMENTALLY FRIENDLY

TrueBlend is engineered using all recycled material. The system contributes to a positive impact for the planet.



## EASY UPKEEP

Being irrigation and replenishment free, TrueBlend truly is a low-stress solution.



## DURABILITY

The materials used in TrueBlend showcases proven durability and experience.



## MAKING A REAL DIFFERENCE EVERY YEAR

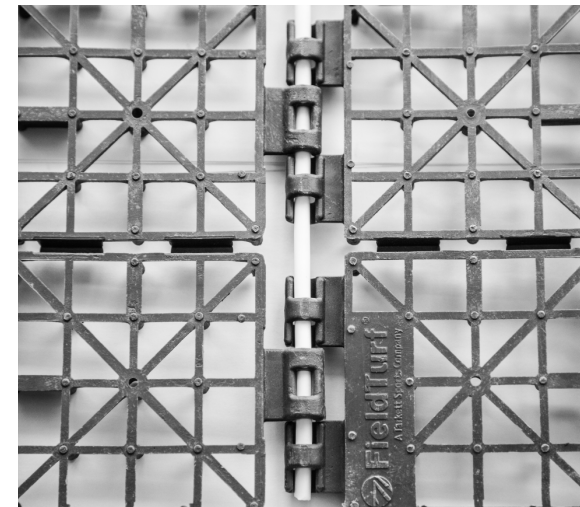
We were founded with the promise to make athletes safer during the game — and now we extend that promise to completely eliminate its potential to harm not just people but the environment too. FieldTurf's new Sustain The Game program showcases our sustainability commitment and our unwavering dedication to drive the field to zero.



## HINGED VERSATILE

The ultimate drainage and shock underlayment solution.

VersaTile	
Dimensions	42" x 24"
Thickness	13mm / ½"
Weight per sq.ft	220g / 0.5lb
% of recycled Turf	50 %
Dimensional Stability -30 °C / 60 °	< 1 %
Installation specification	Liner between stones and tiles
Installation specificity	Unroll carpet over the tiles before applying any equipment load



VersaTile installed under:	Alone (concrete)	Multi40-HD + SBR	FTRV2	FTRV1
Gmax (over concrete)	164	124	100	82
Clegg Hammer	185	99	74	65
Force Reduction (%)	47 %	61 %	67 %	69 %
Vertical Deformation (mm)	4.5 mm	8.0 mm	10.2 mm	10.8 mm
Percolation rate (with Mirafi liner)	> 360 mm/hr	System rate	System rate	System rate

SUBJECT **HINGED VERSATILE - SPEC SHEET**

TESTED BY **Nicolas Aumonier**

DATE **27/06/2016**

REPORT No. **16-031**

FIELDTURF INNOVATION & RESEARCH CENTRE  
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 IS FOR INTERNAL USE ONLY.

PRODUCT  
TECHNICAL  
SPECIFICATION

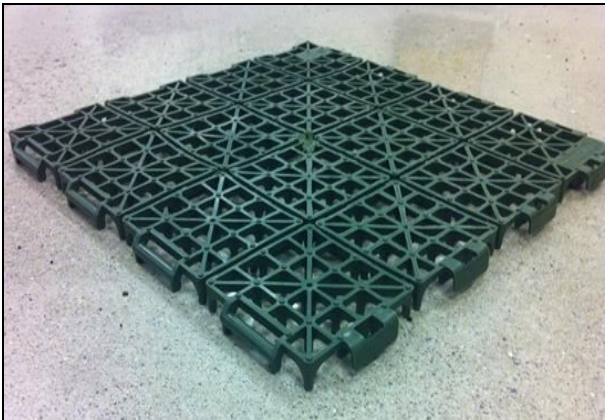
# VERSATILE

Property	Value	Units	Test Method
Product Structure	Drainage and Shock Tile		N/A
Material Type	Recycled Turf/TPE		N/A
VersaTile Dimensions	24 X 21	inches	N/A
VersaTile Thickness	13	mm	N/A
VersaTile Weight per Square Foot	175	grams	N/A
Interlock Format	Edge Clips		N/A
Average Shock Absorption – VersaTile Only	53	%	EN 14808
Average Vertical Deformation – VersaTile Only	5.4	mm	EN 14809
Water Infiltration Rate	>72,000	mm/hr	EN 12616
Free Draining Void Area	84	%	N/A
Dimensional Stability -30C/60C	<1	%	EN 13746

*Variation of +/- 5% on above listed property values is within normal manufacturing tolerances  
A proper liner is needed between the (stone) base and the VersaTile  
It is imperative to install the turf carpet over the VersaTile before applying any equipment or significant loads*

Issue Date: 04/03/2014

Top Side View of VersaTile Design



Bottom Side View of VersaTile Design







**IT'S NOT JUST PART OF THE TURF.  
IT'S PART OF THE GAME.™**

Envirofill is the natural choice for infill on football fields across the country. It's tough like the game itself, and players love it because it's cooler, more natural, and non-compacting. Plus, it's durable and it's completely reusable for multiple turf lifecycles. Want an infill that can take some serious hits? Call 800-548-0402 or visit [usgreentech.com](http://usgreentech.com) for more information and samples.



“Anderson Township Park District (ATPD) was looking for a synthetic turf field that delivered on performance, environmental responsibility, and longevity. The new fields, using Envirofill from USGreentech, delivered on all three aspects.”

- Ken Kushner, Executive Director | Anderson Township Park District

**Maximum playability.** Envirofill® tests have shown that it has 85% less flyout than crumb rubber infill. Its highly rounded quartz core resists compression so it doesn't continue to compact over the life of your field.

**It's cleaner.** Microban antimicrobial protection is infused into Envirofill during the manufacturing process to help prevent the growth of bacteria, mold, and mildew that can cause stains, odors, and product deterioration.

**It's cool.** Envirofill's natural heat reducing properties have been proven to lower synthetic surface temperatures as much as 25%. And it resists changes brought on by even the harshest weather conditions.

**It's reusable.** With its superior durability, Envirofill can be used for multiple turf lifecycles with no decrease in performance.

PRODUCT DATA ENVIROFILL® 12-20			
Physical properties	Measure	Test Method	Value
Dimensions	98.6% Retained 12-20 mesh sieves		
Materials	99.6% Silicon Dioxide, Pigment and Acrylic		
Hardness	Mohs Scale		6-8
Roundness	Krumbein Shape	ISO13503-2/API RP19C	0.7+
Density	lbs/cf	ASTM F-1815-06	110
Flammability		ASTM E648	Non-flammable
Dust			Negligible
Angle of Repose		ASTM C1444	±30 degrees
TCLP Metals Content	mg/kg	ASTM 6010	<Min Detectable Levels
Abrasiveness	Index	ASTM F 1015	26+/-2
Coefficient of Friction	Direct	ASTM F 1551	0.80 dynamic
Packaging	50lb bags or 3000lb Super Sacks		

Envirofill's exclusive partnership with Microban® provides an added level of antimicrobial protection for the lifetime of your infill.

For more information visit [www.USGreentech.com](http://www.USGreentech.com) or call (800) 548-0402



## ENVIROSAND MATERIAL SPECIFICATION

Test Method	Property	Unit	Range
ISO 2031	Bulk Density	g/cm <sup>3</sup>	1.68 – 1.76
ASTM D792	Specific Gravity	-	2.8 – 3.0
ISO 2030	Size Analysis by Mechanical Sieving	%	<i>see table</i>
	<b>(mesh)</b>	<b>(mm)</b>	<b>% retention</b>
	8	2.36	0.0
	10	2.00	0.0- 0.2
	12	1.70	0.8-1.0
	14	1.40	15.7 - 17.7
	16	1.18	29.8 - 31.8
	20	0.85	43.6 -45.6
	under	< 0.85	4.5- 6.9

PRODUCT  
TECHNICAL  
SPECIFICATION

# FTHD-1-EcoGrind

Property	Value	Units	ASTM
Product Stock Code	FTHD-1-EcoGrind		
Pile Yarn Type	UV-resistant polyethylene		n/a
Yarn Structure	Slit-Film		n/a
Yarn Denier	10800	Denier	D1577
Tape Thickness	130	Microns	D3218
Pile Height	2.5	inches	D5823
Pile Weight	36	oz/yd <sup>2</sup>	D5848
Primary Backing Weight	7+	oz/yd <sup>2</sup>	D5848
Secondary Backing Weight (Finger-Unit)	14+	oz/yd <sup>2</sup>	D5848
Total Weight	57	oz/yd <sup>2</sup>	D5848
Stitch Gauge	3/4 inch centers		D5793
Tuft Bind	8+	lbs/force	D1335
Grab Tear Length	>200	lbs/force	D5034
Grab Tear Width	>200	lbs/force	D5034
Pill Burn Test	Pass		D2859
Impact Attenuation (Gmax)	<200	gmax	F1936
Water Permeability	>40	inch/hour	DIN 18-035
Nike Grind	3	Lbs/ft <sup>2</sup>	
Sand	4	Lbs/ft <sup>2</sup>	

*Variation of +/- 5% on above listed property values is within normal manufacturing tolerances*

PRODUCT  
TECHNICAL  
SPECIFICATION

# FTHD-2-EcoGrind

Property	Value	Units	ASTM
Product Stock Code	FTHD-2-EcoGrind		
Pile Yarn Type	UV-resistant polyethylene		n/a
Yarn Structure	Slit-Film		n/a
Yarn Denier	10800	Denier	D1577
Tape Thickness	130	Microns	D3218
Pile Height	2	inches	D5823
Pile Weight	30	oz/yd <sup>2</sup>	D5848
Primary Backing Weight	7+	oz/yd <sup>2</sup>	D5848
Secondary Backing Weight (Finger-Unit)	14+	oz/yd <sup>2</sup>	D5848
Total Weight	51	oz/yd <sup>2</sup>	D5848
Stitch Gauge	3/4 inch centers		D5793
Tuft Bind	8+	lbs/force	D1335
Grab Tear Length	>200	lbs/force	D5034
Grab Tear Width	>200	lbs/force	D5034
Pill Burn Test	Pass		D2859
Impact Attenuation (Gmax)	<200	gmax	F1936
Water Permeability	>40	inch/hour	DIN 18-035
Nike Grind	3	Lbs/ft <sup>2</sup>	
Sand	2	Lbs/ft <sup>2</sup>	

*Variation of +/- 5% on above listed property values is within normal manufacturing tolerances*

**Issue Date: 10/22/14**



# Forgrin<sup>®</sup> HT-140

Thermoplastic Elastomer (TPE)

<b>Description</b>	TPE pellet for infill of synthetic turf.
<b>Characteristics</b>	Made with origin guaranteed and first-use raw materials. High UV and weathering resistance. It does not release any dust. Recommended for areas with UV irradiance $\leq$ 140 kLangley per year.
<b>Colour</b>	Dark brown, green, beige.
<b>Norm compliance</b>	<u>Forgrin<sup>®</sup> passed the tests based on the following regulations:</u> <ul style="list-style-type: none"> <li>• EU Directive EN 71-3 (Safety of Toys)</li> </ul>
<b>Safety</b>	<u>Forgrin<sup>®</sup> does not contain the following hazardous substances:</u> <ul style="list-style-type: none"> <li>• <b>Phthalates and Perfluorooctane Sulfonates (PFOS)</b>, as per European Regulation 1907/2006 annex 17 applicable from 01.06.2009 (REACH)</li> <li>• <b>Halogens</b>, as per IEC 61249-2-21</li> <li>• <b>Polycyclic Aromatic Hydrocarbons (PAH)</b> as per Document Zek 01-08</li> <li>• <b>Solvents (VOC)</b>, as per D.Lgs 152/2006, Art.268</li> </ul>

*The following figures indicate the typical material properties and are not to be considered as a specification.*

Physical properties	Typical values	Test method	Units
Hardness 3s	<b>63</b>	ASTM D2240	Shore A
Apparent density	<b>0.83</b>	ASTM D1895	g/cm <sup>3</sup>
Pellet length	<b>2</b>		mm
Particle size (weight % sieve size 1.6 - 2.5 mm)	<b>98</b>	So.f.ter MA TPE-S 2.0	%

## Disclaimer

The figures reported in this Technical Data Sheet are based on analyses carried out in SO.F.TER. laboratories according to the above mentioned test methods. These figures indicate the **typical material properties** and are not to be considered as a specification.

## Use and maintenance.

Forgrin<sup>®</sup> does not require any particular care after laying. In the hottest days, we recommend to water the pitch before using it, in order to lower the surface temperature. We also recommend not to shed any substance such as detergents, solvents and lubricating oils which could damage the pitch.

## Recycling

Forgrin<sup>®</sup> is completely recyclable and can be reprocessed at the end of its life cycle.

## Trademark

Forgrin<sup>®</sup> is a registered trademark of SO.F.TER. SPA, Italy.

PRODUCT  
TECHNICAL  
SPECIFICATION

# FTHD-57-EcoGrind

Property	Value	Units	ASTM
Product Stock Code	FTHD-57-EcoGrind		
Pile Yarn Type	UV-resistant polyethylene		n/a
Yarn Structure	Slit-Film		n/a
Yarn Denier	10800	Denier	D1577
Tape Thickness	130	Microns	D3218
Pile Height	2.25	inches	D5823
Pile Weight	33	oz/yd <sup>2</sup>	D5848
Primary Backing Weight	7+	oz/yd <sup>2</sup>	D5848
Secondary Backing Weight (Finger-Unit)	14+	oz/yd <sup>2</sup>	D5848
Total Weight	54	oz/yd <sup>2</sup>	D5848
Stitch Gauge	3/4 inch centers		D5793
Tuft Bind	8+	lbs/force	D1335
Grab Tear Length	>200	lbs/force	D5034
Grab Tear Width	>200	lbs/force	D5034
Pill Burn Test	Pass		D2859
Impact Attenuation (Gmax)	<200	gmax	F1936
Water Permeability	>40	inch/hour	DIN 18-035
Nike Grind	3	Lbs/ft <sup>2</sup>	
Sand	3	Lbs/ft <sup>2</sup>	

*Variation of +/- 5% on above listed property values is within normal manufacturing tolerances*

PRODUCT  
TECHNICAL  
SPECIFICATION

## FTRV-1-EcoGrind

Property	Value	Units	ASTM
Product Stock Code	FTRV-1-EcoGrind		
Pile Yarn Type	UV-resistant polyethylene		n/a
Yarn Structure	Ridged Monofilament		n/a
Yarn Denier	10800	Denier	D1577
Tape Thickness	235	Microns	D3218
Pile Height	2.5	inches	D5823
Pile Weight	40	oz/yd <sup>2</sup>	D5848
Primary Backing Weight	7+	oz/yd <sup>2</sup>	D5848
Secondary Backing Weight (Finger-Unit)	14+	oz/yd <sup>2</sup>	D5848
Total Weight	61	oz/yd <sup>2</sup>	D5848
Stitch Gauge	3/4 inch centers		D5793
Tuft Bind	8+	lbs/force	D1335
Grab Tear Length	>200	lbs/force	D5034
Grab Tear Width	>200	lbs/force	D5034
Pill Burn Test	Pass		D2859
Impact Attenuation (Gmax)	<200	gmax	F1936
Water Permeability	>40	inch/hour	DIN 18-035
Nike Grind	3	Lbs/ft <sup>2</sup>	
Sand	4	Lbs/ft <sup>2</sup>	

*Variation of +/- 5% on above listed property values is within normal manufacturing tolerances*



PRODUCT  
TECHNICAL  
SPECIFICATION

## FTRV-2-EcoGrind

Property	Value	Units	ASTM
Product Stock Code	FTRV-2-EcoGrind		
Pile Yarn Type	UV-resistant polyethylene		n/a
Yarn Structure	Ridged Monofilament		n/a
Yarn Denier	10800	Denier	D1577
Tape Thickness	235	Microns	D3218
Pile Height	2	inches	D5823
Pile Weight	34	oz/yd <sup>2</sup>	D5848
Primary Backing Weight	7+	oz/yd <sup>2</sup>	D5848
Secondary Backing Weight (Finger-Unit)	14+	oz/yd <sup>2</sup>	D5848
Total Weight	55	oz/yd <sup>2</sup>	D5848
Stitch Gauge	3/4 inch centers		D5793
Tuft Bind	8+	lbs/force	D1335
Grab Tear Length	>200	lbs/force	D5034
Grab Tear Width	>200	lbs/force	D5034
Pill Burn Test	Pass		D2859
Impact Attenuation (Gmax)	<200	gmax	F1936
Water Permeability	>40	inch/hour	DIN 18-035
Nike Grind	3	Lbs/ft <sup>2</sup>	
Sand	2	Lbs/ft <sup>2</sup>	

*Variation of +/- 5% on above listed property values is within normal manufacturing tolerances*

PRODUCT  
TECHNICAL  
SPECIFICATION

# FTRV-57-EcoGrind

Property	Value	Units	ASTM
Product Stock Code	FTRV-57-EcoGrind		
Pile Yarn Type	UV-resistant polyethylene		n/a
Yarn Structure	Ridged Monofilament		n/a
Yarn Denier	10800	Denier	D1577
Tape Thickness	235	Microns	D3218
Pile Height	2.25	inches	D5823
Pile Weight	36	oz/yd <sup>2</sup>	D5848
Primary Backing Weight	7+	oz/yd <sup>2</sup>	D5848
Secondary Backing Weight (Finger-Unit)	14+	oz/yd <sup>2</sup>	D5848
Total Weight	57	oz/yd <sup>2</sup>	D5848
Stitch Gauge	3/4 inch centers		D5793
Tuft Bind	8+	lbs/force	D1335
Grab Tear Length	>200	lbs/force	D5034
Grab Tear Width	>200	lbs/force	D5034
Pill Burn Test	Pass		D2859
Impact Attenuation (Gmax)	<200	gmax	F1936
Water Permeability	>40	inch/hour	DIN 18-035
Nike Grind	3	Lbs/ft <sup>2</sup>	
Sand	3	Lbs/ft <sup>2</sup>	

*Variation of +/- 5% on above listed property values is within normal manufacturing tolerances*

PRODUCT  
TECHNICAL  
SPECIFICATION

# FTVT-50-EcoGrind

Property	Value	Units	ASTM
Product Stock Code	FTVT-50-EcoGrind		
Pile Yarn Type	UV-resistant polyethylene		n/a
Yarn Structure 1	Ridged Monofilament Field Green		n/a
Yarn Denier 1	10800	Denier	D1577
Yarn Structure 2	Slit-Film Summergreen		
Yarn Denier 2	5000	Denier	
Pile Height	2	inches	D5823
Pile Weight	35	oz/yd <sup>2</sup>	D5848
Primary Backing Weight	7+	oz/yd <sup>2</sup>	D5848
Secondary Backing Weight (Perforated)	16+	oz/yd <sup>2</sup>	D5848
Total Weight	58	oz/yd <sup>2</sup>	D5848
Stitch Gauge	3/4 inch centers		D5793
Tuft Bind	8+	lbs/force	D1335
Pill Burn Test	Pass		D2859
Impact Attenuation (Gmax)	<200	gmax	F1936
Water Permeability	>40	inch/hour	DIN 18-035
Nike Grind	3	lbs/ft <sup>2</sup>	
Sand	2	lbs/ft <sup>2</sup>	

*Variation of +/- 5% on above listed property values is within normal manufacturing tolerances*

PRODUCT  
TECHNICAL  
SPECIFICATION

## FTVT-57-EcoGrind

Property	Value	Units	ASTM
Product Stock Code	FTVT-57-EcoGrind		
Pile Yarn Type	UV-resistant polyethylene		n/a
Yarn Structure 1	Ridged Monofilament Field Green		n/a
Yarn Denier 1	10800	Denier	D1577
Yarn Structure 2	Slit-Film Summergreen		
Yarn Denier 2	5000	Denier	
Pile Height	2.25	inches	D5823
Pile Weight	38	oz/yd <sup>2</sup>	D5848
Primary Backing Weight	7+	oz/yd <sup>2</sup>	D5848
Secondary Backing Weight (Perforated)	16+	oz/yd <sup>2</sup>	D5848
Total Weight	61	oz/yd <sup>2</sup>	D5848
Stitch Gauge	3/4 inch centers		D5793
Tuft Bind	8+	lbs/force	D1335
Pill Burn Test	Pass		D2859
Impact Attenuation	<200	gmax	F1936
Water Permeability	>40	inch/hour	DIN 18-035
Nike Grind	3	lbs/ft <sup>2</sup>	
Sand	3	lbs/ft <sup>2</sup>	

*Variation of +/- 5% on above listed property values is within normal manufacturing tolerances*

PRODUCT  
TECHNICAL  
SPECIFICATION

# FTVT-65-EcoGrind

Property	Value	Units	ASTM
Product Stock Code	FTVT-65-EcoGrind		
Pile Yarn Type	UV-resistant polyethylene		n/a
Yarn Structure 1	Ridged Monofilament Field Green		n/a
Yarn Denier 1	10800	Denier	D1577
Yarn Structure 2	Slit-Film Summergreen		
Yarn Denier 2	5000	Denier	
Pile Height	2.5	inches	D5823
Pile Weight	42	oz/yd <sup>2</sup>	D5848
Primary Backing Weight	7+	oz/yd <sup>2</sup>	D5848
Secondary Backing Weight (Perforated)	16+	oz/yd <sup>2</sup>	D5848
Total Weight	65	oz/yd <sup>2</sup>	D5848
Stitch Gauge	3/4 inch centers		D5793
Tuft Bind	8+	lbs/force	D1335
Pill Burn Test	Pass		D2859
Impact Attenuation (Gmax)	<200	gmax	F1936
Water Permeability	>40	inch/hour	DIN 18-035
Nike Grind	3	lbs/ft <sup>2</sup>	
Sand	4	lbs/ft <sup>2</sup>	

*Variation of +/- 5% on above listed property values is within normal manufacturing tolerances*

PRODUCT  
TECHNICAL  
SPECIFICATION

## FTVTP-50-EcoGrind

Property	Value	Units	ASTM
Product Stock Code	FTVTP-50-EcoGrind		
Pile Yarn Type	UV-resistant polyethylene		n/a
Yarn Structure 1	Ridged Monofilament Field Green		n/a
Yarn Denier 1	10800	Denier	D1577
Yarn Structure 2	Slit-Film Summergreen		
Yarn Denier 2	5000	Denier	
Pile Height	2	inches	D5823
Pile Weight	35	oz/yd <sup>2</sup>	D5848
Primary Backing Weight	7+	oz/yd <sup>2</sup>	D5848
Secondary Backing Weight (Finger-Unit)	14+	oz/yd <sup>2</sup>	D5848
Total Weight	56	oz/yd <sup>2</sup>	D5848
Stitch Gauge	3/4 inch centers		D5793
Tuft Bind	8+	lbs/force	D1335
Pill Burn Test	Pass		D2859
Impact Attenuation (Gmax)	<200	gmax	F1936
Water Permeability	>40	inch/hour	DIN 18-035
Nike Grind	3	lbs/ft <sup>2</sup>	
Sand	2	lbs/ft <sup>2</sup>	

*Variation of +/- 5% on above listed property values is within normal manufacturing tolerances*

PRODUCT  
TECHNICAL  
SPECIFICATION

## FTVTP-65-EcoGrind

Property	Value	Units	ASTM
Product Stock Code	FTVTP-65-EcoGrind		
Pile Yarn Type	UV-resistant polyethylene		n/a
Yarn Structure 1	Ridged Monofilament Field Green		n/a
Yarn Denier 1	10800	Denier	D1577
Yarn Structure 2	Slit-Film Summergreen		
Yarn Denier 2	5000	Denier	
Pile Height	2.5	inches	D5823
Pile Weight	42	oz/yd <sup>2</sup>	D5848
Primary Backing Weight	7+	oz/yd <sup>2</sup>	D5848
Secondary Backing Weight (Finger-Unit)	14+	oz/yd <sup>2</sup>	D5848
Total Weight	63	oz/yd <sup>2</sup>	D5848
Stitch Gauge	3/4 inch centers		D5793
Tuft Bind	8+	lbs/force	D1335
Pill Burn Test	Pass		D2859
Impact Attenuation (Gmax)	<200	gmax	F1936
Water Permeability	>40	inch/hour	DIN 18-035
Nike Grind	3	lbs/ft <sup>2</sup>	
Sand	4	lbs/ft <sup>2</sup>	

*Variation of +/- 5% on above listed property values is within normal manufacturing tolerances*

PRODUCT  
TECHNICAL  
SPECIFICATION

# Multi40-HD-EcoGrind

Property	Value	Units	ASTM
Product Stock Code	Multi40-HD-EcoGrind		
Pile Yarn Type	UV-resistant polyethylene		n/a
Yarn Structure	Slit-Film		n/a
Yarn Denier	10800	Denier	D1577
Tape Thickness	130	Microns	D3218
Pile Height	1.6	inches	D5823
Pile Weight	38	oz/yd <sup>2</sup>	D5848
Primary Backing Weight	7+	oz/yd <sup>2</sup>	D5848
Secondary Backing Weight (Perforated)	26	oz/yd <sup>2</sup>	D5848
Total Weight	71	oz/yd <sup>2</sup>	D5848
Stitch Gauge	3/8 inch centers		D5793
Tuft Bind	8+	lbs/force	D1335
Grab Tear Length	>200	lbs/force	D5034
Grab Tear Width	>200	lbs/force	D5034
Pill Burn Test	Pass		D2859
Impact Attenuation (Gmax)	<200	gmax	F1936
Water Permeability	>40	inch/hour	DIN 18-035
Nike Grind	1.5	Lbs/ft <sup>2</sup>	
Sand	3.75	Lbs/ft <sup>2</sup>	

*Variation of +/- 5% on above listed property values is within normal manufacturing tolerances  
A separate shockpad is required under this system. Ask us for details.*



PRODUCT  
TECHNICAL  
SPECIFICATION

# Multi40-RV-EcoGrind

Property	Value	Units	ASTM
Product Stock Code	Multi40-RV-EcoGrind		
Pile Yarn Type	UV-resistant polyethylene		n/a
Yarn Structure	Ridged Monofilament		n/a
Yarn Denier	10800	Denier	D1577
Tape Thickness	235	Microns	D3218
Pile Height	1.6	inches	D5823
Pile Weight	38	oz/yd <sup>2</sup>	D5848
Primary Backing Weight	7+	oz/yd <sup>2</sup>	D5848
Secondary Backing Weight (Perforated)	26	oz/yd <sup>2</sup>	D5848
Total Weight	71	oz/yd <sup>2</sup>	D5848
Stitch Gauge	3/8 inch centers		D5793
Tuft Bind	8+	lbs/force	D1335
Grab Tear Length	>200	lbs/force	D5034
Grab Tear Width	>200	lbs/force	D5034
Pill Burn Test	Pass		D2859
Impact Attenuation (Gmax)	<200	gmax	F1936
Water Permeability	>40	inch/hour	DIN 18-035
Nike Grind	1.5	Lbs/ft <sup>2</sup>	
Sand	3.75	Lbs/ft <sup>2</sup>	

*Variation of +/- 5% on above listed property values is within normal manufacturing tolerances  
A separate shockpad is necessary under this system. Ask us for details.*

PRODUCT  
TECHNICAL  
SPECIFICATION

## XM6-50-EcoGrind

Property	Value	Units	ASTM
Product Stock Code	XM6-50-EcoGrind		
Pile Yarn Type	UV-resistant polyethylene		n/a
Yarn Structure	Ridged Monofilament		n/a
Yarn Denier	10800	Denier	D1577
Tape Thickness	280	Microns	D3218
Pile Height	2	inches	D5823
Pile Weight	30	oz/yd <sup>2</sup>	D5848
Primary Backing Weight	7+	oz/yd <sup>2</sup>	D5848
Secondary Backing Weight (Perforated)	16+	oz/yd <sup>2</sup>	D5848
Total Weight	53	oz/yd <sup>2</sup>	D5848
Stitch Gauge	3/4 inch centers		D5793
Tuft Bind	8+	lbs/force	D1335
Grab Tear Length	>200	lbs/force	D5034
Grab Tear Width	>200	lbs/force	D5034
Pill Burn Test	Pass		D2859
Impact Attenuation (Gmax)	<200	gmax	F1936
Water Permeability	>40	inch/hour	DIN 18-035
Nike Grind	3	Lbs/ft <sup>2</sup>	
Sand	2	Lbs/ft <sup>2</sup>	

*Variation of +/- 5% on above listed property values is within normal manufacturing tolerances*

PRODUCT  
TECHNICAL  
SPECIFICATION

## XM6-57-EcoGrind

Property	Value	Units	ASTM
Product Stock Code	XM6-57-EcoGrind		
Pile Yarn Type	UV-resistant polyethylene		n/a
Yarn Structure	Ridged Monofilament		n/a
Yarn Denier	10800	Denier	D1577
Tape Thickness	280	Microns	D3218
Pile Height	2	inches	D5823
Pile Weight	33	oz/yd <sup>2</sup>	D5848
Primary Backing Weight	7+	oz/yd <sup>2</sup>	D5848
Secondary Backing Weight (Perforated)	16+	oz/yd <sup>2</sup>	D5848
Total Weight	56	oz/yd <sup>2</sup>	D5848
Stitch Gauge	3/4 inch centers		D5793
Tuft Bind	8+	lbs/force	D1335
Grab Tear Length	>200	lbs/force	D5034
Grab Tear Width	>200	lbs/force	D5034
Pill Burn Test	Pass		D2859
Impact Attenuation (Gmax)	<200	gmax	F1936
Water Permeability	>40	inch/hour	DIN 18-035
Nike Grind	3	Lbs/ft <sup>2</sup>	
Sand	3	Lbs/ft <sup>2</sup>	

*Variation of +/- 5% on above listed property values is within normal manufacturing tolerances*

PRODUCT  
TECHNICAL  
SPECIFICATION

## XM6-65-EcoGrind

Property	Value	Units	ASTM
Product Stock Code	XM6-65-EcoGrind		
Pile Yarn Type	UV-resistant polyethylene		n/a
Yarn Structure	Ridged Monofilament		n/a
Yarn Denier	10800	Denier	D1577
Tape Thickness	280	Microns	D3218
Pile Height	2.5	inches	D5823
Pile Weight	35	oz/yd <sup>2</sup>	D5848
Primary Backing Weight	7+	oz/yd <sup>2</sup>	D5848
Secondary Backing Weight (Perforated)	16+	oz/yd <sup>2</sup>	D5848
Total Weight	58	oz/yd <sup>2</sup>	D5848
Stitch Gauge	3/4 inch centers		D5793
Tuft Bind	8+	lbs/force	D1335
Grab Tear Length	>200	lbs/force	D5034
Grab Tear Width	>200	lbs/force	D5034
Pill Burn Test	Pass		D2859
Impact Attenuation (Gmax)	<200	gmax	F1936
Water Permeability	>40	inch/hour	DIN 18-035
Nike Grind	3	Lbs/ft <sup>2</sup>	
Sand	4	Lbs/ft <sup>2</sup>	

*Variation of +/- 5% on above listed property values is within normal manufacturing tolerances*

PRODUCT  
TECHNICAL  
SPECIFICATION

## XT-50-EcoGrind

Property	Value	Units	ASTM
Product Stock Code	XT-50-EcoGrind		
Pile Yarn Type	UV-resistant polyethylene		n/a
Yarn Structure	Slit-Film		n/a
Yarn Denier	10000+	Denier	D1577
Tape Thickness	100+	Microns	D3218
Pile Height	2	inches	D5823
Pile Weight	30	oz/yd <sup>2</sup>	D5848
Primary Backing Weight	7+	oz/yd <sup>2</sup>	D5848
Secondary Backing Weight (Perforated)	16+	oz/yd <sup>2</sup>	D5848
Total Weight	53	oz/yd <sup>2</sup>	D5848
Stitch Gauge	3/4 inch centers		D5793
Tuft Bind	8+	lbs/force	D1335
Grab Tear Length	>200	lbs/force	D5034
Grab Tear Width	>200	lbs/force	D5034
Pill Burn Test	Pass		D2859
Impact Attenuation (Gmax)	<200	gmax	F1936
Water Permeability	>40	inch/hour	DIN 18-035
Nike Grind	3	Lbs/ft <sup>2</sup>	
Sand	2	Lbs/ft <sup>2</sup>	

*Variation of +/- 5% on above listed property values is within normal manufacturing tolerances*

PRODUCT  
TECHNICAL  
SPECIFICATION

# XT-57-EcoGrind

Property	Value	Units	ASTM
Product Stock Code	XT-57-EcoGrind		
Pile Yarn Type	UV-resistant polyethylene		n/a
Yarn Structure	Slit-Film		n/a
Yarn Denier	10000+	Denier	D1577
Tape Thickness	100+	Microns	D3218
Pile Height	2.25	inches	D5823
Pile Weight	33	oz/yd <sup>2</sup>	D5848
Primary Backing Weight	7+	oz/yd <sup>2</sup>	D5848
Secondary Backing Weight (Perforated)	16+	oz/yd <sup>2</sup>	D5848
Total Weight	56	oz/yd <sup>2</sup>	D5848
Stitch Gauge	3/4 inch centers		D5793
Tuft Bind	8+	lbs/force	D1335
Grab Tear Length	>200	lbs/force	D5034
Grab Tear Width	>200	lbs/force	D5034
Pill Burn Test	Pass		D2859
Impact Attenuation (Gmax)	<200	gmax	F1936
Water Permeability	>40	inch/hour	DIN 18-035
Nike Grind	3	Lbs/ft <sup>2</sup>	
Sand	3	Lbs/ft <sup>2</sup>	

*Variation of +/- 5% on above listed property values is within normal manufacturing tolerances*

PRODUCT  
TECHNICAL  
SPECIFICATION

# XT-65-EcoGrind

Property	Value	Units	ASTM
Product Stock Code	XT-65-EcoGrind		
Pile Yarn Type	UV-resistant polyethylene		n/a
Yarn Structure	Slit-Film		n/a
Yarn Denier	10000+	Denier	D1577
Tape Thickness	100+	Microns	D3218
Pile Height	2	inches	D5823
Pile Weight	36	oz/yd <sup>2</sup>	D5848
Primary Backing Weight	7+	oz/yd <sup>2</sup>	D5848
Secondary Backing Weight (Perforated)	16+	oz/yd <sup>2</sup>	D5848
Total Weight	59	oz/yd <sup>2</sup>	D5848
Stitch Gauge	3/4 inch centers		D5793
Tuft Bind	8+	lbs/force	D1335
Grab Tear Length	>200	lbs/force	D5034
Grab Tear Width	>200	lbs/force	D5034
Pill Burn Test	Pass		D2859
Impact Attenuation (Gmax)	<200	gmax	F1936
Water Permeability	>40	inch/hour	DIN 18-035
Nike Grind	3	Lbs/ft <sup>2</sup>	
Sand	4	Lbs/ft <sup>2</sup>	

*Variation of +/- 5% on above listed property values is within normal manufacturing tolerances*

## ECOMAX MATERIAL SPECIFICATION

Test Method	Property	Unit	Range
ISO 2031	Bulk Density	kg/l	0.45-0.65
ASTM D792	Specific Gravity	-	1.05-1.25
ISO 2030	Size Analysis by Mechanical Sieving	%	<i>see table</i>
	<b>(mesh)</b>	<b>(mm)</b>	<b>% retention</b>
	8	2.36	0.0-2.0
	10	2.00	0.0-40.0
	12	1.70	40.0-100.0
	14	1.40	0.0-40.0
	16	1.18	0.0-5.0
	20	0.85	0.0-1.0
	under	< 0.85	0.0



## PUREGEO MATERIAL SPECIFICATION

Test Method	Property	Unit	Range
ISO 2031	Bulk Density	g/cm <sup>3</sup>	0.1 - 0.2
ASTM D792	Specific Gravity	-	< 1.0
ISO 2030	Size Analysis by Mechanical Sieving	%	<i>see table</i>
	<b>(mesh)</b>	<b>(mm)</b>	<b>% retention</b>
	8	2.36	5.0-20.0
	10	2.00	5.0-20.0
	12	1.70	5.0-20.0
	14	1.40	5.0-20.0
	16	1.18	5.0-20.0
	20	0.85	5.0-20.0
	40	0.42	20.0-50.0
	under	< 0.42	0.0-10.0

*\*Note that fluctuations in moisture content of the PureGeo organic material may alter the above listed properties*

PRODUCT  
TECHNICAL  
SPECIFICATION

# FTHD-2-PureFill

Property	Value	Units	ASTM
Product Stock Code	FTHD-2-PureFill		
Pile Yarn Type	UV-resistant polyethylene		n/a
Yarn Structure	Slit-Film		n/a
Yarn Denier	10800	Denier	D1577
Tape Thickness	130	Microns	D3218
Pile Height	2	inches	D5823
Pile Weight	30	oz/yd <sup>2</sup>	D5848
Primary Backing Weight	7+	oz/yd <sup>2</sup>	D5848
Secondary Backing Weight (Finger-Unit)	14+	oz/yd <sup>2</sup>	D5848
Total Weight	51	oz/yd <sup>2</sup>	D5848
Stitch Gauge	3/4 inch centers		D5793
Tuft Bind	8+	lbs/force	D1335
Grab Tear Length	>200	lbs/force	D5034
Grab Tear Width	>200	lbs/force	D5034
Pill Burn Test	Pass		D2859
Impact Attenuation (Gmax)	<200	gmax	F1936
Water Permeability	>40	inch/hour	DIN 18-035
Cork 1-2 Infill	0.75	Lbs/ft <sup>2</sup>	
Sand	4.5	Lbs/ft <sup>2</sup>	
VersaTile Drainage/Shock Pad	13	mm	

*Variation of +/- 5% on above listed property values is within normal manufacturing tolerances*

PRODUCT  
TECHNICAL  
SPECIFICATION

# FTHD-57-PureFill

Property	Value	Units	ASTM
Product Stock Code	FTHD-57-PureFill		
Pile Yarn Type	UV-resistant polyethylene		n/a
Yarn Structure	Slit-Film		n/a
Yarn Denier	10800	Denier	D1577
Tape Thickness	130	Microns	D3218
Pile Height	2.25	inches	D5823
Pile Weight	33	oz/yd <sup>2</sup>	D5848
Primary Backing Weight	7+	oz/yd <sup>2</sup>	D5848
Secondary Backing Weight (Finger-Unit)	14+	oz/yd <sup>2</sup>	D5848
Total Weight	54	oz/yd <sup>2</sup>	D5848
Stitch Gauge	3/4 inch centers		D5793
Tuft Bind	8+	lbs/force	D1335
Grab Tear Length	>200	lbs/force	D5034
Grab Tear Width	>200	lbs/force	D5034
Pill Burn Test	Pass		D2859
Impact Attenuation (Gmax)	<200	gmax	F1936
Water Permeability	>40	inch/hour	DIN 18-035
Cork 1-2 Infill	1	Lbs/ft <sup>2</sup>	
Sand	4.5	Lbs/ft <sup>2</sup>	
VersaTile Drainage/Shock Pad	13	mm	

*Variation of +/- 5% on above listed property values is within normal manufacturing tolerances*

PRODUCT  
TECHNICAL  
SPECIFICATION

# FTRV-2-PureFill

Property	Value	Units	ASTM
Product Stock Code	FTRV-2-PureFill		
Pile Yarn Type	UV-resistant polyethylene		n/a
Yarn Structure	Ridged Monofilament		n/a
Yarn Denier	10800	Denier	D1577
Tape Thickness	235	Microns	D3218
Pile Height	2	inches	D5823
Pile Weight	34	oz/yd <sup>2</sup>	D5848
Primary Backing Weight	7+	oz/yd <sup>2</sup>	D5848
Secondary Backing Weight (Finger-Unit)	14+	oz/yd <sup>2</sup>	D5848
Total Weight	55	oz/yd <sup>2</sup>	D5848
Stitch Gauge	3/4 inch centers		D5793
Tuft Bind	8+	lbs/force	D1335
Grab Tear Length	>200	lbs/force	D5034
Grab Tear Width	>200	lbs/force	D5034
Pill Burn Test	Pass		D2859
Impact Attenuation (Gmax)	<200	gmax	F1936
Water Permeability	>40	inch/hour	DIN 18-035
Cork 1-2 Infill	0.75	Lbs/ft <sup>2</sup>	
Sand	4.5	Lbs/ft <sup>2</sup>	
VersaTile Drainage/Shock Pad	13	mm	

*Variation of +/- 5% on above listed property values is within normal manufacturing tolerances*

PRODUCT  
TECHNICAL  
SPECIFICATION

# FTRV360-2-PureFill

Property	Value	Units	ASTM
Product Stock Code	FTRV360-2-PureFill		
Pile Yarn Type	UV-resistant polyethylene		n/a
Yarn Structure	Ridged Monofilament		n/a
Yarn Denier	14500	Denier	D1577
Tape Thickness	380	Microns	D3218
Pile Height	2	inches	D5823
Pile Weight	36	oz/yd <sup>2</sup>	D5848
Primary Backing Weight	7+	oz/yd <sup>2</sup>	D5848
Secondary Backing Weight (Finger-Unit)	14+	oz/yd <sup>2</sup>	D5848
Total Weight	57	oz/yd <sup>2</sup>	D5848
Stitch Gauge	3/4 inch centers		D5793
Tuft Bind	8+	lbs/force	D1335
Grab Tear Length	>200	lbs/force	D5034
Grab Tear Width	>200	lbs/force	D5034
Pill Burn Test	Pass		D2859
Impact Attenuation (Gmax)	<200	gmax	F1936
Water Permeability	>40	inch/hour	DIN 18-035
Cork 1-2 Infill	0.75	Lbs/ft <sup>2</sup>	
Sand	4.5	Lbs/ft <sup>2</sup>	
VersaTile Drainage/Shock Pad	13	mm	

*Variation of +/- 5% on above listed property values is within normal manufacturing tolerances*

**Issue Date: 09/01/15**

PRODUCT  
TECHNICAL  
SPECIFICATION

# FTRV-57-PureFill

Property	Value	Units	ASTM
Product Stock Code	FTRV-57-PureFill		
Pile Yarn Type	UV-resistant polyethylene		n/a
Yarn Structure	Ridged Monofilament		n/a
Yarn Denier	10800	Denier	D1577
Tape Thickness	235	Microns	D3218
Pile Height	2.25	inches	D5823
Pile Weight	36	oz/yd <sup>2</sup>	D5848
Primary Backing Weight	7+	oz/yd <sup>2</sup>	D5848
Secondary Backing Weight (Finger-Unit)	14+	oz/yd <sup>2</sup>	D5848
Total Weight	57	oz/yd <sup>2</sup>	D5848
Stitch Gauge	3/4 inch centers		D5793
Tuft Bind	8+	lbs/force	D1335
Grab Tear Length	>200	lbs/force	D5034
Grab Tear Width	>200	lbs/force	D5034
Pill Burn Test	Pass		D2859
Impact Attenuation (Gmax)	<200	gmax	F1936
Water Permeability	>40	inch/hour	DIN 18-035
Cork 1-2 Infill	1	Lbs/ft <sup>2</sup>	
Sand	4	Lbs/ft <sup>2</sup>	
VersaTile Drainage/Shock Pad	13	mm	

*Variation of +/- 5% on above listed property values is within normal manufacturing tolerances*

**Issue Date: 12/19/14**

PRODUCT  
TECHNICAL  
SPECIFICATION

# FTVT-50-PureFill

Property	Value	Units	ASTM
Product Stock Code	FTVT-50-PureFill		
Pile Yarn Type	UV-resistant polyethylene		n/a
Yarn Structure 1	Ridged Monofilament Field Green		n/a
Yarn Denier 1	10800	Denier	D1577
Yarn Structure 2	Slit-Film Summergreen		
Yarn Denier 2	5000	Denier	
Pile Height	2	inches	D5823
Pile Weight	35	oz/yd <sup>2</sup>	D5848
Primary Backing Weight	7+	oz/yd <sup>2</sup>	D5848
Secondary Backing Weight (Finger-Unit)	14+	oz/yd <sup>2</sup>	D5848
Total Weight	56	oz/yd <sup>2</sup>	D5848
Stitch Gauge	3/4 inch centers		D5793
Tuft Bind	8+	lbs/force	D1335
Pill Burn Test	Pass		D2859
Water Permeability	>40	inch/hour	DIN 18-035
PureFill Cork	0.75	lbs/ft <sup>2</sup>	
Sand	4.5	lbs/ft <sup>2</sup>	
VersaTile Drainage/Shockpad	13	mm	

*Variation of +/- 5% on above listed property values is within normal manufacturing tolerances*

PRODUCT  
TECHNICAL  
SPECIFICATION

# FTVT-57-PureFill

Property	Value	Units	ASTM
Product Stock Code	FTVT-57-PureFill		
Pile Yarn Type	UV-resistant polyethylene		n/a
Yarn Structure 1	Ridged Monofilament Field Green		n/a
Yarn Denier 1	10800	Denier	D1577
Yarn Structure 2	Slit-Film Summergreen		
Yarn Denier 2	5000	Denier	
Pile Height	2.25	inches	D5823
Pile Weight	38	oz/yd <sup>2</sup>	D5848
Primary Backing Weight	7+	oz/yd <sup>2</sup>	D5848
Secondary Backing Weight (Finger-Unit)	14+	oz/yd <sup>2</sup>	D5848
Total Weight	59	oz/yd <sup>2</sup>	D5848
Stitch Gauge	3/4 inch centers		D5793
Tuft Bind	8+	lbs/force	D1335
Pill Burn Test	Pass		D2859
Water Permeability	>40	inch/hour	DIN 18-035
PureFill Cork	1	lbs/ft <sup>2</sup>	
Sand	4.5	lbs/ft <sup>2</sup>	
VersaTile Drainage/Shockpad	13	mm	

*Variation of +/- 5% on above listed property values is within normal manufacturing tolerances*



PRODUCT  
TECHNICAL  
SPECIFICATION

# FTVTP-50-PureFill

Property	Value	Units	ASTM
Product Stock Code	FTVTP-50-PureFill		
Pile Yarn Type	UV-resistant polyethylene		n/a
Yarn Structure 1	Ridged Monofilament Field Green		n/a
Yarn Denier 1	10800	Denier	D1577
Yarn Structure 2	Slit-Film Summergreen		
Yarn Denier 2	5000	Denier	
Pile Height	2	inches	D5823
Pile Weight	35	oz/yd <sup>2</sup>	D5848
Primary Backing Weight	7+	oz/yd <sup>2</sup>	D5848
Secondary Backing Weight (Finger-Unit)	14+	oz/yd <sup>2</sup>	D5848
Total Weight	56	oz/yd <sup>2</sup>	D5848
Stitch Gauge	3/4 inch centers		D5793
Tuft Bind	8+	lbs/force	D1335
Pill Burn Test	Pass		D2859
Water Permeability	>40	inch/hour	DIN 18-035
PureFill Cork	0.75	lbs/ft <sup>2</sup>	
Sand	4.5	lbs/ft <sup>2</sup>	
VersaTile Drainage/Shockpad	13	mm	

*Variation of +/- 5% on above listed property values is within normal manufacturing tolerances*

PRODUCT  
TECHNICAL  
SPECIFICATION

# FTVTP-57-PureFill

Property	Value	Units	ASTM
Product Stock Code	FTVTP-57-PureFill		
Pile Yarn Type	UV-resistant polyethylene		n/a
Yarn Structure 1	Ridged Monofilament Field Green		n/a
Yarn Denier 1	10800	Denier	D1577
Yarn Structure 2	Slit-Film Summergreen		
Yarn Denier 2	5000	Denier	
Pile Height	2.25	inches	D5823
Pile Weight	38	oz/yd <sup>2</sup>	D5848
Primary Backing Weight	7+	oz/yd <sup>2</sup>	D5848
Secondary Backing Weight (Finger-Unit)	14+	oz/yd <sup>2</sup>	D5848
Total Weight	59	oz/yd <sup>2</sup>	D5848
Stitch Gauge	3/4 inch centers		D5793
Tuft Bind	8+	lbs/force	D1335
Pill Burn Test	Pass		D2859
Water Permeability	>40	inch/hour	DIN 18-035
PureFill Cork	1	lbs/ft <sup>2</sup>	
Sand	4.5	lbs/ft <sup>2</sup>	
VersaTile Drainage/Shockpad	13	mm	

*Variation of +/- 5% on above listed property values is within normal manufacturing tolerances*

PRODUCT  
TECHNICAL  
SPECIFICATION

# Multi40-HD-PureFill

Property	Value	Units	ASTM
Product Stock Code	Multi40-HD-PureFill		
Pile Yarn Type	UV-resistant polyethylene		n/a
Yarn Structure	Slit-Film		n/a
Yarn Denier	10800	Denier	D1577
Tape Thickness	130	Microns	D3218
Pile Height	1.6	inches	D5823
Pile Weight	38	oz/yd <sup>2</sup>	D5848
Primary Backing Weight	7+	oz/yd <sup>2</sup>	D5848
Secondary Backing Weight	26	oz/yd <sup>2</sup>	D5848
Total Weight	71	oz/yd <sup>2</sup>	D5848
Stitch Gauge	3/8 inch centers		D5793
Tuft Bind	8+	lbs/force	D1335
Grab Tear Length	>200	lbs/force	D5034
Grab Tear Width	>200	lbs/force	D5034
Pill Burn Test	Pass		D2859
Impact Attenuation (Gmax)	<200	gmax	F1936
Water Permeability	>40	inch/hour	DIN 18-035
PureFill Cork Infill	0.5	Lbs/ft <sup>2</sup>	
Silica Sand Infill	4.5	Lbs/ft <sup>2</sup>	
VersaTile Shock and Drain Pad	13	mm	

*Variation of +/- 5% on above listed property values is within normal manufacturing tolerances*

PRODUCT  
TECHNICAL  
SPECIFICATION

## Multi40-RV-PureFill

Property	Value	Units	ASTM
Product Stock Code	Multi40-RV-PureFill		
Pile Yarn Type	UV-resistant polyethylene		n/a
Yarn Structure	Ridged Monofilament		n/a
Yarn Denier	10800	Denier	D1577
Tape Thickness	235	Microns	D3218
Pile Height	1.6	inches	D5823
Pile Weight	38	oz/yd <sup>2</sup>	D5848
Primary Backing Weight	7+	oz/yd <sup>2</sup>	D5848
Secondary Backing Weight	26	oz/yd <sup>2</sup>	D5848
Total Weight	71	oz/yd <sup>2</sup>	D5848
Stitch Gauge	3/8 inch centers		D5793
Tuft Bind	8+	lbs/force	D1335
Grab Tear Length	>200	lbs/force	D5034
Grab Tear Width	>200	lbs/force	D5034
Pill Burn Test	Pass		D2859
Impact Attenuation (Gmax)	<200	gmax	F1936
Water Permeability	>40	inch/hour	DIN 18-035
PureFill Cork Infill	0.5	Lbs/ft <sup>2</sup>	
Silica Sand Infill	4.5	Lbs/ft <sup>2</sup>	
VersaTile Shock and Drain Pad	13	mm	

*Variation of +/- 5% on above listed property values is within normal manufacturing tolerances*

PRODUCT  
TECHNICAL  
SPECIFICATION

## XM6-50-PureFill

Property	Value	Units	ASTM
Product Stock Code	XM6-50-PureFill		
Pile Yarn Type	UV-resistant polyethylene		n/a
Yarn Structure	Ridged Monofilament		n/a
Yarn Denier	10800	Denier	D1577
Tape Thickness	280	Microns	D3218
Pile Height	2	inches	D5823
Pile Weight	30	oz/yd <sup>2</sup>	D5848
Primary Backing Weight	7+	oz/yd <sup>2</sup>	D5848
Secondary Backing Weight (Finger-Unit)	14+	oz/yd <sup>2</sup>	D5848
Total Weight	51	oz/yd <sup>2</sup>	D5848
Stitch Gauge	3/4 inch centers		D5793
Tuft Bind	8+	lbs/force	D1335
Grab Tear Length	>200	lbs/force	D5034
Grab Tear Width	>200	lbs/force	D5034
Pill Burn Test	Pass		D2859
Impact Attenuation (Gmax)	<200	gmax	F1936
Water Permeability	>40	inch/hour	DIN 18-035
PureFill Cork Infill	0.75	Lbs/ft <sup>2</sup>	
Silica Sand Infill	4.5	Lbs/ft <sup>2</sup>	
VersaTile Shock and Drain Pad	13	mm	

*Variation of +/- 5% on above listed property values is within normal manufacturing tolerances*

PRODUCT  
TECHNICAL  
SPECIFICATION

## XM6-57-PureFill

Property	Value	Units	ASTM
Product Stock Code	XM6-57-PureFill		
Pile Yarn Type	UV-resistant polyethylene		n/a
Yarn Structure	Ridged Monofilament		n/a
Yarn Denier	10800	Denier	D1577
Tape Thickness	280	Microns	D3218
Pile Height	2.25	inches	D5823
Pile Weight	33	oz/yd <sup>2</sup>	D5848
Primary Backing Weight	7+	oz/yd <sup>2</sup>	D5848
Secondary Backing Weight (Finger-Unit)	14+	oz/yd <sup>2</sup>	D5848
Total Weight	54	oz/yd <sup>2</sup>	D5848
Stitch Gauge	3/4 inch centers		D5793
Tuft Bind	8+	lbs/force	D1335
Grab Tear Length	>200	lbs/force	D5034
Grab Tear Width	>200	lbs/force	D5034
Pill Burn Test	Pass		D2859
Impact Attenuation (Gmax)	<200	gmax	F1936
Water Permeability	>40	inch/hour	DIN 18-035
PureFill Cork Infill	1	Lbs/ft <sup>2</sup>	
Silica Sand Infill	4.5	Lbs/ft <sup>2</sup>	
VersaTile Shock and Drain Pad	13	mm	

*Variation of +/- 5% on above listed property values is within normal manufacturing tolerances*

PRODUCT  
TECHNICAL  
SPECIFICATION

## XT-50-PureFill

Property	Value	Units	ASTM
Product Stock Code	XT-50-PureFill		
Pile Yarn Type	UV-resistant polyethylene		n/a
Yarn Structure	Slit-Film		n/a
Yarn Denier	10000+	Denier	D1577
Tape Thickness	100+	Microns	D3218
Pile Height	2	inches	D5823
Pile Weight	30	oz/yd <sup>2</sup>	D5848
Primary Backing Weight	7+	oz/yd <sup>2</sup>	D5848
Secondary Backing Weight (Finger-Unit)	14+	oz/yd <sup>2</sup>	D5848
Total Weight	51	oz/yd <sup>2</sup>	D5848
Stitch Gauge	3/4 inch centers		D5793
Tuft Bind	8+	lbs/force	D1335
Grab Tear Length	>200	lbs/force	D5034
Grab Tear Width	>200	lbs/force	D5034
Pill Burn Test	Pass		D2859
Impact Attenuation (Gmax)	<200	gmax	F1936
Water Permeability	>40	inch/hour	DIN 18-035
PureFill Cork Infill	0.75	Lbs/ft <sup>2</sup>	
Silica Sand Infill	4.5	Lbs/ft <sup>2</sup>	
VersaTile Shock and Drain Pad	13	mm	

*Variation of +/- 5% on above listed property values is within normal manufacturing tolerances*

PRODUCT  
TECHNICAL  
SPECIFICATION

## XT-57-PureFill

Property	Value	Units	ASTM
Product Stock Code	XT-57-PureFill		
Pile Yarn Type	UV-resistant polyethylene		n/a
Yarn Structure	Slit-Film		n/a
Yarn Denier	10000+	Denier	D1577
Tape Thickness	100+	Microns	D3218
Pile Height	2.25	inches	D5823
Pile Weight	33	oz/yd <sup>2</sup>	D5848
Primary Backing Weight	7+	oz/yd <sup>2</sup>	D5848
Secondary Backing Weight (Finger-Unit)	14+	oz/yd <sup>2</sup>	D5848
Total Weight	54	oz/yd <sup>2</sup>	D5848
Stitch Gauge	3/4 inch centers		D5793
Tuft Bind	8+	lbs/force	D1335
Grab Tear Length	>200	lbs/force	D5034
Grab Tear Width	>200	lbs/force	D5034
Pill Burn Test	Pass		D2859
Impact Attenuation (Gmax)	<200	gmax	F1936
Water Permeability	>40	inch/hour	DIN 18-035
PureFill Cork Infill	1	Lbs/ft <sup>2</sup>	
Silica Sand Infill	4.5	Lbs/ft <sup>2</sup>	
VersaTile Shock and Drain Pad	13	mm	

*Variation of +/- 5% on above listed property values is within normal manufacturing tolerances*



**PUREFILL CORK MATERIAL SPECIFICATION**

Property	Test Method	Unit	Range
Size	See Table	mm	0.6-3.15
Bulk Density	EN 1097-3	kg/m <sup>3</sup>	250 +/- 15%
Size analysis		%	See table
<i>NET (mm)</i>		<i>WEIGHT (gr)</i>	<i>PERC. (%)</i>
3.15			0 - 15
2.50			0 - 40
2.00			10 - 50
1.60			20 - 60
1.00			10 - 40
0.6			5 - 20
0.5			0 - 5
<0.5			0 - 5

The exact color of the PureFill infill may vary from submitted samples as it is a natural cork product.

## OLIVE CORES 10-30 MATERIAL SPECIFICATION

Test Method	Property	Unit	Range
ISO 2031	Bulk Density	kg/l	0.70 - 0.80
ASTM D792	Specific Gravity	-	1.20 - 1.45
ISO 2030	Size Analysis by Mechanical Sieving	%	<i>see table</i>
	<b>(mesh)</b>	<b>(mm)</b>	<b>% retention</b>
	8	2.36	0-2
	10	2.00	0-10
	12	1.70	0-20
	14	1.40	0-30
	16	1.18	10-20
	20	0.85	10-20
	30	0.60	0-10
	40	0.42	0-10
	50	0.30	0-2
	Under 50	< 0.30	0-2

# PDS



**P**RECISION **D**RAINAGE **S**YSTEM

PRECISION  
PERFORMANCE,  
MAXIMIZED  
DRAINAGE

**FieldTurf Tarkett**  
UNITED IN SPORT

# PDS

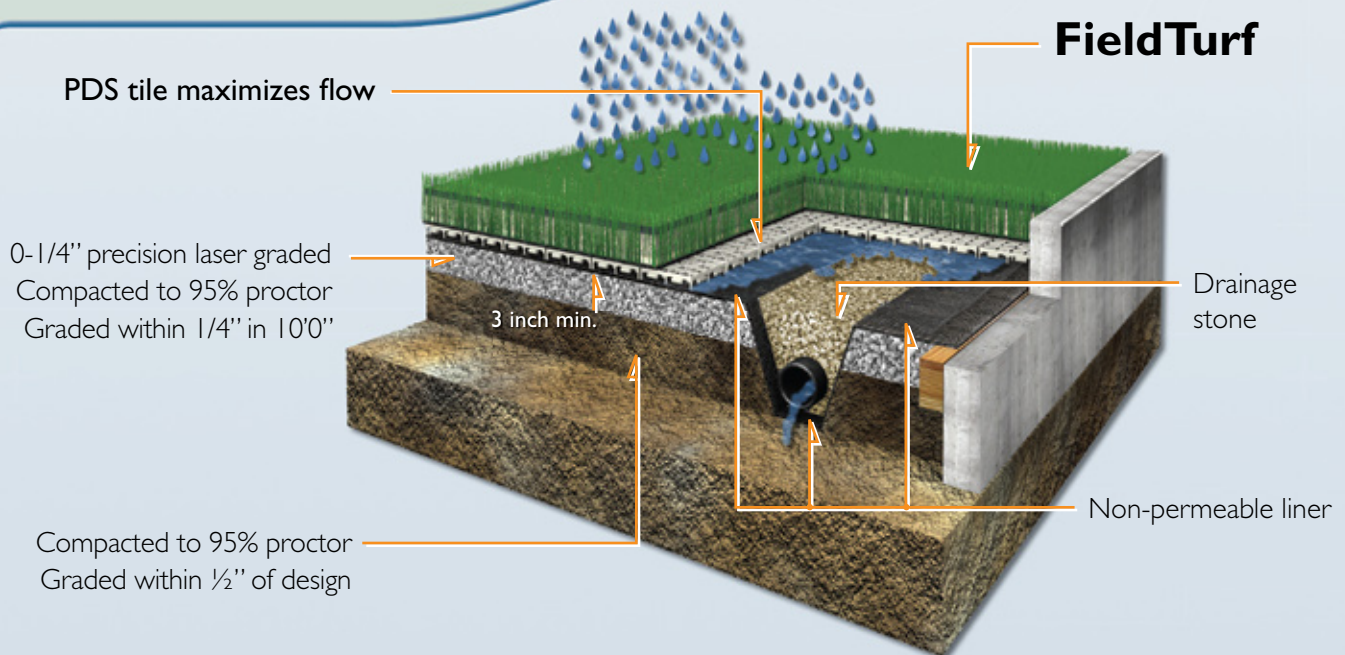
## PRECISION DRAINAGE SYSTEM

PDS delivers the Precision Performance and Maximized Drainage that the player and the facility demand. Consistent response throughout the field ensures that elite levels of play can always be reached. Maximizing the drainage ensures the on field performance when the weather gets tough. Wet or dry your level of play remains the same. The installation of the PDS system is user friendly and reduces base installation time by approximately 30% while reducing base costs by up to 50%. Your players and facility demand the best. PDS delivers.

## The PDS Concept

- The organic grass is stripped and the natural soil or fill is compacted to 95% proctor.
- A 3" base of 0"-1/4" road stone is laser graded and compacted to 95% proctor.
- A non-permeable liner covers the PDS base and the bottom of the trench.
- The PDS tile is installed on the liner and across the trench.
- FieldTurf is installed over the tile.
- Water flows through the turf and tile onto the liner and then into the drains.

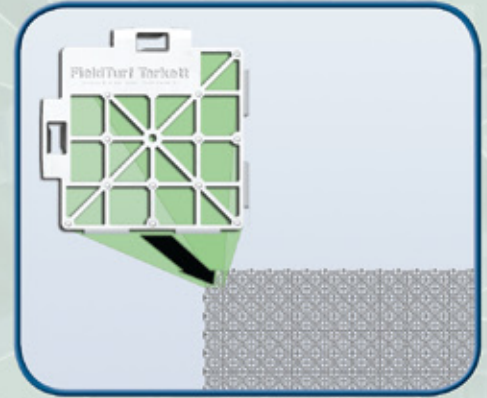
## PDS The Complete System



# PRECISION PERFORMANCE, MAXIMIZED DRAINAGE

## Precision Performance

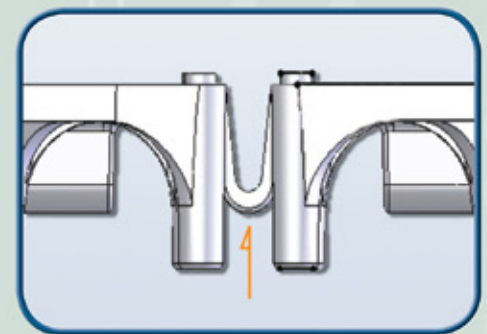
- Field Consistency
  - The PDS tile ensures the same performance response at every spot on the field.
  - A single tile is composed of 64 small squares that conform to the field, eliminating bridging.
  - No matter where you are on the field the turf is sitting on the same performance surface... the PDS tile.



*The PDS tile is composed of 64 small squares to eliminate bridging.*

- Exceptional Load Bearing Capacity
  - At 164 psi, the load bearing capacity of the tile is 4.3 times greater than other competitive technologies.
  - The PDS tile respects a design safety factor of 2.7 and delivers the long term performance that a field deserves. Using the same performance benchmark factor, some competitive products have a design safety factor of 0.62.
  - The number of legs has been optimized and the Roman arches distribute stresses to ensure the long term performance of the field.

- Thermal Expansion and Contraction
  - The PDS tile is equipped with 64 mini squares designed with a total of 224 bidirectional thermal expansion U-joints that will expand and contract with changes in temperature.
  - Once the turf and infill are in place they act as an insulator and therefore only small levels of expansion and contraction need be addressed. The turf will remain "true" to its alignment.



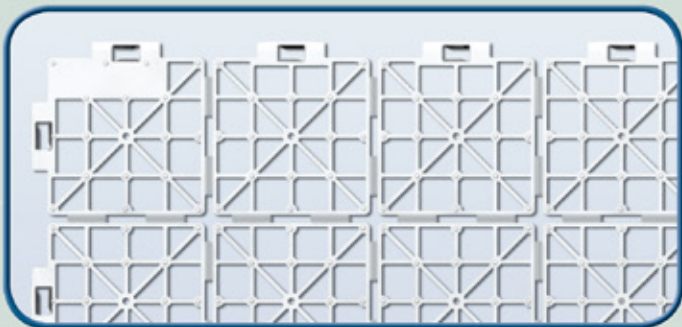
*224 bidirectional thermal expansion joints ensure that your field remains flat.*

# PDS

PRECISION DRAINAGE SYSTEM

## Precision Performance

- Tri-Axial Design
  - The  $0^{\circ}/90^{\circ}/\pm 45^{\circ}$  design resists bending and twisting.
  - Furthermore, the small “grid” pattern eliminates “dips” in the turf.
  - Rugged and free of “dips”. Performance day in and day out.



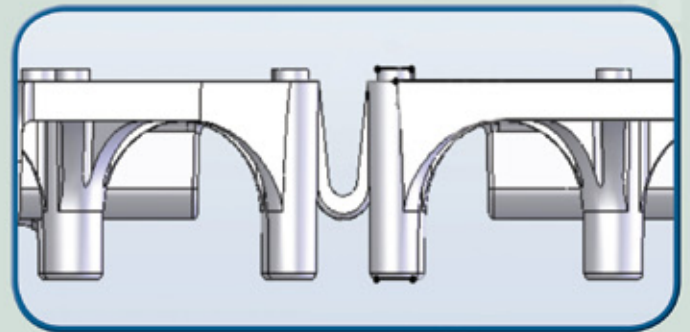
*The  $0^{\circ}/90^{\circ}/\pm 45^{\circ}$  design of the PDS tile resists bending and twisting.*

- Turf Grip
  - The small “bumps” and the edges of the tri-axial design will keep the turf in place.

*Keep in mind that our patented 10 lbs/ft<sup>2</sup> of infill also acts as a ballast, delivering sure footed performance.*

## Maximized Drainage

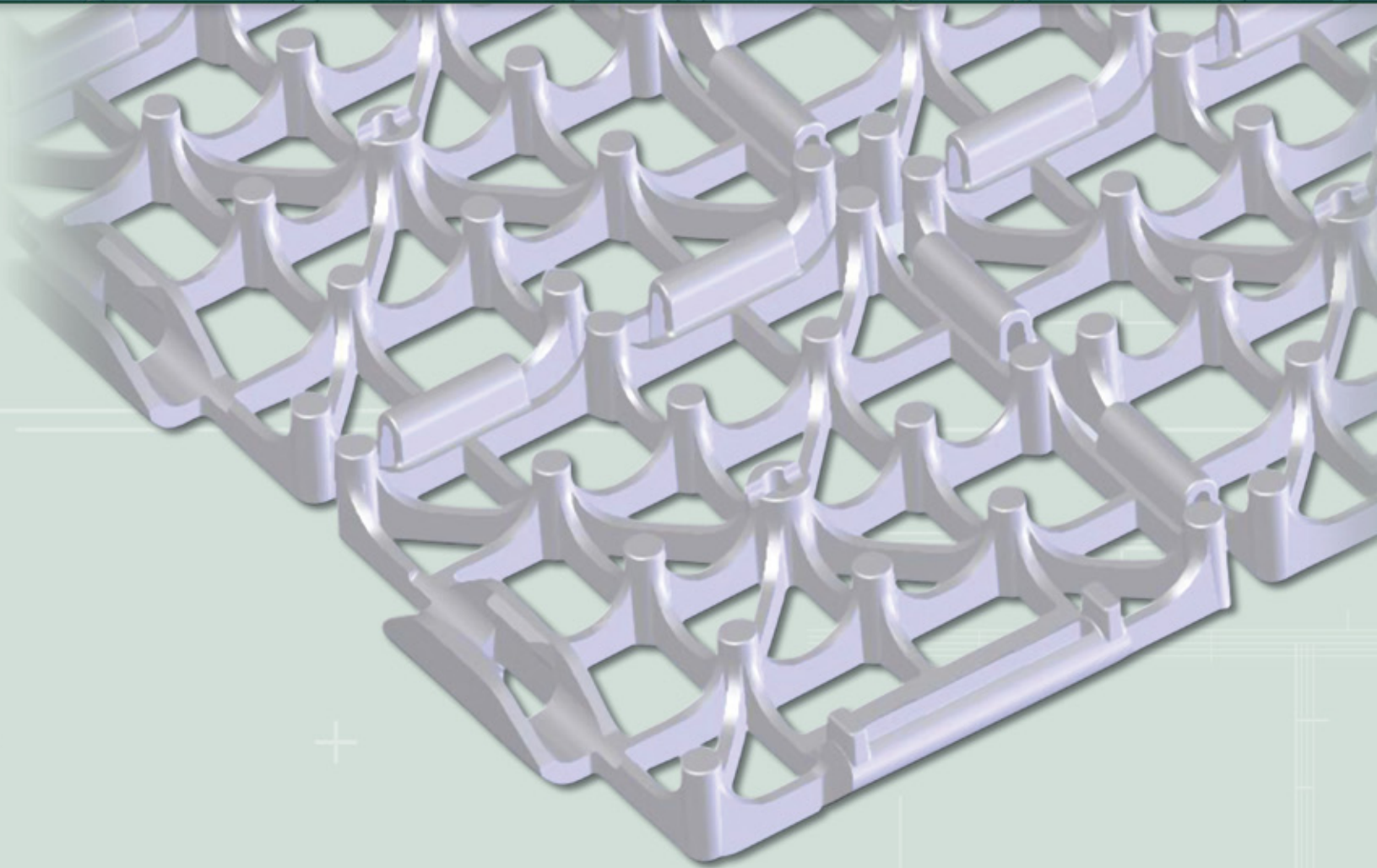
- Maximized Volume Voids
  - PDS tile volume voids are 84%.
  - Typical competitive products have approximately 35% voids.
  - The PDS tile will consistently deliver drainage since it never gets in the way of the water flow.



*The design of the tile delivers 84% voids for unmatched vertical and horizontal drainage.*

- Unequalled Vertical Permeability
  - The surface voids are 71% ensuring that the water will flow vertically through the turf / tile system.
  - Some competitive products act like a surface - potentially causing surface drainage in heavy rainfall situations.
  - The PDS tile never holds back the water.
- Unparalleled Horizontal Transmissivity
  - By optimizing the number and the height of the legs the horizontal transmissivity is second to none.
  - The PDS tile drains at least 150 times greater than some typical competitive product.

# PRECISION PERFORMANCE, MAXIMIZED DRAINAGE



## Outstanding Puncture Resistance

- There are 1,088 legs over a 3.92 ft<sup>2</sup> surface (1.93 legs/in<sup>2</sup> and 19% leg area/in<sup>2</sup>) minimizing local load concentration.
- Like the magic of a bed of nails, the legs distribute the load to prevent puncture.
- The bottom edge of each leg has been slightly beveled so no sharp edges come in contact with the liner.
- Finally, the liner is supported by the 3" stone base and therefore will not be punctured.



# PDS

PRECISION DRAINAGE SYSTEM

## Installation Friendly

- The lightweight design is easy to handle which speeds up the installation.
- The 8 “Smart Clips” on each side of the tile provide a firm positive lock.
- The beveled Smart Clip “teeth” allow for easy tile removal by simply twisting one clip away from the cylinder.
- The small rotation designed into the Smart Clips allows the installer to roll up the tile and temporarily place it aside if required.

## Reduced Installation Time

- A base can be installed in approximately 30% less time than traditional stone bases.
- Less exposure to the elements, and reduced installation time leads to increased installation capacity.

## Minimized Base Cost

- The PDS system can save up to 50% on the cost of a base.



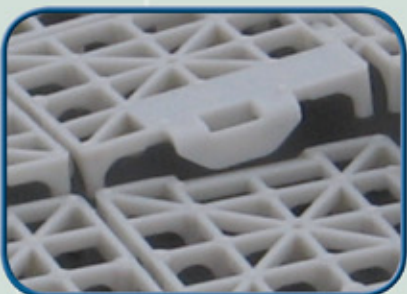
Laser grade and compact to 95% proctor



Install non-permeable liner



Install PDS tiles across center of field



Align and snap Smart Clips



Install PDS tiles



Install Turf



# LEED® Credits



## How PDS Can Contribute To Obtaining LEED® Credits

FieldTurf Tarkett's Precision Drainage System can contribute towards obtaining LEED Credits. In addition to the Precision Performance and Maximized Drainage built into this system, the industry's most innovative drainage system has a positive effect on the environment.

### *Sustainable Site*

- Credit 5.1:** Reduced Site Disturbance; protect or restore open space
- Credit 5.2:** Reduced Site Disturbance; development footprint
- Credit 7.1:** Landscape and Exterior Design to Reduce Heat Islands; roof

### *Water Efficiency Credit*

- Credit 1.1:** Water Efficient Landscaping; reduce by 50%
- Credit 1.2:** Water Efficient Landscaping; no potable water or no landscaping
- Credit 2:** Innovative Wastewater Technologies
- Credit 3.1:** Water Use Reduction; reduce by 20%
- Credit 3.2:** Water Use Reduction; reduce by 30%

### *Materials and Resources*

- Credit 3.1 and 3.2:** Resource Reuse; Specify 5% to 10%
- Credit 4.1 and 4.2:** Recycled Content; Specify 25% to 50%
- Credit 5.1:** Local/Regional Materials; 20% Manufactured Locally

### *Energy & Atmosphere Credits*

- Credit 1.1–1.5:** Optimize Energy Performance; 20–60% New/  
10–50% Existing



US GREEN BUILDING COUNCIL  
LEED VERSION 2.2

# PDS



PRECISION DRAINAGE SYSTEM

**FieldTurf Tarkett**  
UNITED IN SPORT

8088 Montview, Montreal, Quebec Canada H4P 2L7  
Tel. (514) 340-9311 | (800) 724-2969 | Fax. (514) 340-9374  
info@fieldturftarkett.com | www.fieldturftarkett.com



## **E-LAYER (25mm)**

### **Product Specifications**

#### **PART 1 – GENERAL**

##### **1.1 SUMMARY**

- A. Product Name: E-Layer.
- B. Product Description: Pour-in-place, permeable, synthetic field surface base consisting of rubber granules, gravel aggregate and polyurethane binder.
- C. Scope of Work: Furnish all required labor, materials and equipment to successfully install the specified synthetic field surface base.

##### **1.2 RELATED WORK**

- A. Earthwork
- B. Drainage
- C. Asphaltic Concrete Paving
- D. Cast-in-Place Concrete
- E. Synthetic Turf

##### **1.3 REFERENCE STANDARDS**

- A. The work shall conform to the standards for field construction as prescribed or approved by the appropriate governing body; NFHS, NCAA, or IAAF.

##### **1.4 SUBMITTALS**

- A. Product Data
- B. Warranty

##### **1.5 QUALITY ASSURANCE**

- A. Synthetic surfacing contractor (SSC) shall be licensed and bonded and possess a valid contractor's license in the state where Work is performed.
- B. SSC shall have a minimum of 5 years experience installing the specified permeable base surface under the same corporate name as current operations.

## 1.6 PROJECT CONDITIONS

- A. SSC, General Contractor (GC) and/or Owner, shall conduct a pre-construction meeting to review project conditions prior to dispatch of the SSC's installation team.
- B. Permeable Surface Sub-Base.
  - 1. The field sub-base shall meet the standards set by the Architect/Engineer and described in the product specifications.
  - 2. Repair work required on the base shall be approved by the Architect/Engineer.
  - 3. GC and/or Owner shall be responsible to protect the field sub-base from activities and traffic that may damage the sub-base prior to application.
- C. Weather
  - 1. Apply the permeable field base surface only during favorable weather conditions.
  - 2. No application of the permeable field base surface shall be conducted during rainfall, when rain is imminent, when freezing temperatures are forecasted or exist, or when gusting winds are occurring.
  - 3. Work is to progress only when the SSC can guarantee successful cure of the materials.
- D. During field base surface installation, all irrigation systems shall be shut-off or controlled so that no water falls on the field areas.
- E. During set-up and installation, the GC and/or Owner shall be responsible to have the entire field and other pertinent areas closed and secured of all activities 24 hours per day until completion of the project.

## 1.7 WARRANTY

- A. Manufacturer's and Installer's Warranty
  - 1. The warranty on the permeable base surface shall endure for eight (8) years from completion of installation.
  - 2. The warranty is to be provided directly by the SSC to the Owner.
  - 3. The warranty shall cover defects in materials and workmanship not deemed as ordinary wear on a synthetic field.
- B. Warranty Bond not required.

## PART 2 – PRODUCTS

### 2.1 MANUFACTURERS

- A. Beynon Sports Surfaces, Inc., 19600 SW 129<sup>th</sup> Ave., Ste A, Tualatin, OR 97092,  
Tel: 503-691-2484, Fax: 503-692-0491, [www.beynonssports.com](http://www.beynonssports.com)

### 2.2 MATERIALS

- A. Aggregate
  - 1. Birds Eye Pea Gravel with a 3.0-6.0mm gradation.
  - 2. Pea gravel shall be clean, washed and dry.
- B. Rubber
  - 1. SBR granules with a 1.0-5.0mm gradation.
- C. Binder
  - 1. Permeable base binder shall be polyurethane moisture cure, MDI based, 100% solids.

## **PART 3 – EXECUTION**

### **3.1 EXAMINATION**

- A. SSC shall examine project conditions to ensure successful installation of the permeable field base surface. Any deficiencies shall be reported to the GC and/or Owner for corrective action.

### **3.2 PREPARATION**

- B. SSC to protect adjacent areas from contamination of permeable field base surfacing materials due to installation procedures.

### **3.3 INSTALLATION**

- A. Permeable Field Surface Base
  1. The permeable field surface base will be applied to a minimum depth of 25 mm.
  2. The permeable surface base shall consist of 6% binder, 47% rubber granule and 47% aggregate, by weight.
  3. The materials shall be prepared in a mechanical mixer, to assure complete coverage of each particle by the binding agent, and mixed until a homogenous mixture is obtained.
  4. Mixed materials shall be applied to the field sub-base surface by a mechanically operated finishing machine which shall have an electrically heated screed.

### **3.4 CLEANING**

- A. Upon completion of work remove all containers, surplus materials, and installation debris.
- B. Leave area of work in clean orderly condition ready for synthetic field application.

## ProPlay-Sport23D

### Technical data sheet



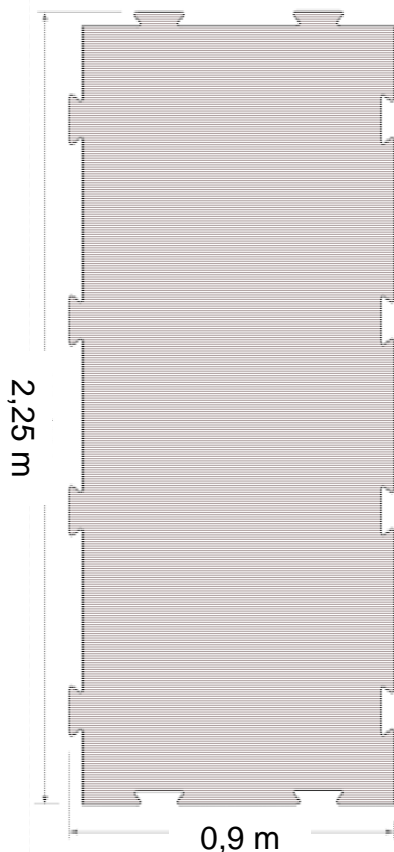
**ProPlay-Sport23D** professionally designed as a sport technical performance layer for artificial turf sports fields.

#### Vertical and Horizontal drainage!

As well as the necessary sport technical performance characteristics, the ProPlay-Sport23D has additional (in-plane) drainage channels which ensure adequate gradient drainage of water to complement the vertical drainage capability and in case the artificial turf system is to be built on a sealed or subsequently underperforming existing sub base.



For a prompt installation, the ProPlay-Sport23D is supplied as interlocking panels which are equipped with expansion slots. The installation guide can be downloaded at our website ([www.schmitzfoam.com](http://www.schmitzfoam.com)) or available upon request from our sales department.



ProPlay-Sport23D\_CND-UK

#### Physical characteristics

ProPlay-Sport23D consists of thermal bonded (closed-celled) cross-linked Polyethylene foam (PEX). This foam originates from production residues and contains no contaminants. ProPlay-Sport23D is fully tested based on microbiological resistance (according EN 12225) resistance to: weathering (according EN 12224), oxidation (according EN-ISO 13438), acids & bases (according EN 14030). The predicted durability of PEX is a 100 years minimum (according ISO/TR 13434).

ProPlay-Sport23D is tested by simulated mechanical wear using the Lisport wear test. Even after 65.000 cycles (Lisport simulated average 30\* year usage) there are hardly any differences in sport technical characteristics (SA,VD, HIC).

The ProPlay-Sport23D is tested on simulated ageing weatherability according EN 13744 and EN 13817. This ageing test has virtually no influence on the dimensional properties of ProPlay-Sport23D.

\* based on 1 cycle = 1 hour of usage and 2080 hours of usage per year (average usage of 52 weeks a year and 40 hrs a week)

## Technical data

### Physical

Thickness at 2 kPa load	23	mm	
Mass per unit area	4,0	kg/m <sup>2</sup>	

### Tensile strength

0,26	MPa	EN 12230 / ASTM D 3575
------	-----	------------------------

### Performance

Force reduction	58	%	AAA*
Energy restitution	41	%	AAA*
Vertical deformation	6,6	%	AAA*
Critical fall height (Head Injury Criterion ~ 1000)	0,85	m	EN 1177 / ASTM F 1292
Impact attenuation [gmax] **	80-110		ASTM F 355-A

### Drainage and isolation

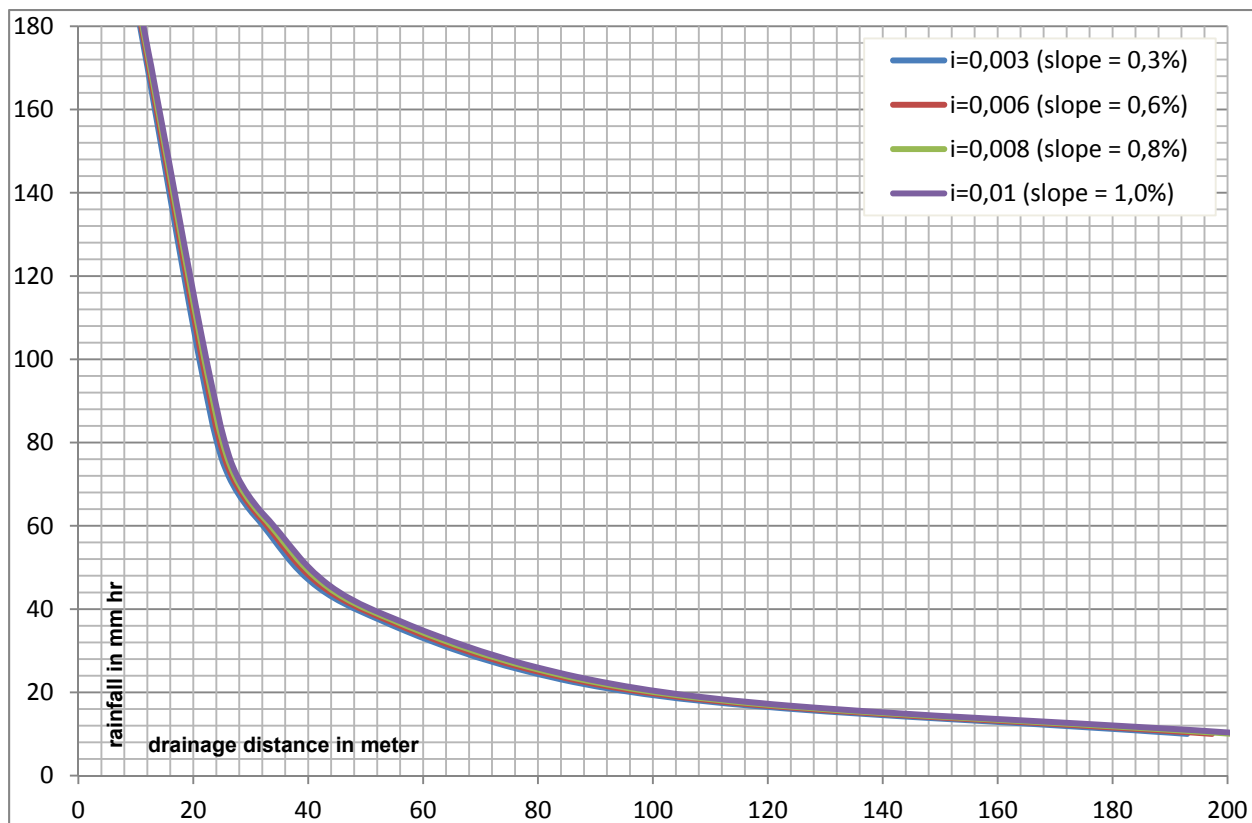
Water infiltration rate [IA]	72000	mm/hr	EN 12616
Thermal conductivity [ $\lambda_{10}$ ]	0,05	W/m.K	EN 12667 / ASTM C 177
(resulting) Thermal resistance [R-value]	460	m <sup>2</sup> .K/W	EN 12667 / ASTM C 177

\* AAA = Advanced Artificial Athlete

\*\* Results will vary depending on actual field configuration and final cross-section design

## Drainage graph

Drainage distance [m] versus rainfall [mm/h] at different gradients. Measured according to the LND method.



The provided information is, to the best of our knowledge, true and accurate (at the time of revision). This information is based on (independent) measurements and (where possible) based on average values, measured over a long and representative period. Additional information (e.g. additional characteristics, specific (independent) reports or statistical analysis) is available upon request. Schmitz Foam Products is allowed to change this information and/or the product (without notice) and assumes no legal responsibility for use of and/or reliance on this information.



# SportLite™ HD23SL-NW3-SG

SportLite™, developed by ThermaGreen Environmental, is the Shock & Drainage pad for top quality synthetic turf systems. Our pad is manufactured in North America, approved under the NAFTA agreement, and is produced by re-purposing virgin non-contaminated post-industrial cross-linked (closed cell) PEX foam. It is bonded to a non-woven geotextile to create a pad that accommodates the various demands of different sports.

ThermaGreen Sport products meet energy absorption standards under ASTM F355-10a for HIC and  $G_{MAX}$ . SportLite™ does not contain or use any toxic substances (i.e. CFC & HCFC) during the manufacturing process; it has passed California Proposition 65 and the Synthetic Precipitation Leaching Procedure (SPLP) for metals, and is compliant under NSF 61 US/Canadian drinking water quality. It is inert, environmentally friendly, resistant to mold and most chemicals (including petroleum products), and helps you obtain LEED credits!

TESTED PROPERTY	TESTED METHOD	TYPICAL VALUES	
		SI units	Imperial units

FOAM / GEOTEXTILE COMPOSITE			
Mass per Unit Area	ASTM D3776M-09a	3.9 kg/m <sup>2</sup>	0.8 lb/ft <sup>2</sup>
Overall Density	ASTM D3575-08-W (A)	168 kg/m <sup>3</sup>	10.5 lb/ft <sup>3</sup>
Ply Adhesion (200mm wide specimen)	ASTM D7005-03 mod	0.2 kN/m	1.3 lbf/in
Thermal Stability	ASTM D3575-08-S	< 0.5 %	< 0.5 %

PERFORMANCE PROPERTIES			
Compression Set	ASTM D3575-08-B	8.2 %	8.2 %
Compressive Strength at 25% Deflection	ASTM D3575-08-D	150 kPa	22 psi
In-Plane Flow Rate <sup>(1)</sup>	ASTM D4716M-14	16.8 l/min/m	1.36 gal/min/ft
Water Permeability	ASTM D4491-99a (2014) el	1189/min/m <sup>2</sup>	29.2 gal/min/ft <sup>2</sup>
Shock Attenuation <sup>(2)</sup>	ASTM F355-10a	81 - 96 $G_{MAX}$	190 -218 HIC

GEOTEXTILE (prior to lamination)			
Grab Tensile Strength	ASTM D4632	400 N	90 lb
Grab Tensile Elongation	ASTM D4632	75 %	75 %
Tear Resistance	ASTM D4533	130 N	30 lb
Puncture Resistance	ASTM D6241	1100 N	250 lb
Permittivity	ASTM D4491	2.0 s <sup>-1</sup>	2.0 s <sup>-1</sup>

DURABILITY AND ENDURANCE PROPERTIES		
<b>Residual properties after 4000 hours water immersion</b>		
Compression Set	ASTM D5322-98 / D3575-08-B	100% retained
Compressive Strength at 25% Deflection	ASTM D5322-98 / D3575-08-D	> 75% retained
<b>Residual properties after 4000 hours aging at 85°C/185°F</b>		
Compressive Strength at 25% Deflection	ASTM D3045-92 / D3575-08-B	100% retained
Compression Deflection	ASTM D3045-92 / D3575-08-D	> 75% retained

DIMENSIONS			
Thickness +/-2 mm (0.08")	ASTM D5199-01	23 mm	7/8 in
Roll Weight	-	304 kg	672 lbs
Roll Width	-	1.22 m	4 ft
Roll Length (custom roll lengths available) +/-1%	-	62.48 m	205 ft
Roll Area	-	76.22 m <sup>2</sup>	820 ft <sup>2</sup>

(1) Hydraulic gradient 1% (0.01), compression strength of 10kPa (1.5 psi)

(2) Shock attenuation measured using Triax "A" Missile Tests - Results will vary depending on actual field configuration and final cross-section design

The technical information is provided by ThermaGreen and to the best of our knowledge, is true and accurate; ThermaGreen assumes no legal responsibility for use or reliance of data.

# SportLite™ HD15SL-NW3-S

SportLite™, developed by ThermoGreen Environmental, is the Shock & Drainage Pad for top quality synthetic turf systems. Our pad is manufactured in North America, approved under the NAFTA agreement, and is produced by re-purposing virgin non-contaminated post-industrial cross-linked (closed cell) PEX foam. It is bonded to a non-woven geotextile to create a pad that accommodates the various demands of different sports.

ThermoGreen Sport products meet energy absorption standards under ASTM F355-10a for HIC and  $G_{MAX}$ . SportLite™ does not contain or use any toxic substances (i.e. CFC & HCFC) during the manufacturing process; it has passed California Proposition 65 and the Synthetic Precipitation Leaching Procedure (SPLP) for metals, and is compliant under NSF 61 US/Canadian drinking water quality. It is inert, environmentally friendly, resistant to mold and most chemicals (including petroleum products), and helps you obtain LEED credits!

TESTED PROPERTY	TESTED METHOD	TYPICAL VALUES	
		SI units	Imperial units

FOAM / GEOTEXTILE COMPOSITE			
Mass per Unit Area	ASTM D3776M-09a	2.7 kg/m <sup>2</sup>	0.57 lb/ft <sup>2</sup>
Overall Density	ASTM D3575-08-W (A)	139.8 kg/m <sup>3</sup>	8.7 lb/ft <sup>3</sup>
Ply Adhesion (200mm wide specimen)	ASTM D7005-03 mod	0.2 kN/m	1.3 lbf/in
Thermal Stability	ASTM D3575-08-S	< 0.24 %	< 0.24 %
Thermal Resistance	ISO 11092-1993ISO	15.01 r(m-K/W)	1.69 (R value)

PERFORMANCE PROPERTIES			
Compression Set	ASTM D3575-14	2.36%	2.36%
Compressive Strength at 25% Deflection	ASTM D3575-14	99 kPa	14 psi
Water Permeability <sup>(1)</sup>	ASTM D4491-99a (2014)	884 l/min/m <sup>2</sup>	21.7 gal/min/ft <sup>2</sup>
Shock Attenuation <sup>(2)</sup>	ASTM F355-10a	89 - 97 $G_{MAX}$	340 - 410 HIC

GEOTEXTILE (prior to lamination)			
Grab Tensile Strength	ASTM D4632	400 N	90 lb
Grab Tensile Elongation	ASTM D4632	75 %	75 %
Tear Resistance	ASTM D4533	130 N	30 lb
Puncture Resistance	ASTM D6241	1100 N	250 lb
Permittivity	ASTM D4491	2.0 s <sup>-1</sup>	2.0 s <sup>-1</sup>

DURABILITY AND ENDURANCE PROPERTIES			
<b>Residual properties after 4000 hours water immersion</b>			
Compression Set	ASTM D5322-98 / D3575-08-B	100% retained	
Compressive Strength at 25% Deflection	ASTM D5322-98 / D3575-08-D	> 75% retained	
<b>Residual properties after 4000 hours aging at 85°C/185°F</b>			
Compressive Strength at 25% Deflection	ASTM D3045-92 / D3575-08-B	100% retained	
Compression Deflection	ASTM D3045-92 / D3575-08-D	> 75% retained	

DIMENSIONS			
Thickness +/-2 mm (0.08")	ASTM D5199-01	15 mm	5/8 in
Roll Weight	-	233 kg	513 lbs
Roll Width	-	1.22 m	4 ft
Roll Length (custom roll lengths available) +/-1%	-	68.58 m	225 ft
Roll Area	-	83.67 m <sup>2</sup>	900 ft <sup>2</sup>

(1) Flow rate under 51mm hydraulic head

(2) Shock attenuation measured using Triax "A" Missile Tests - Results will vary depending on actual field configuration and final cross-section design

The technical information is provided by ThermoGreen and to the best of our knowledge, is true and accurate; ThermoGreen assumes no legal responsibility for use or reliance of data.

SportLite™, developed by ThermaGreen Environmental, is the Shock & Drainage pad for top quality synthetic turf systems. Our pad is manufactured in North America, approved under the NAFTA agreement, and is produced by re-purposing virgin non-contaminated post-industrial cross-linked (closed cell) PEX foam. It is bonded to a non-woven geotextile to create a pad that accommodates the various demands of different sports.

ThermaGreen Sport products meet energy absorption standards under ASTM F355-10a for HIC and G<sub>MAX</sub>. SportLite™ does not contain or use any toxic substances (i.e. CFC & HCFC) during the manufacturing process; it has passed California Proposition 65 and the Synthetic Precipitation Leaching Procedure (SPLP) for metals, and is compliant under NSF 61 US/Canadian drinking water quality. It is inert, environmentally friendly, resistant to mold and most chemicals (including petroleum products), and helps you obtain LEED credits!

TESTED PROPERTY	TESTED METHOD	TYPICAL VALUES	
		SI units	Imperial units

FOAM / GEOTEXTILE COMPOSITE			
Mass per Unit Area	ASTM D3776M-09a	4 kg/m <sup>2</sup>	0.6 lb/ft <sup>2</sup>
Overall Density	ASTM D3575-08-W (A)	168 kg/m <sup>3</sup>	10.5 lb./ft <sup>3</sup>
Ply Adhesion (200mm wide specimen)	ASTM D7005-03 mod	0.2 kN/m	1.3 lbf/in
Thermal Stability	ASTM D3575-08-S	< 0.5 %	< 0.5 %
Thermal Resistance	ASTM C518-10	0.437 m <sup>2</sup> K/W	R value of 2.48

PERFORMANCE PROPERTIES			
Compression Set	ASTM D3575-08-B	8.2%	8.2%
Compressive Strength at 25% Deflection	ASTM D3575-08-D	150 kPa	22 psi
In-Plane Flow Rate <sup>(1)</sup>	ASTM D4716M-14	8.4 l/min/m	0.68 gal/min/ft
Water Permeability	ASTM D4491-99a (2014) el	794.5 l/min/m <sup>2</sup>	19.5 gal/min/ft <sup>2</sup> .
Shock Attenuation <sup>(2)</sup>	ASTM F355-10a	92 - 105 G <sub>MAX</sub>	260 -330 HIC

GEOTEXTILE (prior to lamination)			
Grab Tensile Strength	ASTM D4632	400 N	90 lb
Grab Tensile Elongation	ASTM D4632	75 %	75 %
Tear Resistance	ASTM D4533	130 N	30 lb
Puncture Resistance	ASTM D6241	1100 N	250 lb
Permittivity	ASTM D4491	2.0 s <sup>-1</sup>	2.0 s <sup>-1</sup>

DURABILITY AND ENDURANCE PROPERTIES			
<b>Residual properties after 4000 hours water immersion</b>			
Compression Set	ASTM D5322-98 / D3575-08-B	100% retained	
Compressive Strength at 25% Deflection	ASTM D5322-98 / D3575-08-D	> 75% retained	
<b>Residual properties after 4000 hours aging at 85°C/185°F</b>			
Compressive Strength at 25% Deflection	ASTM D3045-92 / D3575-08-B	100% retained	
Compression Deflection	ASTM D3045-92 / D3575-08-D	> 75% retained	

DIMENSIONS			
Thickness +/- 2 mm (0.08")	ASTM D5199-01	20 mm	3/4 in
Roll Weight	-	228 kg	504 lbs
Roll Width	-	1.22 m	4 ft
Roll Length (custom roll lengths available) +/-1%	-	62.48 m	205 ft
Roll Area	-	76.22 m <sup>2</sup>	820 ft <sup>2</sup>

(1) Hydraulic gradient 1% (0.01), compression strength of 10kPa (1.5 psi)

(2) Shock attenuation measured using Triax "A" Missile Tests - Results will vary depending on actual field configuration and final cross-section design

The technical information is provided by ThermaGreen and to the best of our knowledge, is true and accurate; ThermaGreen assumes no legal responsibility for use or reliance of data.



## Typical Properties

<b>Product Number</b>	PBYSR	
<b>Material Type</b>	Expanded Polypropylene	
<b>Part Format</b>	Edge locking panel	
<b>Part Size – net coverage</b>	16.89 sq ft per panel	
<b>Material Density</b>	3.24 lbs / cubic ft (52 grams / litre)	
<b>Part Thickness</b>	0.9 in (23 mm)	
<b>Part Length</b>	61.1 in	
<b>Part Width</b>	42 in	
<b>Part Weight</b>	3.5 lbs per panel	
<b>Tensile Strength</b>	110 psi	ASTM D3757
<b>Tensile Elongation</b>	40%	ASTM D3757
<b>Vertical Permeability</b>	>50"/hr	EN 12616
<b>Hydraulic Transmissivity (ASTM D4716) *</b>		ASTM D4716
<i>Hydraulic Gradient – 0.005 - Flow Rate (GPM/ft width)</i>	0.36 GPM/ft w	
<i>Hydraulic Gradient – 0.005 - Transmissivity (m<sup>2</sup>/s)</i>	1.51E-02	
<i>Hydraulic Gradient – 0.0075 - Flow Rate (GPM/ft width)</i>	0.53 GPM/ft w	
<i>Hydraulic Gradient – 0.075 - Transmissivity (m<sup>2</sup>/s)</i>	1.45E-02	
<i>Hydraulic Gradient – 0.01 - Flow Rate (GPM/ft width)</i>	0.63 GPM/ft	
<i>Hydraulic Gradient – 0.01 - Transmissivity (m<sup>2</sup>/s)</i>	1.28E-02	
<b>Thermal Expansion</b> per 1° C change	0.003 in / ft	ASTM D696
<b>Compression Strength</b>		ISO 844
@ 25% strain	30 psi	
@ 50% strain	45 psi	
@ 75% strain	90 psi	
<b>Thermal Conductivity</b> Lambda Value	0.0377 W/mK	EN 12667
<b>Thermal Resistance</b> R Value	3.0	ASTM D3757
<b>Friction Coefficient</b> movement of artificial turf over 50mm distance		ISO 8295
maximum force	2.0 lbs	
average force	1.58 lbs	
<b>Environmental Standards Testing</b>		
Cradle to Cradle Silver	Certified	
Germany (DIN)	Pass	DIN V – 18035-7
Switzerland (ESSM)	Pass	ESSM 105-d/1997
<b>Microbiological Analysis</b>		
bacteria resistance	no growth	EN 12225 / ASTM G22-76
fungi resistance	no growth	ASTM G21-96
<b>Resistance to Acid and Alkaline Liquids</b>		EN 14030
% tensile strength loss - 100yr model	0% after 12 days	
<b>Resistance to Oxidation (Accelerated Ageing)</b>		EN ISO 13438:2004
% tensile strength loss - 100yr model	6% after 56 days @ 110°C	
<b>CE Declaration</b>		EN 14030
Based on the 10 required characteristic standards for CE marking of geosynthetics	Product is predicted to be durable for greater than 100 years in pH conditions of 4<pH<9.	EN ISO 13438:2004

\* Note that ASTM D4716 flow rate and hydraulic transmissivity values are not an indication of athletic field drainage performance and cannot be directly used in drainage calculations.

DATA IS TYPICAL PROPERTIES ONLY. THIS DOCUMENT DOES NOT CREATE ANY WARRANTY, EXPRESS OR IMPLIED.

September, 2013

# SHOCKPAD/14

BY BROCK

## Specification & Typical Properties

<b>Product Number</b>	SP14
<b>Material Type</b>	Expanded Polypropylene Composite containing up to 23% by volume pre-consumer and/or reground post-consumer recycled material
<b>Part Format</b>	Interlocking panel
<b>Part Size, nominal net coverage</b>	15.9 sq ft per panel (1.48 sq m)
<b>Material Density, nominal</b>	3.85 lbs / cubic ft (61.7 g per l)
<b>Part Thickness, nominal</b>	0.55 in (14 mm)
<b>Part Length, nominal</b>	57.6 in (1463 mm)
<b>Part Width, nominal</b>	43.8 in (1112 mm)
<b>Part Weight, nominal</b>	2.8 lbs per panel

Property	Typical Value	Specification	
		Typical	Standard
<b>Tensile Strength</b>	52 psi	> 45 psi	ASTM D3575-08
<b>Tensile Elongation</b>	19%	>10%	ASTM D3575-08
<b>Vertical Permeability</b>	1000+ in / hr	> 300 in / hr	ASTM F1551: DIN 18-035, Part 6
<b>Linear Thermal Expansion</b> per 1° C change	0.0833 mm/m	< 0.12 mm/m	ASTM D696-03
<b>Compression Strength</b> @ 25% strain @ 50% strain @ 75% strain	32 psi 54 psi 116 psi	> 25 psi > 40 psi -	ASTM D3575-08
<b>Compression Set – static load</b> (35 psi, 900 sec at 23°C, meas. after 48 hrs)	15% (0.11 in)	< 5%	Brock test protocol
<b>Compression Set – repeated impacts</b> (95 psi, repeated load, 10,000 cycles, after 24 hrs)	6.0% (0.031 in)	< 15%	Brock test protocol
<b>Friction Coefficient</b> movement of artificial turf over 50mm maximum force average force	2.44 lbs max force 1.35 lbs avg force	> 1.80 lbs max force > 1.00 lbs avg force	Brock test protocol
<b>Microbiological Analysis</b> bacteria resistance fungi resistance	No growth No growth	No growth No growth	ASTM G22-76 ASTM G21-96

## **SHOCKBASE – 26mm** **(Elastic Layer Shock Pad)**

### **1.0 MATERIALS**

#### **A. SHOCKBASE – Elastic Layer Shock Pad**

1. The SHOCKBASE elastic layer shock pad shall be 26mm in nominal thickness and provide an energy absorbing elastic layer for use with athletic field surfaces. Composition to be comprised of SBR rubber granules (XL) and moisture cured polyurethane binder. The elastic layer system shall demonstrate resistance to rot, mildew, water, freeze-thaw and compression set properties associated with normal athletic field use.

<u><b>MATERIAL</b></u>	<u><b>LBS/YD<sup>2</sup></b></u>
SBR (XL) Rubber	23.70
Beypur 300 (PU Binder)	2.85
<b>TOTAL</b>	<b>26.55</b>

2. Elastic layer shock pad shall conform to the following physical properties:

A. Thickness:	26mm nominal
B. Density:	~ 26 lbs/yd <sup>2</sup>
C. Shock Absorbency (ASTM F355):	~ 150 GMax
D. Water Permeability:	> 1000 mm/hour

### **2.0 EXECUTION**

- A. The installation shall be performed in compliance with approved shop drawings.
- B. The existing permeable substrate layer being pavement or compacted stone shall serve as the base of the elastic layer shock pad.
- C. The finished elastic layer surface to receive the synthetic turf system shall be inspected and certified by the manufacturer as acceptable prior to installation of the synthetic turf system. The elastic layer surface must be perfectly clean during throughout the installation process of the synthetic turf system.
- D. Prior to the installation of the elastic layer the installer shall confirm the planarity of the existing substrate system as it relates to uniformity and slope. The surface shall be checked with a 10-foot straight edge over the entire surface and/or string-lined at each inlay location. Deviations of the existing base that exceed 1/4" over the ten foot straight edge shall be remedied prior to the installation of the elastic layer shock pad.

These deviations shall be marked in the field as to the height or depth of the imperfection and reviewed the engineer. Low spots shall be filled with approved material, high spots may be either ground down to acceptable tolerance or regarded depending on the substrate.

- E. Material shall not be installed when ambient temperature is below 50° F or above 100°F, or if the material is wet, or if rain is falling or pending.
- F. Elastic layer shock pad shall be installed in one lift at approximately uniform thickness. Joints shall be troweled with compaction by a paving machine operator as the material is paved. Seams shall be hand rolled. Cold pad joints shall be primed with a polyurethane primer supplied by the elastic layer shock pad manufacturer.
- G. Surface irregularities which exceed ¼ in. measured by means of 10 ft. long straightedge shall be corrected prior to placement of synthetic surface.
- H. Installing contractor shall use SMG Planomatic model 928-D or approved equal paving machine with fully electronic leveling and steering controls and SMG Mixmatic M6004 continuous mixer.
- I. Only factory approved technicians skilled in the installation of paved in place elastic layer systems shall undertake the placement of the system.

End of Section

## **SHOCKBASE – 19mm (Elastic Layer Shock Pad)**

### **1.0 MATERIALS**

#### **A. SHOCKBASE – Elastic Layer Shock Pad**

1. The SHOCKBASE elastic layer shock pad shall be 19mm in nominal thickness and provide an energy absorbing elastic layer for use with athletic field surfaces. Composition to be comprised of SBR rubber granules (XL) and moisture cured polyurethane binder. The elastic layer system shall demonstrate resistance to rot, mildew, water, freeze-thaw and compression set properties associated with normal athletic field use.

<u>MATERIAL</u>	<u>LBS/YD<sup>2</sup></u>
SBR (XL) Rubber	18.00
Beypur 300 (PU Binder)	2.16
<b>TOTAL</b>	<b>20.16</b>

2. Elastic layer shock pad shall conform to the following physical properties:

A. Thickness:	19mm nominal
B. Density:	~ 20 lbs/yd <sup>2</sup>
C. Shock Absorbency (ASTM F355):	~ 185 GMax
D. Water Permeability:	> 1000 mm/hour

### **2.0 EXECUTION**

- A. The installation shall be performed in compliance with approved shop drawings.
- B. The existing permeable substrate layer being pavement or compacted stone shall serve as the base of the elastic layer shock pad.
- C. The finished elastic layer surface to receive the synthetic turf system shall be inspected and certified by the manufacturer as acceptable prior to installation of the synthetic turf system. The elastic layer surface must be perfectly clean during throughout the installation process of the synthetic turf system.
- D. Prior to the installation of the elastic layer the installer shall confirm the planarity of the existing substrate system as it relates to uniformity and slope. The surface shall be checked with a 10-foot straight edge over the entire surface and/or string-lined at each inlay location. Deviations of the existing base that exceed ¼” over the ten foot straight edge shall be remedied prior to the installation of the elastic layer shock pad.



These deviations shall be marked in the field as to the height or depth of the imperfection and reviewed the engineer. Low spots shall be filled with approved material, high spots may be either ground down to acceptable tolerance or regarded depending on the substrate.

- E. Material shall not be installed when ambient temperature is below 50° F or above 100°F, or if the material is wet, or if rain is falling or pending.
- F. Elastic layer shock pad shall be installed in one lift at approximately uniform thickness. Joints shall be troweled with compaction by a paving machine operator as the material is paved. Seams shall be hand rolled. Cold pad joints shall be primed with a polyurethane primer supplied by the elastic layer shock pad manufacturer.
- G. Surface irregularities which exceed ¼ in. measured by means of 10 ft. long straightedge shall be corrected prior to placement of synthetic surface.
- H. Installing contractor shall use SMG Planomatic model 928-D or approved equal paving machine with fully electronic leveling and steering controls and SMG Mixmatic M6004 continuous mixer.
- I. Only factory approved technicians skilled in the installation of paved in place elastic layer systems shall undertake the placement of the system.

End of Section



# FieldTurf COMMERCIAL

A TARKETT SPORTS COMPANY

## TECHNICAL PRODUCT SPECIFICATION | DRIVING RANGE TURF 1.5

PROPERTY	VALUE	UNITS	METHOD
Product Stock Code			
Pile Yarn Type	UV-resistant polyethylene		n/a
Face Denier	80000	Denier	D1577
Face Color	Field Green	n/a	n/a
Thatch Denier	n/a	Denier	D1577
Thatch Color	n/a	n/a	n/a
Pile Height	1.5	inches	D5823
Face Weight	20	oz/yd <sup>2</sup>	D5848
Primary Backing Weight	7	oz/yd <sup>2</sup>	D5848
Secondary Backing Weight	14	oz/yd <sup>2</sup>	D5848
Total Carpet Weight	41	oz/yd <sup>2</sup>	D5848
Tufting Gauge	3/4 inch centers		D5793
Water Permeability	>40	inch/hour	DIN 18-035
Infill Rate		Lbs/ft <sup>2</sup>	

**Issue Date:**02/23/2021

**Disclaimer:** Variation of +/-5% on above listed property values is within normal manufacturing tolerances



# FieldTurf COMMERCIAL

A TARKETT SPORTS COMPANY

## TECHNICAL PRODUCT SPECIFICATION | TOUR TEE

PROPERTY	VALUE	UNITS	METHOD
Product Stock Code	32227		
Pile Yarn Type	UV-resistant Nylon	Texture-Diamond	n/a
Face Denier	6,000	Denier	D1577
Face Color	Turf Green	n/a	n/a
Thatch Denier	N/A	Denier	D1577
Thatch Color	N/A	n/a	n/a
Pile Height	1"	inches	D5823
Face Weight	105	oz/yd <sup>2</sup>	D5848
Primary Backing Weight	8	oz/yd <sup>2</sup>	D5848
Secondary Backing Weight	22	oz/yd <sup>2</sup>	D5848
Total Carpet Weight	135	oz/yd <sup>2</sup>	D5848
Tufting Gauge	16-Mar		D5793
Water Permeability	>40	inch/hour	DIN 18-035
Infill Rate		Lbs/ft <sup>2</sup>	

**Issue Date:**2/23/2021

**Disclaimer:** Variation of +/-5% on above listed property values is within normal manufacturing tolerances

# COMMAND CORE

## Product Data

Property	Value	Units	ASTM
Pile Yarn Types	UV-Resistant Polyethylene		N/A
Primary Yarn Structure	Dual Polymer Monofilament		N/A
Primary Yarn Color	Field Green		N/A
Primary Yarn Denier	14,000	Denier	D1577
Secondary Structure	Slit-Film		N/A
Third Yarn Structure	Thatch		N/A
Secondary Yarn Color	Olive Green		N/A
Third Yarn Color	Nutmeg Brown /Olive Green		N/A
Secondary Yarn Denier	>10,000	Denier	D1577
Third Yarn Denier	>5,000		
Pile Height	1.625	Inches	D5823
Pile Weight	65	OZ/YD2	D5848
Primary Backing Weight	>9	OZ/YD2	D5848
Secondary Backing Weight	>20	OZ/YD2	D5848
Total Weight	94	OZ/YD2	D5848
Stitch Gauge	3/8 Inch Centers		D5793
Tuft Bind	>8	LBS/Force	D1335
Water Permeability	>300   AquaFlow	Inch/Hr.	DIN 18-035
Total Infill	3	LBS/FT2	N/A

\* Variation of +/- 5% on above listed property values are within normal manufacturing tolerances.



# COMMAND Duo

## Product Data

Property	Value	Units	ASTM
Pile Yarn Type	UV-Resistant Polyethylene		N/A
Primary Yarn Structure	Ridged Monofilament		N/A
Primary Yarn Color	Field Green/Olive Green		N/A
Primary Yarn Denier	12,000	Denier	D1577
Secondary Yarn Structure	Slit-Film		N/A
Secondary Yarn Color	Olive Green		N/A
Secondary Yarn Denier	5,000	Denier	D1577
Pile Height	1.5	Inches	D5823
Pile Weight	55	OZ/YD2	D5848
Primary Backing Weight	>7	OZ/YD2	D5848
Secondary Backing Weight	>18	OZ/YD2	D5848
Total Weight	80	OZ/YD2	D5848
Stitch Gauge	3/8 Inch Centers		D5793
Tuft Bind	>8	LBS/Force	D1335
Water Permeability	>300   AquaFlow	Inch/Hr.	DIN 18-035
Total Infill	3	LBS/FT2	N/A

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(866) 271-5413 | [fieldturfcommercial.com](http://fieldturfcommercial.com)

# COMMAND Play (Nutmeg)



## Product Data

Property	Value	Units	ASTM
Pile Yarn Type	UV-Resistant Polyethylene		N/A
Primary Yarn Structure	Ridged Monofilament		N/A
Primary Yarn Color	Field Green/Olive Green		N/A
Primary Yarn Denier	12,000	Denier	D1577
Thatch Yarn Structure	Texturized Monofilament		N/A
Thatch Yarn Color	Nutmeg Brown/Olive Green		N/A
Thatch Yarn Denier	5,000	Denier	D1577
Pile Height	1.625	Inches	D5823
Pile Weight	65	OZ/YD2	D5848
Primary Backing Weight	>7	OZ/YD2	D5848
Secondary Backing Weight	>21	OZ/YD2	D5848
Total Weight	>93	OZ/YD2	D5848
Stitch Gauge	3/8 Inch Centers		D5793
Tuft Bind	>8	LBS/Force	D1335
Water Permeability	>300   AquaFlow	Inch/Hr.	DIN 18-035
Total Infill	3	LBS/FT2	N/A

\* Variation of +/- 5% on above listed property values are within normal manufacturing tolerances.



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Revision Date 6/1/2021  
Product Code: FC-GF-LIT-FN

FieldTurf reserves the right to modify technical specifications on the above-mentioned product.  
Variation of +/- 5% on above listed property values are within normal manufacturing

# COMMAND Play (Olive)



## Product Data

Property	Value	Units	ASTM
Pile Yarn Type	UV-Resistant Polyethylene		N/A
Primary Yarn Structure	Ridged Monofilament		N/A
Primary Yarn Color	Field Green/Olive Green		N/A
Primary Yarn Denier	12,000	Denier	D1577
Thatch Yarn Structure	Texturized Monofilament		N/A
Thatch Yarn Color	Olive Green		N/A
Thatch Yarn Denier	5,000	Denier	D1577
Pile Height	1.625	Inches	D5823
Pile Weight	65	OZ/YD2	D5848
Primary Backing Weight	>7	OZ/YD2	D5848
Secondary Backing Weight	>21	OZ/YD2	D5848
Total Weight	>93	OZ/YD2	D5848
Stitch Gauge	3/8 Inch Centers		D5793
Tuft Bind	>8	LBS/Force	D1335
Water Permeability	>300   AquaFlow	Inch/Hr.	DIN 18-035
Total Infill	3	LBS/FT2	N/A

*\* Variation of +/- 5% on above listed property values are within normal manufacturing tolerances.*



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# PowerPlay FIT

## Product Data

Property	Value	Units	ASTM
Pile Yarn Type	UV-Resistant Polyethylene		N/A
Primary Yarn Structure	Slit-Film		N/A
Primary Yarn Color	Field Green		N/A
Primary Yarn Denier	>5,000	Denier	D1577
Thatch Yarn Structure	Texturized Monofilament		N/A
Thatch Yarn Color	Olive Green		N/A
Thatch Yarn Denier	5,000	Denier	D1577
Pile Height	0.75	Inches	D5823
Pile Weight	45	OZ/YD2	D5848
Primary Backing Weight	>8	OZ/YD2	D5848
Secondary Backing Weight + Pad (5mm)	>81	OZ/YD2	D5848
Total Weight	>134	OZ/YD2	D5848
Stitch Gauge	3/16 Inch Centers		D5793
Tuft Bind	>8	LBS/Force	D1335
Pad	5 mm		

\* Variation of +/- 5% on above listed property values are within normal manufacturing tolerances.



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TECHNICAL PRODUCT SPECIFICATION

**CLASSIC HD**



**SLIT-FILM 2"**

PROPERTY	VALUE	UNITS	METHOD
Product Stock Code	FTHD-2		
Pile Yarn Type	UV-resistant polyethylene		n/a
Yarn Structure	Slit-Film		n/a
Yarn Denier	10800	Denier	D1577
Tape Thickness	130	Microns	D3218
Pile Height	2	inches	D5823
Pile Weight	30	oz/yd <sup>2</sup>	D5848
Primary Backing Weight	7+	oz/yd <sup>2</sup>	D5848
Secondary Backing Weight (Finger-Unit)	14+	oz/yd <sup>2</sup>	D5848
Total Carpet Weight	51	oz/yd <sup>2</sup>	D5848
Stitch Gauge	3/4 inch centers		D5793
Tuft Bind	8+	lbs/force	D1335
Grab Tear Length	>200	lbs/force	D5034
Grab Tear Width	>200	lbs/force	D5034
Pill Burn Test	Pass		D2859
Impact Attenuation (Gmax)	<200	gmax	F1936
Water Permeability	>40	inch/hour	DIN 18-035
Cryogenic SBR Rubber Infill	2.6	Lbs/ft <sup>2</sup>	
Sand	3.65	Lbs/ft <sup>2</sup>	
Total Product Weight	951	oz/yd <sup>2</sup>	

Issue Date: 4/2/2018

Disclaimer: Variation of +/-5% on above listed property values is within normal manufacturing tolerances



## COMMERCIAL – SPECIALT LINE

# TRU-ROLL PUTTING GREEN

### PRODUCT DATA

Property	Value	Units	ASTM
Pile Yarn Type	UV-Resistant Polyethylene		N/A
Primary Yarn Structure	Monofilament		N/A
Primary Yarn Color	Golf Green		N/A
Primary Yarn Denier	5000	Denier	D1577
Pile Height	5/8	Inches	D5823
Pile Weight	54	OZ/YD <sup>2</sup>	D5848
Primary Backing Weight	>6	OZ/YD <sup>2</sup>	D5848
Secondary Backing Weight	20	OZ/YD <sup>2</sup>	D5848
Total Weight	80	OZ/YD <sup>2</sup>	D5848
Stitch Gauge	3/16 Inch Centers		D5793
Tuft Bind	>8	LBS/Force	D1335
Total Infill	2 to 3	LBS/FT <sup>2</sup>	N/A

\* Variation of +/- 5% on above listed property values is within normal manufacturing tolerances.

FieldTurf reserves the right to modify technical specifications on the above-mentioned product. Delivered products tolerances can slightly differ from the technical data.

Manufactured by



Commercial – Elite Line

# Versa Lush

## Product Data

Property	Value	Units	ASTM
Pile Yarn Type	UV-Resistant Polyethylene		N/A
Primary Yarn Structure	Ridged Monofilament		N/A
Primary Yarn Color	Field Green/Olive Green		N/A
Primary Yarn Denier	12000	Denier	D1577
Thatch Yarn Structure	Texturized Monofilament		N/A
Thatch Yarn Color	Olive Green		N/A
Thatch Yarn Denier	5000	Denier	D1577
Pile Height	1.00	Inch	D5823
Pile Weight	48	OZ/YD2	D5848
Primary Backing Weight	>7	OZ/YD2	D5848
Secondary Backing Weight	>20	OZ/YD2	D5848
Total Weight	75	OZ/YD2	D5848
Stitch Gauge	3/8 Inch Centers		D5793
Tuft Bind	>8	LBS/Force	D1335
Water Permeability	>250 l MaxxFlow Coating	Inch/Hr.	DIN 18-035
Total Infill	2	LBS/FT2	N/A

\* Variation of +/- 5% on above listed property values are within normal manufacturing tolerances.



Manufactured by



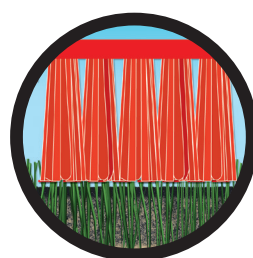
FieldTurf COMMERCIAL  
A TARKETT SPORTS COMPANY

(866) 271-5413 | [fieldturfcommercial.com](http://fieldturfcommercial.com)

SAFETY FOR ATHLETES HAS ALWAYS BEEN A TOP PRIORITY FOR FIELDTURF AND TODAY THAT DISCUSSION IS EVEN MORE RELEVANT. WE WANT OUR CUSTOMERS AND THEIR ATHLETES TO KNOW THAT WE CAN ASSIST THEM IN ENSURING THAT THEIR FACILITIES ARE AS SAFE AS POSSIBLE.

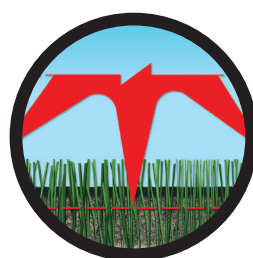
The FieldCleanse Program, part of FieldTurf's multi-pronged service platform, is designed to increase safety measures for our clients and their athletes. FieldTurf, which for over 25 years has been recognized as the leader in artificial turf and player safety is proud to introduce the FieldCleanse program designed to elevate the cleanliness standards of our fields and to meet the new health and safety challenges presented by the current pandemic environment. This multi-faceted approach includes our standard guidance for Brushing, Aerating, Raking and Sweeping along with new options for those who want to sanitize their turf fields.

## THE FIELDCLEANSE SERVICE OFFERING



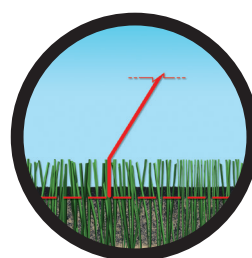
### BRUSHING

Agitate & loosen inill



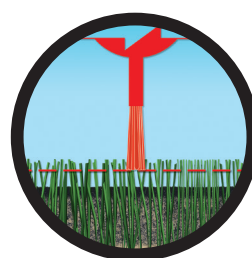
### AERATING

Prevent infill compaction & build up



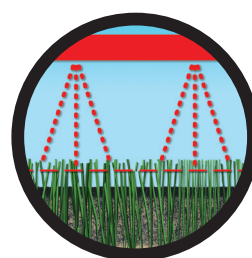
### RAKING

Prevent infill compaction & build up



### SWEEPING

Remove debris & contaminants



### SANITIZING

The ultimate in bacteria control

## SANITIZATION PROGRAM PACKAGES

1

### COMPLETE

DON'T HAVE THE NECESSARY EQUIPMENT OR LABOR?

Our FieldTurf Service Experts will provide a full service cleanse with sanitization utilizing EPA Approved mPerial sanitizer.

2

### BASIC

INTERESTED IN DOING IT YOURSELF?

mPerial is available in 5 gallon, 55 gallon or 275 gallon containers. 5 gallons of mPerial is enough to treat 80,000 sq.ft. of synthetic turf (see application instructions for more details)

Our Customer Service Coordinators can provide a detailed quote for the Complete or Basic Sanitization along with our full suite of FieldCleanse options including Brushing, Aerating, Raking and Sweeping.

## WE CAN HELP WITH TRACKS, COURTS, GYMS AND MORE!

Have additional facilities that need to be sanitized? Our certified teams can help. As a part of Tarkett Sports, the worldwide leader in sports surfacing, we can help with a variety of surfacing applications. Our experienced R&D and service teams have identified the right products and application rates to ensure that your facility is properly cleaned and that we are keeping your athletes safe. Our Customer Service Coordinators can provide you with a complete cleaning solution, offering you peace of mind from the experts.

## EPA APPROVED CORONAVIRUS (COVID-19) SANITIZER

FieldTurf's NEW FieldCleanse program will help deep clean your surface to combat COVID-19. Utilizing an EPA approved coronavirus sanitizer: mPerial™, by MPact™ Environmental Solutions, LLC, which confirms results that demonstrates the ability of the mPact™ technology to prevent and protect against the spread of the COVID-19 Virus. mPerial™ is EPA registered with multiple studies across many industries proving its safety and efficacy. Both products in the mPact antimicrobial cleaning system are EPA Registered, non-toxic, biodegradable and non leaching: therefore it does not absorb in the body. The active formula in our products have been used safely for many solutions since 1976.

## MPERIAL PRODUCT DETAILS

- ▶ EPA registered, FDA compliant
- ▶ EPA Registration #: 10324-59-83129

## DILUTION RATIOS

- ▶ Standard Use: 2 oz. per gal. (approx. 4 gal. per 250 gal. water tank)

## APPLICATION

- ▶ Can be applied with a low pressure sprayer using "wet" nozzles - not atomized
- ▶ Approximately 1 gallon (diluted) per 250 sq. ft.
- ▶ Entire surface area must remain wet for 10 minutes
- ▶ Do not apply when temperatures are high
- ▶ Be sure all surfaces are dry before application
- ▶ Once applied, the product should be flushed through the system with water



*Note - This product is safe to use once or twice a year on FieldTurf systems. Further usage could damage the field fibers.*

## FIELDCLEANSE CUSTOMER COMMITMENT

FIELDTURF, THE WORLD LEADER IN ARTIFICIAL TURF, IS COMMITTED TO KEEPING ATHLETES SAFE – A PROMISE MADE VIA OUR INNOVATION PROGRAM STRAIGHT THROUGH TO HOW WE MAINTAIN OUR FIELDS. IT'S WHY OVER 20,000 CUSTOMERS WORLDWIDE PUT THEIR TRUST IN FIELDTURF.



**THE ULTIMATE  
ATHLETIC FACILITY  
SANITIZATION  
PROGRAM**

# SOLUTIONS FOR YOUR ATHLETES

## EQUIPMENT SANITIZATION: SANI SPORT

Want the same protection for your equipment & facilities as NFL, NHL & MLB teams? The Sani Sport technology significantly reduces harmful bacteria and viruses on personal protective gear (PPE), sports equipment and enclosed spaces. 3200 times more powerful than bleach, the Sani Sport sanitizing equipment can be used for helmets; cleats; skates; protective padding of all sorts including shin guards, shoulder pad, jock straps, gloves; and even exercise mats.

**PROVEN 98% KILL RATE OF COVID-19  
IN A 30 MINUTE TIME FRAME**

Testing performed by Cornell University

## Sani Sport

### REMOVES HARMFUL PATHOGENS:

- Staphylococcus aureus (S. aureus)
- Staphylococcus aureus MRSA
- Streptococcus viridans (S. viridans)
- Escherichia Coli (E. coli)
- Influenza
- Clostridium difficol (C. diff)
- Acinetobacter baumannii
- Klebsiella Pneumoniae ESBL
- MERS
- Mumps
- H1N1
- COVID-19

## EQUIPMENT

DISINFECTS AND DRIES EQUIPMENT IN 12 MINUTES



FROM: \$15,995



FROM: \$22,295

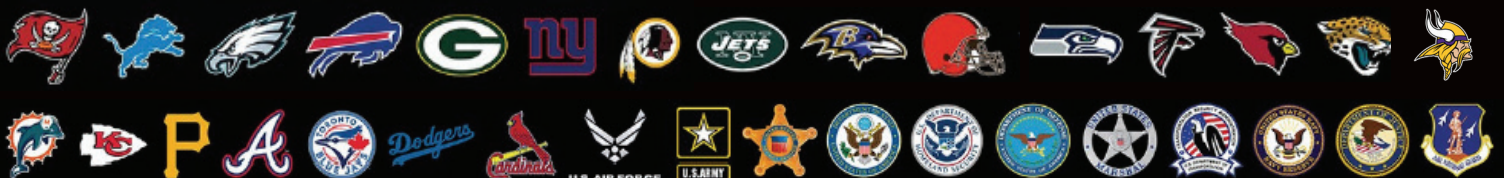
## ENCLOSED SPACES

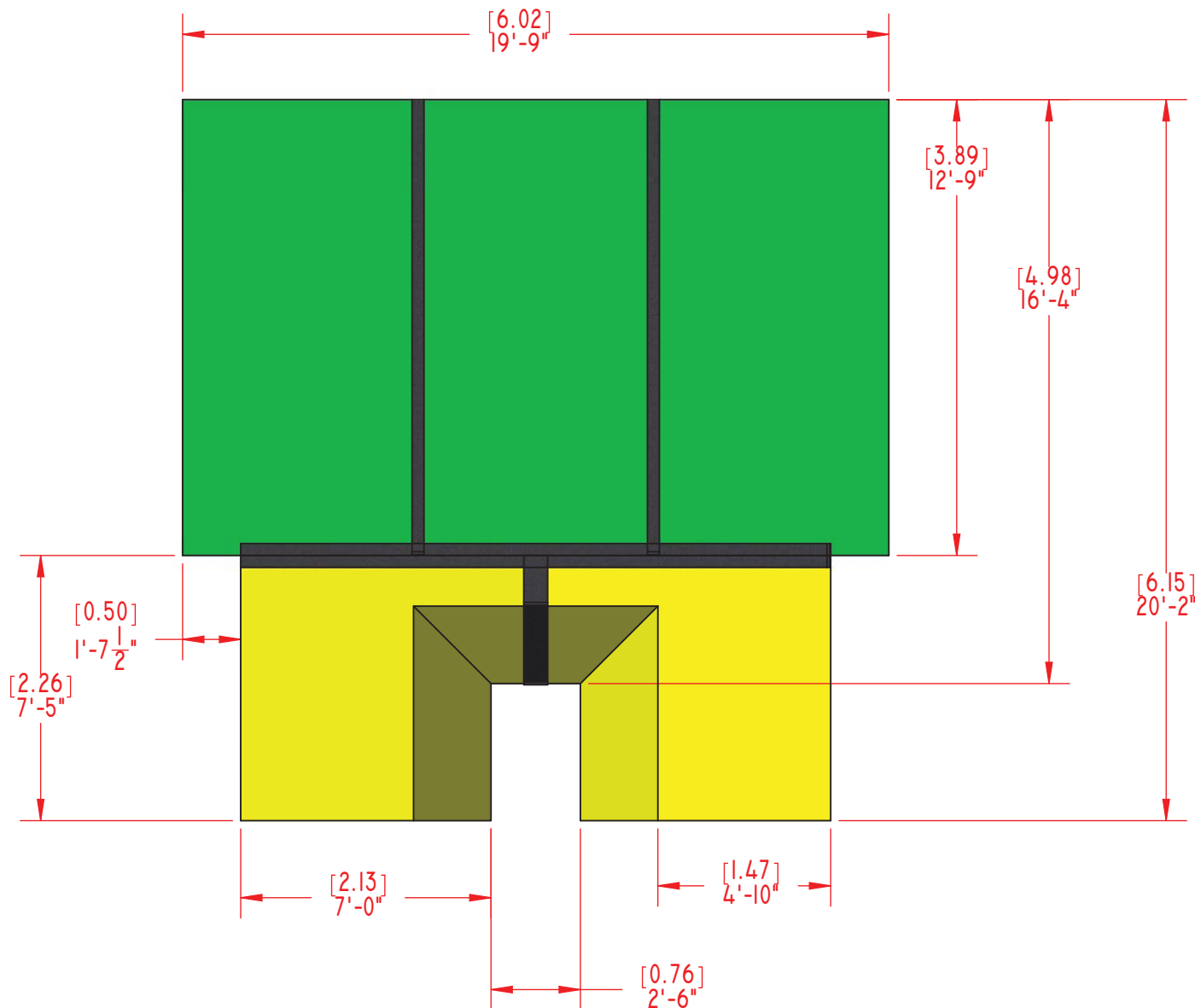
SANITIZES ROOMS 600-4,000 SQ.FT.  
IN 30 TO 240 MINUTES



FROM: \$12,995

## Sani Sport





**MEETS AND/OR EXCEEDS ALL NFHS SPECIFICATIONS**

OVERALL SIZE: 19'-9" X 20'-2" X 26"

METRIC: 6.02M X 6.15M X .66M

THREE (3) BASE UNITS: 6'-7" X 12'-9" X 26" (GREEN)

TWO (2) FRONT SLANT UNITS: 8'-3" X 7'-5" X 26" (YELLOW)

ONE (1) SKIRTED MESH TOP COVER: (NOT SHOWN)

ONE (1) TFPVPBSC - PLANTING BOX SAFETY COLLAR (NOT SHOWN)

**PROPRIETARY AND CONFIDENTIAL**

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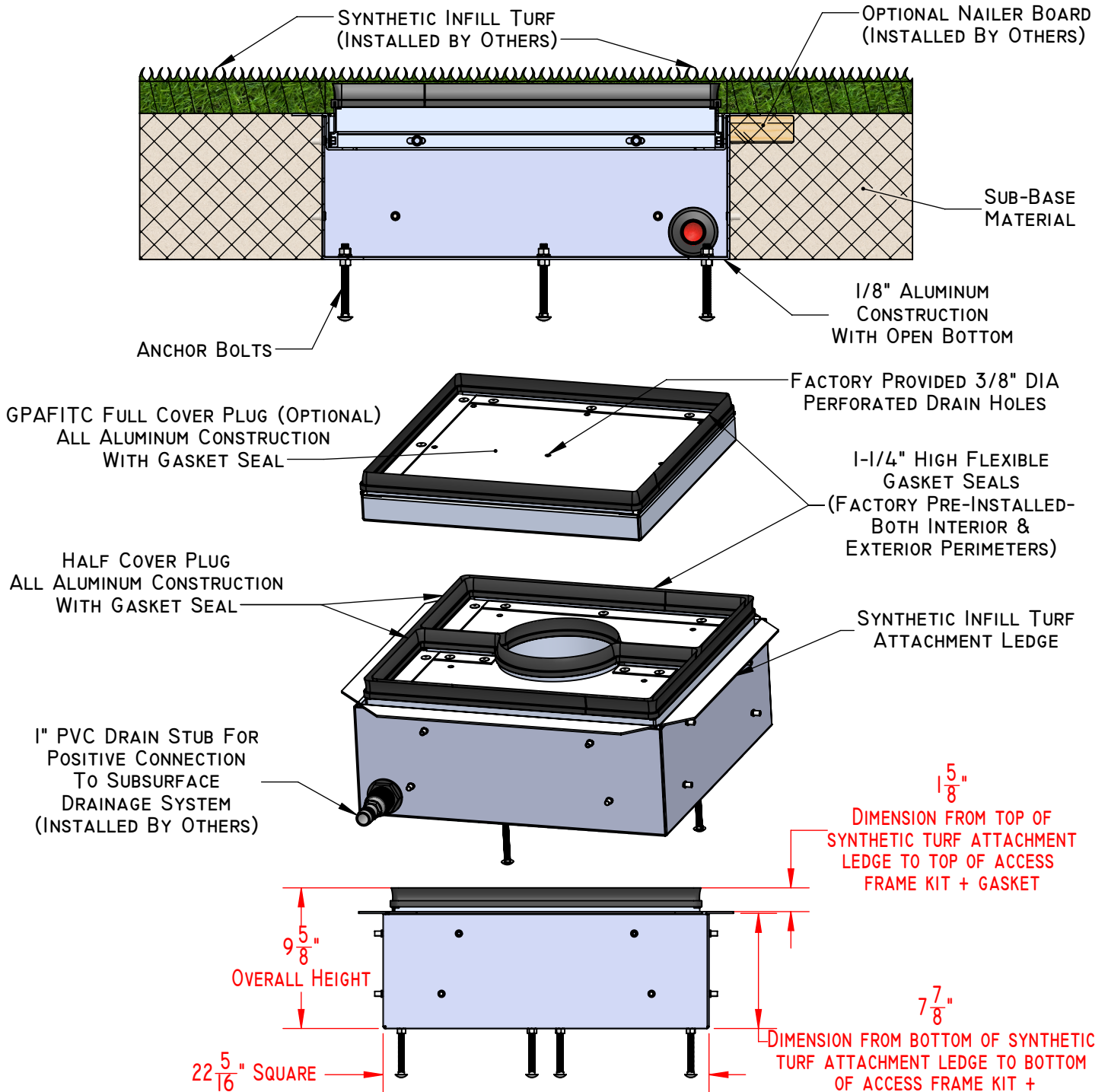
**JUMPZONE® CHAMPION BRONZE POLE VAULT LANDING SYSTEM OVERVIEW  
TFPV2021L**

NOT TO SCALE

SPORTSFIELD SPECIALTIES INC 08172012



**GPAFIT Access Frame Kit + FOR USE WITH GROUND SLEEVE AND BASE PLATE MOUNT  
ADJUSTRIGHT® FOOTBALL GOAL POSTS INSTALLED IN SYNTHETIC TURF APPLICATIONS**



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**GPAFIT (GP4570) ACCESS FRAME KIT + WITH INFILL  
RETAINER SYSTEM FOR SYNTHETIC TURF APPLICATIONS**

NOT TO SCALE

SPORTSFIELD SPECIALTIES INC 08222017



**1-888-975-3343**

## Installation Guide

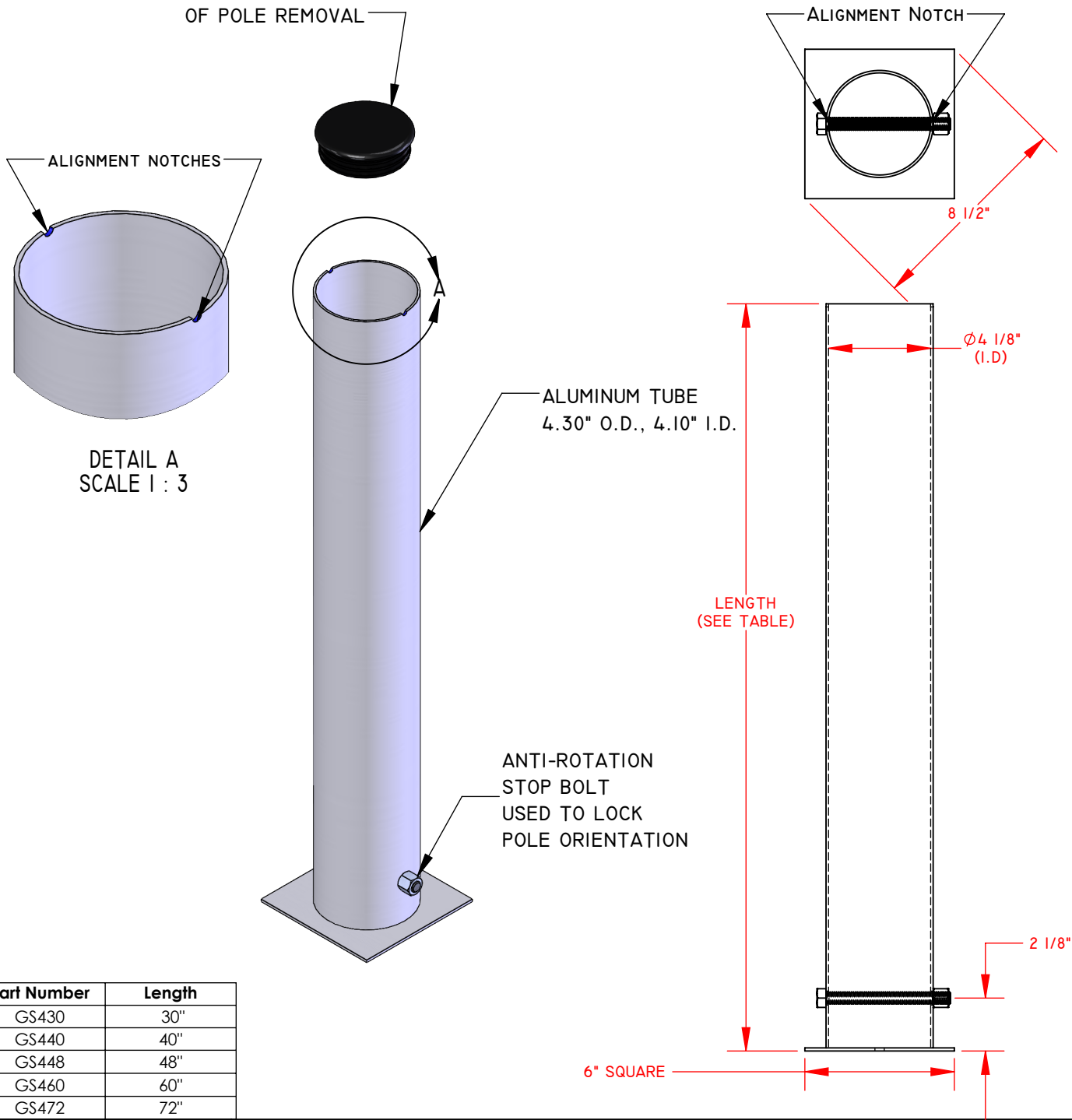
Product No.	Product Description
DHCCOL	College Discus/Hammer Cage System, Single Pad (6.15 Meters)
DDHCCOL	College Discus/Hammer Cage System, Dual Pad (6.15 Meters)

Based on the cage configuration desired, refer to one of the following documents for the placement of the ground sleeves.

- College Discus Hammer Cage Single Pad Ground Sleeve Layout (6 Poles)
- College Discus Hammer Cage Dual Pad Ground Sleeve Layout (8 Poles)

BLACK PLASTIC GROUND SLEEVE  
CAP FOR USE IN CASE  
OF POLE REMOVAL

STOP BOLT/ALIGNMENT NOTCHES MUST BE  
INSTALLED IN CORRECT POSITION TO ALLOW  
FOR PROPER ORIENTATION OF UPRIGHT POLE



Part Number	Length
GS430	30"
GS440	40"
GS448	48"
GS460	60"
GS472	72"

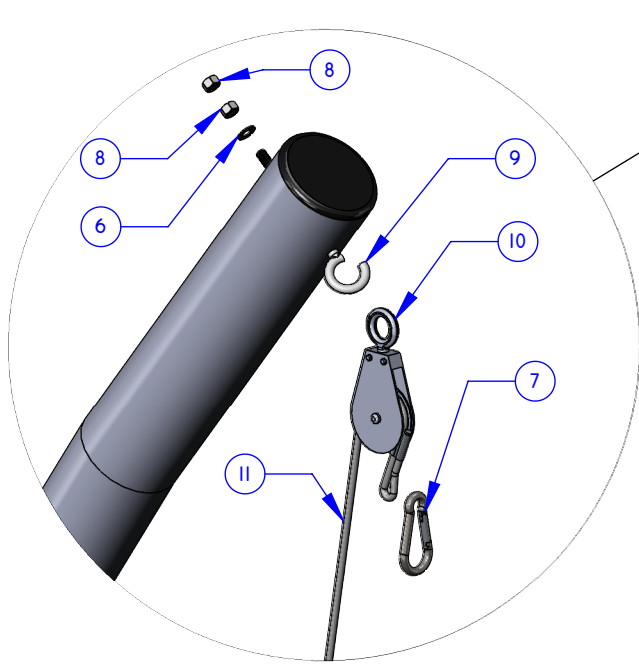
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**GS4XX**  
**GROUND SLEEVE WITH STOP BOLT FOR 4" O.D. POST**

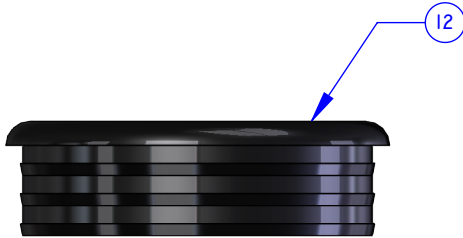
NOT TO SCALE

SPORTSFIELD SPECIALTIES INC 03222019

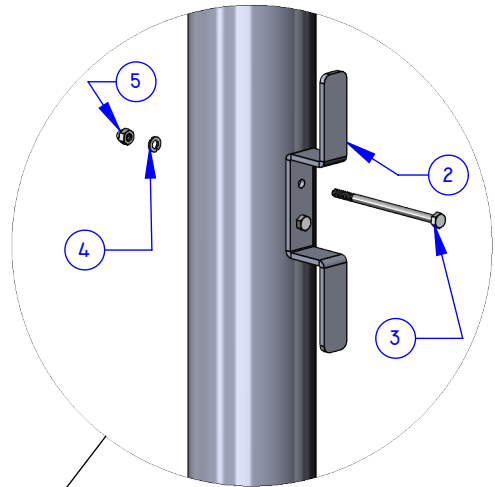
# BILL OF MATERIAL (BOM) REFERENCE



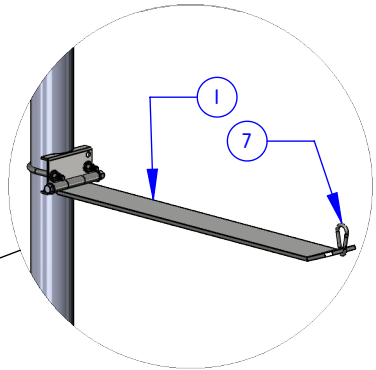
PULLEY AND TETHER DETAIL



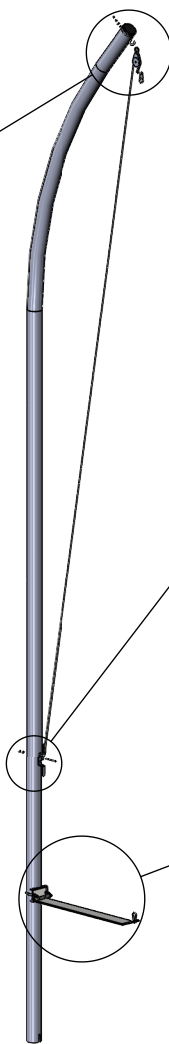
GROUND SLEEVE CAP



ROPE CLEAT DETAIL



EXTENSION ARM DETAIL



**6 POLES PER DHCCOL**  
**8 POLES PER DDHCCOL**

**INSTALL NOTES:**

1. INSTALL TETHER AND ROPE CLEAT HARDWARE PRIOR TO INSERTING POLE INTO GROUND SLEEVE
2. GROUND SLEEVE CAPS PROVIDED FOR USE WHEN POLES ARE REMOVED FOR STORAGE
3. EXTENSION ARMS ARE INSTALLED AT FINISH GRADE. USE SPRING HOOK FOR BOTTOM NET ATTACHMENT

ITEM NO.	QTY.	DRAWING NUMBER	SAP PART NUMBER	DESCRIPTION
1	1	HINGE-STAB-EXT	E-I000-S004	STANDARD 36" HINGED STABILIZER EXTENSION ARM
2	1	ROPE CLEAT	E-I000-0013	STEEL ROPE CLEAT
3	2	101-HHCL_4-20X4.50-SS	101-HHC-0025	1/4-20 x 4.5" HEX HEAD BOLT, 304 SS
4	2	110-SLWI_4-SS	110-SLW-0002	1/4 SS LOCK WASHER
5	2	107-HXNI_4-20ACORN-SS	107-HXN-0006	1/4-20 S.S. LOW CROWN ACORN NUT
6	1	110-FLW3_8-SS	110-FLW-0005	3/8 S.S. FLAT WASHER
7	2	113-209860	PURCHP-0009	5/16" SPRING HOOK
8	2	107-HXN3_8-16-SS	107-HXN-0020	3/8-16 STAINLESS STEEL HEX NUT
9	1	100-EYE3_8-16x5.125-STL-OPEN	100-EYE-0005	3/8-16 x 5.125" LONG OPEN EYE BOLT
10	1	113-BLOCKWR300-02548	PURCHP-0026	1/4" SWIVEL BLOCK PULLEY
11	1	TETHER-45	TETHER-45	45' LONG TETHER
12	1	114-GS-04-CAP	PURCHP-0318	PLASTIC END CAP (FITS 4" O.D. x 1/8" WALL)

ERP Part No.  
**Undefined**

TITLE: Hardware Kit, Single Cage Pole, Hammer/Discus, Standard

DWG. NO.  
**TFDHC-POLE-HD**

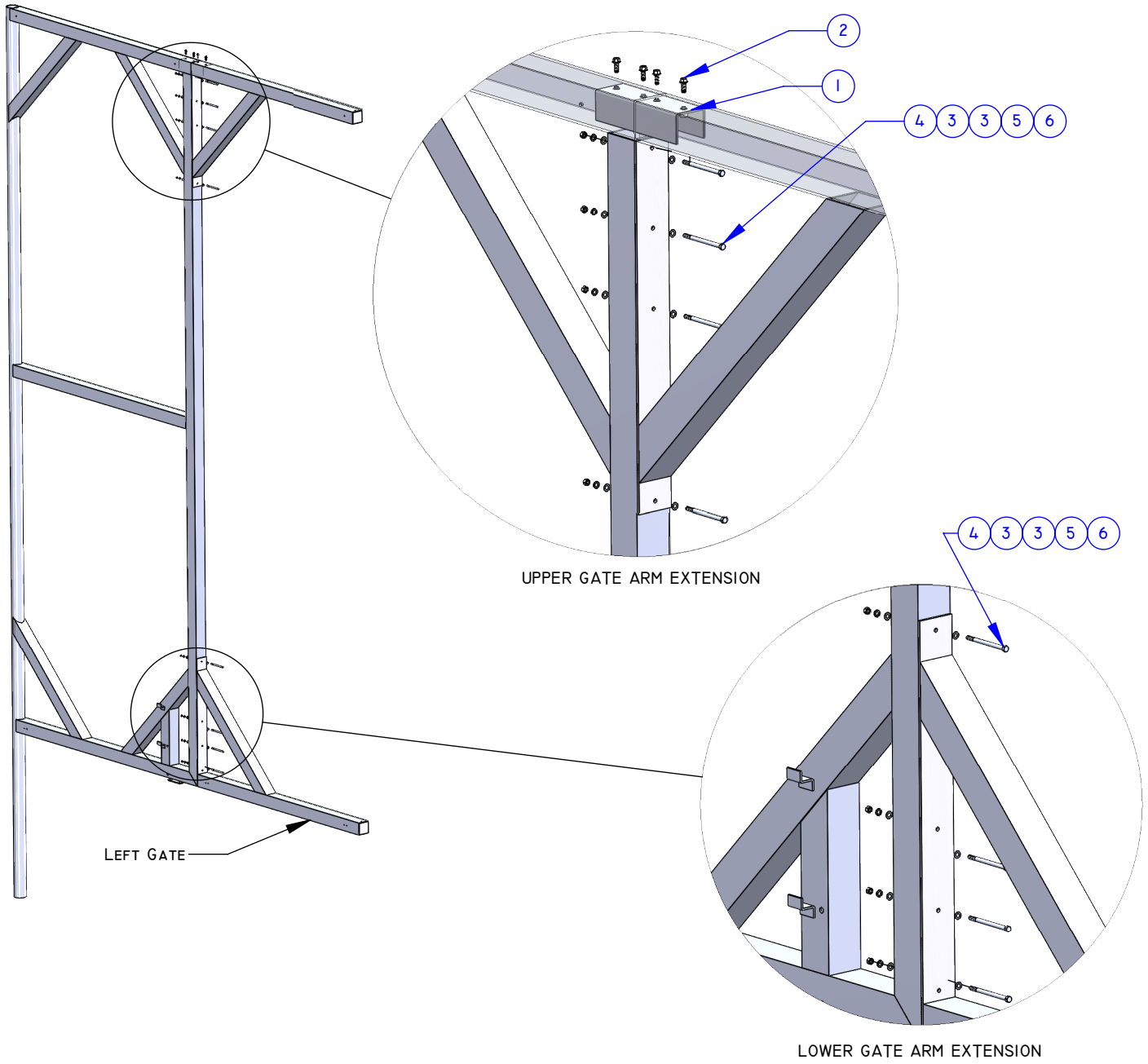
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B. DREHER

Revision Date  
08/03/2018

SHEET 1 OF 1

# BILL OF MATERIAL (BOM) REFERENCE



**INSTALL NOTES:**

I. ATTACH THE GATE ARM EXTENSIONS TO THE MAIN GATE BEFORE INSERTING GATE INTO THE GROUND SLEEVE

2 GATES PER DHCCOL AND DDHCCOL

ITEM NO.	QTY.	DRAWING NUMBER	SAP PART NUMBER	DESCRIPTION
1	1	SG4910-CHANNEL	E-1004-S008	4 HOLE CONNECTING CHANNEL, 3.600" WIDE x 3.0" HIGH x 12.0" LONG
2	4	100_HWH3_8_16XI_SER_CS_BP	100-HWH-0002	3/8-16 x 1" HEX WASHER HEAD WITH SERRATED FLANGE, GRADE 5, FULLY THREADED
3	16	110-FLW3_8-SS	110-FLW-0005	3/8 S.S. FLAT WASHER
4	8	101-HHC3_8-16X5.5-SS	101-HHC-0039	3/8-16 x 5.5" HEX HEAD BOLT, 304 SS
5	8	110-SLW3_8-SS	110-SLW-0006	3/8-16 S. S. LOCK WASHER
6	8	107-HXN3_8-16-SS	107-HXN-0020	3/8-16 STAINLESS STEEL HEX NUT

ERP Part No.  
**Undefined**

TITLE: Hardware Kit, College Discus/Hammer, Standard Rotating Gate

DWG. NO.  
**TFDHC-GATE-HD**

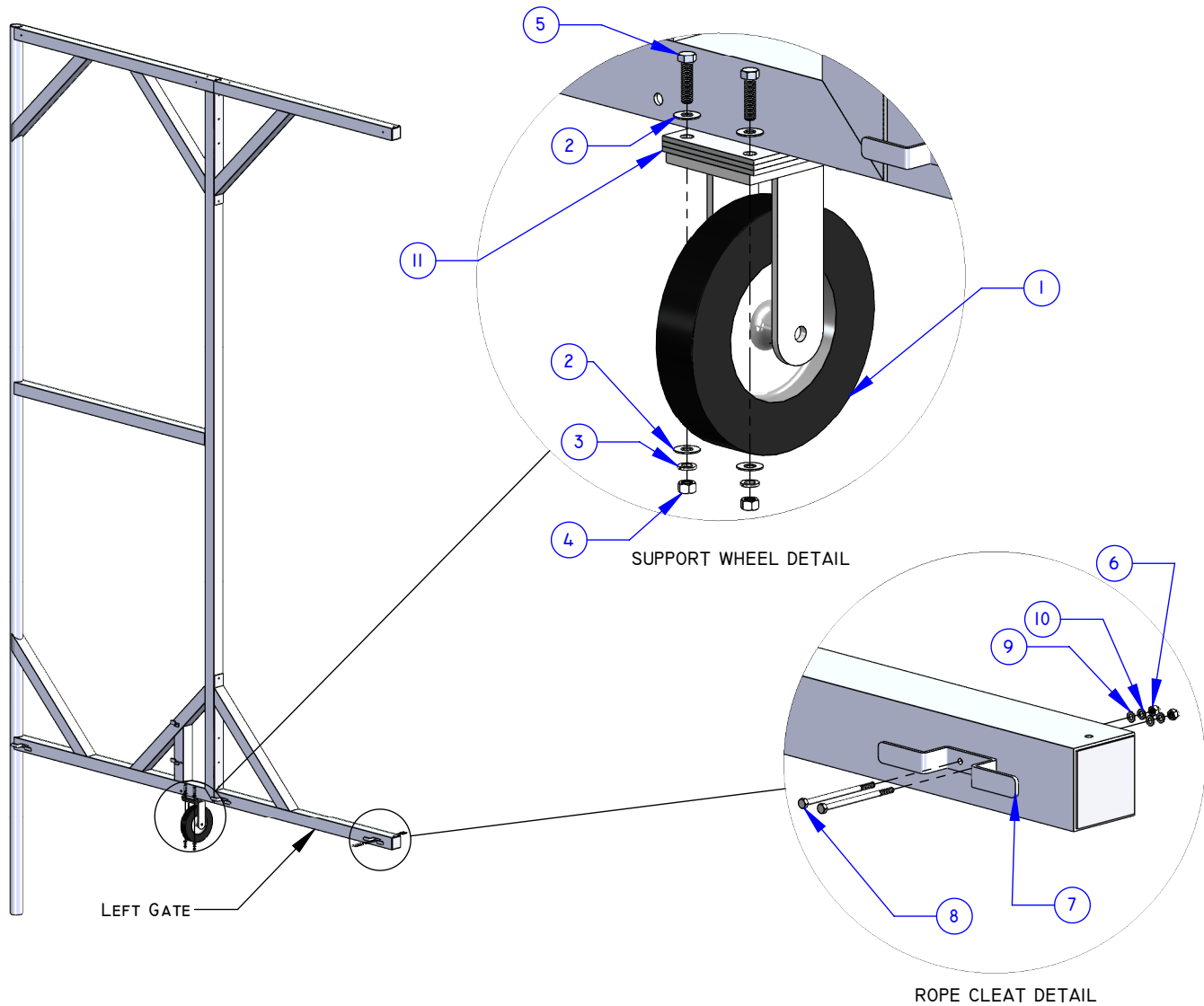
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DRAWN BY  
LRM

Revision Date  
11/12/2018

SHEET 1 OF 7

# BILL OF MATERIAL (BOM) REFERENCE



**INSTALL NOTES:**

1. WHEEL SHIMS ARE INCLUDED TO HELP SET THE WHEEL ON THE CONCRETE PATH ONCE THE GATE IS INSERTED INTO THE GROUND SLEEVE
2. MAKE SURE THE ROPE CLEATS ARE ON THE OUTSIDE OF THE CAGE FOR BOTH THE LEFT AND RIGHT GATES

ITEM NO.	QTY.	DRAWING NUMBER	SAP PART NUMBER	DESCRIPTION
1	1	114-R-8012-SU	PURCHP-0344	RIGD, HARD RUBBER CASTER W/SIDE BRAKE, 12" x 2.75"
2	8	110-FLWI_2-SS	110-FLW-0001	1/2 S.S. FLAT WASHER
3	4	110-SLWI_2-SS	110-SLW-0001	1/2 S.S. LOCK WASHER
4	4	107-HXNI_2-13-SS	107-HXN-0003	1/2-13 STAINLESS STEEL HEX NUT
5	4	101-HHCI_2-13X2-SS	101-HHC-0005	1/2-13 x 2" HEX HEAD BOLT, 304 SS
6	6	107-HXNI_4-20ACORN-SS	107-HXN-0006	1/4-20 S.S. LOW CROWN ACORN NUT
7	3	ROPE CLEAT	E-1000-0013	STEEL ROPE CLEAT
8	6	101-HHCI_4-20X4.50-SS	101-HHC-0025	1/4-20 x 4.5" HEX HEAD BOLT, 304 SS
9	6	110-FLWI_4-SS	110-FLW-0002	1/4" S.S. FLAT WASHER
10	6	110-SLWI_4-SS	110-SLW-0002	1/4 SS LOCK WASHER
11	2	DHC-WHEEL SHIM	E-0018-S041	HAMMER/DISCUS CAGE WHEEL SHIM, PAINTED BLACK

ERP Part No.  
**Undefined**

TITLE: Hardware Kit, College Discus/Hammer, Standard Rotating Gate

DWG. NO. TFDHC-GATE-HD

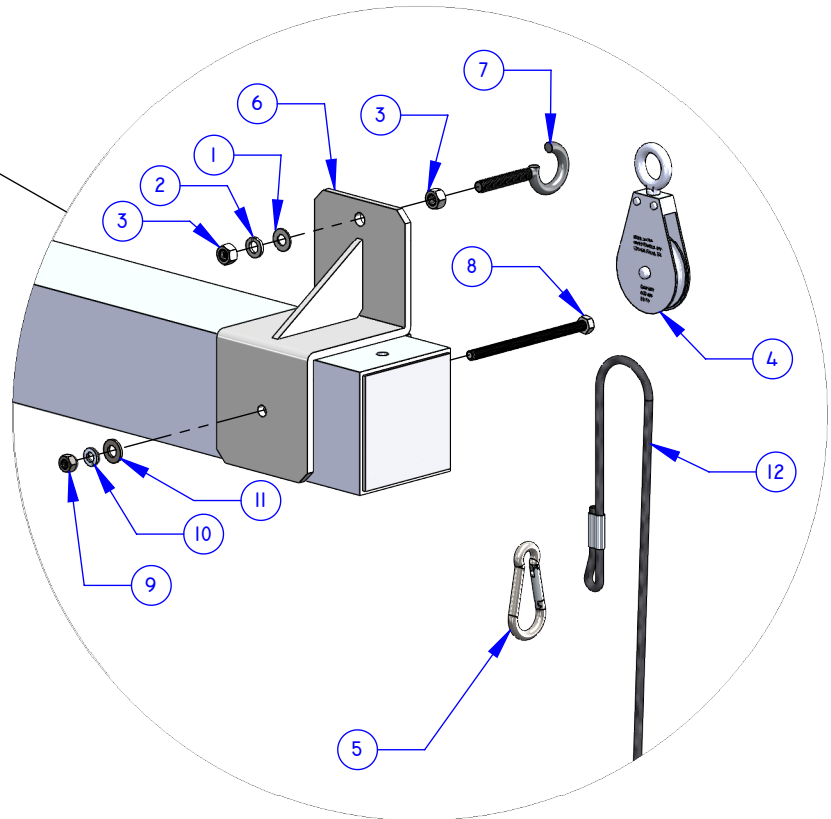
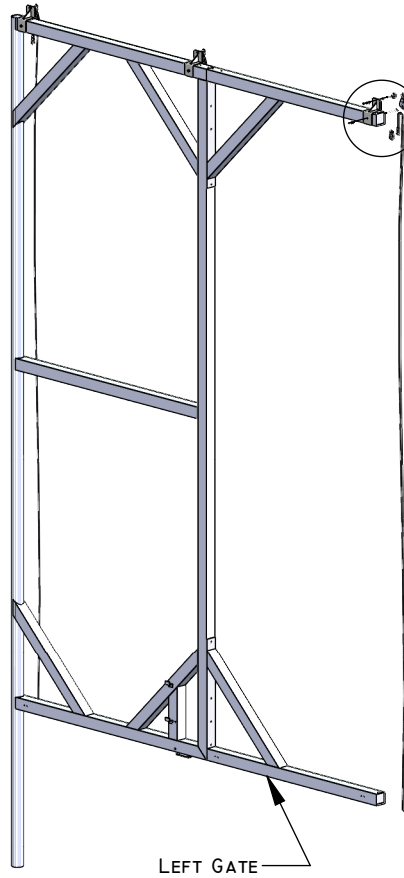
REV **B**

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Revision Date 11/12/2018

SHEET 2 OF 7

# BILL OF MATERIAL (BOM) REFERENCE



**INSTALL NOTES:**

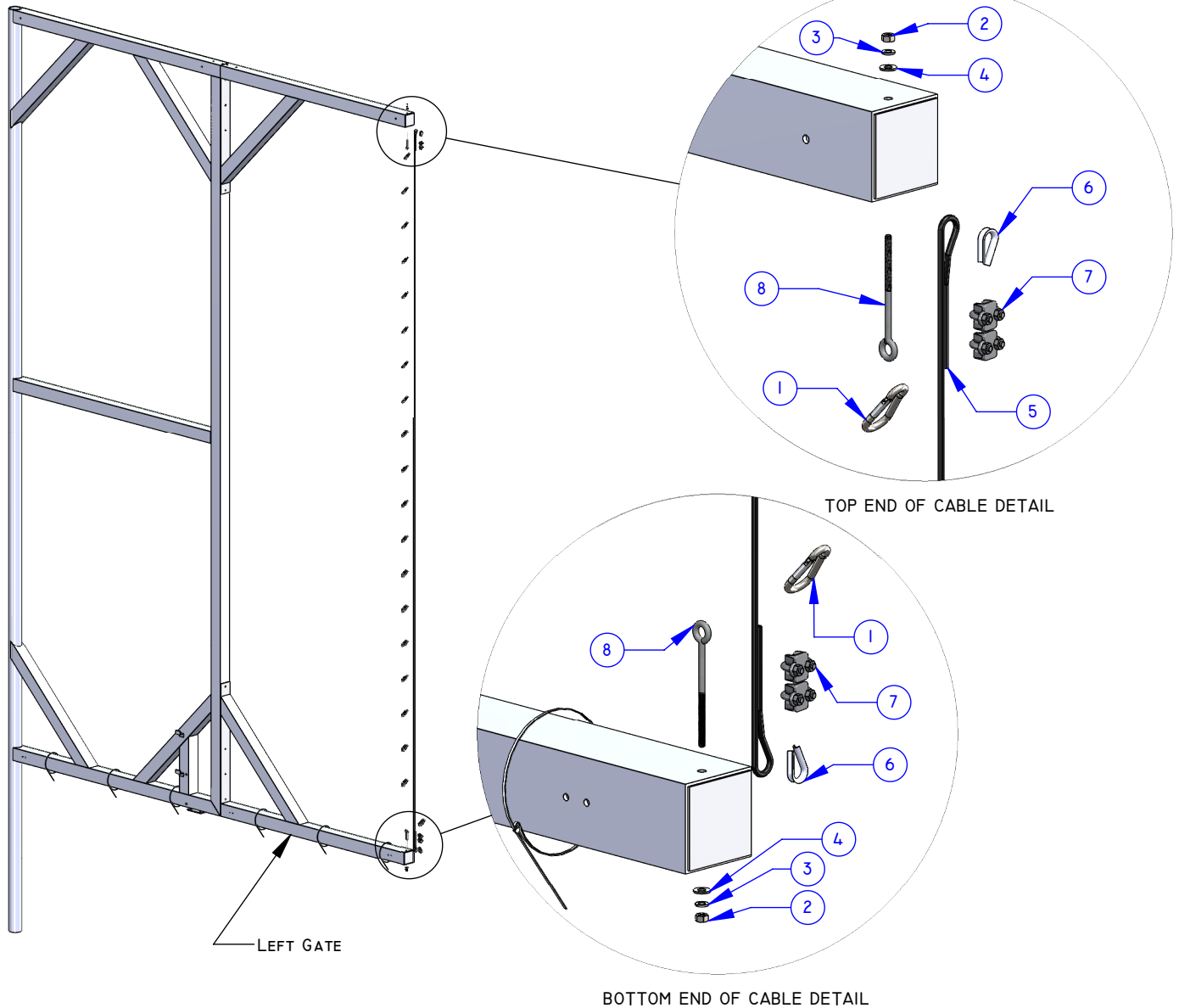
- I. MOUNT THE TOP BRACKETS AND HARDWARE SUCH THAT THE EYE BOLT FOR THE PULLEY AND TETHER IS FACING THE INSIDE OF THE CAGE

ITEM NO.	QTY.	DRAWING NUMBER	SAP PART NUMBER	DESCRIPTION
1	3	I10-FLW3_8-SS	I10-FLW-0005	3/8 S.S. FLAT WASHER
2	3	I10-SLW3_8-SS	I10-SLW-0006	3/8-16 S. S. LOCK WASHER
3	6	I07-HXN3_8-16-SS	I07-HXN-0020	3/8-16 STAINLESS STEEL HEX NUT
4	3	I13-BLOCKWR300-02548	PURCHP-0026	1/4" SWIVEL BLOCK PULLEY
5	3	I13-209860	PURCHP-0009	5/16" SPRING HOOK
6	3	TFDHC-GATE-BRACKET	E-0018-S008	GATE PULLEY BRACKET, HAMMER/DISCUS CAGE
7	3	I00-EYE3_8-16X2.5-OPEN-STL	E-I000-0024	3/8-16 x 2.5" LONG OPEN EYE BOLT
8	3	I01-HHC5_16-18X5-SS	I01-HHC-0051	5/16-18 x 5.00" HEX HEAD BOLT, 304 SS
9	3	I07-HXN5_16-18-SS	I07-HXN-0023	5/16-18 S.S. HEX NUT
10	3	I10-SLW5_16-SS	I10-SLW-0007	5/16 S.S. LOCK WASHER
11	3	I10-FLW5_16-SS	I10-FLW-0007	5/16 S.S. FLAT WASHER
12	3	DHC-GATE PULLEY TETHER	TETHER-45	TETHER FOR DHC GATE

ERP Part No. <b>Undefined</b>	TITLE: Hardware Kit, College Discus/Hammer, Standard Rotating Gate	DWG. NO. <b>TFDHC-GATE-HD</b>	REV <b>B</b>
		DRAWN BY LRM	Revision Date 11/12/2018



# BILL OF MATERIAL (BOM) REFERENCE



**INSTALL NOTES:**

1. INSTALL EYE BOLTS AT THE TOP AND BOTTOM AND THEN ATTACH VERTICAL CABLE USING THIMBLE AND ROPE CLIPS
2. PULL CABLE AS TIGHT AS POSSIBLE SO THAT IT IS TAUT AND USE THE SPRING HOOKS TO CLIP THE SIDES OF THE NET TO THE CABLE
3. USE THE CABLE TIES TO SECURE THE NET AT THE BOTTOM OF THE GATE

ITEM NO.	QTY.	DRAWING NUMBER	SAP PART NUMBER	DESCRIPTION
1	20	I13-209860	PURCHP-0009	5/16" SPRING HOOK
2	2	107-HXN5_I6-18-SS	107-HXN-0023	5/16-18 S.S. HEX NUT
3	2	I10-SLW5_I6-SS	I10-SLW-0007	5/16 S.S. LOCK WASHER
4	2	I10-FLW5_I6-SS	I10-FLW-0007	5/16 S.S. FLAT WASHER
5	1	I13-VGACB187	PURCHP-0048	1/4" BLACK VINYL COATED WIRE ROPE
6	2	I13-211160	PURCHP-0010	1/4" THIMBLE, HEAVY DUTY GALV.
7	4	I13-I15-WRCDF0187	PURCHP-0569	3/16" DROP FORGED WIRE ROPE CLIP
8	2	100-EYE5_I6-18X4.625-STL	100-EYE-0009	5/16-18 x 4-11/16" CLOSED EYE BOLT WITH NUT, 2-1/2" THREAD, ZINC-PLATED STEEL
9	6	I13-S-11160BL	CT26175B	26" REUSABLE NYLON CABLE TIE

ERP Part No.  
**Undefined**

TITLE:  
Hardware Kit, College  
Discus/Hammer, Standard  
Rotating Gate

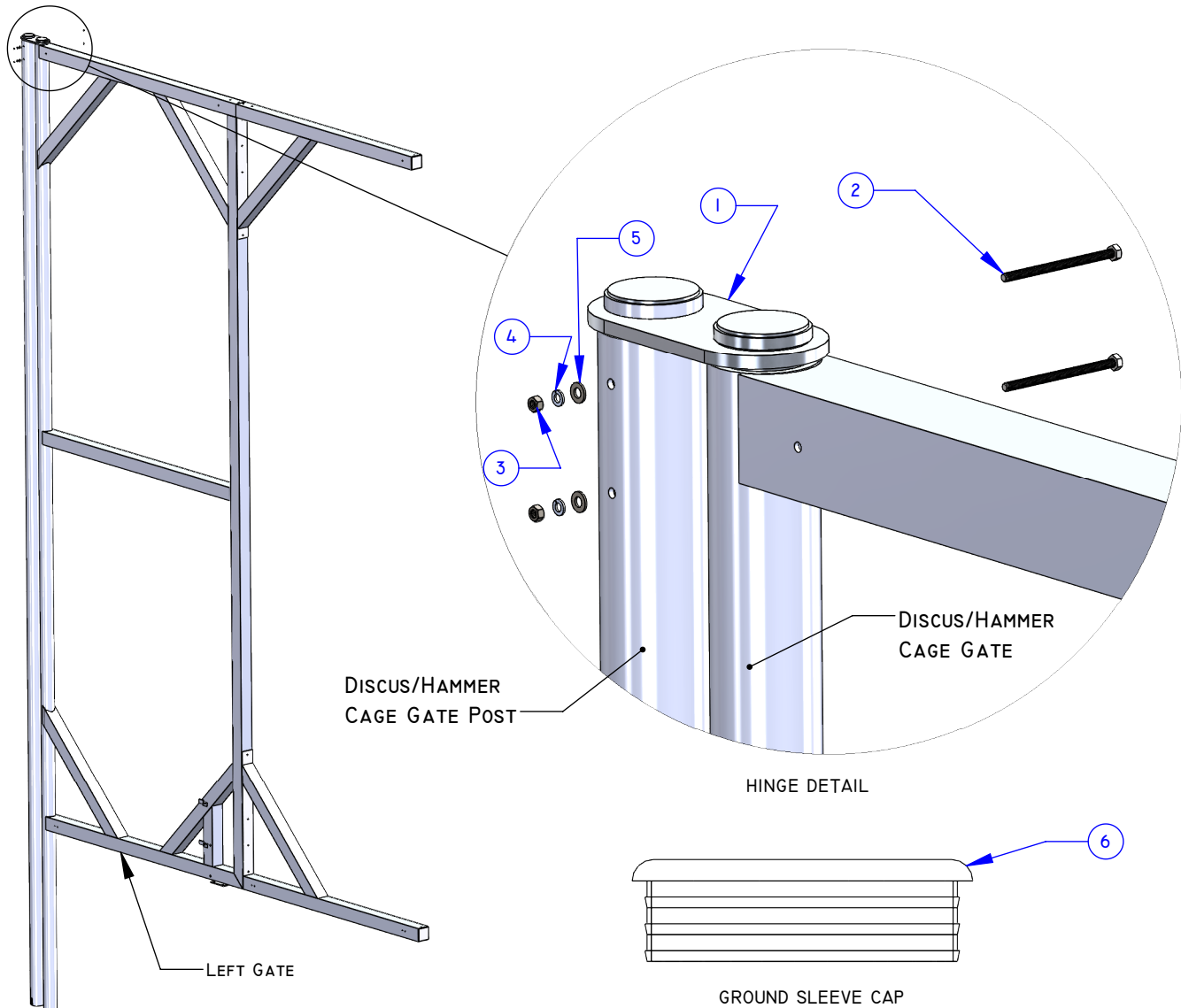
DWG. NO.  
**TFDHC-GATE-HD**

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**B**

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LRM

Revision Date  
11/12/2018

SHEET 4 OF 7

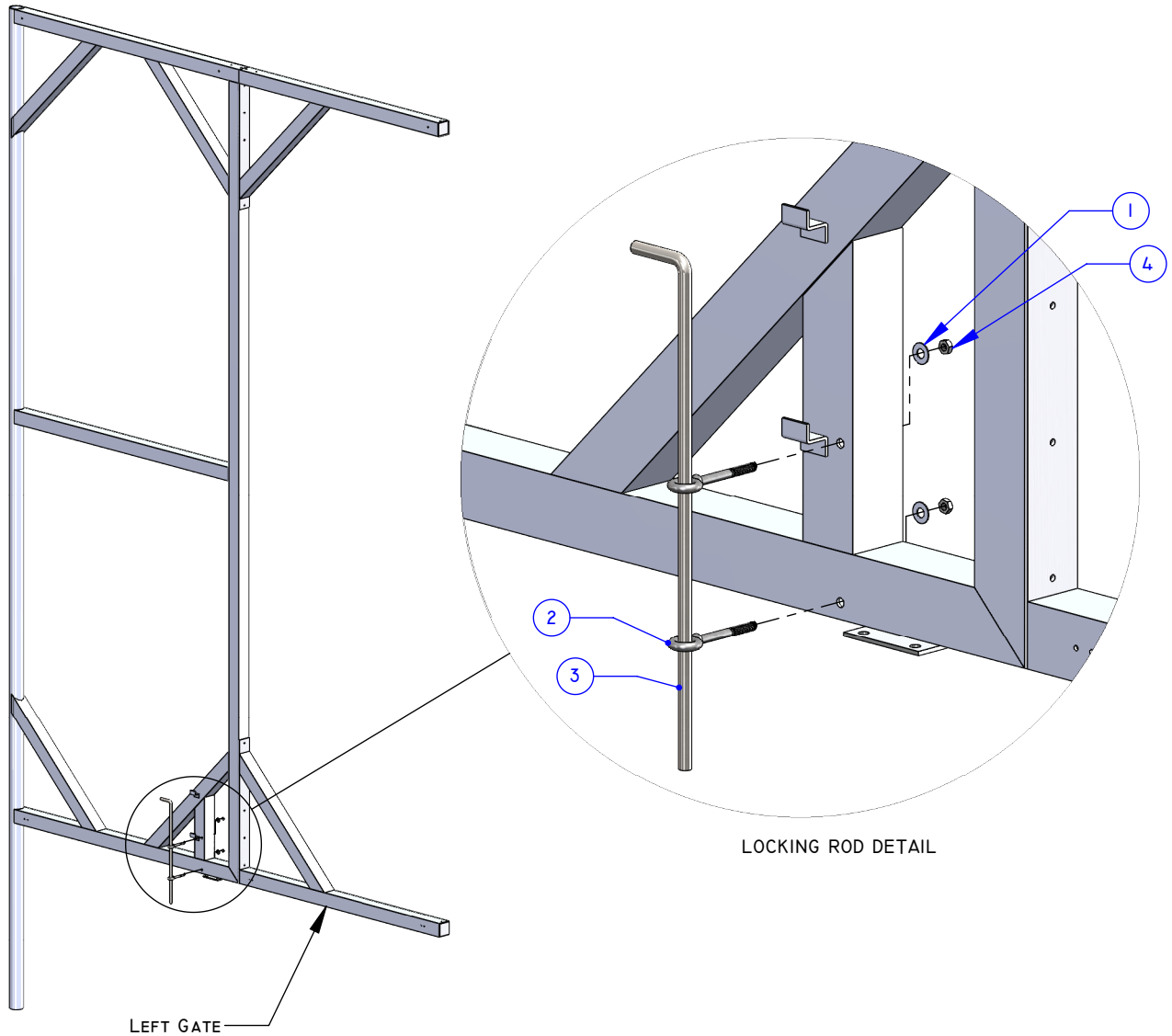


**INSTALL NOTES:**

1. CONNECT THE GATE TO THE GATE POST USING THE DOOR HINGE AND ASSOCIATED HARDWARE BEFORE INSERTING GATE INTO DUAL GROUND SLEEVE
2. GROUND SLEEVE CAPS ARE PROVIDED IF GATES ARE REMOVED FOR STORAGE

ITEM NO.	QTY.	DRAWING NUMBER	SAP PART NUMBER	DESCRIPTION
1	1	DHC-GATEPOST-HINGE	E-0018-S014	Door Hinge, Hammer/Discus Cage
2	2	I01-HHC5_I6-I8X5-SS	I01-HHC-0051	5/16-18 x 5.00" Hex Head Bolt, 304 SS
3	2	I07-HXN5_I6-I8-SS	I07-HXN-0023	5/16-18 S.S. Hex Nut
4	2	I10-SLW5_I6-SS	I10-SLW-0007	5/16 S.S. Lock Washer
5	4	I10-FLW5_I6-SS	I10-FLW-0007	5/16 S.S. Flat Washer
6	2	I14-GS-04-CAP	PURCHP-0318	Black Plastic Cap for 4.3" O.D. Ground Sleeve

ERP Part No. <b>Undefined</b>	TITLE: Hardware Kit, College Discus/Hammer, Standard Rotating Gate	DWG. NO. <b>TFDHC-GATE-HD</b>	REV <b>B</b>
		Drawn By LRM	Revision Date 11/12/2018



**INSTALL NOTES:**

1. AFTER MOUNTING THE LOCKING ROD TO THE GATE, MARK AND DRILL LOCATIONS FOR THE GATES IN A LOCKED POSITION
2. EACH GATE SHOULD BE ABLE TO BE LOCKED PARALLEL TO THE SECTOR AND AS PERPENDICULAR AS POSSIBLE TO THE SECTOR LINE AND NOT MORE THAN 1.5 METER INTO THE SECTOR AND AT LEAST 6 METER FROM THE CENTER OF THE CIRCLE PER COLLEGE RULES

ITEM NO.	QTY.	DRAWING NUMBER	SAP PART NUMBER	DESCRIPTION
1	2	I10-FLWI_2-SS	I10-FLW-0001	1/2 S.S. FLAT WASHER
2	2	I14-30I8T29	PURCHP-0131	1/2" X 4-1/2", GALV. STEEL CLOSED EYE BOLT W/ SHOULDER
3	1	TFDHC-GATE-ROD	E-0018-S011	GATE LOCKING ROD
4	2	I07-HXNI_2-I3STOPNUT-SS	I07-HXN-0004	1/2-13 NTE STOP NUT, SS

<b>ERP Part No.</b> <i>Undefined</i>	<b>TITLE:</b> Hardware Kit, College Discus/Hammer, Standard Rotating Gate	<b>DWG. NO.</b> TFDHC-GATE-HD		<b>REV</b> B
		DRAWN BY LRM	Revision Date 11/12/2018	SHEET 6 OF 7

## ROTATING GATE MASTER HARDWARE LIST

ITEM NO.	QTY.	DRAWING NUMBER	SAP PART NUMBER	DESCRIPTION
1	1	DHC-GATEPOST-HINGE	E-0018-S014	DOOR HINGE, HAMMER/DISCUS CAGE
2	19	I10-FLW3_8-SS	I10-FLW-0005	3/8 S.S. FLAT WASHER
3	8	I01-HHC3_8-16X5.5-SS	I01-HHC-0039	3/8-16 x 5.5" HEX HEAD BOLT, 304 SS
4	11	I10-SLW3_8-SS	I10-SLW-0006	3/8-16 S. S. LOCK WASHER
5	14	I07-HXN3_8-16-SS	I07-HXN-0020	3/8-16 STAINLESS STEEL HEX NUT
6	1	SG4910-CHANNEL	E-I004-S008	4 HOLE CONNECTING CHANNEL, 3.600" WIDE x 3.0" HIGH x 12.0" LONG
7	4	I00_HWH3_8_16XL_SER_CS_BP	I00-HWH-0002	3/8-16 x 1" HEX WASHER HEAD WITH SERRATED FLANGE, GRADE 5, FULLY THREADED
8	1	I14-R-8012-SU	PURCHP-0344	RIGD, HARD RUBBER CASTER W/SIDE BRAKE, 12" x 2.75"
9	10	I10-FLWI_2-SS	I10-FLW-0001	1/2 S.S. FLAT WASHER
10	4	I10-SLWI_2-SS	I10-SLW-0001	1/2 S.S. LOCK WASHER
11	4	I07-HXNI_2-13-SS	I07-HXN-0003	1/2-13 STAINLESS STEEL HEX NUT
12	4	I01-HHCL_2-13X2-SS	I01-HHC-0005	1/2-13 x 2" HEX HEAD BOLT, 304 SS
13	6	I07-HXNI_4-20ACORN-SS	I07-HXN-0006	1/4-20 S.S. LOW CROWN ACORN NUT
14	3	ROPE CLEAT	E-I000-0013	STEEL ROPE CLEAT
15	6	I01-HHCL_4-20X4.50-SS	I01-HHC-0025	1/4-20 x 4.5" HEX HEAD BOLT, 304 SS
16	6	I10-FLWI_4-SS	I10-FLW-0002	1/4" S.S. FLAT WASHER
17	6	I10-SLWI_4-SS	I10-SLW-0002	1/4 SS LOCK WASHER
18	3	I13-BLOCKWR300-02548	PURCHP-0026	1/4" SWIVEL BLOCK PULLEY
19	6	I13-S-I1160BL	CT26175B	26" REUSABLE NYLON CABLE TIE
20	23	I13-209860	PURCHP-0009	5/16" SPRING HOOK
21	3	TFDHC-GATE-BRACKET	E-0018-S008	GATE PULLEY BRACKET, HAMMER/DISCUS CAGE
22	3	I00-EYE3_8-16X2.5-OPEN-STL	E-I000-0024	3/8-16 x 2.5" LONG OPEN EYE BOLT
23	5	I01-HHC5_16-18X5-SS	I01-HHC-0051	5/16-18 x 5.00" HEX HEAD BOLT, 304 SS
24	7	I07-HXN5_16-18-SS	I07-HXN-0023	5/16-18 S.S. HEX NUT
25	7	I10-SLW5_16-SS	I10-SLW-0007	5/16 S.S. LOCK WASHER
26	9	I10-FLW5_16-SS	I10-FLW-0007	5/16 S.S. FLAT WASHER
27	3	DHC-GATE PULLEY TETHER	TETHER-45	TETHER FOR DHC GATE
28	1	I13-VGACBI87	PURCHP-0048	1/4" BLACK VINYL COATED WIRE ROPE
29	2	I13-211160	PURCHP-0010	1/4" THIMBLE, HEAVY DUTY GALV.
30	4	I13-I15-WRCDFOI87	PURCHP-0569	3/16" DROP FORGED WIRE ROPE CLIP
31	2	I00-EYE5_16-18X4.625-STL	I00-EYE-0009	5/16-18 x 4-11/16" CLOSED EYE BOLT WITH NUT, 2-1/2" THREAD, ZINC-PLATED STEEL
32	2	I14-3018T29	PURCHP-0131	1/2" X 4-1/2", GALV. STEEL CLOSED EYE BOLT W/ SHOULDER
33	1	TFDHC-GATE-ROD	E-0018-S011	GATE LOCKING ROD
34	2	I07-HXNI_2-13STOPNUT-SS	I07-HXN-0004	1/2-13 NTE STOP NUT, SS
35	2	DHC-WHEEL SHIM	E-0018-S041	HAMMER/DISCUS CAGE WHEEL SHIM, PAINTED BLACK

ERP Part No.  
**Undefined**

TITLE:  
Hardware Kit, College  
Discus/Hammer,  
Standard Rotating Gate

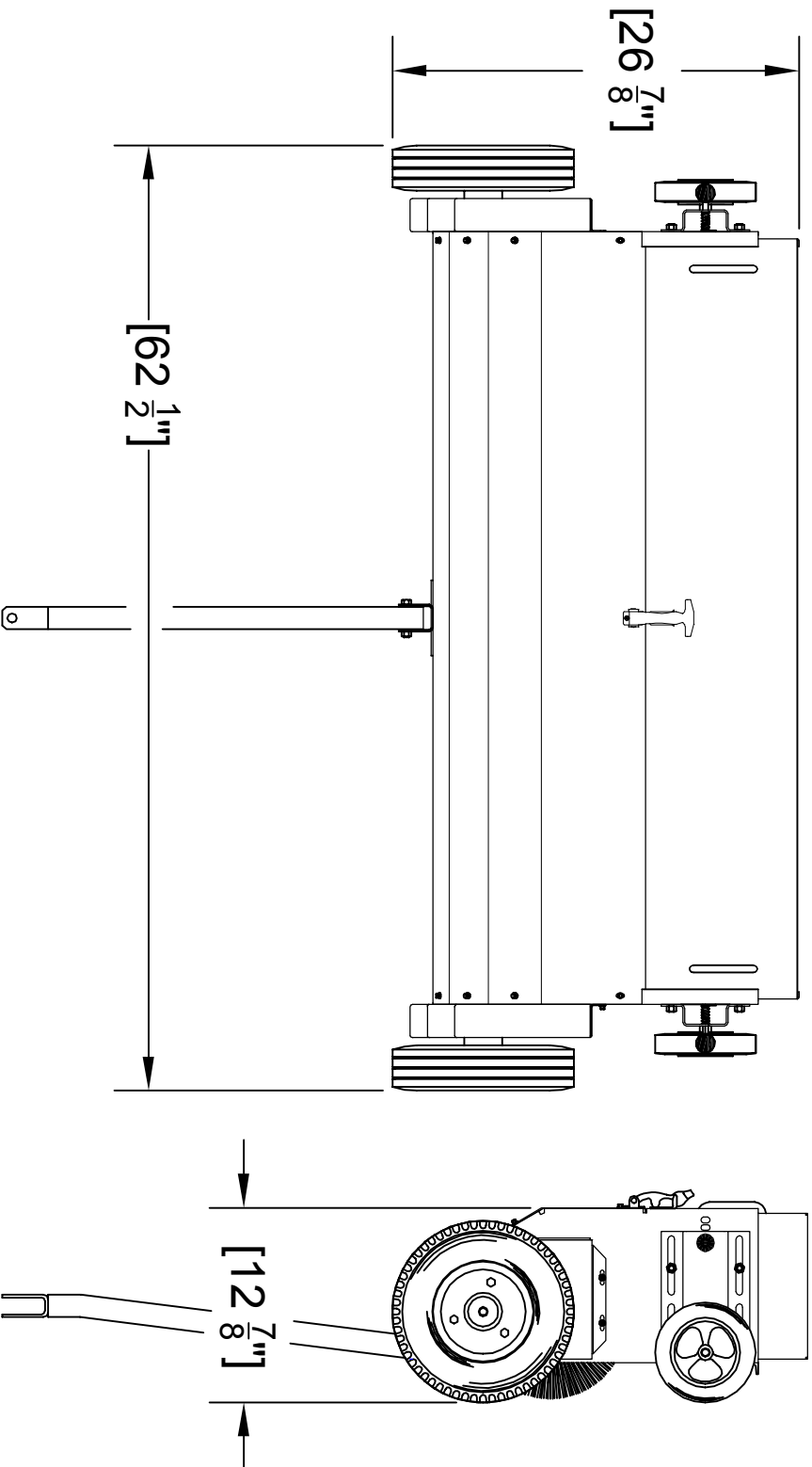
DWG. NO.  
TFDHC-GATE-HD

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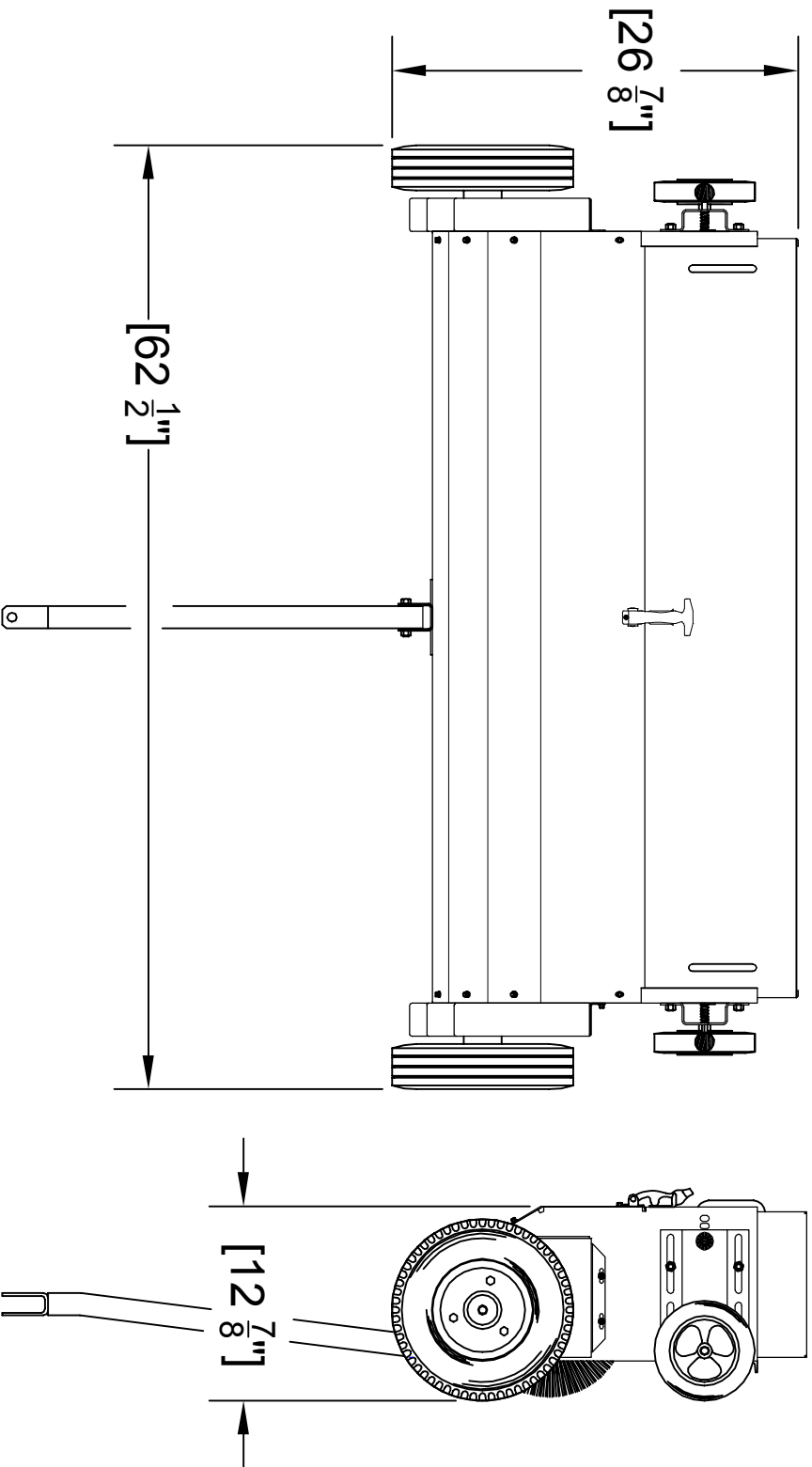
SHEET 7 OF 7



<b>TITLE:</b>		<b>ALLIED ENGINEERED PRODUCTS</b>	
<b>48" TURF SWEEPER ASSEMBLY</b>			
<b>SIZE</b>	<b>DWG. NO.</b>	<b>REV</b>	
<b>A</b>	<b>15527-01</b>	<b>1</b>	
<b>SCALE: 1:12.5 WEIGHT:</b>		<b>SHEET 1 OF 4</b>	

UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES TOLERANCES: FRACTIONAL ± ANGULAR: MACH ± BEND ± TWO PLACE DECIMAL ± THREE PLACE DECIMAL ±		DRAWN	NAME	DATE
INTERPRET GEOMETRIC TOLERANCING PER:			K. MARSH	3/12/2018
MATERIAL		CHECKED		
FINISH		ENG APP		
DO NOT SCALE DRAWING		MFG APPR.		
APPLICATION		COMMENTS:		
USED ON		Q.A.		
NEXT ASSY				

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THE INFORMATION CONTAINED IN THIS  
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ALLIED ENGINEERED PRODUCTS. ANY  
REPRODUCTION IN PART OR AS A WHOLE  
WITHOUT THE WRITTEN PERMISSION OF  
ALLIED ENGINEERED PRODUCTS IS  
PROHIBITED.



<b>TITLE:</b>		<b>ALLIED ENGINEERED PRODUCTS</b>	
<b>48" TURF SWEEPER ASSEMBLY</b>			
<b>SIZE</b>	<b>DWG. NO.</b>	<b>REV</b>	
<b>A</b>	<b>15527-01</b>	<b>1</b>	
<b>SCALE: 1:12.5 WEIGHT:</b>		<b>SHEET 1 OF 4</b>	

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INTERPRET GEOMETRIC TOLERANCING PER:			K. MARSH	3/12/2018
MATERIAL		CHECKED		
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ALLIED ENGINEERED PRODUCTS IS  
PROHIBITED.

## Specifications

### Dimensions:

### With Extensions

<b>Overall Width:</b>	<b>72.178"</b>	<b>186.000"</b>
<b>Length (Hitch to Rear):</b>	<b>154.457"</b>	<b>154.457"</b>
<b>Height (Jack Handle to Ground):</b>	<b>40.670"</b>	<b>40.670"</b>
<b>Weight:</b>	<b>500 lbs.</b>	<b>700 lbs.</b>
<b>Construction Type:</b>	<b>Steel</b>	
<b>Exterior Finish:</b>	<b>TGIC Polyester Powder Coat</b>	
<b>Brush Specifications:</b>	<b>Combo Poly</b>	
<b>Tines:</b>	<b>1/8" Spring Steel</b>	
<b>Tow Hitch Locking Pin Size (Not Provided):</b>	<b>3/4" x 2-1/2" Steel</b>	

## Specifications

### Dimensions:

<b>Overall Width:</b>	<b>89"</b>
<b>Length (Tow Hitch to Rear):</b>	<b>67"</b>
<b>Height:</b>	<b>16"</b>

**Weight:** **550 lbs.**

**Construction Type:** **Steel and Aluminum**

**Exterior Finish:** **TGIC Polyester Powder Coat**

**Rotating Brush Type:** **6'W Helical, Combo Poly**

**Tow Hitch Locking Pin Size (Not Provided):** **3/4" x 2-1/2" Steel**



## Specifications

### Dimensions:

<b>Overall Width:</b>	<b>95.125''</b>
<b>Length (Tow Hitch to Rear):</b>	<b>52.25''</b>
<b>Height:</b>	<b>8.625''</b>

<b>Weight:</b>	<b>150 lbs.</b>
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<b>Construction Type:</b>	<b>Steel and Aluminum</b>
---------------------------	---------------------------

<b>Exterior Finish:</b>	<b>TGIC Polyester Powder Coat</b>
-------------------------	-----------------------------------

<b>Tow Hitch Locking Pin Size (Not Provided):</b>	<b>3/4'' x 2-1/2'' Steel</b>
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# FieldTurf®

A Tarkett Sports Company

Synthetic Turf Maintenance Equipment

## **GROOMRIGHT**

OWNERS/OPERATING MANUAL



Manufactured Exclusively for FieldTurf® by Sportsfield Specialties, Inc.

Revision Date:

# CONGRATULATIONS

Thank you for purchasing a FieldTurf® Synthetic Turf Maintenance product. This piece of equipment has been designed for specific use on in-filled, synthetic turf systems. To ensure years of dependable service this product has been designed and manufactured to the highest quality standards available in the industry today.

This Synthetic Turf Maintenance Equipment is designed with safety in mind, however if the equipment is operated carelessly and/or not as instructed it can be dangerous. With this in mind, we recommend that each and every operator of this equipment familiarize themselves with the owners/operating manual prior to initial use. The upfront time spent on acquainting themselves with the safe operation, performance and minimal required maintenance, will ensure long life of this equipment.

Our goal is to ensure that you as the end user are satisfied with this synthetic turf maintenance equipment. While the design and illustrations used in this manual were current at the time of manual printing, we reserve the right to incorporate design improvements in future products without changing products previously manufactured. These improvements are important to ensure that customer feedback and industry changes are incorporated into future products.

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## SAFETY SYMBOLS



This is a standard safety alert symbol meaning **ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED!**



**CAUTION**

Indicates hazardous situation, injury may occur, used to alert against carelessness.



**WARNING**

Indicates potentially hazardous situation. Death or serious injury may occur if proper procedures are not followed.



**DANGER**

Indicates most hazardous situation. Death or serious injury will occur if proper procedures are not followed.

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## SAFETY INFORMATION



### WARNING

The grooming unit wheels on this machine are extremely pointed. It is strongly recommended that two people are available when unhitching the grooming unit from the tow vehicle. Never place feet or hands under this unit even when in a stationary position.



### DANGER

The **GROOMRIGHT** is not designed to carry human occupants. Doing so is at the owner's risk. The manufacturer of this unit is not responsible for injuries, permanent disabilities or fatalities that may be a result of this occurrence.



### CAUTION

The **GROOMRIGHT** is not designed to be towed at high speed across non synthetic turf surfaces. Excessive speed can damage the unit and create an unsafe condition.



### CAUTION

Wood crating contains nails and may splinter during removal from the sweeper system. Operator should wear gloves and eye protection to minimize potential for injury.

## SETUP

**Uncrating** – The **GROOMRIGHT** is packaged to ensure that damage does not occur during the shipping process. While the packaging is more than adequate to handle the normal bumps and shifts in loads during transit, in rare cases damage may occur.

Upon receipt of the **GROOMRIGHT** please inspect the packaging and unit to ensure that they are damage free. It is the customer's responsibility to document damage prior to the departure of the shipping company and file a claim if appropriate.

After inspecting the unit, carefully remove the packaging/crating.



### CAUTION

**Wood crating contains nails and may splinter during removal from the sweeper system. Operator should wear gloves and eye protection to minimize potential for injury.**

**Lifting and Re-Assembly** – Eye Bolts are provided in each frame corner of the **GROOMRIGHT** to assist in lifting the unit. Properly rated straps and/or chains can be attached to the eyes to lift the unit off the shipping truck or it can be removed by forklift if available. The **GROOMRIGHT** weighs approximately 500 lbs. so caution must be taken when lifting to ensure that the unit is properly balanced.



### WARNING

**This unit weighs 500 lbs., lift with caution. Verify that the lifting equipment is rated properly and secured to the unit prior to the lift. The manufacturer of this unit is not responsible for injuries, permanent disabilities or fatalities that may result from the use of improper lifting equipment.**

Once on the ground the tow hitch will need to be removed from its packaging and assembled to the front of the unit. To do this remove the bubble wrap and position the hitch as shown in **Picture 1**. The hardware to mount the hitch is already in place at the attachment points, please remove and then reinstall once the hitch is in place, ensuring that all hardware and spacers are properly located, **Picture 2** (also see assembly drawings at back of manual). Once the hitch is secured assemble the lifting jack which controls the grooming unit height, **Picture 3**. To do this remove the safety pins at the attachment points, top and bottom and position lifting jack. Install safety pin at bottom, **Picture 4** flipping locking clasp in place followed by the installation of the top pin, again flipping locking clasp in place.



## WARNING

The **GROOMRIGHT** weighs 500 lbs., it is critical that all locking pins are in place and locked when being moved. Never place feet or hands under the unit when in the lifted position.

**Hitching to Tow Vehicle** – The **GROOMRIGHT** is designed to be towed by any small tow vehicle ranging from a small garden tractor to a Gator® or larger vehicle. To transport the unit simply rotate the hitch forward and attach to the tow vehicle with the  $\frac{3}{4}$ " x 2  $\frac{1}{2}$ " pin (not provided). Prior to towing the vehicle verify that all components are in the full-up position providing approximately 2" to 3" of ground clearance for the **GROOMRIGHT** grooming components. If any appear to be lower please adjust accordingly with the 2 positioning jacks, **Picture 1**.



Picture 1



Picture 2



Picture 3



Picture 4

Once the components are verified to be in the full-up position, the unit is ready for towing.



## WARNING

The **GROOMRIGHT** weighs 500 lbs. It is critical that all locking pins are in place and locked when being moved. Never place feet or hands under the unit when in the lifted position.



## CAUTION

The **GROOMRIGHT** is not designed to be towed at high speed across non synthetic turf surfaces. Excessive speed can damage the unit and create an unsafe condition.



## DANGER

The **GROOMRIGHT** is not designed to carry human occupants. Doing so is at the owner's risk. The manufacturer is not responsible for injuries, permanent disabilities or fatalities that may be a result of this occurrence.



## OPERATION

**GROOMRIGHT COMPONENTS** – The **GROOMRIGHT** is made up of two specific components each individually adjustable allowing for individual or multiple component usage.

**Grooming Component** – Star wheels designed to loosen the infill components without damage to the synthetic fibers, located at center of unit, **Picture 5**.

**Brush & Tine Component** – The brush and tines, are designed to remove any rowing effect caused by components while at the same time lifting the exposed fibers preventing matting, located at both front and rear of the unit, **Picture 6**.



**Picture 5**



**Picture 6**

Individual component operation is detailed further in the following pages.

## GROOMING COMPONENT OPERATION

### SAFETY INFORMATION



Picture 7



### WARNING

**The grooming wheels on this unit are extremely pointed.**

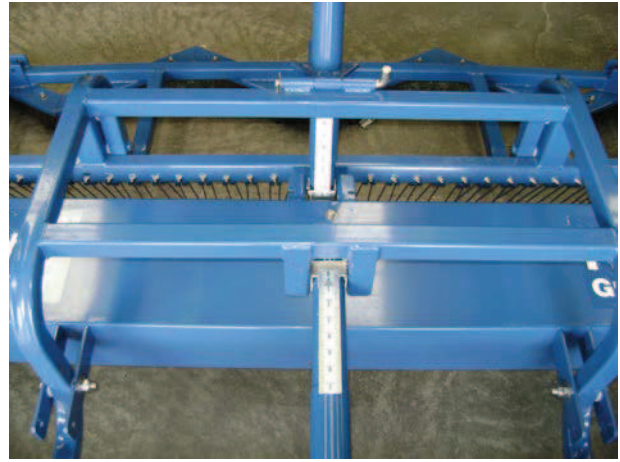
**Lowering Grooming Stars and Spring Tines** - Once the **GROOMRIGHT** is towed to the location of the synthetic infill turf field the unit must be carefully lowered to the desired position. Lowering of the unit is accomplished with the jack located on the **GROOMRIGHT** Grooming Component, **Picture 8**. Simply rotate the knob to lower the Grooming Component star wheels, monitoring the Indicator Strip located on the jack, **Picture 9**. All markings only are used for reference only as depth of infill varies greatly from field to field.

Prior to adjusting the height of the Grooming Component, please measure the infill depth at multiple locations on the field. Utilize this information to determine the reference setting which makes most sense for you FieldTurf synthetic infill turf field. It is recommended that the maximum depth of the star wheel penetration be three-fourths of an inch (3/4"), easily determine by measuring and marking the outside star wheel.

The height of the spring tines can also be set so that the tines work in conjunction with the Grooming Component star wheels, **Picture 12**. It is recommended that the spring tines penetrate the infill no more than 1/2", maximum.



Picture 8



Picture 9



## CAUTION

It is critical that you measure the depth of your synthetic turf infill, prior to using this component of the **GROOMRIGHT** system. Infill materials can and do vary in height requiring caution when using the Grooming Component. The manufacturer of this unit is not responsible for damage to synthetic infill turf caused by avoidance of this requirement. Remember the increments on the Indicator Strip do not indicate depth of penetration but rather are provided for your convenience once you have experience with your field.



## WARNING

The star wheels on the Grooming Component are spiked to ensure that they work into the infill, loosening it without damaging fibers. Due to this it is critical that no one is near the unit during the grooming operation. Serious injury can occur if feet or hands get caught underneath.

**Preparing the GROOMRIGHT Grooming Component for Transport** – Once grooming is complete the Grooming Component star wheels must be raised off the synthetic infill turf field. To do this rotate the handle on the positioning jack until the Indicator Strip is at its highest point. If the spring tines were adjusted these will need to be raised as well.

**Maintenance** – The Grooming Component requires minimum maintenance, however periodic inspection is recommended in order to ensure parts have not come loose. The unit is lubricated during production although occasional lubrication may be necessary for moving parts only.

**Frequency of Use** – The Grooming Component star wheels should be used every 6-8 weeks.

## **BRUSH COMPONENT OPERATION**

**Adjusting Brush Height** –Utilize the manual positioning jack to lower and raise the brush and tine assemblies, **Picture 10**. Prior to adjustment the brushes should be at a height of 2” to 3” off the ground depending on the infill depth and height of the synthetic fibers, see **Picture 11**. In **Picture 11** the unit has been lowered to the point where the brushes are just touching the surface to be groomed, the adjustment required will vary from field to field.



**Picture 10**



**Picture 11**

Full brush contact provides optimum grooming, however also increases the brush wear, accelerating the potential replacement cycle. Since each field, grounds staff, sport and coach are different the adjusted height of the Brush Component will be dictated by the perceived appearance once the grooming is complete.

**Adjusting Tine Height** – The spring tines are designed to be adjusted in conjunction with either the Brush or Grooming Component. The tines have limited adjustment to ensure that they do not exceed a depth of ½” into the infill. To adjust simply loosen the spring loaded adjuster by pulling out and rotating in the appropriate direction, **Picture 12**. Retighten the hardware once located in the desired position. Use the Indicator Strip as a guideline, **Picture 13**, once an acceptable depth has been achieved.



**Picture 12**



**Picture 13**

**IMPORTANT NOTE:** Since these tines can be more aggressive than the brushes it is important that they be carefully adjusted during first use and checked prior to each use thereafter!!!

**Preparing the Brush Component for Transport** – Once grooming is complete the Brush Component must be prepared for transport away from the synthetic infill turf field. To do this please rotate the jacking device in the opposite direction until the brush/tine assembly is at the maximum height.

**Checking the Brush Component for Wear** – Periodically check brush length and tines to determine if replacement is warranted.

**Maintenance** - The Brush Component requires minimum maintenance, however periodic inspection is recommended in order to ensure parts have not come loose. The unit is lubricated during production although occasional lubrication may be necessary for moving parts only; at pivots and the tine assembly pivots.

Periodic inspection of the alignment of the raking tines is also recommended as the tines can become severely bent. Re-bending to the correct position is possible, however over time the tines can break requiring replacement.

**Frequency of Use** – Pass the Brush Component with only the tines over the entire field surface a minimum of once every 4 - 6 weeks. This procedure will groom the fibers and infill to prevent the fibers from matting down an excessive amount and will keep the infill loosened up to maximize drainage characteristics. The object is to put only slight pressure on the tines in order to have them go into the surface just enough to lift the fibers up from a more flattened position and to turn the very top of the infill. It is recommended that they do not exceed ½” of penetration into the infill.

Use the Brush of the Brush Component every 6 – 8 weeks.

## **GROOMRIGHT CONVERSION TO BRUSH ONLY SYSTEM**

Converting the unit from a multi-purpose unit to a brush only system requires the availability of a two maintenance personnel. While every effort has been made to simplify this process it still requires lifting the main unit over the Grooming Unit (center portion of the **GROOMRIGHT** product).

To remove the Grooming Unit it is important to first ensure that the unit has been lowered to a point where the star wheels are touching the ground. To do this simply rotate the handle on the Grooming Unit jack in the appropriate direction. Once grounded remove both the top and bottom safety pins located on the jack, **Picture 14**. It is easiest to remove the top pin first, followed by the bottom pin; reinstallation should be done in a reverse sequence, **Picture 15**. Simply flip the safety clasp away from the pin and pull the pin in two locations, allowing the removal of the entire jack system.

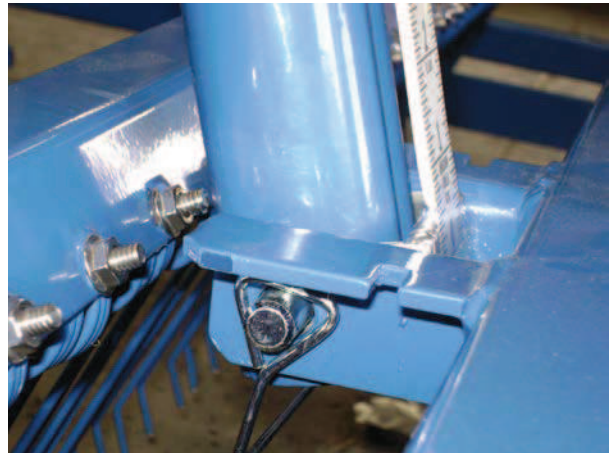


### **WARNING**

**The grooming wheels on this unit are extremely pointed.**



**Picture 14**



**Picture 15**

Once the jack has been removed it is necessary to lift the main unit over the Grooming Unit. This requires a minimum of two people each located at the right rear corners of the main frame, **Picture 16**. Securely grab the frame with two hands and slide the main unit forward until it clears the Grooming Unit, **Picture 17**.



### **CAUTION**

**Always observe property lifting techniques when lifting heavy objects. A two person lift requires coordination to ensure evenness of load.**



**Picture 16**



**Picture 17**

Once cleared reinsert the lower safety pin in the Grooming Unit to ensure that it does not get lost during unit storage. The top pin should be reinserted in the appropriate location on the main unit. Note that Grooming Unit is unstable when uninstalled from the main unit, it is important that this be stored in a manner which keeps it from tipping over. This will minimize paint damage as well as an unintended exposure to the pointed star wheels.

The main unit is now ready for the installation of the optional wing/brush extensions, fully assembled with wings down in **Picture 18**, up and locked in **Picture 19** (Grooming Unit is installed for clarity).



**Picture 18**



**Picture 19**

To install the wing/brush extensions carefully remove the bubble wrap if necessary from both wings, locate the included hardware and position the wing to the main unit ensuring that the tines on the extension are to the rear of the unit (simply match the wing tines to the Grooming Unit tines).

Once complete slide the extension towards the main unit, lining up the two lower bolt locations lower and upper right hand corner of **Picture 20**. Install the provided hardware noting nylon washer location. Once both lower bolts are tightened install the hardware for the extension arm located at the top portion of the main unit, right-center on **Picture 20**. Once complete the extension can be rotated to the Transport Position by simply removing the safety locking pin located on the center support, lifting the extension arm and reinstalling the safety locking pin as shown in **Picture 21**. Follow the same procedure on the other side of the main unit.



**Picture 20**



**Picture 21**



#### **CAUTION**

**While the Extension Arms are lightweight they can be awkward to raise and lower. Please grab the outside of the extension arm firmly to raise or lower the extension.**



#### **WARNING**

**The Extension Arm must be pinned in the vertical position with the lock pin fully engaged and the safety clip fully fastened around the pin, Picture 3. Failure to do so could result in the Extension Arm falling during transport potentially injuring bystanders and/or the tow vehicle operator.**

**Adjusting Brush Height** – Once both extension arms have been lowered utilize the manual crank assembly, located on the main unit, to adjust the height of the brush assemblies, **Picture 10**.

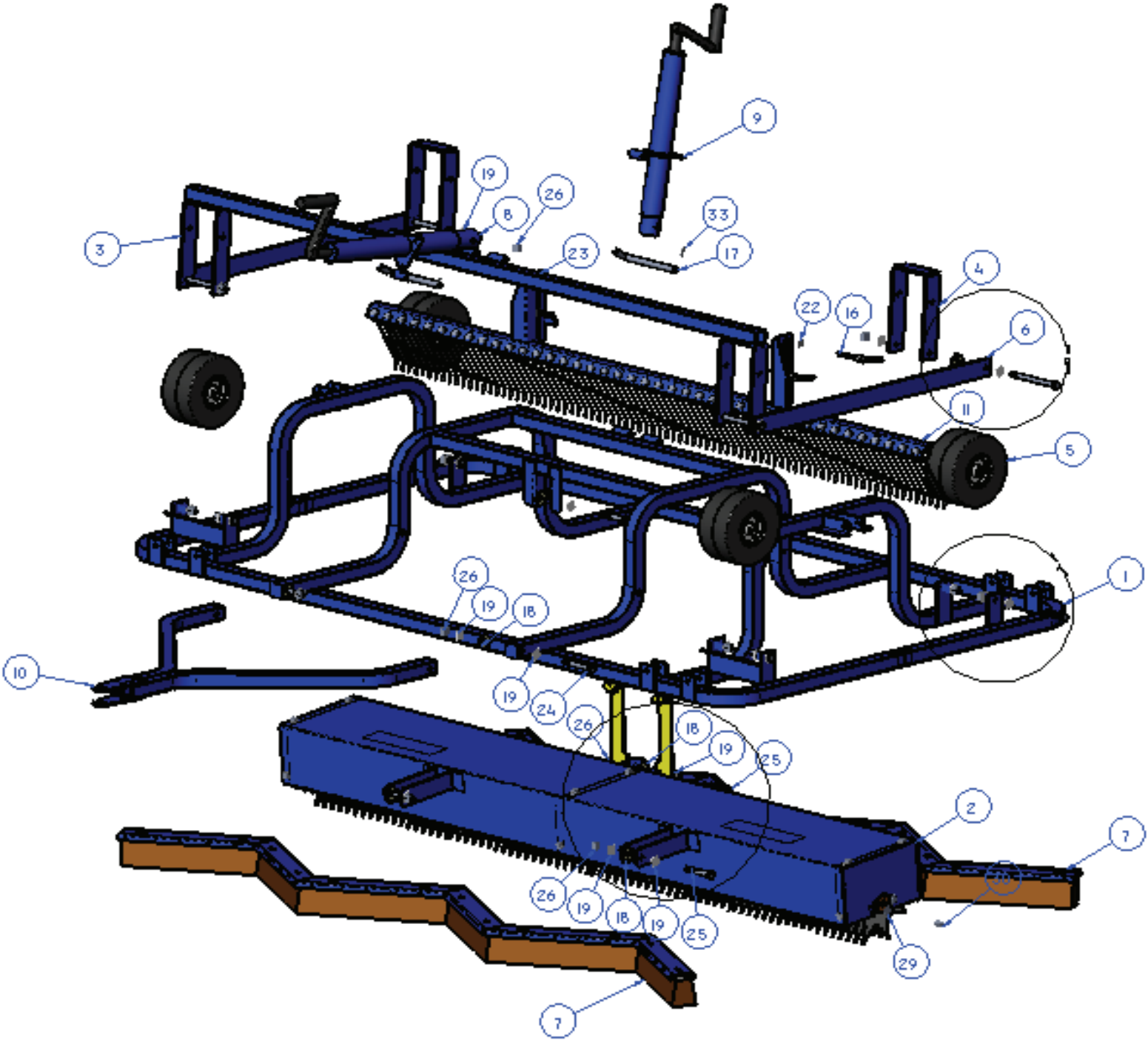
**Adjusting Tine Height** – The spring tines on the brush extensions are designed to be adjusted independently from the brushes using the same hardware as those on the main unit, **Picture 12**.



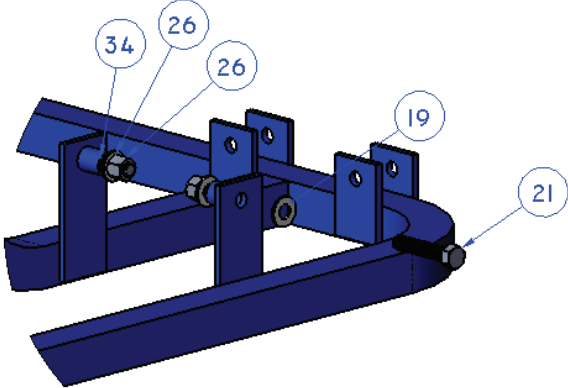
## Specifications

<b>Dimensions:</b>	<b><u>With Extensions</u></b>	
<b>Overall Width:</b>	<b>72.178"</b>	<b>186.000"</b>
<b>Length (Hitch to Rear):</b>	<b>154.457"</b>	<b>154.457"</b>
<b>Height (Jack Handle to Ground):</b>	<b>40.670"</b>	<b>40.670"</b>
<b>Weight:</b>	<b>500 lbs.</b>	<b>700 lbs.</b>
<b>Construction Type:</b>	<b>Steel</b>	
<b>Exterior Finish:</b>	<b>TGIC Polyester Powder Coat</b>	
<b>Brush Specifications:</b>	<b>Combo Poly</b>	
<b>Tines:</b>	<b>1/8" Spring Steel</b>	
<b>Tow Hitch Locking Pin Size (Not Provided):</b>	<b>3/4" x 2-1/2" Steel</b>	

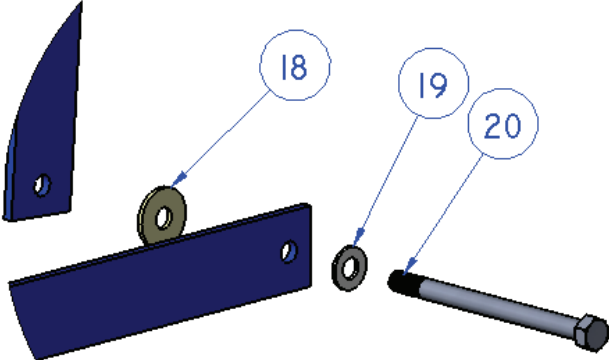
# GENERAL ASSEMBLY (Pictorial)



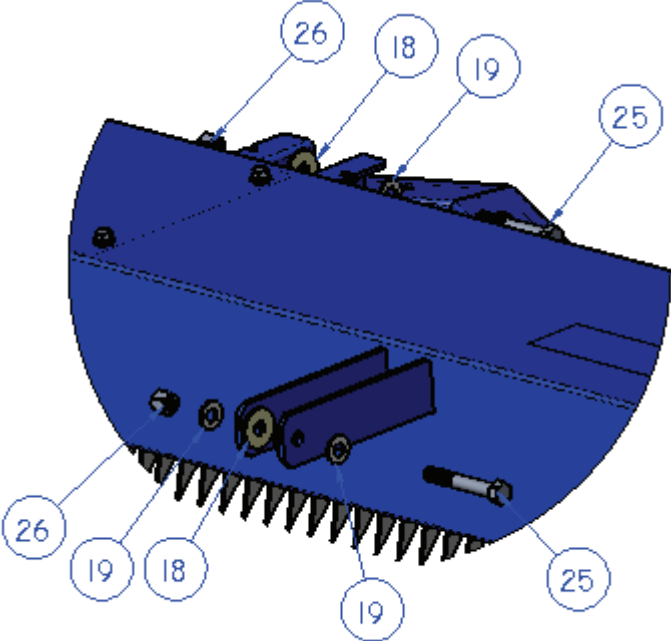
# GENERAL ASSEMBLY (Details)



Detail A

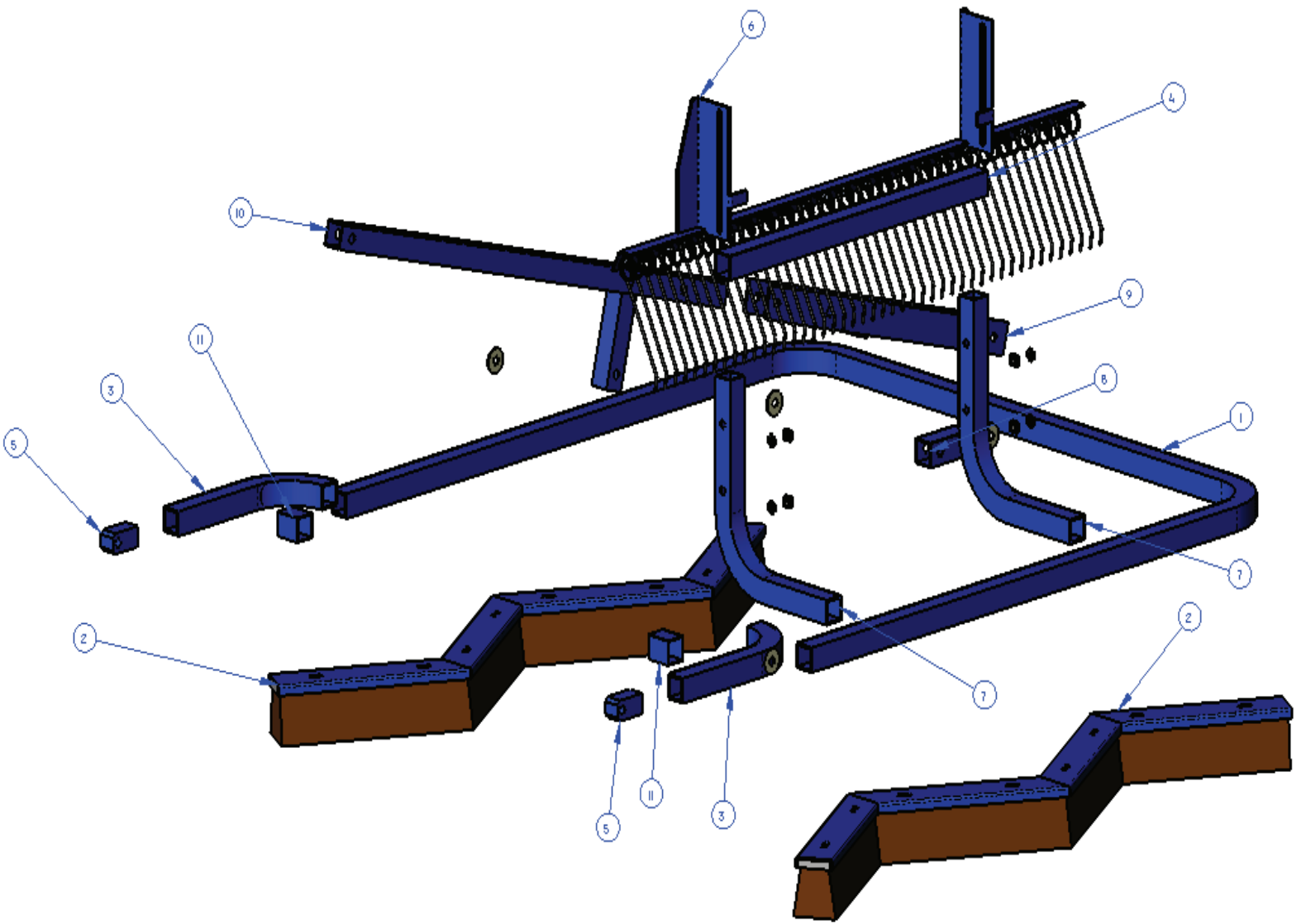


Detail B



Detail C

# EXTENSION WING DETAILS



## GENERAL ASSEMBLY (Bill of Material)

ITEM NO.	QTY.	PART NO.	WEIGHT	MATERIAL
1	1	FTTP-FRAME	142.81	STEEL
2	1	FTTP-RT	178.039	STEEL
3	1	FTTP-FRAME-SWINGARM	16.997	STEEL
4	2	FTTP-FRAME-SWINGARM	3.292	STEEL
5	8	114-2319T3	2	RUBBER TREAD. CAST IRON HUB
6	2	BRUSH015-16	4.9	1/4 x 2 STEEL BAR
7	2	FTTP-BRUSH	36.106	P&O
8	1	FTTP-FRONT-JACK	15	STEEL
9	1	FTTP-REAR-JACK	15	STEEL
10	1	FTTP-TONGUE	14.752	STEEL
11	1	FTTP-TINE	15.972	STEEL
12	3	52-FTDECAL	0	DECAL
13	1	TANK	0.29	
14	1	TANK-01		
15	1	FTTP-FRAME-17	3.034	7 GA P&O
16	4	64835K72		
17	2	FTTP-FRAME-23	0.781	5/8" S.S. ROUND STOCK
18	14	114-NYL L2XL5Z125FLW	0.007	NYLON
19	36	110-FLWL2-SS	0.018	STAINLESS STEEL
20	4	101-HHCL2-13X6.5-SS	0.4005	STAINLESS STEEL
21	8	101-HHCL2-13X2.5-SS	0.1682	STAINLESS STEEL
22	16	110-FLW3_8-SS	0.006	STAINLESS STEEL
23	4	114-90295A170	0.002	NYLON
24	2	101-HHCL2-13X4-SS	0.2622	STAINLESS STEEL
25	4	101-HHCL2-13X3.5-SS	0.2321	STAINLESS STEEL
26	18	107-HXNL2-13NYLOCK-SS	0.057	STAINLESS STEEL
27	12	110-SLW3_8-SS	0.006	STAINLESS STEEL
28	12	101-HHC3_8-16X.75-SS	0.0404	STAINLESS STEEL
29	12	110-FLW5_16-SS	0.011	STAINLESS STEEL
30	6	101-HHC5_16-18X.750-SS	0.0278	STAINLESS STEEL
31	6	110-SLW5_16-SS	0.004	STAINLESS STEEL
32	6	107-HXN5_16-18-SS	0.012	STAINLESS STEEL
33	2	114-92375A341	0.002	STAINLESS STEEL
34	8	FTTP-FRAME-24	0.071	1/2" SCH 40 STEEL PIPE

## BRUSH EXTENSION (Bill of Material)

ITEM NO.	QTY.	PART NO.	WEIGHT	MATERIAL
1	1	FTTP-Wing-01	26.651	1-1/2" X 1/8" SQ Tube
2	2	FTTP-WING-BRUSH	23.74	P&O
3	2	FTTP-Wing-03	2.767	1-1/2" X 1/8" SQ Tube
4	1	FTTP-Wing-02	3.135	1-1/2" X 1/8" Tube
5	2	FTTP-Wing-04	1.001	Steel
6	1	FTTP-TINE-WING-LEFT	10.778	Steel
7	2	FTTP-Wing-06	3.999	1-1/2" X 1/8" SQ Tube
8	1	FTTP-Wing-09	0.47	1-1/2" X 1/8" Tube
9	1	FTTP-LiftingArm	5.054	Steel
10	1	FTTP-LiftingLink	5.509	Steel
11	2	FTTP-Wing-12	0.24	1-1/2" X 1/8" Tube
12	4	114-2008-01		STEEL
13	5	114- NYL1_2X1_5Z125FLW	0.007	Nylon
14	4	114-90295A170	0.002	Nylon

## REPLACEMENT PARTS

Your new FieldTurf® Synthetic Turf Maintenance Equipment was designed and manufactured with durability in mind, however certain “wear” components such as brushes, tines, tires, hardware, etc. will need to be replaced at some point during the equipment’s lifetime. Additionally, operator based accidents with this equipment can and will happen resulting in an almost immediate need for replacement parts.

Sportsfield Specialties, Inc. is committed to maintaining available inventory to ensure that these damaged part emergencies and “wear” based replacements can be responded to immediately.

Please contact Sportsfield Specialties, Inc., on our support hotline, 888-975-3343 and request Synthetic Turf Maintenance Products Parts Assistance. Utilize the information provided on the General Assembly pages to identify both part number and description.

### **SPORTSFIELD SPECIALTIES, INC. 888-975-3343**

**Part Number:** \_\_\_\_\_

**Part Description:** \_\_\_\_\_

To ensure quick turnaround Sportsfield Specialties, Inc. accepts credit card transactions, typically resulting in same or next day shipment.

## LIMITED WARRANTY

Sportsfield Specialties, Inc. warrants this product to be free of defects in materials and workmanship for a period of twelve months from the original delivery date. This warranty does not cover components or parts caused to be deficient due to normal wear, misuse, accidents, or lack of proper maintenance.

Any parts thought to be defective must be returned to Sportsfield Specialties along with the unit for warranty consideration. The owner/operator will be responsible for the expense of returning the above items to Sportsfield Specialties for warranty service as well as the expense for returning same after repair or replacement. A Return Authorization Number must be obtained and clearly marked on all packages of parts requiring return to the factory.

The obligation of Sportsfield Specialties, Inc under this limited warranty, to the extent allowed by law, is in lieu of all warranties, implied or expressed, INCLUDING WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE and any liability of incidental and consequential damages with respect to the sale or use of the items warranted. Such incidental and consequential damages shall include but not be limited to: transportation charges other than normal freight charges; cost of installation other than cost approved by Sportsfield Specialties, Inc.; duty; taxes; charges from normal service or adjustment; loss of synthetic carpet or any other income, ; rental of substitute equipment, expenses due to loss, damage, detention or delay in delivery of equipment or parts resulting from the acts beyond the control of Sportsfield Specialties, Inc.

### LIMITED WARRANTY SHALL NOT APPLY:

1. If the Equipment has been subjected to misapplication, abuse, misuse, negligence, fire or other accident.
2. If parts not made by Sportsfield Specialties have been used in connection with the unit, if, in the sole judgment of Sportsfield Specialties, Inc. such use affects its performance, stability or reliability.
3. If the unit has been altered or repaired in a manner which, in the sole judgment of Sportsfield Specialties, Inc., affects its performance, stability, or reliability.
4. To normal maintenance service and normal replacement items such as brushes, tines, etc. or to normal deterioration of exterior finish due to use or exposure.
5. To expendable or wear items that in the company's sole judgment is a wear item.

This warranty gives you specific legal rights, and you may also have other legal rights which vary from state to state.



**WARRANTY CARD TO BE COPIED AND MAILED OR FAXED TO  
(Please retain copy for your records):**



Sportsfield Specialties, Inc.  
Attn: Warranty Department  
P.O. Box 231  
41155 State Highway 10  
Delhi, NY 13753  
(607) 746-8481 - Fax  
(888) 975-3343 - Phone

Customer Name: \_\_\_\_\_

Customer Address: \_\_\_\_\_

Customer Contact Information:

Phone: \_\_\_\_\_

Fax: \_\_\_\_\_

E-mail: \_\_\_\_\_

Date of Arrival at Customer Location: \_\_\_\_\_

Model Number (See Serial Plate – Front of Unit): \_\_\_\_\_

Serial Number (See Serial Plate – Front of Unit): \_\_\_\_\_

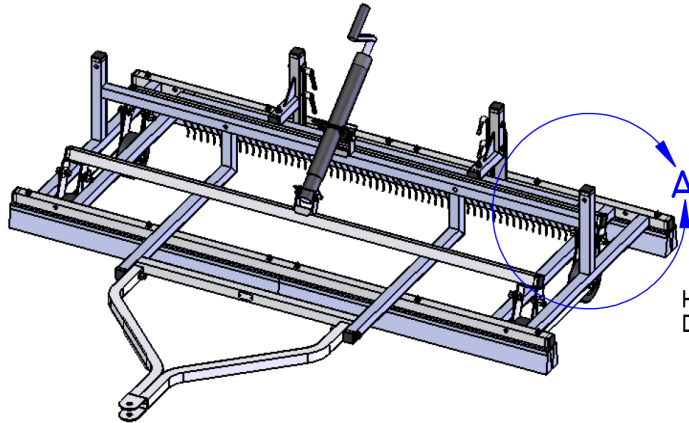
**THE ABOVE WARRANTY CARD MUST BE MAILED or FAXED  
WITHIN TEN (10) DAYS OF RECEIPT AT OWNERS FACILITY.**



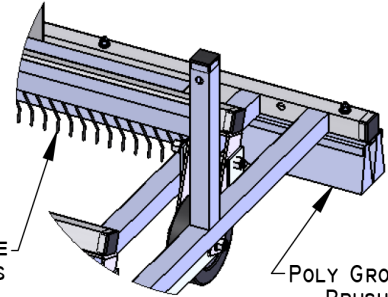
# FieldTurf

A Tarkett Sports Company

THE ULTIMATE  
SURFACE EXPERIENCE

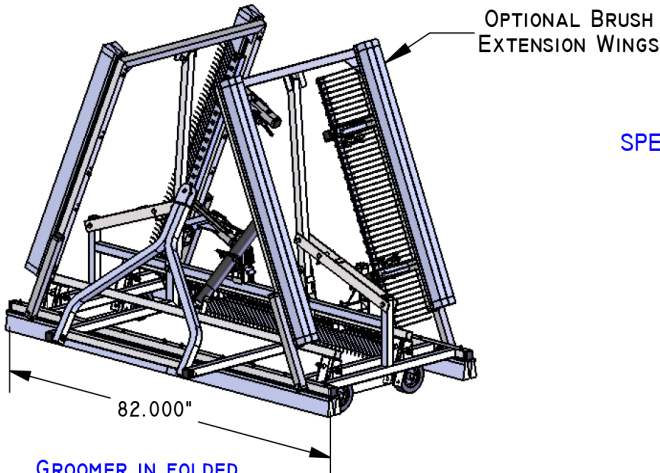


HEIGHT ADJUSTABLE  
DETHATCHING TINES



POLY GROOMING  
BRUSHES

DETAIL A



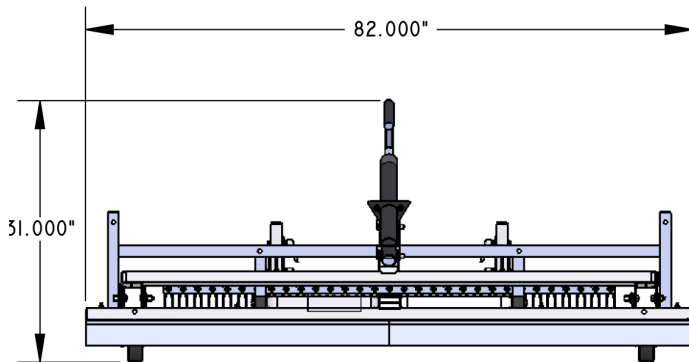
OPTIONAL BRUSH  
EXTENSION WINGS

82.000"

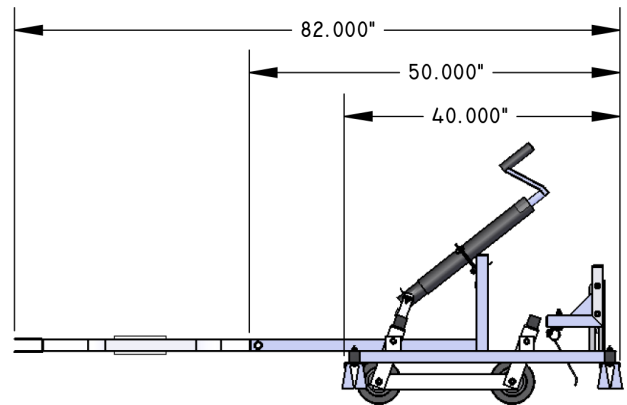
GROOMER IN FOLDED  
POSITION

#### SPECIFICATIONS:

- \*POWDER COATED STEEL CONSTRUCTION
- \*TOWABLE WITH SMALL TRACTOR OR UTILITY VEHICLE
- \*REVERSIBLE & REPLACEABLE GROOMING BRUSHES
- \*REPLACEABLE DETHATCHING TINES
- \*SIMPLIFIED HEIGHT ADJUSTMENT
- \*EASILY UPGRADABLE TO 15' BRUSH
- \*FULLY PORTABLE FOR OFF-FIELD STORAGE
- \*APPROX. UNIT WEIGHT: 240 LBS



51.000"



82.000"

50.000"

40.000"

PROPRIETARY AND CONFIDENTIAL  
THE INFORMATION CONTAINED IN THIS  
DRAWING IS THE SOLE PROPERTY OF  
SPORTSFIELD SPECIALTIES INC. ANY  
REPRODUCTION IN PART OR AS A  
WHOLE WITHOUT THE WRITTEN PER-  
MISSION OF SPORTSFIELD SPECIALTIES  
INC. IS PROHIBITED.

## FT7DB - 7' Drag Brush

NOT TO SCALE

SPORTSFIELD SPECIALTIES INC.

# OPERATING MANUAL

## GROOMRIGHT™ Specifications

### Dimensions :

### With Extensions

Overall Width	72.178"	186.000"
Length (Hitch to Rear)	154.457"	154.457"
Height (Jack Handle to Ground)	40.670"	40.670"
Weight	500 lbs.	700 lbs.
Construction Type	Steel	
Coating Type	Powder	
Brush Specifications	Combo Poly	
Tines	1/8" Spring Steel	
Hitch Pin Size (not provided)	3/4" Steel	





**Penn State's**

**Center for  
Sports Surface Research**

**FieldTurf Core Lisport Wear Report**

**200,000 Lisport Cycles**

December 2016

Fiber wear testing was conducted on FieldTurf Core synthetic turf at Penn State's Center for Sports Surface Research, University Park, PA. The turf sample was supplied by FieldTurf and was exposed to a total of 200,000 cycles on a Lisport-type wear tester.

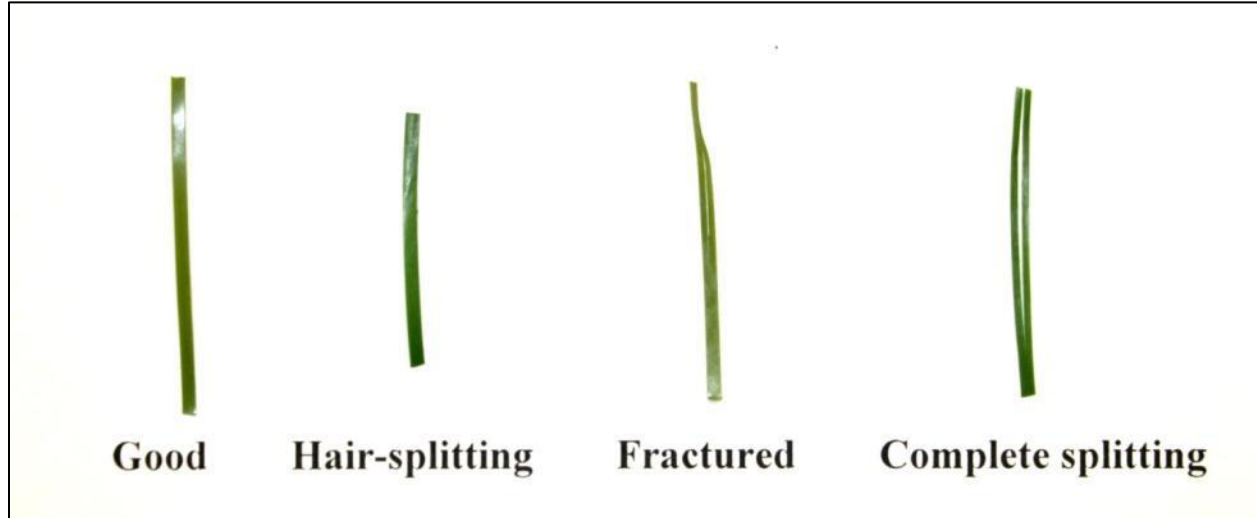
### Testing Methods

The fiber wear test was conducted using a Lisport-style wear tester (pictured below). The Lisport wear tester consists of two cylinders outfitted with studs (cleats) that simulate field use. Different sprocket sizes on each cylinder allow for a sliding movement of one of the cylinders. The model used in this testing also included a sample tray that produced movement transverse to the linear movement of the cylinders, allowing for even wear across the entire sample. Each cycle is roughly equivalent to one hour of field use by users wearing cleated shoes. The method used is considered a modified version of both the European Standard for Surfaces for Outdoor Sports Areas - Exposure of Synthetic Turf to Simulated Wear (EN 15306) and the FIFA Quality Concept for Football Turf – Handbook of Test Methods (May, 2009 edition) as our machine includes plastic cleats with metal tips instead of cleats made of 100% plastic. Ten fibers were randomly removed and photographed after the following number of cycles: 10,000, 20,000, 30,000, 50,000, 75,000, 100,000, 125,000, 150,000, 175,000, and 200,000 cycles.



## Fiber Evaluation

Each of the 10 randomly selected fibers were classified into one of four categories based on appearance (below).



Fiber classifications for each cycle interval from 10 random fibers removed from sample.

# of Cycles	Good	Hair-Splitting*	Fractured	Complete Splitting
0 Cycles	10	0	0	0
10,000 Cycles	10	0	0	0
20,000 Cycles	10	0	0	0
30,000 Cycles	10	0	0	0
50,000 Cycles	9	1	0	0
75,000 Cycles	9	1	0	0
100,000 Cycles	8	2	0	0
125,000 Cycles	8	2	0	0
150,000 Cycles	9	1	0	0
175,000 Cycles	10	0	0	0
200,000 Cycles	9	1	0	0

\*Fine hairsplitting on edges of fibers only



FieldTurf Core  
0 Cycles



FieldTurf Core  
10,000 Cycles





FieldTurf Core  
20,000 Cycles



FieldTurf Core  
30,000 Cycles



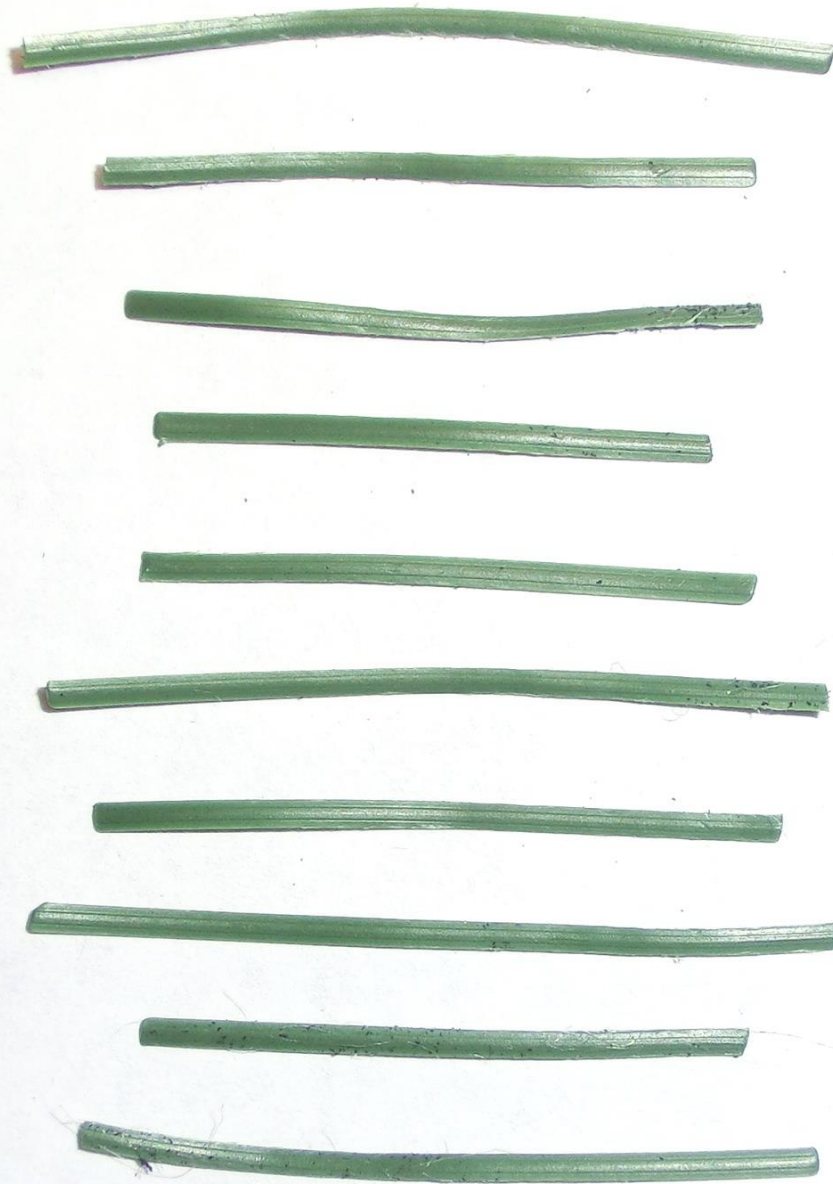
FieldTurf Core  
50,000 Cycles



FieldTurf Core  
75,000 Cycles



FieldTurf Core  
100,000 Cycles



FieldTurf Core  
125,000 Cycles

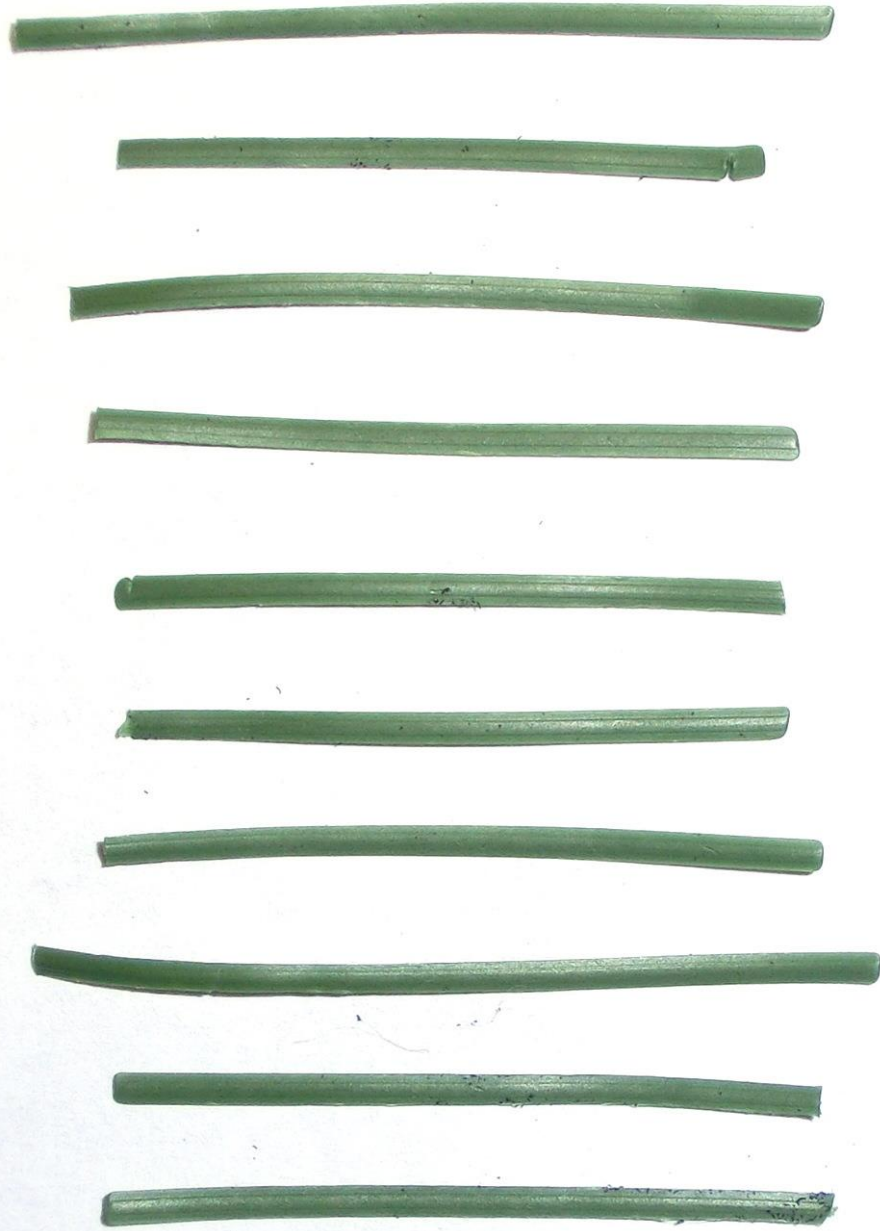


FieldTurf Core  
150,000 Cycles



FieldTurf Core  
175,000 Cycles





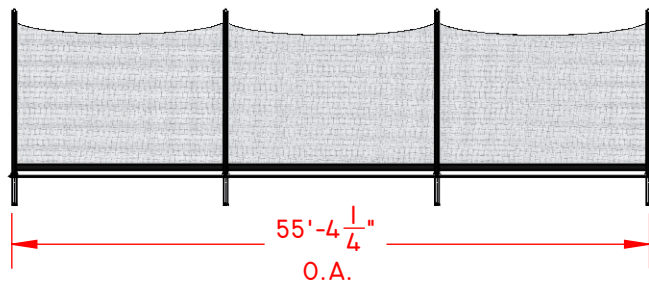
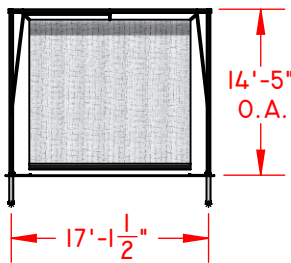
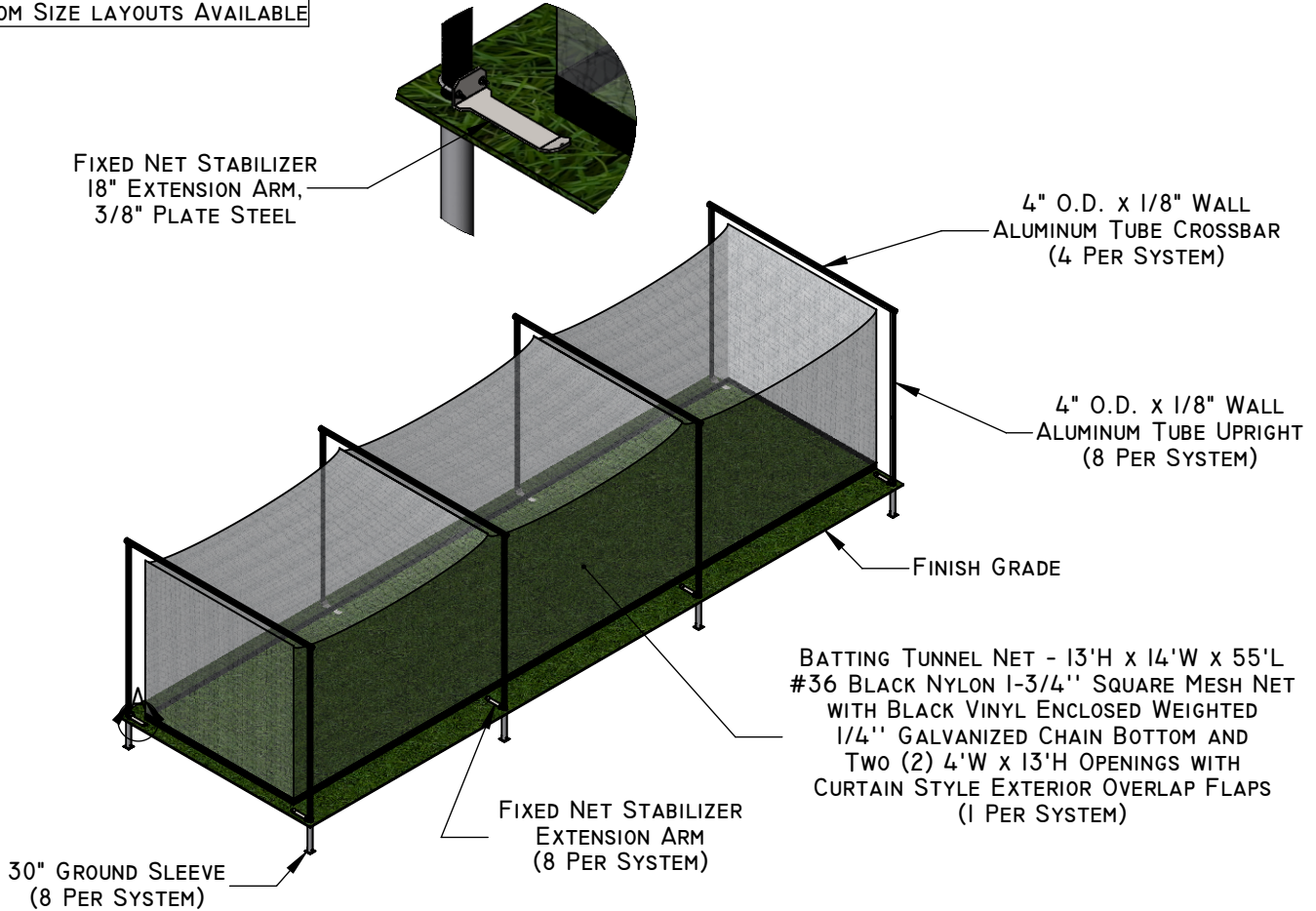
FieldTurf Core  
200,000 Cycles



**FieldTurf Core after 200,000 cycles**

BASE PLATE MOUNTED AND/OR  
CUSTOM SIZE LAYOUTS AVAILABLE

STANDARD BLACK POWDER COATED FINISH



FOUNDATION REQUIREMENTS  
VARY BASED ON LOCAL CODES  
AND SOIL CONDITIONS

SPORTSFIELD SPECIALTIES, INC. STRONGLY RECOMMENDS THE REMOVAL OF ALL NETS PRIOR TO EXPOSURE TO WINTER WEATHER, INCLUDING SNOW AND/OR ICE STORMS. WHENEVER POSSIBLE, THE NETS SHOULD ALSO BE LOWERED PRIOR TO ANY EXTREME WIND EVENTS. REMOVAL/LOWERING OF THE NETS WILL MITIGATE ANY UNFORESEEN DAMAGE TO THE POLES, NETS AND/OR ATTACHMENT HARDWARE. STORING NETS IN A DRY, PEST FREE LOCATION WILL HELP EXTEND THE LIFE OF THE NETS. SPORTSFIELD SPECIALTIES, INC. WILL NOT BE HELD LIABLE OR ASSUME RESPONSIBILITY FOR ANY DAMAGE TO THE NETS, POLES AND/OR CORRESPONDING ATTACHMENT HARDWARE IF THE NETS ARE NOT REMOVED/LOWERED PRIOR TO THE ABOVE DESCRIBED WIND AND/OR WEATHER EVENTS.

**PROPRIETARY AND CONFIDENTIAL**

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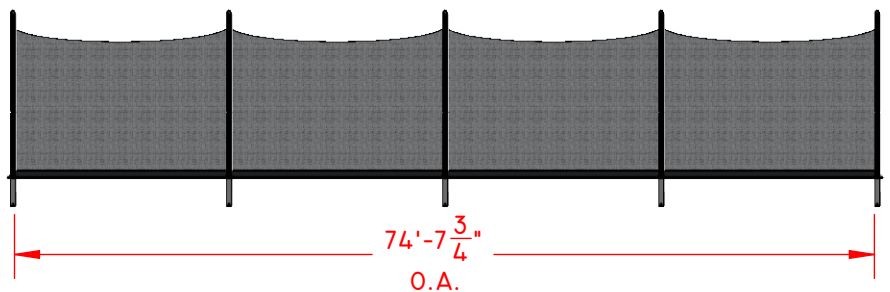
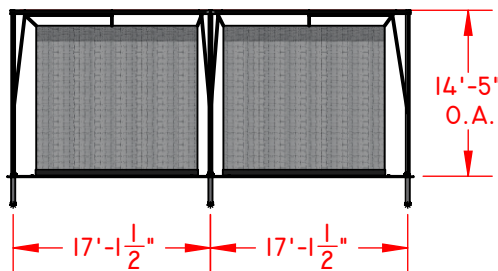
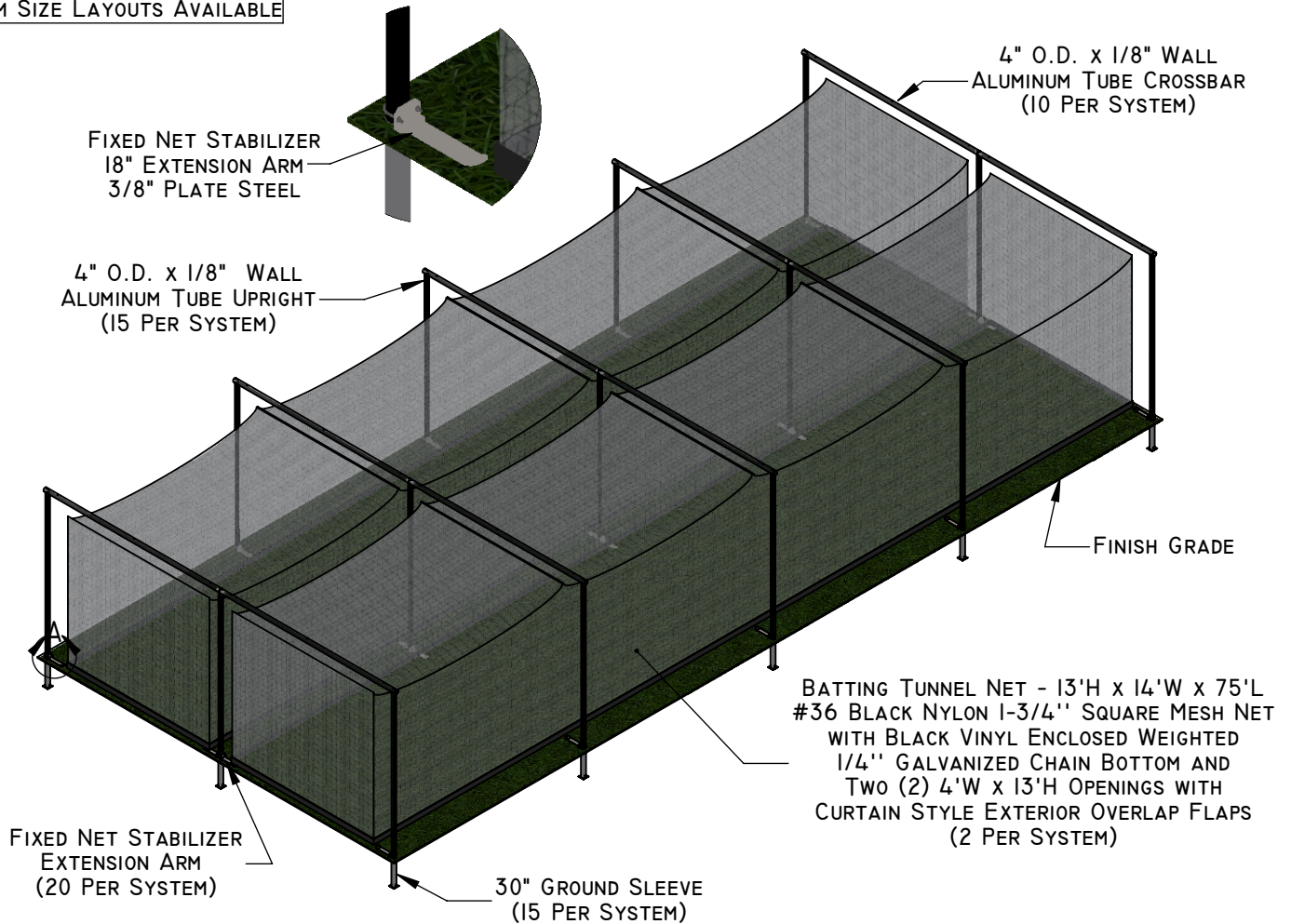
**BTOSS (LGOBT-SS-P) - SOFTBALL SINGLE OVERHEAD BATTING TUNNEL**

NOT TO SCALE

SPORTSFIELD SPECIALTIES INC 09242018

BASE PLATE MOUNTED AND/OR  
 CUSTOM SIZE LAYOUTS AVAILABLE

STANDARD BLACK POWDER COATED FINISH



FOUNDATION REQUIREMENTS VARY BASED ON LOCAL CODES AND SOIL CONDITIONS

SPORTSFIELD SPECIALTIES, INC. STRONGLY RECOMMENDS THE REMOVAL OF ALL NETS PRIOR TO EXPOSURE TO WINTER WEATHER, INCLUDING SNOW AND/OR ICE STORMS. WHENEVER POSSIBLE, THE NETS SHOULD ALSO BE LOWERED PRIOR TO ANY EXTREME WIND EVENTS. REMOVAL/LOWERING OF THE NETS WILL MITIGATE ANY UNFORESEEN DAMAGE TO THE POLES, NETS AND/OR ATTACHMENT HARDWARE. STORING NETS IN A DRY, PEST FREE LOCATION WILL HELP EXTEND THE LIFE OF THE NETS. SPORTSFIELD SPECIALTIES, INC. WILL NOT BE HELD LIABLE OR ASSUME RESPONSIBILITY FOR ANY DAMAGE TO THE NETS, POLES AND/OR CORRESPONDING ATTACHMENT HARDWARE IF THE NETS ARE NOT REMOVED/LOWERING PRIOR TO THE ABOVE DESCRIBED WIND AND/OR WEATHER EVENTS.

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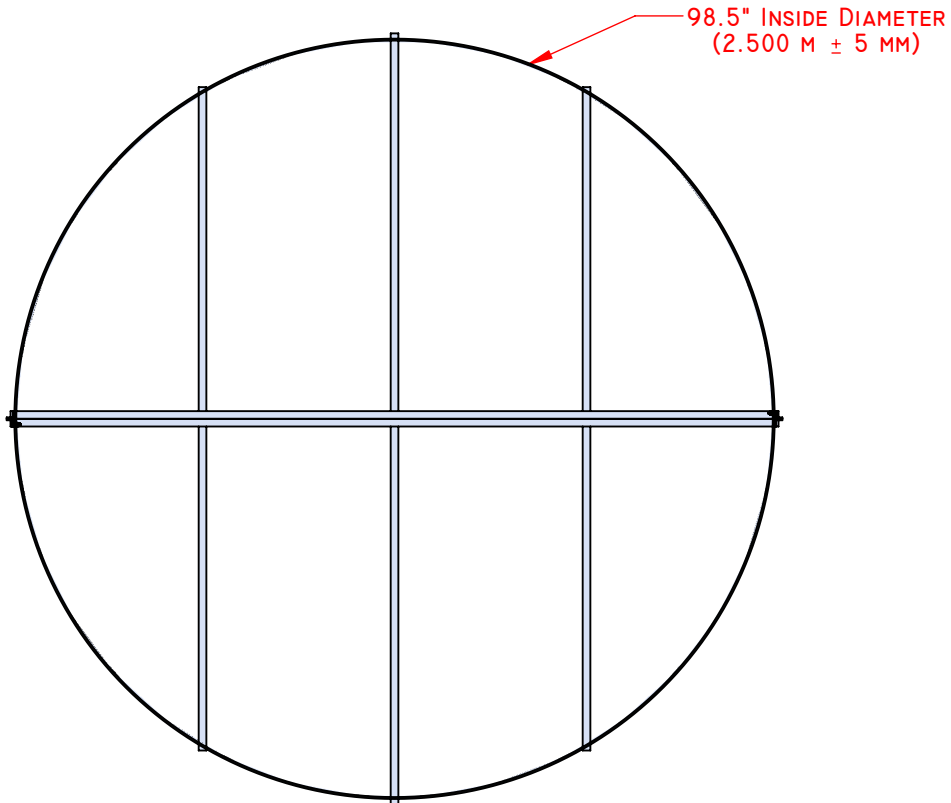
**BTOBD (LGOBT-BD-P) - BASEBALL DOUBLE OVERHEAD BATTING TUNNEL**

NOT TO SCALE

SPORTSFIELD SPECIALTIES INC 09242018

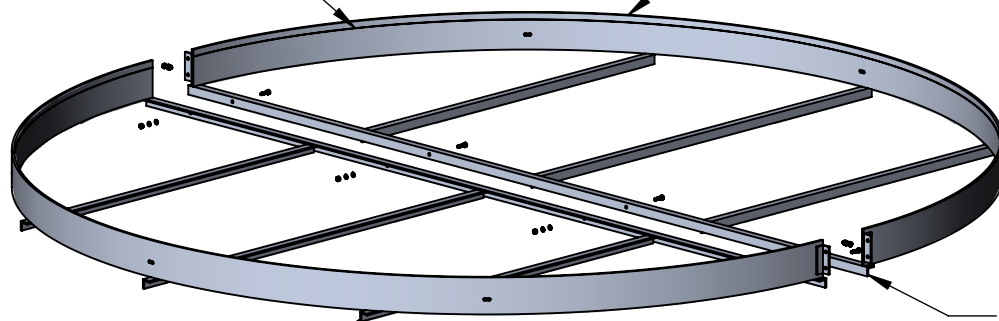
DESIGNED TO MEET THE DEMANDS  
OF MODERN SPORTS CONSTRUCTION

41155 ST. HWY 10  
PO BOX 231  
DELHI, NY 13753  
TOLL FREE: 888-975-3343  
FAX: 607-746-8481



3/4" (0.75") DEPRESSED  
CONCRETE FINISHING SCREED LINE

1/4" x 4" ALUMINUM  
ROLLED THROW RING



1" x 1" x 3/16" ALUMINUM  
ANGLE SUPPORTS

BOLT TOGETHER  
CONSTRUCTION  
STAINLESS STEEL  
HARDWARE INCLUDED

**PROPRIETARY AND CONFIDENTIAL**  
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SPORTSFIELD SPECIALTIES INC. IS  
PROHIBITED.

## TFDWRING DISCUS WEB REINFORCED THROW RING

NOT TO SCALE

SPORTSFIELD SPECIALTIES INC 12112014

## **TFDWRING Webbed Discus Throw Ring**

SECTION 11480 Athletic Equipment - Field

### **PART 1 GENERAL**

#### **1.01 WORK INCLUDED**

**A.** Provide all equipment and materials, and do all work necessary to furnish and install the athletic equipment, as indicated on the drawings and as specified herein. Athletic equipment shall include, but not be limited to:

1. TFDWRING Webbed Discus Throw Ring

#### **1.02 RELATED WORK**

**A.** Examine contract documents for requirements that affect work of this section. Other specification sections that directly relate to the work of this section include, but are not limited to:

1. Section 02200 – Earthwork; Excavation and Backfill and establishment of sub-grade elevations.
2. Section 02511 – Asphalt, Concrete, and Pavement
3. Section 02535 – Synthetic Track Surfacing
4. Section 02542 – Synthetic Field Surfacing
5. Section 03300 – Cast-in-Place Concrete

#### **1.03 REFERENCES**

**A.** Comply with applicable requirements of the following standards. Where these standards conflict with other specified requirements, the most restrictive requirements shall govern.

1. National Federation of State High School Associations (NFHS)
2. National Collegiate Athletic Association (NCAA)
3. International Amateur Athletic Association (IAAF)
4. American Sports Builders Association (ASBA)
5. Manufacturers Data and Recommended Installation Requirements

#### **1.04 SUBMITTALS**

**A.** Manufacturers Product Data

1. Provide manufacturers product data prior to actual field installation work, for Architects or Owners representatives

review.

**B. Shop Drawings**

1. Provide drawings of the manufacturers recommended installation and foundation requirements prior to actual field installation work, for Architects or Owners representatives review.

**1.05 QUALITY ASSURANCE**

- A.** Manufacturers warranties shall pass to the Owner and certification made that the product materials meet all applicable grade trademarks or conform to industry standards and inspection requirements.

**1.06 PRODUCT DELIVERY AND STORAGE**

- A.** Materials delivered to the site shall be examined for damage or defects in shipping. Any defects shall be noted and reported to the Owners representative. Replacements, if necessary, shall be immediately re-ordered, so as to minimize any conflict with the construction schedule. Sound materials shall be stored above ground under protective cover or indoors so as to provide proper protection.

**PART 2 PRODUCTS**

**2.01 Webbed Discus Throw Ring**

- A.** BASE: TFDWRING Webbed Discus Throw Ring as manufactured by:

Sportsfield Specialties Inc.  
P.O. Box 231  
41155 State Highway 10  
Delhi, NY 13753  
p. 888-975-3343  
f. 607-746-8481

- B.** COMPONENTS:

1. TFDWRING fabricated with 2.0in x 2.0in x .25in Aluminum Angle, 98.4in Diameter, having the following attributes:
  - A. Aluminum Web Reinforcement

**PART 3 EXECUTION**

**3.01           INSTALLATION OF EQUIPMENT**

- A.**           All athletic equipment shall be installed as recommended with manufacturer's written directions, and as indicated on the drawings.

**END OF SECTION**



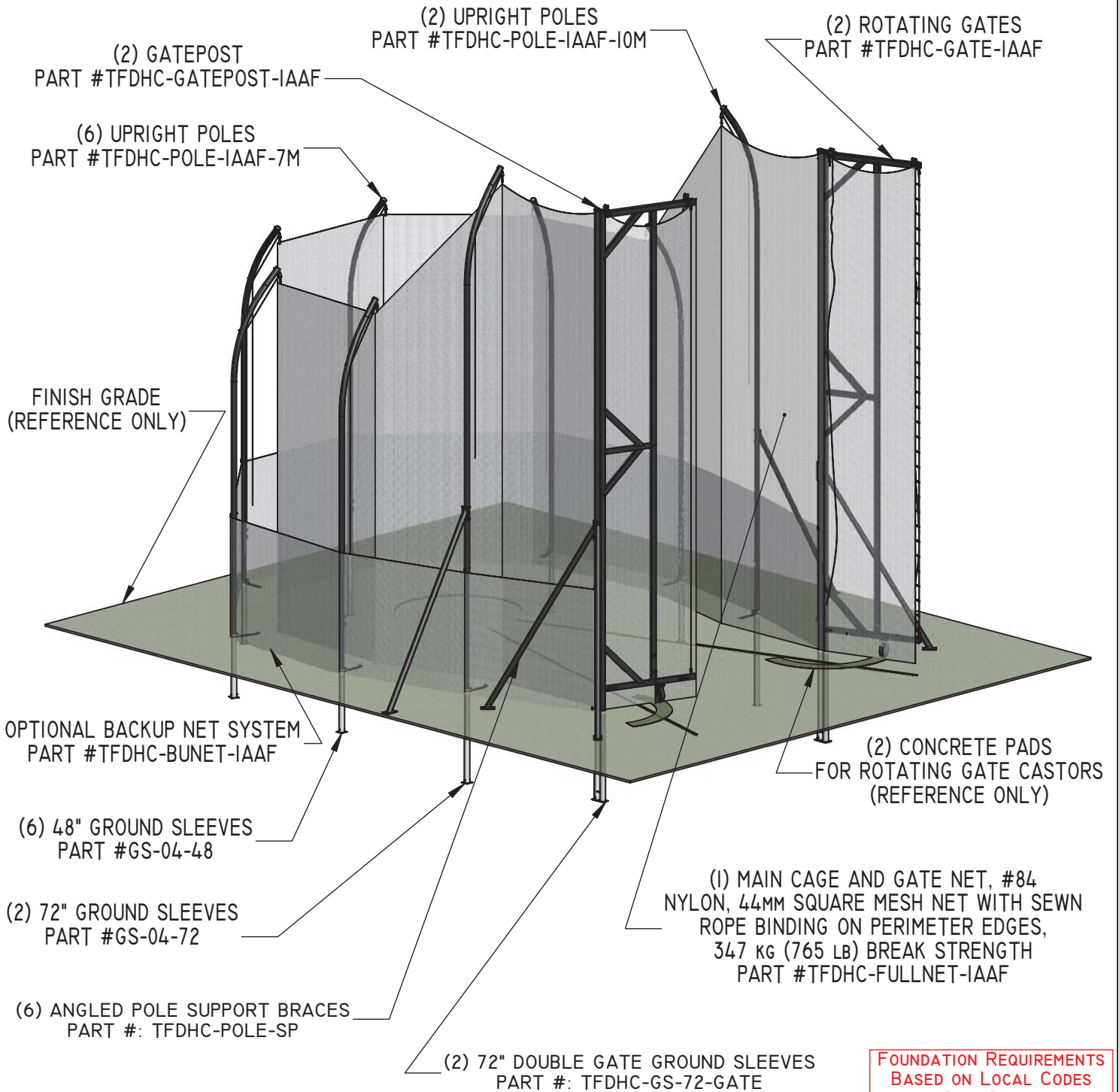
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MEETS AND/OR EXCEEDS CURRENT IAAF  
SPECIFICATIONS, RULES AND REQUIREMENTS

STANDARD BLACK POWDER COATED FINISH



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**TFDHCIAAF - IAAF HAMMER/DISCUS CAGE  
SINGLE PAD ELEVATION VIEW  
WITH OPTIONAL BACKUP NET SYSTEM**

NOT TO SCALE

SPORTSFIELD SPECIALTIES INC 11042014

DESIGNED TO MEET THE DEMANDS  
OF MODERN SPORTS CONSTRUCTION



FieldTurf USA Inc

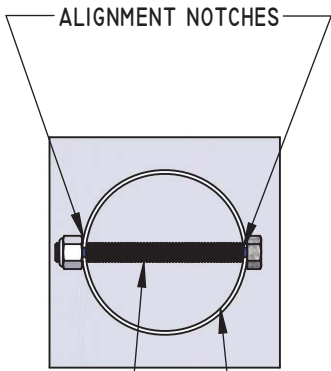
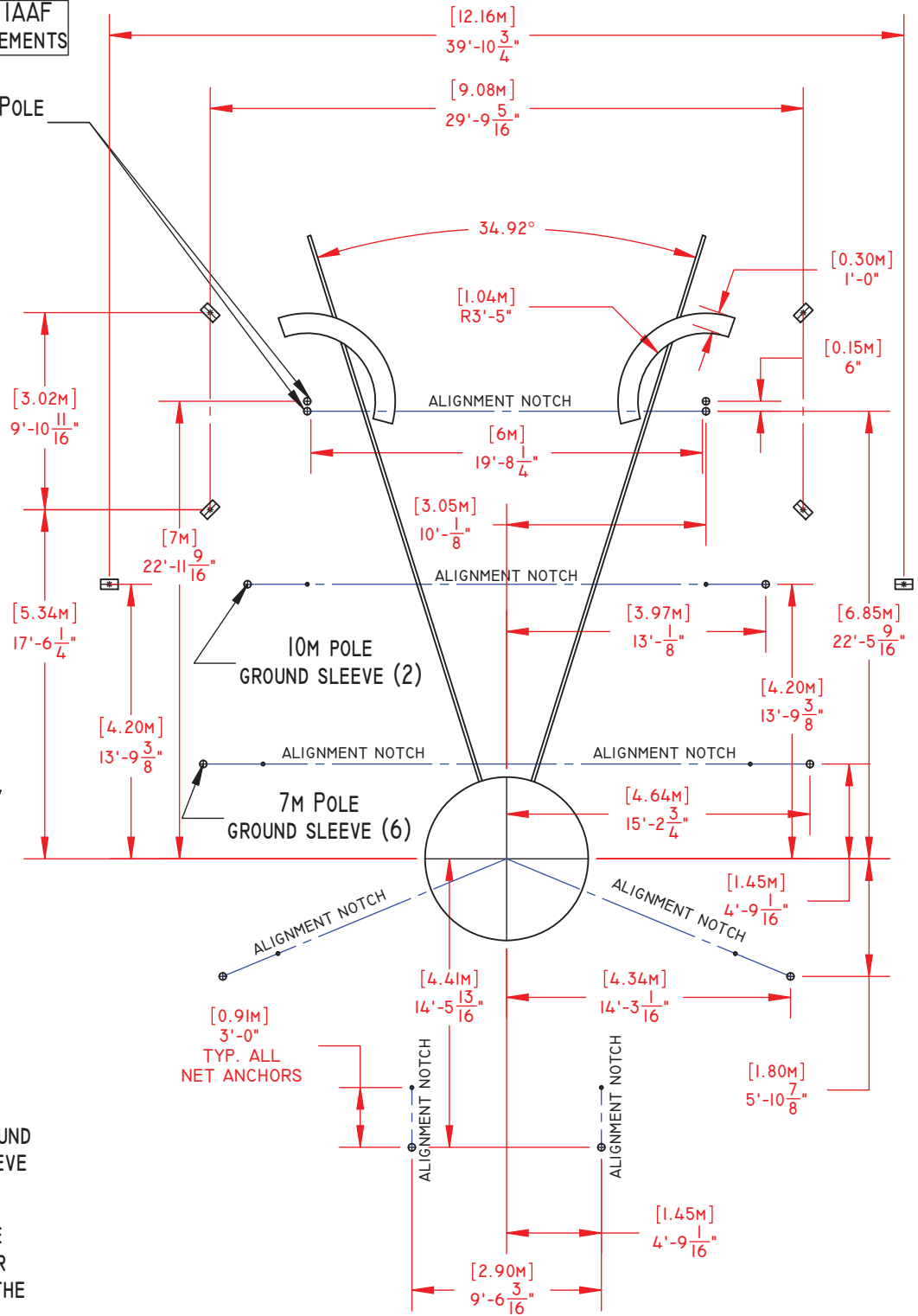
**SPORTSFIELD  
SPECIALTIES**

WWW.SPORTSFIELDSPECIALTIES.COM

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PO BOX 231  
DELHI, NY 13753  
TOLL FREE: 888-975-3343  
FAX: 607-746-8481

MEETS AND/OR EXCEEDS CURRENT IAAF  
SPECIFICATIONS, RULES AND REQUIREMENTS

ROTATING GATE AND SUPPORT POLE  
DUAL GROUND SLEEVE (2)



STOP BOLT ALIGNMENTS MUST  
MATCH THE ALIGNMENT NOTCH  
DIRECTION IN THE LAYOUT IN ORDER  
FOR THE CAGE POLES TO LOCK IN THE  
CORRECT POSITION.

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**IAAF HAMMER/DISCUS CAGE, SINGLE PAD  
GROUND SLEEVE LAYOUT**

NOT TO SCALE

SPORTSFIELD SPECIALTIES INC 11202014

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OF MODERN SPORTS CONSTRUCTION

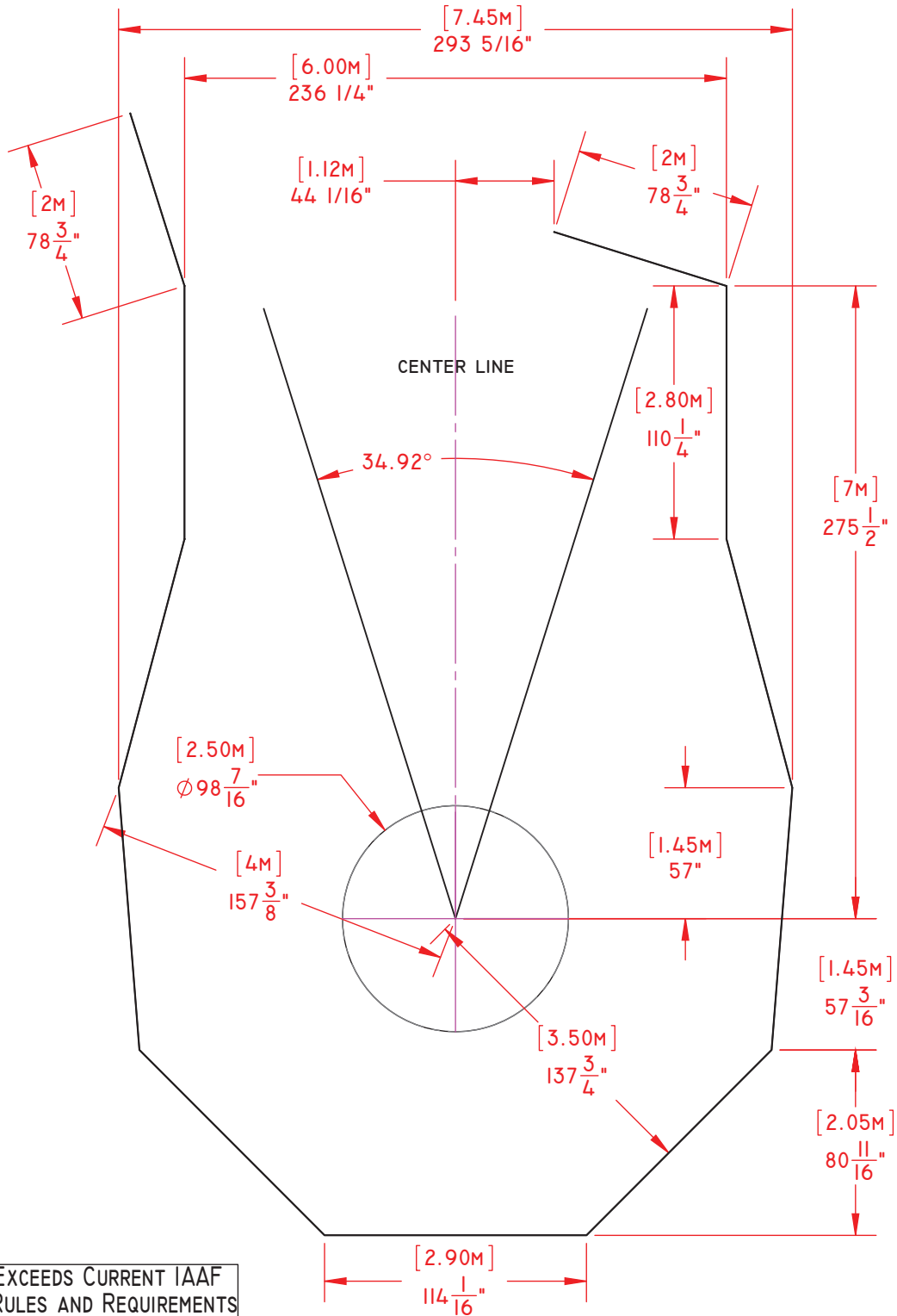


FieldTurf USA Inc

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FAX: 607-746-8481



MEETS AND/OR EXCEEDS CURRENT IAAF  
SPECIFICATIONS, RULES AND REQUIREMENTS

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**TFDHCIAAF - IAAF HAMMER/DISCUS CAGE  
SINGLE PAD LAYOUT**

NOT TO SCALE

SPORTSFIELD SPECIALTIES INC 11142014

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OF MODERN SPORTS CONSTRUCTION



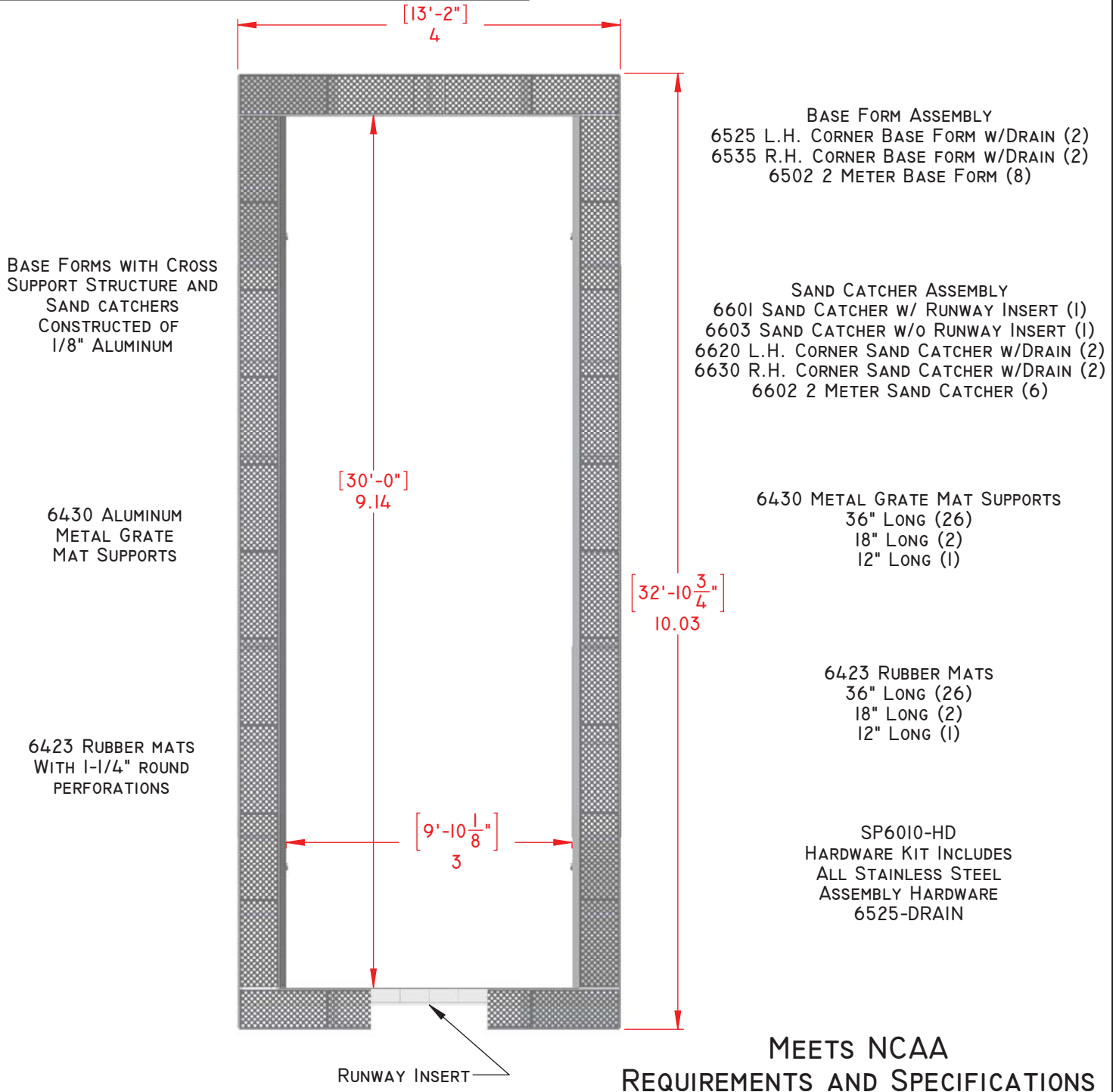
FieldTurf USA Inc

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DELHI, NY 13753  
TOLL FREE: 888-975-3343  
FAX: 607-746-8481

UNITED STATES PATENT #7,641,593, ISSUED JANUARY 5, 2010  
UNITED STATES PATENT #8,186,125, ISSUED MAY 29, 2012  
UNITED STATES PATENT #8,745,955, ISSUED JUNE 10, 2014



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**SP6010 JUMPFORM®  
COLLEGE 3M x 9M SAND PIT WITH SAND CATCHERS**

NOT TO SCALE

SPORTSFIELD SPECIALTIES INC 11012014

DESIGNED TO MEET THE DEMANDS  
OF MODERN SPORTS CONSTRUCTION



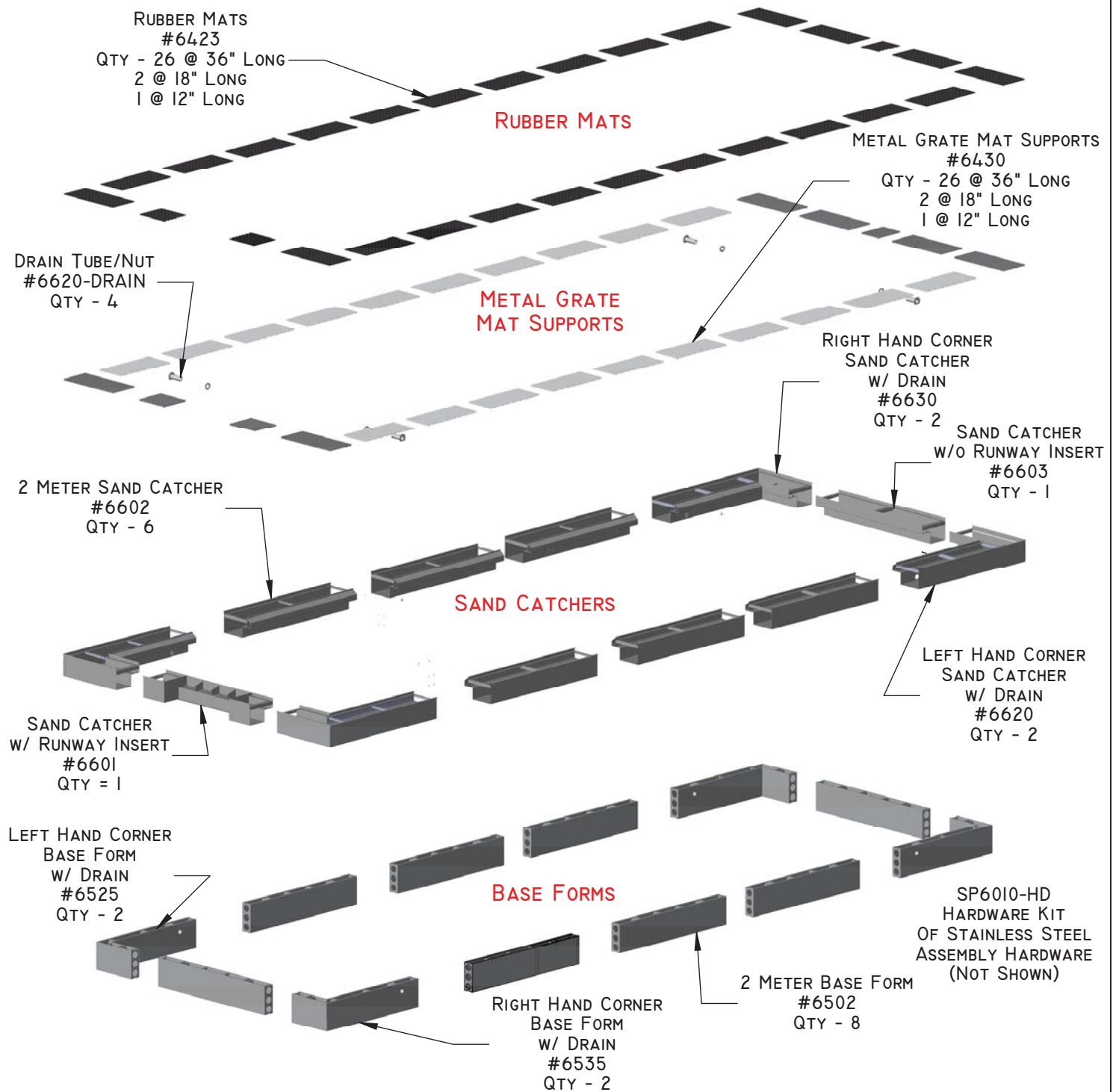
FieldTurf USA Inc

**SPORTSFIELD  
SPECIALTIES**

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PO BOX 231  
DELHI, NY 13753  
TOLL FREE: 888-975-3343  
FAX: 607-746-8481

UNITED STATES PATENT #7,641,593, ISSUED JANUARY 5, 2010  
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**SP6010 JUMPFORM® EXPLODED VIEW  
COLLEGE 3M X 9M SAND PIT WITH SAND CATCHERS**

NOT TO SCALE

SPORTSFIELD SPECIALTIES INC 11012014

DESIGNED TO MEET THE DEMANDS  
OF MODERN SPORTS CONSTRUCTION



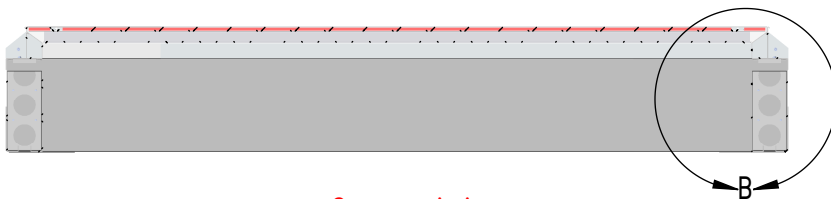
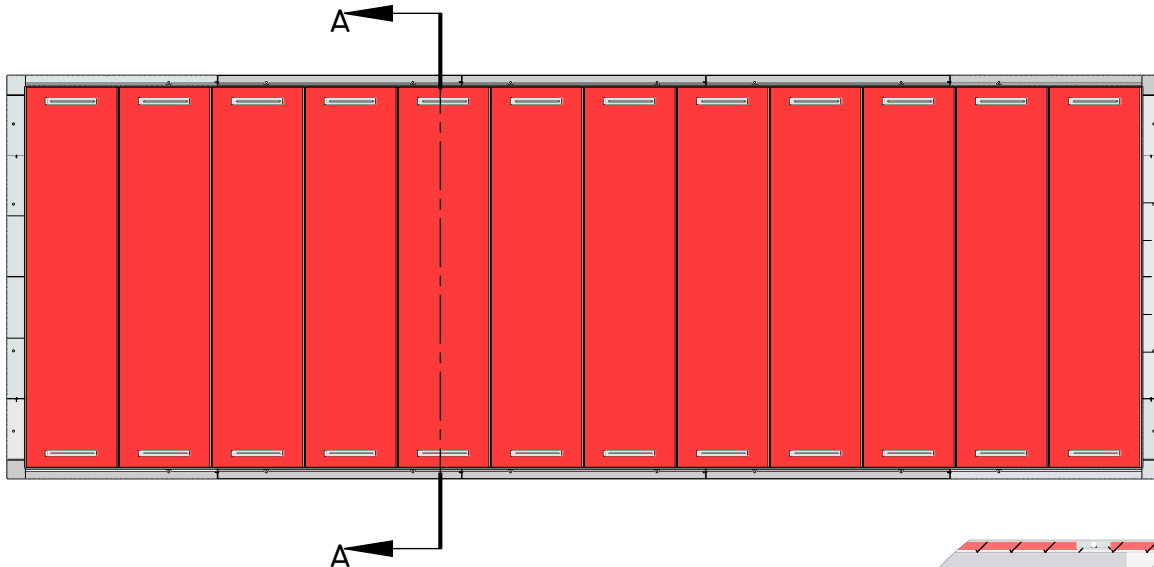
FieldTurf USA Inc

**SPORTSFIELD  
SPECIALTIES**

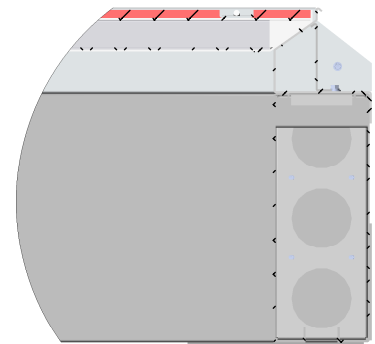
WWW.SPORTSFIELDSPECIALTIES.COM

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PO BOX 231  
DELHI, NY 13753  
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FAX: 607-746-8481

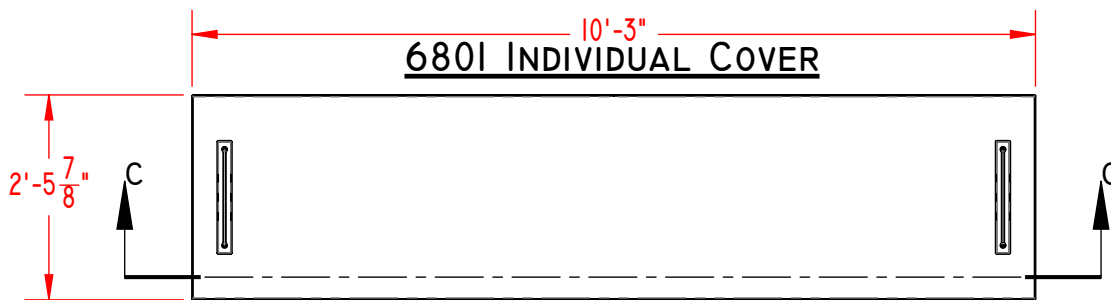
**6800 COLLEGE SAND PIT COVER SET (12-6801 COVERS)**



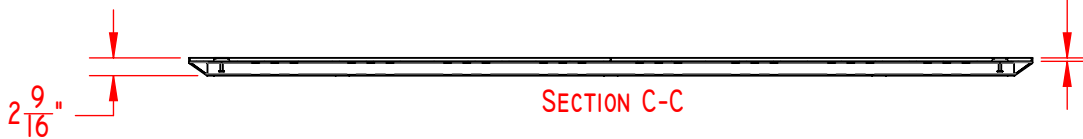
SECTION A-A



DETAIL B



**PRODUCT WEIGHTS**  
6800 - 960LBS/SET  
6801 - 80LBS EACH  
\*WEIGHTS PRIOR  
TO SURFACING



**1/2" RECESS TO ACCEPT  
SYNTHETIC TRACK SURFACE  
BY OTHERS**

SECTION C-C

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**SP6800 COLLEGE SAND PIT COVER SET**

NOT TO SCALE

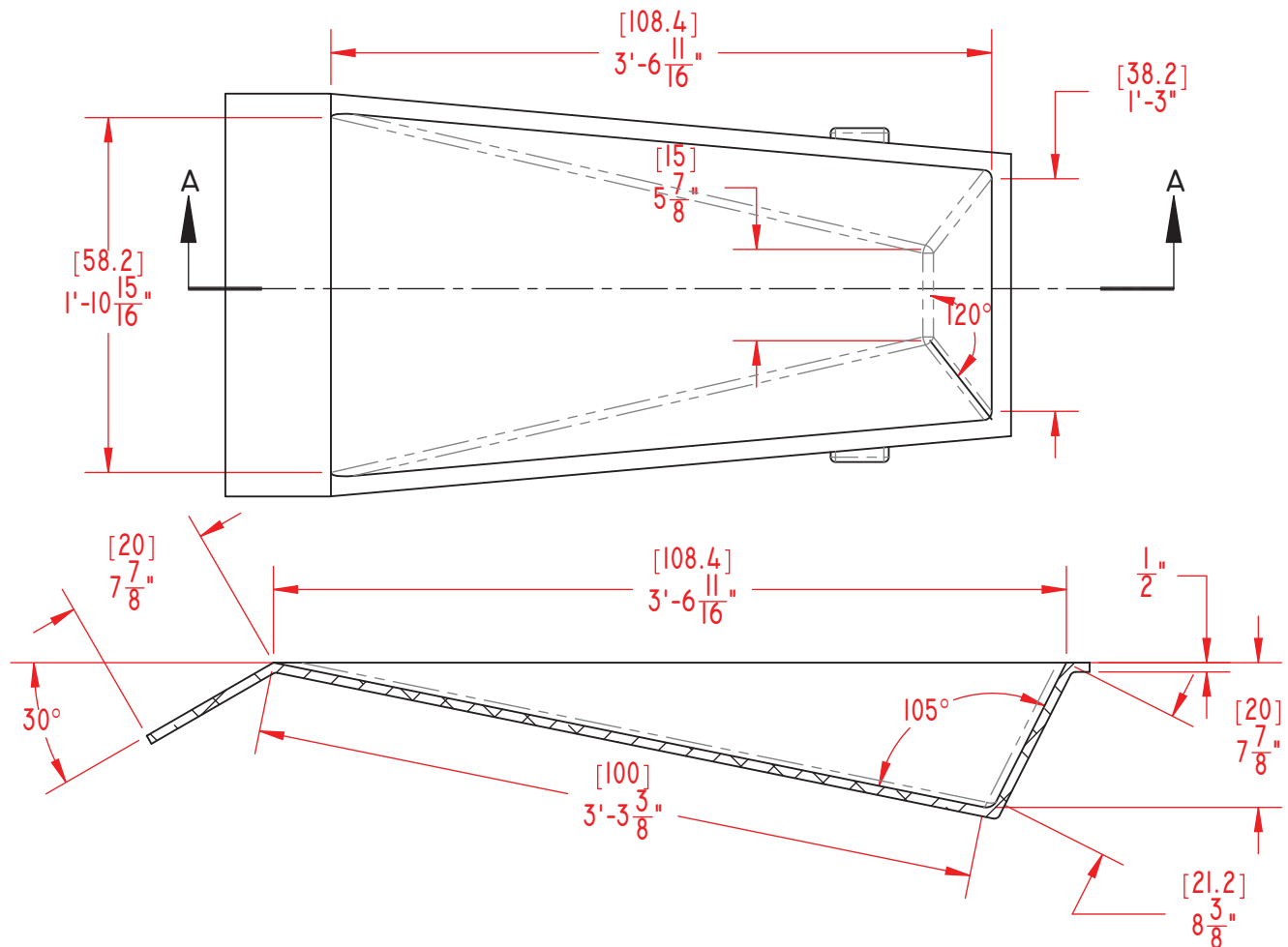
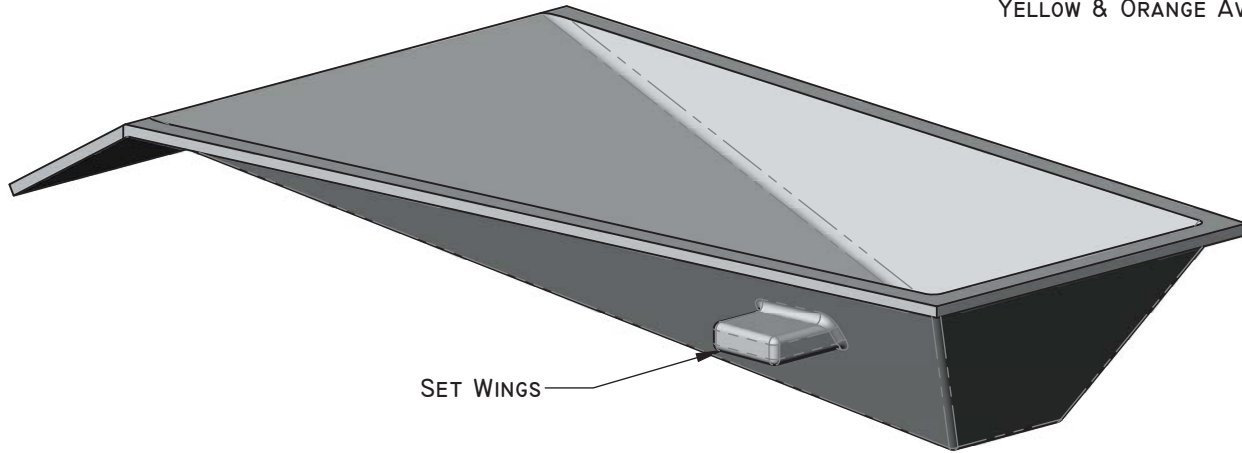
SPORTSFIELD SPECIALTIES INC 11012014

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DELHI, NY 13753  
TOLL FREE: 888-975-3343  
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STANDARD POWDER COATED WHITE FINISH  
YELLOW & ORANGE AVAILABLE



MEETS AND/OR EXCEEDS ALL IAAF, NCAA AND NFHS SPECIFICATIONS

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**TFPV001CA - CAST ALUMINUM VAULT BOX**

NOT TO SCALE

SPORTSFIELD SPECIALTIES INC 11012014

## **TFPV001CA Cast Aluminum Pole Vault Box with TFPV003ALTR-CA Cover Plug**

SECTION 11480 Athletic Equipment - Track & Field

### **PART 1 GENERAL**

#### **1.01 WORK INCLUDED**

**A.** Provide all equipment and materials, and do all work necessary to furnish and install the athletic equipment, as indicated on the drawings and as specified herein. Athletic equipment shall include, but not be limited to:

1. TFPV001CA Vault Box with TFPV003ALTR-CA Cover Plug

#### **1.02 RELATED WORK**

**A.** Examine contract documents for requirements that affect work of this section. Other specification sections that directly relate to the work of this section include, but are not limited to:

1. Section 02200 – Earthwork; Excavation and Backfill and establishment of sub-grade elevations.
2. Section 02511 – Asphalt, Concrete, and Pavement
3. Section 02535 – Synthetic Track Surfacing
4. Section 02542 – Synthetic Field Surfacing
5. Section 03300 – Cast-in-Place Concrete

#### **1.03 REFERENCES**

**A.** Comply with applicable requirements of the following standards. Where these standards conflict with other specified requirements, the most restrictive requirements shall govern.

1. National Federation of State High School Associations (NFHS)
2. National Collegiate Athletic Association (NCAA)
3. International Amateur Athletic Association (IAAF)
4. American Sports Builders Association (ASBA)
5. Manufacturers Data and Recommended Installation Requirements

#### **1.04 SUBMITTALS**

**A.** Manufacturers Product Data

1. Provide manufacturers product data prior to actual field installation work, for Architects or Owners representatives



review.

**B. Shop Drawings**

1. Provide drawings of the manufacturers recommended installation and foundation requirements prior to actual field installation work, for Architects or Owners representatives review.

**1.05 QUALITY ASSURANCE**

- A.** Manufacturers warranties shall pass to the Owner and certification made that the product materials meet all applicable grade trademarks or conform to industry standards and inspection requirements.

**1.06 PRODUCT DELIVERY AND STORAGE**

- A.** Materials delivered to the site shall be examined for damage or defects in shipping. Any defects shall be noted and reported to the Owners representative. Replacements, if necessary, shall be immediately re-ordered, so as to minimize any conflict with the construction schedule. Sound materials shall be stored above ground under protective cover or indoors so as to provide proper protection.

**PART 2 PRODUCTS**

**2.01 Cast Aluminum Pole Vault Box with Cover Plug**

BASE: TFPV001CA Pole Vault Box with TFPV003ALTR-CA Cover Plug as manufactured by:

Sportsfield Specialties Inc.  
P.O. Box 231  
41155 State Highway 10  
Delhi, NY 13753  
p. 888-975-3343  
f. 607-746-8481

**B. COMPONENTS:**

1. TFPV001CA Pole Vault Box fabricated with ½” Cast Aluminum having the following attributes:
  - A. Regulation Size
  - B. Cast Aluminum Setting Wings for Concrete Encasement
  - C. Powder Coating White (Yellow & Orange Available)

2. TFPV003ALTR-CA Cover Plug fabricated with 1/8" Aluminum having the following attributes:
  - A. Sized to Fill Void of Vault Box
  - B. Top Surface Recessed 1/2" to Accept Synthetic Track Material

**PART 3 EXECUTION**

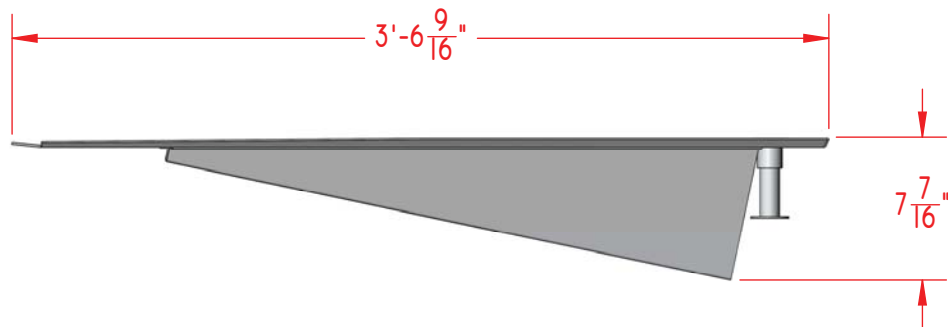
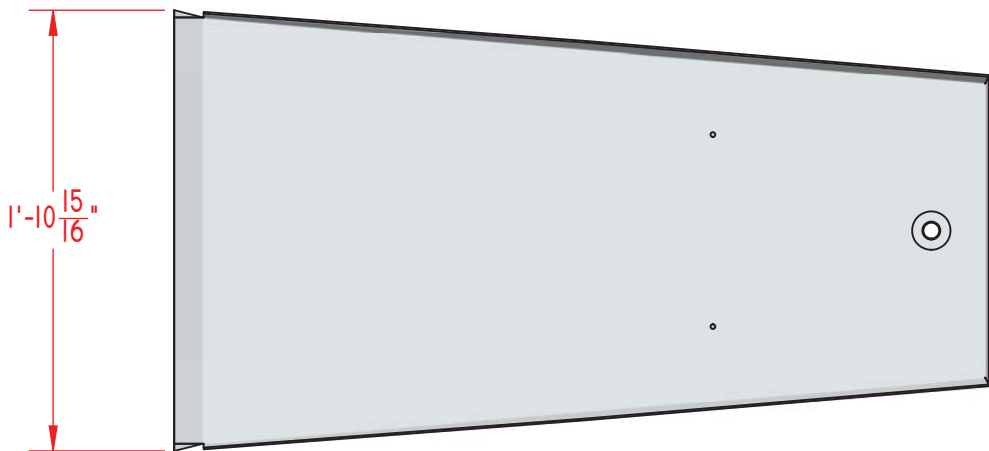
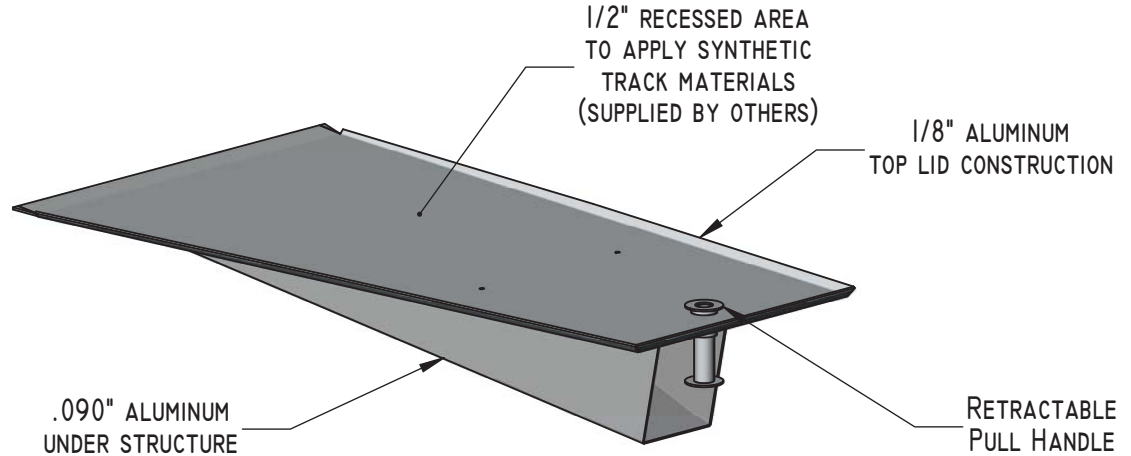
**3.01 INSTALLATION OF EQUIPMENT**

- A. All athletic equipment shall be installed as recommended with manufacturer's written directions, and as indicated on the drawings.

**END OF SECTION**

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**TFPV003ALTR-CA - CAST ALUMINUM VAULT BOX COVER PLUG**

NOT TO SCALE

SPORTSFIELD SPECIALTIES INC 11012014

## **TFPV003ALTR-CA - Vault Box Cover Plug**

SECTION 11480 Athletic Equipment - Track & Field

### **PART 1 GENERAL**

#### **1.01 WORK INCLUDED**

**A.** Provide all equipment and materials, and do all work necessary to furnish and install the athletic equipment, as indicated on the drawings and as specified herein. Athletic equipment shall include, but not be limited to:

1. TFPV003ALTR-CA - Vault Box Cover Plug

#### **1.02 RELATED WORK**

**A.** Examine contract documents for requirements that affect work of this section. Other specification sections that directly relate to the work of this section include, but are not limited to:

1. Section 02200 – Earthwork; Excavation and Backfill and establishment of sub-grade elevations.
2. Section 02511 – Asphalt, Concrete, and Pavement
3. Section 02535 – Synthetic Track Surfacing
4. Section 02542 – Synthetic Field Surfacing
5. Section 03300 – Cast-in-Place Concrete

#### **1.03 REFERENCES**

**A.** Comply with applicable requirements of the following standards. Where these standards conflict with other specified requirements, the most restrictive requirements shall govern.

1. National Federation of State High School Associations (NFHS)
2. National Collegiate Athletic Association (NCAA)
3. International Amateur Athletic Association (IAAF)
4. American Sports Builders Association (ASBA)
5. Manufacturers Data and Recommended Installation Requirements

#### **1.04 SUBMITTALS**

**A.** Manufacturers Product Data

1. Provide manufacturers product data prior to actual field installation work, for Architects or Owners representatives

review.

**B. Shop Drawings**

1. Provide drawings of the manufacturers recommended installation and foundation requirements prior to actual field installation work, for Architects or Owners representatives review.

**1.05 QUALITY ASSURANCE**

- A.** Manufacturers warranties shall pass to the Owner and certification made that the product materials meet all applicable grade trademarks or conform to industry standards and inspection requirements.

**1.06 PRODUCT DELIVERY AND STORAGE**

- A.** Materials delivered to the site shall be examined for damage or defects in shipping. Any defects shall be noted and reported to the Owners representative. Replacements, if necessary, shall be immediately re-ordered, so as to minimize any conflict with the construction schedule. Sound materials shall be stored above ground under protective cover or indoors so as to provide proper protection.

**PART 2 PRODUCTS**

**2.01 Aluminum Vault Box Cover Plug**

- A.** BASE: TFPV003ALTR-CA - Vault Box Cover Plug as manufactured by:

Sportsfield Specialties Inc.  
P.O. Box 231  
41155 State Highway 10  
Delhi, NY 13753  
p. 888-975-3343  
f. 607-746-8481

**B. COMPONENTS:**

1. TFPV003ALTR-CA Cover Plug fabricated with 0.90in Aluminum understructure and .125in Aluminum top lid having the following attributes:

- A. Sized to Fill Void of Standard Cast Aluminum Vault Box
- B. Top Surface Recessed 0.50in to Accept Synthetic Track Material

**PART 3 EXECUTION**

**3.01 INSTALLATION OF EQUIPMENT**

- A.** All athletic equipment shall be installed as recommended with manufacturer's written directions, and as indicated on the drawings.

**END OF SECTION**

## **TFSPT001AL Shot Put Toe Board (Depressed Pad)**

SECTION 11480 Athletic Equipment - Track & Field

### **PART 1 GENERAL**

#### **1.01 WORK INCLUDED**

**A.** Provide all equipment and materials, and do all work necessary to furnish and install the athletic equipment, as indicated on the drawings and as specified herein. Athletic equipment shall include, but not be limited to:

1. TFSPT001AL Shot Put Toe Board (Depressed Pad)

#### **1.02 RELATED WORK**

**A.** Examine contract documents for requirements that affect work of this section. Other specification sections that directly relate to the work of this section include, but are not limited to:

1. Section 02200 – Earthwork; Excavation and Backfill and establishment of sub-grade elevations.
2. Section 02511 – Asphalt, Concrete, and Pavement
3. Section 02535 – Synthetic Track Surfacing
4. Section 02542 – Synthetic Field Surfacing
5. Section 03300 – Cast-in-Place Concrete

#### **1.03 REFERENCES**

**A.** Comply with applicable requirements of the following standards. Where these standards conflict with other specified requirements, the most restrictive requirements shall govern.

1. National Federation of State High School Associations (NFHS)
2. National Collegiate Athletic Association (NCAA)
3. International Amateur Athletic Association (IAAF)
4. American Sports Builders Association (ASBA)
5. Manufacturers Data and Recommended Installation Requirements

#### **1.04 SUBMITTALS**

**A.** Manufacturers Product Data

1. Provide manufacturers product data prior to actual field installation work, for Architects or Owners representatives

review.

**B. Shop Drawings**

1. Provide drawings of the manufacturers recommended installation and foundation requirements prior to actual field installation work, for Architects or Owners representatives review.

**1.05 QUALITY ASSURANCE**

- A.** Manufacturers warranties shall pass to the Owner and certification made that the product materials meet all applicable grade trademarks or conform to industry standards and inspection requirements.

**1.06 PRODUCT DELIVERY AND STORAGE**

- A.** Materials delivered to the site shall be examined for damage or defects in shipping. Any defects shall be noted and reported to the Owners representative. Replacements, if necessary, shall be immediately re-ordered, so as to minimize any conflict with the construction schedule. Sound materials shall be stored above ground under protective cover or indoors so as to provide proper protection.

**PART 2 PRODUCTS**

**2.01 Cast Aluminum Shot Put Toe Board (Depressed Pad)**

- A.** BASE: TFSPT001AL Shot Put Toe Board as manufactured by:

Sportsfield Specialties Inc.  
P.O. Box 231  
41155 State Highway 10  
Delhi, NY 13753  
p. 888-975-3343  
f. 607-746-8481

**B. COMPONENTS:**

1. Model # TFSPT001AL Cast Aluminum Toe Board having the following attributes:
  - A. Standard Size, 3.25in Height for Depressed Pad Installation
  - B. Powder Coated White
  - C. 34.92° Black Sector Identifiers



**PART 3 EXECUTION**

**3.01 INSTALLATION OF EQUIPMENT**

- A.** All athletic equipment shall be installed as recommended with manufacturer's written directions, and as indicated on the drawings.

**END OF SECTION**

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OF MODERN SPORTS CONSTRUCTION

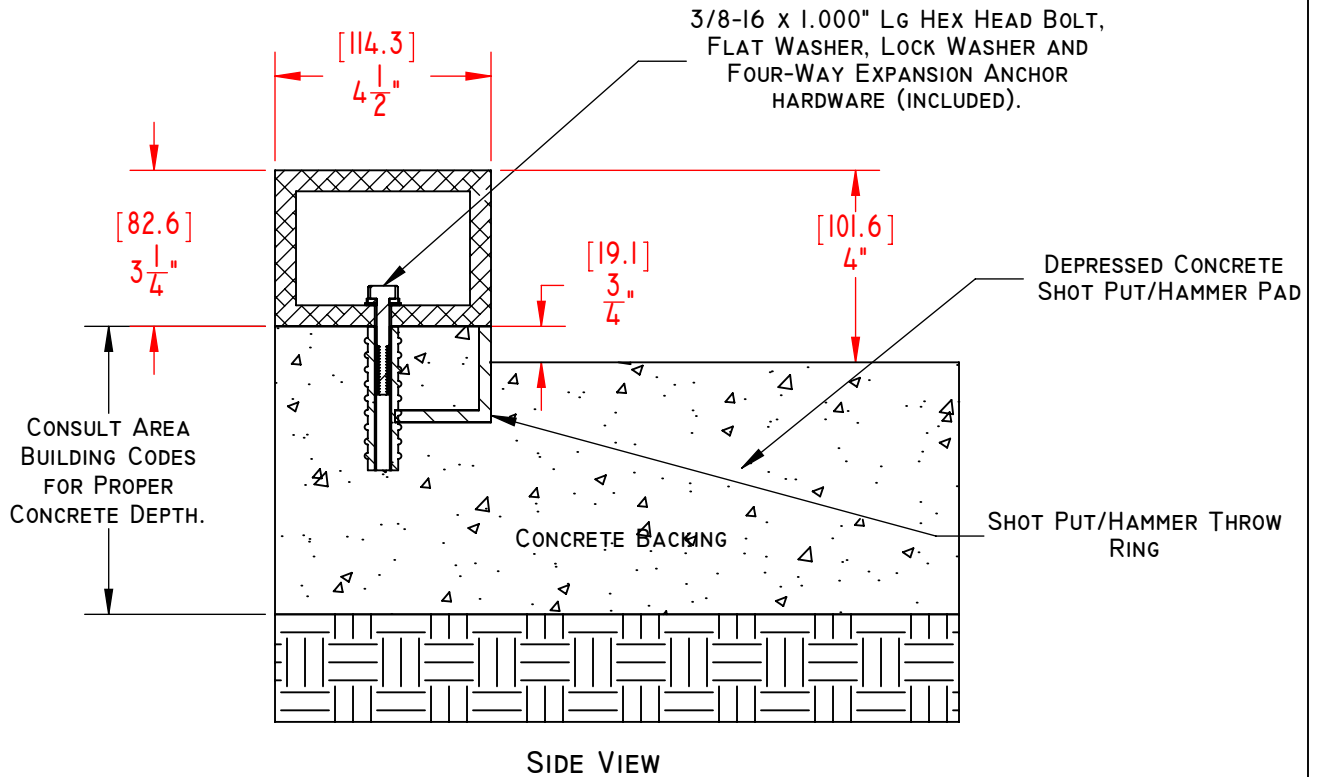
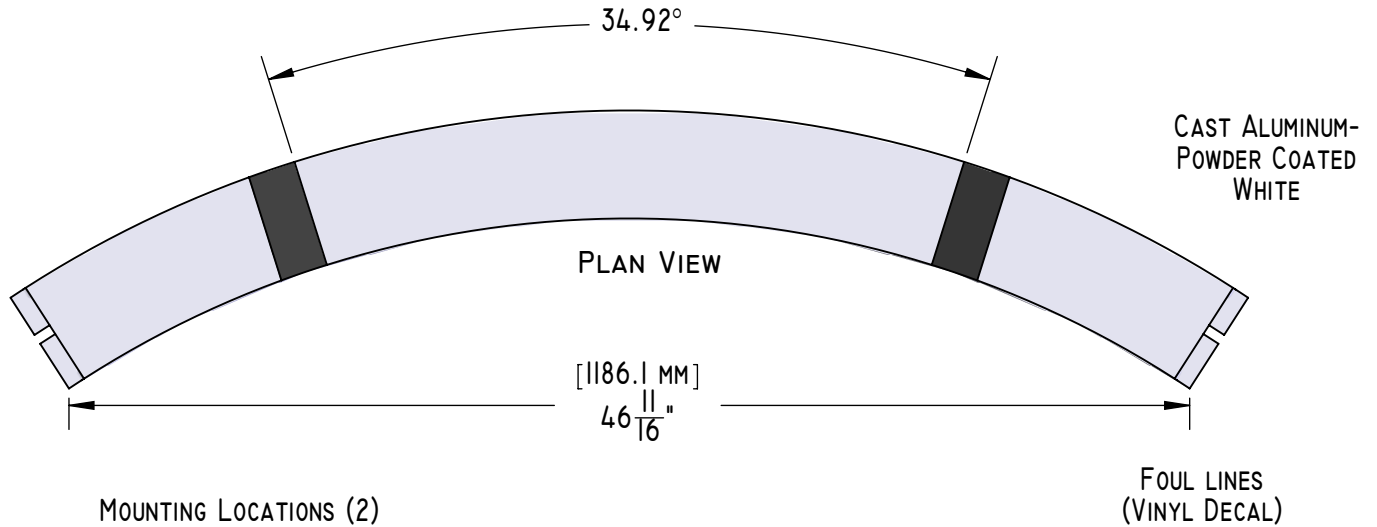
41155 ST. HWY 10  
PO BOX 231  
DELHI, NY 13753  
TOLL FREE: 888-975-3343  
FAX: 607-746-8481



FieldTurf USA Inc

**SPORTSFIELD  
SPECIALTIES**

WWW.SPORTSFIELDSPECIALTIES.COM



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**TFSPT001AL - SHOT PUT TOE BOARD  
DEPRESSED PAD INSTALLATION**

NOT TO SCALE

SPORTSFIELD SPECIALTIES INC 11012014

## **TFSWRING Webbed Shot Put/Hammer Throw Ring**

SECTION 11480 Athletic Equipment - Field

### **PART 1 GENERAL**

#### **1.01 WORK INCLUDED**

**A.** Provide all equipment and materials, and do all work necessary to furnish and install the athletic equipment, as indicated on the drawings and as specified herein. Athletic equipment shall include, but not be limited to:

1. TFSWRING Webbed Shot Put/Hammer Throw Ring

#### **1.02 RELATED WORK**

**A.** Examine contract documents for requirements that affect work of this section. Other specification sections that directly relate to the work of this section include, but are not limited to:

1. Section 02200 – Earthwork; Excavation and Backfill and establishment of sub-grade elevations.
2. Section 02511 – Asphalt, Concrete, and Pavement
3. Section 02535 – Synthetic Track Surfacing
4. Section 02542 – Synthetic Field Surfacing
5. Section 03300 – Cast-in-Place Concrete

#### **1.03 REFERENCES**

**A.** Comply with applicable requirements of the following standards. Where these standards conflict with other specified requirements, the most restrictive requirements shall govern.

1. National Federation of State High School Associations (NFHS)
2. National Collegiate Athletic Association (NCAA)
3. International Amateur Athletic Association (IAAF)
4. American Sports Builders Association (ASBA)
5. Manufacturers Data and Recommended Installation Requirements

#### **1.04 SUBMITTALS**

**A.** Manufacturers Product Data

1. Provide manufacturers product data prior to actual field installation work, for Architects or Owners representatives

review.

**B. Shop Drawings**

1. Provide drawings of the manufacturers recommended installation and foundation requirements prior to actual field installation work, for Architects or Owners representatives review.

**1.05 QUALITY ASSURANCE**

- A.** Manufacturers warranties shall pass to the Owner and certification made that the product materials meet all applicable grade trademarks or conform to industry standards and inspection requirements.

**1.06 PRODUCT DELIVERY AND STORAGE**

- A.** Materials delivered to the site shall be examined for damage or defects in shipping. Any defects shall be noted and reported to the Owners representative. Replacements, if necessary, shall be immediately re-ordered, so as to minimize any conflict with the construction schedule. Sound materials shall be stored above ground under protective cover or indoors so as to provide proper protection.

**PART 2 PRODUCTS**

**2.01 Webbed Shot Put/Hammer Throw Ring**

- A.** BASE: TFSWRING Webbed Shot Putt/Hammer Throw Ring as manufactured by:

Sportsfield Specialties Inc.  
P.O. Box 231  
41155 State Highway 10  
Delhi, NY 13753  
p. 888-975-3343  
f. 607-746-8481

**B. COMPONENTS:**

1. TFSWRING fabricated with 2.0in x 2.0in x .25in Aluminum Angle, 84.0in Diameter, having the following attributes:
  - A. Aluminum Web Reinforcement

**PART 3 EXECUTION**

**3.01 INSTALLATION OF EQUIPMENT**

- A.** All athletic equipment shall be installed as recommended with manufacturer's written directions, and as indicated on the drawings.

**END OF SECTION**

## **WJ 5000 Steeple Chase Water Jump Pit Specification**

Section 11 6600 Athletic Equipment - Field  
(Formally Section 11480)

### **PART 1: GENERAL**

#### **1.01 WORK INCLUDED**

**A.** Provide all equipment and material, and do all work necessary to furnish and install the athletic equipment, as indicated on the drawings and as specified herein. Athletic equipment shall include, but not be limited to:

1. WJ5000 Steeple Chase Water Jump Pit Specification.

#### **1.02 RELATED WORK**

**A.** Examine contract documents for requirements that affect work of this section. Other specification sections that directly relate to the work of this section include, but are not limited to:

1. Section 02200 – Earthwork; Excavation and Backfill and establishment of sub-grade elevation.
2. Section 02700 – Asphalt, Concrete, and Pavement.
3. Section 02794 – Synthetic Grass & Turf.
4. Section 02793 – Synthetic Field Surfacing.
5. Section 03110 – Cast-in-Place Concrete.

#### **1.03 REFERENCES**

**A.** Comply with applicable requirements of the following standards. Where these standards conflict with other specified requirements, the most restrictive requirements shall govern.

1. National Collegiate Athletic Association (NCAA).
2. International Amateur Athletic Association (IAAF).
3. American Sports Builders Association (ASBA).
4. American Wood Preserver's Association (AWPA).
5. Manufactures Data and Recommended Installation Requirements.

#### **1.04 SUBMITTALS**

**A.** Manufacturers Product Data

1. Provide manufactures product data prior to actual field installation work, for Architects or Owners representatives review.

**B.** Shop Drawings

1. Provide drawings of the manufacturers recommended installation and foundation requirements prior to actual filed installation work, for Architects or Owners representatives review.

**1.05            QUALITY ASSURANCE**

- A.**            Manufacturers warranties shall pass to the Owner and certification made that the product materials meet all applicable grade trademarks or conform to industry standards and inspection requirements.

**1.06            PRODUCT DELIVERY AND STORAGE**

- A.**            Material delivered to the site shall be examined for damage or defects in shipping. Any defects shall be noted and reported to the Owners representative. Replacements, if necessary, shall be immediately re-ordered, so to minimize any conflict with the construction schedule. Sound materials shall be stored above ground under protective cover or indoors so as to provide proper protection.

**PART 2:        PRODUCTS**

**2.01            WJ500 STEEPLE CHASE WATER JUMP PIT**

- A.**            Base: NCAA/IAAF WJ5000 Steeple Chase Water Jump Pit as manufactured by:

Sportsfield Specialties, Inc.  
P.O. Box 231  
41155 State Highway 10  
Delhi, NY 13753  
p. 888-975-3343  
f. 607-746-8481  
[www.sportsfieldspecialties.com](http://www.sportsfieldspecialties.com).

- B.**            Components

1. WJ500 Modular Water Jump Pit Assembly: Fabricated of 0.125 in thick aluminum, 12.0ft x 12.0ft interior dimensions, having the following attributes:
  - A. Left Form Panel (5113), Right Form Panel (5114), Rear Form Panel (5115):
    1. Double-wall, gusset reinforced construction.
    2. Tapered side wall with 22.4% slope.
    3. Square joint bolt together construction.
    4. Built-in screed edge guide for synthetic surfacing.
    5. Built-in 3.0in Schedule 40 P.V.C. drainage valve:
      - a. Located at center of front wall.
      - b. Serviceable sealed plate at bottom of front wall.
  6. Water Stop:
    - a. Continuous at floor/side wall joint.
  7. Barrier Sleeves:
    - a. Aluminum Sleeves

- b. Located at universal men's/woman's position.
- B. Left Cover Ledge Assembly (5250) and Right Cover Ledge Assembly (5251):
  - 1. Fills void created by cover ledge when optional WJ5400 Cover set are not in place.
  - 2. Recessed 0.50in for synthetic surfacing.
- C. T-Handle (5125):
  - 1. Key to open/close Drainage Valve.
- D. Installation Package consisting of the following components:
  - 1. WJ5000-HD
    - a. Assembly bolts, nuts, flat washers, lock washers-stainless steel.
    - b. Gate Valve Sleeve Cover (5121-A).
    - c. Hurdle Sleeve Cover (5121-B).
- E. Spreader Bar (5118)
  - 1. 0.125in thick steel-formed channel, powder coated.

**PART 3: EXECUTION**

**3.01 INSTALLATION OF EQUIPMENT**

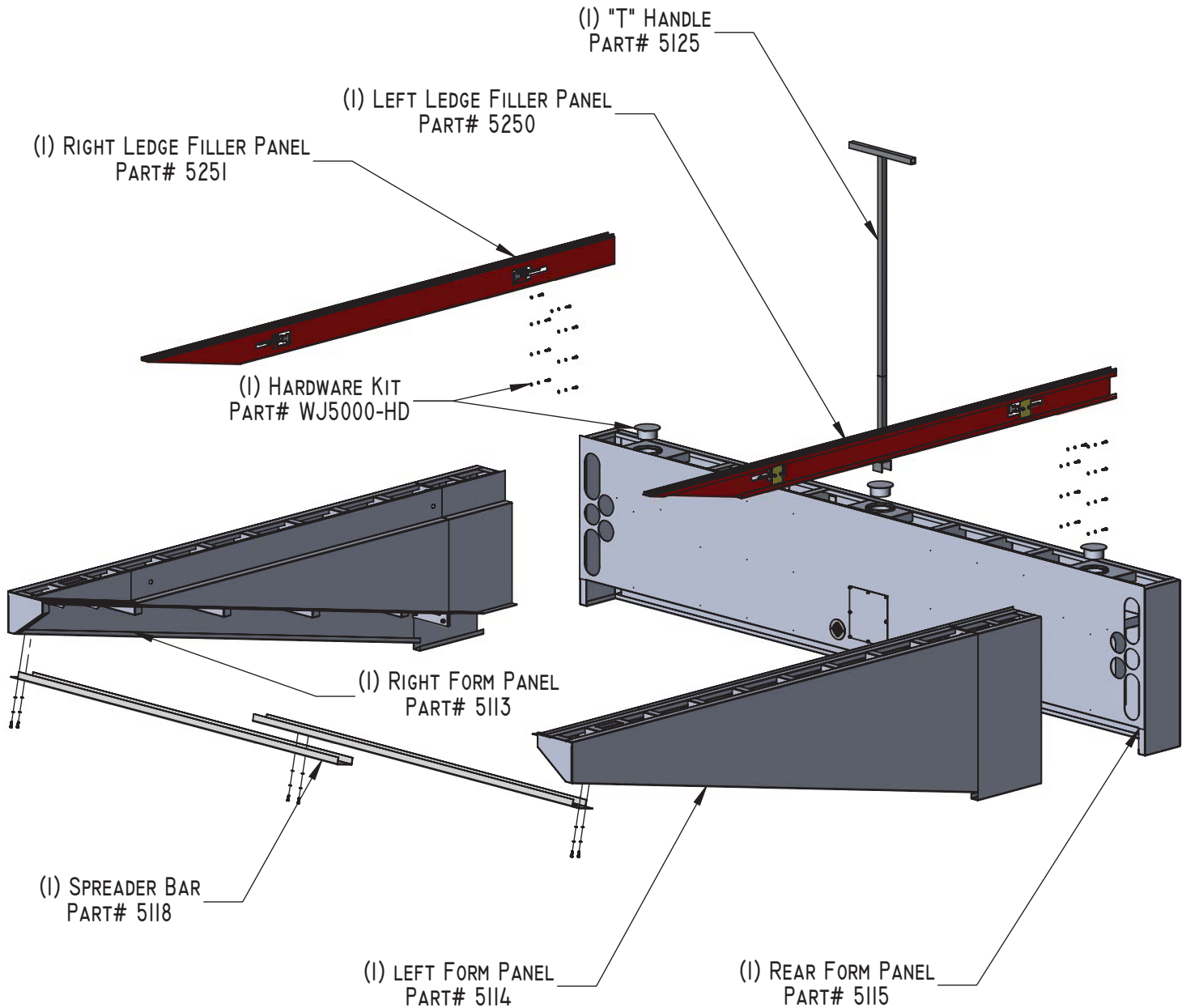
- A. All athletic equipment shall be installed as recommended with manufacturer's written directions, and as indicated on the drawings.

**END OF SECTION**



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PO BOX 231  
DELHI, NY 13753  
TOLL FREE: 888-975-3343  
FAX: 607-746-8481



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## WJ5000 WATER JUMP PIT STEEPLECHASE ELEVATION VIEW

NOT TO SCALE

PRODUCT WEIGHT: 510 LBS.

SPORTSFIELD SPECIALTIES INC 11012014

DESIGNED TO MEET THE DEMANDS  
OF MODERN SPORTS CONSTRUCTION

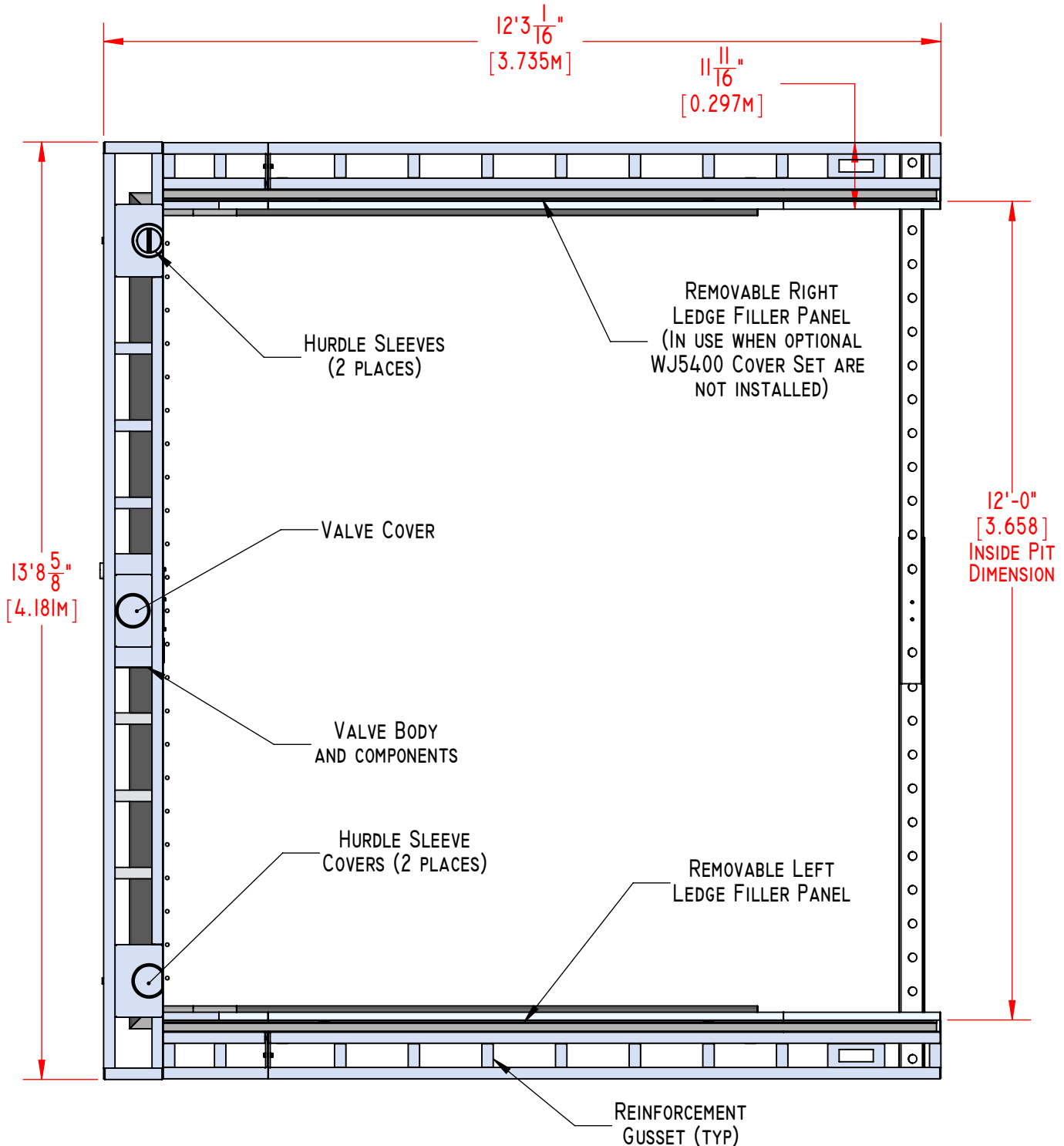


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TOLL FREE: 888-975-3343  
FAX: 607-746-8481



**MEETS 2015-2016 N.C.A.A. RULES**

NOTE: WJ5000 WATER JUMP PIT IS ALL ALUMINUM CONSTRUCTED.

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**WJ5000 WATER JUMP PIT WITH LEDGE FILLERS  
PLAN VIEW**

NOT TO SCALE

PRODUCT WEIGHT: 510 LBS.

SPORTSFIELD SPECIALTIES INC 04272015

DESIGNED TO MEET THE DEMANDS  
OF MODERN SPORTS CONSTRUCTION

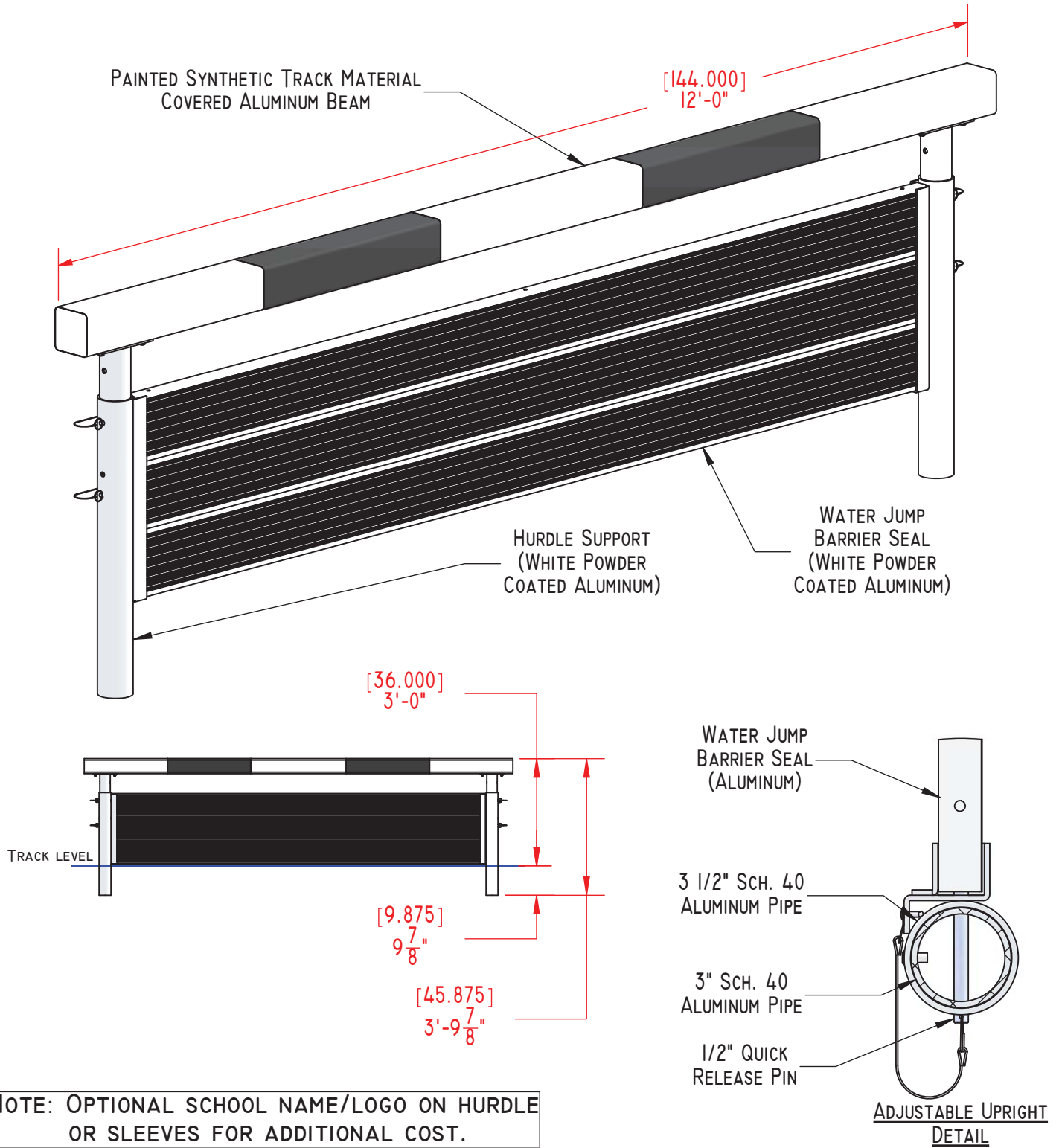


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DELHI, NY 13753  
TOLL FREE: 888-975-3343  
FAX: 607-746-8481



**NOTE: OPTIONAL SCHOOL NAME/LOGO ON HURDLE OR SLEEVES FOR ADDITIONAL COST.**

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**ADJUSTABLE STEEPLE CHASE HURDLE  
WJ5020 PLAN VIEW - MEN'S POSITION**

NOT TO SCALE

SPORTSFIELD SPECIALTIES INC 11012014

DESIGNED TO MEET THE DEMANDS  
OF MODERN SPORTS CONSTRUCTION

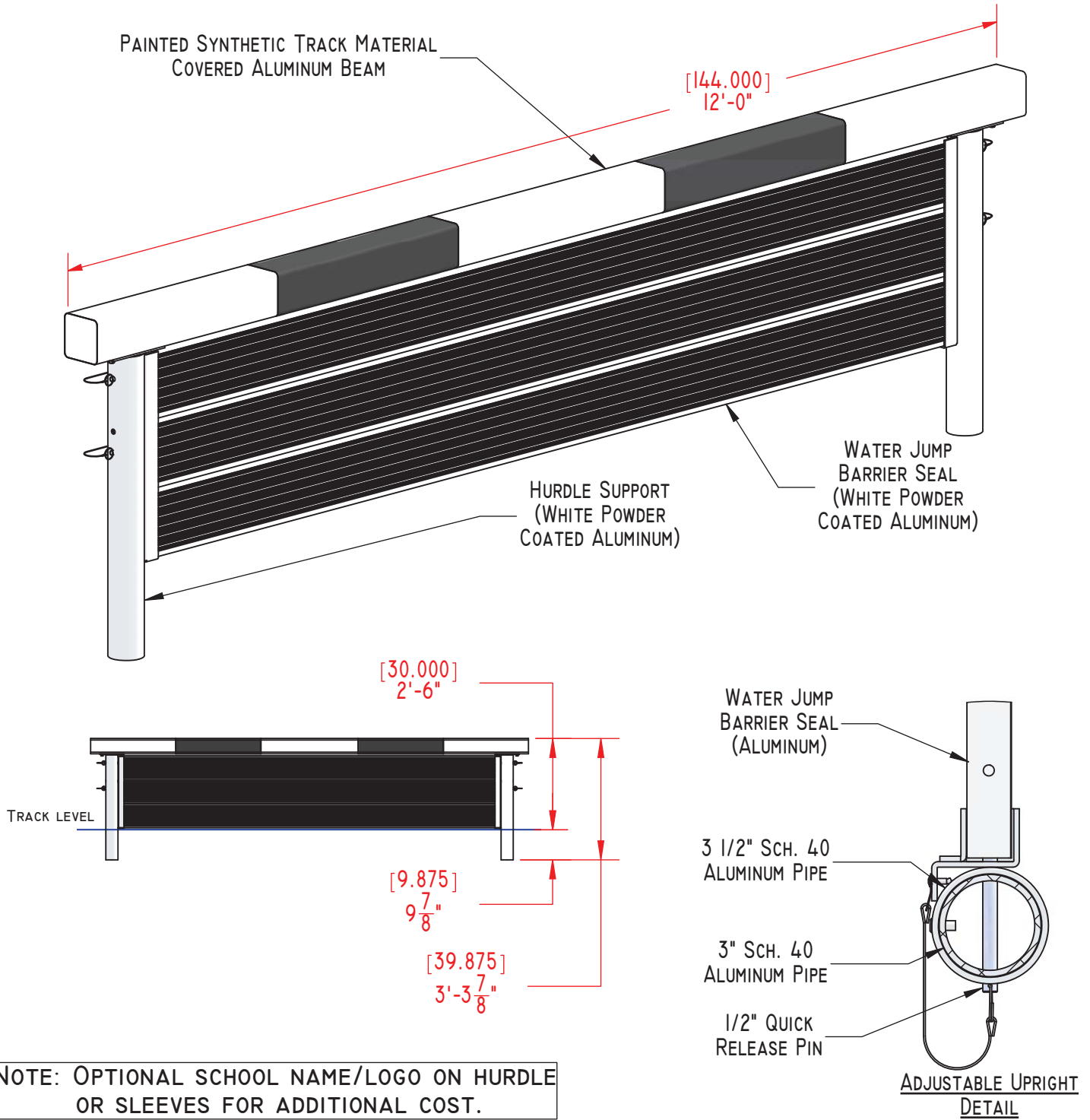


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**ADJUSTABLE STEEPLE CHASE HURDLE  
WJ5020 PLAN VIEW - WOMEN'S POSITION**

NOT TO SCALE

SPORTSFIELD SPECIALTIES INC 11012014

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OF MODERN SPORTS CONSTRUCTION

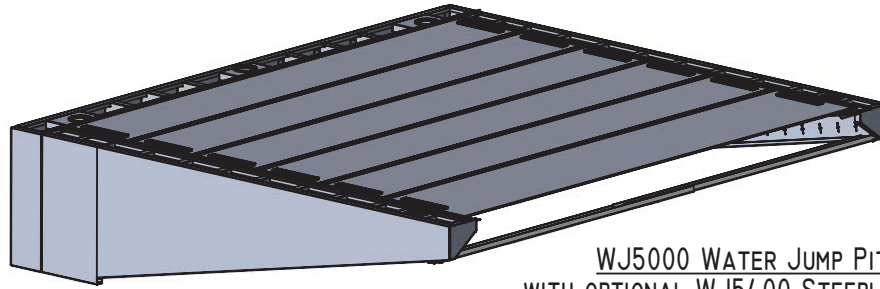
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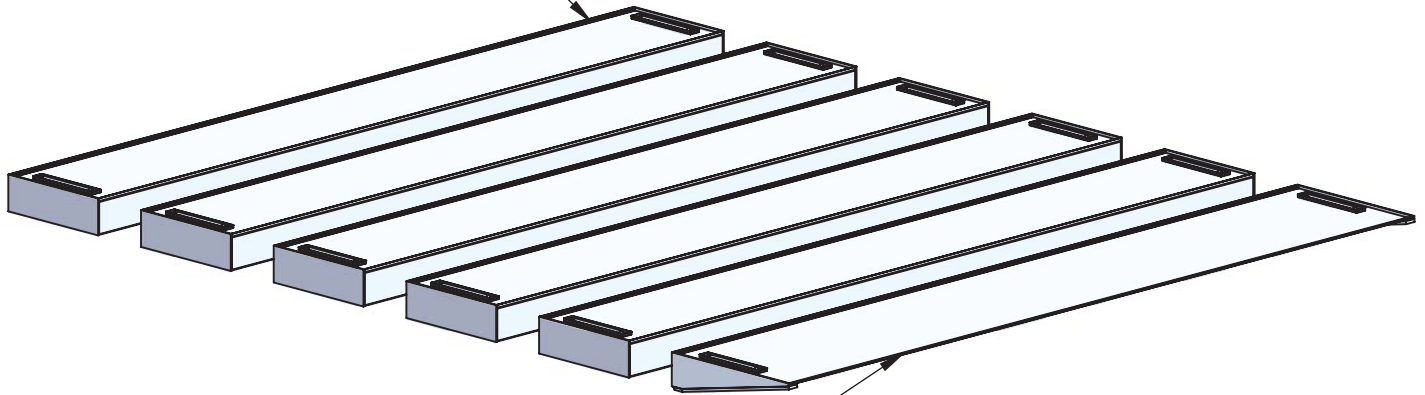
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WJ5000 WATER JUMP PIT  
WITH OPTIONAL WJ5400 STEEPLECHASE  
COVER SET

(5) STANDARD STEEPLECHASE COVER  
PART# 5401



(1) WEDGE COVER  
PART# 5402

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**WJ5400 STEEPLECHASE WATER JUMP  
PIT PANEL COVER SET**

NOT TO SCALE

PRODUCT WEIGHT: 540 LBS.

SPORTSFIELD SPECIALTIES INC 11012014

## **TFLTP012SS International 12" Long/Triple Jump Take-Off Board**

SECTION 11480 Athletic Equipment - Track & Field

### **PART 1 GENERAL**

#### **1.01 WORK INCLUDED**

**A.** Provide all equipment and materials, and do all work necessary to furnish and install the athletic equipment, as indicated on the drawings and as specified herein. Athletic equipment shall include, but not be limited to:

1. TFLTP012SS International 12" Take-Off Board

#### **1.02 RELATED WORK**

**A.** Examine contract documents for requirements that affect work of this section. Other specification sections that directly relate to the work of this section include, but are not limited to:

1. Section 02200 – Earthwork; Excavation and Backfill and establishment of sub-grade elevations.
2. Section 02511 – Asphalt, Concrete, and Pavement
3. Section 02535 – Synthetic Track Surfacing
4. Section 02542 – Synthetic Field Surfacing
5. Section 03300 – Cast-in-Place Concrete

#### **1.03 REFERENCES**

**A.** Comply with applicable requirements of the following standards. Where these standards conflict with other specified requirements, the most restrictive requirements shall govern.

1. National Federation of State High School Associations (NFHS)
2. National Collegiate Athletic Association (NCAA)
3. International Amateur Athletic Association (IAAF)
4. American Sports Builders Association (ASBA)
5. American Wood Preserver's Association (AWPA)
6. Manufacturers Data and Recommended Installation Requirements

#### **1.04 SUBMITTALS**

**A.** Manufacturers Product Data

1. Provide manufacturers product data prior to actual field

installation work, for Architects or Owners representatives review.

**B. Shop Drawings**

1. Provide drawings of the manufacturers recommended installation and foundation requirements prior to actual field installation work, for Architects or Owners representatives review.

**1.05 QUALITY ASSURANCE**

- A.** Manufacturers warranties shall pass to the Owner and certification made that the product materials meet all applicable grade trademarks or conform to industry standards and inspection requirements.

**1.06 PRODUCT DELIVERY AND STORAGE**

- A.** Materials delivered to the site shall be examined for damage or defects in shipping. Any defects shall be noted and reported to the Owners representative. Replacements, if necessary, shall be immediately re-ordered, so as to minimize any conflict with the construction schedule. Sound materials shall be stored above ground under protective cover or indoors so as to provide proper protection.

**PART 2 PRODUCTS**

**2.01 International 12" Long/Triple Jump Take-Off Board**

- A.** BASE: TFLTP012SS International 12" Take-Off Board as manufactured by:

Sportsfield Specialties Inc.  
P.O. Box 231  
41155 State Highway 10  
Delhi, NY 13753  
p. 888-975-3343  
f. 607-746-8481

**B. COMPONENTS:**

1. International Model # TFLT012SS, 12.0in 16 Gauge Stainless Steel Tray, with Stainless Steel insert containing double surface support, 0.75in White Synthetic Polyboard Board, 0.75in Yellow Synthetic Polyboard Foul Strip, Lift Handles for Insert Removal, Stainless Steel

Adjustment Bolts, and 2 lbs of 'Jolly King' Plasticene. Overall  
Dimensions: 2.81in x 12.0in x 48.0in

**PART 3 EXECUTION**

**3.01 INSTALLATION OF EQUIPMENT**

- A.** All athletic equipment shall be installed as recommended with manufacturer's written directions, and as indicated on the drawings.

**END OF SECTION**



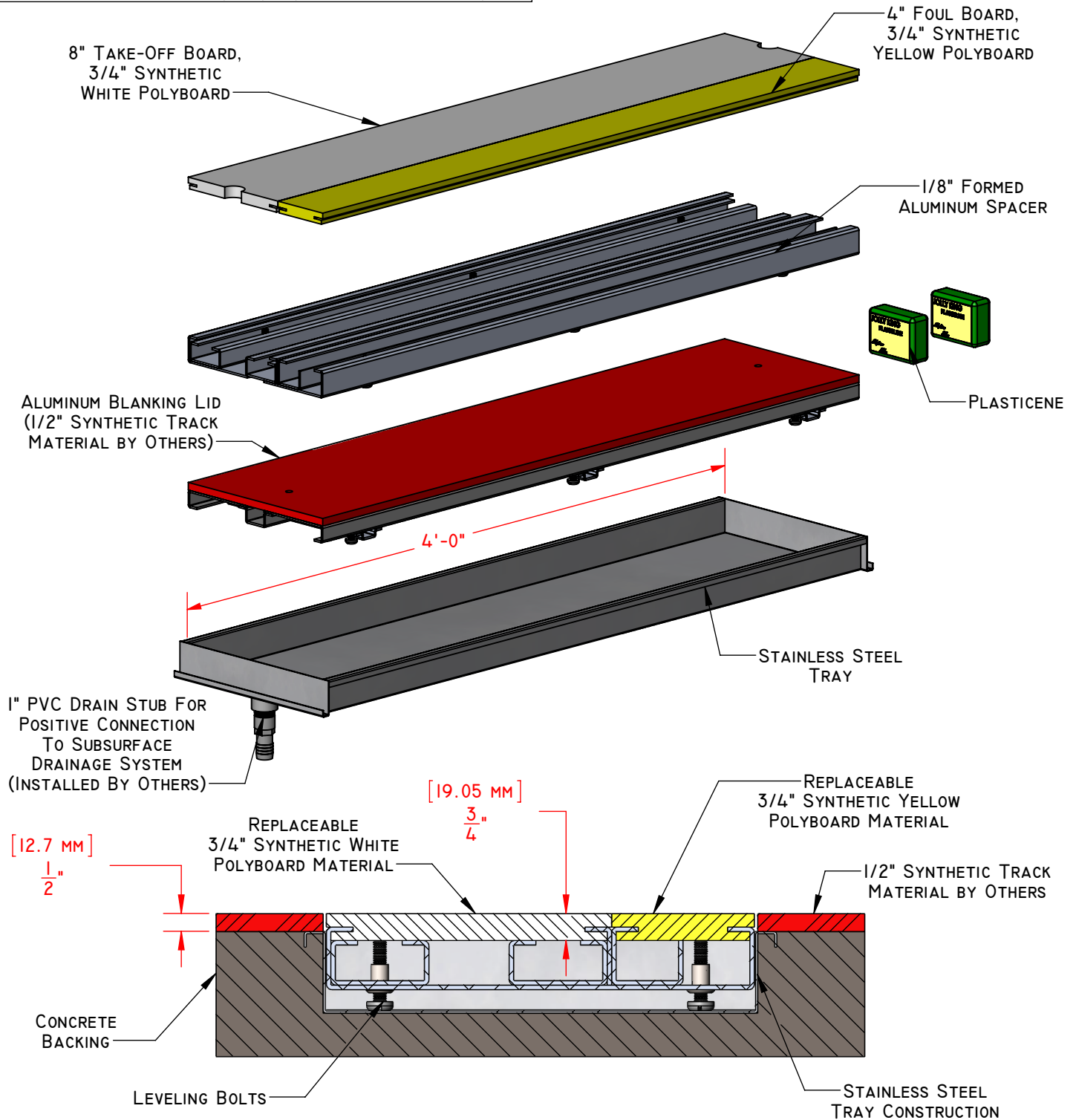
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UNITED STATES PATENT # 8,337,318, ISSUED DECEMBER 25, 2012



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**TFLTPO12SS-SYN - 12" LONG/TRIPLE JUMP TAKE-OFF BOARD SYSTEM  
WITH REPLACEMENT BLANKING LID**

NOT TO SCALE

SPORTSFIELD SPECIALTIES INC 02272015

DESIGNED TO MEET THE DEMANDS  
OF MODERN SPORTS CONSTRUCTION



41155 ST. HWY 10  
PO BOX 231  
DELHI, NY 13753  
TOLL FREE: 888-975-3343  
FAX: 607-746-8481



MADE FROM TWO INCH SQUARE (2" x 2") HEAVY GAUGE ALUMINUM TUBE

SECTIONS MEASURE TWENTY FEET (20') IN LENGTH AND ARE  
NUMBERED FOR EASE OF INSTALLATION

FORM FITTED AND MANUFACTURED TO EXACT TRACK SPECIFICATIONS  
FROM PROVIDED PROJECT LAYOUT DRAWINGS AND INFORMATION,  
\*REQUIRED-BY OTHERS\*

CURBING SPLITS 1/2" ABOVE SYNTHETIC TRACK SURFACE ON  
ANCHOR CLIPS FOR EFFICIENT DRAINAGE

ALUMINUM FINISH IS SILVER OR GOLD ANODIZED (ELECTROPLATED)

IAAF, NCAA, AND USATF RULES COMPLIANT

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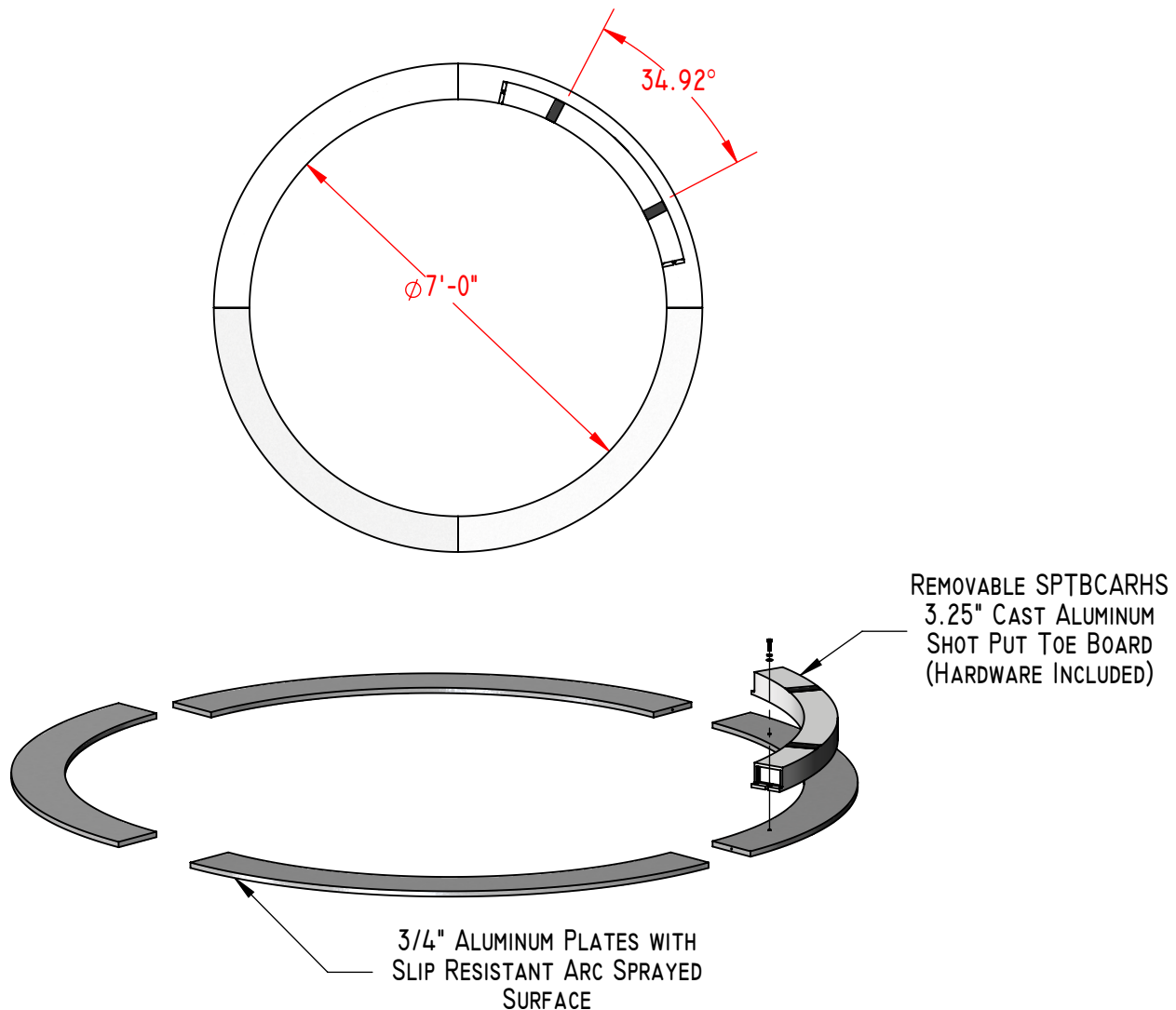
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**TF852A - GILL ATHLETICS ANODIZED ALUMINUM TRACK CURB**

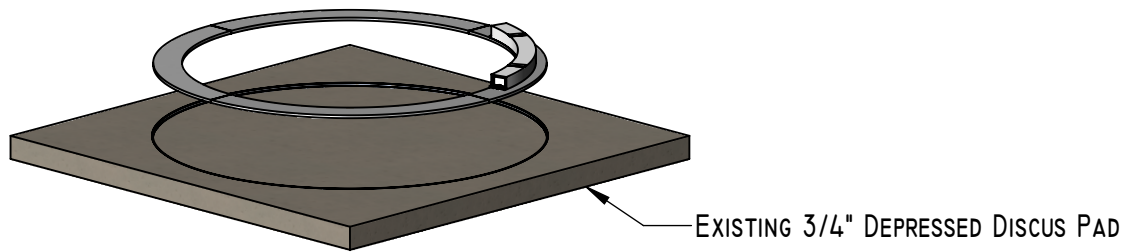
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STANDARD WHITE POWDER COATED FINISH



ASSEMBLY CONVERTS EXISTING DISCUS RING TO SHOT PUT/HAMMER RING



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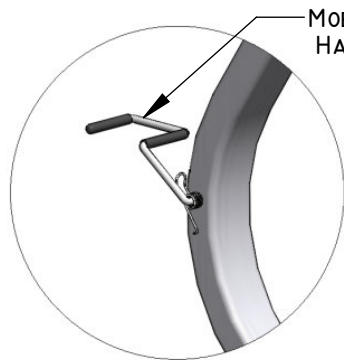
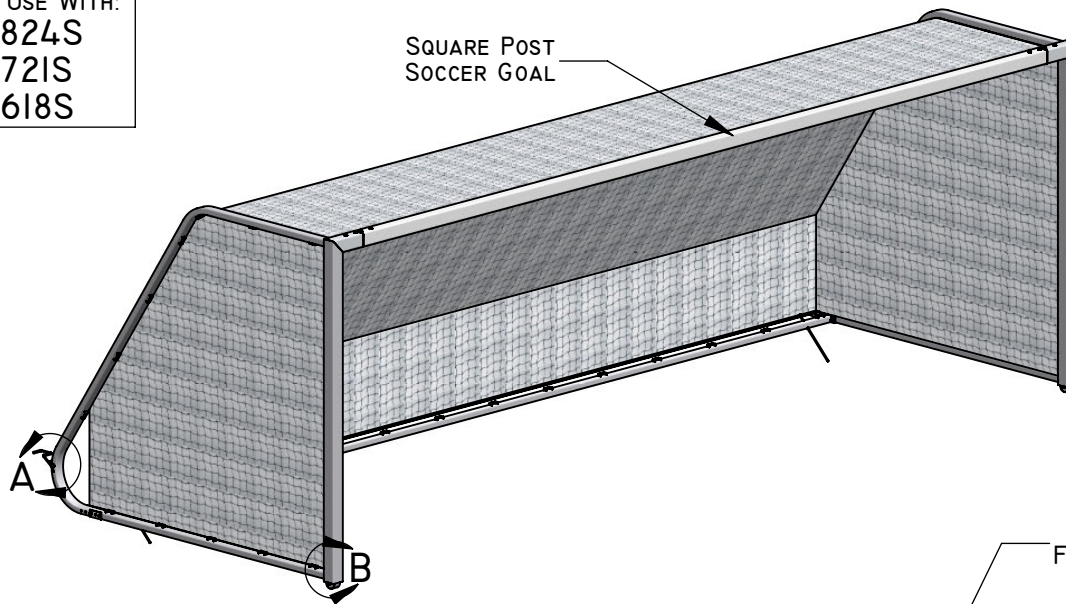
**TRSPHC (TFSPCR) - SHOT PUT/HAMMER CONVERSION RING**

NOT TO SCALE

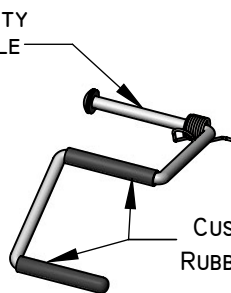
SPORTSFIELD SPECIALTIES INC 03282019

FOR USE WITH:  
SG824S  
SG721S  
SG618S

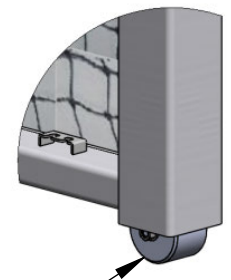
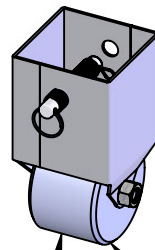
MOBILITY WHEEL KIT FOR  
USE WITH SYNTHETIC TURF  
OR NATURAL GRASS  
APPLICATIONS



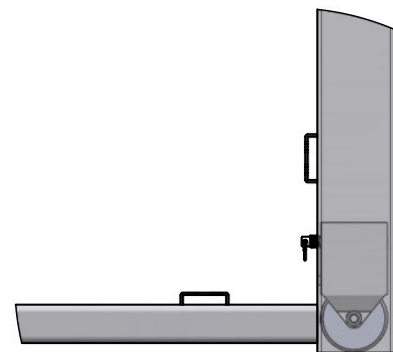
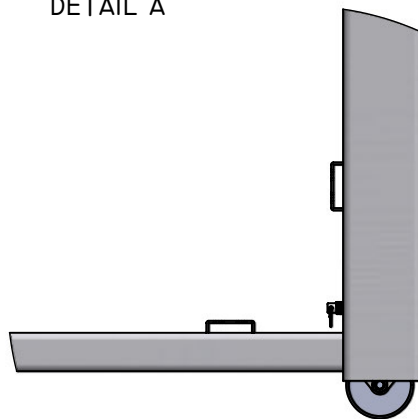
DETAIL A



U.H.M.W.  
PLASTIC ROLLER



DETAIL B



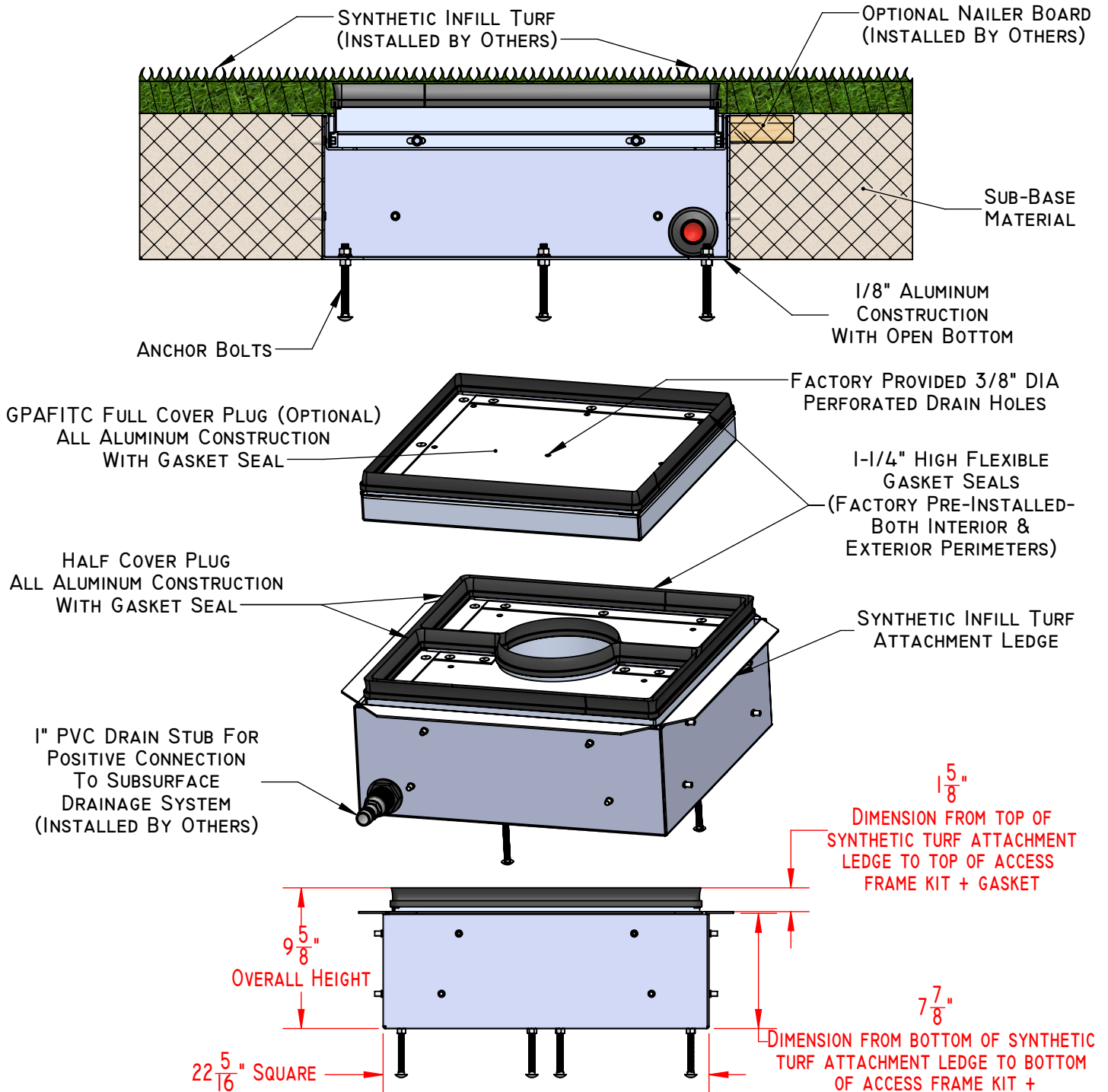
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**SGMKS (SG4905) SGMOBILE®  
SQUARE POST SOCCER GOAL INTEGRATED WHEEL KIT**

NOT TO SCALE

SPORTSFIELD SPECIALTIES INC 07262016

**GPAFIT Access Frame Kit + FOR USE WITH GROUND SLEEVE AND BASE PLATE MOUNT  
 ADJUSTRIGHT® FOOTBALL GOAL POSTS INSTALLED IN SYNTHETIC TURF APPLICATIONS**



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**GPAFIT (GP4570) ACCESS FRAME KIT + WITH INFILL  
 RETAINER SYSTEM FOR SYNTHETIC TURF APPLICATIONS**

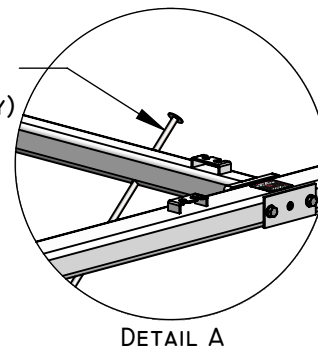
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SPORTSFIELD SPECIALTIES INC 08222017

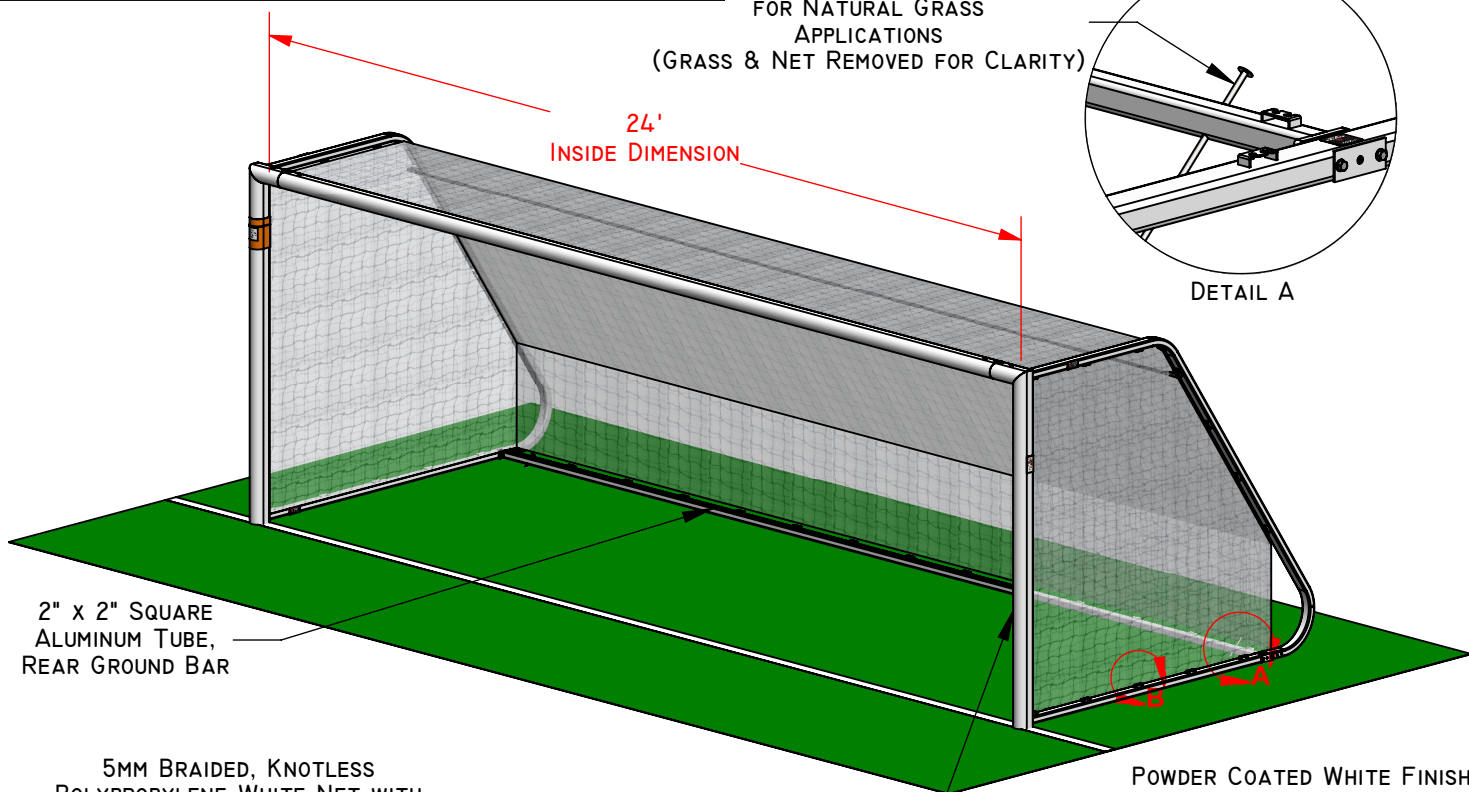
**OPTIONAL EQUIPMENT:**  
 SGMobile® INTEGRATED SOCCER GOAL WHEEL KIT - SGMKR  
 SOCCER GOAL SAFETY SYSTEM - SG2S®  
 UNITED STATES PATENT #7,331,880, ISSUED FEBRUARY 19, 2008  
 UNITED STATES PATENT #7,527,569, ISSUED MAY 5, 2009  
 UNITED STATES PATENT #8,777,784, ISSUED JULY 15, 2014

MEETS AND EXCEEDS ASTM F2950-14 STANDARD  
 SAFETY AND PERFORMANCE SPECIFICATION FOR  
 SOCCER GOALS AND ASTM F1938-98 STANDARD  
 GUIDE FOR SAFER USE OF MOVABLE SOCCER GOALS

ANCHORING PIN  
 FOR NATURAL GRASS  
 APPLICATIONS  
 (GRASS & NET REMOVED FOR CLARITY)



24'  
 INSIDE DIMENSION



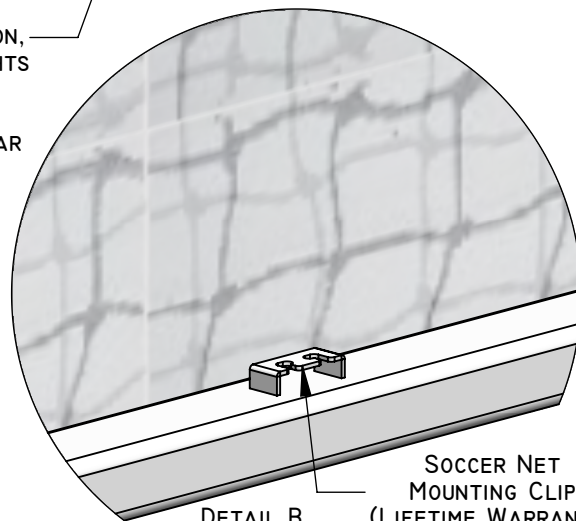
8'-0"

FINISH GRADE

3" x 2" RECTANGULAR ALUMINUM TUBE, END FRAMES

8'0" OR 8'-4"

FRONT OF POST TO REAR OF GROUND BAR



**PROPRIETARY AND CONFIDENTIAL**

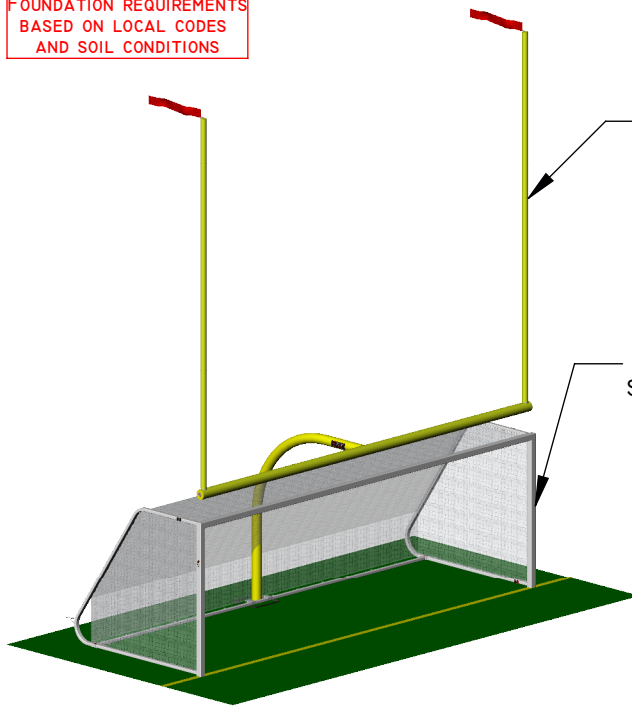
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**SG824R (SG4950) 8' x 24' REGULATION SIZE  
 ROUND FACED SOCCER GOAL**

NOT TO SCALE

SPORTSFIELD SPECIALTIES INC 08202018

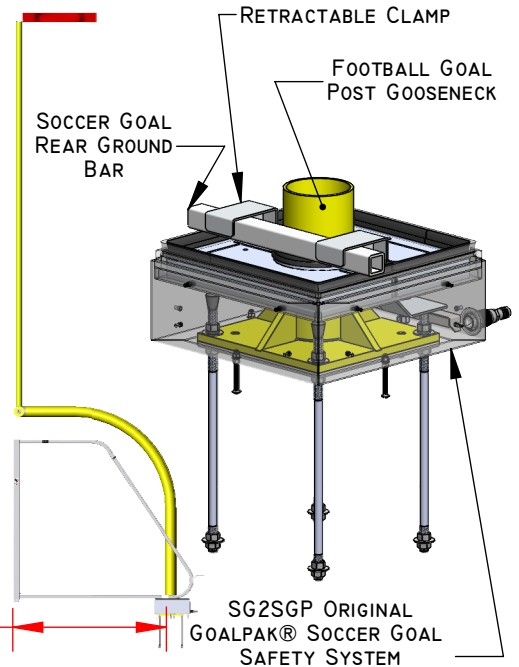
**FOUNDATION REQUIREMENTS  
BASED ON LOCAL CODES  
AND SOIL CONDITIONS**



ADJUSTRIGHT®  
FOOTBALL GOAL POST  
WITH 8' OFFSET GOOSENECK

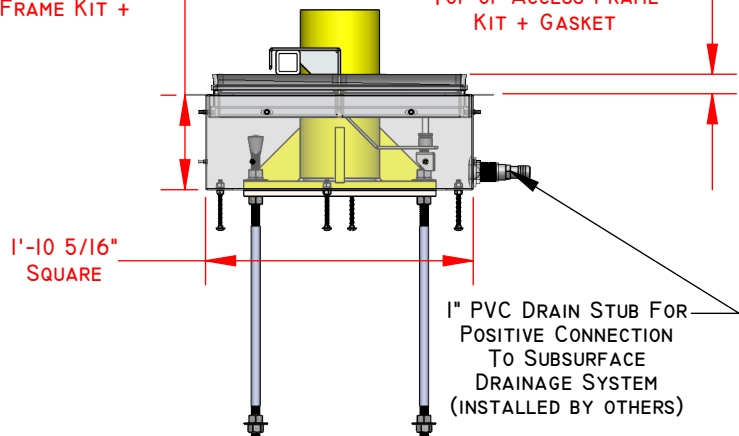
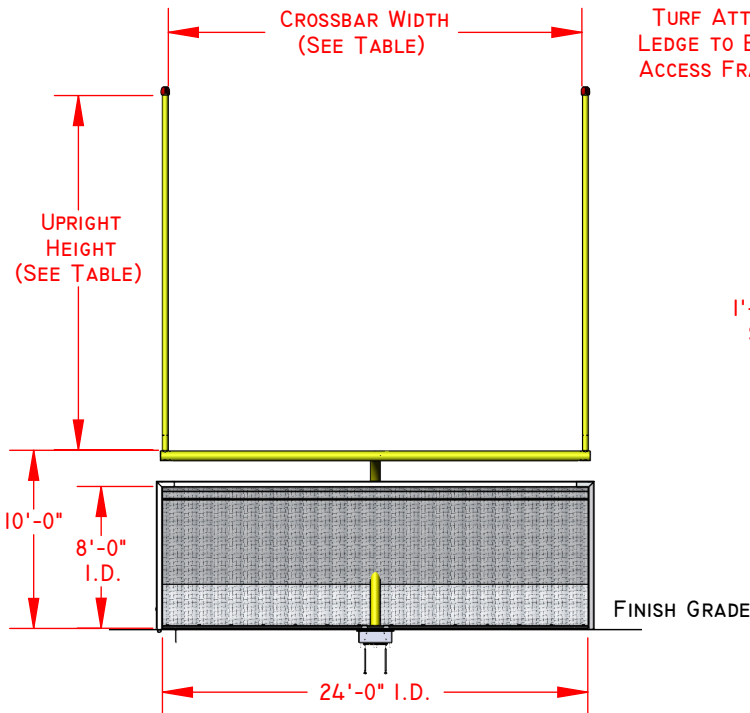
SG824S  
SQUARE POST SOCCER GOAL  
WITH SGMKS INTEGRATED  
SGMOBILE® WHEEL KIT

8'-0" OR 8'-4"  
FRONT OF SOCCER POST TO  
REAR OF BACK BAR  
(FRONT FACE OF GOOSENECK)



7 7/8"  
DIMENSION FROM  
BOTTOM OF SYNTHETIC  
TURF ATTACHMENT  
LEDGE TO BOTTOM OF  
ACCESS FRAME KIT +

1 5/8"  
DIMENSION FROM TOP OF  
SYNTHETIC TURF  
ATTACHMENT LEDGE TO  
TOP OF ACCESS FRAME  
KIT + GASKET



PART NO.	UPRIGHT HEIGHT	MODEL	CROSSBAR WIDTH (I.D.)
GPKS20ADJPL	20'-0"	ADJUSTABLE	18'-6" / 23'-4"
GPKS20COLPL	20'-0"	COLLEGE	18'-6"
GPKS20HSPL	20'-0"	HIGH SCHOOL	23'-4"
GPKS30ADJPL	30'-0"	ADJUSTABLE	18'-6" / 23'-4"
GPKS30COLPL	30'-0"	COLLEGE	18'-6"
GPKS30HSPL	30'-0"	HIGH SCHOOL	23'-4"

**PROPRIETARY AND CONFIDENTIAL**  
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**ORIGINAL GOALPAK® FOOTBALL / SQUARE SOCCER GOAL SYSTEM, BASE PLATED MOUNTED**

NOT TO SCALE

SPORTSFIELD SPECIALTIES INC I2082017



THE ULTIMATE  
SURFACE EXPERIENCE

Attachment 4 - Category 3 - Running Track, Tennis and Athletic Courts Specs  
- FieldTurf USA, Inc.





## **eynon Sports – FastTrac Maintenance Program**

Designed to keep your track looking great, Beynon Sports FastTrack Maintenance Program offers the following options for your running track surface:

- Track Cleaning – one time visit to clean your running track
- Track Restripe – one time visit to restripe your existing track line and event markings
- Clean & Restripe – one time visit to clean and restripe your running track
- 3 Year Maintenance Program
  - Includes annual track surface inspections
  - Two deep surface track cleanings and one dry sweep in alternating visits
  - One restripe of all existing lane lines and event markings

\*Contact your Beynon Sports representative for program pricing and scheduling\*



Bidder: FieldTurf USA, Inc.

G.3

6 yr warranty

## **½" RED POLYRESIN TRACK SYSTEM**

### **1.0 DESCRIPTION**

This specification covers the installation of a new, high performance resilient track surfacing system for new asphalt surfaces. This track system utilizes specially compounded, pigmented, water-based binders and both EPDM and SBR rubber granules to provide strength, flexibility and to prevent ultra violet degradation. Multiple topcoats are applied to further protect against harmful UV rays and to reduce wear. The system provides a durable, resilient, spike resistant surface for recreational and competitive use.

NOTE: The success of the running track surface is dependent on a sound base (with good drainage) and the asphalt concrete meeting the requirements of The National Asphalt Paving Association and the American Sports Builders Association. Variations of the existing asphalt subsurface should not exceed 1/8" in 10' when measured in any direction with a straightedge.

**2.0 MATERIALS** – All liquid products shall be supplied by one manufacturer.

**2.1 Court Patch Binder**

**2.2 Latex tack coat**

**2.3 Polyresin Binder** – (Red).

**2.4 Rubber Granules** – Select granules for base layers approved by the manufacturer (Black).

**2.5 EPDM Granules** – Select granules for top layers approved by the manufacturer. (Red)

**2.5 Polyresin Coating** – (Red).

**2.6 Line Paint**

**2.7 Pigment** – Water-borne pigment for enhanced color depth (Red).

**2.8 Water** – The water used in all mixtures shall be fresh and potable.

# **TOP COAT**

## **Product Specifications**

G.3 - Bidder: FieldTurf USA, Inc.

### **PART 1 – GENERAL**

#### **1.1 SUMMAR**

- A. Product Name: TOP COAT.
- B. Product Description: Pour-in-place, all-weather synthetic track re-surface consisting of polymer resin binders and rubber granules.
- C. Scope of Work: Furnish all required labor, materials and equipment to successfully install the specified all-weather synthetic track surface including striping and markings.

#### **1.2 RELATED OR**

- A. Earthwork
- B. Drainage
- C. Asphaltic Concrete Paving
- D. Cast-in-Place Concrete
- E. Synthetic Turf

#### **1.3 REFERENCE STANDARDS**

- A. The work shall conform to the standards for track construction as prescribed or approved by the appropriate governing body; NFHS, NCAA, or IAAF.
  - 1. NFSHSA *Track and Field Rules*.
  - 2. ASBA *Running Tracks Construction and Maintenance Manual*.

#### **1.4 SU MITTALS**

- A. Product Data
- B. Striping Diagram
- C. Operation and Maintenance Manual
- D. Warranty

#### **1.5 UALIT ASSURANCE**

- A. Synthetic surfacing contractor (SSC) shall be licensed and bonded and possess a valid contractor's license in the state where Work is performed.
- B. SSC shall have a minimum of 5 years experience installing the specified all-weather track surface under the same corporate name as current operations.

## 1.6 PROJECT CONDITIONS

- A. SSC, General Contractor (GC) and/or Owner, shall conduct a pre-construction meeting to review project conditions prior to dispatch of the SSC's installation team.
- B. Synthetic surface base.
  - 1. The base surface shall meet the standards set by the Architect/Engineer and described in the product specifications.
  - 2. Allow minimum of 14 days cure on new asphalt, 28 days cure on new concrete prior to application of specified synthetic track surface.
  - 3. Repair work required on the base shall be approved by the Architect/Engineer.
  - 4. GC and/or Owner shall be responsible to protect the base from activities and traffic that may damage the base or leave dirt, oil or other foreign material on the base prior to application of the synthetic track surface.
- C. Weather
  - 1. Apply the synthetic track surface only during favorable weather conditions.
  - 2. No application of the synthetic track surface shall be conducted during rainfall, when rain is imminent, when freezing temperatures are forecasted or exist, or when gusting winds are occurring.
  - 3. Work is to progress only when the SSC can guarantee successful cure of the materials.
- D. During surface installation and striping, all irrigation systems shall be shut-off or controlled so that no water falls on the track or event areas.
- E. During set-up, installation and striping, the GC and/or Owner shall be responsible to have the entire track and other pertinent areas closed and secured of all activities 24 hours per day until completion of the project.

## 1.7 WARRANTY

- A. Manufacturer's and Installer's Warranty
  - 1. The warranty on the all-weather synthetic track surface shall endure for one (1) year from completion of installation.
  - 2. The warranty is to be provided directly by the SSC to the Owner.
  - 3. The warranty shall cover defects in materials and workmanship not deemed as ordinary wear on a running track.
- B. Warranty Bond not required.

## PART 2 – PRODUCTS

### 2.1 MANUFACTURERS

- A. Beynon Sports Surfacing, 19495 SW Teton Ave., Tualatin, OR 97092,  
Tel: 503-691-2484, Fax: 503-692-0491, [www.beynonssports.com](http://www.beynonssports.com)

### 2.2 MATERIALS

- A. Rubber
  - 1. Top-coat rubber shall be SBR granules with a 1.0-4.0mm gradation.
  - 2. SBR color shall be black

- B. Binder
  - 1. Top-Coat primer shall be a polymer resin compatible with base course materials.
  - 2. Top-Coat binder shall be polymer resin containing a minimum of 50% solids.
  - 3. Polymer resin shall be pigmented black.
  
- C. Marking and Line Paint
  - 1. The paint shall be formulated to be compatible with synthetic track surface materials.
  - 2. Colors shall be as prescribed or approved by the appropriate governing body; NFHS, NCAA, or IAAF.

## **PART 3 – E ECUTION**

### **3.1 E AMINATION**

- A. SSC shall examine project conditions to ensure successful installation of the synthetic track surface. Any deficiencies shall be reported to the GC and/or Owner for corrective action.

### **3.2 PREPARATION**

- B. SSC to protect adjacent areas from contamination of synthetic track surfacing materials due to installation procedures.
  
- C. SSC shall prepare the base surface using a power blower to remove surface dirt. Cleaning necessary to remove embedded dirt, oil, or other foreign material shall be the responsibility of the GC and/or Owner.

### **3.3 INSTALLATION**

- A. General
  - 1. The Top-Coat shall be installed using the “rake and spray” method. “Batching” of rubber and binder, “wet spraying” binder and rubber, or other methods used to reduce the number of layers applied are not allowed.
  - 2. Top-Coat shall be installed in a minimum of three layers.
  - 3. Materials shall be applied in even layers with equipment specifically designed for the installation of resilient surfacing. Thorough curing between each layer is required before successive coats are applied.
  - 4. Top-Coat shall consist of a minimum quantity of 1.8 pounds per square yard of specified rubber granules and not less than 2.2 pounds per square yard of polymer resin.
  
- B. Striping
  - 1. Striping Contractor shall verify with Owner’s representative the exact locations, size, shape, and color of the lines and markings before proceeding with striping and markings.
  - 2. Engineer the layout of lane lines, starting lines, and markings as prescribed or approved by the Owner’s representative, Architect/Engineer and the appropriate governing body; NFHS, NCAA, or IAAF.
  - 3. All lines and markings shall be spray applied by experienced personnel utilizing equipment manufactured for line striping. Striping lines and markings shall have true sharp edges.

### 3.4 CLEANING

- A. Upon completion of work remove all containers, surplus materials, and installation debris.
- B. Leave area of work in clean orderly condition ready for use by Owner.

02/11/09  
Product Specifications\09T-C.doc



### 3.0 SURFACE PREPARATION

3.1 Prior to the application of surfacing materials, the entire surface should be flooded and checked for minor depressions or irregularities. Any puddled area covering a nickel shall be marked and repaired with Court Patch Binder. After patching, the asphalt surface shall not vary more than 1/8" in 10' measured in any direction.

### 4.0 CONSTRUCTION

Allow all patchwork to dry thoroughly. The surface to be coated must be sound, smooth and free from dust, dirt, or oily materials.

4.1 **Primer Coat** – A tack coat of must be applied over the entire surface at a rate of .04 gal./s.y. Allow to dry thoroughly.

4.2 **Track Surface** – Materials shall be applied to achieve a dense uniform surface of 1/2", in not less than six layers. The binder must be evenly distributed amongst the rubber granules upon the application of materials. Coverage rates:

<b>Granule Color:</b>	<b>Thickness:</b>	<b>Rubber Granules Weight:</b>	<b>Binder (Red):</b>
Black (SBR)	3/8" (9.5MM)	10.5 lbs./s.y.	.60 gal./s.y.
Red (EPDM)	1/2" (12.5MM)	5 lbs./s.y.	.27 gal./s.y.

Coverage rate based on undiluted product. Binder to rubber ratio shall be 1 gallon Polyresin binder per 18 lbs. of rubber granules.

To further enhance color depth, it is recommended to add 5 gallons of pigment to each 300 gallon tote of binder on the final spray coat. Pigment is a water-borne colorant.

The coverage rate for rubber granules is dependent on the specific gravity (density) of the rubber and the installation method of the surfacing system. Different densities will affect the dry bulking value of the rubber, which determines the weight per square yard for a specified thickness. The specific gravity for rubber particles can vary between colors, size, and manufacturers. It is recommended to consult the manufacturer for more information. Also, different application methods can affect the overall system density requiring lower or higher volumes of product. System weights and volumes shall be verified by on site sample methods.

4.3 **Top Coat** – Polyresin Coating shall be applied by approved spray equipment at a rate of not less than .10 gallons per square yard.

4.4 **Line striping** – Line paint shall be applied to meet all rules and regulations of the local track federation.

## 5.0 LIMITATIONS

- No part of the construction shall be conducted during rainfall or when rain is imminent.
- Allow 4-5 hours to cure at least 70F. Lower temperature and higher temperature will increase the drying time.
- Do not apply when surface temperature is above 130F.
- Apply only when ambient temperature is 50F and rising.
- Keep from freezing. Do not store in the hot sun.
- The Polyresin Track System will not prevent pavement cracks from occurring.
- Allow applications to thoroughly cure prior to subsequent applications.
- Use caution when applying materials near adjacent areas. Mask when necessary to prevent over spray.
- Allow new asphalt to cure for a minimum of 14 days.

## 6.0 PHYSICAL PROPERTIES

6.1 The polyresin binder is a high solids pigmented binder containing special fibers to promote strength. It is capable of drying/curing to a depth of 10mm in a single lift when mixed at the specified levels of 1-3mm rubber granules:

Viscosity > 90 ku or >1200 cps    Pigment and Filler > 6% total formula

6.2 The polyresin coating is a fully pigmented acrylic topcoat system designed to have a high resistance to ultraviolet light. It is made from acrylic resins specifically designed for track surfaces to provide a tough, long lasting surface that can withstand the elements. It should be applied in 2 coats at a coverage rate of .05 gal./s.y. per coat.

6.3 **Rubber Properties:** 1-3mm Sieve Analysis – other sieve sizes may be used to achieve a different surface texture or force reduction characteristic; at the discretion of the owner and/or installer. Rubber supply can vary.

Mesh	M.M.	% Retained	Specific Gravity: Hardness: Shore A, 55-75 durometer
6	3.36	0-15%	Black Rubber Granules: 1.15-1.40
10	2.00	60-85%	Color EPDM Rubber Granules: 1.40-1.60
18	1.00	10-30%	
PAN 1.00	0-5%		



**BSS 300RE**  
**Seal Coat & Embedded Wear Layer Resurfacing**  
**Synthetic Track Surfacing System Specifications**

**Part 1 – General**

**1.1 Scope**

- A. The synthetic surfacing contractor shall furnish all labor, materials, equipment, supervision, and services necessary for the proper completion of all **BSS 200RE Seal Coat & Embedded Wear Layer Resurfacing** and related work indicated on the drawings and specified herein.
- B. The synthetic surfacing contractor shall refer to the drawings for the required locations of synthetic track surfacing to be installed. All quantities and dimensions shall be field verified by the synthetic surfacing contractor.

**1.2 Specific Scope of Work**

- A. Install an impermeable polyurethane synthetic track system comprised of an impermeable layer (seal coat) of a two-component urethane, and topped with a poured-in-place, two-component U.V. stabilized elastomeric polyurethane wearing layer with an Embedded textured finish.
- B. Layout and paint all track lines and event markings as required and specified by current IAAF and NCAA rules.

**1.3 Coordination**

- A. The synthetic surfacing contractor shall coordinate the work specified with an authorized and appointed representative of the owner so as to perform the work during a period and in a manner acceptable to the owner.

**Part 2 – Quality Assurance**

**2.1 Contractor and Manufacturer Qualifications**

- A. The CONTRACTOR and the MANUFACTURER must be the same.
- B. The CONTRACTOR must have a minimum of 10 years' experience in the installation of poured-in-place, two-component elastomeric polyurethane synthetic track surfacing.

- C. The CONTRACTOR shall be able to furnish evidence that they have been in business for a period of not less than 3 years, under the present name, and if required, furnish financial statements for each of the past 3 years.
- D. The CONTRACTOR must have installed a minimum of 10 outdoor track facilities in the last 2 years using the exact, poured-in-place, two-component elastomeric polyurethane synthetic track resurfacing, as specified herein with the contractor bidding this project.
- E. The MANUFACTURER must have a minimum of 10 years of experience with compound two-part polyurethane for athletic surfaces.
- F. CONTRACTOR is to provide a list of completed facilities, minimum of 10 which are certified to meet IAAF/NCAA rules & regulations, utilizing the same product as specified.
- G. The MANUFACTURER must offer a minimum of six (6) IAAF Certified Track Systems.
- H. All polyurethane components must be MANUFACTURED in the United States in an ISO 9001:2008 Certified facility to ensure the highest quality materials.
- I. The CONTRACTOR must have installed a minimum of two (2) Class I IAAF Certified outdoor tracks within the United States.

### **3.2 Submittals**

The following submittals must be received with bid submittal:

- A. Standard printed specifications of the synthetic track surfacing system to be installed on this project.
- B. An affidavit attesting that the synthetic track surfacing material to be installed meets the requirements defined by the manufacturers currently published specifications and any modifications outlined in those technical specifications.
- C. A synthetic track surfacing system sample, 12" x 12" in size, of the same synthetic track surfacing system to be installed on this project.
- D. A list of completed facilities, including the installing supervisor, of the exact Dual Durometer synthetic track surfacing system

### **Part 3 – Materials**

#### **4.1 Elastomeric Polyurethane**

- A. BEYPUR, the two-component U.V. stabilized elastomeric polyurethane compounded from polyol and isocyanate components, based on one hundred percent (100%) Methylene Diphenyl Isocyanate (MDI). No Toluene Diisocyanate Isocyanate (TDI) will be allowed.
- B. The elastomeric polyurethane shall be red in color.

#### **4.2 EPDM Granulate**

- A. The EPDM granulates shall be approximately 1 to 3mm in size
- B. The EPDM granulates and the U.V. stabilized elastomeric polyurethane shall be color matched.

#### **4.3 Seal Coat**

- A. BEYPUR 200, the two-component polyurethane resin for this application, shall be pigmented to match the color of the wear coat. The material shall be applied by a squeegee to insure that the black mat is sealed.

#### **4.4 Line Marking Paint**

- A. Manufacturers recommended pigmented line paint.

### **Part 4 – Installation**

#### **4.1 Surface Preparation**

- A. Prior to the application of the resurfacing layer, the existing polyurethane surface shall be inspected for conformity to planarity requirements. The surface shall not deviate more than 1/8 inch in 10 feet from the specified grade when checked with a 10-foot straightedge. An impermeable polyurethane surface may also be flooded with water to determine if any “bird baths” or low areas exist.
- B. The owner should verify that the surface tolerances meet all specifications issued by the appropriate sanctioning or governing body such as IAAF, NCAA, NFSHSA, TAC, etc.

- C. The area to be surfaced shall be clean and free of any loose or foreign particles (dirt, oil, etc.) prior to the commencement of work. The surface is usually cleaned by use of a power blower and high-pressure washer.

#### **4.2 Thickness**

- A. The thickness of the **BSS 300RE Seal Coat & Embedded Wear Layer** shall be 5mm.

#### **4.3 Equipment**

- A. The **BSS 300RE Seal Coat & Embedded Wear Layer Resurfacing** components shall be processed and installed by specially designed machinery and equipment. The wearing course shall be installed using automatic electronic portioning, which provides continuous mixing and feeding for an accurate, quality controlled installation.

#### **4.4 Installation**

- A. Seal Coat

The two BEYPUR 200 components are mixed at the prescribed ratio homogeneously with a suitable mixing device. The coating is squeegee applied to the base mat, making it impermeable.

- B. Wearing Course

The 1 to 3mm EPDM granules shall be integrated into the BEYPUR to achieve the full depth of the 5 mm wearing course. The resilient embedded textured finish shall be a dense matrix of exposed EPDM granules. The homogeneous wearing course shall be applied in situ with the base course.

#### **4.5 Site Conditions**

- A. Installation shall not take place if adjacent or concurrent construction generates excessive dust, abrasives or any other by-product that, in the opinion of the installer, would be harmful to the track material, until completion of such works.
- B. If, in the opinion of the installer of the synthetic material, the weather and/or climatic conditions are detrimental to the proper installation of the surfacing materials, work shall be delayed until conditions are acceptable. Preferred installation temperature is fifty degrees Fahrenheit and rising. Installation shall be executed only in dry conditions.

## **Part 5 – Line Striping and Event Markings**

### **5.1 Layout**

- A. Line striping and event markings shall be laid out in accordance with current IAAF and NCAA rules.

### **5.2 Certification**

- A. Upon completion of the installation, the owner shall be supplied with all necessary computations and drawings as well as a letter of certification attesting to the accuracy of the markings.

## **Part 6 – Guarantee**

- A. Synthetic track surfacing system shall be fully guaranteed against faulty workmanship and material failure for a period of five (5) years from the date of acceptance.
- B. Synthetic surfacing material found to be defective as a result of faulty workmanship and/or material failure shall be replaced or repaired at no charge, upon written notification within the guarantee period.

END OF SECTION

**BSS 200RE**  
**Seal Coat & Structural Spray Resurfacing**  
**Synthetic Track Surfacing System Specifications**

**Part 1 – General**

**1.1 Scope**

- A. The synthetic surfacing contractor shall furnish all labor, materials, equipment, supervision, and services necessary for the proper completion of all **BSS 200RE Seal Coat & Structural Spray Resurfacing** and related work indicated on the drawings and specified herein.
- B. The synthetic surfacing contractor shall refer to the drawings for the required locations of synthetic track surfacing to be installed. All quantities and dimensions shall be field verified by the synthetic surfacing contractor.

**1.2 Specific Scope of Work**

- A. Install an impermeable polyurethane synthetic track system comprised of an impermeable layer (seal coat) of a two-component urethane, and topped with BEYPUR, a spray-applied coating of single-component polyurethane, and EPDM granules.
- A. Layout and paint all track lines and event markings as required and specified by current IAAF and NCAA rules.

**1.3 Coordination**

- A. The synthetic surfacing contractor shall coordinate the work specified with an authorized and appointed representative of the owner so as to perform the work during a period and in a manner acceptable to the owner.

**Part 2 – Quality Assurance**

**2.1 Contractor and Manufacturer Qualifications**

- A. The CONTRACTOR and the MANUFACTURER must be the same.
- B. The CONTRACTOR must have a minimum of 10 years' experience in the installation of poured-in-place, two-component elastomeric polyurethane synthetic track surfacing.

- C. The CONTRACTOR shall be able to furnish evidence that they have been in business for a period of not less than 3 years, under the present name, and if required, furnish financial statements for each of the past 3 years.
- D. The CONTRACTOR must have installed a minimum of 10 outdoor track facilities in the last 2 years using the exact, poured-in-place, two-component elastomeric polyurethane synthetic track resurfacing, as specified herein with the contractor bidding this project.
- E. The MANUFACTURER must have a minimum of 10 years of experience with compound two-part polyurethane for athletic surfaces.
- F. CONTRACTOR is to provide a list of completed facilities, minimum of 10 which are certified to meet IAAF/NCAA rules & regulations, utilizing the same product as specified.
- G. The MANUFACTURER must offer a minimum of six (6) IAAF Certified Track Systems.
- H. All polyurethane components must be MANUFACTURED in the United States in an ISO 9001:2008 Certified facility to ensure the highest quality materials.
- I. The CONTRACTOR must have installed a minimum of two (2) Class I IAAF Certified outdoor tracks within the United States.

### **3.2 Submittals**

The following submittals must be received with bid submittal:

- A. Standard printed specifications of the synthetic track surfacing system to be installed on this project.
- B. An affidavit attesting that the synthetic track surfacing material to be installed meets the requirements defined by the manufacturers currently published specifications and any modifications outlined in those technical specifications.
- C. A synthetic track surfacing system sample, 12" x 12" in size, of the same synthetic track surfacing system to be installed on this project.
- D. A list of completed facilities, including the installing supervisor, of the exact Dual Durometer synthetic track surfacing system

### **Part 3 – Materials**

#### **4.1 EPDM Granules**

- A. The rubber granules for the BEYPUR structural spray wearing coats shall be EPDM, synthetic rubber containing a minimum 20% EPDM resin, with a specific gravity of  $1.5 \pm 0.1$  g/cm<sup>3</sup>. The EPDM rubber shall be the same color as chosen by the owner for the track surface.

#### **4.2 Structural Spray Coating**

- A. The spray coating shall be BEYPUR, an MDI-based single-component, moisture cured, 100% solids, pigmented polyurethane, specifically formulated for compatibility with EPDM granules. The coating shall be the color specified by the owner. Pigment intergraded in the field shall not be allowed.

#### **4.3 Seal Coat**

- A. BEYPUR 200, the two-component polyurethane resin for this application, shall be pigmented to match the color of the wear coat. The material shall be applied by a squeegee to insure that the black mat is sealed.

#### **4.4 Line Marking Paint**

- A. Manufacturers recommended pigmented line paint.

### **Part 4 – Installation**

#### **4.1 Surface Preparation**

- A. Prior to the application of the resurfacing layer, the existing polyurethane surface shall be inspected for conformity to planarity requirements. The surface shall not deviate more than 1/8 inch in 10 feet from the specified grade when checked with a 10-foot straightedge. An impermeable polyurethane surface may also be flooded with water to determine if any “bird baths” or low areas exist.
- B. The owner should verify that the surface tolerances meet all specifications issued by the appropriate sanctioning or governing body such as IAAF, NCAA, NFSHSA, TAC, etc.
- C. The area to be surfaced shall be clean and free of any loose or foreign particles (dirt, oil, etc.) prior to the commencement of work. The surface is usually cleaned by use of a power blower and high-pressure washer.



## 4.2 Thickness

- A. The thickness of the **BSS 200RE Seal Coat & Structural Spray** shall be 2-3mm.

## 4.3 Equipment

- A. The **BSS 200RE Seal Coat & Structural Spray Resurfacing** components shall be processed and installed by specially designed machinery and equipment. The wearing course shall be installed using automatic electronic portioning, which provides continuous mixing and feeding for an accurate, quality controlled installation.

## 4.4 Installation

- A. Seal Coat

The two BEYPUR 200 components are mixed at the prescribed ratio homogeneously with a suitable mixing device. The coating is squeegee applied to the base mat, making it impermeable.

- B. Structural Spray Course

The 0.5 to 1.5 millimeter EPDM granules shall be mixed with BEYPUR, the single-component structural spray coating. The structural spray shall be made in two (2) uniform applications.

## 4.5 Site Conditions

- B. Installation shall not take place if adjacent or concurrent construction generates excessive dust, abrasives or any other by-product that, in the opinion of the installer, would be harmful to the track material, until completion of such works.
- C. If, in the opinion of the installer of the synthetic material, the weather and/or climatic conditions are detrimental to the proper installation of the surfacing materials, work shall be delayed until conditions are acceptable. Preferred installation temperature is fifty degrees Fahrenheit and rising. Installation shall be executed only in dry conditions.

## Part 5 – Line Striping and Event Markings

### 5.1 Layout

- A. Line striping and event markings shall be laid out in accordance with current IAAF and NCAA rules.

## **5.2 Certification**

- A. Upon completion of the installation, the owner shall be supplied with all necessary computations and drawings as well as a letter of certification attesting to the accuracy of the markings.

## **Part 6 – Guarantee**

- A. Synthetic track surfacing system shall be fully guaranteed against faulty workmanship and material failure for a period of five (5) years from the date of acceptance.
- B. Synthetic surfacing material found to be defective as a result of faulty workmanship and/or material failure shall be replaced or repaired at no charge, upon written notification within the guarantee period.

END OF SECTION

**BSS 200**  
**Impermeable Basemat with Structural Spray**  
**Synthetic Track Surfacing System Specifications**

**Part I - General**

**1.1 Scope**

- A. The synthetic surfacing contractor shall furnish all labor, materials, equipment, supervision, and services necessary for the proper completion of all **BSS 200** Synthetic Track Surfacing and related work indicated on the drawings and specified herein.
- B. The synthetic surfacing contractor shall refer to the drawings for the required locations of synthetic track surfacing to be installed. All quantities and dimensions shall be field verified by the synthetic surfacing contractor.

**1.2 Specific Scope of Work**

- A. Install an impermeable polyurethane synthetic track system comprised of a base layer of polyurethane bound SBR rubber granules, BEYPUR 200, an impermeable layer (seal coat) of a two-component urethane, and topped with BEYPUR, a spray-applied coating of single-component polyurethane, and EPDM granules.
- B. Layout and paint all track lines and event markings as required and specified by current IAAF and NCAA rules.

**1.3 Coordination**

- A. The synthetic surfacing contractor shall coordinate the work specified with an authorized and appointed representative of the owner so as to perform the work during a period and in a manner acceptable to the owner.

**Part 2 - Codes and Standards**

**1.1 Applicable Publications**

- B. Codes and standards follow the current guidelines set forth by the International Amateur Athletic Federation (IAAF) and the National Collegiate Athletic Association (NCAA), along with the current material testing

guidelines as published by the American Society of Testing and Materials (ASTM).

## 2.2 Performance Standards

The **BSS 200** synthetic track surfacing system shall exhibit the following minimum performance standards (ASTM):

- |                             |                           |
|-----------------------------|---------------------------|
| A. Thickness:               | (12-13mm) or as specified |
| B. Force Reduction:         | 35-50%                    |
| C. Vertical Deformation:    | 0.6mm-2.5mm               |
| D. Coefficient of Friction: | ≥ 0.5 (47 TRRL Scale)     |
| E. Tensile Strength:        | ≥ 0.5 Mpa                 |
| F. Elongation:              | ≥ 40%                     |

## Part 3 - Quality Assurance

### 3.1 Contractor and Manufacturer Qualifications

- A. The CONTRACTOR and the MANUFACTURER must be the same.
- B. The CONTRACTOR must have a minimum of 10 years experience in the installation of poured-in-place, two-component elastomeric polyurethane synthetic track surfacing.
- C. The CONTRACTOR shall be able to furnish evidence that they have been in business for a period of not less than 3 years, under the present name, and if required, furnish financial statements for each of the past 3 years.
- D. The CONTRACTOR must have installed a minimum of 10 outdoor track facilities in the last 2 years using the exact, IAAF certified, synthetic track surfacing, as specified herein with the contractor bidding this project.
- E. The MANUFACTURER must have a minimum of 10 years of experience with compound two-part polyurethane for athletic surfaces.
- F. The CONTRACTOR is required to provide documentation that shows the selected specified and installed product meets current IAAF Performance Standards for Synthetic Surfaced Athletics Tracks (Outdoor) and is certified in terms of the IAAF certification system as updated to present day.

- G. CONTRACTOR is to provide a list of completed facilities, minimum of 10 which are certified to meet IAAF/NCAA rules & regulations, utilizing the same product as specified.
- H. The MANUFACTURER must offer a minimum of seven (7) IAAF Certified Track Systems.
- I. All polyurethane components must be MANUFACTURED in the United States in an **ISO 9001:2008 Certified** facility to ensure the highest quality materials.
- J. The CONTRACTOR must have installed a minimum of three (3) Class I IAAF Certified outdoor tracks within the United States.

### **3.2 Submittals**

The following submittals must be received with bid submittal:

- A. Standard printed specifications of the synthetic track surfacing system to be installed on this project.
- B. An affidavit attesting that the synthetic track surfacing material to be installed meets the requirements defined by the manufacturers currently published specifications and any modifications outlined in those technical specifications.
- C. A synthetic track surfacing system sample, 12" x 12" in size, of the same synthetic track surfacing system to be installed on this project.
- D. A list of completed facilities, including the installing supervisor, of the exact synthetic track surfacing system.
- E. A current IAAF Certificate proving the product to be installed meets the current IAAF Performance Standards for Synthetic Surfaced Athletics Tracks (Outdoor).

## **Part 4 - Materials**

### **4.1 Primers**

- A. Primers must be polyurethane-based, specifically formulated to be compatible with the paved SBR base and track surfacing material.

#### **4.2 Black SBR Granules**

- A. The rubber granules for the base mat shall be recycled SBR rubber, processed and chopped to 1-3mm size, containing less than 1% dust.

#### **4.3 EPDM Granules**

- A. The rubber granules for the BEYPUR structural spray wearing coats shall be EPDM, synthetic rubber containing a minimum 20% EPDM resin, with a specific gravity of  $1.5 \pm 0.1$  g/cm<sup>3</sup>. The EPDM rubber shall be the same color as chosen by the owner for the track surface.

#### **4.4 Polyurethane Binder**

- A. Binder for the black mat shall be BEYPUR, an MDI-based single-component, polyurethane binding agent. The binder shall not have a free TDI monomer level above 0.2% and must be solvent free. The binder must be specially formulated for compatibility with SBR rubber crumb.

#### **4.5 Structural Spray Coating**

- A. The spray coating shall be BEYPUR, an MDI-based single-component, moisture cured, 100% solids, pigmented polyurethane, specifically formulated for compatibility with EPDM granules. The coating shall be the color specified by the owner. Pigment intergraded in the field shall not be allowed.

#### **4.6 Seal Coat**

- A. BEYPUR 200, the two-component polyurethane resin for this application, shall be pigmented to match the color of the wear coat. The material shall be applied by a squeegee to insure that the black mat is sealed.

#### **4.7 Line Marking Paint**

- A. All line and event markings shall be applied by experienced personnel the manufacturers recommended pigmented paint compatible with the synthetic track surfacing.

### **Part 5 - Installation**

## 5.1 Subbase Requirements

### A. Asphalt Compaction

- a. The Synthetic Track Surfacing System shall be laid on an approved subbase. The General Contractor shall provide compaction test results of 92-96% for the installed subbase and asphalt surface.
- b. For NCAA certification the following criteria must be followed. The track surface, i.e. asphalt substrate, shall not vary from planned cross slope by more than +/- 0.2%, with a maximum lateral slope outside to inside of 1%, and a maximum slope of 0.1% in any running direction. The finished asphalt shall not vary under a 10' straight edge more than 1/8".
- c. It should be the responsibility of the asphalt-paving contractor to flood the surface immediately after the asphalt is capable of handling traffic. If, after 20 minutes of drying time, there are birdbaths evident, it shall be the responsibility of the architect, in conjunction with the surfacing contractor, to determine the method of correction. No cold tar patching, skin patching or sand mix patching will be acceptable.

### B. Asphalt Quality

- a. No Recycled Asphalt Pavement (RAP) shall be used in the wear course asphalt mix design as the inclusion of RAP as an off-set to virgin asphalt binder results in a brittle hot-mix asphalt (HMA) with significantly lower tensile strength and fatigue resistance. The sports surfacing contractor will not be held responsible for asphalt failures resulting from the inclusion RAP in the HMA mix design of the wear course.
- b. Any oil spills (hydraulic, diesel, motor oil, etc.) must be completely removed, either by chipping out or removing and replacing with new, keyed in asphalt. The minimum depth of any asphalt replacement shall be one inch. The curing time for the asphalt base is 28 days. It shall be the responsibility of the surfacing contractor to determine if the asphalt substrate has cured sufficiently prior to the application of polyurethane surfacing system.

### C. Responsibility of Others

- a. It shall be the responsibility of the general contractor to determine if the asphalt substrate meets all design specifications, i.e. cross slopes, planarity and specific project criteria. After all the above conditions are met, the synthetic surfacing contractor must, in writing, accept the planarity of the asphalt receiving base, before work can commence.

## 5.2 Thickness

- A. The thickness of the **BSS 200** Synthetic Track Surfacing System shall be 13mm.

## 5.3 Equipment

- A. The **BSS 200** Synthetic Track Surfacing System components shall be processed and installed by specially designed machinery and equipment. A mechanically operated paver with variable regulated speed and thermostatically controlled screed shall be used in the installation of the base mat. The wearing course shall be installed using automatic electronic portioning, which provides continuous mixing and feeding for an accurate, quality controlled installation.
- B. No hand mixing is allowed.

## 5.4 Installation

- A. Base Course

The SBR granules and BEYPUR shall be mixed together on site to regulate the ratio/quantity of SBR, not to exceed 82% by weight in the base mat portion of the system. The BEYPUR shall be mixed with the SBR rubber so that a minimum of 20%, by weight, exists in the final mixture. This mixture is then mechanically installed using the paver.

- B. Seal Coat

The two BEYPUR 200 components are mixed at the prescribed ratio homogeneously with a suitable mixing device. The coating is squeegee applied to the base mat, making it impermeable.

- C. Wearing Course



The 0.5 to 1.5mm EPDM granules shall be mixed with BEYPUR, the single-component structural spray coating. The structural spray shall be made in two uniform applications.

## **5.5 Site Conditions**

- A. Installation shall not take place if adjacent or concurrent construction generates excessive dust, abrasives or any other by-product that, in the opinion of the installer, would be harmful to the track material, until completion of such works.
- B. Apply Synthetic Track Surfacing in dry weather when pavement and atmospheric temperatures are fifty (50) degrees Fahrenheit or above, and are anticipated to remain above fifty (50) degrees Fahrenheit for twenty-four (24) hours after completing application.
- C. The maximum temperature cannot exceed 105 degrees at any point during a 24 - hour period.
- D. Rain cannot be falling. If there is a threat of rain, work shall cease until dry conditions can be re-established on the track pavement. Work is to proceed only when adequate curing can be guaranteed by the manufacturer.

## **Part 6 - Line Striping and Event Markings**

### **6.1 Layout**

- A. Line striping and event markings shall be laid out in accordance with current IAAF and NCAA rules.

### **6.2 Certification**

- A. Upon completion of the installation, the owner shall be supplied with all necessary computations and drawings as well as a letter of certification attesting to the accuracy of the markings.

## **Part 7 - Guarantee**

- A. Synthetic track surfacing system shall be fully guaranteed against faulty workmanship and material failure for a period of five (5) years from the date of acceptance.

- B. Synthetic surfacing material found to be defective as a result of faulty workmanship and/or material failure shall be replaced or repaired at no charge, upon written notification within the guarantee period

END OF SECTION

**BSS 100**  
**Basemat with Structural Spray**  
**Synthetic Track Surfacing System Specifications**

**Part 1 – General**

**1.1 Scope**

- A. The synthetic surfacing contractor shall furnish all labor, materials, equipment, supervision, and services necessary for the proper completion of all **BSS 100** Synthetic Track Surfacing and related work indicated on the drawings and specified herein.
- B. The synthetic surfacing contractor shall refer to the drawings for the required locations of synthetic track surfacing to be installed. All quantities and dimensions shall be field verified by the synthetic surfacing contractor.

**1.2 Specific Scope of Work**

- A. Install an IAAF approved, porous polyurethane synthetic track system comprised of a base layer of polyurethane-bound SBR granules and topped with BEYPUR, a single-component polyurethane structural spray, and EPDM granules.
- B. Layout and paint all track lines and event markings as required and specified by current IAAF and NCAA rules.

**1.3 Coordination**

- A. The synthetic surfacing contractor shall coordinate the work specified with an authorized and appointed representative of the owner so as to perform the work during a period and in a manner acceptable to the owner.

**Part 2 – Codes and Standards**

**2.1 Applicable Publications**

- A. Codes and standards follow the current guidelines set forth by the International Amateur Athletic Federation (IAAF) and the National Collegiate Athletic Association (NCAA), along with the current material testing guidelines as published by the American Society of Testing and Materials (ASTM).

## 2.2 Performance Standards

The **BSS 100** Track Surfacing System shall exhibit the following minimum performance standards as required by IAAF:

A.	Thickness:	12-13mm or as specified
B.	Force Reduction:	35 to 50%
C.	Vertical Deformation:	0.6 to 2.5mm
D.	Friction:	≥ 0.5 (47 TRRL Scale)
E.	Tensile Strength:	≥ 0.4 MPa
F.	Elongation at Break:	≥ 40%

## Part 3 – Quality Assurance

### 3.1 Contractor and Manufacturer Qualifications

- A. The CONTRACTOR and the MANUFACTURER must be the same.
- B. The CONTRACTOR must have a minimum of 10 years experience in the installation of poured-in-place, two-component elastomeric polyurethane synthetic track surfacing.
- C. The CONTRACTOR shall be able to furnish evidence that they have been in business for a period of not less than 3 years, under the present name, and if required, furnish financial statements for each of the past 3 years.
- D. The CONTRACTOR must have installed a minimum of 10 outdoor track facilities in the last 2 years using the exact, IAAF certified, synthetic track surfacing, as specified herein with the contractor bidding this project.
- E. The MANUFACTURER must have a minimum of 10 years of experience with compound two-part polyurethane for athletic surfaces.
- F. The CONTRACTOR is required to provide documentation that shows the selected specified and installed product meets current IAAF Performance Standards for Synthetic Surfaced Athletics Tracks (Outdoor) and is certified in terms of the IAAF certification system as updated to present day.
- G. CONTRACTOR is to provide a list of completed facilities, minimum of 10 which are certified to meet IAAF/NCAA rules & regulations, utilizing the same product as specified.

- H. The MANUFACTURER must offer a minimum of seven (7) IAAF Certified Track Systems.
- I. All polyurethane components must be MANUFACTURED in the United States in an **ISO 9001:2008 Certified** facility to ensure the highest quality materials.
- J. The CONTRACTOR must have installed a minimum of three (3) Class I IAAF Certified outdoor tracks within the United States.

### **3.2 Submittals**

The following submittals must be received with bid submittal:

- A. Standard printed specifications of the synthetic track surfacing system to be installed on this project.
- B. An affidavit attesting that the synthetic track surfacing material to be installed meets the requirements defined by the manufacturers currently published specifications and any modifications outlined in those technical specifications.
- C. A synthetic track surfacing system sample, 12" x 12" in size, of the same synthetic track surfacing system to be installed on this project.
- D. A list of completed facilities, including the installing supervisor, of the exact synthetic track surfacing system.
- E. A current IAAF Certificate proving the product to be installed meets the current IAAF Performance Standards for Synthetic Surfaced Athletics Tracks (Outdoor).

## **Part 4 – Materials**

### **4.1 Primers**

- A. Primers shall be BEYPRIM, a polyurethane-based primer specifically formulated to be compatible with the paved-in-place SBR granules and BEYPUR track surfacing material.

### **4.2 Black SBR Granules**

- A. The rubber granules for the base mat shall be recycled SBR rubber, processed and chopped to 1-3mm size, containing less than 1% dust.

### **4.3 EPDM Granules**

- A. The rubber granules for the BEYPUR structural spray wearing coats shall be EPDM, synthetic rubber containing a minimum 20% EPDM resin, with a specific gravity of  $1.5 \pm 0.1$  g/cm<sup>3</sup>. The EPDM rubber shall be the same color as chosen by the owner for the track surface.

### **4.4 Polyurethane Binder**

- A. Binder for the black mat shall be BEYPUR, an MDI-based single-component, polyurethane binding agent. The binder shall not have a free TDI monomer level above 0.2% and must be solvent free. The binder must be specially formulated for compatibility with SBR rubber crumb.

### **4.5 Structural Spray Coating**

- A. The spray coating shall be BEYPUR, an MDI-based single-component, moisture cured, 100% solids, and pigmented polyurethane, specifically formulated for compatibility with EPDM granules. The coating shall be the color specified by the owner. Pigment intergraded in the field shall not be allowed.

### **4.6 Line Marking Paint**

- A. All line and event markings shall be applied by experienced personnel utilizing the manufacturers' recommended pigmented paint compatible with the BSS 100 Track Surfacing material.

## **Part 5 – Installation**

### **5.1 Subbase Requirements**

- A. Asphalt Compaction
  - a. The Synthetic Track Surfacing System shall be laid on an approved subbase. The General Contractor shall provide compaction test results of 92-96% for the installed subbase and asphalt surface.
  - b. For NCAA certification the following criteria must be followed. The track surface, i.e. asphalt substrate, shall not vary from planned cross slope by more than +/- 0.2%, with a maximum lateral slope outside to inside of 1%,

and a maximum slope of 0.1% in any running direction. The finished asphalt shall not vary under a 10' straight edge more than 1/8".

- c. It should be the responsibility of the asphalt-paving contractor to flood the surface immediately after the asphalt is capable of handling traffic. If, after 20 minutes of drying time, there are birdbaths evident, it shall be the responsibility of the architect, in conjunction with the surfacing contractor, to determine the method of correction. No cold tar patching, skin patching or sand mix patching will be acceptable.

#### B. Asphalt Quality

- a. No Recycled Asphalt Pavement (RAP) shall be used in the wear course asphalt mix design as the inclusion of RAP as an off-set to virgin asphalt binder results in a brittle hot-mix asphalt (HMA) with significantly lower tensile strength and fatigue resistance. The sports surfacing contractor will not be held responsible for asphalt failures resulting from the inclusion RAP in the HMA mix design of the wear course.
- b. Any oil spills (hydraulic, diesel, motor oil, etc.) must be completely removed, either by chipping out or removing and replacing with new, keyed in asphalt. The minimum depth of any asphalt replacement shall be one inch. The curing time for the asphalt base is 28 days. It shall be the responsibility of the surfacing contractor to determine if the asphalt substrate has cured sufficiently prior to the application of polyurethane surfacing system.

#### C. Responsibility of Others

- a. It shall be the responsibility of the general contractor to determine if the asphalt substrate meets all design specifications, i.e. cross slopes, planarity and specific project criteria. After all the above conditions are met, the synthetic surfacing contractor must, in writing, accept the planarity of the asphalt receiving base, before work can commence.

### 5.2 Thickness

- A. The thickness of the **BSS 100** Synthetic Track Surfacing System shall be 13mm.

### 5.3 Equipment

- A. The **BSS 100** Synthetic Track Surfacing System components shall be processed and installed by specially designed machinery and equipment. A mechanically operated paver with variable regulated speed and thermostatically controlled screed shall be used in the installation of the base mat. The wearing course shall be installed using automatic electronic portioning, which provides continuous mixing and feeding for an accurate, quality controlled installation.
- B. No hand mixing is allowed.

#### **5.4 Installation**

##### **A. Base Course**

The SBR granules and BEYPUR shall be mixed together on site to regulate the ratio/quantity of SBR, not to exceed 82% by weight in the base mat portion of the system. The single component polyurethane binder shall be mixed with the SBR rubber so that a minimum of 20%, by weight, exists in the final mixture. This mixture is then mechanically installed using the paver.

##### **B. Wearing Course**

The 0.5 to 1.5 millimeter EPDM granules shall be mixed with BEYPUR, the single-component structural spray coating. The structural spray shall be made in two (2) uniform applications.

#### **5.5 Site Conditions**

- A. Installation shall not take place if adjacent or concurrent construction generates excessive dust, abrasives or any other by-product that, in the opinion of the installer, would be harmful to the track material, until completion of such works.
- C. Apply Synthetic Track Surfacing in dry weather when pavement and atmospheric temperatures are fifty (50) degrees Fahrenheit or above, and are anticipated to remain above fifty (50) degrees Fahrenheit for twenty-four (24) hours after completing application.
- D. The maximum temperature cannot exceed 105 degrees at any point during a 24 hour period.
- E. Rain cannot be falling. If there is a threat of rain, work shall cease until dry conditions can be re-established on the track pavement. Work is to proceed only when adequate curing can be guaranteed by the manufacturer.



## **Part 6 – Line Striping and Event Markings**

### **6.1 Layout**

- A. Line striping and event markings shall be laid out in accordance with current IAAF and NCAA rules.

### **6.2 Certification**

- A. Upon completion of the installation, the owner shall be supplied with all necessary computations and drawings, as well as a letter of certification attesting to the accuracy of the markings.

## **Part 7 – Guarantee**

- A. The BSS 100 Track Surfacing System shall be fully guaranteed against faulty workmanship and material failure for a period of five (5) years from the date of acceptance. The warranty coverage shall not be prorated nor limited by the amount of usage.
- B. Synthetic surfacing material found to be defective as a result of faulty workmanship and/or material failure shall be replaced or repaired at no charge, upon written notification within the guarantee period.

END OF SECTION

## **7.0 QUALITY ASSURANCE:**

Installer shall be a member in good standing of the American Sports Builders Association (ASBA), with specific qualifications in building and surfacing running tracks. Installer must employ a Certified Track Builder (CTB) as conferred by the ASBA. Approved installer must have remained in business under the same business name for double the length of the warrantee period.

## **8.0 DISCLAIMER:**

Suggestions for use of our product or inclusion of descriptive material from patents should not be understood as recommending the use of our product in violation of any patents.

## **9.0 GENERAL:**

Materials must be specifically designed for the construction of running track surfaces. Materials specified shall be delivered to the site in sealed drums or totes. Minimal addition of clear, fresh water at the job site is dependent on temperature and material flow. Coverage rates are based upon material prior to mixing with water. Dispose of empty containers in accordance with local, state and federal regulations.



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## **SECTION 10.3**

### **SITE IMPROVEMENTS** **ATHLETIC FACILITIES**

EXTERIOR/INTERIOR

LATEX TYPE

RUBBER-FILLED

## **PLEXICUSHION®**

### **DESCRIPTION:**

Plexicushion is a resilient, asbestos-free 100% latex cushion subsurface for the Plexipave Color Finish. Plexicushion can be used alone to add cushion to a standard hard surface or it may be used over Plexicushion Base Coat to add cushion and to provide a uniform surface to receive the Plexipave Color System. Plexicushion may be applied on both indoor and outdoor asphalt and indoor and outdoor concrete. Application over outdoor concrete requires that a proper vapor barrier has been installed under the slab and appropriate perimeter drainage is in place.

### **SURFACE USES:**

- Tennis Courts
- Basketball Courts
- Playground Areas
- Field Houses
- Jogging Tracks

### **APPLICATION:**

- 50 Durometer flexible rubber squeegee.

### **DRYING TIME:**

Dependent on the ambient temperatures and humidity;

- 60°F and rising – 2-4 hours dry time @ 50% relative humidity.
- 70°F and rising – 1-2 hours dry time @ 50% relative humidity.
- Indoor application – 8 hour dry time with good heat ventilation (1 coat per day recommended)

### **COLOR:**

Bluish

### **COVERAGE:**

Over Asphalt or Concrete:

- 4 coats - .1-.11 gallons per square yard per coat (9-10s.y. / gal/coat)

Over Plexicushion Base Coat:

- 1<sup>st</sup> Coat - .16 gallons per square yard (6-7s.y. / gal.)
- 2<sup>nd</sup> Coat - .10-.11 gallons per square yard (9-10s.y. / gal.)
- 3<sup>rd</sup> Coat (if specified) - .10-.11 gallons per square yard (9-10s.y. / gal.)

### **LIMITATIONS:**

- The Plexicushion system will not prevent substrate cracks from occurring and reoccurring.
- Allow each application to dry thoroughly before subsequent applications.
- Do not apply if surface temperature is less than 60° F or more than 140°F.
- Do not apply over tar based emulsion sealers
- Allow asphalt to cure for a minimum of 14 days in summer conditions.
- Allow concrete to cure for a minimum of 28 days in summer conditions
- Do not use curing agents on concrete surfaces.
- Apply only when ambient temperature is 60° F and rising.
- Do not apply when rain is imminent.
- Used mixed material promptly after diluting with water.
- Outdoor concrete MUST have a vapor barrier in place underneath the concrete.
- Keep containers tightly closed when not in use.
- DO NOT STORE IN HOT SUN.
- KEEP FROM FREEZING.

**SPECIFICATION  
PLEXICUSHION  
RESILIENT UNDERLAYMENT**

**1.0 SCOPE**

- 1.1 This specification pertains to the application of Fortified Plexicushion over tennis courts and other recreational areas as designated in the site plans. The material shall be for use over indoor and outdoor asphalt, indoor concrete and outdoor concrete with a proper vapor barrier in place. Application shall be equally durable on each of the specified substrate conditions.
- 1.2 The work shall consist of suitable cleaning and preparation of the asphalt or concrete to assure a satisfactory bond of Plexicushion to the substrate.

**2.0 DESCRIPTION**

The asphalt (or concrete) surface to receive the Plexicushion System shall be clean, sound, and free of grease, oils and other foreign materials. All ridges, cracks and birdbaths shall be filled and leveled with Court Patch Binder according to specifications 10.14. Surfaces shall have a slope of 1" in 10', all in one plane, and variations shall not exceed 1/8<sup>th</sup> in ten feet measured in any direction when measured with a 10' straight edge.

- 2.1 Asphalt—Allow asphalt to cure for a minimum of 14 days. Proceed with patches as specified above. Allow all patch work to dry and apply one coat of Acrylic Resurfacer to provide a uniform underlayment according to specification Section 10.8.
- 2.2 Concrete—The concrete surface shall have a wood floor or light broom finish. DO NOT PROVIDE A STEEL TROWEL FINISH. DO NOT ALLOW ANY CURING AGENTS OR HARDNERS TO BE USED. Acid etch concrete with Concrete Preparer according to specification 10.13.

Proceed with patching as specified above. Allow all patch work to dry and prime the surface with California Ti-Coat according to specification 10.17 Acrylic Resurfacer must be applied within 1-3 hours after Ti-Coat application and while the material is dry but still tacky to the touch.

**3.0 PLEXICUSHION**

<u>Plexicushion Club</u>	<u>Plexicushion Tournament</u>	<u>Plexicushion Prestige</u>
1 coat of Acrylic Resurfacer	1 coat of Acrylic Resurfacer	1 coat of Acrylic Resurfacer
4 coats of Plexicushion	2 coats of Plexicushion Base Coat	3 Coats of Plexicushion Base Coat
Plexipave Color System	3 coats of Plexicushion	3 coats of Plexicushion
	Plexipave Color System	Plexipave Color System

**4.0 APPLICATION**

- 4.1 Plexicushion should be diluted with one (1) part water to four (4) parts Plexicushion to improve flowability. When applying in extremely warm climatic conditions or when using an approved mechanical sprayer, the material may be applied at one (1) part water to three (3) parts Plexicushion. The Plexicushion shall be thoroughly mixed at the job site.
- 4.2 Plexicushion is applied (in a similar manner to Plexipave) in windrows on the surface with sufficient quantity to cover as the squeegee is pulled over the surface. Apply only light pressure to the squeegee. Do not allow ridges to form between passes of the squeegee. Any ridges existing after this material has dried can be removed by rubbing with a mason stone or heavy sand paper.
- 4.3 Plexicushion applications should be allowed to thoroughly dry prior to application of subsequent coats. Indoor applications will require more drying time with proper heat and ventilation.

**5.0 GENERAL**

- 5.1 The contractor shall remove all containers, surplus materials and debris upon completion of work leaving the site in a clean, orderly condition that is acceptable to the owner. Gates shall be secured and all containers shall be disposed of in accordance with Local, State and Federal regulations.
- 5.2 Materials specified for the Plexicushion System shall be delivered to the site in sealed, properly labeled drums with California Products Corporation labels that are stenciled with proper batch code numbers. Products packaged or labeled in any other manner will not be accepted. Mixing with clear, fresh water shall only be done at the job site. Coverage rates are based upon material prior to mixing with water as specified.



## **E-LAYER (25mm)**

### **Product Specifications**

#### **PART 1 – GENERAL**

##### **1.1 SUMMARY**

- A. Product Name: E-Layer.
- B. Product Description: Pour-in-place, permeable, synthetic field surface base consisting of rubber granules, gravel aggregate and polyurethane binder.
- C. Scope of Work: Furnish all required labor, materials and equipment to successfully install the specified synthetic field surface base.

##### **1.2 RELATED WORK**

- A. Earthwork
- B. Drainage
- C. Asphaltic Concrete Paving
- D. Cast-in-Place Concrete
- E. Synthetic Turf

##### **1.3 REFERENCE STANDARDS**

- A. The work shall conform to the standards for field construction as prescribed or approved by the appropriate governing body; NFHS, NCAA, or IAAF.

##### **1.4 SUBMITTALS**

- A. Product Data
- B. Warranty

##### **1.5 QUALITY ASSURANCE**

- A. Synthetic surfacing contractor (SSC) shall be licensed and bonded and possess a valid contractor's license in the state where Work is performed.
- B. SSC shall have a minimum of 5 years experience installing the specified permeable base surface under the same corporate name as current operations.

## 1.6 PROJECT CONDITIONS

- A. SSC, General Contractor (GC) and/or Owner, shall conduct a pre-construction meeting to review project conditions prior to dispatch of the SSC's installation team.
- B. Permeable Surface Sub-Base.
  - 1. The field sub-base shall meet the standards set by the Architect/Engineer and described in the product specifications.
  - 2. Repair work required on the base shall be approved by the Architect/Engineer.
  - 3. GC and/or Owner shall be responsible to protect the field sub-base from activities and traffic that may damage the sub-base prior to application.
- C. Weather
  - 1. Apply the permeable field base surface only during favorable weather conditions.
  - 2. No application of the permeable field base surface shall be conducted during rainfall, when rain is imminent, when freezing temperatures are forecasted or exist, or when gusting winds are occurring.
  - 3. Work is to progress only when the SSC can guarantee successful cure of the materials.
- D. During field base surface installation, all irrigation systems shall be shut-off or controlled so that no water falls on the field areas.
- E. During set-up and installation, the GC and/or Owner shall be responsible to have the entire field and other pertinent areas closed and secured of all activities 24 hours per day until completion of the project.

## 1.7 WARRANTY

- A. Manufacturer's and Installer's Warranty
  - 1. The warranty on the permeable base surface shall endure for eight (8) years from completion of installation.
  - 2. The warranty is to be provided directly by the SSC to the Owner.
  - 3. The warranty shall cover defects in materials and workmanship not deemed as ordinary wear on a synthetic field.
- B. Warranty Bond not required.

## PART 2 – PRODUCTS

### 2.1 MANUFACTURERS

- A. Beynon Sports Surfaces, Inc., 19600 SW 129<sup>th</sup> Ave., Ste A, Tualatin, OR 97092, Tel: 503-691-2484, Fax: 503-692-0491, [www.beynonssports.com](http://www.beynonssports.com)

### 2.2 MATERIALS

- A. Aggregate
  - 1. Birds Eye Pea Gravel with a 3.0-6.0mm gradation.
  - 2. Pea gravel shall be clean, washed and dry.
- B. Rubber
  - 1. SBR granules with a 1.0-5.0mm gradation.
- C. Binder
  - 1. Permeable base binder shall be polyurethane moisture cure, MDI based, 100% solids.

## **PART 3 – EXECUTION**

### **3.1 EXAMINATION**

- A. SSC shall examine project conditions to ensure successful installation of the permeable field base surface. Any deficiencies shall be reported to the GC and/or Owner for corrective action.

### **3.2 PREPARATION**

- B. SSC to protect adjacent areas from contamination of permeable field base surfacing materials due to installation procedures.

### **3.3 INSTALLATION**

- A. Permeable Field Surface Base
  1. The permeable field surface base will be applied to a minimum depth of 25 mm.
  2. The permeable surface base shall consist of 6% binder, 47% rubber granule and 47% aggregate, by weight.
  3. The materials shall be prepared in a mechanical mixer, to assure complete coverage of each particle by the binding agent, and mixed until a homogenous mixture is obtained.
  4. Mixed materials shall be applied to the field sub-base surface by a mechanically operated finishing machine which shall have an electrically heated screed.

### **3.4 CLEANING**

- A. Upon completion of work remove all containers, surplus materials, and installation debris.
- B. Leave area of work in clean orderly condition ready for synthetic field application.

## **STRUCTURAL SPRAY Product Specifications**

### **PART 1 – GENERAL**

#### **1.1 SUMMARY**

- A. Product Name: Structural Spray.
- B. Product Description: Pour-in-place, all-weather synthetic track re-surface consisting of structural spray coatings of pigmented polyurethane and rubber.
- C. Scope of Work: Furnish all required labor, materials and equipment to successfully install the specified all-weather synthetic track surface including striping and markings.

#### **1.2 RELATED WORK**

- A. Earthwork
- B. Drainage
- C. Asphaltic Concrete Paving
- D. Cast-in-Place Concrete
- E. Synthetic Turf

#### **1.3 REFERENCE STANDARDS**

- A. The work shall conform to the standards for track construction as prescribed or approved by the appropriate governing body; NFHS, NCAA, or IAAF.
  - 1. NFSHSA *Track and Field Rules*.
  - 2. ASBA *Running Tracks Construction and Maintenance Manual*.

#### **1.4 SUBMITTALS**

- A. Product Data
- B. Striping Diagram
- C. Operation and Maintenance Manual
- D. Warranty

#### **1.5 QUALITY ASSURANCE**

- A. Synthetic surfacing contractor (SSC) shall be licensed and bonded and possess a valid contractor's license in the state where Work is performed.
- B. SSC shall have a minimum of 5 years experience installing the specified all-weather track surface under the same corporate name as current operations.



## 1.6 PROJECT CONDITIONS

- A. SSC, General Contractor (GC) and/or Owner, shall conduct a pre-construction meeting to review project conditions prior to dispatch of the SSC's installation team.
- B. Synthetic surface base.
  - 1. The base surface shall meet the standards set by the Architect/Engineer and described in the product specifications.
  - 2. Allow minimum of 14 days cure on new asphalt, 28 days cure on new concrete prior to application of specified synthetic track surface.
  - 3. Repair work required on the base shall be approved by the Architect/Engineer.
  - 4. GC and/or Owner shall be responsible to protect the base from activities and traffic that may damage the base or leave dirt, oil or other foreign material on the base prior to application of the synthetic track surface.
- C. Weather
  - 1. Apply the synthetic track surface only during favorable weather conditions.
  - 2. No application of the synthetic track surface shall be conducted during rainfall, when rain is imminent, when freezing temperatures are forecasted or exist, or when gusting winds are occurring.
  - 3. Work is to progress only when the SSC can guarantee successful cure of the materials.
- D. During surface installation and striping, all irrigation systems shall be shut-off or controlled so that no water falls on the track or event areas.
- E. During set-up, installation and striping, the GC and/or Owner shall be responsible to have the entire track and other pertinent areas closed and secured of all activities 24 hours per day until completion of the project.

## 1.7 WARRANTY

- A. Manufacturer's and Installer's Warranty
  - 1. The warranty on the all-weather synthetic track surface shall endure for one (1) years from completion of installation.
  - 2. The warranty is to be provided directly by the SSC to the Owner.
  - 3. The warranty shall cover defects in materials and workmanship not deemed as ordinary wear on a running track.
- B. Warranty Bond not required.

## PART 2 – PRODUCTS

### 2.1 MANUFACTURERS

- A. Beynon Sports Surfaces, Inc., 19600 SW 129th Ave. Ste A, Tualatin, OR 97092, Tel: 503-691-2484, Fax: 503-692-0491, [www.beynonssports.com](http://www.beynonssports.com)

## 2.2 MATERIALS

- A. Rubber
  - 1. Structural spray rubber shall be EPDM with a 0.5-1.5mm gradation. Color shall be red.
- B. Binder
  - 1. Structural spray primer shall be polyurethane compatible with coating materials.
  - 2. Structural spray binder shall be polyurethane highly pigmented, meeting all EPA VOC requirements. Color shall be red
- C. Marking and Line Paint
  - 1. The paint shall be formulated to be compatible with synthetic track surface materials.
  - 2. Colors shall be as prescribed or approved by the appropriate governing body; NFHS, NCAA, or IAAF.

## PART 3 – EXECUTION

### 3.1 EXAMINATION

- A. SSC shall examine project conditions to ensure successful installation of the synthetic track surface. Any deficiencies shall be reported to the GC and/or Owner for corrective action.

### 3.2 PREPARATION

- B. SSC to protect adjacent areas from contamination of synthetic track surfacing materials due to installation procedures.
- C. SSC shall prepare the base surface using a power blower to remove surface dirt. Cleaning necessary to remove embedded dirt, oil, or other foreign material shall be the responsibility of the GC and/or Owner.

### 3.3 INSTALLATION

- A. Primer
  - 1. Apply solid pour primer uniformly at a rate of not less than 0.3 pounds per square yard of the synthetic track surface area.
  - 2. Allow a minimum of 30 minutes cure before application of the base mat materials.
- B. Structural Spray
  - 1. The entire surface area shall receive a structural spray consisting 60 parts structural spray binder and 40 parts structural spray rubber granules, by weight.
  - 2. The structural spray shall be applied in a minimum of two layers using equipment specifically designed for the application of synthetic track surfaces.
  - 3. Each structural spray layer shall be applied uniformly at a minimum rate of 1.8 pounds per square yard; for total spray coverage of not less than 3.6 pounds per square yard.
  - 4. The two layers shall be sprayed in opposite directions in order to achieve a uniform application.

C. Striping

1. Striping Contractor shall verify with Owner's representative the exact locations, size, shape, and color of the lines and markings before proceeding with striping and markings.
2. Engineer the layout of lane lines, starting lines, and markings as prescribed or approved by the Owner's representative, Architect/Engineer and the appropriate governing body; NFHS, NCAA, or IAAF.
3. All lines and markings shall be spray applied by experienced personnel utilizing equipment manufactured for line striping. Striping lines and markings shall have true sharp edges.
4. SSC shall provide a detailed drawing to the Owner clearly identifying color codes and locations of lines and markings.

**3.4 CLEANING**

- A. Upon completion of work remove all containers, surplus materials, and installation debris.
- B. Leave area of work in clean orderly condition ready for use by Owner.

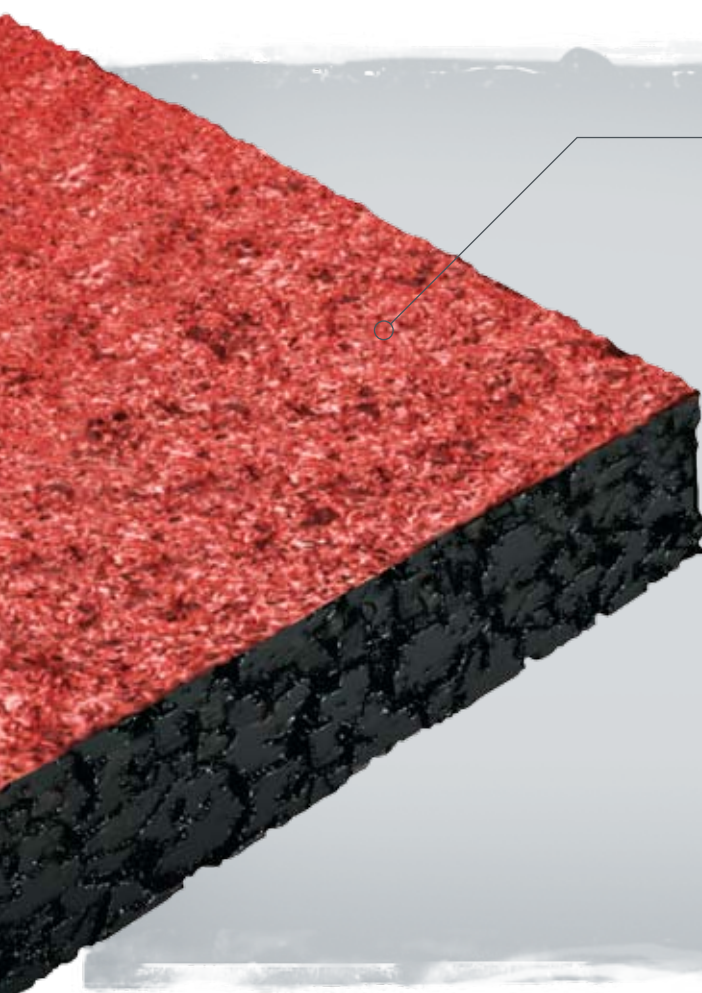
# FOR TRACKS THAT LEAVE NO FOOTPRINT.

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A superb polyurethane spray coating for use in the application of texturing layers with no free isocyanate. Made without harmful chemicals, it's ideal for use around turf fields and enclosed areas. BEYPUR 160. The best way to improve times and the environment.



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- *Reduced hazardous waste and environmental liabilities*
- *Ships as a non-hazardous product*
- *Reduced odors due to the absence of solvents and isocyanates*
- *Faster dry times allow for more efficient applications. In most cases, two spray applications in one day are achievable*
- *Low overspray allows for less prep work and issues with clean up after application*
- *Excellent color retention*

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Bidder: Fieldturf USA, Inc.

G.3

1 yr warranty

## **BLACK POLYRESIN TRACK RESURFACING SYSTEM**

### **1.0 DESCRIPTION**

This specification covers the installation of a high performance resilient track resurfacing system for existing polyresin surfaces. This track system utilizes specially compounded, pigmented, water-based binders and SBR rubber granules to provide strength, flexibility and to prevent ultra violet degradation. Multiple topcoats are applied to further protect against harmful UV rays and to reduce wear. The system provides a durable, resilient, spike resistant surface for recreational and competitive use.

NOTE: The success of the running track surface is dependent on a sound base (with good drainage) and the asphalt concrete meeting the requirements of The National Asphalt Paving Association and the American Sports Builders Association. Variations of the existing asphalt subsurface should not exceed 1/8" in 10' when measured in any direction with a straightedge.

**2.0 MATERIALS** – All liquid products shall be supplied by one manufacturer.

**2.1 Court Patch Binder**

**2.2 Latex tack coat**

**2.3 Polyresin Binder** – (Black).

**2.4 EPDM Granules** – Select granules for top layers approved by the manufacturer. (Black)

**2.5 Polyresin Coating** – (Black).

**2.6 Line Paint**

**2.7 Pigment** – Water-borne pigment for enhanced color depth (Black).

**2.8 Water** – The water used in all mixtures shall be fresh and potable.

### **3.0 SURFACE PREPARATION**

**3.1** Prior to the application of resurfacing materials; repair torn, delaminated or overly worn areas using a mixture of rubber granules and polyurethane binder.

3.2 Clean existing surface using soft-bristle brooms, power blowers and pressure washer (when necessary).

#### 4.0 CONSTRUCTION

Allow all patchwork to cure thoroughly. The surface to be coated must be sound, smooth and free from dust, dirt, or oily materials.

4.1 **Primer Coat** – A tack coat of must be applied over the entire surface at a rate of .04 gal./s.y. Allow to dry thoroughly.

4.2 **Track Resurface** – Rubber granules shall be applied evenly at a rate of 5lbs per square yard in 2 layers. Each layer will be sprayed with pigmented polyresin binder at a rate of 1 gallon of binder per 18 lbs of epdm rubber granules.

To further enhance color depth, it is recommended to add 5 gallons of pigment to each 300 gallon tote of binder on the final spray coat. Pigment is a water-borne colorant.

The coverage rate for rubber granules is dependent on the specific gravity (density) of the rubber and the installation method of the surfacing system. Different densities will affect the dry bulking value of the rubber, which determines the weight per square yard for a specified thickness. The specific gravity for rubber particles can vary between colors, size, and manufacturers. It is recommended to consult the manufacturer for more information. Also, different application methods can affect the overall system density requiring lower or higher volumes of product. System weights and volumes shall be verified by on site sample methods.

4.3 **Top Coat** – Polyresin Coating shall be applied by approved spray equipment at a rate of not less than .10 gallons per square yard.

4.4 **Line striping** – Line paint shall be applied to meet all rules and regulations of the local track federation.

#### 5.0 LIMITATIONS

- No part of the construction shall be conducted during rainfall or when rain is imminent.
- Allow 4-5 hours to cure at least 70F. Lower temperature and higher temperature will increase the drying time.
- Do not apply when surface temperature is above 130F.
- Apply only when ambient temperature is 50F and rising.
- Keep from freezing. Do not store in the hot sun.

- The Polyresin Track System will not prevent pavement cracks from occurring.
- Allow applications to thoroughly cure prior to subsequent applications.
- Use caution when applying materials near adjacent areas. Mask when necessary to prevent over spray.
- Allow new asphalt to cure for a minimum of 14 days.

**6.0 PHYSICAL PROPERTIES**

6.1 The polyresin binder is a high solids pigmented binder containing special fibers to promote strength. It is capable of drying/curing to a depth of 10mm in a single lift when mixed at the specified levels of 1-3mm rubber granules:

Viscosity > 90 ku or >1200 cps    Pigment and Filler > 6% total formula

6.2 The polyresin coating is a fully pigmented acrylic topcoat system designed to have a high resistance to ultraviolet light. It is made from acrylic resins specifically designed for track surfaces to provide a tough, long lasting surface that can withstand the elements. It should be applied in 2 coats at a coverage rate of .05 gal./s.y. per coat.

6.3 **Rubber Properties:** 1-3mm Sieve Analysis – other sieve sizes may be used to achieve a different surface texture or force reduction characteristic; at the discretion of the owner and/or installer. Rubber supply can vary.

Mesh	M.M.	% Retained	Specific Gravity: Hardness: Shore A, 55-75 durometer
6	3.36	0-15%	Black Rubber Granules: 1.15-1.40
10	2.00	60-85%	Color EPDM Rubber Granules: 1.40-1.60
18	1.00	10-30%	
PAN 1.00	0-5%		

**7.0 QUALITY ASSURANCE:**

Installer shall be a member in good standing of the American Sports Builders Association (ASBA), with specific qualifications in building and surfacing running tracks. Installer must employ a Certified Track Builder (CTB) as conferred by the ASBA. Approved installer must have remained in business under the same business name for double the length of the warrantee period.

**8.0 DISCLAIMER:**

Suggestions for use of our product or inclusion of descriptive material from patents should not be understood as recommending the use of our product in violation of any patents.



## **9.0 GENERAL:**

Materials must be specifically designed for the construction of running track surfaces. Materials specified shall be delivered to the site in sealed drums or totes. Minimal addition of clear, fresh water at the job site is dependent on temperature and material flow. Coverage rates are based upon material prior to mixing with water. Dispose of empty containers in accordance with local, state and federal regulations.

Bidder: FieldTurf USA, Inc.

G.3

6 yr warranty

## **BLACK POLYRESIN TRACK SYSTEM**

### **1.0 DESCRIPTION**

This specification covers the installation of a new, high performance resilient track surfacing system for new asphalt surfaces. This track system utilizes specially compounded, pigmented, water-based binders and select rubber granules to provide strength, flexibility and to prevent ultra violet degradation. Multiple topcoats are applied to further protect against harmful UV rays and to reduce wear. The system provides a durable, resilient, spike resistant surface for recreational and competitive use.

NOTE: The success of the running track surface is dependent on a sound base (with good drainage) and the asphalt concrete meeting the requirements of The National Asphalt Paving Association and the American Sports Builders Association. Variations of the existing asphalt subsurface should not exceed 1/8" in 10' when measured in any direction with a straightedge.

**2.0 MATERIALS** – All liquid products shall be supplied by one manufacturer.

**2.1 Court Patch Binder**

**2.2 Latex tack coat**

**2.3 Polyresin Binder** – (Black).

**2.4 Rubber Granules** – select granules for job mixing with binder.

**2.5 Polyresin Coating** – (Black).

**2.6 Line Paint**

**2.7 Pigment** – Water-borne pigment for enhanced color depth (Black).

**2.8 Water** – The water used in all mixtures shall be fresh and potable.

### **3.0 SURFACE PREPARATION**

3.1 Prior to the application of surfacing materials, the entire surface should be flooded and checked for minor depressions or irregularities. Any puddled area covering a nickel shall be marked and repaired with Court Patch Binder. After patching, the asphalt surface shall not vary more than 1/8” in 10’ measured in any direction.

**4.0 CONSTRUCTION**

Allow all patchwork to dry thoroughly. The surface to be coated must be sound, smooth and free from dust, dirt, or oily materials.

4.1 **Primer Coat** – A tack coat of must be applied over the entire surface at a rate of .04 gal./s.y. Allow to dry thoroughly.

4.2 **Track Surface** – Materials shall be applied to achieve a dense uniform surface of not less than the specified thickness in not less than four layers. The binder must be evenly distributed amongst the rubber granules upon the application of materials. Coverage rates (measured in accordance with I.A.A.F. standards):

<b>Color:</b>	<b>Thickness:</b>	<b>Rubber Granules:</b>	<b>Binder (Black):</b>
Black	3/8” (9.5MM)	10.5 lbs./s.y.	.60 gal./s.y.
Black	1/2” (12.5MM)	14.0 lbs./s.y.	.78 gal./s.y.

Coverage rate based on undiluted product. Binder to rubber ratio shall be 1 gallon Polyresin binder per 18 lbs. of Black S.B.R. Rubber.

To further enhance color depth, it is recommended to add 5 gallons of pigment to each 300 gallon tote of binder on the final spray coat. Pigment is a water-borne colorant.

The coverage rate for rubber granules is dependent on the specific gravity (density) of the rubber and the installation method of the surfacing system. Different densities will affect the dry bulking value of the rubber, which determines the weight per square yard for a specified thickness. The specific gravity for rubber particles can vary between colors, size, and manufacturers. It is recommended to consult the manufacturer for more information. Also, different application methods can affect the overall system density requiring lower or higher volumes of product. System weights and volumes shall be verified by on site sample methods.

4.3 **Top Coat** – Polyresin Coating shall be applied by approved spray equipment at a rate of not less than .10 gallons per square yard.

4.4 **Line striping** – Line paint shall be applied to meet all rules and regulations of the local track federation.

## 5.0 LIMITATIONS

- No part of the construction shall be conducted during rainfall or when rain is imminent.
- Allow 4-5 hours to cure at least 70F. Lower temperature and higher temperature will increase the drying time.
- Do not apply when surface temperature is above 130F.
- Apply only when ambient temperature is 50F and rising.
- Keep from freezing. Do not store in the hot sun.
- The Polyresin Track System will not prevent pavement cracks from occurring.
- Allow applications to thoroughly cure prior to subsequent applications.
- Use caution when applying materials near adjacent areas. Mask when necessary to prevent over spray.
- Allow new asphalt to cure for a minimum of 14 days.

## 6.0 PHYSICAL PROPERTIES

6.1 The polyresin binder is a high solids pigmented binder containing special fibers to promote strength. It is capable of drying/curing to a depth of 10mm in a single lift when mixed at the specified levels of 1-3mm rubber granules:

Viscosity > 90 ku or >1200 cps    Pigment and Filler > 6% total formula

6.2 The polyresin coating is a fully pigmented acrylic topcoat system designed to have a high resistance to ultraviolet light. It is made from acrylic resins specifically designed for track surfaces to provide a tough, long lasting surface that can withstand the elements. It should be applied in 2 coats at a coverage rate of .05 gal./s.y. per coat.

6.3 **Rubber Properties:** 1-3mm Sieve Analysis – other sieve sizes may be used to achieve a different surface texture or force reduction characteristic; at the discretion of the owner and/or installer. Rubber supply can vary.

Mesh	M.M.	% Retained	Specific Gravity: Hardness: Shore A, 55-75 durometer
6	3.36	0-15%	Black Rubber Granules: 1.15-1.40
10	2.00	60-85%	Color EPDM Rubber Granules: 1.40-1.60
18	1.00	10-30%	
PAN 1.00	0-5%		

## **7.0 QUALITY ASSURANCE:**

Installer shall be a member in good standing of the American Sports Builders Association (ASBA), with specific qualifications in building and surfacing running tracks. Installer must employ a Certified Track Builder (CTB) as conferred by the ASBA. Approved installer must have remained in business under the same business name for double the length of the warrantee period.

## **8.0 DISCLAIMER:**

Suggestions for use of our product or inclusion of descriptive material from patents should not be understood as recommending the use of our product in violation of any patents.

## **9.0 GENERAL:**

Materials must be specifically designed for the construction of running track surfaces. Materials specified shall be delivered to the site in sealed drums or totes. Minimal addition of clear, fresh water at the job site is dependent on temperature and material flow. Coverage rates are based upon material prior to mixing with water. Dispose of empty containers in accordance with local, state and federal regulations.

**SS 100 TOP (5MM)**  
**Product Specifications**

G.3- Bidder: FieldTurf USA, Inc.

**PART 1 – GENERAL**

**1.1 SUMMAR**

- A. Product Name: BSS 100 TOP (5MM)
- B. Product Description: Pour-in-place, all-weather synthetic track re-surface consisting of structural spray coatings of pigmented polyurethane and rubber.
- C. Scope of Work: Furnish all required labor, materials and equipment to successfully install the specified all-weather synthetic track surface including striping and markings.

**1.2 RELATED OR**

- A. Earthwork
- B. Drainage
- C. Asphaltic Concrete Paving
- D. Cast-in-Place Concrete
- E. Synthetic Turf

**1.3 REFERENCE STANDARDS**

- A. The work shall conform to the standards for track construction as prescribed or approved by the appropriate governing body; NFHS, NCAA, or IAAF.
  - 1. NFSHSA *Track and Field Rules*.
  - 2. ASBA *Running Tracks Construction and Maintenance Manual*.

**1.4 SU MITTALS**

- A. Product Data
- B. Striping Diagram
- C. Operation and Maintenance Manual
- D. Warranty

**1.5 UALIT ASSURANCE**

- A. Synthetic surfacing contractor (SSC) shall be licensed and bonded and possess a valid contractor's license in the state where Work is performed.
- B. SSC shall have a minimum of 5 years experience installing the specified all-weather track surface under the same corporate name as current operations.

## **SS 1000 5mm Top Coat Product Specifications**

### **PART 1 – GENERAL**

#### **1.1 SUMMAR**

- A. Product Name: BSS 100 5mm Top Coat.
- B. Product Description: Pour-in-place, all-weather synthetic track re-surface consisting of a solid pour polyurethane coating with embedded rubber granule finish.
- C. Scope of Work: Furnish all required labor, materials and equipment to successfully install the specified all-weather synthetic track surface including striping and markings.

#### **1.2 RELATED OR**

- A. Earthwork
- B. Drainage
- C. Asphaltic Concrete Paving
- D. Cast-in-Place Concrete
- E. Synthetic Turf

#### **1.3 REFERENCE STANDARDS**

- A. The work shall conform to the standards for track construction as prescribed or approved by the appropriate governing body; NFHS, NCAA, or IAAF.
  - 1. NFSHSA *Track and Field Rules*.
  - 2. ASBA *Running Tracks Construction and Maintenance Manual*.

#### **1.4 SU MITTALS**

- A. Product Data
- B. Striping Diagram
- C. Operation and Maintenance Manual
- D. Warranty

#### **1.5 UALIT ASSURANCE**

- A. Synthetic surfacing contractor (SSC) shall be licensed and bonded and possess a valid contractor's license in the state where Work is performed.
- B. SSC shall have a minimum of 5 years experience installing the specified all-weather track surface under the same corporate name as current operations.

## 1.6 PROJECT CONDITIONS

- A. SSC, General Contractor (GC) and/or Owner, shall conduct a pre-construction meeting to review project conditions prior to dispatch of the SSC's installation team.
- B. Synthetic surface base.
  - 1. The base surface shall meet the standards set by the Architect/Engineer and described in the product specifications.
  - 2. Allow minimum of 14 days cure on new asphalt, 28 days cure on new concrete prior to application of specified synthetic track surface.
  - 3. Repair work required on the base shall be approved by the Architect/Engineer.
  - 4. GC and/or Owner shall be responsible to protect the base from activities and traffic that may damage the base or leave dirt, oil or other foreign material on the base prior to application of the synthetic track surface.
- C. Weather
  - 1. Apply the synthetic track surface only during favorable weather conditions.
  - 2. No application of the synthetic track surface shall be conducted during rainfall, when rain is imminent, when freezing temperatures are forecasted or exist, or when gusting winds are occurring.
  - 3. Work is to progress only when the SSC can guarantee successful cure of the materials.
- D. During surface installation and striping, all irrigation systems shall be shut-off or controlled so that no water falls on the track or event areas.
- E. During set-up, installation and striping, the GC and/or Owner shall be responsible to have the entire track and other pertinent areas closed and secured of all activities 24 hours per day until completion of the project.

## 1.7 WARRANTY

- A. Manufacturer's and Installer's Warranty
  - 1. The warranty on the all-weather synthetic track surface shall endure for five (5) years from completion of installation.
  - 2. The warranty is to be provided directly by the SSC to the Owner.
  - 3. The warranty shall cover defects in materials and workmanship not deemed as ordinary wear on a running track.
- B. Warranty Bond not required.

## PART 2 – PRODUCTS

### 2.1 MANUFACTURERS

- A. Beynon Sports Surfaces, Inc., 19600 SW 129<sup>th</sup> Ave. Suite A, Tualatin, OR 97092,  
Tel: 503-691-2484, Fax: 503-692-0491, [www.beynonssports.com](http://www.beynonssports.com)



## 2.2 MATERIALS

- A. Rubber
  - 1. Embedded rubber shall be EPDM with a 1.0-4.0mm gradation. Color shall be red.
- B. Binder
  - 1. Solid pour primer shall be polyurethane compatible with coating materials.
  - 2. Solid pour binder shall be polyurethane solvent free and self-leveling. Color shall be red.
- C. Marking and Line Paint
  - 1. The paint shall be formulated to be compatible with synthetic track surface materials.
  - 2. Colors shall be as prescribed or approved by the appropriate governing body; NFHS, NCAA, or IAAF.

## PART 3 – EXECUTION

### 3.1 EXECUTION

- A. SSC shall examine project conditions to ensure successful installation of the synthetic track surface. Any deficiencies shall be reported to the GC and/or Owner for corrective action.

### 3.2 PREPARATION

- B. SSC to protect adjacent areas from contamination of synthetic track surfacing materials due to installation procedures.
- C. SSC shall prepare the base surface using a power blower to remove surface dirt. Cleaning necessary to remove embedded dirt, oil, or other foreign material shall be the responsibility of the GC and/or Owner.

### 3.3 INSTALLATION

- A. Primer
  - 1. Apply solid pour primer uniformly at a rate of not less than 0.3 pounds per square yard of the synthetic track surface area.
  - 2. Allow a minimum of 30 minutes cure before application of the base mat materials.
- B. Solid Pour Coating
  - 1. The solid pour coating shall have a minimum weight of 12.25 pounds per square yard; consisting of a minimum 6.25 pounds of pour binder, and 6 pounds of embedded rubber granule.
  - 2. The solid pour binder components shall be prepared in a mechanical mixer and thoroughly mixed until a homogenous blend is obtained. The self-leveling mixed coating materials are poured onto the surface and spread utilizing a notched trowel or squeegee.
  - 3. Prior to the initial set of the pour materials, the specified rubber granules are broadcast into the surface in excess. After curing, the excess granules are removed and recovered.
  - 4. Provide a minimum finished depth of 5 mm of new solid pour coating.

C. Striping

1. Striping Contractor shall verify with Owner's representative the exact locations, size, shape, and color of the lines and markings before proceeding with striping and markings.
2. Engineer the layout of lane lines, starting lines, and markings as prescribed or approved by the Owner's representative, Architect/Engineer and the appropriate governing body; NFHS, NCAA, or IAAF.
3. All lines and markings shall be spray applied by experienced personnel utilizing equipment manufactured for line striping. Striping lines and markings shall have true sharp edges.
4. SSC shall provide a detailed drawing to the Owner clearly identifying color codes and locations of lines and markings.

**3.4 CLEANING**

- A. Upon completion of work remove all containers, surplus materials, and installation debris.
- B. Leave area of work in clean orderly condition ready for use by Owner.



## **SS 300 LE**

### **Product Specifications**

#### **PART 1 – GENERAL**

##### **1.1 SUMMAR**

- A. Product Name: BSS 300 LE.
- B. Product Description: Pour-in-place, all-weather synthetic track surface consisting of impermeable polyurethane bound rubber base mat and a solid pour polyurethane coating with rubber granules in a light encapsulating finish.
- C. Scope of Work: Furnish all required labor, materials and equipment to successfully install the specified all-weather synthetic track surface including striping and markings to a base properly prepared by others.

##### **1.2 RELATED OR**

- A. Earthwork
- B. Drainage
- C. Asphaltic Concrete Paving
- D. Cast-in-Place Concrete
- E. Synthetic Turf

##### **1.3 REFERENCE STANDARDS**

- A. The work shall conform to the standards for track construction as prescribed or approved by the appropriate governing body; NFHS, NCAA, or IAAF.
  - 1. NFSHSA *Track and Field Rules*.
  - 2. ASBA *Running Tracks Construction and Maintenance Manual*.

##### **1.4 SU MITTALS**

- A. Product Data
- B. Striping Diagram
- C. Operation and Maintenance Manual
- D. Warranty

##### **1.5 UALIT ASSURANCE**

- A. Synthetic surfacing contractor (SSC) shall be licensed and bonded and possess a valid contractor's license in the state where Work is performed.
- B. SSC shall have a minimum of 5 years experience installing the specified all-weather track surface under the same corporate name as current operations.

## 1.6 PROJECT CONDITIONS

- A. SSC, General Contractor (GC) and/or Owner, shall conduct a pre-construction meeting to review project conditions prior to dispatch of the SSC's installation team.
- B. Synthetic surface base asphalt/concrete.
  - 1. The base asphalt and/or concrete shall meet the standards set by the Architect/Engineer and described in the product specifications.
  - 2. Allow minimum of 28 days cure on new asphalt, 28 days cure on new concrete prior to application of specified synthetic track surface.
  - 3. When surfacing on new asphalt, the asphalt contractor shall provide a flood test of the asphalt base.
  - 4. Repair work required on the base shall be approved by the Architect/Engineer.
  - 5. GC and/or Owner shall be responsible to protect the base from activities and traffic that may damage the base or leave dirt, oil or other foreign material on the base prior to application of the synthetic track surface.
- C. Weather
  - 1. Apply the synthetic track surface only during favorable weather conditions.
  - 2. No application of the synthetic track surface shall be conducted during rainfall, when rain is imminent, when freezing temperatures are forecasted or exist, or when gusting winds are occurring.
  - 3. Work is to progress only when the SSC can guarantee successful cure of the materials.
- D. During surface installation and striping, all irrigation systems shall be shut-off or controlled so that no water falls on the track or event areas.
- E. During set-up, installation and striping, the GC and/or Owner shall be responsible to have the entire track and other pertinent areas closed and secured of all activities 24 hours per day until completion of the project.

## 1.7 WARRANTY

- A. Manufacturer's and Installer's Warranty
  - 1. The warranty on the all-weather synthetic track surface shall endure for five (5) years from completion of installation.
  - 2. The warranty is to be provided directly by the SSC to the Owner.
  - 3. The warranty shall cover defects in materials and workmanship not deemed as ordinary wear on a running track.
- B. Warranty Bond not required.

## PART 2 – PRODUCTS

### 2.1 MANUFACTURERS

- A. Beynon Sports Surfaces, Inc., 19600 SW 129<sup>th</sup> Ave Suite A, Tualatin, OR 97092, Tel: 503-691-2484, Fax: 503-692-0491, [www.beynonsports.com](http://www.beynonsports.com)

## **2.2 MATERIALS**

- A. Rubber
  - 1. Base mat rubber shall be SBR granules with a 1.0-3.0mm gradation.
  - 2. Base mat sealer may utilize SBR/EPDM rubber dust with a 16 to 20 mesh gradation.
  - 3. Embedded rubber shall be EPDM with a 1.0-4.0mm gradation. Color shall be red.
- B. Binder
  - 1. Base mat primer shall be polyurethane compatible with base mat materials.
  - 2. Base mat binder shall be polyurethane moisture cure, MDI based, 100% solids.
  - 3. Base mat sealer shall be polyurethane solvent free, self leveling and compatible with the base mat and solid pour coating.
  - 4. Solid pour binder shall be polyurethane solvent free and self leveling. Color shall be red.
  - 5. Encapsulating spray shall be polyurethane highly pigmented, meeting all EPA VOC requirements. Color shall be red.
- C. Marking and Line Paint
  - 1. The paint shall be formulated to be compatible with synthetic track surface materials.
  - 2. Colors shall be as prescribed or approved by the appropriate governing body; NFHS, NCAA, or IAAF.

## **PART 3 – E ECUTION**

### **3.1 E AMINATION**

- A. SSC shall examine project conditions to ensure successful installation of the synthetic track surface. Any deficiencies shall be reported to the GC and/or Owner for corrective action.

### **3.2 PREPARATION**

- B. SSC to protect adjacent areas from contamination of synthetic track surfacing materials due to installation procedures.
- C. SSC shall prepare the base surface using a power blower to remove surface dirt. Cleaning necessary to remove embedded dirt, oil, or other foreign material shall be the responsibility of the GC and/or Owner.

### **3.3 INSTALLATION**

- A. Primer
  - 1. Apply base mat primer uniformly at a rate of not less than 0.3 pounds per square yard of the synthetic track surface area.
  - 2. Allow a minimum of 30 minutes cure before application of the base mat materials.
- B. Base Mat
  - 1. The base mat shall have a minimum weight of 18 pounds per square yard; consisting of 20 parts base mat binder and 100 parts base mat rubber, by weight.
  - 2. The materials shall be prepared in a mechanical mixer, to assure complete coverage of each rubber particle by the binding agent, and mixed until a homogenous mixture is obtained.
  - 3. Mixed materials making up the base mat shall be applied to the base surface by a mechanically operated finishing machine which shall have an electrically heated screed.

4. The base mat will be applied in one layer only to a minimum depth of 12 mm.
- C. Base Mat Sealer
1. The base mat sealer shall have a minimum weight of 3 pounds per square yard.
  2. The base mat sealer materials shall be prepared in a mechanical mixer and thoroughly mixed until a homogenous blend is obtained.
  3. The base mat sealer may contain up to 31% of the specified base mat sealer rubber, by weight.
  4. Mixed materials making up the base mat sealer shall be scraped or squeegee applied to the open pores of the base mat to create an impermeable finish.
- D. Solid Pour Coating
1. The solid pour coating shall have a minimum weight of 9.75 pounds per square yard; consisting of a minimum 3.75 pounds of pour binder and 6 pounds of embedded rubber granule.
  2. The solid pour binder components shall be prepared in a mechanical mixer and thoroughly mixed until a homogenous blend is obtained. The self leveling mixed coating materials are poured onto the sealed base mat and spread utilizing a notched trowel or squeegee.
  3. Prior to the initial set of the pour materials, the specified rubber granules are broadcast into the surface in excess. After curing, the excess granules are removed and recovered leaving a minimum 3mm solid pour embedded rubber finish.
- E. Encapsulating Spray
1. The light encapsulating spray shall have a minimum weight of 1 pound per square yard.
  2. The light encapsulating spray shall be applied in a minimum of two layers using equipment specifically designed for the application of synthetic track surfaces.
  3. The two layers shall be sprayed in opposite directions in order to achieve a uniform application.
- F. Striping
1. Striping Contractor shall verify with Owner's representative the exact locations, size, shape, and color of the lines and markings before proceeding with striping and markings.
  2. Engineer the layout of lane lines, starting lines, and markings as prescribed or approved by the Owner's representative, Architect/Engineer and the appropriate governing body; NFHS, NCAA, or IAAF.
  3. All lines and markings shall be spray applied by experienced personnel utilizing equipment manufactured for line striping. Striping lines and markings shall have true sharp edges.
  4. SSC shall provide a detailed drawing to the Owner clearly identifying color codes and locations of lines and markings.

### **3.4 CLEANING**

- A. Upon completion of work remove all containers, surplus materials, and installation debris.
- B. Leave area of work in clean orderly condition ready for use by Owner.

## **BSS 50 (ATLAS POLY-MAT)**

### **Product Specifications**

#### **PART 1 – GENERAL**

##### **1.1 SUMMARY**

- A. Product Name: BSS 50
- B. Product Description: Pour-in-place, all-weather synthetic track surface consisting of permeable polyurethane bound rubber base mat.
- C. Scope of Work: Furnish all required labor, materials and equipment to successfully install the specified all-weather synthetic track surface including striping and markings to a base properly prepared by others.

##### **1.2 RELATED WORK**

- A. Earthwork
- B. Drainage
- C. Asphaltic Concrete Paving
- D. Cast-in-Place Concrete
- E. Synthetic Turf

##### **1.3 REFERENCE STANDARDS**

- A. The work shall conform to the standards for track construction as prescribed or approved by the appropriate governing body; NFHS, NCAA, or IAAF.
  - 1. NFSHSA *Track and Field Rules*.
  - 2. ASBA *Running Tracks Construction and Maintenance Manual*.

##### **1.4 SUBMITTALS**

- A. Product Data
- B. Operation and Maintenance Manual
- C. Warranty

##### **1.5 QUALITY ASSURANCE**

- A. Synthetic surfacing contractor (SSC) shall be licensed and bonded and possess a valid contractor's license in the state where Work is performed.
- B. SSC shall have a minimum of 5 years experience installing the specified all-weather track surface under the same corporate name as current operations.

## 1.6 PROJECT CONDITIONS

- A. SSC, General Contractor (GC) and/or Owner, shall conduct a pre-construction meeting to review project conditions prior to dispatch of the SSC's installation team.
- B. Synthetic surface base asphalt/concrete.
  - 1. The base asphalt and/or concrete shall meet the standards set by the Architect/Engineer and described in the product specifications.
  - 2. Allow minimum of 14 days cure on new asphalt, 28 days cure on new concrete prior to application of specified synthetic track surface.
  - 3. When surfacing on new asphalt, the asphalt contractor shall provide a flood test of the asphalt base.
  - 4. Repair work required on the base shall be approved by the Architect/Engineer.
  - 5. GC and/or Owner shall be responsible to protect the base from activities and traffic that may damage the base or leave dirt, oil or other foreign material on the base prior to application of the synthetic track surface.
- C. Weather
  - 1. Apply the synthetic track surface only during favorable weather conditions.
  - 2. No application of the synthetic track surface shall be conducted during rainfall, when rain is imminent, when freezing temperatures are forecasted or exist, or when gusting winds are occurring.
  - 3. Work is to progress only when the SSC can guarantee successful cure of the materials.
- D. During surface installation and striping, all irrigation systems shall be shut-off or controlled so that no water falls on the track or event areas.
- E. During set-up, installation and striping, the GC and/or Owner shall be responsible to have the entire track and other pertinent areas closed and secured of all activities 24 hours per day until completion of the project.

## 1.7 WARRANTY

- A. Manufacturer's and Installer's Warranty
  - 1. The warranty on the all-weather synthetic track surface shall endure for two (2) years from completion of installation.
  - 2. The warranty is to be provided directly by the SSC to the Owner.
  - 3. The warranty shall cover defects in materials and workmanship not deemed as ordinary wear on a running track.
- B. Warranty Bond not required.

## PART 2 – PRODUCTS

### 2.1 MANUFACTURERS

- A. Beynon Sports, 19600 SW 129th Ave. Suite A, Tualatin, OR 97092,  
Tel: 503-691-2484, Fax: 503-692-0491, [www.beynonports.com](http://www.beynonports.com)



## 2.2 MATERIALS

- A. Rubber
  - 1. Base mat rubber shall be SBR granules with a 1.0-3.0mm gradation.
  - 2. Color shall be black
  
- B. Binder
  - 1. Base mat primer shall be polyurethane compatible with base mat materials.
  - 2. Base mat binder shall be polyurethane moisture cure, MDI based, 100% solids.
  - 3. Color shall be black.
  
- C. Marking and Line Paint
  - 1. The paint shall be formulated to be compatible with synthetic track surface materials.
  - 2. Colors shall be as prescribed or approved by the appropriate governing body; NFHS, NCAA, or IAAF.

## PART 3 – EXECUTION

### 3.1 EXAMINATION

- A. SSC shall examine project conditions to ensure successful installation of the synthetic track surface. Any deficiencies shall be reported to the GC and/or Owner for corrective action.

### 3.2 PREPARATION

- B. SSC to protect adjacent areas from contamination of synthetic track surfacing materials due to installation procedures.
  
- C. SSC shall prepare the base surface using a power blower to remove surface dirt. Cleaning necessary to remove embedded dirt, oil, or other foreign material shall be the responsibility of the GC and/or Owner.

### 3.3 INSTALLATION

- A. Primer
  - 1. Apply base mat primer uniformly at a rate of not less than 0.3 pounds per square yard of the synthetic track surface area.
  - 2. Allow a minimum of 30 minutes cure before application of the base mat materials.
  
- B. Base Mat
  - 1. The base mat shall have a minimum weight of 18 pounds per square yard; consisting of 20 parts base mat binder and 100 parts base mat rubber, by weight.
  - 2. The materials shall be prepared in a mechanical mixer, to assure complete coverage of each rubber particle by the binding agent, and mixed until a homogenous mixture is obtained.
  - 3. Mixed materials making up the base mat shall be applied to the base surface by a mechanically operated finishing machine which shall have an electrically heated screed.
  - 4. The base mat will be applied in one layer only to a minimum depth of 12 mm.

- C. Striping
1. Striping Contractor shall verify with Owner's representative the exact locations, size, shape, and color of the lines and markings before proceeding with striping and markings.
  2. Engineer the layout of lane lines, starting lines, and markings as prescribed or approved by the Owner's representative, Architect/Engineer and the appropriate governing body; NFHS, NCAA, or IAAF.
  3. All lines and markings shall be spray applied by experienced personnel utilizing equipment manufactured for line striping. Striping lines and markings shall have true sharp edges.

### **3.4 CLEANING**

- A. Upon completion of work remove all containers, surplus materials, and installation debris.
- B. Leave area of work in clean orderly condition ready for use by Owner.

**BSS 100**  
**Basemat with Waterbased Structural Spray**  
**Synthetic Track Surfacing System Specifications**

**Part 1 – General**

**1.1 Scope**

- A. The synthetic surfacing contractor shall furnish all labor, materials, equipment, supervision, and services necessary for the proper completion of all **BSS 100** Synthetic Track Surfacing and related work indicated on the drawings and specified herein.
- B. The synthetic surfacing contractor shall refer to the drawings for the required locations of synthetic track surfacing to be installed. All quantities and dimensions shall be field verified by the synthetic surfacing contractor.

**1.2 Specific Scope of Work**

- A. Install an IAAF approved, porous polyurethane synthetic track system comprised of a base layer of polyurethane-bound SBR granules and topped with BEYPUR 160, a waterbased single-component polyurethane structural spray, and EPDM granules.
- B. Layout and paint all track lines and event markings as required and specified by current IAAF and NCAA rules.

**1.3 Coordination**

- A. The synthetic surfacing contractor shall coordinate the work specified with an authorized and appointed representative of the owner so as to perform the work during a period and in a manner acceptable to the owner.

**Part 2 – Codes and Standards**

**2.1 Applicable Publications**

- B. Codes and standards follow the current guidelines set forth by the International Amateur Athletic Federation (IAAF) and the National Collegiate Athletic Association (NCAA), along with the current material testing guidelines as published by the American Society of Testing and Materials (ASTM).

## 2.2 Performance Standards

The **BSS 100** Track Surfacing System shall exhibit the following minimum performance standards as required by IAAF:

A.	Thickness:	12- 13mm or as specified
B.	Force Reduction:	35 to 50%
C.	Modified Vertical Deformation:	0.6 to 1.8mm
D.	Friction:	>0.5 (47 TRRL Skid Resistance)
E.	Tensile Strength:	≥ 0.4MPa
F.	Elongation at Break:	≥ 40%

## Part 3 – Quality Assurance

### 3.1 Contractor and Manufacturer Qualifications

- A. The CONTRACTOR and the MANUFACTURER must be the same.
- B. The CONTRACTOR must have a minimum of 10 years experience in the installation of poured-in-place, two-component elastomeric polyurethane synthetic track surfacing.
- C. The CONTRACTOR shall be able to furnish evidence that they have been in business for a period of not less than 3 years, under the present name, and if required, furnish financial statements for each of the past 3 years.
- D. The CONTRACTOR must have installed a minimum of 10 outdoor track facilities in the last 2 years using the exact, IAAF certified, synthetic track surfacing, as specified herein with the contractor bidding this project.
- E. The MANUFACTURER must have a minimum of 10 years of experience with compound two-part polyurethane for athletic surfaces.
- F. The CONTRACTOR is required to provide documentation that shows the selected specified and installed product meets current IAAF Performance Standards for Synthetic Surfaced Athletics Tracks (Outdoor) and is certified in terms of the IAAF certification system as updated to present day.
- G. CONTRACTOR is to provide a list of completed facilities, minimum of 10 which are certified to meet IAAF/NCAA rules & regulations, utilizing the same product as specified.
- H. The MANUFACTURER must offer a minimum of seven (7) IAAF Certified Track Systems.

- I. All polyurethane components must be MANUFACTURED in the United States in an **ISO 9001:2008 Certified** facility to ensure the highest quality materials.
- J. The CONTRACTOR must have installed a minimum of three (3) Class I IAAF Certified outdoor tracks within the United States.

### **3.2 Submittals**

The following submittals must be received with bid submittal:

- A. Standard printed specifications of the synthetic track surfacing system to be installed on this project.
- B. An affidavit attesting that the synthetic track surfacing material to be installed meets the requirements defined by the manufacturers currently published specifications and any modifications outlined in those technical specifications.
- C. A synthetic track surfacing system sample, 12" x 12" in size, of the same synthetic track surfacing system to be installed on this project.
- D. A list of completed facilities, including the installing supervisor, of the exact synthetic track surfacing system.
- E. A current IAAF Certificate proving the product to be installed meets the current IAAF Performance Standards for Synthetic Surfaced Athletics Tracks (Outdoor).

## **Part 4 – Materials**

### **4.1 Primers**

- A. Primers shall be BEYPRIM, a polyurethane-based primer specifically formulated to be compatible with the paved-in-place SBR granules, BEYPUR 300/320 and BEYPUR 160 track surfacing material.

### **4.2 Black SBR Granules**

- A. The rubber granules for the base mat shall be recycled SBR rubber, processed and chopped to 1-3mm size, containing less than 1% dust.

### **4.3 EPDM Granules**

- A. The rubber granules for the BEYPUR structural spray wearing coats shall be EPDM peroxide cured, synthetic rubber containing a minimum 20% EPDM resin, with a specific gravity of  $1.5 \pm 0.1 \text{ g/cm}^3$ . The EPDM rubber shall be the same color as chosen by the owner for the track surface.

#### **4.4 Polyurethane Binder**

- A. Binder for the black mat shall be BEYPUR, an MDI-based single-component, polyurethane binding agent. The binder shall not have a free TDI monomer level above 0.2% and must be solvent free. The binder must be specially formulated for compatibility with SBR rubber crumb.

#### **4.5 Structural Spray Coating**

- A. The spray coating shall be BEYPUR 160, a waterbased single-component, pigmented polyurethane, specifically formulated for compatibility with EPDM granules. The coating shall be Red. Pigment intergraded in the field shall not be allowed.

#### **4.6 Line Marking Paint**

- A. All line and event markings shall be applied by experienced personnel utilizing the manufacturers' recommended pigmented paint compatible with the **BSS 100** Track Surfacing material.

### **Part 5 – Installation**

#### **5.1 Subbase Requirements**

- A. Asphalt Compaction
  - a. The Synthetic Track Surfacing System shall be laid on an approved subbase. The General Contractor shall provide compaction test results of 92-96% for the installed subbase and asphalt surface.
  - b. For NCAA certification the following criteria must be followed. The track surface, i.e. asphalt substrate, shall not vary from planned cross slope by more than +/- 0.2%, with a maximum lateral slope outside to inside of 1%, and a maximum slope of 0.1% in any running direction. The finished asphalt shall not vary under a 10' straight edge more than 1/8".
  - c. It should be the responsibility of the asphalt-paving contractor to flood the surface immediately after the asphalt is capable of handling

traffic. If, after 20 minutes of drying time, there are birdbaths evident, it shall be the responsibility of the architect, in conjunction with the surfacing contractor, to determine the method of correction. No cold tar patching, skin patching or sand mix patching will be acceptable.

#### B. Asphalt Quality

- a. No Recycled Asphalt Pavement (RAP) shall be used in the wear course asphalt mix design as the inclusion of RAP as an off-set to virgin asphalt binder results in a brittle hot-mix asphalt (HMA) with significantly lower tensile strength and fatigue resistance. The sports surfacing contractor will not be held responsible for asphalt failures resulting from the inclusion RAP in the HMA mix design of the wear course.
- b. Any oil spills (hydraulic, diesel, motor oil, etc.) must be completely removed, either by chipping out or removing and replacing with new, keyed in asphalt. The minimum depth of any asphalt replacement shall be one inch. The curing time for the asphalt base is 28 days. It shall be the responsibility of the surfacing contractor to determine if the asphalt substrate has cured sufficiently prior to the application of polyurethane surfacing system.

#### C. Responsibility of Others

- a. It shall be the responsibility of the general contractor to determine if the asphalt substrate meets all design specifications, i.e. cross slopes, planarity and specific project criteria. After all the above conditions are met, the synthetic surfacing contractor must, in writing, accept the planarity of the asphalt receiving base, before work can commence.

### 5.2 Thickness

- A. The thickness of the **BSS 100** Synthetic Track Surfacing System shall be 13mm.

### 5.3 Equipment

- A. The **BSS 100** Synthetic Track Surfacing System components shall be processed and installed by specially designed machinery and equipment. A mechanically operated paver with variable regulated speed and thermostatically controlled screed shall be used in the installation of the base mat. The wearing course shall be installed using automatic electronic

portioning, which provides continuous mixing and feeding for an accurate, quality controlled installation.

- B. No hand mixing is allowed.

#### **5.4 Installation**

- A. Base Course

The SBR granules and BEYPUR shall be mixed together on site to regulate the ratio/quantity of SBR, not to exceed 82% by weight in the base mat portion of the system. The single component polyurethane binder shall be mixed with the SBR rubber so that a minimum of 20%, by weight, exists in the final mixture. This mixture is then mechanically installed using the paver.

- B. Wearing Course

The 0.5 to 1.5 millimeter EPDM granules shall be mixed with BEYPUR 160, the waterbased single-component structural spray coating. The structural spray shall be made in two (2) uniform applications.

#### **5.5 Site Conditions**

- A. Installation shall not take place if adjacent or concurrent construction generates excessive dust, abrasives or any other by-product that, in the opinion of the installer, would be harmful to the track material, until completion of such works.
- B. Apply Synthetic Track Surfacing in dry weather when pavement and atmospheric temperatures are fifty (50) degrees Fahrenheit or above, and are anticipated to remain above fifty (50) degrees Fahrenheit for twenty-four (24) hours after completing application.
- C. The maximum temperature cannot exceed 105 degrees at any point during a 24 - hour period.
- D. Rain cannot be falling. If there is a threat of rain, work shall cease until dry conditions can be re-established on the track pavement. Work is to proceed only when adequate curing can be guaranteed by the manufacturer.

### **Part 6 – Line Striping and Event Markings**

#### **6.1 Layout**



- A. Line striping and event markings shall be laid out in accordance with current IAAF and NCAA rules.

## **6.2 Certification**

- A. Upon completion of the installation, the owner shall be supplied with all necessary computations and drawings, as well as a letter of certification attesting to the accuracy of the markings.

## **Part 7 – Guarantee**

- A. The BSS 100 Track Surfacing System shall be fully guaranteed against faulty workmanship and material failure for a period of five (5) years from the date of acceptance. The warranty coverage shall not be prorated nor limited by the amount of usage.
- B. Synthetic surfacing material found to be defective as a result of faulty workmanship and/or material failure shall be replaced or repaired at no charge, upon written notification within the guarantee period.

END OF SECTION

**BSS 1000  
10mm Embedded  
Synthetic Track Surfacing System Specifications**

**Part 1 – General**

**1.1 Scope**

- A. The synthetic surfacing contractor shall furnish all labor, materials, equipment, supervision and services necessary for the proper completion of the **BSS 1000 Full Pour Dual Durometer** synthetic track surfacing and related work indicated on the drawings and specified herein.
- B. The synthetic surfacing contractor shall refer to the drawings for the required locations of synthetic track surfacing to be installed. All quantities and dimensions shall be field verified by the synthetic surfacing contractor.

**1.2 Specific Scope of Work**

- A. Install a full depth poured-in-place two-component, UV stabilized elastomeric polyurethane Dual Durometer synthetic surfacing system with embedded textured finish.
- B. Layout and paint all track lines and event markings as required and specified by current NCAA and NFHS rules.

**1.3 Coordination**

- A. The synthetic surfacing contractor shall coordinate the work specified with an authorized and appointed representative of the owner so as to perform the work during a period and in a manner acceptable to the owner.

**Part 2 – Codes and Standards**

**2.1 Applicable Publications**

- A. Codes and standards follow the current guidelines set forth by the National Collegiate Athletic Association (NCAA), along with the current material testing guidelines as published by the American Society of Testing and Materials (ASTM).

**Part 3 - Quality Assurance**

### **3.1 Contractor and Manufacturer Qualifications**

- A. The CONTRACTOR and the MANUFACTURER must be the same.
- B. The CONTRACTOR must have a minimum of 10 years experience in the installation of poured-in-place, two-component elastomeric polyurethane synthetic track surfacing.
- C. The CONTRACTOR shall be able to furnish evidence that they have been in business for a period of not less than 3 years, under the present name, and if required, furnish financial statements for each of the past 3 years.
- D. The CONTRACTOR must have installed a minimum of 10 outdoor track facilities in the last 2 years using the exact, poured-in-place, two-component elastomeric polyurethane synthetic track surfacing, as specified herein with the contractor bidding this project.
- E. The MANUFACTURER must have a minimum of 10 years of experience with compound two-part polyurethane for athletic surfaces.
- F. CONTRACTOR is to provide a list of completed facilities, minimum of 10 which are certified to meet NCAA rules & regulations, utilizing the same product as specified.
- G. All polyurethane components must be MANUFACTURED in the United States in an ISO 9001 Certified facility.

### **3.2 Submittals**

The following submittals must be received with bid submittal:

- A. Standard printed specifications of the synthetic track surfacing system to be installed on this project.
- B. An affidavit attesting that the synthetic track surfacing material to be installed meets the requirements defined by the manufacturers currently published specifications and any modifications outlined in those technical specifications.
- C. A synthetic track surfacing system sample, 12" x 12" in size, of the same synthetic track surfacing system to be installed on this project.

- D. A list of completed facilities, including the installing supervisor, of the exact Dual Durometer synthetic track surfacing system.

## **Part 4 – Materials**

### **4.1 Elastomeric Polyurethane**

- A. BEYPUR, the two-component U.V. stabilized elastomeric polyurethane compounded from polyol and isocyanate components, based on one hundred percent Methylene Diphenyl Isocyanate (MDI). No Toluene Diisocyanate Isocyanate (TDI) will be allowed.
- B. The elastomeric polyurethane shall be red in color.

### **4.2 EPDM Granulate**

- A. The EPDM granulates shall be approximately 1 to 3mm in size.
- B. The EPDM granulates and the U.V. stabilized elastomeric polyurethane shall be color matched.

### **4.3 Rubber Granulate**

- A. Fine mesh Styrene Butadiene Rubber (SBR) processed ground to a graded size not to exceed 20 mesh in size.
- B. A maximum of twenty percent, by weight of the SBR will be allowed in the force reduction layer.

### **4.4 Line Marking Paint**

- A. Manufacturers recommended pigmented paint.

## **Part 5 – Installation**

### **5.1 Subbase Requirements**

- A. Asphalt Compaction
  - a. The Synthetic Track Surfacing System shall be laid on an approved subbase. The General Contractor shall provide compaction test results of 92-96% for the installed subbase and asphalt surface.

- b. For NCAA certification the following criteria must be followed. The track surface, i.e. asphalt substrate, shall not vary from planned cross slope by more than +/- 0.2%, with a maximum lateral slope outside to inside of 1%, and a maximum slope of 0.1% in any running direction. The finished asphalt shall not vary under a 10' straight edge more than 1/8".
- c. It should be the responsibility of the asphalt-paving contractor to flood the surface immediately after the asphalt is capable of handling traffic. If, after 20 minutes of drying time, there are birdbaths evident, it shall be the responsibility of the architect, in conjunction with the surfacing contractor, to determine the method of correction. No cold tar patching, skin patching or sand mix patching will be acceptable.

#### B. Asphalt Quality

- a. No Recycled Asphalt Pavement (RAP) shall be used in the wear course asphalt mix design as the inclusion of RAP as an off-set to virgin asphalt binder results in a brittle hot-mix asphalt (HMA) with significantly lower tensile strength and fatigue resistance. The sports surfacing contractor will not be held responsible for asphalt failures resulting from the inclusion RAP in the HMA mix design of the wear course.
- b. Any oil spills (hydraulic, diesel, motor oil, etc.) must be completely removed, either by chipping out or removing and replacing with new, keyed in asphalt. The minimum depth of any asphalt replacement shall be one inch. The curing time for the asphalt base is 28 days. It shall be the responsibility of the surfacing contractor to determine if the asphalt substrate has cured sufficiently prior to the application of polyurethane surfacing system.

#### C. Responsibility of Others

- a. It shall be the responsibility of the general contractor to determine if the asphalt substrate meets all design specifications, i.e. cross slopes, planarity and specific project criteria. After all the above conditions are met, the synthetic surfacing contractor must, in writing, accept the planarity of the asphalt receiving base, before work can commence.

## 5.2 Thickness

- A. Total thickness of the **BSS 1000 Full Pour Dual Durometer** synthetic track surfacing system shall average 10mm.

### **5.3 Equipment**

- A. The **BSS 1000 Full Pour Dual Durometer** synthetic track surfacing system components shall be processed and installed by specially designed machinery with automatic electronic portioning, which provides continuous mixing, feeding and finishing for accurate quality controlled installation.
- B. No hand mixing is allowed.

### **5.4 Materials**

- A. Force Reduction Layer

The fine mesh SBR granules and UV stabilized elastomeric polyurethane shall be metered and mixed together on site to regulate the ratio/quantity of SBR, not to exceed fourteen percent in the system and to insure an even distribution of the granules throughout the force reduction layer. No multi-layered systems allowed.

- B. Resilient Wearing Layer

The 1 to 3 millimeter EPDM granules shall be mechanically integrated with a UV stabilized elastomeric polyurethane to the full depth of the wearing layer. The resilient textured finish shall be a dense matrix of embedded EPDM granules.

### **5.5 Site Conditions**

- A. Installation shall not take place if adjacent or concurrent construction generates excessive dust, abrasives or any other by-product that, in the opinion of the installer, would be harmful to the track material, until completion of such works.
- B. Apply Synthetic Track Surfacing in dry weather when pavement and atmospheric temperatures are fifty (50) degrees Fahrenheit or above, and are anticipated to remain above fifty (50) degrees Fahrenheit for twenty-four (24) hours after completing application.
- C. The maximum temperature cannot exceed 105 degrees at any point during a 24 - hour period.

- D. Rain cannot be falling. If there is a threat of rain, work shall cease until dry conditions can be re-established on the track pavement. Work is to proceed only when adequate curing can be guaranteed by the manufacturer.

## **Part 6 – Line Striping and Event Markings**

### **6.1 Layout**

- A. Line striping and event markings shall be laid out in accordance with current NCAA and NFHS rules.

### **6.2 Certification**

- A. Upon completion of the installation, the owner shall be supplied with all necessary computations and drawings as well as a letter of certification attesting to the accuracy of the markings.

## **Part 7 – Guarantee**

- A. Synthetic track surfacing system shall be fully guaranteed against faulty workmanship and material failure for a period of five (5) years from the date of acceptance.
- B. Synthetic surfacing material found to be defective as a result of faulty workmanship and/or material failure shall be replaced or repaired at no charge, upon written notification within the guarantee period.

END OF SECTION

**BSS 1000  
13mm Embedded  
Synthetic Track Surfacing System Specifications**

**Part 1 – General**

**1.1 Scope**

- A. The synthetic surfacing contractor shall furnish all labor, materials, equipment, supervision and services necessary for the proper completion of the **BSS 1000 Full Pour Dual Durometer** synthetic track surfacing and related work indicated on the drawings and specified herein.
- B. The synthetic surfacing contractor shall refer to the drawings for the required locations of synthetic track surfacing to be installed. All quantities and dimensions shall be field verified by the synthetic surfacing contractor.

**1.2 Specific Scope of Work**

- A. Install an IAAF approved, full depth poured-in-place two-component, UV stabilized elastomeric polyurethane Dual Durometer synthetic surfacing system with embedded textured finish.
- B. Layout and paint all track lines and event markings as required and specified by current IAAF and NCAA rules.

**1.3 Coordination**

- A. The synthetic surfacing contractor shall coordinate the work specified with an authorized and appointed representative of the owner so as to perform the work during a period and in a manner acceptable to the owner.

**Part 2 – Codes and Standards**

**2.1 Applicable Publications**

- A. Codes and standards follow the current guidelines set forth by the International Amateur Athletic Federation (IAAF) and the National Collegiate Athletic Association (NCAA), along with the current material testing guidelines as published by the American Society of Testing and Materials (ASTM).

**2.2 Performance Standards**



The new synthetic track surfacing system shall exhibit the following minimum performance standards as required by IAAF:

- |                             |                           |
|-----------------------------|---------------------------|
| A. Thickness:               | (12-13mm) or as specified |
| B. Force Reduction          | 35-50%                    |
| C. Vertical Deformation:    | 0.6mm-2.5mm               |
| D. Coefficient of Friction: | ≥ 0.5 (47 TRRL Scale)     |
| E. Tensile Strength:        | ≥ 0.5 Mpa                 |
| F. Elongation:              | ≥ 40%                     |

### **Part 3 - Quality Assurance**

#### **3.1 Contractor and Manufacturer Qualifications**

- A. The CONTRACTOR and the MANUFACTURER must be the same.
- B. The CONTRACTOR must have a minimum of 10 years experience in the installation of poured-in-place, two-component elastomeric polyurethane synthetic track surfacing.
- C. The CONTRACTOR shall be able to furnish evidence that they have been in business for a period of not less than 3 years, under the present name, and if required, furnish financial statements for each of the past 3 years.
- D. The CONTRACTOR must have installed a minimum of 10 outdoor track facilities in the last 2 years using the exact, IAAF certified, poured-in-place, two-component elastomeric polyurethane synthetic track surfacing, as specified herein with the contractor bidding this project.
- E. The MANUFACTURER must have a minimum of 10 years of experience with compound two-part polyurethane for athletic surfaces.
- F. The CONTRACTOR is required to provide documentation that shows the selected specified and installed product meets current IAAF Performance Standards for Synthetic Surfaced Athletics Tracks (Outdoor) and is certified in terms of the IAAF certification system as updated to present day.
- G. CONTRACTOR is to provide a list of completed facilities, minimum of 10 which are certified to meet IAAF/NCAA rules & regulations, utilizing the same product as specified.
- H. The MANUFACTURER must offer a minimum of seven (7) IAAF Certified Track Systems.
- I. All polyurethane components must be MANUFACTURED in the United States at the headquarters of the CONTRACTOR.

- J. All Polyurethane components must be MANUFACTURED in an ISO 9001 Certified facility.
- K. The CONTRACTOR must have installed a minimum of three (3) Class I IAAF Certified outdoor tracks within the United States.

### **3.2 Submittals**

The following submittals must be received with bid submittal:

- A. Standard printed specifications of the synthetic track surfacing system to be installed on this project.
- B. An affidavit attesting that the synthetic track surfacing material to be installed meets the requirements defined by the manufacturers currently published specifications and any modifications outlined in those technical specifications.
- C. A synthetic track surfacing system sample, 12" x 12" in size, of the same synthetic track surfacing system to be installed on this project.
- D. A list of completed facilities, including the installing supervisor, of the exact Dual Durometer synthetic track surfacing system.
- E. A current IAAF Certificate proving the product to be installed meets the current IAAF Performance Standards for Synthetic Surfaced Athletics Tracks (Outdoor).

## **Part 4 – Materials**

### **4.1 Elastomeric Polyurethane**

- A. BEYPUR, the two-component U.V. stabilized elastomeric polyurethane compounded from polyol and isocyanate components, based on one hundred percent Methylene Diphenyl Isocyanate (MDI). No Toluene Diisocyanate Isocyanate (TDI) will be allowed.
- B. The elastomeric polyurethane shall be red in color.

### **4.2 EPDM Granulate**

- A. The EPDM granulates shall be approximately 1 to 3mm in size.
- B. The EPDM granulates and the U.V. stabilized elastomeric polyurethane shall be color matched.

#### 4.3 Rubber Granulate

- A. Fine mesh Styrene Butadiene Rubber (SBR) processed ground to a graded size not to exceed 20 mesh in size.
- B. A maximum of twenty percent, by weight of the SBR will be allowed in the force reduction layer.

#### 4.4 Line Marking Paint

- A. Manufacturers recommended pigmented paint.

### Part 5 – Installation

#### 5.1 Subbase Requirements

- A. Asphalt Compaction
  - a. The Synthetic Track Surfacing System shall be laid on an approved subbase. The General Contractor shall provide compaction test results of 92-96% for the installed subbase and asphalt surface.
  - b. For NCAA certification the following criteria must be followed. The track surface, i.e. asphalt substrate, shall not vary from planned cross slope by more than +/- 0.2%, with a maximum lateral slope outside to inside of 1%, and a maximum slope of 0.1% in any running direction. The finished asphalt shall not vary under a 10' straight edge more than 1/8".
  - c. It should be the responsibility of the asphalt-paving contractor to flood the surface immediately after the asphalt is capable of handling traffic. If, after 20 minutes of drying time, there are birdbaths evident, it shall be the responsibility of the architect, in conjunction with the surfacing contractor, to determine the method of correction. No cold tar patching, skin patching or sand mix patching will be acceptable.
- B. Asphalt Quality
  - a. No Recycled Asphalt Pavement (RAP) shall be used in the wear course asphalt mix design as the inclusion of RAP as an off-set to virgin asphalt binder results in a brittle hot-mix asphalt (HMA) with significantly lower tensile strength and fatigue resistance. The sports surfacing contractor will not be held responsible for asphalt failures resulting from the inclusion RAP in the HMA mix design of the wear course.

- b. Any oil spills (hydraulic, diesel, motor oil, etc.) must be completely removed, either by chipping out or removing and replacing with new, keyed in asphalt. The minimum depth of any asphalt replacement shall be one inch. The curing time for the asphalt base is 28 days. It shall be the responsibility of the surfacing contractor to determine if the asphalt substrate has cured sufficiently prior to the application of polyurethane surfacing system.

C. Responsibility of Others

- a. It shall be the responsibility of the general contractor to determine if the asphalt substrate meets all design specifications, i.e. cross slopes, planarity and specific project criteria. After all the above conditions are met, the synthetic surfacing contractor must, in writing, accept the planarity of the asphalt receiving base, before work can commence.

## 5.2 Thickness

- A. Total thickness of the **BSS 1000 Full Pour Dual Durometer** synthetic track surfacing system shall average 13mm.

## 5.3 Equipment

- A. The **BSS 1000 Full Pour Dual Durometer** synthetic track surfacing system components shall be processed and installed by specially designed machinery with automatic electronic portioning, which provides continuous mixing, feeding and finishing for accurate quality controlled installation.
- B. No hand mixing is allowed.

## 5.4 Materials

- A. Force Reduction Layer
  - a. The fine mesh SBR granules and UV stabilized elastomeric polyurethane shall be metered and mixed together on site to regulate the ratio/quantity of SBR, not to exceed fourteen percent in the system and to insure an even distribution of the granules throughout the force reduction layer. No multi-layered systems allowed.
- B. Resilient Wearing Layer
  - a. The 1 to 3 millimeter EPDM granules shall be mechanically integrated with a UV stabilized elastomeric polyurethane to the full depth of the wearing layer. The resilient textured finish shall be a dense matrix of embedded EPDM granules.

## **5.5 Site Conditions**

- A. Installation shall not take place if adjacent or concurrent construction generates excessive dust, abrasives or any other by-product that, in the opinion of the installer, would be harmful to the track material, until completion of such works.
- B. Apply Synthetic Track Surfacing in dry weather when pavement and atmospheric temperatures are fifty (50) degrees Fahrenheit or above, and are anticipated to remain above fifty (50) degrees Fahrenheit for twenty-four (24) hours after completing application.
- C. The maximum temperature cannot exceed 105 degrees at any point during a 24 - hour period.
- D. Rain cannot be falling. If there is a threat of rain, work shall cease until dry conditions can be re-established on the track pavement. Work is to proceed only when adequate curing can be guaranteed by the manufacturer.

## **Part 6 – Line Striping and Event Markings**

### **6.1 Layout**

- A. Line striping and event markings shall be laid out in accordance with current IAAF and NCAA rules.

### **6.2 Certification**

- A. Upon completion of the installation, the owner shall be supplied with all necessary computations and drawings as well as a letter of certification attesting to the accuracy of the markings.

## **Part 7 – Guarantee**

- A. Synthetic track surfacing system shall be fully guaranteed against faulty workmanship and material failure for a period of five (5) years from the date of acceptance.
- B. Synthetic surfacing material found to be defective as a result of faulty workmanship and/or material failure shall be replaced or repaired at no charge, upon written notification within the guarantee period.

END OF SECTION

**BSS 100RE**  
**Structural Spray Resurfacing**  
**Synthetic Track Surfacing System Specifications**

**Part 1 – General**

**1.1 Scope**

- A. The synthetic surfacing contractor shall furnish all labor, materials, equipment, supervision, and services necessary for the proper completion of all **BSS 100RE Structural Spray Resurfacing** and related work indicated on the drawings and specified herein.
- B. The synthetic surfacing contractor shall refer to the drawings for the required locations of synthetic track surfacing to be installed. All quantities and dimensions shall be field verified by the synthetic surfacing contractor.

**1.2 Specific Scope of Work**

- A. Install a porous polyurethane synthetic track surface comprised of BEYPUR, a single-component polyurethane structural spray, and EPDM granules.
- B. Layout and paint all track lines and event markings as required and specified by current IAAF and NCAA rules.

**1.3 Coordination**

- A. The synthetic surfacing contractor shall coordinate the work specified with an authorized and appointed representative of the owner so as to perform the work during a period and in a manner acceptable to the owner.

**Part 2 – Quality Assurance**

**2.1 Contractor and Manufacturer Qualifications**

- A. The CONTRACTOR and the MANUFACTURER must be the same.
- B. The CONTRACTOR must have a minimum of 10 years' experience in the installation of poured-in-place, two-component elastomeric polyurethane synthetic track surfacing.

- C. The CONTRACTOR shall be able to furnish evidence that they have been in business for a period of not less than 3 years, under the present name, and if required, furnish financial statements for each of the past 3 years.
- D. The CONTRACTOR must have installed a minimum of 10 outdoor track facilities in the last 2 years using the exact, poured-in-place, two-component elastomeric polyurethane synthetic track resurfacing, as specified herein with the contractor bidding this project.
- E. The MANUFACTURER must have a minimum of 10 years of experience with compound two-part polyurethane for athletic surfaces.
- F. CONTRACTOR is to provide a list of completed facilities, minimum of 10 which are certified to meet IAAF/NCAA rules & regulations, utilizing the same product as specified.
- G. The MANUFACTURER must offer a minimum of six (6) IAAF Certified Track Systems.
- H. All polyurethane components must be MANUFACTURED in the United States in an ISO 9001:2008 Certified facility to ensure the highest quality materials.
- I. The CONTRACTOR must have installed a minimum of two (2) Class I IAAF Certified outdoor tracks within the United States.

### **3.2 Submittals**

The following submittals must be received with bid submittal:

- A. Standard printed specifications of the synthetic track surfacing system to be installed on this project.
- B. An affidavit attesting that the synthetic track surfacing material to be installed meets the requirements defined by the manufacturers currently published specifications and any modifications outlined in those technical specifications.
- C. A synthetic track surfacing system sample, 12" x 12" in size, of the same synthetic track surfacing system to be installed on this project.
- D. A list of completed facilities, including the installing supervisor, of the exact Dual Durometer synthetic track surfacing system

## Part 3 – Materials

### 4.1 EPDM Granules

- A. The rubber granules for the BEYPUR structural spray wearing coats shall be EPDM, synthetic rubber containing a minimum 20% EPDM resin, with a specific gravity of  $1.5 \pm 0.1$  g/cm<sup>3</sup>. The EPDM rubber shall be the same color as chosen by the owner for the track surface.

### 4.2 Structural Spray Coating

- A. The spray coating shall be BEYPUR, an MDI-based single-component, moisture cured, 100% solids, pigmented polyurethane, specifically formulated for compatibility with EPDM granules. The coating shall be the color specified by the owner. Pigment intergraded in the field shall not be allowed.

### 4.3 Line Marking Paint

- A. Manufacturers recommended pigmented line paint.

## Part 4 – Installation

### 4.1 Surface Preparation

- A. Prior to the application of the resurfacing layer, the existing polyurethane surface shall be inspected for conformity to planarity requirements. The surface shall not deviate more than 1/8 inch in 10 feet from the specified grade when checked with a 10-foot straightedge. An impermeable polyurethane surface may also be flooded with water to determine if any “bird baths” or low areas exist.
- B. The owner should verify that the surface tolerances meet all specifications issued by the appropriate sanctioning or governing body such as IAAF, NCAA, NFSHSA, TAC, etc.
- C. The area to be surfaced shall be clean and free of any loose or foreign particles (dirt, oil, etc.) prior to the commencement of work. The surface is usually cleaned by use of a power blower and high-pressure washer.

### 4.2 Thickness

- A. The thickness of the **BSS 100RE Structural Spray** shall be 2-3mm.



### **4.3 Equipment**

- A. The **BSS 100RE Structural Spray Resurfacing** components shall be processed and installed by specially designed machinery and equipment. The wearing course shall be installed using automatic electronic portioning, which provides continuous mixing and feeding for an accurate, quality controlled installation.

### **4.4 Installation**

- A. Structural Spray Course

The 0.5 to 1.5 millimeter EPDM granules shall be mixed with BEYPUR, the single-component structural spray coating. The structural spray shall be made in two (2) uniform applications.

### **4.5 Site Conditions**

- B. Installation shall not take place if adjacent or concurrent construction generates excessive dust, abrasives or any other by-product that, in the opinion of the installer, would be harmful to the track material, until completion of such works.
- C. If, in the opinion of the installer of the synthetic material, the weather and/or climatic conditions are detrimental to the proper installation of the surfacing materials, work shall be delayed until conditions are acceptable. Preferred installation temperature is fifty degrees Fahrenheit and rising. Installation shall be executed only in dry conditions.

## **Part 5 – Line Striping and Event Markings**

### **5.1 Layout**

- A. Line striping and event markings shall be laid out in accordance with current IAAF and NCAA rules.

### **5.2 Certification**

- A. Upon completion of the installation, the owner shall be supplied with all necessary computations and drawings as well as a letter of certification attesting to the accuracy of the markings.

## **Part 6 – Guarantee**

- A. Synthetic track surfacing system shall be fully guaranteed against faulty workmanship and material failure for a period of five (5) years from the date of acceptance.
- B. Synthetic surfacing material found to be defective as a result of faulty workmanship and/or material failure shall be replaced or repaired at no charge, upon written notification within the guarantee period.

END OF SECTION

**BSS 200**  
**Impermeable Basemat with Structural Spray**  
**Synthetic Track Surfacing System Specifications**

**Part I - General**

**1.1 Scope**

- A. The synthetic surfacing contractor shall furnish all labor, materials, equipment, supervision, and services necessary for the proper completion of all **BSS 200** Synthetic Track Surfacing and related work indicated on the drawings and specified herein.
- B. The synthetic surfacing contractor shall refer to the drawings for the required locations of synthetic track surfacing to be installed. All quantities and dimensions shall be field verified by the synthetic surfacing contractor.

**1.2 Specific Scope of Work**

- A. Install an impermeable polyurethane synthetic track system comprised of a base layer of polyurethane bound SBR rubber granules, BEYPUR 200, an impermeable layer (seal coat) of a two-component urethane, and topped with BEYPUR, a spray-applied coating of single-component polyurethane, and EPDM granules.
- B. Layout and paint all track lines and event markings as required and specified by current IAAF and NCAA rules.

**1.3 Coordination**

- A. The synthetic surfacing contractor shall coordinate the work specified with an authorized and appointed representative of the owner so as to perform the work during a period and in a manner acceptable to the owner.

**Part 2 - Codes and Standards**

**1.1 Applicable Publications**

- B. Codes and standards follow the current guidelines set forth by the International Amateur Athletic Federation (IAAF) and the National Collegiate Athletic Association (NCAA), along with the current material testing

guidelines as published by the American Society of Testing and Materials (ASTM).

## 2.2 Performance Standards

The **BSS 200** synthetic track surfacing system shall exhibit the following minimum performance standards (ASTM):

- |                             |                           |
|-----------------------------|---------------------------|
| A. Thickness:               | (12-13mm) or as specified |
| B. Force Reduction:         | 35-50%                    |
| C. Vertical Deformation:    | 0.6mm-2.5mm               |
| D. Coefficient of Friction: | ≥ 0.5 (47 TRRL Scale)     |
| E. Tensile Strength:        | ≥ 0.5 Mpa                 |
| F. Elongation:              | ≥ 40%                     |

## Part 3 - Quality Assurance

### 3.1 Contractor and Manufacturer Qualifications

- A. The CONTRACTOR and the MANUFACTURER must be the same.
- B. The CONTRACTOR must have a minimum of 10 years experience in the installation of poured-in-place, two-component elastomeric polyurethane synthetic track surfacing.
- C. The CONTRACTOR shall be able to furnish evidence that they have been in business for a period of not less than 3 years, under the present name, and if required, furnish financial statements for each of the past 3 years.
- D. The CONTRACTOR must have installed a minimum of 10 outdoor track facilities in the last 2 years using the exact, IAAF certified, synthetic track surfacing, as specified herein with the contractor bidding this project.
- E. The MANUFACTURER must have a minimum of 10 years of experience with compound two-part polyurethane for athletic surfaces.
- F. The CONTRACTOR is required to provide documentation that shows the selected specified and installed product meets current IAAF Performance Standards for Synthetic Surfaced Athletics Tracks (Outdoor) and is certified in terms of the IAAF certification system as updated to present day.

- G. CONTRACTOR is to provide a list of completed facilities, minimum of 10 which are certified to meet IAAF/NCAA rules & regulations, utilizing the same product as specified.
- H. The MANUFACTURER must offer a minimum of seven (7) IAAF Certified Track Systems.
- I. All polyurethane components must be MANUFACTURED in the United States in an **ISO 9001:2008 Certified** facility to ensure the highest quality materials.
- J. The CONTRACTOR must have installed a minimum of three (3) Class I IAAF Certified outdoor tracks within the United States.

### **3.2 Submittals**

The following submittals must be received with bid submittal:

- A. Standard printed specifications of the synthetic track surfacing system to be installed on this project.
- B. An affidavit attesting that the synthetic track surfacing material to be installed meets the requirements defined by the manufacturers currently published specifications and any modifications outlined in those technical specifications.
- C. A synthetic track surfacing system sample, 12" x 12" in size, of the same synthetic track surfacing system to be installed on this project.
- D. A list of completed facilities, including the installing supervisor, of the exact synthetic track surfacing system.
- E. A current IAAF Certificate proving the product to be installed meets the current IAAF Performance Standards for Synthetic Surfaced Athletics Tracks (Outdoor).

## **Part 4 - Materials**

### **4.1 Primers**

- A. Primers must be polyurethane-based, specifically formulated to be compatible with the paved SBR base and track surfacing material.

#### **4.2 Black SBR Granules**

- A. The rubber granules for the base mat shall be recycled SBR rubber, processed and chopped to 1-3mm size, containing less than 1% dust.

#### **4.3 EPDM Granules**

- A. The rubber granules for the BEYPUR structural spray wearing coats shall be EPDM, synthetic rubber containing a minimum 20% EPDM resin, with a specific gravity of  $1.5 \pm 0.1$  g/cm<sup>3</sup>. The EPDM rubber shall be the same color as chosen by the owner for the track surface.

#### **4.4 Polyurethane Binder**

- A. Binder for the black mat shall be BEYPUR, an MDI-based single-component, polyurethane binding agent. The binder shall not have a free TDI monomer level above 0.2% and must be solvent free. The binder must be specially formulated for compatibility with SBR rubber crumb.

#### **4.5 Structural Spray Coating**

- A. The spray coating shall be BEYPUR, an MDI-based single-component, moisture cured, 100% solids, pigmented polyurethane, specifically formulated for compatibility with EPDM granules. The coating shall be the color specified by the owner. Pigment intergraded in the field shall not be allowed.

#### **4.6 Seal Coat**

- A. BEYPUR 200, the two-component polyurethane resin for this application, shall be pigmented to match the color of the wear coat. The material shall be applied by a squeegee to insure that the black mat is sealed.

#### **4.7 Line Marking Paint**

- A. All line and event markings shall be applied by experienced personnel the manufacturers recommended pigmented paint compatible with the synthetic track surfacing.

### **Part 5 - Installation**

## 5.1 Subbase Requirements

### A. Asphalt Compaction

- a. The Synthetic Track Surfacing System shall be laid on an approved subbase. The General Contractor shall provide compaction test results of 92-96% for the installed subbase and asphalt surface.
- b. For NCAA certification the following criteria must be followed. The track surface, i.e. asphalt substrate, shall not vary from planned cross slope by more than +/- 0.2%, with a maximum lateral slope outside to inside of 1%, and a maximum slope of 0.1% in any running direction. The finished asphalt shall not vary under a 10' straight edge more than 1/8".
- c. It should be the responsibility of the asphalt-paving contractor to flood the surface immediately after the asphalt is capable of handling traffic. If, after 20 minutes of drying time, there are birdbaths evident, it shall be the responsibility of the architect, in conjunction with the surfacing contractor, to determine the method of correction. No cold tar patching, skin patching or sand mix patching will be acceptable.

### B. Asphalt Quality

- a. No Recycled Asphalt Pavement (RAP) shall be used in the wear course asphalt mix design as the inclusion of RAP as an off-set to virgin asphalt binder results in a brittle hot-mix asphalt (HMA) with significantly lower tensile strength and fatigue resistance. The sports surfacing contractor will not be held responsible for asphalt failures resulting from the inclusion RAP in the HMA mix design of the wear course.
- b. Any oil spills (hydraulic, diesel, motor oil, etc.) must be completely removed, either by chipping out or removing and replacing with new, keyed in asphalt. The minimum depth of any asphalt replacement shall be one inch. The curing time for the asphalt base is 28 days. It shall be the responsibility of the surfacing contractor to determine if the asphalt substrate has cured sufficiently prior to the application of polyurethane surfacing system.

### C. Responsibility of Others

- a. It shall be the responsibility of the general contractor to determine if the asphalt substrate meets all design specifications, i.e. cross slopes, planarity and specific project criteria. After all the above conditions are met, the synthetic surfacing contractor must, in writing, accept the planarity of the asphalt receiving base, before work can commence.

## 5.2 Thickness

- A. The thickness of the **BSS 200** Synthetic Track Surfacing System shall be 13mm.

## 5.3 Equipment

- A. The **BSS 200** Synthetic Track Surfacing System components shall be processed and installed by specially designed machinery and equipment. A mechanically operated paver with variable regulated speed and thermostatically controlled screed shall be used in the installation of the base mat. The wearing course shall be installed using automatic electronic portioning, which provides continuous mixing and feeding for an accurate, quality controlled installation.
- B. No hand mixing is allowed.

## 5.4 Installation

- A. Base Course

The SBR granules and BEYPUR shall be mixed together on site to regulate the ratio/quantity of SBR, not to exceed 82% by weight in the base mat portion of the system. The BEYPUR shall be mixed with the SBR rubber so that a minimum of 20%, by weight, exists in the final mixture. This mixture is then mechanically installed using the paver.

- B. Seal Coat

The two BEYPUR 200 components are mixed at the prescribed ratio homogeneously with a suitable mixing device. The coating is squeegee applied to the base mat, making it impermeable.

- C. Wearing Course



The 0.5 to 1.5mm EPDM granules shall be mixed with BEYPUR, the single-component structural spray coating. The structural spray shall be made in two uniform applications.

## **5.5 Site Conditions**

- A. Installation shall not take place if adjacent or concurrent construction generates excessive dust, abrasives or any other by-product that, in the opinion of the installer, would be harmful to the track material, until completion of such works.
- B. Apply Synthetic Track Surfacing in dry weather when pavement and atmospheric temperatures are fifty (50) degrees Fahrenheit or above, and are anticipated to remain above fifty (50) degrees Fahrenheit for twenty-four (24) hours after completing application.
- C. The maximum temperature cannot exceed 105 degrees at any point during a 24 - hour period.
- D. Rain cannot be falling. If there is a threat of rain, work shall cease until dry conditions can be re-established on the track pavement. Work is to proceed only when adequate curing can be guaranteed by the manufacturer.

## **Part 6 - Line Striping and Event Markings**

### **6.1 Layout**

- A. Line striping and event markings shall be laid out in accordance with current IAAF and NCAA rules.

### **6.2 Certification**

- A. Upon completion of the installation, the owner shall be supplied with all necessary computations and drawings as well as a letter of certification attesting to the accuracy of the markings.

## **Part 7 - Guarantee**

- A. Synthetic track surfacing system shall be fully guaranteed against faulty workmanship and material failure for a period of five (5) years from the date of acceptance.

- B. Synthetic surfacing material found to be defective as a result of faulty workmanship and/or material failure shall be replaced or repaired at no charge, upon written notification within the guarantee period

END OF SECTION

**BSS 2000**  
**13mm Embedded**  
**Synthetic Track Surfacing System Specifications**

**Part 1 – General**

**1.1 Scope**

- A. The synthetic surfacing contractor shall furnish all labor, materials, equipment, supervision and services necessary for the proper completion of the **BSS 2000 Full Pour** synthetic track surfacing and related work indicated on the drawings and specified herein.
- B. The synthetic surfacing contractor shall refer to the drawings for the required locations of synthetic track surfacing to be installed. All quantities and dimensions shall be field verified by the synthetic surfacing contractor.

**1.2 Specific Scope of Work**

- A. Install a full depth poured-in-place two-component, UV stabilized elastomeric polyurethane Dual Durometer synthetic surfacing system with embedded textured finish that has been certified by the IAAF.
- B. Layout and paint all track lines and event markings as required and specified by current IAAF and NCAA rules.

**1.3 Coordination**

- A. The synthetic surfacing contractor shall coordinate the work specified with an authorized and appointed representative of the owner so as to perform the work during a period and in a manner acceptable to the owner.

**Part 2 – Codes and Standards**

**2.1 Applicable Publications**

- A. Codes and standards follow the current guidelines set forth by the International Amateur Athletic Federation (IAAF) and the National Collegiate Athletic Association (NCAA), along with the current material testing guidelines as published by the American Society of Testing and Materials (ASTM).

## 2.2 Performance Standards

The new synthetic track surfacing system shall exhibit the following minimum performance standards as required by IAAF:

- |                             |                       |
|-----------------------------|-----------------------|
| A. Thickness:               | 13mm or as specified  |
| B. Force Reduction:         | 35-50%                |
| C. Vertical Deformation:    | 0.6mm-2.5mm           |
| D. Coefficient of Friction: | ≥ 0.5 (47 TRRL Scale) |
| E. Tensile Strength:        | ≥ 0.5 Mpa             |
| F. Elongation:              | ≥ 40%                 |

## Part 3 - Quality Assurance

### 3.1 Contractor and Manufacturer Qualifications

- A. The CONTRACTOR and the MANUFACTURER must be the same.
- B. The CONTRACTOR must have a minimum of 10 years experience in the installation of poured-in-place, two-component elastomeric polyurethane synthetic track surfacing.
- C. The CONTRACTOR shall be able to furnish evidence that they have been in business for a period of not less than 3 years, under the present name, and if required, furnish financial statements for each of the past 3 years.
- D. The CONTRACTOR must have installed a minimum of 10 outdoor track facilities in the last 2 years using the exact, IAAF certified, poured-in-place, two-component elastomeric polyurethane synthetic track surfacing, as specified herein with the contractor bidding this project.
- E. The MANUFACTURER must have a minimum of 10 years of experience with compound two-part polyurethane for athletic surfaces.
- F. The CONTRACTOR is required to provide documentation that shows the selected specified and installed product meets current IAAF Performance Standards for Synthetic Surfaced Athletics Tracks (Outdoor) and is certified in terms of the IAAF certification system as updated to present day.
- G. CONTRACTOR is to provide a list of completed facilities, minimum of 10 which are certified to meet IAAF/NCAA rules & regulations, utilizing the same product as specified.

- H. The MANUFACTURER must offer a minimum of seven (7) IAAF Certified Track Systems.
- I. All polyurethane components must be MANUFACTURED in the United States at the headquarters of the CONTRACTOR.
- J. All Polyurethane components must be MANUFACTURED in an ISO 9001 Certified facility.
- K. The CONTRACTOR must have installed a minimum of three (3) Class I IAAF Certified outdoor tracks within the United States.

### **3.2 Submittals**

The following submittals must be received with bid submittal:

- A. Standard printed specifications of the synthetic track surfacing system to be installed on this project.
- B. An affidavit attesting that the synthetic track surfacing material to be installed meets the requirements defined by the manufacturers currently published specifications and any modifications outlined in those technical specifications.
- C. A synthetic track surfacing system sample, 12" x 12" in size, of the same synthetic track surfacing system to be installed on this project.
- D. A list of completed facilities, including the installing supervisor, of the exact Dual Durometer synthetic track surfacing system.
- E. A current IAAF Certificate proving the product to be installed meets the current IAAF Performance Standards for Synthetic Surfaced Athletics Tracks (Outdoor).

## **Part 4 – Materials**

### **4.1 Elastomeric Polyurethane**

- A. BEYPUR, the two-component U.V. stabilized elastomeric polyurethane compounded from polyol and isocyanate components, based on one hundred percent Methylene Diphenyl Isocyanate (MDI). No Toluene Diisocyanate Isocyanate (TDI) will be allowed.

- B. The elastomeric polyurethane shall be red in color.

#### **4.2 EPDM Granulate**

- A. The EPDM granulates shall be approximately 1 to 3mm in.
- B. The EPDM granulates and the U.V. stabilized elastomeric polyurethane shall be color matched.

#### **4.3 Rubber Granulate**

- A. Red butyl rubber processed ground to a graded size not to exceed .5 – 1.0mm.
- B. A maximum of twenty percent, by weight, of the butyl rubber will be allowed in the force reduction layer.

#### **4.6 Line Marking Paint**

- A. Manufacturers recommended pigmented line paint.

### **Part 5 – Installation**

#### **5.1 Subbase Requirements**

- A. Asphalt Compaction
  - a. The Synthetic Track Surfacing System shall be laid on an approved subbase. The General Contractor shall provide compaction test results of 92-96% for the installed subbase and asphalt surface.
  - b. For NCAA certification the following criteria must be followed. The track surface, i.e. asphalt substrate, shall not vary from planned cross slope by more than +/- 0.2%, with a maximum lateral slope outside to inside of 1%, and a maximum slope of 0.1% in any running direction. The finished asphalt shall not vary under a 10' straight edge more than 1/8".
  - c. It should be the responsibility of the asphalt-paving contractor to flood the surface immediately after the asphalt is capable of handling traffic. If, after 20 minutes of drying time, there are birdbaths evident, it shall be the responsibility of the architect, in conjunction with the surfacing contractor, to determine the method of correction.

No cold tar patching, skin patching or sand mix patching will be acceptable.

B. Asphalt Quality

- a. No Recycled Asphalt Pavement (RAP) shall be used in the wear course asphalt mix design as the inclusion of RAP as an off-set to virgin asphalt binder results in a brittle hot-mix asphalt (HMA) with significantly lower tensile strength and fatigue resistance. The sports surfacing contractor will not be held responsible for asphalt failures resulting from the inclusion RAP in the HMA mix design of the wear course.
- b. Any oil spills (hydraulic, diesel, motor oil, etc.) must be completely removed, either by chipping out or removing and replacing with new, keyed in asphalt. The minimum depth of any asphalt replacement shall be one inch. The curing time for the asphalt base is 28 days. It shall be the responsibility of the surfacing contractor to determine if the asphalt substrate has cured sufficiently prior to the application of polyurethane surfacing system.

C. Responsibility of Others

- a. It shall be the responsibility of the general contractor to determine if the asphalt substrate meets all design specifications, i.e. cross slopes, planarity and specific project criteria. After all the above conditions are met, the synthetic surfacing contractor must, in writing, accept the planarity of the asphalt receiving base, before work can commence.

**5.2 Thickness**

- A. Total thickness of the **BSS 2000 Full Pour Embedded** synthetic track surfacing system shall average 13mm.

**5.3 Equipment**

- A. The **BSS 2000 Full Pour Embedded** synthetic track surfacing system components shall be processed and installed by specially designed machinery with automatic electronic portioning, which provides continuous mixing, feeding and finishing for accurate quality controlled installation.
- B. No hand mixing is allowed.

## 5.4 Materials

### A. Force Reduction Layer

The red butyl granules and UV stabilized elastomeric polyurethane shall be metered and mixed together on site to regulate the ratio/quantity of butyl, not to exceed fourteen percent in the system and to insure an even distribution of the granules throughout the force reduction layer. No multi-layered systems allowed.

### B. Resilient Wearing Layer

The 1 to 3 millimeter EPDM granules shall be mechanically integrated with a UV stabilized elastomeric polyurethane to the full depth of the wearing layer. The resilient textured finish shall be a dense matrix of embedded EPDM granules.

## 5.5 Site Conditions

- A. Installation shall not take place if adjacent or concurrent construction generates excessive dust, abrasives or any other by-product that, in the opinion of the installer, would be harmful to the track material, until completion of such works.
- B. Apply Synthetic Track Surfacing in dry weather when pavement and atmospheric temperatures are fifty (50) degrees Fahrenheit or above, and are anticipated to remain above fifty (50) degrees Fahrenheit for twenty-four (24) hours after completing application.
- C. The maximum temperature cannot exceed 105 degrees at any point during a 24 - hour period.
- D. Rain cannot be falling. If there is a threat of rain, work shall cease until dry conditions can be re-established on the track pavement. Work is to proceed only when adequate curing can be guaranteed by the manufacturer.

## Part 6 – Line Striping and Event Markings

### 6.1 Layout

- A. Line striping and event markings shall be laid out in accordance with current IAAF and NCAA rules.



## **6.2 Certification**

- A. Upon completion of the installation, the owner shall be supplied with all necessary computations and drawings as well as a letter of certification attesting to the accuracy of the markings.

## **Part 7 – Guarantee**

- A. Synthetic track surfacing system shall be fully guaranteed against faulty workmanship and material failure for a period of five (5) years from the date of acceptance.
- B. Synthetic surfacing material found to be defective as a result of faulty workmanship and/or material failure shall be replaced or repaired at no charge, upon written notification within the guarantee period.

END OF SECTION

**BSS 2000RE**  
**Embedded Resurfacing**  
**Synthetic Track Surfacing System Specifications**

**Part 1 – General**

**1.1 Scope**

- A. The synthetic surfacing contractor shall furnish all labor, materials, equipment, supervision and services necessary for the proper completion of the **BSS 2000RE Embedded Resurfacing** synthetic track system and related work indicated on the drawings and specified herein.
- B. The synthetic surfacing contractor shall refer to the drawings for the required locations of synthetic track surfacing to be installed. All quantities and dimensions shall be field verified by the synthetic surfacing contractor.

**1.2 Specific Scope of Work**

- A. Install a full depth poured-in-place two-component, UV stabilized elastomeric polyurethane synthetic resurfacing system with Hobart textured finish.
- B. Layout and paint all track lines and event markings as required and specified by current IAAF and NCAA rules.

**1.3 Coordination**

- A. The synthetic surfacing contractor shall coordinate the work specified with an authorized and appointed representative of the owner so as to perform the work during a period and in a manner acceptable to the owner.

**Part 2 - Quality Assurance**

**2.1 Contractor and Manufacturer Qualifications**

- A. The CONTRACTOR and the MANUFACTURER must be the same.

- B. The CONTRACTOR must have a minimum of 10 years experience in the installation of poured-in-place, two-component elastomeric polyurethane synthetic track surfacing.
- C. The CONTRACTOR shall be able to furnish evidence that they have been in business for a period of not less than 3 years, under the present name, and if required, furnish financial statements for each of the past 3 years.
- D. The CONTRACTOR must have installed a minimum of 10 outdoor track facilities in the last 2 years using the exact, poured-in-place, two-component elastomeric polyurethane synthetic track resurfacing, as specified herein with the contractor bidding this project.
- E. The MANUFACTURER must have a minimum of 10 years of experience with compound two-part polyurethane for athletic surfaces.
- F. CONTRACTOR is to provide a list of completed facilities, minimum of 10 which are certified to meet IAAF/NCAA rules & regulations, utilizing the same product as specified.
- G. The MANUFACTURER must offer a minimum of six (6) IAAF Certified Track Systems.
- H. All polyurethane components must be MANUFACTURED in an ISO 9001 Certified facility.
- I. All polyurethane components must be MANUFACTURED in the United States at the headquarters of the CONTRACTOR.
- J. The CONTRACTOR must have installed a minimum of two (2) Class I IAAF Certified outdoor tracks within the United States.

## **2.2 Submittals**

The following submittals must be received with bid submittal:

- A. Standard printed specifications of the synthetic track surfacing system to be installed on this project.
- B. An affidavit attesting that the synthetic track surfacing material to be installed meets the requirements defined by the manufacturers currently published specifications and any modifications outlined in those technical specifications.

- C. A synthetic track surfacing system sample, 12" x 12" in size, of the same synthetic track surfacing system to be installed on this project.
- D. A list of completed facilities, including the installing supervisor, of the exact Dual Durometer synthetic track surfacing system.

### **Part 3 – Materials**

#### **3.1 Elastomeric Polyurethane**

- A. BEYPUR, the two-component U.V. stabilized elastomeric polyurethane compounded from polyol and isocyanate components, based on one hundred percent Methylene Diphenyl Isocyanate (MDI). No Toluene Diisocyanate Isocyanate (TDI) will be allowed.
- B. The elastomeric polyurethane shall be red in color.

#### **3.2 EPDM Granulate**

- A. The EPDM granulates shall be approximately 1 to 3mm in size.
- B. The EPDM granulates and the U.V. stabilized elastomeric polyurethane shall be color matched.

#### **3.3 Line Marking Paint**

- A. Manufacturers recommended pigmented paint.

### **Part 4 – Installation**

#### **4.1 Surface Preparation**

- A. Prior to the application of the resurfacing layer, the existing polyurethane surface shall be inspected for conformity to planarity requirements. The surface shall not deviate more than 1/8 inch in 10 feet from the specified grade when checked with a 10-foot straightedge. An impermeable polyurethane surface may also be flooded with water to determine if any "bird baths" or low areas exist.
- B. The owner should verify that the surface tolerances meet all specifications issued by the appropriate sanctioning or governing body such as IAAF, NCAA, NFSHSA, TAC, etc.

- C. The area to be surfaced shall be clean and free of any loose or foreign particles (dirt, oil, etc.) prior to the commencement of work. The surface is usually cleaned by use of a power blower and high-pressure washer.

#### **4.2 Thickness**

- A. Total thickness of the **BSS 2000RE Embedded Resurfacing** synthetic track system shall average 7mm.

#### **4.3 Equipment**

- A. The **BSS 2000RE Embedded Resurfacing** synthetic track system components shall be processed and installed by specially designed machinery with automatic electronic portioning, which provides continuous mixing, feeding and finishing for accurate quality controlled installation.
- B. No hand mixing is allowed.

#### **4.4 Materials**

- A. Leveling Layer

The 2mm leveling layer material shall be two-component polyurethane that is self-leveling, compounded from a proprietary pigmented polyol and MDI based, "TDI Free," isocyanate and designed to patch and bond existing track and field surfaces to the original substrate and level low areas of the existing surface. The liquid polyurethane shall contain no mercury, lead, or any other heavy metals added by design.

- B. Resurfacing Layer

The 1 to 3 millimeter EPDM granules shall be mechanically integrated with a UV stabilized elastomeric polyurethane to the full depth of the 5mm resurfacing. The resilient wear layer textured finish shall be a dense matrix of embedded EPDM granules.

#### **4.5 Site Conditions**

- A. Installation shall not take place if adjacent or concurrent construction generates excessive dust, abrasives or any other by-product that, in the opinion of the installer, would be harmful to the track material, until completion of such works.

- B. Apply Synthetic Track Surfacing in dry weather when the existing surface and atmospheric temperatures are fifty (50) degrees Fahrenheit or above, and are anticipated to remain above fifty (50) degrees Fahrenheit for twenty-four (24) hours after completing application.
- C. The maximum temperature cannot exceed 105 degrees at any point during a 24 - hour period.
- D. Rain cannot be falling. If there is a threat of rain, work shall cease until dry conditions can be re-established on the track surface. Work is to proceed only when adequate curing can be guaranteed by the manufacturer.

## **Part 5 – Line Striping and Event Markings**

### **5.1 Layout**

- A. Line striping and event markings shall be laid out in accordance with current IAAF and NCAA rules.

### **5.2 Certification**

- A. Upon completion of the installation, the owner shall be supplied with all necessary computations and drawings as well as a letter of certification attesting to the accuracy of the markings.

## **Part 6 – Guarantee**

- A. Synthetic track surfacing system shall be fully guaranteed against faulty workmanship and material failure for a period of five (5) years from the date of acceptance.
- B. Synthetic surfacing material found to be defective as a result of faulty workmanship and/or material failure shall be replaced or repaired at no charge, upon written notification within the guarantee period.

END OF SECTION

**BSS 300**  
**Embedded Polyurethane Sandwich**  
**Synthetic Track Surfacing System Specifications**

**Part 1 – General**

**1.1 Scope**

- A. The synthetic surfacing contractor shall furnish all labor, materials, equipment, supervision and services necessary for the proper completion of the **BSS 300** Synthetic Track Surfacing System and related work indicated on the drawings and specified herein.
- B. The synthetic surfacing contractor shall refer to the drawings for the required locations of synthetic track surfacing to be installed. All quantities and dimensions shall be field verified by the synthetic surfacing contractor.

**1.2 Specific Scope of Work**

- A. Install an IAAF approved, impermeable polyurethane synthetic track system consisting of SBR Rubber and BEYPUR, a single-component polyurethane binder and BEYPUR, a poured-in-place, two-component U.V. stabilized elastomeric polyurethane wearing layer with an embedded textured finish.
- B. Layout and paint all track lines and event markings as required and specified by current IAAF and NCAA rules.

**1.3 Coordination**

- A. The synthetic surfacing contractor shall coordinate the work specified with an authorized and appointed representative of the owner so as to perform the work during a period and in a manner acceptable to the owner.

**Part 2 – Codes and Standards**

**2.1 Applicable Publications**

- A. Codes and standards follow the current guidelines set forth by the International Amateur Athletic Federation (IAAF) and the National Collegiate Athletic Association (NCAA), along with the current material testing guidelines as published by the American Society of Testing and Materials (ASTM).

## 2.2 Performance Standards

The BSS 300 synthetic track surfacing system shall exhibit the following minimum performance standards as required by IAAF:

- |                             |                           |
|-----------------------------|---------------------------|
| A. Thickness:               | (12-13mm) or as specified |
| B. Force Reduction          | 35-50%                    |
| C. Vertical Deformation:    | 0.6mm-2.5mm               |
| D. Coefficient of Friction: | ≥ 0.5 (47 TRRL Scale)     |
| E. Tensile Strength:        | ≥ 0.5 Mpa                 |
| F. Elongation:              | ≥ 40%                     |

## Part 3 – Quality Assurance

### 3.1 Contractor and Manufacturer Qualifications

- A. The CONTRACTOR and the MANUFACTURER must be the same.
- B. The CONTRACTOR must have a minimum of 10 years experience in the installation of poured-in-place, two-component elastomeric polyurethane synthetic track surfacing.
- C. The CONTRACTOR shall be able to furnish evidence that they have been in business for a period of not less than 3 years, under the present name, and if required, furnish financial statements for each of the past 3 years.
- D. The CONTRACTOR must have installed a minimum of 10 outdoor track facilities in the last 2 years using the exact, IAAF certified, synthetic track surfacing, as specified herein with the contractor bidding this project.
- E. The MANUFACTURER must have a minimum of 10 years of experience with compound two-part polyurethane for athletic surfaces.
- F. The CONTRACTOR is required to provide documentation that shows the selected specified and installed product meets current IAAF Performance Standards for Synthetic Surfaced Athletics Tracks (Outdoor) and is certified in terms of the IAAF certification system as updated to present day.
- G. CONTRACTOR is to provide a list of completed facilities, minimum of 10 which are certified to meet IAAF/NCAA rules & regulations, utilizing the same product as specified.



- H. The MANUFACTURER must offer a minimum of six (6) IAAF Certified Track Systems.
- I. All polyurethane components must be MANUFACTURED in the United States in an **ISO 9001:2008 Certified** facility to ensure the highest quality materials.
- J. The CONTRACTOR must have installed a minimum of two (2) Class I IAAF Certified outdoor tracks within the United States.

### **3.2 Submittals**

The following submittals must be received with bid submittal:

- A. Standard printed specifications of the synthetic track surfacing system to be installed on this project.
- B. An affidavit attesting that the synthetic track surfacing material to be installed meets the requirements defined by the manufacturers currently published specifications and any modifications outlined in those technical specifications.
- C. A synthetic track surfacing system sample, 12" x 12" in size, of the same synthetic track surfacing system to be installed on this project.
- D. A list of completed facilities, including the installing supervisor, of the exact synthetic track surfacing system.
- E. A current IAAF Certificate proving the product to be installed meets the current IAAF Performance Standards for Synthetic Surfaced Athletics Tracks (Outdoor).

## **Part 4 – Materials**

### **4.1 Elastomeric Polyurethane**

- A. BEYPUR, the two-component U.V. stabilized elastomeric polyurethane compounded from polyol and isocyanate components, based on one hundred percent (100%) Methylene Diphenyl Isocyanate (MDI). No Toluene Diisocyanate Isocyanate (TDI) will be allowed.
- B. The elastomeric polyurethane shall be red in color.

### **4.2 EPDM Granulate**

- A. The EPDM granulates shall be approximately 1 to 3mm in size
- B. The EPDM granulates and the U.V. stabilized elastomeric polyurethane shall be color matched.

#### **4.3 Rubber Granulate of the base course**

- A. Styrene Butadiene Rubber (SBR) processed ground to a graded size of 1-3mm.
- B. A maximum of 82%, by weight of the paved-in-place base layer, of SBR will be allowed.

#### **4.4 Single Component Polyurethane Binder**

- A. This binder shall be BEYPUR 300, a single-component polyurethane binder with a long cure time for use in paved mat specifications; a minimum of 18%, by weight of the paved-in-place base layer.

#### **4.5 Seal Coat**

- A. This seal coat shall be BEYPUR 200, a two-component polyurethane pore sealer use with paved rubber granule mats. The granular SBR and binder layer shall be sealed with the BEYPUR 200. The application of EPDM dust is not allowed.

#### **4.6 Line Marking Paint**

- A. Manufacturers recommended pigmented line paint.

### **Part 5 – Installation**

#### **5.1 Subbase Requirements**

- A. Asphalt Compaction
  - a. The Synthetic Track Surfacing System shall be laid on an approved subbase. The General Contractor shall provide compaction test results of 92-96% for the installed subbase and asphalt surface.
  - b. For NCAA certification the following criteria must be followed. The track surface, i.e. asphalt substrate, shall not vary from planned cross

slope by more than +/- 0.2%, with a maximum lateral slope outside to inside of 1%, and a maximum slope of 0.1% in any running direction. The finished asphalt shall not vary under a 10' straight edge more than 1/8".

- c. It should be the responsibility of the asphalt-paving contractor to flood the surface immediately after the asphalt is capable of handling traffic. If, after 20 minutes of drying time, there are birdbaths evident, it shall be the responsibility of the architect, in conjunction with the surfacing contractor, to determine the method of correction. No cold tar patching, skin patching or sand mix patching will be acceptable.

#### B. Asphalt Quality

- a. No Recycled Asphalt Pavement (RAP) shall be used in the wear course asphalt mix design as the inclusion of RAP as an off-set to virgin asphalt binder results in a brittle hot-mix asphalt (HMA) with significantly lower tensile strength and fatigue resistance. The sports surfacing contractor will not be held responsible for asphalt failures resulting from the inclusion RAP in the HMA mix design of the wear course.
- b. Any oil spills (hydraulic, diesel, motor oil, etc.) must be completely removed, either by chipping out or removing and replacing with new, keyed in asphalt. The minimum depth of any asphalt replacement shall be one inch. The curing time for the asphalt base is 28 days. It shall be the responsibility of the surfacing contractor to determine if the asphalt substrate has cured sufficiently prior to the application of polyurethane surfacing system.

#### C. Responsibility of Others

- a. It shall be the responsibility of the general contractor to determine if the asphalt substrate meets all design specifications, i.e. cross slopes, planarity and specific project criteria. After all the above conditions are met, the synthetic surfacing contractor must, in writing, accept the planarity of the asphalt receiving base, before work can commence.

## 5.2 Thickness

- A. The thickness of the **BSS 300** Synthetic Track Surfacing System shall be 13mm.

### 5.3 Equipment

- A. The **BSS 300** Synthetic Track Surfacing System components shall be processed and installed by specially designed machinery and equipment. A mechanically operated paver with variable regulated speed and thermostatically controlled screed shall be used in the installation of the base mat. The wearing course shall be installed using automatic electronic portioning, which provides continuous mixing and feeding for an accurate, quality controlled installation.
- B. No hand mixing is allowed.

### 5.4 Installation

#### A. Base Course

The SBR granules and BEYPUR 300 shall be mixed together on site to regulate the ratio/quantity of SBR, not to exceed 82% in the base mat portion of the system. The BEYPUR 300 shall be mixed with the SBR rubber so that a minimum of 20%, by weight, exists in the final mixture. This mixture is then mechanically installed using the paver.

#### B. Seal Coat

The two BEYPUR 200 components are mixed at the prescribed ratio homogeneously with a suitable mixing device. The coating is squeegee applied to the base mat, making it impermeable.

#### C. Wearing Course

The 1 to 3mm EPDM granules shall be integrated into the BEYPUR to achieve the full depth of the 5 mm wearing course. The resilient embedded textured finish shall be a dense matrix of exposed EPDM granules. The homogeneous wearing course shall be applied in situ with the base course.

### 5.5 Site Conditions

- A. Installation shall not take place if adjacent or concurrent construction generates excessive dust, abrasives or any other by-product that, in the opinion of the installer, would be harmful to the track material, until completion of such works.

- B. Apply Synthetic Track Surfacing in dry weather when pavement and atmospheric temperatures are fifty (50) degrees Fahrenheit or above, and are anticipated to remain above fifty (50) degrees Fahrenheit for twenty-four (24) hours after completing application.
- C. The maximum temperature cannot exceed 105 degrees at any point during a 24 - hour period.
- D. Rain cannot be falling. If there is a threat of rain, work shall cease until dry conditions can be re-established on the track pavement. Work is to proceed only when adequate curing can be guaranteed by the manufacturer.

## **Part 6 – Line Striping and Event Markings**

### **6.1 Layout**

- A. Line striping and event markings shall be laid out in accordance with current IAAF and NCAA rules.

### **6.2 Certification**

- A. Upon completion of the installation, the owner shall be supplied with all necessary computations and drawings as well as a letter of certification attesting to the accuracy of the markings.

## **Part 7 – Guarantee**

- A. The BSS 300 Synthetic Track Surfacing System shall be fully guaranteed against faulty workmanship and material failure for a period of five (5) years from the date of acceptance.
- B. Synthetic surfacing material found to be defective as a result of faulty workmanship and/or material failure shall be replaced or repaired at no charge, upon written notification within the guarantee period.

END OF SECTION

**CUSHIONED ACRYLIC SURFACING  
FOR TENNIS COURTS AND PLAY AREAS**

PART 1 GENERAL

1.1 GENERAL DESCRIPTION

- A. Cushioned Acrylic Surfacing for asphalt tennis courts and similar play areas.

1.2 RELATED SECTIONS

A. Related Work

- 1. Asphalt concrete pavement (sec \_\_\_\_\_)
- 2. Court marking for tennis courts (sec \_\_\_\_\_)
- 3. Athletic equipment (sec \_\_\_\_\_)

B. References

- 1. National Asphalt Paving Association (NAPA)
- 2. United States Tennis Association (USTA)
- 3. International Tennis Federation (ITF)
- 4. American Sport Builders Association (ASBA)

1.3 QUALITY ASSURANCE

- A. Surfacing shall conform to the guidelines of the ASBA for planarity.
- B. All surface coatings products shall be supplied by a single manufacturer.
- C. The contractor shall record the batch number of each product used on the site and maintain it through the warranty period.
- D. The contractor shall provide the inspector, upon request, an estimate of the volume of each product to be used on the site.
- E. The installer shall be an authorized applicator of the specified system.
- F. The manufacturer's representative shall be available to help resolve material questions.

1.4 SUBMITTALS

- A. Manufacturer specifications for components, color chart and installation instructions.
- B. Authorized Applicator certificate from the surface system manufacturer.
- E. ITF classification certificate for the system to be installed.

- F. Reference list from the installer of at least 5 projects of similar scope done in each of the past 3 years.
- G. Current Material Safety Data Sheets (MSDS).
- H. Product substitution: If other than the product specified, the contractor shall submit at least 7 days prior to the bid date a complete type written list of proposed substitutions with sufficient data, drawings, samples and literature to demonstrate to the owners satisfaction that the proposed substitution is of equal quality and utility to that originally specified. Information must include a QUV test of at least 1000 hours illustrating the UV stability of the system. The color system shall have an ITF pace rating in Category 2. Under no circumstances will systems from multiple manufacturers be considered.

#### 1.5 MATERIAL HANDLING AND STORAGE

- A. Store materials in accordance with manufacturer specifications and MSDS.
- B. Deliver product to the site in original unopened containers with proper labels attached.
- C. All surfacing materials shall be non flammable.

#### 1.6 GUARANTEE

- A. Provide a guarantee against defects in the materials and workmanship for a period of one year from the date of substantial completion.

#### 1.7 INSTALLER QUALIFICATIONS

- A. Installer shall be regularly engaged in construction and surfacing of cushioned acrylic tennis courts, play courts or similar surfaces.
- B. Installer shall be an Authorized Applicator of the specified surface system.
- C. Installer shall be a builder member of the ASBA.

#### 1.8 MANUFACTURER QUALIFICATIONS

- A. System manufacturer shall provide documentation that the surface to be installed has been classified by the ITF as a medium pace surface.
- B. System manufacturer shall be a US owned company.
- C. System manufacturer shall be a member of the ASBA.

## PART 2 PRODUCTS

### 2.1 MANUFACTURERS

- A. California Products Corp., Andover, MA. 01810 / Plexicushion Prestige System  
[www.plexipave.com](http://www.plexipave.com)
- B. Substitutions: Submit requests at least 7 days prior to the bid date with a complete type written list of proposed substitutions with sufficient data, drawings, samples and literature to demonstrate to the owners satisfaction that the proposed substitution is of equal quality and utility to the specified product. Information must include a QUV test of at least 1000 hours illustrating the UV stability of the system. The system shall have an ITF pace rating in Category 2. Under no circumstance may the final color surface contain silica sand added at the job site.

### 2.2 MATERIALS

- A. Patching Mix (California Court Patch Binder) - for use in patching cracks, holes, depressions and other surface imperfections.
- B. Crack Filler (Plexipave Crack Filler) - for use in filling fine cracks.
- C. Acrylic Filler Course (California Acrylic Resurfacer) – for use as a filler for new or existing asphalt surfaces. The 100% acrylic filler shall be blended with approved silica sand at the job site.
- D. Plexicushion Base Coat – A course rubber filled material used to build depth and resilience.
- E. Plexicushion – A firm rubber and selected filler material to build density and resilience.
- F. Plexipave Grand Prix – 100% flexible acrylic coating filled with select silica.
- G. Acrylic Color Playing Surface (Plexichrome/Plexipave Color Base) – for use as the finish color and texture. Plexichrome and Plexipave Color Base are blended at the job site to achieve the correct surface texture. \*Factory Fortified Plexipave may be used as an alternative material.
- H. Line Paint (California Line Paint) – for use as the line marking on the court/play surface.
- I. Water – for use in dilution/mixing shall be clean and potable.

### 2.3 MATERIAL SPECIFICATIONS

- A. Court Patch Binder – 100% acrylic resin blended with Portland Cement and silica sand.
  - 1) Percent solids by weight (minimum) 46%
  - 2) Weight 8.7-8.9 lbs./gallon
- B. Plexipave Crack Filler – 100% acrylic resin heavily filled with sand.



- 1) Percent solids by weight (minimum) 85%
  - 2) Percent solids by weight (minimum) 15 lbs./gallon
- C. California Acrylic Resurfacer – 100% acrylic resin (no vinyl copolymerization constituent). The product shall contain not less than 3.5% attapulgite.
- 1) Percent solids by weight (minimum) 26.7%
  - 2) Weight 8.7-8.9 lbs./gallon
- D. Plexicushion Base Coat – Proprietary latex resin filled with .5-1.0 mm EPDM granule.
- 1) Percent solids by weight (minimum) 43.4%
  - 2) Weight 8.78 lbs./gallon
- E. Plexicushion – Proprietary latex resin filled with a unique combination of rubber and select mineral filler.
- 1) Percent solids by weight (minimum) 43.8%
  - 2) Weight 9.15 lbs./gallon
- F. Plexipave Gran Prix
- G. Plexichrome – 100% acrylic resin (no vinyl copolymerization constituent) with selected light fast pigments. Green shall contain not less than 8% chrome oxide.
- 1) Percent solids by weight (minimum) 36.5%
  - 2) Weight 10.0-10.2 lbs./gallon
- H. Plexipave Color Base – 100% acrylic resin containing no vinyl copolymerization constituent. Contains not more than 63% rounded silica sand.
- 1) Percent solids by weight (minimum) 74%
  - 2) Weight 13.1-14.1 lbs./gallon
- I. California Line Paint – 100% acrylic resin containing no alkyds or vinyl constituents. Texturing shall be rounded silica sand.
- 1) Percent solids by weight (minimum) 60.5%
  - 2) Weight 12-12.3 lbs./gallon

All surfacing materials shall be non-flammable and have a VOC content of not less than 100g./ltr. Measured by EPA method 24.

Local sands are not acceptable in the color playing surface. Sands must be incorporated at the manufacturing location to insure quality and stability.

### PART 3 EXECUTION

### 3.1 WEATHER LIMITATIONS

- A. Do not install when rainfall is imminent or extremely high humidity prevents drying.
- B. Do not apply unless surface and air temperature are 50°F and rising.
- C. Do not apply if surface temperature is in excess of 140°F.

### 3.2 PREPARATION FOR CUSHIONED UNDERLAYMENT

A. Clean surfaces of loose dirt, oil, grease, leaves, and other debris in strict accordance with manufacturer's directions. Pressure washing will be necessary to adequately clean areas to be coated. Any areas previously showing algae growth shall be treated with bleach or approved product to kill the organisms and then be properly rinsed.

B. Holes and cracks: Cracks and holes shall be cleaned and a suitable soil sterilant, as approved by the owner, shall be applied to kill all vegetation 14 days prior to use of **Court Patch Binder** according to manufacturer's specifications.

C. Depression: Depressions holding enough water to cover a five cent piece shall be filled with Court Patch Binder Patching Mix. 3 gallons of Court Patch Binder, 100 lbs. 60-80 silica sand, 1 gallon Dry Portland Cement (Type I). **This step shall be accomplished prior to the squeegee application of Acrylic Resurfacer.** The contractor shall flood all the courts and then allow draining. Define and mark all areas holding enough water to cover a nickel. After defined areas are dry, prime with tack coat mixture of 2 parts water/1 part Court Patch Binder. Allow tack coat to dry completely. Spread Court Patch Binder mix true to grade using a straight edge (never a squeegee) for strike off. Steel trowel or wood float the patch so that the texture matches the surrounding area. Never add water to mix. Light misting on surface and edges to feather in is allowed as needed to maintain work ability. Allow to dry thoroughly and cure.

NO WORK FROM THIS STAGE ON SHALL COMMENCE UNTIL AN INSPECTOR HAS ACCEPTED THE SURFACE.

D. Filler Course. (Acrylic Resurfacer): Filler course shall be applied to the clean underlying surface in one application to obtain a total quantity of not less than .06 gallon per square yard based on the material prior to any dilution. Acrylic Resurfacer may be used to pre-coat depression and crack/hole repairs to achieve better planarity prior to filler course application.

1. Over a properly repaired surface of asphalt on existing courts, apply one coat of Acrylic Resurfacer according to the following mix:

Acrylic Resurfacer	55 gallons
Water	20 - 40 gallons
Sand	600-800 pounds / 60-80 mesh
Liquid Yield	112-138 gallons

On new asphalt, two coats of Acrylic Resurfacer shall be used to properly fill all voids in the asphalt surface. Use clean, dry 50-60 mesh sand and clean, potable water to make mixes. The quantity of sand and water in the above mix may be adjusted within above limits to complement the roughness and temperature of the surface.

2. Mix the ingredients thoroughly using accepted mixing devices and use a 70 Durometer rubber bladed squeegee to apply each coat of Acrylic Resurfacer as required.

3. Allow the application of Acrylic Resurfacer to dry thoroughly. Scrape off all ridges and rough spots prior to any subsequent application of Acrylic Resurfacer or subsequent cushion surface system.

### 3.3 APPLICATION OF CUSHION UNDERLAYMENT

A. Application of the cushion underlayment can begin after all surface preparation has been completed and it is thoroughly dry.

B. Plexicushion Base Coat shall be blended in a mechanical mixer to a uniform consistency. Dilution shall be 4 parts material to 1 part water.

C. Plexicushion Base Coat shall be applied in not less than three applications to obtain an average application rate of .22 gal./sq. yd. per application. Application may be made by 50 durometer squeegee on an approved air diaphragm pump with surge suppression.

D. Care should be taken to not allow ridges or puddles to form during application. Any defects that do occur shall be corrected prior to the application of Plexicushion.

E. After the Plexicushion Base Coat has thoroughly dried, begin the application of Plexicushion.

F. Plexicushion shall be blended in a mechanical mixer to a uniform consistency. Dilution shall be 4 parts material to 1 part water.

G. Plexicushion shall be applied by a 50 durometer squeegee. Be careful not to leave ridges.

H. Plexicushion shall be applied in not less than three applications at an average application rate of .11 gal per square yard.

I. Allow the final coat of Plexicushion to dry for at least 6 hours in good weather conditions.

J. Apply the first coat of Fortified Plexipave in accordance with Sec. 3.4. After the application has thoroughly dried, the surface should be lightly sanded with a mechanical sander.

### 3.4 APPLICATION OF ACRYLIC COLOR PLAYING SURFACE

A. All areas to be color coated shall be clean, free from sand, clay, grease, dust, salt or other foreign matters. The Contractor shall obtain the Engineer's approval, prior to applying any surface treatment.

B. Blend color base and Plexichrome with a mechanical mixer to achieve a uniform Fortified

Plexipave mixture. The mix shall be:

Color Base	30 gallons
Plexichrome	20 gallons
Water	20 gallons

C. Application shall be made by 50 durometer rubber faced squeegees. The Fortified Plexipave mixture should be poured on to the court surface and spread to a uniform thickness in a regular pattern.

D. A total of 3 applications of Fortified Plexipave shall be made to achieve a total application rate of not less than .15 gal./sy. No application should be made until the previous application is thoroughly dry.

E. If a more flexible surface is desired, Plexipave Gran Prix coating may be used. It is applied at a total application rate of .18 gal./sy.

### 3.4 LINE PAINTING

A. Line shall be 2" wide unless otherwise noted on the drawings. Lines shall be carefully laid out in accordance with ASBA and USTA guidelines. The area to be marked shall be taped to insure a crisp line. The California Line Paint shall have a texture similar to the surrounding play surface. Application shall be made by brush or roller at the rate of 150-200 sg./gal. (3/4 gal. per tennis court).

### 3.5 PROTECTION

- A. Erect temporary barriers to protect coatings during drying and curing.
- B. Lock gates to prevent use until acceptance by the owner's representative.

### 3.6 CLEAN UP

- A. Remove all containers, surplus materials and debris. Dispose of materials in accordance with local, state and Federal regulations.
- B. Leave site in a clean and orderly condition.



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## **SECTION 10.0**

INTERIOR/EXTERIOR

SITE IMPROVEMENTS  
 ATHLETIC FACILITIES

# **PLEXIPAVE® SYSTEM**

## **DESCRIPTION:**

The Plexipave Color Surfacing System, developed through almost four decades of technological advancements in acrylic athletic surfacing, is a durable, asbestos free, colorful playing surface compatible with hot mix asphalt, asphalt emulsion surfaces and suitably prepared concrete. The Plexipave System is a combination of texture coats and finish coats that provide a long-wearing color surface of uniform texture. The system is suitable for all climatic conditions and protects asphalt from ultraviolet ray deterioration. Based on 100% acrylic water vehicle coatings, the Plexipave System dries rapidly and allows surfaces to breathe enabling moisture vapor to pass through the dried film.

Generally applied in three coats, two filler coats and one finish coat, the speed of play can be adjusted by the amount of sand present in the finished coat. Additionally, Plexicushion may be used to provide a cushioned subsurface for greater comfort and ease of play.

## **SURFACE USES:**

Over asphalt surfaces and suitable concrete:

- Tennis Courts
- Basketball Courts
- Field Houses
- Play Areas
- Lighted traffic pathways & walks
- Asphalt or concrete rooftop areas
- Multi-purpose sports areas

## **APPLICATION:**

Depending upon the product used in the system, application is by 70 or 50 durometer flexible rubber squeegee, as well as by wide hair-type push brooms for finish coat application of non sand-filled materials.

## **DRYING TIME:**

- 30 minutes to one hour at 70°+ with 50% relative humidity.
- Indoor applications require fans and good ventilation.
- Surface may be used for play in 24 hours after completion.

## **COLOR RANGE:**

Nine standard colors: Light Green, Dark Green, Florida Green, California Red, Sahara Sand, Pacific Blue, Cape Gray, Brown, Maroon. (Special colors are available on request.)

## **LIMITATIONS:**

- The Plexipave system will not prevent pavement cracks from occurring or reoccurring.
- Do not apply if surface temperature is less than 50°F or more than 140°F
- Do not apply over tar emulsion sealers.
- Allow asphalt to cure for a minimum of 14 days.
- Allow concrete to cure for a minimum of 28 days.
- No curing agents allowed on concrete surfaces.
- DO NOT STORE IN HOT SUN
- Apply only when ambient temperature is 50° and rising.
- Do not apply when rain is imminent.
- After diluting with water, use mixed materials promptly.
- Keep containers tightly closed when not in use.
- KEEP FROM FREEZING

**THE PLEXIPAVE SYSTEM**

The Plexipave System comprises the most complete group of recreational surface coatings and companion products available:

**SURFACE COATINGS**

<u>Product</u>	<u>Description</u>	<u>Specification No.</u>
Plexichrome®	Full color Acrylic (9 colors) Finish Coat (Non-Textured).	10.1
Plexipave Gran Prix	Exceptionally flexible Acrylic Surface Color Coating for resilient surfaces.	10.32
Fortified Plexipave	Ready-to-use, textured Color Finish.	10.2
Job-Mix Fortified Plexipave	On site mix for Plexichrome & Color base.	10.12
Plexipave Color Base	Neutral Acrylic Texture (filler coat) for job mixing with Plexichrome to make full color-in-depth surfacing,	10.5
Plexicushion®	Rubberized cushion subsurface, multi-coat system used under Plexipave.	10.3
Plexicushion Base Coat	Large rubber Particle Underlayment for Plexicushion.	10.9
Plexicolor® Line Paint	Flat, high-hide, 100% Acrylic Line Marking Paint – 7 colors – Textured or Non-textured.	10.4

**SURFACE PREPARATION PRODUCTS**

Acrylic Resurfacer	Acrylic Binder for job mixing with silica sand and water for filler coat mixes.	10.8
Crack Filler	Highly flexible, high solids filler for minor cracks.	10.10
Court Patch Binder	Concentrated Acrylic binder for mixing with silica sand and cement for patching and major cracks.	10.14
Plexibond® Coating	Surface primer as well as an adhesive in the Plexibond Fiberglass repair system.	10.11
Concrete Preparer	Acid pretreatment for uncoated Portland Cement Concrete.	10.13
Ti-Coat®	Two-component water-based epoxy primer for new or old uncoated concrete.	10.17
Plxipatch®	High Solids, ready-to-use acrylic compound for light patching.	10.21
Plxicushion Patch Compound	Rubberized patching compound for Plexicushion Surfaces.	10.22

**SPECIALTY COATING**

Clear-Glo #3®	Hard Acrylic surface coat for increased wear.	10.6
Grid-Stripe®	Latex field marking paint – semi permanent for athletic fields.	—

**PLEXIPAVE SYSTEM  
APPLICATION GUIDELINES**

The following recommendations apply to field procedures for coating asphalt or concrete recreational surfaces  
(Note: See Application Specification 10.18 for Asphalt Surfaces and 10.19 for Concrete Surfaces):

**STANDARD ASPHALT INSTALLATION**

New Construction	<ul style="list-style-type: none"> <li>• Level with Court Patch binder mix or Plexipatch</li> <li>• 1 coat Acrylic Resurfacer</li> <li>• 2 coats Fortified Plexipave</li> <li>• 1 coat finish (depending on speed of play- either Fortified Plexipave or Plexichrome) (See Asphalt Spec. #10.18)</li> </ul>
Re-Coat	<p>Depending on the condition of surface,</p> <ul style="list-style-type: none"> <li>• 1 coat Acrylic Resurfacer, (needed for courts that require extensive preparation)</li> <li>• 2 or 3 coats of Fortified Plexipave.</li> </ul>

**STANDARD CONCRETE INSTALLATION**

New Construction	<ul style="list-style-type: none"> <li>• Acid Etch with Concrete Preparer.</li> <li>• Level with Court Patch Binder.</li> <li>• Ti-Coat as Primer.</li> <li>• 1 Coat Acrylic Resurfacer.</li> <li>• Apply 3 coats Fortified Plexipave. (See Concrete Spec #10.19)</li> </ul>
Re-Coat	<ul style="list-style-type: none"> <li>• Remove any loose or flaking material.</li> <li>• Repair any spalled areas or depressions with Court Patch Binder.</li> <li>• 1 coat Acrylic Resurfacer (needed for courts that require extensive preparation).</li> <li>• Recoat with 2-3 coats of Fortified Plexipave, depending on surface wear and texture.</li> </ul>

**PLEXICUSHION APPLICATION GUIDELINES**

See: Application Specifications 10.3 and 10.9

Plexicushion Club	<ul style="list-style-type: none"> <li>• 1 coat Acrylic Resurfacer</li> <li>• 4 coats Plexicushion</li> <li>• 3 coats Fortified Plexipave/Plexipave Gran Prix</li> </ul>
Plexicushion Tournament	<ul style="list-style-type: none"> <li>• 1 coat Acrylic Resurfacer</li> <li>• 2 coat Plexicushion Basecoat</li> <li>• 3 coats Plexicushion</li> <li>• 3 Fortified Plexipave/Plexipave Gran Prix</li> </ul>
Plexicushion Prestige	<ul style="list-style-type: none"> <li>• 1 coat Acrylic Resurfacer</li> <li>• 3 coat Plexicushion Base Coat</li> <li>• 3 coats Plexicushion</li> <li>• 3 coats Fortified Plexipave/Plexipave Gran Prix</li> </ul>

Note: Open textured surfaces require a preliminary application of Acrylic Resurfacer

**APPLICATION RATES PER COAT (UNDILUTED)**

	<u>GALLON/SQUARE YARD</u>	<u>GALLON/SQUARE METER</u>	<u>YARDS/GALLON</u>	<u>DILUTION RATE</u>
ACRYLIC RESURFACER	.05-.07	.06-.09	15-20	2 to 1 10-16# Sand/Gal
COLOR BASE	.05-.07 Base (.03-.04) Chrome (.02-.03)	.06-.09 Base (.03-.04) Chrome (.02-.03)	<u>30 to 20 to 20 Mix</u> 15-20	Combined 3 to 2 to 2
PLEXICHROME	.05-.04	.05-.06	20.25	1 to 1
PLEXIPAVE	.05-.07	.06-.09	15-20	2 to 1
FORTIFIED PAVE (FACTORY)	.05-.07	.06-.09	15-20	4 to 1
JOB MIX FORTIFIED (see Color Base)				
PLEXICUSHION	.1-.13	.12-.16	8-10	4 to 1
PLEXICUSHION BASE COAT	.25	.3	4	4 to 1
CLEAR-GLO®	.025	.03	40	1 to 1
PLEXITRAC® SURFACER	.22-.50	.26-.60	2-4	4 to 1
TI COAT (A& B)	.025-.03	.029-.036	33-44	None
CONCRETE PREPARER	.01-.013	.012-.016	78-100	1 to 4
PLEXIBOND® COATING	.07-.05 .04-.025	.084-.06 .048-.03	15-20 25-40	2 to 1 1 to 2
PLEXIBOND SYSTEM: PRIMER:				





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## SECTION 10.19

EXTERIOR/INTERIOR

SITE IMPROVEMENTS  
ATHLETIC FACILITIES

# APPLICATION SPECIFICATIONS CONCRETE SURFACES

## 1.0 DESCRIPTION

This specification covers the application of a new wearing surface for Plexipave Tennis Courts and/or new or existing concrete tennis courts that have a sound, well-drained base of adequate thickness and stability. Surfaces should be properly sloped for good drainage, and free from cracks. The process consists of the repair of any minor depressions and cracks, followed by applications of the Plexipave System.

NOTE: The success of all-weather characteristics of coating is dependent on a sound base with good drainage, the concrete surface being prepared in accordance to Specification 10.0 of California Products Corporation and the U.S. Tennis Court & Track Builders Association. Care should be taken to provide adequate surface water drainage and an appropriate vapor barrier below the concrete slab. Surface variation should not exceed 1/8 inch in 10 ft. when measured in any direction with a straight edge and slope 1 inch in 10 ft., all in one plane.

## 2.0 MATERIALS

- 2.1 Concrete Preparer – shall comply with Specification 10.13 of California Products Corporation.
- 2.2 California Ti-Coat – shall conform with Specification 10.17 of California Products Corporation.
- 2.3 Plexipave Court Patch Binder – shall comply with Specification 10.14 of California Products Corporation
- 2.4 Acrylic Resurfacer – shall comply with Specification 10.8 of California Products Corporation.
- 2.5 Plexipave Color Base – shall conform to Specification 10.5 of California Products Corporation.
- 2.6 Plexichrome – shall conform to Specification 10.1 of California Products Corporation.
- 2.7 Plexicolor Textured Line Paint – shall conform to Specification 10.4 of California Products Corporation.
- 2.8 Water – The water used in all mixtures shall be fresh potable.

## 3.0 CONSTRUCTION – Concrete (new constructions)

- 3.1 **Surface Preparation** – Concrete shall have a wood float or medium broom finish. DO NOT PROVIDE STEEL – TROWEL FINISH. DO NOT ALLOW ANY CURING AGENTS OR HARDENERS TO BE USED. Concrete must cure for a minimum of 28 days. Thoroughly remove all dirt, dust, mud, oil, and all foreign matter. Flood the surface, locate and mark all depressions greater than the thickness of a nickel.

3.2 **Concrete Preparer** – Concrete surface must be etched with Concrete Preparer solution. After drying, all latent material must be removed from the surface.

3.3 **Depressions** – After the surface has dried, fill marked depressions with Court Patch Binder according to specifications using the following mix:

100lbs. 60-80 mesh silica sand (dry)  
3 gallons Plexipave Court Patch Binder  
1 or 2 gallons Portland Cement, Type 1 (20lbs. min.)

**Tack Coat** – A tack coat is necessary under patches only and shall be mixed as follows:

Plexipave Court Patch Binder diluted 1 part Court Patch Binder to 2 parts water and allowed to thoroughly dry prior to patching. After patching the surface shall not vary more than 1/8” in ten feet measured in any direction.

3.4 **Primer Coat** – Mix and apply California Ti-Coat epoxy primer according to Specification 10.17. Use only on uncoated surfaces.

NOTE: Plexibond may be used as an alternate for priming concrete courts. Consult manufacturer before mixing.

3.5 **Acrylic Filler Coat** – A coat of Acrylic Resurfacer shall be applied within 1 to 3 hours of the application of Ti – Coat while still tacky to fingertip touch.

Acrylic Resurfacer – 55 gallons  
Sand (60-80 mesh) – 600-900 lbs.  
Water – 20-40 gallons  
Liquid Yield = 112-138 gallons

#### 4.0 PLEXIPAVE COLOR BASE AND PLEXICHROME

4.1 Plexipave Acrylic textured coats shall be applied on the clean, dry underlying surface in 3 applications to obtain a total quantity of not less than .15 nor more than .23 gallons per sq. yd. of area, based on the material prior to dilution. No application shall be covered by a succeeding application until thoroughly dried.

Dilution with Plexichrome and water to obtain proper application consistency will be as follows:

Plexipave Color Base – 30 gallons  
Plexichrome – 20 gallons  
Water – 20 gallons

(NOTE: Other mix ratios may be used after consulting the manufacturer.)

The diluted material shall be homogeneous. Segregation before or during application will not be permitted. The finished surface shall have a uniform appearance and shall be free from ridges and tool marks.

#### 5.0 PLAYING LINES

- 5.1 Four hours minimum after completion of the color coating, 2-inch wide, textured playing lines shall be accurately located, marked and painted with textured Plexicolor Line Paint as specified by the U.S. Tennis Association.

**6.0 Limitations**

- 6.1** No parts of the construction involving Plexipave System shall be conducted during rainfall or when rain is imminent. The air temperature must be at least 50 1/2F and rising. Do not apply when surface temperature is in excess of 140 1/2F. The Plexipave System will not prevent surface or structural crack from reoccurring.



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## SECTION 10.18

### SITE IMPROVEMENTS ATHLETIC FACILITIES

**EXTERIOR/INTERIOR**

**ACRYLIC LATEX**

**COLOR SURFACE SYSTEM**

### **APPLICATION SPECIFICATIONS** **ASPHALT SURFACES**

#### **1.0 DESCRIPTION**

This specification covers the application of a new wearing surface texture for Plexipave Tennis Courts and new or existing asphalt concrete tennis courts that have a sound, well-drained base of adequate thickness and stability. Existing surfaces should be properly sloped for good drainage, and free from cracks. The process consists of the repair of any minor depressions, followed by application of the Plexipave System.

NOTE: The success of the all-weather characteristics of resurfacing is dependent on a sound base (with good drainage) and asphalt concrete meeting the requirements of The National Asphalt Paving Association and the U.S. Tennis Court and Track Builders Association. Surface variation should not exceed 1/8 inch in ten feet, when measured in any direction with a straightedge and a slope of 1 inch in 10 feet, all in one plane.

#### **2.0 MATERIALS**

- 2.1 Plexipave Court Patch Binder** – shall comply with Specification 10.14 of California Products Corporation.
- 2.2 Plexipatch** – shall comply with Specification 10.21 of California Products Corporation.
- 2.3 Acrylic Resurfacer** - shall comply with Specification 10.8 of California Products Corporation.
- 2.4 Plexipave Color Base** - shall conform to Specification 10.5 of California Products Corporation.
- 2.5 Plexichrome** - shall conform to Specification 10.1 of California Products Corporation.
- 2.6 Plexicolor Line Paint** - shall conform to Specification 10.4 of California Products Corporation.
- 2.7 Water** – the water used in all mixtures shall be fresh and potable.

#### **3.0 CONSTRUCTION**

- 3.1 Surface Preparation** - The surface to be coated must be sound, smooth, and free from dust, dirt or oily materials. Prior to the application of surfacing materials, the entire surface should be flooded, and checked for minor depressions or irregularities. Any puddled area covering a nickel shall be marked and repaired with Court Patch Binder using the following mix:

100 lbs. 60 – 80 mesh silica sand (dry)  
 3 gallons Plexipave Court Patch Binder  
 1 to 2 gallons Portland Cement (dry) (depending on humidity and temperature)

Tack coat consisting of 1 part Court Patch Binder and 2 parts water shall be applied to the patch areas and allowed to dry thoroughly prior to patching. For more information see CPC Specification 10.14 or 10.21.

After patching, the surface shall not vary more than 1/8 inch in ten feet measured in any direction.

#### 4.0 SURFACE PREPARATION

In order to provide a smooth, dense underlayment for the Plexipave system, one application of California Acrylic Resurfacer shall be applied to the surface to obtain a coverage of 15 – 20 sq. yds. Per gallon (.07 - .05 gallons per square yard). No application shall be covered by a succeeding application until thoroughly cured. Dilution with water and sand is required utilizing the following mix:

Acrylic Resurfacer	55 gallons
Water (Clean and Potable)	20-40 gallons
Sand (45-60 Mesh)	<u>600 – 900 lbs.</u>
Liquid Yield	112 – 138 gallons

#### 5.0 FORTIFIED PLEXIPAVE

- 5.1 Fortified Plexipave shall be applied by rubber bladed squeegee on the clean, dry surface in 3 applications to obtain a total quantity of not less than .15 nor more than .23 gallons per sq. yd. of area, based on the material prior to any dilution. No application shall be covered by a succeeding application until thoroughly cured.

Fortified Plexipave can be job mixed as follows:

Plexipave Color Base	30 gallons
Plexichrome	20 gallons
Water	20 gallons

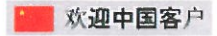
The diluted material shall be homogenous. Segregation before or during application will not be permitted.

The finished surface shall have a uniform appearance and be free from ridges and tool marks.

- 5.2 **PLAYING LINES** – Four hours minimum after completion of the color resurfacing, 2-inch wide playing lines shall be accurately located, marked, and painted with Plexicolor Line Paint as specified by U.S. Tennis Association.

#### 6.0 LIMITATIONS

No part of the construction involving the Plexipave System shall be conducted during rainfall, or when rainfall is imminent. The air temperature must be at least 50°F and rising. Do not apply when surface temperature is above 140°F. The Plexipave System will not prevent surface or structural cracks from reoccurring.


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## Plexipave Tennis Court Surface Products

Plexipave systems are formulated to meet the requirements of players at any level. For **tennis court surfaces**, there are three systems to choose from, offering varying degrees of speed and playability, all rated by the governing body of the game, the International Tennis Federation (ITF).

### Plexipave IW - ITF Category 1 - Pace: Slow

For those who desire a much slower surface, to compensate for lower humidity, high altitudes or simply to change the pace of the game, Plexipave has developed the I.W. mixture, first used at the Indian Wells, CA tournament facility.

### Plexipave Standard - ITF Category 3 - Pace: Medium

Considered by many to be the best combination of consistency-of-play, pace and footing. Plexipave Standard is the traditional and most widely used tennis court surface system. Standard Plexipave provides a consistent and reliable medium-pace playing surface.

### Plexipave H.U. - ITF Category 4 - Pace: Medium-Fast

Harvard University has been the birthplace of many great innovations and playing traditions. Plexipave H.U. is no exception. It has also been adapted as the standard for the Australian Open Series.

The Plexipave Color Finish System is an all-weather, durable, quick drying color surface that provides superior resistance to deterioration from ultra-violet rays. Plexipave is a 100% acrylic latex, color intense tennis surface formulated for use over asphalt and concrete. The high performance finish coat is available in ten popular standard colors. Custom colors are available to meet individual needs. Plexipave has been the choice of tournament installations around the world.



### [Open Plexipave Color Card](#)

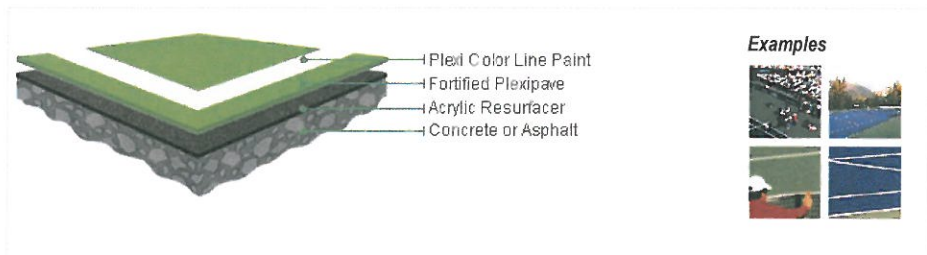
*"As the USC men's tennis coach for the past 23 years, I was always looking for a slow, long-lasting court surface. Plexipave was the answer! They also have brilliant colors that stay sharp."*

Dick Leach Retired Men's Tennis Coach  
University of Southern California

*"I think it's great for the body. I think it's good for anyone's body. It's a lot easier on the joints, which is always good, especially when you're 6-2."*

Maria Sharapova  
Professional Tennis Player From the New York Times, article "Australian Open Evens the Playing Surfaces" published Jan 13, 2008

## Plexipave - Plexipave

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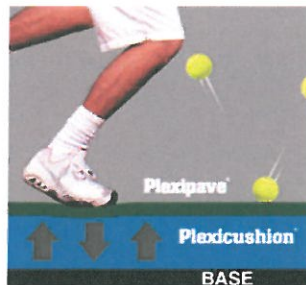
Maria Sharapova  
Professional Tennis Player From the New York Times, article "Australian Open Evens the Playing Surfaces" published Jan 13, 2008

## Plexipave and Plexicushion Tennis Court Surfaces

### Advanced acrylic tennis surface systems for indoor and outdoor tennis facilities

Plexipave and Plexicushion systems are advanced tennis surfacing systems designed to provide players with the highest levels of surface performance for competition and cushioning for safe training.

The [Plexipave](#) Color Finish system is an all-weather, durable quick-drying color surfacer that provides superior resistance to deterioration from ultra-violet rays. Plexipave is a 100% acrylic latex color intense sports surface formulated for use over asphalt and concrete.



The [Plexicushion System](#) combines the consistent bounce, sure footing and outstanding durability of Plexipave with the innovative, shock-absorbing properties of EPDM rubber cushioning. The result is a tennis surface that dynamically responds to body impact and reduces fatigue on legs, knees, ankles and feet.

*The Plexicushion substrate, a special blend of latex, rubber and plastic particles forms a resilient layer that absorbs body shock and reduces muscle fatigue. The 100% acrylic Plexipave surface provides uniform bounce, long lasting color and allows speed of play specification.*

System Components Plexipave and Plexicushion are engineered tennis surface systems made up of innovative materials installed according to rigid application specifications. Each layer in the system serves a specific purpose, and contributes to the quality of the finished court.

- Textured line paint insures uniform ball bounce.
- Highly pigmented finishes allow speed of play specification. (Available in a popular palette of colors)
- Multiple Plexipave acrylic layers for the firm, uniform and durable surface Plexipave and Plexicushion are noted for.
- Plexicushion is an enhancement that provides dynamic response to body impact, attenuates foot and leg shock, and reduces fatigue.
- A filler undercoat.
- The Systems can be installed indoors or outdoors, on asphalt or concrete.
- Additional Plexipave products are used for patching, leveling and etching base surfaces.

#### Durability and Value Worldwide

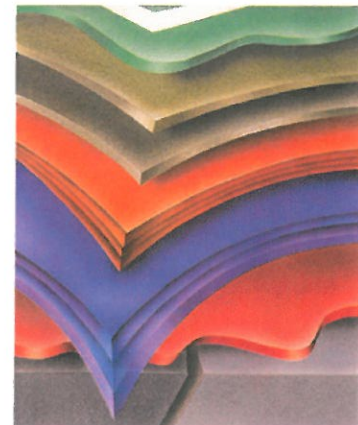
Owners and facility managers around the world appreciate Plexipave's long-lasting, all-weather durability. It's 100% acrylic, asbestos-free composition retains color, texture and playability for 5 to 7 years between resurfacings. Excellent wear resistance represents significant value: a Plexipave or Plexicushion court is a wise investment that yields substantial returns year after year.

#### Outstanding Service and Support

Plexipave and Plexicushion are the most widely used acrylic tennis court surfacing systems in the world. They have achieved a global presence in tennis surface systems, and enjoy an international reputation for excellence and dependability. With the Plexipave and Plexicushion Systems, you get superior products supported by a worldwide organization of authorized applicators.

#### Superior Playability

Tennis players everywhere attest to the superior playability of the Plexipave System. Plexipave's speed of play makes it possible for all types of players to excel, and its distinctive qualities of consistently true bounce and sure footing enhance coaching, training and competition. According to coaches, when tournament competitors play on Plexipave and Plexicushion, they are unhindered by surface inconsistencies, allowing a level of play which truly reflects the athlete's skill.



**SECTION 09 65 66**  
**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC**  
**SURFACING**

**PART 1 – GENERAL**

- 1.1 *SECTION INCLUDES*
- A. Supply and installation of the indoor resilient multipurpose surfacing
  - B. Application of the game lines
  - C. References for the correct construction and preparation of concrete slabs to receive resilient flooring.
- 1.2 *SUBMITTALS*
- A. Product Data:  
Manufacturer's promotional brochures, specifications and installation instructions
  - B. Manufacturer Certifications:
    - 1. Provide certification that accurately identifies the Original Equipment Manufacturer (OEM) of flooring furnished for this project including manufacturer's name, address and factory location.
    - 2. Suppliers of private label flooring for this project must identify themselves as such and fully disclose the OEM information listed above.
    - 3. All "manufacturer" requirements in these specifications must be complied with by the OEM, including warranties, certifications, qualifications, product data, test results, environmental requirements, performance data, etc.
  - B. Samples:
    - 1. Submit for selection and approval three (3) sets of the indoor resilient multipurpose surfacing, manufacturer's brochures, samples or sample boards of all of the available colors, textures and styles.
    - 2. Submit color samples of all the available game line paint colors for selection and approval.
  - C. Closeout Submittals:
    - 1. Submit three (3) copies of the indoor resilient multipurpose surfacing and manufacturer's maintenance instructions.
    - 2. Submit three (3) copies of the material and installation warranties as specified.
- 1.3 *QUALITY ASSURANCE*
- A. Qualifications:
    - 1. The indoor resilient multipurpose surfacing shall have been actively marketed for a minimum of ten (10) years.
    - 2. The indoor resilient multipurpose surfacing shall be manufactured in an ISO 9001 certified plant.
    - 3. The indoor resilient multipurpose surfacing shall be manufactured in an ISO 14001 certified plant.
    - 4. The indoor resilient multipurpose surfacing supplier shall be an established firm, experienced in the field, and appointed as a distributor by the manufacturer of the indoor resilient multipurpose surfacing.



**SECTION 09 65 66**  
**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC**  
**SURFACING**

5. The installer of the indoor resilient multipurpose surfacing shall have a minimum of five (5) years of experience in the field installing indoor resilient multipurpose surfacing and have worked on at least five (5) projects of similar size, type and complexity.

**B. Certifications:**

1. Installer to submit the indoor resilient athletic surfacing manufacturer's certification attesting that they are an approved installer of the indoor resilient multipurpose surfacing.
2. The indoor resilient multipurpose surfacing manufacturer to submit official ISO 9001 certification for the facility in which the indoor resilient multipurpose surfacing is manufactured.
3. The indoor resilient multipurpose surfacing manufacturer to submit official ISO 14001 certification for the facility in which the indoor resilient multipurpose surfacing is manufactured.

**C. Testing:**

Tests shall be relative for multi-purpose use with certificates from independent testing resources to be made available upon request. Test results shall be no more than 5 years old and performed according to ASTM standard testing procedures.

**1.4 DELIVERY, STORAGE AND HANDLING**

**A. Delivery:**

Material shall not be delivered until all related work is in place and finished and/or proper storage facilities and conditions can be provided and guaranteed stable according to FieldTurf USA, Inc. recommendations.

**B. Storage:**

Store the material in a secure, clean and dry location. Maintain temperature between 55° and 85° Fahrenheit. Store the indoor resilient athletic surfacing rolls in an upright position on a smooth flat surface immediately upon delivery to jobsite. Rolls shipped in rigid protective cardboard containers can be laid horizontally prior to unpacking and installation.

**1.5 PROJECT/SITE CONDITIONS**

- A. It is the responsibility of the general contractor/construction manager to maintain project/site conditions acceptable for the installation of the indoor resilient multipurpose flooring.
- B. The area in which the indoor resilient multipurpose surfacing will be installed shall be dry and weather tight. Permanent heat, light and ventilation shall be installed and operable.
- C. All other trades shall have completed their work prior to the installation of the resilient athletic flooring. The general contractor or Construction Manager shall maintain a secure and clean working environment before, during and after the installation. Suspension of other trades' work may be authorized providing their work will not damage the new flooring.
- D. Maintain a stable room temperature of at least 65°F for a minimum of one (1) week prior to, during and thereafter installation.

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**SURFACING**

- E. An effective low-permeance vapor barrier is placed directly beneath the concrete subfloor. For “on” or “below grade” installations, it is recommended to provide a permanent vapor barrier resistant to long term hydrostatic pressure/moisture exposure. Protrusions should be sealed to prevent moisture migration into the slab. Moisture should not be allowed to enter the slab after the completed construction.
- F. Concrete subfloor surface pH level within the 7 to 10 range dependent upon installation type.
- G. Concrete subfloor should be no greater than 1/8" within a 10 ft diameter. This tolerance can be measured in accordance with ASTM E1155. A specified ( $F_F$ ) of 50 and an ( $F_L$ ) of 30 should reach this degree of floor flatness and floor level. There is no numerical correlation between F numbers and the deviation from the straight edge, however the above specified numbers should achieve a flat floor with minimal deviation in the slab. Reference ACI 117 and ACI 302.1R. The general contractor should provide a certificate of compliance with the above recommendations.
- H. Concrete subfloor must be clean and free of all foreign materials or objects including, but not limited to, curing compounds and sealers.
- I. Fill cracks, grooves, voids, depressions, and other minor imperfections. Follow the manufacturer’s directions. Moveable joints must be treated utilizing specific transitioning joint devices depending upon the architect’s recommendations. Follow current ASTM F710 guidelines for the preparation of concrete slabs to receive resilient flooring.
- J. Refer to ACI 302.2R “Guidelines for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials” for concrete design and construction.
- K. Concrete slab shall be fortified with continual steel reinforcement. Fiber reinforcement alone shall not be considered adequate fortification.

1.6 **WARRANTY**

A. Materials:

The indoor resilient athletic surfacing shall be covered by the manufacturer against product defect for 10 years and a 15 year wear through “wear layer” with the surface as defined in ASTM F1303, Section 6.1.3. The manufacturer of the indoor resilient multipurpose surfacing must provide this warranty upon request. Warranties shall not be prorated during the life of the warranty period.

1.7 **ADDITIONAL MATERIALS**

Furnish to the owner additional materials containing a total of at least 1% of each different color or design of the indoor resilient athletic surfacing used on the project.

1.8 **LEED™ CERTIFICATION**

The indoor resilient athletic surfacing should be able to help this facility to achieve points towards *LEED™ certification*. Flooring system must be certified by FloorScore.

LEED categories positively affected by the indoor resilient athletic surfacing:

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ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC  
SURFACING**

Product Type			Vinyl
Building Reuse Maintain Interior Nonstructural Elements	MR 1.2	Renovation	1
Construction Waste Management	MR 2	Renovation	2
Construction Waste Management Materials Reuse	MR 3	Renovation	2
	5 % - 1 point		
	10% - 2 points		
Recycled Content	MR 4	New/Renovation	2
	20% - 2 points		
Indoor Environmental Air Quality Low VOC Adhesives/Sealants	IEQ 4.1	New/Renovation	1
Low-emitting Materials Paints and Coatings	IEQ 4.2	New/Renovation	1
Low-Emitting Materials Flooring Systems	IEQ 4.3	New/Renovation	1

**PART 2 - PRODUCTS**

2.1 *MANUFACTURERS*

The basis of the design for the indoor resilient multipurpose surfacing is Omnisports 6.5 mm and Tarkolay as manufactured by FieldTurf USA, Inc. All other installation accessories and related components must be either made or approved by the indoor resilient athletic surfacing manufacturer. Other products may be approved as equal if deemed qualified and submitted in accordance with the General Conditions. Test reports confirming compliance from an Independent Sports Laboratory must be provided along with samples, technical data, installation, maintenance, and warranty prior to acceptance as an alternative product.

2.2 *MATERIALS.*

Omnisports 6.5 mm - Prefabricated sport surface with wood flooring design and slightly textured embossed surface as supplied by FieldTurf USA, Inc. Embossing of wood design and solid colors must be the same; varying embossing or surface textures will not be allowed. Printing of wood design shall closely resemble standard wood strip flooring in size, color, board length, and grain appearance. The wood design shall be protected by a clear layer of pure PVC (Polyvinyl Chloride) and Top Clean, a factory applied UV cured urethane treatment. Intermediate layers shall be fortified with a non-woven fiberglass grid for increased dimensional stability. The foam force reduction layer shall be high-density closed cell PVC foam with honeycomb embossing, and is applied in one continuous manufacturing process. Laminated or adhered foam layers will not be allowed. Field constructed products will not be accepted. Physical properties of the indoor resilient athletic surfacing shall conform to the following minimums:

Width	.....	6'6" (2 m)
Length	.....	85' (25.9m) approx.

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Total Thickness	.....	6.5 mm
Vertical Deformation	PASSED	ASTM F2772
Rolling Load	PASSED	0.30 (EN 1569 {11/1999})
Surface Finish Effect	PASSED	ASTM F2772 (80 – 110)
Allergy and Asthma Friendly	ASP: 05-01/101	Certified Compliant
Abrasion Resistance	PASSED	0.10 (EN ISO 5470-1 {06/1999})
Sound Insulation	Excellent	+/- 19 dB (ISO 717/2)
In Room Sound Insulation	Excellent	61dB (NF S31-074)
Ball Rebound	PASSED	ASTM F2772 > 90%
Shock Absorption	PASSED	ASTM F2772 Class 2
Fire Rating	PASSED	ASTM E648 Class 1

Tarkolay – A high quality low permeance slip sheet vapor retarder designed to separate the installed system from the substrate below. Tarkolay as manufactured by Fieldturf can be used below, on, or above grade substrates that experience elevated moisture conditions. Moisture tolerances shall not exceed 98% RH per ASTM F2170.

- Physical properties of the indoor resilient athletic surfacing shall conform to the following minimums:

Width	.....	6'6" (2 m)
Length	.....	147'7" (45 m) approx.
Total Thickness	.....	1.3 mm
Dimensional	PASSED	.01% (EN 1434)
Stability	Permeance	Excellent
		<0.20 (ASTM E96)

- Color: As available from the indoor resilient athletic surfacing manufacturer's standard range.
  - Hardwood Design Series: A wood look design as available from the indoor resilient athletic surfacing manufacturer's standard range.
  - Texture: Texture to remain consistent between solid colors and wood design when blending colors.
- B. Welding Rod:  
As supplied by the indoor resilient athletic surfacing manufacturer or supplier. Color to blend with the indoor resilient athletic surfacing color or design. All seams shall be welded to create a monolithic and impermeable surface.
- C. Adhesive:  
As approved by the indoor resilient athletic surfacing manufacturer.
- D. Game Line Paint Primer:  
As approved by the indoor resilient athletic surfacing manufacturer.
- E. Game Line Paint:  
As approved by the indoor resilient athletic surfacing manufacturer. Colors are to be selected from the manufacturer's standard range.

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC**  
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**PART 3 - EXECUTION**

3.1 *EXAMINATION*

- A. It is the responsibility of the general contractor/construction manager to ensure that project/site conditions are acceptable for the installation of the indoor resilient athletic flooring.
- B. Verify that the area in which the indoor resilient athletic surfacing will be installed is dry and weather tight. Verify that permanent heat, light and ventilation is installed and operable.
- C. Verify that all other work that could cause damage, dirt and dust or interrupt the normal pace of the indoor resilient athletic flooring installation is completed or suspended.
- D. Verify that there is a stable room temperature of at least 65°F.
- E. Verify that there are no foreign materials or objects on the subfloor and that the subfloor is clean and ready for installation.
- F. *Installation with Tarkolay to Concrete Subfloor* : moisture content must be less than 98 % RH when tested per ASTM F2170.
- G. Do not average the results of the tests. Report all field test results in writing to the General Contractor, Architect, and End User prior to installation.
- H. Verify that the concrete subfloor surface pH level is within the 7 - 11 range.
- I. Document the results indicating the slab is within manufacturer's tolerances for slab deviation.

3.2 *PREPARATION OF SURFACES*

- A. Sand the entire surface of the concrete slab.
- B. Sweep the concrete slab so as to remove all dirt and dust. If a sweeping compound is to be used it must be a sweeping compound that does not contain oil or other items that may inhibit the adhesive bond.
- C. Slab must be dust free. In the event that dust impairs adhesive bond, priming the slab prior to application of adhesive may be necessary. Follow installation guidelines.

3.3 *INSTALLATION*

- A. The installation area shall be closed to all traffic and activity for a period to be set by the indoor resilient athletic surfacing installer. The indoor resilient athletic surfacing installation shall not begin until the installer is familiar with the existing conditions.
- B. All necessary precautions should be taken to minimize noise, smell, dust, the use of hazardous materials and any other items that may inconvenience others.
- C. Install the indoor resilient athletic surfacing in strict accordance with the indoor resilient athletic surfacing manufacturer's written instructions.
- D. Install the indoor resilient athletic surfacing minimizing cross seams. Provide a seam diagram during the submittal process for approval prior to installation.
- E. Paint game lines using approved game line paint primer and game line paint in strict accordance with the game line paint manufacturer's instructions.

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**SURFACING**

F. Install appropriate threshold plates or transition strips where necessary.

3.4 *CLEANING*

A. Remove all unused materials, tools, and equipment and dispose of any debris properly. Clean the indoor resilient athletic surfacing in accordance with the manufacturer's instructions.

3.5 *PROTECTION*

If required, protect the indoor resilient athletic surfacing from damage using coverings approved by the manufacturer until acceptance of work by the customer or their authorized representative.

3.6 RELATED STANDARDS AND GUIDELINES

A. ASTM F2170 "Standard Test Method for Determining Relative Humidity In Concrete Floor Slabs Using In-Situ Probes"

B. ASTM F710 "Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring"

D. ACI 302.2R-06 "Guideline for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials"

**END OF SECTION**

**SECTION 09 65 66**  
**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC**  
**SURFACING**

**PART 1 – GENERAL**

- 1.1 *SECTION INCLUDES*
- A. Supply and installation of the indoor resilient multipurpose surfacing
  - B. Application of the game lines
  - C. References for the correct construction and preparation of concrete slabs to receive resilient flooring.
- 1.2 *SUBMITTALS*
- A. Product Data:
    - Manufacturer’s promotional brochures, specifications and installation instructions
  - B. Manufacturer Certifications:
    - 1. Provide certification that accurately identifies the Original Equipment Manufacturer (OEM) of flooring furnished for this project including manufacturer’s name, address and factory location.
    - 2. Suppliers of private label flooring for this project must identify themselves as such and fully disclose the OEM information listed above.
    - 3. All “manufacturer” requirements in these specifications must be complied with by the OEM, including warranties, certifications, qualifications, product data, test results, environmental requirements, performance data, etc.
  - B. Samples:
    - 1. Submit for selection and approval three (3) sets of the indoor resilient multipurpose surfacing, manufacturer’s brochures, samples or sample boards of all of the available colors, textures and styles.
    - 2. Submit color samples of all the available game line paint colors for selection and approval.
  - C. Closeout Submittals:
    - 1. Submit three (3) copies of the indoor resilient multipurpose surfacing and manufacturer’s maintenance instructions.
    - 2. Submit three (3) copies of the material and installation warranties as specified.
- 1.3 *QUALITY ASSURANCE*
- A. Qualifications:
    - 1. The indoor resilient multipurpose surfacing shall have been actively marketed for a minimum of ten (10) years.
    - 2. The indoor resilient multipurpose surfacing shall be manufactured in an ISO 9001 certified plant.
    - 3. The indoor resilient multipurpose surfacing shall be manufactured in an ISO 14001 certified plant.
    - 4. The indoor resilient multipurpose surfacing supplier shall be an established firm, experienced in the field, and appointed as a distributor by the manufacturer of the indoor resilient multipurpose surfacing.

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC**  
**SURFACING**

5. The installer of the indoor resilient multipurpose surfacing shall have a minimum of five (5) years of experience in the field installing indoor resilient multipurpose surfacing and have worked on at least five (5) projects of similar size, type and complexity.
- B. Certifications:
1. Installer to submit the indoor resilient athletic surfacing manufacturer's certification attesting that they are an approved installer of the indoor resilient multipurpose surfacing.
  2. The indoor resilient multipurpose surfacing manufacturer to submit official ISO 9001 certification for the facility in which the indoor resilient multipurpose surfacing is manufactured.
  3. The indoor resilient multipurpose surfacing manufacturer to submit official ISO 14001 certification for the facility in which the indoor resilient multipurpose surfacing is manufactured.
- C. Testing:  
 Tests shall be relative for multi-purpose use with certificates from independent testing resources to be made available upon request. Test results shall be no more than 5 years old and performed according to ASTM standard testing procedures.

1.4 *DELIVERY, STORAGE AND HANDLING*

- A. Delivery:  
 Material shall not be delivered until all related work is in place and finished and/or proper storage facilities and conditions can be provided and guaranteed stable according to FieldTurf USA, Inc. recommendations.
- B. Storage:  
 Store the material in a secure, clean and dry location. Maintain temperature between 55° and 85° Fahrenheit. Store the indoor resilient athletic surfacing rolls in an upright position on a smooth flat surface immediately upon delivery to jobsite. Rolls shipped in rigid protective cardboard containers can be laid horizontally prior to unpacking and installation.

1.5 *PROJECT/SITE CONDITIONS*

- A. It is the responsibility of the general contractor/construction manager to maintain project/site conditions acceptable for the installation of the indoor resilient multipurpose flooring.
- B. The area in which the indoor resilient multipurpose surfacing will be installed shall be dry and weather tight. Permanent heat, light and ventilation shall be installed and operable.
- C. All other trades shall have completed their work prior to the installation of the resilient athletic flooring. The general contractor or Construction Manager shall maintain a secure and clean working environment before, during and after the installation. Suspension of other trades' work may be authorized providing their work will not damage the new flooring.
- D. Maintain a stable room temperature of at least 65°F for a minimum of one (1) week prior to, during and thereafter installation.
- E. An effective low-permeance vapor barrier is placed directly beneath the concrete subfloor. For "on" or "below grade" installations, it is recommended



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**SURFACING**

to provide a permanent vapor barrier resistant to long term hydrostatic pressure/moisture exposure. Protrusions should be sealed to prevent moisture migration into the slab. Moisture should not be allowed to enter the slab after the completed construction.

- F. Concrete subfloor surface pH level within the 7 to 10 range dependent upon installation type.
- G. Concrete subfloor should be no greater than 1/8" within a 10 ft diameter. This tolerance can be measured in accordance with ASTM E1155. A specified ( $F_F$ ) of 50 and an ( $F_L$ ) of 30 should reach this degree of floor flatness and floor level. There is no numerical correlation between F numbers and the deviation from the straight edge, however the above specified numbers should achieve a flat floor with minimal deviation in the slab. Reference ACI 117 and ACI 302.1R. The general contractor should provide a certificate of compliance with the above recommendations.
- H. Concrete subfloor must be clean and free of all foreign materials or objects including, but not limited to, curing compounds and sealers.
- I. Fill cracks, grooves, voids, depressions, and other minor imperfections. Follow the manufacturer's directions. Moveable joints must be treated utilizing specific transitioning joint devices depending upon the architect's recommendations. Follow current ASTM F710 guidelines for the preparation of concrete slabs to receive resilient flooring.
- J. Refer to ACI 302.2R "Guidelines for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials" for concrete design and construction.
- K. Concrete slab shall be fortified with continual steel reinforcement. Fiber reinforcement alone shall not be considered adequate fortification.

1.6 **WARRANTY**

A. **Materials:**

The indoor resilient athletic surfacing shall be covered by the manufacturer against product defect for 10 years and a 15 year wear through "wear layer" with the surface as defined in ASTM F1303, Section 6.1.3. The manufacturer of the indoor resilient multipurpose surfacing must provide this warranty upon request. Warranties shall not be prorated during the life of the warranty period.

1.7 **ADDITIONAL MATERIALS**

Furnish to the owner additional materials containing a total of at least 1% of each different color or design of the indoor resilient athletic surfacing used on the project.

1.8 **LEED™ CERTIFICATION**

The indoor resilient athletic surfacing should be able to help this facility to achieve points towards *LEED™ certification*. Flooring system must be certified by FloorScore.

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LEED categories positively affected by the indoor resilient athletic surfacing:

Product Type			Vinyl
Building Reuse Maintain Interior Nonstructural Elements	MR 1.2	Renovation	1
Construction Waste Management	MR 2	Renovation	2
Construction Waste Management Materials Reuse	MR 3	Renovation	2
	5 % - 1 point		
	10% - 2 points		
Recycled Content	MR 4	New/Renovation	2
	20% - 2 points		
Indoor Environmental Air Quality Low VOC Adhesives/Sealants	IEQ 4.1	New/Renovation	1
Low-emitting Materials Paints and Coatings	IEQ 4.2	New/Renovation	1
Low-Emitting Materials Flooring Systems	IEQ 4.3	New/Renovation	1

## **PART 2 - PRODUCTS**

### 2.1 *MANUFACTURERS*

The basis of the design for the indoor resilient multipurpose surfacing is Omnisports 6.5 mm as manufactured by Fieldturf. All other installation accessories and related components must be either made or approved by the indoor resilient athletic surfacing manufacturer. Other products may be approved as equal if deemed qualified and submitted in accordance with the General Conditions. Test reports confirming compliance from an Independent Sports Laboratory must be provided along with samples, technical data, installation, maintenance, and warranty prior to acceptance as an alternative product.

### 2.2 *MATERIALS.*

Omnisports 6.5 - Prefabricated sport surface 6.5mm (1/4") with wood flooring design and slightly textured embossed surface as supplied by Fieldturf. Embossing of wood design and solid colors must be the same; varying embossing or surface textures will not be allowed. Printing of wood design shall closely resemble standard wood strip flooring in size, color, board length, and grain appearance. The wood design shall be protected by a clear layer of pure PVC (Polyvinyl Chloride) and Top Clean, a factory applied UV cured urethane treatment. Intermediate layers shall be fortified with a non-woven fiberglass grid for increased dimensional stability. The foam force reduction layer shall be high-density closed cell PVC foam with honeycomb embossing, and is applied in one continuous manufacturing process. Laminated or adhered foam layers will not be allowed. Field constructed products will not be accepted.

Multi-Poxy moisture mitigation/adhesive combination. Provide non-solvent reactive topically applied moisture mitigation/adhesive according to manufacturer's recommendations.

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**SURFACING**

1. Physical properties of the indoor resilient athletic surfacing shall conform to the following minimums:

Width	.....	6'6" (2 m)
Length	.....	85' (25.9m) approx.
Total Thickness	.....	6.5 mm
Vertical Deformation	PASSED	ASTM F2772
Rolling Load	PASSED	0.30 (EN 1569 {11/1999})
Surface Finish Effect	PASSED	ASTM F2772 (80 – 110)
Allergy and Asthma Friendly	ASP: 05-01/101	Certified Compliant
Abrasion Resistance	PASSED	0.10 (EN ISO 5470-1 {06/1999})
Sound Insulation	Excellent	+/- 19 dB (ISO 717/2)
In Room Sound Insulation	Excellent	61dB (NF S31-074)
Ball Rebound	PASSED	ASTM F2772 > 90%
Shock Absorption	PASSED	ASTM F2772 Class 2
Fire Rating	PASSED	ASTM E648 Class1

1. Color: As available from the indoor resilient athletic surfacing manufacturer's standard range.
  2. Hardwood Design Series: A wood look design as available from the indoor resilient athletic surfacing manufacturer's standard range.
  3. Texture: Texture to remain consistent between solid colors and wood design when blending colors.
- A. Welding Rod:  
As supplied by the indoor resilient athletic surfacing manufacturer or supplier. Color to blend with the indoor resilient athletic surfacing color or design. All seams shall be welded to create a monolithic and impermeable surface.
- B. Game Line Paint and Primer:  
As approved by the indoor resilient athletic surfacing manufacturer.

**PART 3 - EXECUTION**

3.1 *EXAMINATION*

- A. It is the responsibility of the general contractor/construction manager to ensure that project/site conditions are acceptable for the installation of the indoor resilient athletic flooring.
- B. Verify that the area in which the indoor resilient athletic surfacing will be installed is dry and weather tight. Verify that permanent heat, light and ventilation is installed and operable.
- C. Verify that all other work that could cause damage, dirt and dust or interrupt the normal pace of the indoor resilient athletic flooring installation is completed or suspended.
- D. Verify that there is a stable room temperature of at least 65°F.
- E. Verify that there are no foreign materials or objects on the subfloor and that the subfloor is clean and ready for installation.

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**SURFACING**

- F. Direct Full Spread Adhering to Concrete Subfloor Multi-Poxy : moisture content less than 92 % RH when tested per ASTM F2170. Follow Fieldturf' Installation Recommendations.
- G. Do not average the results of the tests. Report all field test results in writing to the General Contractor, Architect, and End User prior to installation.
- H. Verify that the concrete subfloor surface pH level is within the 7 - 11 range.
- I. Document the results indicating the slab is within manufacturer's tolerances for slab deviation.

3.2 *PREPARATION OF SURFACES*

- A. Sand the entire surface of the concrete slab.
- B. Sweep the concrete slab so as to remove all dirt and dust. If a sweeping compound is to be used it must be a sweeping compound that does not contain oil or other items that may inhibit the adhesive bond.
- C. Slab must be dust free. In the event that dust impairs adhesive bond, priming the slab prior to application of adhesive may be necessary. Follow installation guidelines.

3.3 *OPTIONS FOR MOISTURE MITIGATION*

- A. For projects with moisture conditions higher than the specified tolerances, **TARKOLAY** may be used for conditions that do not exceed 15 lbs per ASTM F1869 and/or 98% per ASTM F2170. Use only approved Multi-Poxy adhesive as directed by the manufacturer.

3.4 *INSTALLATION*

- A. The installation area shall be closed to all traffic and activity for a period to be set by the indoor resilient athletic surfacing installer. The indoor resilient athletic surfacing installation shall not begin until the installer is familiar with the existing conditions.
- B. All necessary precautions should be taken to minimize noise, smell, dust, the use of hazardous materials and any other items that may inconvenience others.
- C. Install the indoor resilient athletic surfacing in strict accordance with the indoor resilient athletic surfacing manufacturer's written instructions.
- D. Install the indoor resilient athletic surfacing minimizing cross seams. Provide a seam diagram during the submittal process for approval prior to installation.
- E. Paint game lines using approved game line paint primer and game line paint in strict accordance with the game line paint manufacturer's instructions.
- F. Install appropriate threshold plates or transition strips where necessary.

3.5 *CLEANING*

- A. Remove all unused materials, tools, and equipment and dispose of any debris properly. Clean the indoor resilient athletic surfacing in accordance with the manufacturer's instructions.

3.6 *PROTECTION*

**L-2000**  
**Product Specifications**

G.3 - Bidder: FieldTurf USA, Inc.

**PART 1 – GENERAL**

**1.1 SUMMAR**

- A. Product Name: L-2000.
- B. Product Description: Pour-in-place, all-weather synthetic track surface consisting of polymer resin binders and rubber granules.
- C. Scope of Work: Furnish all required labor, materials and equipment to successfully install the specified all-weather synthetic track surface including striping and markings to a base properly prepared by others.

**1.2 RELATED OR**

- A. Earthwork
- B. Drainage
- C. Asphaltic Concrete Paving
- D. Cast-in-Place Concrete
- E. Synthetic Turf

**1.3 REFERENCE STANDARDS**

- A. The work shall conform to the standards for track construction as prescribed or approved by the appropriate governing body; NFHS, NCAA, or IAAF.
  - 1. NFSHSA *Track and Field Rules*.
  - 2. ASBA *Running Tracks Construction and Maintenance Manual*.

**1.4 SU MITTALS**

- A. Product Data
- B. Striping Diagram
- C. Operation and Maintenance Manual
- D. Warranty

**1.5 UALIT ASSURANCE**

- A. Synthetic surfacing contractor (SSC) shall be licensed and bonded and possess a valid contractor's license in the state where Work is performed.
- B. SSC shall have a minimum of 5 years experience installing the specified all-weather track surface under the same corporate name as current operations.

## **1.6 PROJECT CONDITIONS**

- A. SSC, General Contractor (GC) and/or Owner, shall conduct a pre-construction meeting to review project conditions prior to dispatch of the SSC's installation team.
- B. Synthetic surface base asphalt/concrete.
  - 1. The base asphalt and/or concrete shall meet the standards set by the Architect/Engineer and described in the product specifications.
  - 2. Allow minimum of 14 days cure on new asphalt, 28 days cure on new concrete prior to application of specified synthetic track surface.
  - 3. When surfacing on new asphalt, the asphalt contractor shall provide a flood test of the asphalt base.
  - 4. Repair work required on the base shall be approved by the Architect/Engineer.
  - 5. GC and/or Owner shall be responsible to protect the base from activities and traffic that may damage the base or leave dirt, oil or other foreign material on the base prior to application of the synthetic track surface.
- C. Weather
  - 1. Apply the synthetic track surface only during favorable weather conditions.
  - 2. No application of the synthetic track surface shall be conducted during rainfall, when rain is imminent, when freezing temperatures are forecasted or exist, or when gusting winds are occurring.
  - 3. Work is to progress only when the SSC can guarantee successful cure of the materials.
- D. During surface installation and striping, all irrigation systems shall be shut-off or controlled so that no water falls on the track or event areas.
- E. During set-up, installation and striping, the GC and/or Owner shall be responsible to have the entire track and other pertinent areas closed and secured of all activities 24 hours per day until completion of the project.

## **1.7 WARRANTY**

- A. Manufacturer's and Installer's Warranty
  - 1. The warranty on the all-weather synthetic track surface shall endure for six (6) years from completion of installation.
  - 2. The warranty is to be provided directly by the SSC to the Owner.
  - 3. The warranty shall cover defects in materials and workmanship not deemed as ordinary wear on a running track.
- B. Warranty Bond not required.

## **PART 2 – PRODUCTS**

### **2.1 MANUFACTURERS**

- A. Beynon Sports Surfaces., 19495 SW Teton Ave., Tualatin, OR 97092,  
Tel: 503-691-2484, Fax: 503-692-0491, [www.beynonports.com](http://www.beynonports.com)

### **2.2 MATERIALS**

- A. Rubber
  - 1. L-2000 rubber shall be SBR granules with a 1.0-4.0mm gradation.
  - 2. SBR color shall be black

- B. Binder
  - 1. L-2000 primer shall be a polymer resin compatible with base course materials.
  - 2. L-2000 binder shall be polymer resin containing a minimum of 50% solids.
  - 3. Polymer resin shall be pigmented black.
  
- C. Marking and Line Paint
  - 1. The paint shall be formulated to be compatible with synthetic track surface materials.
  - 2. Colors shall be as prescribed or approved by the appropriate governing body; NFHS, NCAA, or IAAF.

## **PART 3 – E ECUTION**

### **3.1 E AMINATION**

- A. SSC shall examine project conditions to ensure successful installation of the synthetic track surface. Any deficiencies shall be reported to the GC and/or Owner for corrective action.

### **3.2 PREPARATION**

- B. SSC to protect adjacent areas from contamination of synthetic track surfacing materials due to installation procedures.
  
- C. SSC shall prepare the base surface using a power blower to remove surface dirt. Cleaning necessary to remove embedded dirt, oil, or other foreign material shall be the responsibility of the GC and/or Owner.

### **3.3 INSTALLATION**

- A. General
  - 1. The L-2000 shall be installed using the “rake and spray” method. “Batching” of rubber and binder, “wet spraying” binder and rubber, or other methods used to reduce the number of layers applied are not allowed.
  - 2. L-2000 shall be installed in a minimum of eight layers.
  - 3. Materials shall be applied in even layers with equipment specifically designed for the installation of resilient surfacing. Thorough curing between each layer is required before successive coats are applied.
  - 4. L-2000 shall consist of a minimum quantity of 9.7 pounds per square yard of specified rubber granules and not less than 6.4 pounds per square yard of polymer resin.
  - 5. Final three layers shall have a minimum two percent by weight of pigment blended with the polymer resin.
  - 6. Completed L-2000 shall have a minimum depth of 10mm.
  
- B. Striping
  - 1. Striping Contractor shall verify with Owner’s representative the exact locations, size, shape, and color of the lines and markings before proceeding with striping and markings.
  - 2. Engineer the layout of lane lines, starting lines, and markings as prescribed or approved by the Owner’s representative, Architect/Engineer and the appropriate governing body; NFHS, NCAA, or IAAF.
  - 3. All lines and markings shall be spray applied by experienced personnel utilizing equipment manufactured for line striping. Striping lines and markings shall have true sharp edges.

### 3.4 CLEANING

- A. Upon completion of work remove all containers, surplus materials, and installation debris.
- B. Leave area of work in clean orderly condition ready for use by Owner.

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Product Specifications\09L2.doc





## **Hobart Coating System Specifications**

### **Part 1 – General**

#### **1.1 Scope**

- A. The synthetic surfacing contractor shall furnish all labor, materials, equipment, supervision and services necessary for the proper completion of the **Hobart Coating** synthetic track system and related work indicated on the drawings and specified herein.
- B. The synthetic surfacing contractor shall refer to the drawings for the required locations of synthetic track surfacing to be installed. All quantities and dimensions shall be field verified by the synthetic surfacing contractor.

#### **1.2 Specific Scope of Work**

- A. Install a full depth poured-in-place two-component, UV stabilized elastomeric polyurethane synthetic resurfacing system with Hobart textured finish.
- B. Layout and paint all track lines and event markings as required and specified by current IAAF and NCAA rules.

#### **1.3 Coordination**

- A. The synthetic surfacing contractor shall coordinate the work specified with an authorized and appointed representative of the owner so as to perform the work during a period and in a manner acceptable to the owner.

### **Part 2 - Quality Assurance**

#### **2.1 Contractor and Manufacturer Qualifications**

- A. The CONTRACTOR and the MANUFACTURER must be the same.
- B. The CONTRACTOR must have a minimum of 10 years experience in the installation of poured-in-place, two-component elastomeric polyurethane synthetic track surfacing.

- C. The CONTRACTOR shall be able to furnish evidence that they have been in business for a period of not less than 3 years, under the present name, and if required, furnish financial statements for each of the past 3 years.
- D. The CONTRACTOR must have installed a minimum of 10 outdoor track facilities in the last 2 years using the exact, poured-in-place, two-component elastomeric polyurethane synthetic track resurfacing, as specified herein with the contractor bidding this project.
- E. The MANUFACTURER must have a minimum of 10 years of experience with compound two-part polyurethane for athletic surfaces.
- F. CONTRACTOR is to provide a list of completed facilities, minimum of 10 which are certified to meet IAAF/NCAA rules & regulations, utilizing the same product as specified.
- G. The MANUFACTURER must offer a minimum of six (6) IAAF Certified Track Systems.
- H. All polyurethane components must be MANUFACTURED in an ISO 9001 Certified facility.
- I. All polyurethane components must be MANUFACTURED in the United States in an **ISO 9001:2008 Certified** facility to ensure the highest quality materials.
- J. The CONTRACTOR must have installed a minimum of two (2) Class I IAAF Certified outdoor tracks within the United States.

## 2.2 Submittals

The following submittals must be received with bid submittal:

- A. Standard printed specifications of the synthetic track surfacing system to be installed on this project.
- B. An affidavit attesting that the synthetic track surfacing material to be installed meets the requirements defined by the manufacturers currently published specifications and any modifications outlined in those technical specifications.
- C. A synthetic track surfacing system sample, 12" x 12" in size, of the same synthetic track surfacing system to be installed on this project.

- D. A list of completed facilities, including the installing supervisor, of the exact Dual Durometer synthetic track surfacing system.

### **Part 3 – Materials**

#### **3.1 Binder Spray**

- A. Apply two applications of moisture cured binder to encapsulate embedded EPDM granulate.
- B. Coverage shall be 7-8 gallons per thousand square feet.

#### **3.2 Pigmented Polyurethane Coating**

- A. Apply two applications of pigmented polyurethane coating color matching EPDM and polyurethane.
- B. Coverage shall be 7 gallons per 1,000 square feet.

#### **3.3 Line Marking Paint**

- A. Manufacturers recommended pigmented paint.

### **Part 4 – Installation**

#### **4.1 Surface Preparation**

- A. Prior to the application of the resurfacing layer, the existing polyurethane surface shall be inspected for conformity to planarity requirements. The surface shall not deviate more than 1/8 inch in 10 feet from the specified grade when checked with a 10-foot straightedge. An impermeable polyurethane surface may also be flooded with water to determine if any “bird baths” or low areas exist.
- B. The owner should verify that the surface tolerances meet all specifications issued by the appropriate sanctioning or governing body such as IAAF, NCAA, NFSHSA, TAC, etc.
- C. The area to be surfaced shall be clean and free of any loose or foreign particles (dirt, oil, etc.) prior to the commencement of work. The surface is usually cleaned by use of a power blower and high-pressure washer.

## 4.2 Equipment

- A. The **Hobart Coating** system components shall be processed and installed by specially designed machinery with automatic electronic portioning, which provides continuous mixing, feeding and finishing for accurate quality controlled installation.
- B. No hand mixing is allowed.

## 4.4 Materials

- A. Hobart Coating

The resilient Hobart textured finish shall be a dense matrix of embedded/encapsulated EPDM granules.

## 4.5 Site Conditions

- A. Installation shall not take place if adjacent or concurrent construction generates excessive dust, abrasives or any other by-product that, in the opinion of the installer, would be harmful to the track material, until completion of such works.
- B. Apply Synthetic Track Surfacing in dry weather when the existing surface and atmospheric temperatures are fifty (50) degrees Fahrenheit or above, and are anticipated to remain above fifty (50) degrees Fahrenheit for twenty-four (24) hours after completing application.
- C. The maximum temperature cannot exceed 105 degrees at any point during a 24 - hour period.
- D. Rain cannot be falling. If there is a threat of rain, work shall cease until dry conditions can be re-established on the track surface. Work is to proceed only when adequate curing can be guaranteed by the manufacturer.

## Part 5 – Line Striping and Event Markings

### 5.1 Layout

- A. Line striping and event markings shall be laid out in accordance with current IAAF and NCAA rules.

### 5.2 Certification

- A. Upon completion of the installation, the owner shall be supplied with all necessary computations and drawings as well as a letter of certification attesting to the accuracy of the markings.

**Part 6 – Guarantee**

- A. Synthetic track surfacing system shall be fully guaranteed against faulty workmanship and material failure for a period of five (5) years from the date of acceptance.
- B. Synthetic surfacing material found to be defective as a result of faulty workmanship and/or material failure shall be replaced or repaired at no charge, upon written notification within the guarantee period.

END OF SECTION

**BSS 2000RE**  
**Embedded Resurfacing**  
**Synthetic Track Surfacing System Specifications**

**Part 1 – General**

**1.1 Scope**

- A. The synthetic surfacing contractor shall furnish all labor, materials, equipment, supervision and services necessary for the proper completion of the **BSS 2000RE Embedded Resurfacing** synthetic track system and related work indicated on the drawings and specified herein.
- B. The synthetic surfacing contractor shall refer to the drawings for the required locations of synthetic track surfacing to be installed. All quantities and dimensions shall be field verified by the synthetic surfacing contractor.

**1.2 Specific Scope of Work**

- A. Install a full depth poured-in-place two-component, UV stabilized elastomeric polyurethane synthetic resurfacing system with Hobart textured finish.
- B. Layout and paint all track lines and event markings as required and specified by current IAAF and NCAA rules.

**1.3 Coordination**

- A. The synthetic surfacing contractor shall coordinate the work specified with an authorized and appointed representative of the owner so as to perform the work during a period and in a manner acceptable to the owner.

**Part 2 - Quality Assurance**

**2.1 Contractor and Manufacturer Qualifications**

- A. The CONTRACTOR and the MANUFACTURER must be the same.

- B. The CONTRACTOR must have a minimum of 10 years experience in the installation of poured-in-place, two-component elastomeric polyurethane synthetic track surfacing.
- C. The CONTRACTOR shall be able to furnish evidence that they have been in business for a period of not less than 3 years, under the present name, and if required, furnish financial statements for each of the past 3 years.
- D. The CONTRACTOR must have installed a minimum of 10 outdoor track facilities in the last 2 years using the exact, poured-in-place, two-component elastomeric polyurethane synthetic track resurfacing, as specified herein with the contractor bidding this project.
- E. The MANUFACTURER must have a minimum of 10 years of experience with compound two-part polyurethane for athletic surfaces.
- F. CONTRACTOR is to provide a list of completed facilities, minimum of 10 which are certified to meet IAAF/NCAA rules & regulations, utilizing the same product as specified.
- G. The MANUFACTURER must offer a minimum of six (6) IAAF Certified Track Systems.
- H. All polyurethane components must be MANUFACTURED in an ISO 9001 Certified facility.
- I. All polyurethane components must be MANUFACTURED in the United States at the headquarters of the CONTRACTOR.
- J. The CONTRACTOR must have installed a minimum of two (2) Class I IAAF Certified outdoor tracks within the United States.

## **2.2 Submittals**

The following submittals must be received with bid submittal:

- A. Standard printed specifications of the synthetic track surfacing system to be installed on this project.
- B. An affidavit attesting that the synthetic track surfacing material to be installed meets the requirements defined by the manufacturers currently published specifications and any modifications outlined in those technical specifications.

- C. A synthetic track surfacing system sample, 12" x 12" in size, of the same synthetic track surfacing system to be installed on this project.
- D. A list of completed facilities, including the installing supervisor, of the exact Dual Durometer synthetic track surfacing system.

### **Part 3 – Materials**

#### **3.1 Elastomeric Polyurethane**

- A. BEYPUR, the two-component U.V. stabilized elastomeric polyurethane compounded from polyol and isocyanate components, based on one hundred percent Methylene Diphenyl Isocyanate (MDI). No Toluene Diisocyanate Isocyanate (TDI) will be allowed.
- B. The elastomeric polyurethane shall be red in color.

#### **3.2 EPDM Granulate**

- A. The EPDM granulates shall be approximately 1 to 3mm in size.
- B. The EPDM granulates and the U.V. stabilized elastomeric polyurethane shall be color matched.

#### **3.3 Line Marking Paint**

- A. Manufacturers recommended pigmented paint.

### **Part 4 – Installation**

#### **4.1 Surface Preparation**

- A. Prior to the application of the resurfacing layer, the existing polyurethane surface shall be inspected for conformity to planarity requirements. The surface shall not deviate more than 1/8 inch in 10 feet from the specified grade when checked with a 10-foot straightedge. An impermeable polyurethane surface may also be flooded with water to determine if any "bird baths" or low areas exist.
- B. The owner should verify that the surface tolerances meet all specifications issued by the appropriate sanctioning or governing body such as IAAF, NCAA, NFSHSA, TAC, etc.



- C. The area to be surfaced shall be clean and free of any loose or foreign particles (dirt, oil, etc.) prior to the commencement of work. The surface is usually cleaned by use of a power blower and high-pressure washer.

#### **4.2 Thickness**

- A. Total thickness of the **BSS 2000RE Embedded Resurfacing** synthetic track system shall average 7mm.

#### **4.3 Equipment**

- A. The **BSS 2000RE Embedded Resurfacing** synthetic track system components shall be processed and installed by specially designed machinery with automatic electronic portioning, which provides continuous mixing, feeding and finishing for accurate quality controlled installation.
- B. No hand mixing is allowed.

#### **4.4 Materials**

- A. Leveling Layer

The 2mm leveling layer material shall be two-component polyurethane that is self-leveling, compounded from a proprietary pigmented polyol and MDI based, "TDI Free," isocyanate and designed to patch and bond existing track and field surfaces to the original substrate and level low areas of the existing surface. The liquid polyurethane shall contain no mercury, lead, or any other heavy metals added by design.

- B. Resurfacing Layer

The 1 to 3 millimeter EPDM granules shall be mechanically integrated with a UV stabilized elastomeric polyurethane to the full depth of the 5mm resurfacing. The resilient wear layer textured finish shall be a dense matrix of embedded EPDM granules.

#### **4.5 Site Conditions**

- A. Installation shall not take place if adjacent or concurrent construction generates excessive dust, abrasives or any other by-product that, in the opinion of the installer, would be harmful to the track material, until completion of such works.

- B. Apply Synthetic Track Surfacing in dry weather when the existing surface and atmospheric temperatures are fifty (50) degrees Fahrenheit or above, and are anticipated to remain above fifty (50) degrees Fahrenheit for twenty-four (24) hours after completing application.
- C. The maximum temperature cannot exceed 105 degrees at any point during a 24 - hour period.
- D. Rain cannot be falling. If there is a threat of rain, work shall cease until dry conditions can be re-established on the track surface. Work is to proceed only when adequate curing can be guaranteed by the manufacturer.

## **Part 5 – Line Striping and Event Markings**

### **5.1 Layout**

- A. Line striping and event markings shall be laid out in accordance with current IAAF and NCAA rules.

### **5.2 Certification**

- A. Upon completion of the installation, the owner shall be supplied with all necessary computations and drawings as well as a letter of certification attesting to the accuracy of the markings.

## **Part 6 – Guarantee**

- A. Synthetic track surfacing system shall be fully guaranteed against faulty workmanship and material failure for a period of five (5) years from the date of acceptance.
- B. Synthetic surfacing material found to be defective as a result of faulty workmanship and/or material failure shall be replaced or repaired at no charge, upon written notification within the guarantee period.

END OF SECTION

**BSS 1000ML  
13mm Embedded  
Multi-Layered Track Surfacing System Specification**

**Part 1 – General**

**1.1 Scope**

- A. The synthetic surfacing contractor shall furnish all labor, materials, equipment, supervision and services necessary for the proper completion of the **BSS 1000ML Multi-Layered** synthetic track surfacing and related work indicated on the drawings and specified herein.
- B. The synthetic surfacing contractor shall refer to the drawings for the required locations of synthetic track surfacing to be installed. All quantities and dimensions are to be field verified by the synthetic surfacing contractor prior to installation.

**1.2 Specific Scope of Work**

- A. Install an IAAF approved, full pour two-component, UV stabilized elastomeric polyurethane layered synthetic surfacing system with embedded textured finish.
- B. Layout and paint all track lines and event markings as required and specified by current IAAF and NCAA rules.

**1.3 Coordination**

- A. The synthetic surfacing contractor shall coordinate the work specified with an authorized and appointed representative of the owner so as to perform the work during a period and in a manner acceptable to the owner.

**Part 2 – Codes and Standards**

**2.1 Applicable Publications**

- A. Codes and standards follow the current guidelines set forth by the International Amateur Athletic Federation (IAAF) and the National Collegiate Athletic Association (NCAA), along with the current material testing

guidelines as published by the American Society of Testing and Materials (ASTM).

## 2.2 Performance Standards

The new synthetic track surfacing system shall exhibit the following minimum performance standards as required by IAAF:

- |                             |                                  |
|-----------------------------|----------------------------------|
| A. Average Thickness:       | 13mm or as specified by the IAAF |
| B. Force Reduction:         | 35-50%                           |
| C. Vertical Deformation:    | 0.6mm-2.5mm                      |
| D. Coefficient of Friction: | ≥ 0.5 (47 TRRL Scale)            |
| E. Tensile Strength:        | ≥ 0.5 Mpa                        |
| F. Elongation:              | ≥ 40%                            |

## Part 3 - Quality Assurance

### 3.1 Contractor and Manufacturer Qualifications

- A. The CONTRACTOR and the MANUFACTURER must be the same corporation.
- B. The CONTRACTOR must have a minimum of 10 years experience in the installation of poured-in-place, two-component elastomeric polyurethane synthetic track surfacing.
- C. The CONTRACTOR shall be able to furnish evidence that they have been in business for a period of not less than 3 years, under the present name, and if required, furnish financial statements for each of the past 3 years.
- D. The CONTRACTOR must have installed a minimum of 10 outdoor track facilities in the last 2 years using, IAAF certified, poured-in-place, two-component elastomeric polyurethane synthetic track surfacing.
- E. The MANUFACTURER must have a minimum of 10 years of experience compounding two-part polyurethane for athletic surfaces.
- F. The CONTRACTOR is required to provide documentation that shows the selected specified and installed product meets current IAAF Performance Standards for Synthetic Surfaced Athletics Tracks (Outdoor) and is certified in terms of the IAAF certification system.
- G. CONTRACTOR is to provide a list of completed facilities, minimum of 10 which are certified to meet IAAF/NCAA rules & regulations, utilizing IAAF

certified, poured-in-place, two-component elastomeric polyurethane synthetic track surfacing.

- H. The MANUFACTURER must offer a minimum of seven (7) IAAF Certified Track Systems.
- I. All polyurethane components must be MANUFACTURED in the United States in an **ISO 9001:2008 Certified** facility to ensure the highest quality materials.
- J. The CONTRACTOR must have installed a minimum of three (3) Class I IAAF Certified outdoor tracks within the United States.

### **3.2 Submittals**

The following submittals must be received prior to contract award:

- A. Standard printed specifications of the synthetic track surfacing system to be installed on this project.
- B. An affidavit attesting that the synthetic track surfacing material to be installed meets the requirements defined by the manufacturers currently published specifications and any modifications outlined within those technical specifications.
- C. A synthetic track surfacing system sample, 12" x 12" in size, of the same synthetic track surfacing system to be installed on this project.
- D. A list of completed facilities, including the installing supervisor, of IAAF certified, poured-in-place, two-component elastomeric polyurethane synthetic track surfacing.

## **Part 4 – Materials**

### **4.1 Elastomeric Polyurethane**

- A. BEYPUR, the two-component U.V. stabilized elastomeric polyurethane compounded from polyol and isocyanate components, based on one hundred percent Methylene Diphenyl Isocyanate (MDI). No Toluene Diisocyanate Isocyanate (TDI) will be allowed.
- B. The elastomeric polyurethane shall be red in color.

## **4.2 EPDM Granulate**

- A. The EPDM granulates shall be approximately 1 to 3mm in size.
- B. The EPDM granulates and the U.V. stabilized elastomeric polyurethane shall be color matched.

## **4.3 Rubber Granulate**

- A. The rubber granulate in the base and middle layers shall be specifically graded Styrene Butadiene Rubber (SBR). Final gradation is to be 1 to 3mm granulated SBR. SBR is to be dried to no less than 2.5% moisture and sealed in bags.

## **4.4 Line Marking Paint**

- A. Manufacturers recommended pigmented paint.

## **Part 5 – Installation**

### **5.1 Subbase Requirements**

- A. Asphalt Compaction
  - a. The Synthetic Track Surfacing System shall be laid on an approved subbase. The General Contractor shall provide compaction test results of 92-96% for the installed subbase and asphalt surface.
  - b. For NCAA certification the following criteria must be followed. The track surface, i.e. asphalt substrate, shall not vary from planned cross slope by more than +/- 0.2%, with a maximum lateral slope outside to inside of 1%, and a maximum slope of 0.1% in any running direction. The finished asphalt shall not vary under a 10' straight edge more than 1/8".
  - c. It should be the responsibility of the asphalt-paving contractor to flood the surface immediately after the asphalt is capable of handling traffic. If, after 20 minutes of drying time, there are birdbaths evident, it shall be the responsibility of the architect, in conjunction with the surfacing contractor, to determine the method of correction. No cold tar patching, skin patching or sand mix patching will be acceptable.

## B. Asphalt Quality

- a. No Recycled Asphalt Pavement (RAP) shall be used in the wear course asphalt mix design as the inclusion of RAP as an off-set to virgin asphalt binder results in a brittle hot-mix asphalt (HMA) with significantly lower tensile strength and fatigue resistance. The sports surfacing contractor will not be held responsible for asphalt failures resulting from the inclusion RAP in the HMA mix design of the wear course.
- b. Any oil spills (hydraulic, diesel, motor oil, etc.) must be completely removed, either by chipping out or removing and replacing with new, keyed in asphalt. The minimum depth of any asphalt replacement shall be one inch. The curing time for the asphalt base is 28 days. It shall be the responsibility of the surfacing contractor to determine if the asphalt substrate has cured sufficiently prior to the application of polyurethane surfacing system.

## C. Responsibility of Others

- a. It shall be the responsibility of the general contractor to determine if the asphalt substrate meets all design specifications, i.e. cross slopes, planarity and specific project criteria. After all the above conditions are met, the synthetic surfacing contractor must, in writing, accept the planarity of the asphalt receiving base, before work can commence.

## 5.2 Thickness

- A. Total thickness of the **BSS 1000ML** Multi-Layered synthetic track surfacing system shall average 13mm or as specified by the IAAF.

## 5.3 Equipment

- A. The **BSS 1000ML** Multi-Layered synthetic track surfacing system components shall be processed and installed by specially designed machinery with automatic electronic portioning, which provides continuous mixing, feeding and finishing for accurate quality controlled installation.

## 5.4 Materials

- A. Force Reduction Layers

- a. Base Layer: UV stabilized elastomeric polyurethane shall be flow applied using a squeegee or notched trowel.
  - b. Broadcast to excess with 1to 3 millimeter Black SBR rubber for thorough coverage. Ensure the rubber is totally dry. Once cured the excess rubber granules are removed by means of mechanical sweeper.
  - c. Mid Layer: After the base layer application has cured to tack-free, an additional layer of UV stabilized elastomeric polyurethane is flow applied.
  - d. The 1 to 3 millimeter Black SBR rubber is again broadcast to excess to provide thorough coverage. Once cured the excess rubber granules are removed by means of mechanical sweeper.
- B. Resilient Wearing Layer
- a. The 1 to 3 millimeter EPDM granules shall be broadcast to excess into UV stabilized elastomeric polyurethane to the full depth of the wearing layer. The resilient textured finish shall be a dense matrix of embedded EPDM granules.

## 5.5 Site Conditions

- A. Installation shall not take place if adjacent or concurrent construction generates excessive dust, abrasives or any other by-product that, in the opinion of the installer, would be harmful to the track material, until completion of such works.
- B. Apply Synthetic Track Surfacing in dry weather when pavement and atmospheric temperatures are fifty (50) degrees Fahrenheit or above, and are anticipated to remain above fifty (50) degrees Fahrenheit for twenty-four (24) hours after completing application.
- C. The maximum temperature cannot exceed 105 degrees at any point during a 24 - hour period.
- D. Rain cannot be falling. If there is a threat of rain, work shall cease until dry conditions can be re-established on the track pavement. Work is to proceed only when adequate curing can be guaranteed by the manufacturer.



## **Part 6 – Line Striping and Event Markings**

### **6.1 Layout**

- A. Line striping and event markings shall be laid out in accordance with current IAAF and NCAA rules.

### **6.2 Certification**

- A. Upon completion of the installation, the owner shall be supplied with all necessary computations and drawings as well as a letter of certification attesting to the accuracy of the markings.

## **Part 7 – Guarantee**

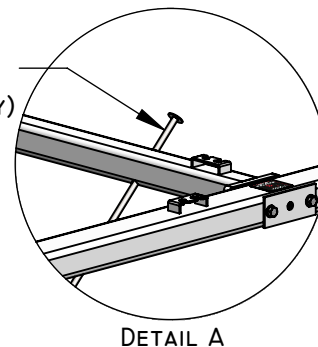
- A. Synthetic track surfacing system shall be fully guaranteed against faulty workmanship and material failure for a period of five (5) years from the date of acceptance.
- B. Synthetic surfacing material found to be defective as a result of faulty workmanship and/or material failure shall be replaced or repaired at no charge, upon written notification within the guarantee period.

END OF SECTION

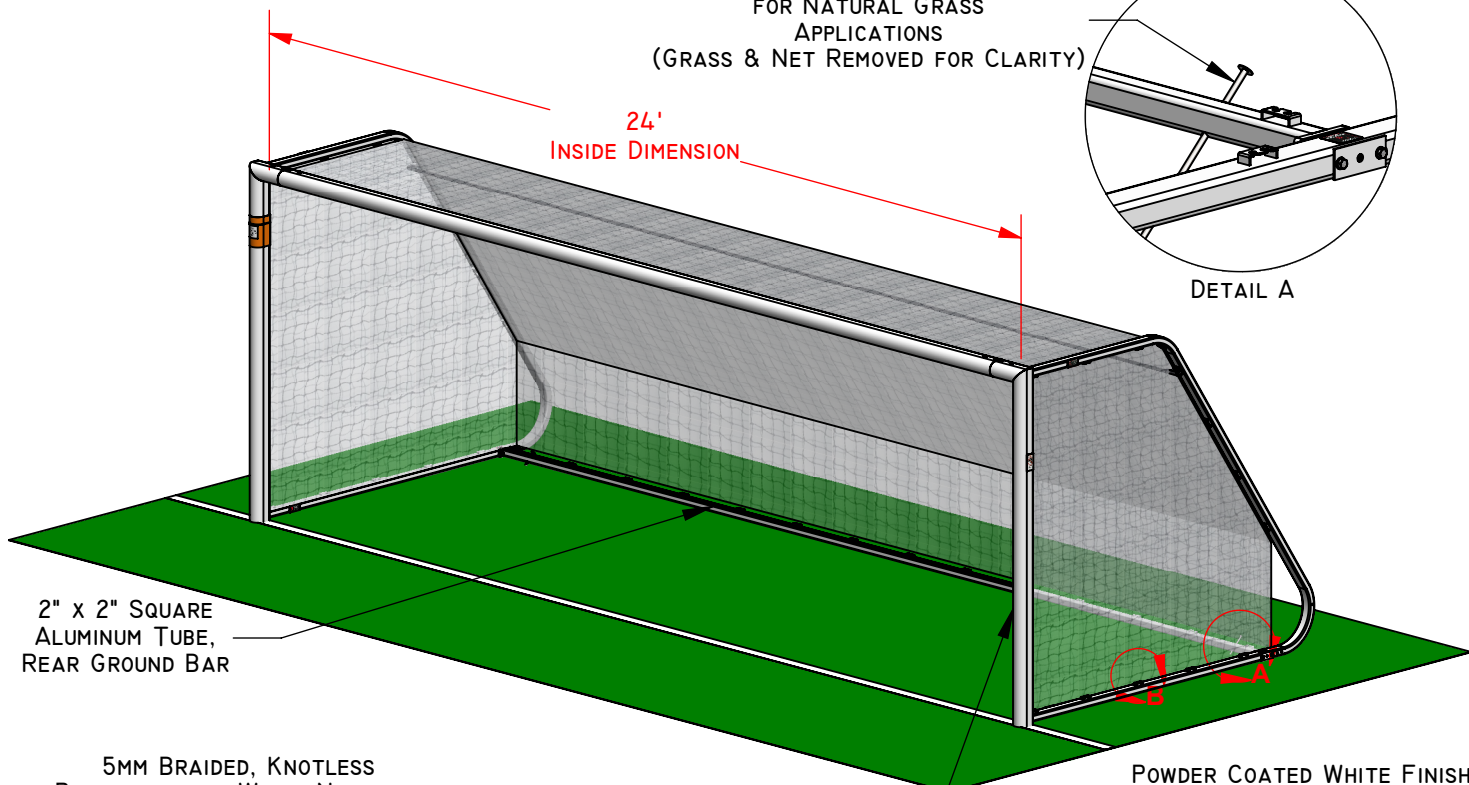
**OPTIONAL EQUIPMENT:**  
 SGMobile® INTEGRATED SOCCER GOAL WHEEL KIT - SGMKR  
 SOCCER GOAL SAFETY SYSTEM - SG2S®  
 UNITED STATES PATENT #7,331,880, ISSUED FEBRUARY 19, 2008  
 UNITED STATES PATENT #7,527,569, ISSUED MAY 5, 2009  
 UNITED STATES PATENT #8,777,784, ISSUED JULY 15, 2014

MEETS AND EXCEEDS ASTM F2950-14 STANDARD  
 SAFETY AND PERFORMANCE SPECIFICATION FOR  
 SOCCER GOALS AND ASTM F1938-98 STANDARD  
 GUIDE FOR SAFER USE OF MOVABLE SOCCER GOALS

ANCHORING PIN  
 FOR NATURAL GRASS  
 APPLICATIONS  
 (GRASS & NET REMOVED FOR CLARITY)



24'  
 INSIDE DIMENSION



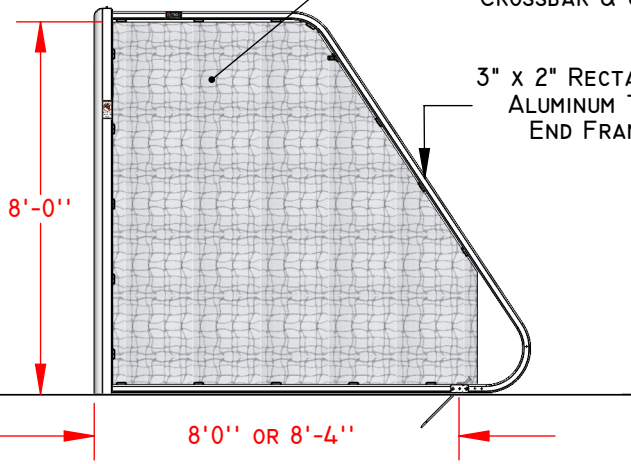
2" x 2" SQUARE ALUMINUM TUBE, REAR GROUND BAR

5MM BRAIDED, KNOTLESS POLYPROPYLENE WHITE NET WITH ROPE BOUND PERIMETER AND 4" SQUARE MESH

4" ROUND FACED ALUMINUM EXTRUSION, CROSSBAR & UPRIGHTS

POWDER COATED WHITE FINISH

3" x 2" RECTANGULAR ALUMINUM TUBE, END FRAMES

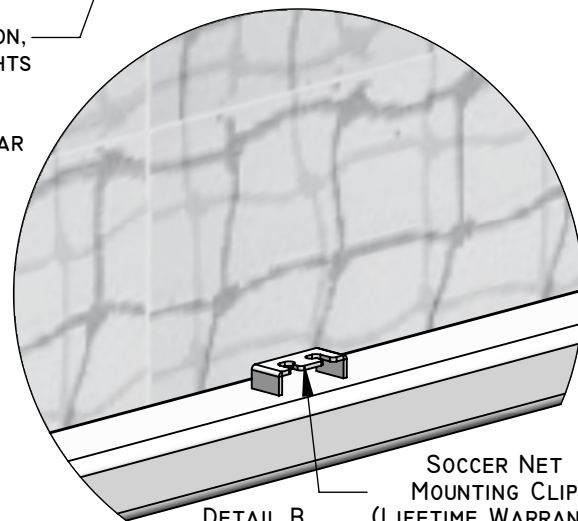


FINISH GRADE

8'-0"

8'-0" OR 8'-4"

FRONT OF POST TO REAR OF GROUND BAR



SOCCER NET MOUNTING CLIP (LIFETIME WARRANTY)

**PROPRIETARY AND CONFIDENTIAL**

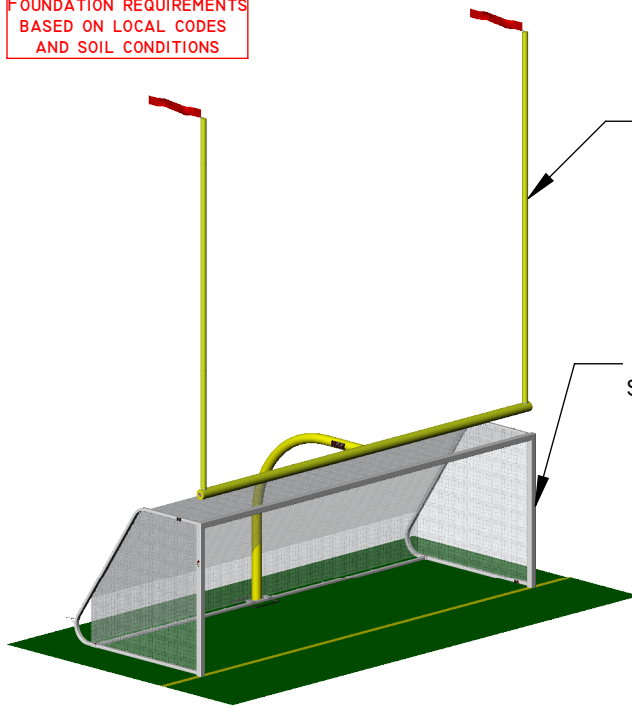
THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF SPORTSFIELD SPECIALTIES INC. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF SPORTSFIELD SPECIALTIES INC. IS PROHIBITED.

**SG824R (SG4950) 8' x 24' REGULATION SIZE  
 ROUND FACED SOCCER GOAL**

NOT TO SCALE

SPORTSFIELD SPECIALTIES INC 08202018

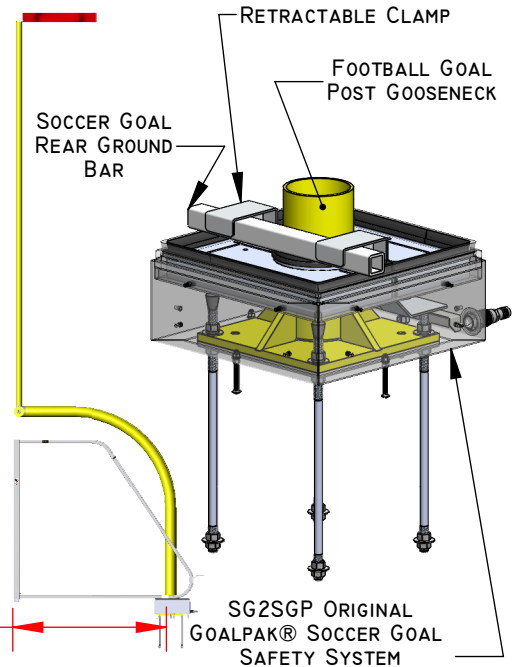
**FOUNDATION REQUIREMENTS  
BASED ON LOCAL CODES  
AND SOIL CONDITIONS**



ADJUSTRIGHT®  
FOOTBALL GOAL POST  
WITH 8' OFFSET GOOSENECK

SG824S  
SQUARE POST SOCCER GOAL  
WITH SGMKS INTEGRATED  
SGMOBILE® WHEEL KIT

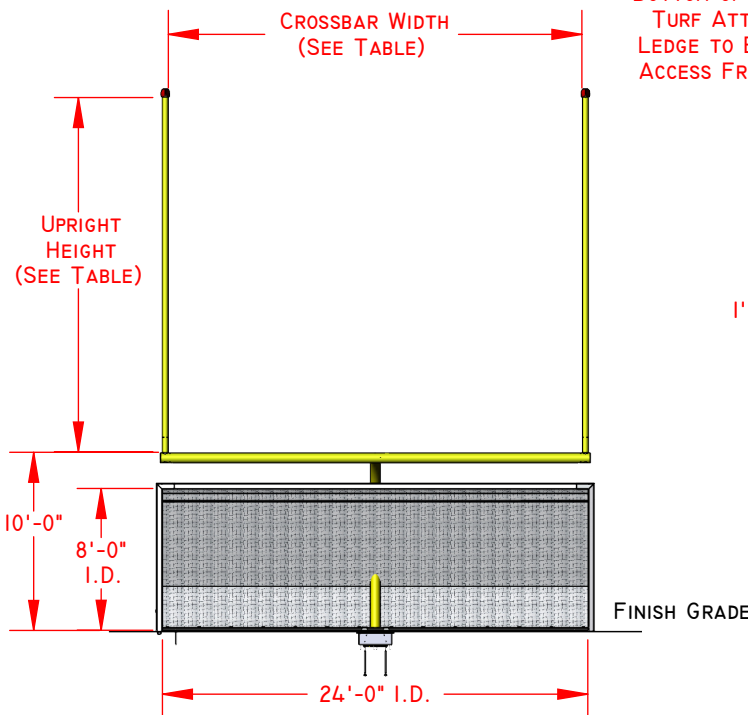
8'-0" OR 8'-4"  
FRONT OF SOCCER POST TO  
REAR OF BACK BAR  
(FRONT FACE OF GOOSENECK)



SG2SGP ORIGINAL  
GOALPAK® SOCCER GOAL  
SAFETY SYSTEM

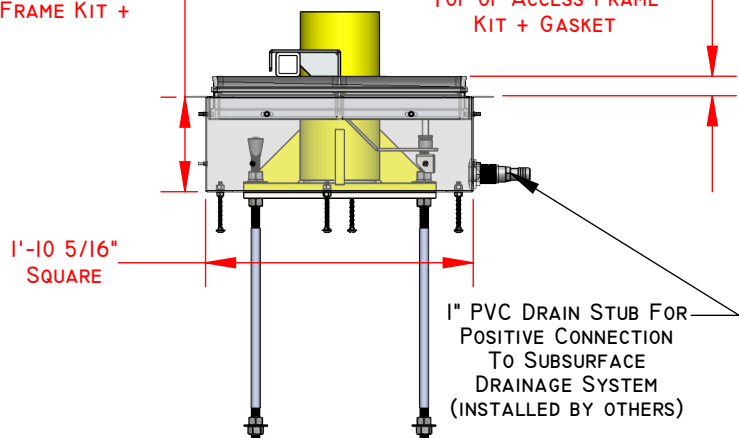
7 7/8"  
DIMENSION FROM  
BOTTOM OF SYNTHETIC  
TURF ATTACHMENT  
LEDGE TO BOTTOM OF  
ACCESS FRAME KIT +

1 5/8"  
DIMENSION FROM TOP OF  
SYNTHETIC TURF  
ATTACHMENT LEDGE TO  
TOP OF ACCESS FRAME  
KIT + GASKET



FINISH GRADE

24'-0" I.D.



1" PVC DRAIN STUB FOR  
POSITIVE CONNECTION  
TO SUBSURFACE  
DRAINAGE SYSTEM  
(INSTALLED BY OTHERS)

PART NO.	UPRIGHT HEIGHT	MODEL	CROSSBAR WIDTH (I.D.)
GPKS20ADJPL	20'-0"	ADJUSTABLE	18'-6" / 23'-4"
GPKS20COLPL	20'-0"	COLLEGE	18'-6"
GPKS20HSPL	20'-0"	HIGH SCHOOL	23'-4"
GPKS30ADJPL	30'-0"	ADJUSTABLE	18'-6" / 23'-4"
GPKS30COLPL	30'-0"	COLLEGE	18'-6"
GPKS30HSPL	30'-0"	HIGH SCHOOL	23'-4"

**PROPRIETARY AND CONFIDENTIAL**

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**ORIGINAL GOALPAK® FOOTBALL / SQUARE SOCCER GOAL SYSTEM, BASE PLATED MOUNTED**

NOT TO SCALE

SPORTSFIELD SPECIALTIES INC I2082017

## **BSS 50 (ATLAS POLY-MAT)**

### **Product Specifications**

#### **PART 1 – GENERAL**

##### **1.1 SUMMARY**

- A. Product Name: BSS 50
- B. Product Description: Pour-in-place, all-weather synthetic track surface consisting of permeable polyurethane bound rubber base mat.
- C. Scope of Work: Furnish all required labor, materials and equipment to successfully install the specified all-weather synthetic track surface including striping and markings to a base properly prepared by others.

##### **1.2 RELATED WORK**

- A. Earthwork
- B. Drainage
- C. Asphaltic Concrete Paving
- D. Cast-in-Place Concrete
- E. Synthetic Turf

##### **1.3 REFERENCE STANDARDS**

- A. The work shall conform to the standards for track construction as prescribed or approved by the appropriate governing body; NFHS, NCAA, or IAAF.
  - 1. NFSHSA *Track and Field Rules*.
  - 2. ASBA *Running Tracks Construction and Maintenance Manual*.

##### **1.4 SUBMITTALS**

- A. Product Data
- B. Operation and Maintenance Manual
- C. Warranty

##### **1.5 QUALITY ASSURANCE**

- A. Synthetic surfacing contractor (SSC) shall be licensed and bonded and possess a valid contractor's license in the state where Work is performed.
- B. SSC shall have a minimum of 5 years experience installing the specified all-weather track surface under the same corporate name as current operations.

## 1.6 PROJECT CONDITIONS

- A. SSC, General Contractor (GC) and/or Owner, shall conduct a pre-construction meeting to review project conditions prior to dispatch of the SSC's installation team.
- B. Synthetic surface base asphalt/concrete.
  - 1. The base asphalt and/or concrete shall meet the standards set by the Architect/Engineer and described in the product specifications.
  - 2. Allow minimum of 14 days cure on new asphalt, 28 days cure on new concrete prior to application of specified synthetic track surface.
  - 3. When surfacing on new asphalt, the asphalt contractor shall provide a flood test of the asphalt base.
  - 4. Repair work required on the base shall be approved by the Architect/Engineer.
  - 5. GC and/or Owner shall be responsible to protect the base from activities and traffic that may damage the base or leave dirt, oil or other foreign material on the base prior to application of the synthetic track surface.
- C. Weather
  - 1. Apply the synthetic track surface only during favorable weather conditions.
  - 2. No application of the synthetic track surface shall be conducted during rainfall, when rain is imminent, when freezing temperatures are forecasted or exist, or when gusting winds are occurring.
  - 3. Work is to progress only when the SSC can guarantee successful cure of the materials.
- D. During surface installation and striping, all irrigation systems shall be shut-off or controlled so that no water falls on the track or event areas.
- E. During set-up, installation and striping, the GC and/or Owner shall be responsible to have the entire track and other pertinent areas closed and secured of all activities 24 hours per day until completion of the project.

## 1.7 WARRANTY

- A. Manufacturer's and Installer's Warranty
  - 1. The warranty on the all-weather synthetic track surface shall endure for two (2) years from completion of installation.
  - 2. The warranty is to be provided directly by the SSC to the Owner.
  - 3. The warranty shall cover defects in materials and workmanship not deemed as ordinary wear on a running track.
- B. Warranty Bond not required.

## PART 2 – PRODUCTS

### 2.1 MANUFACTURERS

- A. Beynon Sports, 19600 SW 129th Ave. Suite A, Tualatin, OR 97092,  
Tel: 503-691-2484, Fax: 503-692-0491, [www.beynonports.com](http://www.beynonports.com)

## **2.2 MATERIALS**

- A. Rubber
  - 1. Base mat rubber shall be SBR granules with a 1.0-3.0mm gradation.
  - 2. Color shall be black
  
- B. Binder
  - 1. Base mat primer shall be polyurethane compatible with base mat materials.
  - 2. Base mat binder shall be polyurethane moisture cure, MDI based, 100% solids.
  - 3. Color shall be black.
  
- C. Marking and Line Paint
  - 1. The paint shall be formulated to be compatible with synthetic track surface materials.
  - 2. Colors shall be as prescribed or approved by the appropriate governing body; NFHS, NCAA, or IAAF.

## **PART 3 – EXECUTION**

### **3.1 EXAMINATION**

- A. SSC shall examine project conditions to ensure successful installation of the synthetic track surface. Any deficiencies shall be reported to the GC and/or Owner for corrective action.

### **3.2 PREPARATION**

- B. SSC to protect adjacent areas from contamination of synthetic track surfacing materials due to installation procedures.
  
- C. SSC shall prepare the base surface using a power blower to remove surface dirt. Cleaning necessary to remove embedded dirt, oil, or other foreign material shall be the responsibility of the GC and/or Owner.

### **3.3 INSTALLATION**

- A. Primer
  - 1. Apply base mat primer uniformly at a rate of not less than 0.3 pounds per square yard of the synthetic track surface area.
  - 2. Allow a minimum of 30 minutes cure before application of the base mat materials.
  
- B. Base Mat
  - 1. The base mat shall have a minimum weight of 18 pounds per square yard; consisting of 20 parts base mat binder and 100 parts base mat rubber, by weight.
  - 2. The materials shall be prepared in a mechanical mixer, to assure complete coverage of each rubber particle by the binding agent, and mixed until a homogenous mixture is obtained.
  - 3. Mixed materials making up the base mat shall be applied to the base surface by a mechanically operated finishing machine which shall have an electrically heated screed.
  - 4. The base mat will be applied in one layer only to a minimum depth of 12 mm.

- C. Striping
1. Striping Contractor shall verify with Owner's representative the exact locations, size, shape, and color of the lines and markings before proceeding with striping and markings.
  2. Engineer the layout of lane lines, starting lines, and markings as prescribed or approved by the Owner's representative, Architect/Engineer and the appropriate governing body; NFHS, NCAA, or IAAF.
  3. All lines and markings shall be spray applied by experienced personnel utilizing equipment manufactured for line striping. Striping lines and markings shall have true sharp edges.

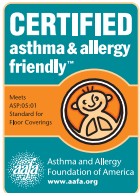
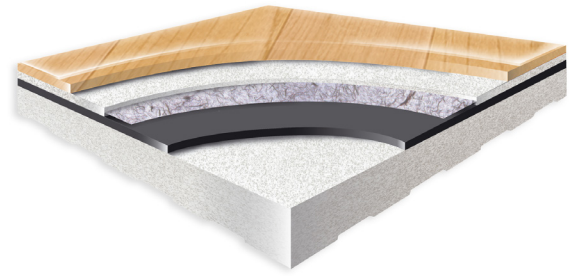
### **3.4 CLEANING**

- A. Upon completion of work remove all containers, surplus materials, and installation debris.
- B. Leave area of work in clean orderly condition ready for use by Owner.

# OMNISPORTS 6.5 mm

Omnisports 6.5 mm is a vinyl multi-use sports floor containing a non-woven fiberglass layer and PVC foam backing. Its slightly textured surface is protected with Top Clean xp®, allowing easy maintenance.

FieldTurf USA Inc



## Warranty Protection

- 10 year product coverage and 15 year wear layer coverage. Refer to sample warranty document for complete coverage details.

## Environmental Facts and LEED

- For environmental facts and LEED credits, visit: [tarkettsportsindoor.com/en/specs-and-data/environmental-fact-sheets](http://tarkettsportsindoor.com/en/specs-and-data/environmental-fact-sheets) and [tarkettsportsindoor.com/en/specs-and-data/leed-information](http://tarkettsportsindoor.com/en/specs-and-data/leed-information).

## Maintenance Instructions

- For a complete maintenance guide, visit: [tarkettsportsindoor.com/en/specs-and-data/care-and-maintenance](http://tarkettsportsindoor.com/en/specs-and-data/care-and-maintenance).

## Installation Methods

- GreenLay™: perimeter glue installation requiring only 2% of the surface area to be glued with Tarkett's solvent-free Multi-Poxy adhesive (moisture tolerance: 92% RH per ASTM F2170)
- Full Adhesive: full glue installation using Tarkett's solvent-free Multi-Poxy adhesive over the entire surface area (moisture tolerance: 92% RH per ASTM F2170)
- Tarkolay: installation over Tarkolay moisture barrier (moisture tolerance: 98% RH per ASTM F2170)

## Sports Characteristics

Property	Standard	Value
Surface Finish Effect	ASTM F2772-11	Passed
Force Reduction	ASTM F2772-11	Class 2
Vertical Deformation	ASTM F2772-11	Passed
Ball Rebound	ASTM F2772-11	Passed

## Technical Characteristics

Property	Standard	Value
Reaction to Fire	ASTM E648	Class 1 (Radiant Panel)
Below-Room Sound Insulation	ISO 717/02	+/- 19 dB
In-Room Sound Insulation	NF S31-074	61 dB
Static Load Tolerance	ASTM F970 (modified)	200 psi
Indentation Resistance	EN 1516	0.21 mm — 0.40 mm
Rolling Load	EN 1569	≤ 0.5 mm (No Degradation)
Resistance to Impact	EN 1517	No Degradation
Taber Abrasion	ASTM D3389	0.02 g (1,000 Cycles)
Stain Resistance	ASTM F925	Excellent
Roll Width	EN 426/EN 427	2 m (6.5')
Roll Length	EN 426/EN 427	26 m (85.3')
Thickness	EN 428/EN 429	6.5 mm (0.256")
Weight	EN 430	4.7 kg/m <sup>2</sup> (0.96 lbs./sq. ft.)
Wear Layer	EN 429	0.70 mm
Microbial Resistance	ASTM G21 (backing)	No growth

Compatible substrates include: properly constructed and prepared concrete, wood, asphalt, and cementitious underlayments. Refer to current installation guidelines, ASTM F710, ACI 302.2R, and other industry standard recommendations for more information. Tarkett Sports reserves the right to modify these specifications without affecting their compliance with standards. Some results may vary in relation to certain flexibilities found within specified testing procedures and manufacturing tolerances.

888.364.6541  
tarkettsportsindoor.com





## Available Colors for Omnisports 6.5 mm



The colors presented here are representations only. An actual sample is recommended for exact color evaluation and matching.  
 ◊This pattern has a 3" wide plank. Maple patterns have a width of 2 1/4".

 Quick Ship

**SECTION 09645**  
**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC**  
**SURFACING**

**PART 1 – GENERAL**

- 1.1 *SECTION INCLUDES*
- A. Supply and installation of the indoor resilient multipurpose surfacing
  - B. Application of the game lines
  - C. References for the construction and preparation of concrete slabs to receive resilient flooring.
- 1.2 *SUBMITTALS*
- A. Product Data:  
Manufacturer's promotional brochures, specifications and installation instructions
  - B. Samples:
    - 1. Submit for selection and approval three (3) sets of the indoor resilient multipurpose surfacing, manufacturer's brochures, samples or sample boards of all of the available colors, textures and styles.
    - 2. Submit color samples of all the available game line paint colors for selection and approval.
  - C. Closeout Submittals:
    - 1. Submit three (3) copies of the indoor resilient multipurpose surfacing and manufacturer's maintenance instructions.
    - 2. Submit three (3) copies of the material and installation warranties as specified.
- 1.3 *QUALITY ASSURANCE*
- A. Qualifications:
    - 1. The indoor resilient multipurpose surfacing shall have been actively marketed for a minimum of ten (10) years.
    - 2. The indoor resilient multipurpose surfacing shall be manufactured in an ISO 9001 certified plant.
    - 4. The indoor resilient multipurpose surfacing supplier shall be an established firm, experienced in the field, and appointed as a distributor by the manufacturer of the indoor resilient multipurpose surfacing.
    - 5. The installer of the indoor resilient multipurpose surfacing shall have a minimum of five (5) years of experience in the field installing indoor resilient multipurpose surfacing and have worked on at least five (5) projects of similar size, type and complexity.
  - B. Certifications:
    - 1. Installer to submit the indoor resilient athletic surfacing manufacturer's certification attesting that they are an approved installer of the indoor resilient multipurpose surfacing.
    - 2. The indoor resilient multipurpose surfacing manufacturer to submit official ISO 9001 certification for the facility in which the indoor resilient multipurpose surfacing is manufactured.

**SECTION 09645**  
**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC**  
**SURFACING**

C. Testing:  
 Tests shall be relative for multi-purpose use with certificates from independent testing resources to be made available upon request. Test results shall be no more than 5 years old and performed according to ASTM standard testing procedures.

B. Certifications:  
 3. Installer to submit the indoor resilient athletic surfacing manufacturer's or distributor's certification attesting that they are an approved installer of the indoor resilient multipurpose surfacing.

C. Testing:  
 Tests shall be relative for multi-purpose use with certificates from independent testing resources to be made available upon request. Test results shall be no more than 5 years old and performed according to ASTM F2772 standard testing procedures for force reduction, ball bounce, vertical deformation, and surface finish effect.

1.4 *DELIVERY, STORAGE AND HANDLING*

A. Delivery:  
 Material shall not be delivered until all related work is in place and finished and/or proper storage facilities and conditions can be provided and guaranteed stable according to Fieldturf's recommendations.

B. Storage:  
 Store the material in a secure, clean and dry location. Maintain temperature between 55° and 85° Fahrenheit.

1.5 *PROJECT/SITE CONDITIONS*

A. It is the responsibility of the general contractor/construction manager to maintain project/site conditions acceptable for the installation of the indoor resilient multipurpose flooring.

B. The area in which the indoor resilient multipurpose surfacing will be installed shall be dry and weather tight. Permanent heat, light and ventilation shall be installed and operable.

C. All other trades shall have completed their work prior to the installation of the resilient athletic flooring. The general contractor or Construction Manager shall maintain a secure and clean working environment before, during and after the installation. Suspension of other trades' work may be authorized providing their work will not damage the new flooring.

D. Maintain a stable room temperature of at least 65°F for a minimum of one (1) week prior to, during, and thereafter installation.

E. An effective low-permeance vapor barrier is placed directly beneath the concrete subfloor. For "on" or "below grade" installations, it is recommended to provide a permanent vapor barrier resistant to long term hydrostatic pressure/moisture exposure. Protrusions should be sealed to prevent moisture migration into the slab. Moisture should not be allowed to enter the slab after the completed construction.

**SECTION 09645**  
**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

- F. Concrete subfloor surface pH level within the 7 to 10 range dependent upon installation type.
- G. Concrete subfloor should be no greater than 1/8" within a 10 ft diameter. This tolerance can be measured in accordance with ASTM E1155. A specified ( $F_F$ ) of 50 and an ( $F_L$ ) of 30 should reach this degree of floor flatness and floor level. There is no numerical correlation between F numbers and the deviation from the straight edge, however the above specified numbers should achieve a flat floor with minimal deviation in the slab. Reference ACI 117 and ACI 302.1R. The general contractor should provide a certificate of compliance with the above recommendations.
- H. Concrete subfloor must be clean and free of all foreign materials or objects including, but not limited to, curing compounds and sealers.
- I. Fill cracks, grooves, voids, depressions, and other minor imperfections with Ardex (or equal) cement-based patching/leveling compounds. Follow the manufacturer's directions. Moveable joints must be treated utilizing specific transition joint devices depending upon the architect's recommendations. Follow current ASTM F710 guidelines for the preparation of concrete slabs to receive resilient flooring.
- J. Refer to ACI 302.2R "Guidelines for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials" for concrete design and construction.
- K. Concrete slab shall be fortified with continual steel reinforcement. Fiber reinforcement alone shall not be considered adequate fortification.

1.6 **WARRANTY**

A. Materials:

The indoor resilient athletic surfacing shall be covered by the manufacturer against product defects for 8 years. The manufacturer of the indoor resilient multipurpose surfacing must provide this warranty upon request.

B. Installation:

The installation of the indoor resilient multipurpose surfacing shall be covered against poor workmanship and faulty installation by a two (2) year written, limited warranty provided by the contractor performing/overseeing the installation.

1.7 **ADDITIONAL MATERIALS**

Furnish to the owner additional materials containing a total of at least 1% of each different color or design of the indoor resilient athletic surfacing used on the project.

1.8 **LEED™ CERTIFICATION**

The indoor resilient athletic surfacing should be able to help this facility to achieve points towards LEED™ certification.

LEED categories positively affected by the indoor resilient athletic surfacing:

Product Type			PU with Recycled Base Layer
Building Reuse Maintain Interior Nonstructural Elements	MR 1.2	Renovation	1

**SECTION 09645**  
**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC**  
**SURFACING**

Construction Waste Management	MR 2	Renovation	2
Recycled Content	MR 4	New/Renovation	2
	20% - 2 points		
Regional Materials	MR 5	New/Renovation	2
	20% - 2 points		
Materials and Resources Rapidly Renewable Materials	MR 6	New/Renovation	1
Indoor Environmental Air Quality Low VOC Adhesives/Sealants	IEQ 4.1	New/Renovation	1
Low-emitting Materials Paints and Coatings	IEQ 4.2	New/Renovation	1

**PART 2 - PRODUCTS**

2.1 *MANUFACTURERS*

The basis of the design for the indoor resilient multipurpose surfacing is Polyurf Plus Pad and Pour as provided by Fieldturf or equal. Product shall be manufactured by an ISO 9001 company.

2.2 *MATERIALS.*

A.) Flooring System:

Polyurf Plus 7+2 (9mm total thickness) consists of a recycled resilient sheet force reduction layer integrated with seamless, liquid applied, and self-leveling 2 mm polyurethane topcoat.

A durable protective color coat shall be applied to a thickness of approximately 7 mils. The finished product shall be a seamless surface heterogeneous resilient multipurpose synthetic flooring system. System shall comply with the following criteria. Colors to be selected from manufacturer's standard range.

**SECTION 09645**  
**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC**  
**SURFACING**

Properties	Standards	PolyTurf Plus Pad & Pour		
		Base Mat + Wear Coat + Top Coat		
<b>1. C Base Mat Properties</b>				
Width	0		59"	
Length	1		82 lin. ft	
Weight	0		1.2 lb/sq ft	
Density	ASTM D297		.67 min (g/cm <sup>3</sup> )	
Tensile Strength	ASTM D412		88 psi (Die Cast C)	
Elongation	ASTM D412		48.5% (Die Cast C)	
Compression	ASTM F36	@50 psi	@100 psi	@200 psi
A		87%	91%	91%
Tear Strength	ASTM D624		30 PPI Die C	
Flexibility	ASTM F147		0-1	
Compression Set B	ASTM D395		37% (25% deflection 158°F/22hrs)	
Compression Set B	ASTM D395		26% (50% deflection 158°F/22hrs)	
<b>v 2mm Wear Coat Properties</b>				
Shore Hardness	Shore A		80	
Tensile Strength	ASTM D412		1600 psi	
Elongation	ASTM D412		150%	
Tear Strength	ASTM D624		122 PLI	
<b>d Misc Technical</b>				
Fire Classification	ASTM E648		Class 1	
Environmental Certification	GreenGuard		GreenGuard Plus Certified	
<b>e Sports Characteristics</b>				
Overall Thickness			+2 (9mm)	
Shock Absorption	ASTM F2772		Class 2	
Ball Bounce I	ASTM F2772		>90%	
Vertical Deformation	ASTM F2772		Passed	
Surface Finish Effect	ASTM F2772		Passed	
Installation with Multi-Poxy			92% Per ASTM F2170	

. Tarkolay – A high quality low permeance slip sheet vapor retarder designed to separate the installed system from the substrate below. Tarkolay as manufactured by FieldTurf USA, Inc. can be used below, on, or above grade substrates that experience elevated moisture conditions. Moisture tolerances shall not exceed 98% RH per ASTM F2170.

2. Physical properties of the indoor resilient athletic surfacing shall conform to the following minimums:

Width	.....	6'6" (2 m)
Length	.....	147'7" (45 m) approx.
Total Thickness	.....	1.3 mm
Dimensional	PASSED	.01% (EN 1434)
Stability	Permeance	Excellent <0.20 (ASTM E96)

**Game Line Paint:**

As approved by the indoor resilient athletic surfacing manufacturer. Colors are to be selected from the manufacturer's standard range.

**SECTION 09645**  
**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC**  
**SURFACING**

**PART 3 - EXECUTION**

3.1 *EXAMINATION*

- A. It is the responsibility of the general contractor/construction manager to ensure that project/site conditions are acceptable for the installation of the indoor resilient athletic flooring.
- B. Verify that the area in which the indoor resilient athletic surfacing will be installed is dry and weather tight. Verify that permanent heat, light and ventilation is installed and operable.
- C. Verify that all other work that could cause damage, dirt and dust or interrupt the normal pace of the indoor resilient athletic flooring installation is completed or suspended.
- D. Verify that there is a stable room temperature of at least 65°F.
- E. Verify that there are no foreign materials or objects on the subfloor and that the subfloor is clean and ready for installation.
- F. Moisture content less than 98 % RH when tested per ASTM F2170. Follow Fieldturf Installation Recommendations.
- G. Do not average the results of the tests. Report all field test results in writing to the General Contractor, Architect, and End User prior to installation.
- H. Verify that the concrete subfloor surface pH level is within the 7 - 10 range.
- I. Document the results indicating the slab is within manufacturer's tolerances for slab deviation.

3.2 *PREPARATION OF SURFACES*

- A. Sand the entire surface of the concrete slab.
- B. Sweep the concrete slab so as to remove all dirt and dust. If a sweeping compound is to be used it must be a sweeping compound that does not contain oil or other items that may inhibit the adhesive bond.
- C. Slab must be dust free. In the event that dust impairs adhesive bond, priming the slab prior to application of adhesive may be necessary. Follow installation guidelines.

3.3 *INSTALLATION*

- A. The installation area shall be closed to all traffic and activity for a period to be set by the indoor resilient athletic surfacing installer. The indoor resilient athletic surfacing installation shall not begin until the installer is familiar with the existing conditions.
- B. All necessary precautions should be taken to minimize noise, smell, dust, the use of hazardous materials, and any other items that may inconvenience others.
- C. Install the indoor resilient athletic surfacing in strict accordance with the indoor resilient athletic surfacing manufacturer's written instructions.
- D. Paint game lines using approved game line paint primer and game line paint in strict accordance with the game line paint manufacturer's instructions.
- E. Install appropriate threshold plates or transition strips where necessary.

**SECTION 09645**  
**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC**  
**SURFACING**

F. Use only approved adhesive as recommended by the manufacturer.

3.4 *CLEANING*

A. Remove all unused materials, tools, and equipment and dispose of any debris properly. Clean the indoor resilient athletic surfacing in accordance with the manufacturer's instructions.

3.5 *PROTECTION*

If required, protect the indoor resilient athletic surfacing from damage using coverings approved by the manufacturer until acceptance of work by the customer or their authorized representative.

3.6 RELATED STANDARDS AND GUIDELINES

- A. ASTM F2170 "Standard Test Method for Determining Relative Humidity In Concrete Floor Slabs Using In-Situ Probes"
- B. ASTM F710 "Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring"
- C. ACI 302.2R-06 "Guideline for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials"

**END OF SECTION**



**SECTION 09645**  
**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC**  
**SURFACING**

**PART 1 – GENERAL**

- 1.1 *SECTION INCLUDES*
- A. Supply and installation of the indoor resilient multipurpose surfacing
  - B. Application of the game lines
  - C. References for the construction and preparation of concrete slabs to receive resilient flooring.
- 1.2 *SUBMITTALS*
- A. Product Data:  
Manufacturer's promotional brochures, specifications and installation instructions
  - B. Samples:
    - 1. Submit for selection and approval three (3) sets of the indoor resilient multipurpose surfacing, manufacturer's brochures, samples or sample boards of all of the available colors, textures and styles.
    - 2. Submit color samples of all the available game line paint colors for selection and approval.
  - C. Closeout Submittals:
    - 1. Submit three (3) copies of the indoor resilient multipurpose surfacing and manufacturer's maintenance instructions.
    - 2. Submit three (3) copies of the material and installation warranties as specified.
- 1.3 *QUALITY ASSURANCE*
- A. Qualifications:
    - 1. The indoor resilient multipurpose surfacing shall have been actively marketed for a minimum of ten (10) years.
    - 2. The indoor resilient multipurpose surfacing shall be manufactured in an ISO 9001 certified plant.
    - 4. The indoor resilient multipurpose surfacing supplier shall be an established firm, experienced in the field, and appointed as a distributor by the manufacturer of the indoor resilient multipurpose surfacing.
    - 5. The installer of the indoor resilient multipurpose surfacing shall have a minimum of five (5) years of experience in the field installing indoor resilient multipurpose surfacing and have worked on at least five (5) projects of similar size, type and complexity.
  - B. Certifications:
    - 1. Installer to submit the indoor resilient athletic surfacing manufacturer's certification attesting that they are an approved installer of the indoor resilient multipurpose surfacing.
    - 2. The indoor resilient multipurpose surfacing manufacturer to submit official ISO 9001 certification for the facility in which the indoor resilient multipurpose surfacing is manufactured.

**SECTION 09645**  
**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC**  
**SURFACING**

C. Testing:  
 Tests shall be relative for multi-purpose use with certificates from independent testing resources to be made available upon request. Test results shall be no more than 5 years old and performed according to ASTM standard testing procedures.

B. Certifications:  
 3. Installer to submit the indoor resilient athletic surfacing manufacturer's or distributor's certification attesting that they are an approved installer of the indoor resilient multipurpose surfacing.

C. Testing:  
 Tests shall be relative for multi-purpose use with certificates from independent testing resources to be made available upon request. Test results shall be no more than 5 years old and performed according to ASTM F2772 standard testing procedures for force reduction, ball bounce, vertical deformation, and surface finish effect.

1.4 *DELIVERY, STORAGE AND HANDLING*

- A. Delivery:  
 Material shall not be delivered until all related work is in place and finished and/or proper storage facilities and conditions can be provided and guaranteed stable according to Fieldturf's recommendations.
- B. Storage:  
 Store the material in a secure, clean and dry location. Maintain temperature between 55° and 85° Fahrenheit.

1.5 *PROJECT/SITE CONDITIONS*

- A. It is the responsibility of the general contractor/construction manager to maintain project/site conditions acceptable for the installation of the indoor resilient multipurpose flooring.
- B. The area in which the indoor resilient multipurpose surfacing will be installed shall be dry and weather tight. Permanent heat, light and ventilation shall be installed and operable.
- C. All other trades shall have completed their work prior to the installation of the resilient athletic flooring. The general contractor or Construction Manager shall maintain a secure and clean working environment before, during and after the installation. Suspension of other trades' work may be authorized providing their work will not damage the new flooring.
- D. Maintain a stable room temperature of at least 65°F for a minimum of one (1) week prior to, during, and thereafter installation.
- E. An effective low-permeance vapor barrier is placed directly beneath the concrete subfloor. For "on" or "below grade" installations, it is recommended to provide a permanent vapor barrier resistant to long term hydrostatic pressure/moisture exposure. Protrusions should be sealed to prevent moisture migration into the slab. Moisture should not be allowed to enter the slab after the completed construction.

**SECTION 09645**  
**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

- F. Concrete subfloor surface pH level within the 7 to 10 range dependent upon installation type.
- G. Concrete subfloor should be no greater than 1/8" within a 10 ft diameter. This tolerance can be measured in accordance with ASTM E1155. A specified ( $F_F$ ) of 50 and an ( $F_L$ ) of 30 should reach this degree of floor flatness and floor level. There is no numerical correlation between F numbers and the deviation from the straight edge, however the above specified numbers should achieve a flat floor with minimal deviation in the slab. Reference ACI 117 and ACI 302.1R. The general contractor should provide a certificate of compliance with the above recommendations.
- H. Concrete subfloor must be clean and free of all foreign materials or objects including, but not limited to, curing compounds and sealers.
- I. Fill cracks, grooves, voids, depressions, and other minor imperfections with Ardex (or equal) cement-based patching/leveling compounds. Follow the manufacturer's directions. Moveable joints must be treated utilizing specific transition joint devices depending upon the architect's recommendations. Follow current ASTM F710 guidelines for the preparation of concrete slabs to receive resilient flooring.
- J. Refer to ACI 302.2R "Guidelines for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials" for concrete design and construction.
- K. Concrete slab shall be fortified with continual steel reinforcement. Fiber reinforcement alone shall not be considered adequate fortification.

1.6 **WARRANTY**

A. Materials:

The indoor resilient athletic surfacing shall be covered by the manufacturer against product defects for 8 years. The manufacturer of the indoor resilient multipurpose surfacing must provide this warranty upon request.

B. Installation:

The installation of the indoor resilient multipurpose surfacing shall be covered against poor workmanship and faulty installation by a two (2) year written, limited warranty provided by the contractor performing/overseeing the installation.

1.7 **ADDITIONAL MATERIALS**

Furnish to the owner additional materials containing a total of at least 1% of each different color or design of the indoor resilient athletic surfacing used on the project.

1.8 **LEED™ CERTIFICATION**

The indoor resilient athletic surfacing should be able to help this facility to achieve points towards *LEED™* certification.

LEED categories positively affected by the indoor resilient athletic surfacing:

Product Type			PU with Recycled Base Layer
Building Reuse Maintain Interior Nonstructural Elements	MR 1.2	Renovation	1

**SECTION 09645**  
**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC**  
**SURFACING**

Construction Waste Management	MR 2	Renovation	2
Recycled Content	MR 4	New/Renovation	2
	20% - 2 points		
Regional Materials	MR 5	New/Renovation	2
	20% - 2 points		
Materials and Resources Rapidly Renewable Materials	MR 6	New/Renovation	1
Indoor Environmental Air Quality Low VOC Adhesives/Sealants	IEQ 4.1	New/Renovation	1
Low-emitting Materials Paints and Coatings	IEQ 4.2	New/Renovation	1

**PART 2 - PRODUCTS**

2.1 *MANUFACTURERS*

The basis of the design for the indoor resilient multipurpose surfacing is Polyurf Plus Pad and Pour as provided by Fieldturf or equal. Product shall be manufactured by an ISO 9001 company.

2.2 *MATERIALS.*

A.) Flooring System:

Polyurf Plus 7+2 (9mm total thickness) consists of a recycled resilient sheet force reduction layer integrated with seamless, liquid applied, and self-leveling 2 mm polyurethane topcoat.

A durable protective color coat shall be applied to a thickness of approximately 7 mils. The finished product shall be a seamless surface heterogeneous resilient multipurpose synthetic flooring system. System shall comply with the following criteria. Colors to be selected from manufacturer's standard range.

**SECTION 09645**  
**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC**  
**SURFACING**

Properties	Standards	PolyTurf Plus Pad & Pour		
		Base Mat + Wear Coat +Top Coat		
<b>1. C Base Mat Properties</b>				
Width	0	59"		
Length	1	82 lin. ft		
Weight	0	1.2 lb/sq ft		
Density	ASTM D297	.67 min (g/cm <sup>3</sup> )		
Tensile Strength	ASTM D412	88 psi (Die Cast C)		
Elongation	ASTM D412	48.5% (Die Cast C)		
Compression	ASTM F36	@50 psi	@100 psi	@200 psi
A		87%	91%	91%
Tear Strength	ASTM D624	30 PPI Die C		
Flexibility	ASTM F147	0-1		
Compression Set B	ASTM D395	37% (25% deflection 158°F/22hrs)		
Compression Set B	ASTM D395	26% (50% deflection 158°F/22hrs)		
<b>v 2mm Wear Coat Properties</b>				
Shore Hardness	Shore A	80		
Tensile Strength	ASTM D412	1600 psi		
Elongation	ASTM D412	150%		
Tear Strength	ASTM D624	122 PLI		
<b>d Misc Technical</b>				
Fire Classification	ASTM E648	Class 1		
Environmental Certification	GreenGuard	GreenGuard Plus Certified		
<b>e Sports Characteristics</b>				
Overall Thickness		7+2 (9mm)		
Shock Absorption	ASTM F2772	Class 2		
Ball Bounce I	ASTM F2772	>90%		
Vertical Deformation	ASTM F2772	Passed		
Surface Finish Effect	ASTM F2772	Passed		
Installation with Multi-Poxy		92% Per ASTM F2170		

**Game Line Paint:**

As approved by the indoor resilient athletic surfacing manufacturer. Colors are to be selected from the manufacturer's standard range.

### **PART 3 - EXECUTION**

#### **3.1 EXAMINATION**

- A. It is the responsibility of the general contractor/construction manager to ensure that project/site conditions are acceptable for the installation of the indoor resilient athletic flooring.
- B. Verify that the area in which the indoor resilient athletic surfacing will be installed is dry and weather tight. Verify that permanent heat, light and ventilation is installed and operable.
- C. Verify that all other work that could cause damage, dirt and dust or interrupt the normal pace of the indoor resilient athletic flooring installation is completed or suspended.
- D. Verify that there is a stable room temperature of at least 65°F.
- E. Verify that there are no foreign materials or objects on the subfloor and that the subfloor is clean and ready for installation.

**SECTION 09645**  
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**SURFACING**

- F. Moisture content less than 92 % RH when tested per ASTM F2170. Follow Fieldturf Installation Recommendations.
- G. If both tests are performed, use the highest value. Do not average the results of the tests. Report all field test results in writing to the General Contractor, Architect, and End User prior to installation.
- H. Verify that the concrete subfloor surface pH level is within the 7 - 10 range.
- I. Document the results indicating the slab is within manufacturer's tolerances for slab deviation.

3.2 *PREPARATION OF SURFACES*

- A. Sand the entire surface of the concrete slab.
- B. Sweep the concrete slab so as to remove all dirt and dust. If a sweeping compound is to be used it must be a sweeping compound that does not contain oil or other items that may inhibit the adhesive bond.
- C. Slab must be dust free. In the event that dust impairs adhesive bond, priming the slab prior to application of adhesive may be necessary. Follow installation guidelines.

3.3 *INSTALLATION*

- A. The installation area shall be closed to all traffic and activity for a period to be set by the indoor resilient athletic surfacing installer. The indoor resilient athletic surfacing installation shall not begin until the installer is familiar with the existing conditions.
- B. All necessary precautions should be taken to minimize noise, smell, dust, the use of hazardous materials, and any other items that may inconvenience others.
- C. Install the indoor resilient athletic surfacing in strict accordance with the indoor resilient athletic surfacing manufacturer's written instructions.
- D. Paint game lines using approved game line paint primer and game line paint in strict accordance with the game line paint manufacturer's instructions.
- E. Install appropriate threshold plates or transition strips where necessary.
- F. Use only approved adhesive as recommended by the manufacturer.

3.4 *CLEANING*

- A. Remove all unused materials, tools, and equipment and dispose of any debris properly. Clean the indoor resilient athletic surfacing in accordance with the manufacturer's instructions.

3.5 *PROTECTION*

If required, protect the indoor resilient athletic surfacing from damage using coverings approved by the manufacturer until acceptance of work by the customer or their authorized representative.

3.6 *RELATED STANDARDS AND GUIDELINES*

- A. ASTM F2170 "Standard Test Method for Determining Relative Humidity In Concrete Floor Slabs Using In-Situ Probes"
- B. ASTM F710 "Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring"

**SECTION 09645**  
**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC**  
**SURFACING**

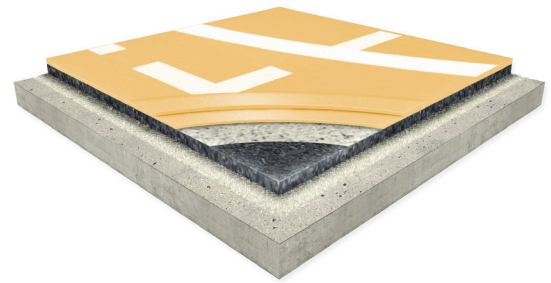
- C. ACI 302.2R-06 “Guideline for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials”

**END OF SECTION**

# POLYTURF PLUS

7+2 Pad and Pour

FieldTurf USA Inc



PolyTurf Plus Pad and Pour 7+2 is a seamless polyurethane sports surface that is designed for durability. This field-constructed system includes a 7 mm recycled rubber base mat for comfort and shock absorption.

## Warranty Protection

- 8-year comprehensive product coverage. Refer to sample warranty document for complete coverage details.

## Environmental Facts and LEED

- For environmental facts and LEED credits, visit: [tarkettsportsindoor.com/en/specs-and-data/environmental-fact-sheets](http://tarkettsportsindoor.com/en/specs-and-data/environmental-fact-sheets) and [tarkettsportsindoor.com/en/specs-and-data/leed-information](http://tarkettsportsindoor.com/en/specs-and-data/leed-information).

## Maintenance Instructions

- For maintenance instructions, please refer to the PolyTurf Plus Pad and Pour maintenance guide at the following link: [tarkettsportsindoor.com/en/specs-and-data/care-and-maintenance](http://tarkettsportsindoor.com/en/specs-and-data/care-and-maintenance).

## Installation Methods

- Multi-Poxy Adhesive:** installation using Tarkett's solvent-free Multi-Poxy adhesive, which allows moisture tolerance of up to 92% relative humidity per ASTM F2170.
- Beybond 50 Adhesive:** installation using Beybond 50 two-part polyurethane adhesive, which allows moisture tolerance of up to 83% relative humidity per ASTM F2170.
- Tarkolay with Multi-Poxy:** installation over Tarkolay moisture barrier using Tarkett's solvent-free Multi-Poxy adhesive, which allows moisture tolerance of up to 98% relative humidity per ASTM F2170.

## Sports Characteristics

Property	Standard	Value
Surface Finish Effect	ASTM F2772-11	Passed
Force Reduction	ASTM F2772-11	Class 2
Vertical Deformation	ASTM F2772-11	Passed
Ball Rebound	ASTM F2772-11	Passed

## Technical Characteristics

Property	Standard	Value
Reaction to Fire	ASTM E648	Class 1 (Radiant Panel)
Shore Hardness	—	80 (Shore A)
Tensile Strength	ASTM D412	1600 psi
Elongation	ASTM D412	150%
Tear Strength	ASTM D624	122 PLI
Thickness	—	9.0 mm (0.354")
Roll Width (Base Mat)	—	1.5 m (59")
Roll Length (Base Mat)	—	25 m (82')
Weight (Base Mat)	—	4.5 kg/m <sup>2</sup> (0.93 lbs./sq. ft.)
Density (Base Mat)	ASTM D297	0.67 min g/cm <sup>3</sup>
Tensile Strength (Base Mat)	ASTM D412	88 psi (die cast C)
Elongation (Base Mat)	ASTM D412	48.5% (die cast C)
Compression (Base Mat)	ASTM F36	87% (50 psi), 91% (100 psi), 91% (200 psi)
Flexibility (Base Mat)	ASTM F147	0-1
Compression Set B (Base Mat)	ASTM D395	37% (25% deflection, 158° F/22 hrs.)
Compression Set B (Base Mat)	ASTM D395	37% (25% deflection, 158° F/22 hrs.)

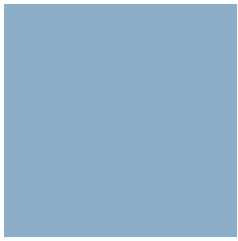
Compatible substrates include: properly constructed and prepared concrete, wood, asphalt, and cementitious underlaments. Refer to current installation guidelines, ASTM F710, ACI 302.2R, and other industry standard recommendations for more information. Tarkett Sports reserves the right to modify these specifications without affecting their compliance with standards. Some results may vary in relation to certain flexibilities found within specified testing procedures and manufacturing tolerances.

888.364.6541  
tarkettsportsindoor.com





**Available Colors for PolyTurf Plus Pad and Pour 7+2**



Sky Blue



Pool Blue



Blue Jay



Deep Blue



Coastal Blue



Teal Blue



Midnight Blue



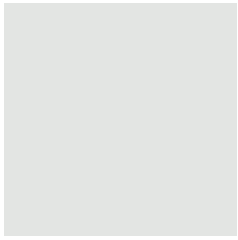
Aqua



Red



Red Rub



Grey Cloud



Grey Smoke



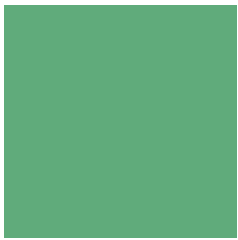
Storm Grey



Black



Orange



Tropical Green



Garden Green



Forest Green



Violet



Purple



Sand



Tan



Smoothie



Desert

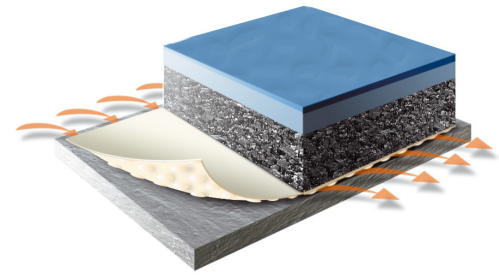


Gold

The colors presented here are representations only.  
 For information on obtaining individual color swatches, contact a local Tarkett Sports representative or call 888-364-6541.

## TARKOLAY Moisture Barrier

Tarkolay is a resilient slip sheet membrane designed to act as a moisture barrier for flooring installations. It does so by separating the vapor pressure of the concrete from the flooring above.



### Installation Options

- PolyTurf Plus Pad and Pour Flooring: Tarkolay can be installed as an underlayment for PolyTurf Plus Pad and Pour systems using Tarkett Sports' Multi-Poxy adhesive.
- Omnisports Multi-Use Sports Flooring: Tarkolay can be installed as an underlayment for Omnisports flooring using Tarkett Sports' Multi-Poxy adhesive.
- Dropzone and Dropzone Speckle Weight Room Flooring: Tarkolay can be installed as an underlayment for Dropzone and Dropzone Speckle flooring using Tarkett Sports' Multi-Poxy adhesive.

### Installation Method

- Tarkolay is installed in a direction parallel to the sheet flooring surface and offset.

### Heating System Compatibility

- Tarkolay is compatible with in-slab heating systems (conditions required).

### Performance Characteristics

Property	Standard	Value
Moisture Tolerance	ASTM F2170	96% RH

### Technical Characteristics

Property	Standard	Value
Material Type	—	Resilient Sheet Vinyl
Color	—	White
Surface Texture	—	Smooth
Backing Texture	—	Dimpled
Roll Width	EN 426/EN 427	2 m (6.5')
Roll Length	EN 426/EN 427	45 m (147' 7")
Thickness	EN 428/EN 429	1.3 mm (0.05")
Weight	EN 430	1.16 kg/m <sup>2</sup> (0.26 lbs./sq. ft.)
Permeance	ASTM E96	< 0.20 Perm
Dimensional Stability	EN 434	0.01%

Compatible substrates include: properly constructed and prepared concrete, wood, asphalt, and cementitious underlayments. Refer to current installation guidelines, ASTM F710, ACI 302.2R, and other industry standard recommendations for more information. Tarkett Sports reserves the right to modify these specifications without affecting their compliance with standards. Some results may vary in relation to certain flexibilities found within specified testing procedures and manufacturing tolerances.

# Tarkett Sports

## EIGHT- YEAR LIMITED MANUFACTURER'S WARRANTY

**ARRANTOR:** FieldTurf USA, Inc.  
175 N Industrial Blvd N.E.  
Calhoun, Georgia  
30701

**OWNER:** ( Insert Owner's Name and Address )

**PRODUCT:** PolyTurf Plus Pad Pour

**ARRANT :** FieldTurf warrants to Owner, subject to the terms and conditions contained in this Warranty, that the above-described Surface is free from defects in materials and workmanship under normal use and service, so long as the Surface was installed in accordance with the drawings, plans and specifications for the Surface.

**ARRANT PERIOD:** This Warranty shall be in force for a period of 96 months from the Effective Date as defined below.

**RESPONSE FOR WARRANT REPAIRS:** FieldTurf agrees to perform all repairs required by this Warranty within a reasonable time upon receiving proper written notice from Owner as provided below and after FieldTurf carries out all inspections and tests, which it may deem necessary or advisable. Any required repair work shall be initiated by FieldTurf within a reasonable time from FieldTurf's receipt of Owner's written notice requesting such repairs.

**LIMITATIONS AND EXCLUSIONS:** This Warranty does not apply to any defect, failure, damage, or undue wear in or to the Surface caused by or connected with: (a) the installation process of the Surface on the Owner's base; (b) improper or insufficient design or engineering, or improper or insufficient project drawings, plans or specifications; (c) an inadequate or defective pre-existing base or surface; (d) the inherent characteristics of the earth or surface upon which the Surface is installed; (e) misuse, abuse, or deliberate acts of vandalism; (f) accident, negligence, or acts of God; (g) static or dynamic loads exceeding FieldTurf's recommendations; (h) use of improper cleaning methods; or (i) Owner's failure to care for and maintain the Surface in accordance with FieldTurf's written instructions. FieldTurf does not warrant or guarantee the accuracy or sufficiency of any drawings, plans, or specifications not prepared by FieldTurf and which are used in connection with installing the Surface. This Warranty shall be of no force and effect if FieldTurf is not paid in full for the Surface and FieldTurf's obligations under this Warranty are expressly contingent upon FieldTurf being paid in full for the Surface.

This Warranty shall not apply to the Surface, or any part thereof, which has been repaired or altered without FieldTurf's prior written consent. No allowance or credit will be granted for any repairs or alterations to the Surface made by Owner except as authorized by this Warranty.

**THIS WARRANTY IS EXPRESSED IN LIEU OF ALL OTHER WARRANTIES EXPRESSED OR IMPLIED OR ARISING OUT OF THE OPERATION OF LAW INCLUDING ( BUT NOT LIMITED TO) AN IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE AND OF ALL OTHER OBLIGATIONS OR LIABILITIES ON FIELDTURF'S PART. FIELDTURF SHALL NOT BE LIABLE FOR ANY DAMAGES UNDER TORT CONTRACT OR STRICT LIABILITY AND OR INCIDENTAL CONSEQUENTIAL SPECIAL OR INDIRECT DAMAGES UNDER THIS WARRANTY .**

# Tarkett Sports

**FIELDTURF'S SOLE OBLIGATION UNDER THIS WARRANTY IS TO REPAIR OR REPLACE AT ITS SOLE DISCRETION ALL OR AN PORTION OF THE SURFACE WHICH MAY BE DETERMINED TO BE DEFECTIVE. FIELDTURF'S LIABILITY FOR ANY SUCH REPAIR OR REPLACEMENT SHALL IN NO EVENT EXCEED THE AMOUNT OF THE PURCHASE PRICE ATTRIBUTABLE TO THE DEFECTIVE PORTION OF THE SURFACE WHICH IS REPAIRED OR REPLACED.**

**MAINTENANCE INSTRUCTIONS:** FieldTurf has supplied Owner with a copy (attached) of the Maintenance Manual containing written instructions for the care and maintenance of the Surface. Owner acknowledges receipt of said Maintenance Manual and agrees to comply with and carry out the instructions contained in it as a condition of this Warranty. The terms of the Maintenance Manual are incorporated in this Warranty by reference.

**CLAIMS:** All claims by Owner under this Warranty must be made in writing to the following address within thirty calendar days after Owner learns of any defect giving rise to the claim: FieldTurf USA, Inc., Indoor Division, 175 N Industrial Blvd N.E., Calhoun, Georgia 30269.

**INSPECTIONS AND TESTS:** FieldTurf shall be allowed to inspect the Surface during reasonable business hours regarding any claim, which Owner makes under this Warranty; to be present at and to analyze the results of all tests conducted by Owner or others; and to conduct such tests as FieldTurf in its discretion may deem advisable. Owner shall promptly furnish FieldTurf with a copy of all written reports of any tests performed by Owner or on Owner's behalf. FieldTurf shall not be responsible for any costs or expenses incurred by Owner or others with respect to such tests, except that FieldTurf shall pay for the costs of all tests and analyses conducted or directed by FieldTurf representatives.

**EFFECTIVE DATE:** The Effective Date of this Warranty is the \_\_\_\_ day of \_\_\_\_\_, 2014.

**FieldTurf USA Inc.**

By: \_\_\_\_\_

Signature: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

Enclosed: Instructions for Care and Maintenance of your Product

# Tarkett Sports

## MANUFACTURER'S LIMITED WARRANTY

**WARRANTOR:** FieldTurf, USA Inc.  
175 N Industrial Boulevard NE  
Calhoun, Georgia 30701  
USA

**OWNER:** (“Insert Owner’s Name and Address”)

**SURFACE:** OMNISPORTS  
 (“Surface”)

### WARRANTY DESCRIPTION AND WARRANTY PERIODS:

**LIMITED PRODUCT DEFECT WARRANTY:** FieldTurf USA, Inc. (“FieldTurf”) warrants to Owner, subject to the terms and conditions contained in this Warranty, that the above-described Surface is free from defects in materials and workmanship under normal use and service, as long as the Surface was installed in accordance with the drawings, plans and specifications for the Surface. The Limited Product Defect Warranty shall be in force for a period of ten (10) years from the Effective Date as defined below.

**LIMITED WEAR WARRANTY:** FieldTurf warrants to Owner, subject to the terms and conditions contained in this Warranty, that there will be no wear-through of the Surface’s wear layer under normal use and service, as long as the Surface was installed in accordance with the drawings, plans and specifications for the Surface. For purposes of the Limited Wear Warranty, “wear-through” refers to the top layer of the Surface and means a complete loss of the wear-layer so that the printed layer (pattern or color) is materially changed or affected. The Limited Wear Warranty only shall be in force for a period of fifteen (15) years from the Effective Date.

**RESPONSE FOR WARRANTY REPAIRS:** FieldTurf agrees to perform all repairs required by this Warranty within a reasonable time upon receiving proper written notice from Owner as provided below and after FieldTurf carries out all inspections and tests, which it may deem necessary or advisable. Any required repair work shall be initiated by FieldTurf within a reasonable time after FieldTurf’s receipt of Owner’s written notice requesting such repairs. FieldTurf’s sole liability under this Warranty shall be limited to either repair or replacement of the affected area of the Surface, at its sole discretion, and FieldTurf shall have no other obligations or liabilities with respect to defects of the Surface.

**LIMITATIONS AND EXCLUSIONS:** This Warranty does not apply to any defect, failure, damage, and/or accelerated, undue or excessive wear in or to the Surface caused by or connected with: (a) the installation process of the Surface on the Owner’s base; (b) improper or insufficient design or engineering, or improper or insufficient project drawings, plans or specifications; (c) an inadequate or defective pre-existing base or surface; (d) the inherent characteristics of the earth or surface upon which the Surface is installed; (e) misuse, abuse, or deliberate acts of vandalism; (f) accident, negligence, or acts of God; (g) static or dynamic loads exceeding FieldTurf’s recommendations; (h) use of improper cleaning methods; (i) the introduction or accumulation of moisture around or under the Surface; (j) Owner’s failure to care for and maintain the Surface in accordance with FieldTurf’s Maintenance Manual and other written instructions; or (k) use which is not generally accepted as a typical use of the Surface. FieldTurf does not warrant or guarantee the accuracy or sufficiency of any drawings, plans, or specifications not prepared by FieldTurf and which are used in connection with installing the Surface. This Warranty shall be of no force and effect if FieldTurf is not paid in full for the Surface and FieldTurf’s obligations under this Warranty are expressly contingent upon FieldTurf being paid in full for the Surface.

For more information please contact the Indoor division of FieldTurf at (888) 364-6541.

# Tarkett Sports

This Warranty shall not apply to the Surface, or any part thereof, which has been repaired or altered without FieldTurf's prior written consent. No allowance or credit will be granted for any repairs or alterations to the Surface made by Owner except as authorized by this Warranty.

**THIS WARRANTY IS EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED, IMPLIED OR ARISING BY OPERATION OF LAW, INCLUDING (BUT NOT LIMITED TO) ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE AND OF ALL OTHER OBLIGATIONS OR LIABILITIES ON FIELDTURF'S PART. FIELDTURF USA, INC. SHALL NOT BE LIABLE FOR ANY DAMAGES UNDER TORT, CONTRACT OR STRICT LIABILITY AND/ OR INCIDENTAL, CONSEQUENTIAL, SPECIAL OR INDIRECT DAMAGES UNDER THIS WARRANTY.**

**FIELDTURF'S SOLE OBLIGATION UNDER THIS WARRANTY IS TO REPAIR OR REPLACE AT ITS SOLE DISCRETION ALL OR ANY PORTION OF THE SURFACE WHICH MAY BE DETERMINED TO BE DEFECTIVE. FIELDTURF'S LIABILITY FOR ANY SUCH REPAIR OR REPLACEMENT SHALL IN NO EVENT EXCEED THE AMOUNT OF THE PURCHASE PRICE ATTRIBUTABLE TO THE DEFECTIVE PORTION OF THE SURFACE WHICH IS REPAIRED OR REPLACED.**

**MAINTENANCE INSTRUCTIONS:** FieldTurf has made available or supplied Owner with a copy of the Maintenance Manual containing written instructions for the care and maintenance of the Surface. Owner acknowledges receipt of said Maintenance Manual and agrees to comply with and carry out the instructions contained in it as a condition of this Warranty. The terms of the Maintenance Manual are incorporated in this Warranty by reference. If a Maintenance Manual is not received by Owner at the time of issuance of this warranty, it is the owner's obligation to request and maintain record of receipt.

**CLAIMS:** All claims by Owner under this Warranty must be made in writing to the following address within thirty calendar days after Owner learns of any defect giving rise to the claim: FieldTurf USA, Inc. Indoor Division, 175 N Industrial Blvd. Calhoun, Georgia, 30701.

**INSPECTIONS AND TESTS:** FieldTurf shall be allowed to inspect the Surface during reasonable business hours regarding any claim, which Owner makes under this Warranty; to be present at and to analyze the results of all tests conducted by Owner or others; and to conduct such tests as FieldTurf in its discretion may deem advisable. Owner shall promptly furnish FieldTurf with a copy of all written reports of any tests performed by Owner or on Owner's behalf. FieldTurf shall not be responsible for any costs or expenses incurred by Owner or others with respect to such tests, except that FieldTurf shall pay for the costs of all tests and analyses conducted or directed by FieldTurf representatives.

**GOVERNING LAW AND CONSENT:** This Warranty shall be governed by and interpreted in accordance with the law of the State of Georgia.

**EFFECTIVE DATE:** The Effective Date of this Warranty is the \_\_\_\_\_ day of \_\_\_\_\_, 2014.

**OWNER'S NAME**

**FieldTurf USA, Inc.**

By: \_\_\_\_\_

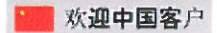
By: \_\_\_\_\_

Title: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

Date: \_\_\_\_\_



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Tennis    Track    Basketball & Other Sports    Colorscales    Technical Documents    Installers    The Company

Plexipave Products

Plexicushion Products

Component Products

Selecting a Surface

Tennis Court Colorizer

Court Maintenance

Court Resurfacing

Reference Sites

Tennis Specs / MSDS

## Plexicushion Tennis Court Surface Products



### [Open Plexipave Color Card](#)

*"As the USC men's tennis coach for the past 23 years, I was always looking for a slow, long-lasting court surface. Plexipave was the answer! They also have brilliant colors that stay sharp."*

Dick Leach Retired Men's Tennis Coach  
University of Southern California

*"I think it's great for the body. I think it's good for anyone's body. It's a lot easier on the joints, which is always good, especially when you're 6-2."*

Maria Sharapova  
Professional Tennis Player From the  
New York Times, article "Australian  
Open Evens the Playing Surfaces"  
published Jan 13, 2008

**A Grand Slam Surface** - The Official Surface Supplier of the Australian Open

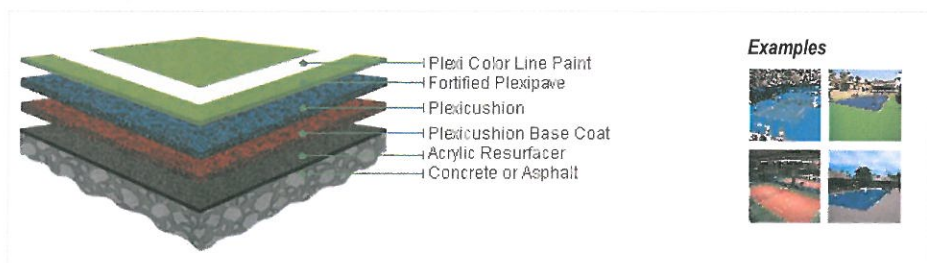
The Plexicushion System combines the consistent bounce, sure footing, and outstanding durability of Plexipave with the innovative shock-absorbing properties of EPDM Rubber cushioning. The result is a sure-footed surface that dynamically responds to body impact and reduces fatigue on player's legs ankles and feet. The multi-layered resiliency lengthens the orthopedic life of players of all ages, from juniors who are just starting to play competitively, to seniors who are enjoying the game in their golden years.

- Increases Health and Longevity for Players of All Ages
- Adjustable Level of Cushioning
- Leading UV Formulation Protects Pigmentation Against Color Fading
- Can be Customized to All ITF Pace Ratings

The Plexicushion substrate, a special blend of latex, rubber and plastic particles, forms a resilient layer that absorbs body shock and reduces muscle fatigue. The 100% acrylic Plexipave Surface provides consistent and uniform bounce, long lasting color, and allows speed of play specification.

Plexipave [Sport Surfacing Systems](#) use recycled and post-industrial components in each of the formulations. This manufacturing choice minimizes the exploitation of petroleum and wood resources. The Plexicushion Prestige System (liquid) contains 16.5% of post-industrial or recycled products.

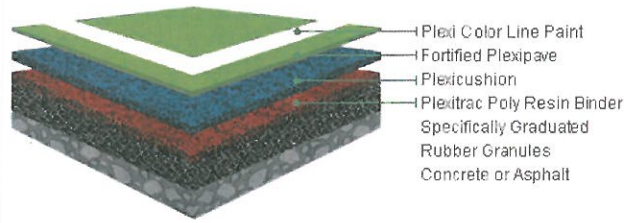
### Plexicushion - Prestige - [\[ Back to top \]](#)



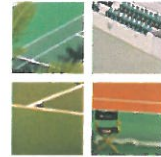
#### Prestige - PLEXICUSHION PRESTIGE - SURFACE OF THE AUSTRALIAN OPEN

- Our Grand Slam Tennis surface! - Plexipave is the Official Surface Supplier for this prestigious event.
- The original and still undisputed champion of cushioned tennis surfacing systems.
- The sub-surfacing system is comprised of SBR and EPDM rubber granules, compressed plastic particles and special mineral fibers bound by special water based polymers.

**Plexicushion - Competition** [ [Back to top](#) ] Competition

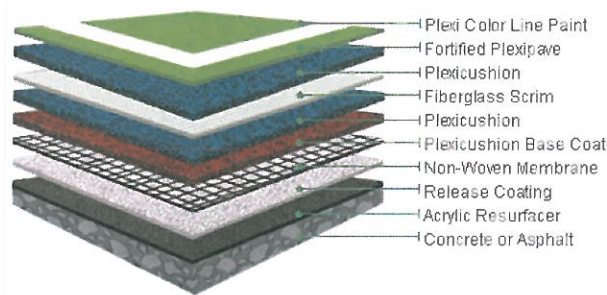


**Examples**

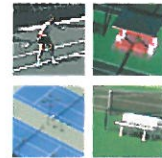


- New cushioned surface system combines the force reduction of the successful Plexitrac® System with the consistency of Plexicushion.
- Thicker layer of cushioning contains specifically-graded rubber granules with our proven polyresin binder technology.
- The ideal seamless surface for indoor and warm-weather climates.

**Plexicushion - 2000** [ [Back to top](#) ]



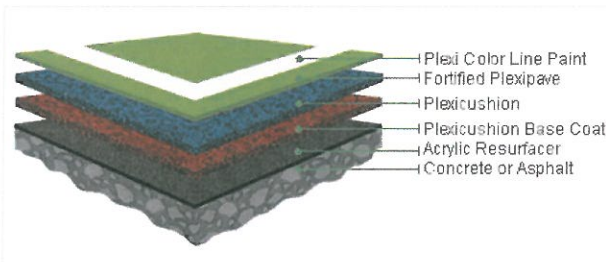
**Examples**



**2000**

- The first cushioned acrylic tennis court system specifically designed for application to slightly cracked or deteriorated concrete or asphalt bases.
- The unique slip-sheet "release coating" allows for a perfect and stable finished surface that is unaffected by base shifting.

**Plexicushion - Tournament** [ [Back to top](#) ]



**Examples**



**Tournament**

Identical design to the industry-leading Prestige system, affordably constructed by removing one layer of Base Coat.







## **BSS POLY-4000**

### **Product Specifications**

#### **PART 1 – GENERAL**

##### **1.1 SUMMARY**

- A. Product Name: BSS Poly-4000.
- B. Product Description: Pour-in-place, all-weather synthetic track surface consisting of polymer resin binders and rubber granules and multiple sprays of polymer resin coating.
- C. Scope of Work: Furnish all required labor, materials and equipment to successfully install the specified all-weather synthetic track surface including striping and markings to a base properly prepared by others.

##### **1.2 RELATED WORK**

- A. Earthwork
- B. Drainage
- C. Asphaltic Concrete Paving
- D. Cast-in-Place Concrete
- E. Synthetic Turf

##### **1.3 REFERENCE STANDARDS**

- A. The work shall conform to the standards for track construction as prescribed or approved by the appropriate governing body; NFHS, NCAA, or IAAF.
  - 1. NFSHSA *Track and Field Rules*.
  - 2. ASBA *Running Tracks Construction and Maintenance Manual*.

##### **1.4 SUBMITTALS**

- A. Product Data
- B. Striping Diagram
- C. Operation and Maintenance Manual
- D. Warranty

##### **1.5 QUALITY ASSURANCE**

- A. Synthetic surfacing contractor (SSC) shall be licensed and bonded and possess a valid contractor's license in the state where Work is performed.
- B. SSC shall have a minimum of 5 years experience installing the specified all-weather track surface under the same corporate name as current operations.

## 1.6 PROJECT CONDITIONS

- A. SSC, General Contractor (GC) and/or Owner, shall conduct a pre-construction meeting to review project conditions prior to dispatch of the SSC's installation team.
- B. Synthetic surface base asphalt/concrete.
  - 1. The base asphalt and/or concrete shall meet the standards set by the Architect/Engineer and described in the product specifications.
  - 2. Allow minimum of 14 days cure on new asphalt, 28 days cure on new concrete prior to application of specified synthetic track surface.
  - 3. When surfacing on new asphalt, the asphalt contractor shall provide a flood test of the asphalt base.
  - 4. Repair work required on the base shall be approved by the Architect/Engineer.
  - 5. GC and/or Owner shall be responsible to protect the base from activities and traffic that may damage the base or leave dirt, oil or other foreign material on the base prior to application of the synthetic track surface.
- C. Weather
  - 1. Apply the synthetic track surface only during favorable weather conditions.
  - 2. No application of the synthetic track surface shall be conducted during rainfall, when rain is imminent, when freezing temperatures are forecasted or exist, or when gusting winds are occurring.
  - 3. Work is to progress only when the SSC can guarantee successful cure of the materials.
- D. During surface installation and striping, all irrigation systems shall be shut-off or controlled so that no water falls on the track or event areas.
- E. During set-up, installation and striping, the GC and/or Owner shall be responsible to have the entire track and other pertinent areas closed and secured of all activities 24 hours per day until completion of the project.

## 1.7 WARRANTY

- A. Manufacturer's and Installer's Warranty
  - 1. The warranty on the all-weather synthetic track surface shall endure for one (1) year from completion of installation.
  - 2. The warranty is to be provided directly by the SSC to the Owner.
  - 3. The warranty shall cover defects in materials and workmanship not deemed as ordinary wear on a running track.
- B. Warranty Bond not required.

## PART 2 – PRODUCTS

### 2.1 MANUFACTURERS

- A. Beynon Sports, Inc., 19600 SW 129th Ave., Tualatin, OR 97092,  
Tel: 503-691-2484, Fax: 503-692-0491, [www.beynonSports.com](http://www.beynonSports.com)

## **2.2 MATERIALS**

- A. Rubber
  - 1. Poly-4000 base rubber shall be SBR granules with a 1.0-4.0mm gradation.
  - 2. SBR color shall be black.
  - 3. Poly-4000 wearing course rubber shall be EPDM with a 1.0-3.0mm gradation.
  - 4. EPDM color shall be red.
- B. Binder
  - 1. Poly-4000 primer shall be a polymer resin compatible with base course materials.
  - 2. Poly-4000 binder shall be polymer resin containing a minimum of 50% solids.
  - 3. Poly-4000 coating shall be polymer resin highly pigmented. Color shall be red.
- C. Marking and Line Paint
  - 1. The paint shall be formulated to be compatible with synthetic track surface materials.
  - 2. Colors shall be as prescribed or approved by the appropriate governing body; NFHS, NCAA, or IAAF.

## **PART 3 – EXECUTION**

### **3.1 EXAMINATION**

- A. SSC shall examine project conditions to ensure successful installation of the synthetic track surface. Any deficiencies shall be reported to the GC and/or Owner for corrective action.

### **3.2 PREPARATION**

- B. SSC to protect adjacent areas from contamination of synthetic track surfacing materials due to installation procedures.
- C. SSC shall prepare the base surface using a power blower to remove surface dirt. Cleaning necessary to remove embedded dirt, oil, or other foreign material shall be the responsibility of the GC and/or Owner.

### **3.3 INSTALLATION**

- A. General
  - 1. The Poly-4000 shall be installed using the “rake and spray” method. “Batching” of rubber and binder, “wet spraying” binder and rubber, or other methods used to reduce the number of layers applied are not allowed.
  - 2. Poly-4000 shall be installed in a minimum of nine layers.
  - 3. Materials shall be applied in even layers with equipment specifically designed for the installation of resilient surfacing. Thorough curing between each layer is required before successive coats are applied.
  - 4. Poly-4000 shall consist of a minimum quantity of 8.0 pounds per square yard of SBR granules, a minimum of 4.4 pounds per square yard of EPDM rubber granules, not less than 4.5 pounds per square yard of polymer resin primer/binder and a minimum of 1.0 pounds per square yard of polymer resin coating.
  - 5. Completed Poly-4000 shall have a minimum depth of 13mm.



- B. Striping
  - 1. Striping Contractor shall verify with Owner's representative the exact locations, size, shape, and color of the lines and markings before proceeding with striping and markings.
  - 2. Engineer the layout of lane lines, starting lines, and markings as prescribed or approved by the Owner's representative, Architect/Engineer and the appropriate governing body; NFHS, NCAA, or IAAF.
  - 3. All lines and markings shall be spray applied by experienced personnel utilizing equipment manufactured for line striping. Striping lines and markings shall have true sharp edges.

### **3.4 CLEANING**

- A. Upon completion of work remove all containers, surplus materials, and installation debris.
- B. Leave area of work in clean orderly condition ready for use by Owner.

Product Specifications\Poly-4000 13mm.doc



## **BSS POLY-4000 TOP-COAT**

### **Product Specifications**

#### **PART 1 – GENERAL**

##### **1.1 SUMMARY**

- A. Product Name: BSS Poly-4000 Top-Coat.
- B. Product Description: Pour-in-place, all-weather synthetic track re-surface consisting of polymer resin binders and rubber granules.
- C. Scope of Work: Furnish all required labor, materials and equipment to successfully install the specified all-weather synthetic track surface including striping and markings.

##### **1.2 RELATED WORK**

- A. Earthwork
- B. Drainage
- C. Asphaltic Concrete Paving
- D. Cast-in-Place Concrete
- E. Synthetic Turf

##### **1.3 REFERENCE STANDARDS**

- A. The work shall conform to the standards for track construction as prescribed or approved by the appropriate governing body; NFHS, NCAA, or IAAF.
  - 1. NFSHSA *Track and Field Rules*.
  - 2. ASBA *Running Tracks Construction and Maintenance Manual*.

##### **1.4 SUBMITTALS**

- A. Product Data
- B. Striping Diagram
- C. Operation and Maintenance Manual
- D. Warranty

##### **1.5 QUALITY ASSURANCE**

- A. Synthetic surfacing contractor (SSC) shall be licensed and bonded and possess a valid contractor's license in the state where Work is performed.
- B. SSC shall have a minimum of 5 years experience installing the specified all-weather track surface under the same corporate name as current operations.



## 1.6 PROJECT CONDITIONS

- A. SSC, General Contractor (GC) and/or Owner, shall conduct a pre-construction meeting to review project conditions prior to dispatch of the SSC's installation team.
- B. Synthetic surface base.
  - 1. The base surface shall meet the standards set by the Architect/Engineer and described in the product specifications.
  - 2. Allow minimum of 14 days cure on new asphalt, 28 days cure on new concrete prior to application of specified synthetic track surface.
  - 3. Repair work required on the base shall be approved by the Architect/Engineer.
  - 4. GC and/or Owner shall be responsible to protect the base from activities and traffic that may damage the base or leave dirt, oil or other foreign material on the base prior to application of the synthetic track surface.
- C. Weather
  - 1. Apply the synthetic track surface only during favorable weather conditions.
  - 2. No application of the synthetic track surface shall be conducted during rainfall, when rain is imminent, when freezing temperatures are forecasted or exist, or when gusting winds are occurring.
  - 3. Work is to progress only when the SSC can guarantee successful cure of the materials.
- D. During surface installation and striping, all irrigation systems shall be shut-off or controlled so that no water falls on the track or event areas.
- E. During set-up, installation and striping, the GC and/or Owner shall be responsible to have the entire track and other pertinent areas closed and secured of all activities 24 hours per day until completion of the project.

## 1.7 WARRANTY

- A. Manufacturer's and Installer's Warranty
  - 1. The warranty on the all-weather synthetic track surface shall endure for two (2) years from completion of installation.
  - 2. The warranty is to be provided directly by the SSC to the Owner.
  - 3. The warranty shall cover defects in materials and workmanship not deemed as ordinary wear on a running track.
- B. Warranty Bond not required.

## PART 2 – PRODUCTS

### 2.1 MANUFACTURERS

- A. beynonsports, Inc., 19600 SW 129th Ave., Tualatin, OR 97092,  
Tel: 503-691-2484, Fax: 503-692-0491, [www.beynonssports.com](http://www.beynonssports.com)

### 2.2 MATERIALS

- A. Rubber
  - 1. Poly-4000 Top-Coat rubber shall be EPDM rubber granules with a 1.0-3.0mm gradation.
  - 2. EPDM color shall be red.



- B. Binder
  - 1. Poly-4000 binder shall be polymer resin containing a minimum of 50% solids.
  - 2. Poly-4000 coating shall be polymer resin highly pigmented. Color shall be red.
- C. Marking and Line Paint
  - 1. The paint shall be formulated to be compatible with synthetic track surface materials.
  - 2. Colors shall be as prescribed or approved by the appropriate governing body; NFHS, NCAA, or IAAF.

## **PART 3 – EXECUTION**

### **3.1 EXAMINATION**

- A. SSC shall examine project conditions to ensure successful installation of the synthetic track surface. Any deficiencies shall be reported to the GC and/or Owner for corrective action.

### **3.2 PREPARATION**

- B. SSC to protect adjacent areas from contamination of synthetic track surfacing materials due to installation procedures.
- C. SSC shall prepare the base surface using a power blower to remove surface dirt. Cleaning necessary to remove embedded dirt, oil, or other foreign material shall be the responsibility of the GC and/or Owner.

### **3.3 INSTALLATION**

- A. General
  - 1. The Poly-4000 Top-Coat shall be installed using the “rake and spray” method. “Batching” of rubber and binder, “wet spraying” binder and rubber, or other methods used to reduce the number of layers applied are not allowed.
  - 2. Poly-4000 Top-Coat shall be installed in a minimum of four layers.
  - 3. Materials shall be applied in even layers with equipment specifically designed for the installation of resilient surfacing. Thorough curing between each layer is required before successive coats are applied.
  - 4. Poly-4000 Top-Coat shall consist of a minimum quantity of 6.0 pounds per square yard of specified rubber granules and not less than 2.6 pounds per square yard of polymer resin binder and a minimum of 1.2 pounds per square yard of polymer resin coating.
- B. Striping
  - 1. Striping Contractor shall verify with Owner’s representative the exact locations, size, shape, and color of the lines and markings before proceeding with striping and markings.
  - 2. Engineer the layout of lane lines, starting lines, and markings as prescribed or approved by the Owner’s representative, Architect/Engineer and the appropriate governing body; NFHS, NCAA, or IAAF.
  - 3. All lines and markings shall be spray applied by experienced personnel utilizing equipment manufactured for line striping. Striping lines and markings shall have true sharp edges.



### **3.4 CLEANING**

- A. Upon completion of work remove all containers, surplus materials, and installation debris.
- B. Leave area of work in clean orderly condition ready for use by Owner.

06/10/2013

Product Specifications\W:\submittals\2013 submittals\poly-4000



Bidder:FieldTurf USA, Inc.

G.3

1 yr warranty

## **RED POLYRESIN TRACK RESURFACING SYSTEM**

### **1.0 DESCRIPTION**

This specification covers the installation of a high performance resilient track resurfacing system for existing polyresin surfaces. This track system utilizes specially compounded, pigmented, water-based binders and EPDM rubber granules to provide strength, flexibility and to prevent ultra violet degradation. Multiple topcoats are applied to further protect against harmful UV rays and to reduce wear. The system provides a durable, resilient, spike resistant surface for recreational and competitive use.

NOTE: The success of the running track surface is dependent on a sound base (with good drainage) and the asphalt concrete meeting the requirements of The National Asphalt Paving Association and the American Sports Builders Association. Variations of the existing asphalt subsurface should not exceed 1/8" in 10' when measured in any direction with a straightedge.

**2.0 MATERIALS** – All liquid products shall be supplied by one manufacturer.

**2.1 Court Patch Binder**

**2.2 Latex tack coat**

**2.3 Polyresin Binder** – (Red).

**2.4 EPDM Granules** – Select granules for top layers approved by the manufacturer. (Red)

**2.5 Polyresin Coating** – (Red).

**2.6 Line Paint**

**2.7 Pigment** – Water-borne pigment for enhanced color depth (Red).

**2.8 Water** – The water used in all mixtures shall be fresh and potable.

### **3.0 SURFACE PREPARATION**

**3.1** Prior to the application of resurfacing materials; repair torn, delaminated or overly worn areas using a mixture of rubber granules and polyurethane binder.

3.2 Clean existing surface using soft-bristle brooms, power blowers and pressure washer (when necessary).

#### 4.0 CONSTRUCTION

Allow all patchwork to cure thoroughly. The surface to be coated must be sound, smooth and free from dust, dirt, or oily materials.

4.1 **Primer Coat** – A tack coat of must be applied over the entire surface at a rate of .04 gal./s.y. Allow to dry thoroughly.

4.2 **Track Resurface** – Rubber granules shall be applied evenly at a rate of 5lbs per square yard in 2 layer. Each layer will be sprayed with pigmented polyresin binder at a rate of 1 gallon of binder per 18 lbs of epdm rubber granules.

To further enhance color depth, it is recommended to add 5 gallons of pigment to each 300 gallon tote of binder on the final spray coat. Pigment is a water-borne colorant.

The coverage rate for rubber granules is dependent on the specific gravity (density) of the rubber and the installation method of the surfacing system. Different densities will affect the dry bulking value of the rubber, which determines the weight per square yard for a specified thickness. The specific gravity for rubber particles can vary between colors, size, and manufacturers. It is recommended to consult the manufacturer for more information. Also, different application methods can affect the overall system density requiring lower or higher volumes of product. System weights and volumes shall be verified by on site sample methods.

4.3 **Top Coat** – Polyresin Coating shall be applied by approved spray equipment at a rate of not less than .10 gallons per square yard.

4.4 **Line striping** – Line paint shall be applied to meet all rules and regulations of the local track federation.

#### 5.0 LIMITATIONS

- No part of the construction shall be conducted during rainfall or when rain is imminent.
- Allow 4-5 hours to cure at least 70F. Lower temperature and higher temperature will increase the drying time.
- Do not apply when surface temperature is above 130F.
- Apply only when ambient temperature is 50F and rising.
- Keep from freezing. Do not store in the hot sun.

- The Polyresin Track System will not prevent pavement cracks from occurring.
- Allow applications to thoroughly cure prior to subsequent applications.
- Use caution when applying materials near adjacent areas. Mask when necessary to prevent over spray.
- Allow new asphalt to cure for a minimum of 14 days.

**6.0 PHYSICAL PROPERTIES**

6.1 The polyresin binder is a high solids pigmented binder containing special fibers to promote strength. It is capable of drying/curing to a depth of 10mm in a single lift when mixed at the specified levels of 1-3mm rubber granules:

Viscosity > 90 ku or >1200 cps    Pigment and Filler > 6% total formula

6.2 The polyresin coating is a fully pigmented acrylic topcoat system designed to have a high resistance to ultraviolet light. It is made from acrylic resins specifically designed for track surfaces to provide a tough, long lasting surface that can withstand the elements. It should be applied in 2 coats at a coverage rate of .05 gal./s.y. per coat.

6.3 **Rubber Properties:** 1-3mm Sieve Analysis – other sieve sizes may be used to achieve a different surface texture or force reduction characteristic; at the discretion of the owner and/or installer. Rubber supply can vary.

Mesh	M.M.	% Retained	Specific Gravity: Hardness: Shore A, 55-75 durometer
6	3.36	0-15%	Black Rubber Granules: 1.15-1.40
10	2.00	60-85%	Color EPDM Rubber Granules: 1.40-1.60
18	1.00	10-30%	
PAN 1.00	0-5%		

**7.0 QUALITY ASSURANCE:**

Installer shall be a member in good standing of the American Sports Builders Association (ASBA), with specific qualifications in building and surfacing running tracks. Installer must employ a Certified Track Builder (CTB) as conferred by the ASBA. Approved installer must have remained in business under the same business name for double the length of the warrantee period.

**8.0 DISCLAIMER:**

Suggestions for use of our product or inclusion of descriptive material from patents should not be understood as recommending the use of our product in violation of any patents.

## **9.0 GENERAL:**

Materials must be specifically designed for the construction of running track surfaces. Materials specified shall be delivered to the site in sealed drums or totes. Minimal addition of clear, fresh water at the job site is dependent on temperature and material flow. Coverage rates are based upon material prior to mixing with water. Dispose of empty containers in accordance with local, state and federal regulations.



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41155 STATE HIGHWAY 10  
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FAX: 607-746-8481

**SPECIALTIES**

FieldTurf USA Inc

**"DESIGNED TO MEET THE DEMANDS  
OF MODERN SPORTS CONSTRUCTION"**



- **6" Square Pole with 4' Extension.**
- **Limited Lifetime Warranty.**
- **Optional Sleeve Sold Separately.**
- **Black Powder Coat Finish.**

**402-797 - Spalding Dominator Pole System**



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- **High Performance Goal With 180-Degree Action for Collegiate Play**
- **7 Year Warranty.**
- **Meets NCAA and NFHS Specifications**
- **Includes Anti-Whip Net**

**411-704 - Slam-Dunk® Precision 180 Goal**



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- **Regulation Glass Backboard Meeting FIBA, NCAA, and NFHS Specifications**
- **Direct Goal Mount Designed to Prevent The Goal From Touching The Glass**
- **Limited Lifetime Warranty**

**413-003 - SuperGlass Pro Backboard**

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FieldTurf USA, Inc

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- ***Made of a Pliable PVC Plastic that is Guaranteed Not to Crack***
- ***IAAF, NCAA and NFHS Compliant***
- ***Consists of Four (4) Interlocking Sections That Fit Inside a Discus Throw Circle, Instantly Converting to a Hammer Throw Circle***
- ***Easily Installed/Removed and Portable***

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**TF362 - GILL ATHLETICS HAMMER CONVERSION CIRCLE**

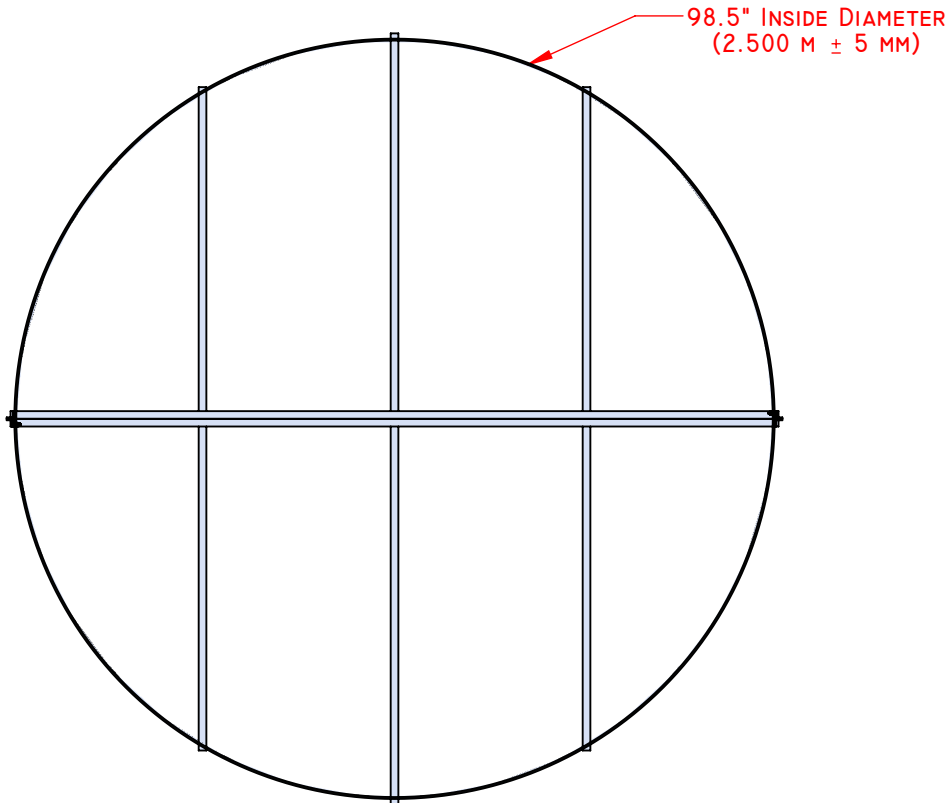
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SPORTSFIELD SPECIALTIES INC 09062012



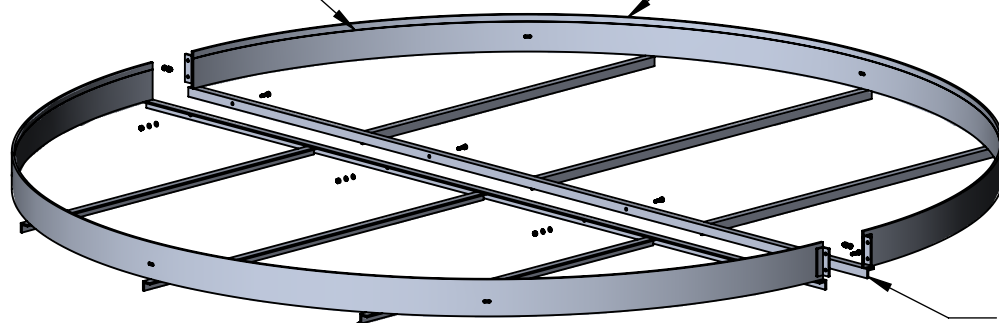
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3/4" (0.75") DEPRESSED  
CONCRETE FINISHING SCREED LINE

1/4" x 4" ALUMINUM  
ROLLED THROW RING



BOLT TOGETHER  
CONSTRUCTION  
STAINLESS STEEL  
HARDWARE INCLUDED

1" x 1" x 3/16" ALUMINUM  
ANGLE SUPPORTS

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## TFDWRING DISCUS WEB REINFORCED THROW RING

NOT TO SCALE

SPORTSFIELD SPECIALTIES INC 12112014

## **TFDWRING Webbed Discus Throw Ring**

SECTION 11480 Athletic Equipment - Field

### **PART 1 GENERAL**

#### **1.01 WORK INCLUDED**

**A.** Provide all equipment and materials, and do all work necessary to furnish and install the athletic equipment, as indicated on the drawings and as specified herein. Athletic equipment shall include, but not be limited to:

1. TFDWRING Webbed Discus Throw Ring

#### **1.02 RELATED WORK**

**A.** Examine contract documents for requirements that affect work of this section. Other specification sections that directly relate to the work of this section include, but are not limited to:

1. Section 02200 – Earthwork; Excavation and Backfill and establishment of sub-grade elevations.
2. Section 02511 – Asphalt, Concrete, and Pavement
3. Section 02535 – Synthetic Track Surfacing
4. Section 02542 – Synthetic Field Surfacing
5. Section 03300 – Cast-in-Place Concrete

#### **1.03 REFERENCES**

**A.** Comply with applicable requirements of the following standards. Where these standards conflict with other specified requirements, the most restrictive requirements shall govern.

1. National Federation of State High School Associations (NFHS)
2. National Collegiate Athletic Association (NCAA)
3. International Amateur Athletic Association (IAAF)
4. American Sports Builders Association (ASBA)
5. Manufacturers Data and Recommended Installation Requirements

#### **1.04 SUBMITTALS**

**A.** Manufacturers Product Data

1. Provide manufacturers product data prior to actual field installation work, for Architects or Owners representatives

review.

**B. Shop Drawings**

1. Provide drawings of the manufacturers recommended installation and foundation requirements prior to actual field installation work, for Architects or Owners representatives review.

**1.05 QUALITY ASSURANCE**

- A.** Manufacturers warranties shall pass to the Owner and certification made that the product materials meet all applicable grade trademarks or conform to industry standards and inspection requirements.

**1.06 PRODUCT DELIVERY AND STORAGE**

- A.** Materials delivered to the site shall be examined for damage or defects in shipping. Any defects shall be noted and reported to the Owners representative. Replacements, if necessary, shall be immediately re-ordered, so as to minimize any conflict with the construction schedule. Sound materials shall be stored above ground under protective cover or indoors so as to provide proper protection.

**PART 2 PRODUCTS**

**2.01 Webbed Discus Throw Ring**

- A.** BASE: TFDWRING Webbed Discus Throw Ring as manufactured by:

Sportsfield Specialties Inc.  
P.O. Box 231  
41155 State Highway 10  
Delhi, NY 13753  
p. 888-975-3343  
f. 607-746-8481

- B. COMPONENTS:**

1. TFDWRING fabricated with 2.0in x 2.0in x .25in Aluminum Angle, 98.4in Diameter, having the following attributes:
  - A. Aluminum Web Reinforcement

**PART 3 EXECUTION**

**3.01           INSTALLATION OF EQUIPMENT**

- A.**           All athletic equipment shall be installed as recommended with manufacturer's written directions, and as indicated on the drawings.

**END OF SECTION**

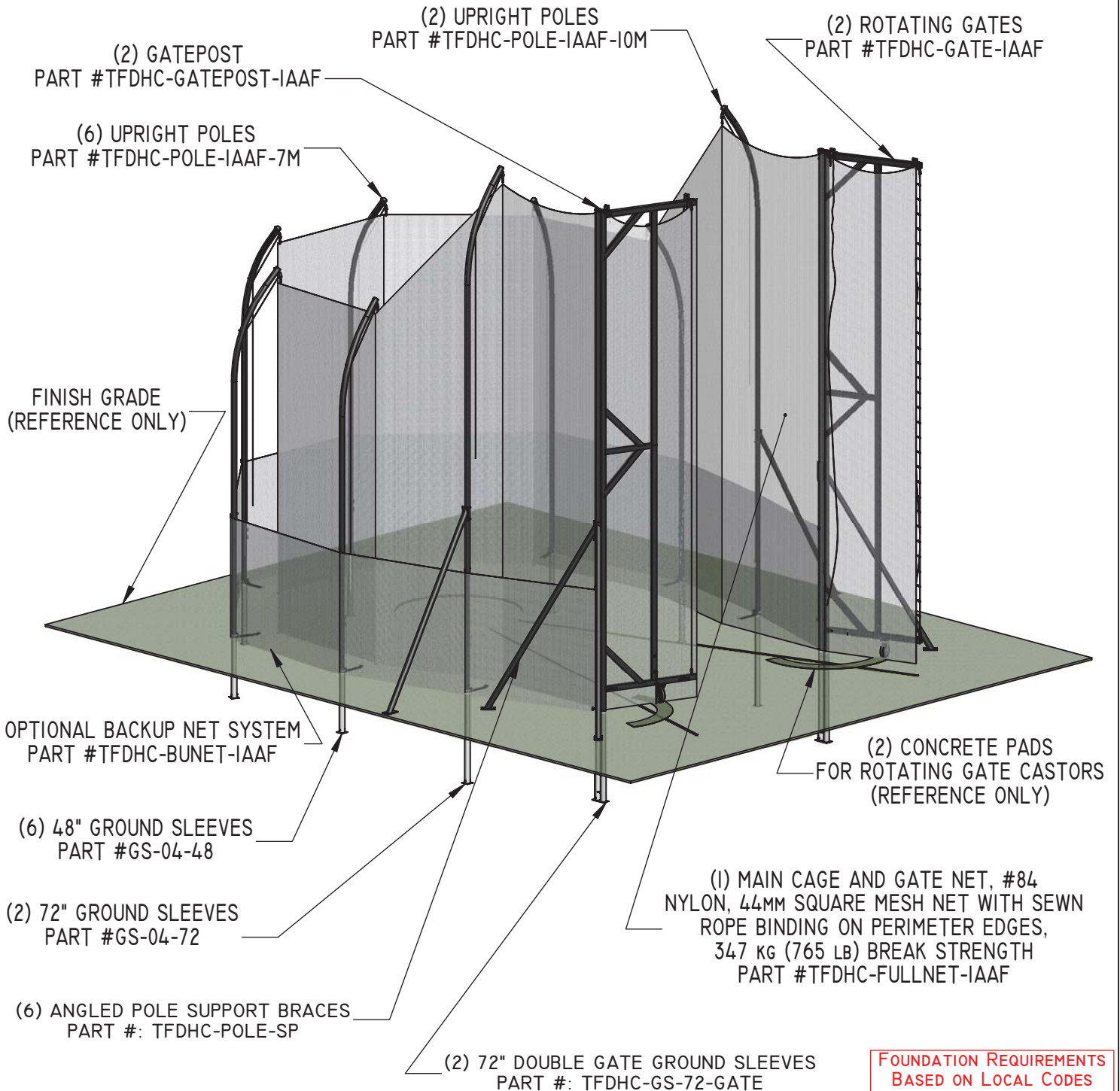
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MEETS AND/OR EXCEEDS CURRENT IAAF  
SPECIFICATIONS, RULES AND REQUIREMENTS

STANDARD BLACK POWDER COATED FINISH



**TFDHCIAAF - IAAF HAMMER/DISCUS CAGE  
SINGLE PAD ELEVATION VIEW  
WITH OPTIONAL BACKUP NET SYSTEM**

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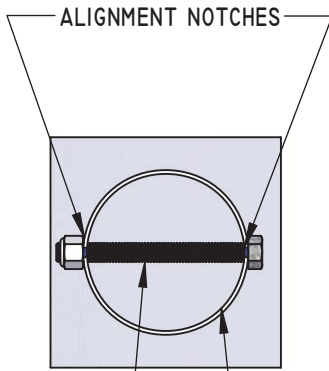
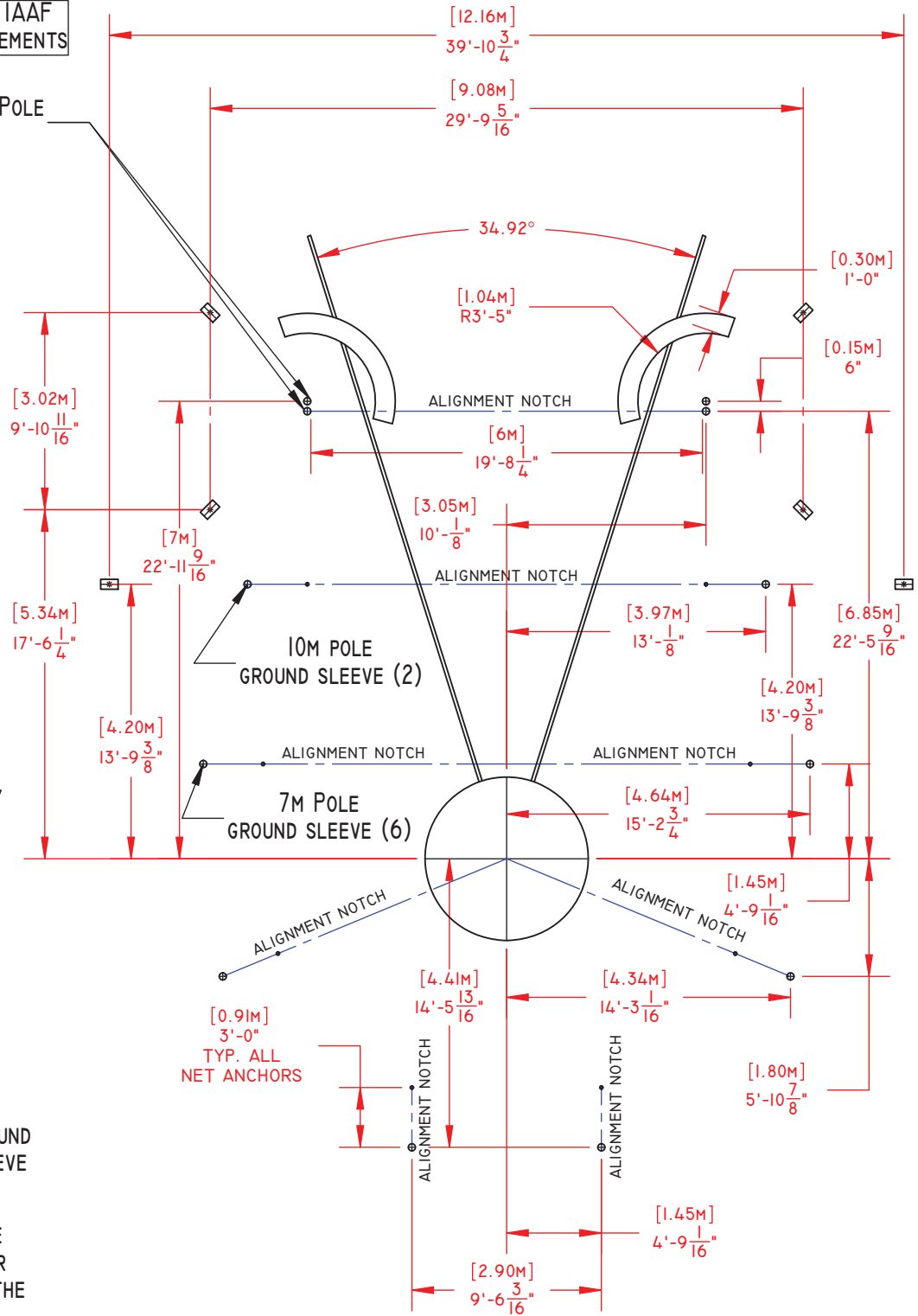
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MEETS AND/OR EXCEEDS CURRENT IAAF  
SPECIFICATIONS, RULES AND REQUIREMENTS

ROTATING GATE AND SUPPORT POLE  
DUAL GROUND SLEEVE (2)



STOP BOLT ALIGNMENTS MUST  
MATCH THE ALIGNMENT NOTCH  
DIRECTION IN THE LAYOUT IN ORDER  
FOR THE CAGE POLES TO LOCK IN THE  
CORRECT POSITION.

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**IAAF HAMMER/DISCUS CAGE, SINGLE PAD  
GROUND SLEEVE LAYOUT**

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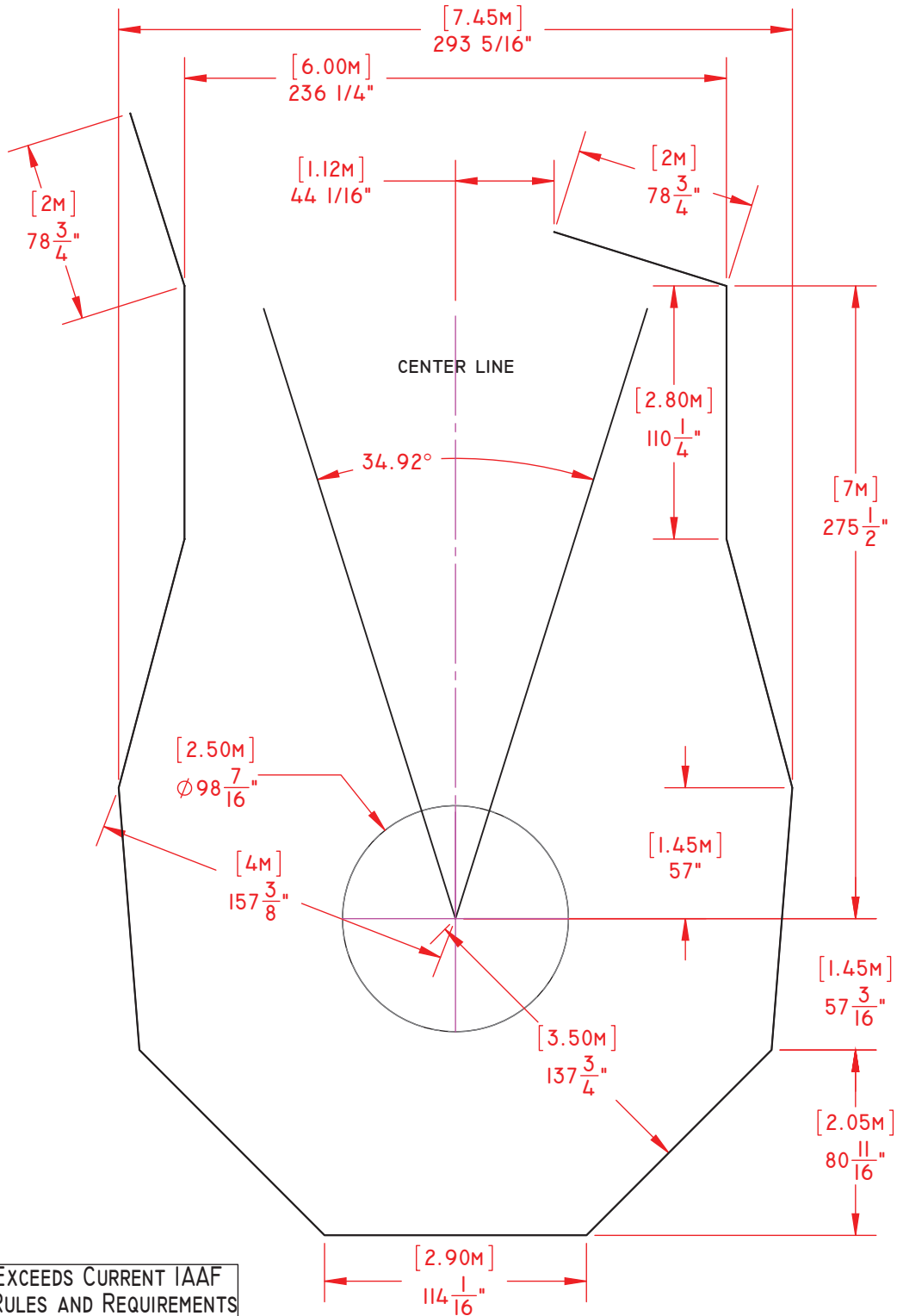


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**TFDHCIAAF - IAAF HAMMER/DISCUS CAGE  
SINGLE PAD LAYOUT**

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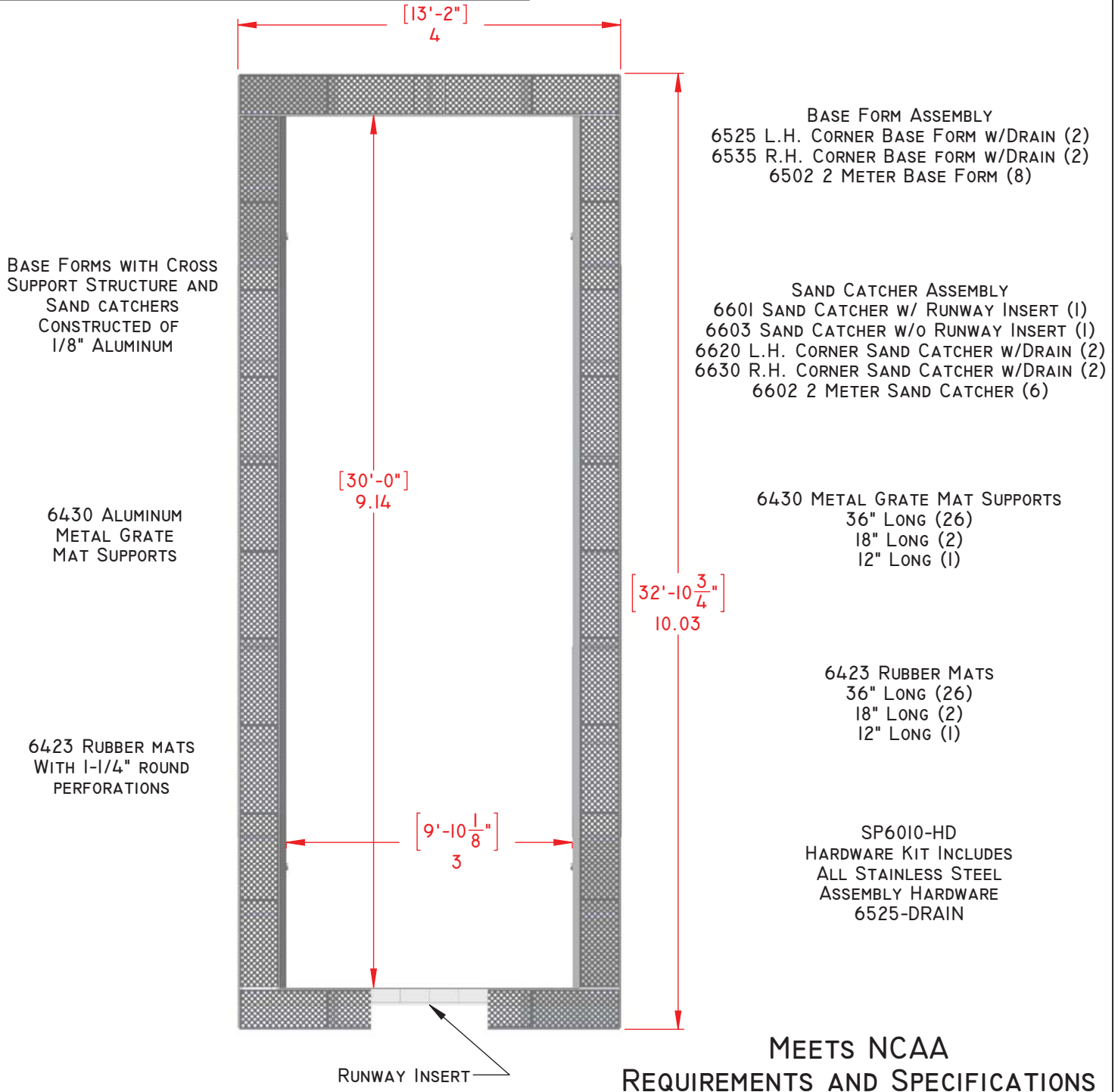
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UNITED STATES PATENT #7,641,593, ISSUED JANUARY 5, 2010  
UNITED STATES PATENT #8,186,125, ISSUED MAY 29, 2012  
UNITED STATES PATENT #8,745,955, ISSUED JUNE 10, 2014



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**SP6010 JUMPFORM®  
COLLEGE 3M x 9M SAND PIT WITH SAND CATCHERS**

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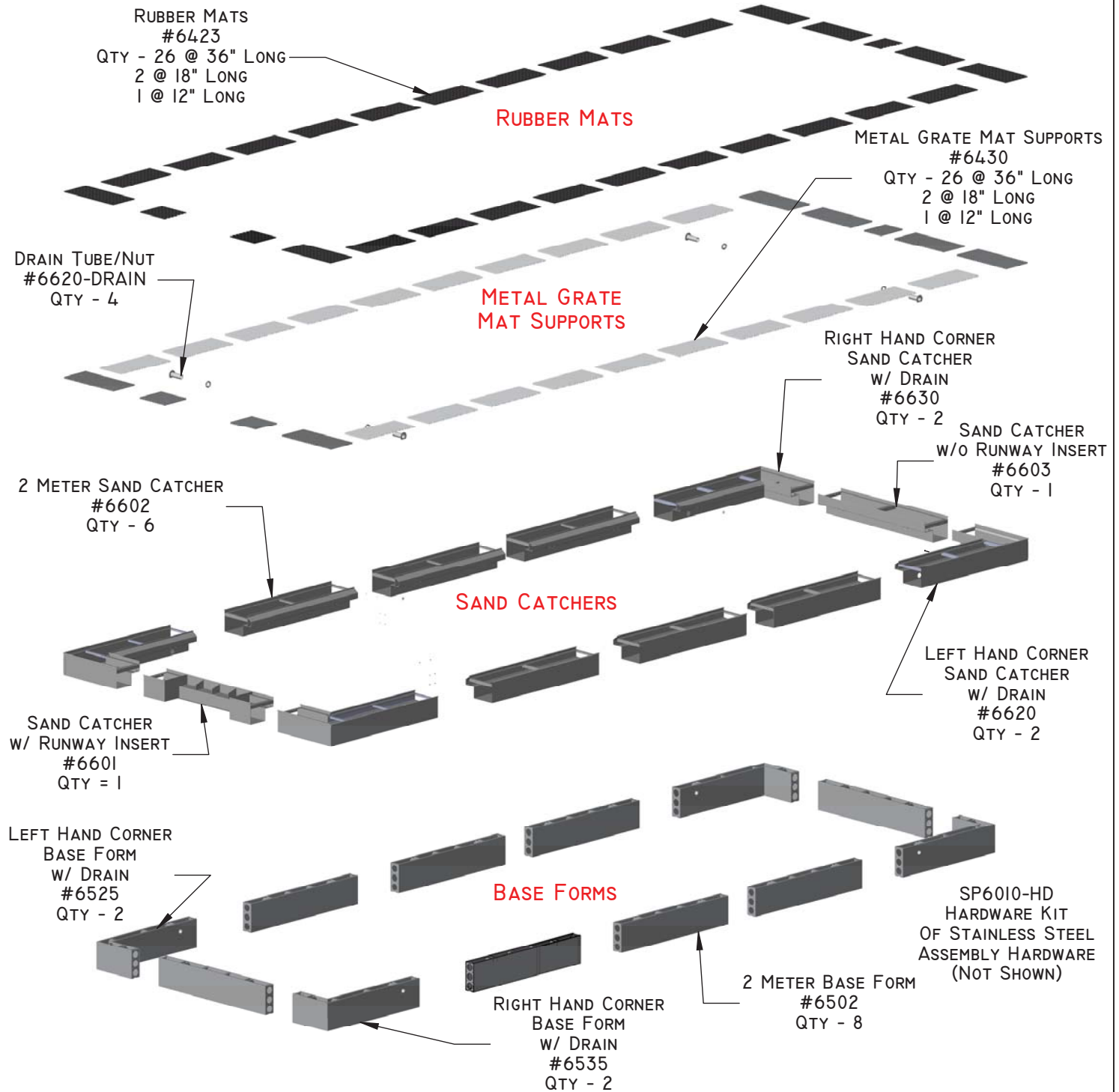
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COLLEGE 3M X 9M SAND PIT WITH SAND CATCHERS**

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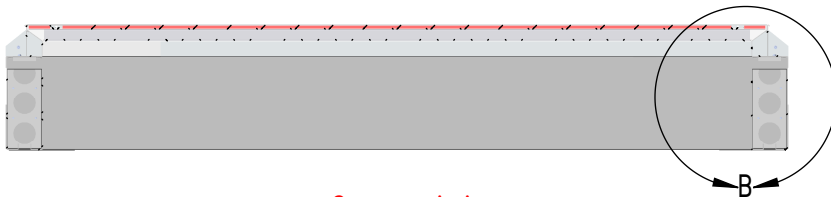
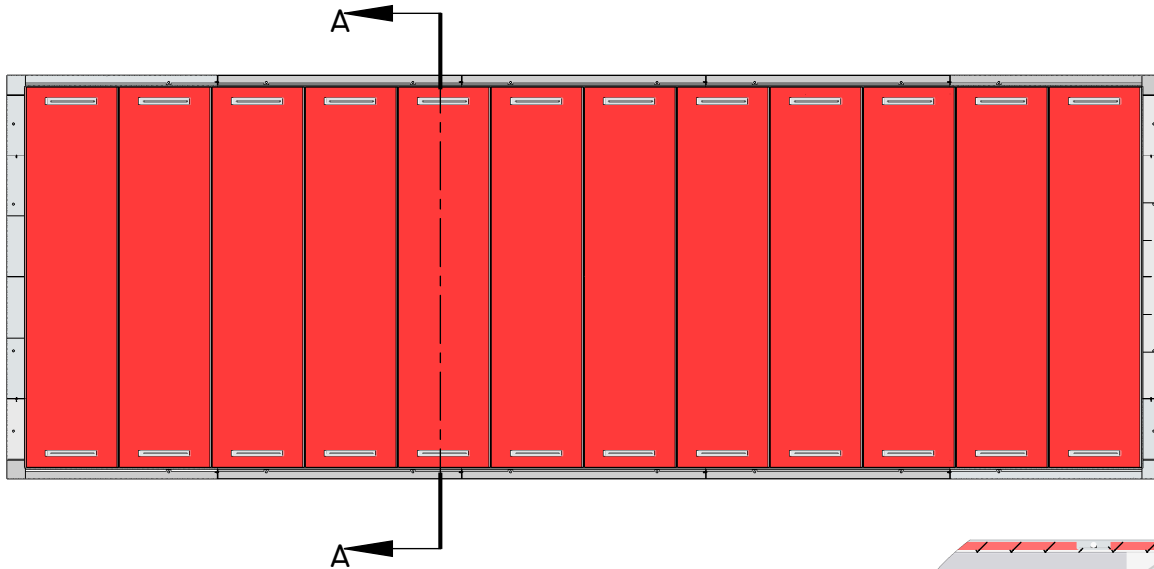
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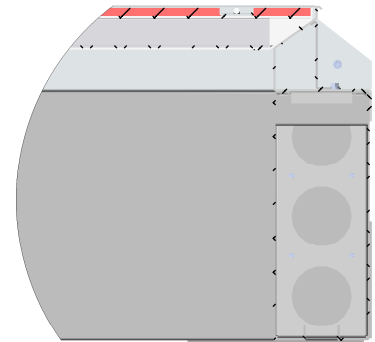
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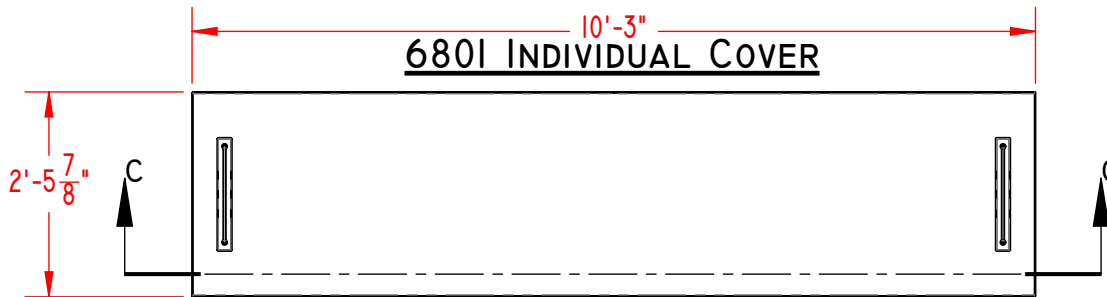
**6800 COLLEGE SAND PIT COVER SET (12-680I COVERS)**



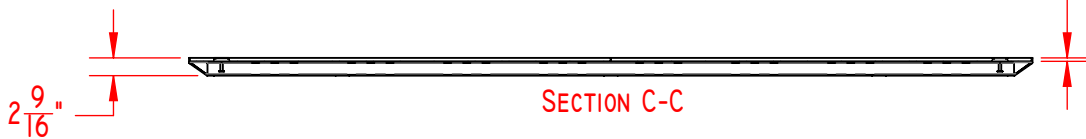
SECTION A-A



DETAIL B



**PRODUCT WEIGHTS**  
6800 - 960LBS/SET  
680I - 80LBS EACH  
\*WEIGHTS PRIOR  
TO SURFACING



**1/2" RECESS TO ACCEPT  
SYNTHETIC TRACK SURFACE  
BY OTHERS**

SECTION C-C

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**SP6800 COLLEGE SAND PIT COVER SET**

NOT TO SCALE

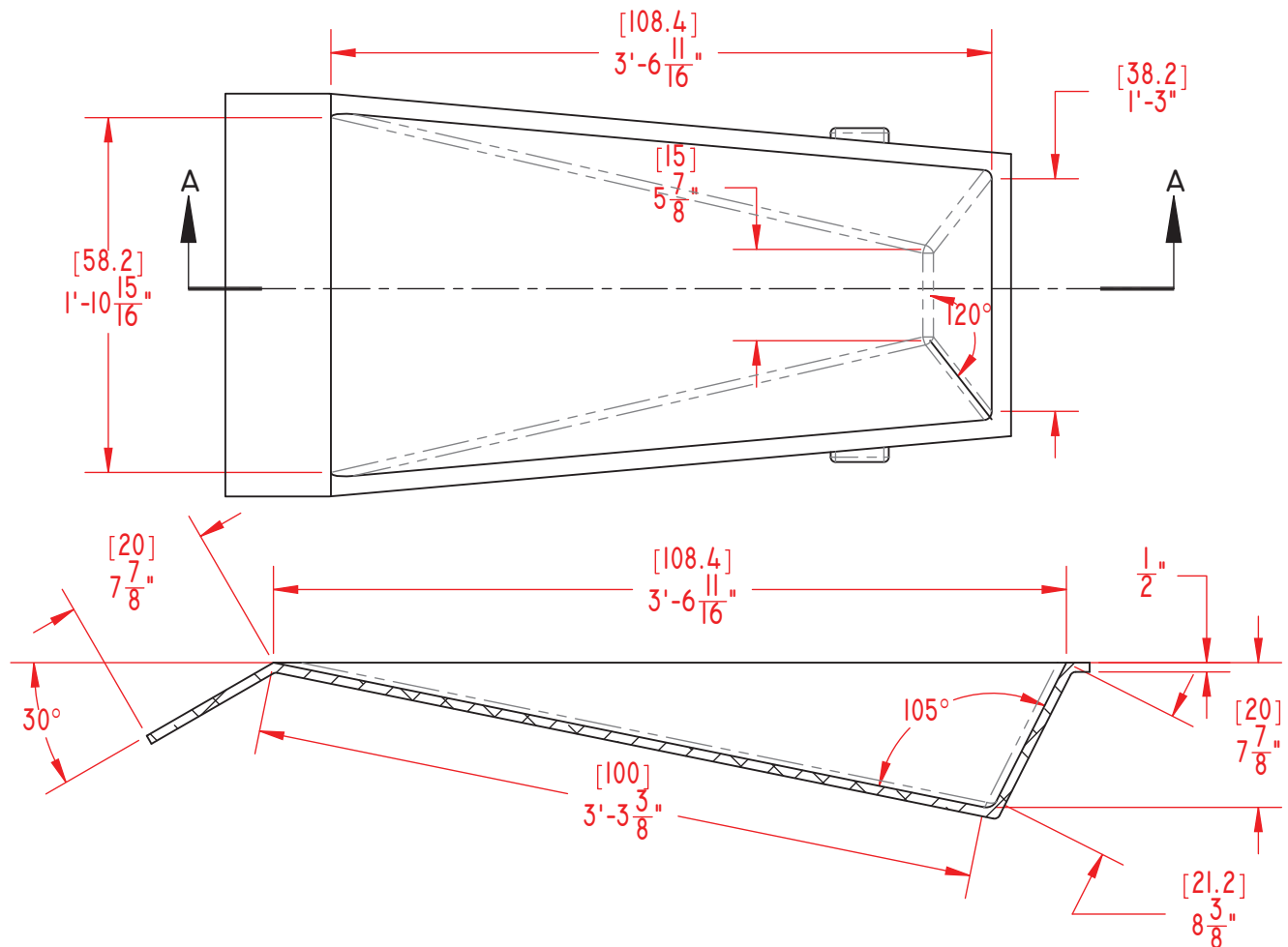
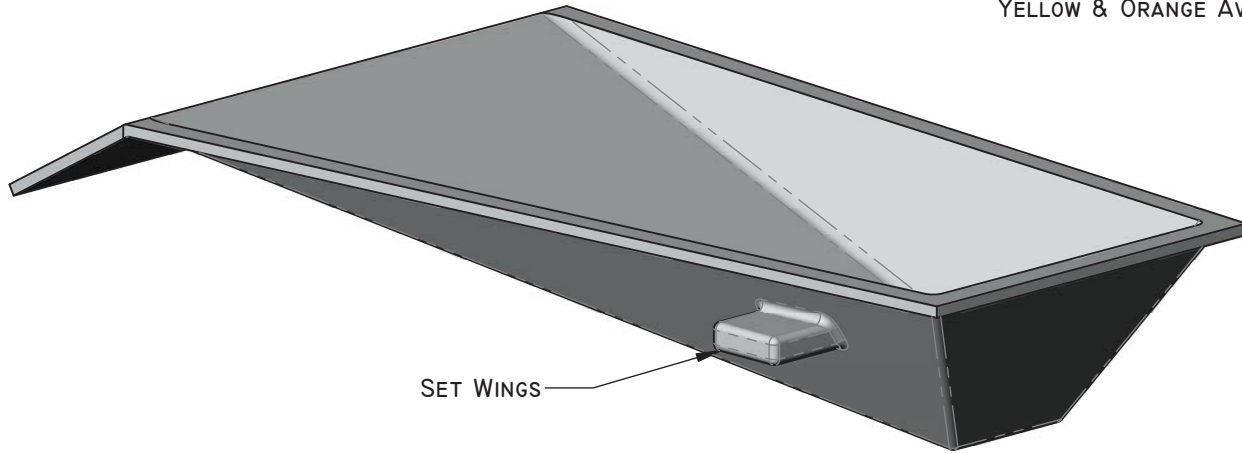
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STANDARD POWDER COATED WHITE FINISH  
YELLOW & ORANGE AVAILABLE



MEETS AND/OR EXCEEDS ALL IAAF, NCAA AND NFHS SPECIFICATIONS

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**TFPV001CA - CAST ALUMINUM VAULT BOX**

NOT TO SCALE

SPORTSFIELD SPECIALTIES INC 11012014

## **TFPV001CA Cast Aluminum Pole Vault Box with TFPV003ALTR-CA Cover Plug**

SECTION 11480 Athletic Equipment - Track & Field

### **PART 1 GENERAL**

#### **1.01 WORK INCLUDED**

**A.** Provide all equipment and materials, and do all work necessary to furnish and install the athletic equipment, as indicated on the drawings and as specified herein. Athletic equipment shall include, but not be limited to:

1. TFPV001CA Vault Box with TFPV003ALTR-CA Cover Plug

#### **1.02 RELATED WORK**

**A.** Examine contract documents for requirements that affect work of this section. Other specification sections that directly relate to the work of this section include, but are not limited to:

1. Section 02200 – Earthwork; Excavation and Backfill and establishment of sub-grade elevations.
2. Section 02511 – Asphalt, Concrete, and Pavement
3. Section 02535 – Synthetic Track Surfacing
4. Section 02542 – Synthetic Field Surfacing
5. Section 03300 – Cast-in-Place Concrete

#### **1.03 REFERENCES**

**A.** Comply with applicable requirements of the following standards. Where these standards conflict with other specified requirements, the most restrictive requirements shall govern.

1. National Federation of State High School Associations (NFHS)
2. National Collegiate Athletic Association (NCAA)
3. International Amateur Athletic Association (IAAF)
4. American Sports Builders Association (ASBA)
5. Manufacturers Data and Recommended Installation Requirements

#### **1.04 SUBMITTALS**

**A.** Manufacturers Product Data

1. Provide manufacturers product data prior to actual field installation work, for Architects or Owners representatives

review.

**B. Shop Drawings**

1. Provide drawings of the manufacturers recommended installation and foundation requirements prior to actual field installation work, for Architects or Owners representatives review.

**1.05 QUALITY ASSURANCE**

- A.** Manufacturers warranties shall pass to the Owner and certification made that the product materials meet all applicable grade trademarks or conform to industry standards and inspection requirements.

**1.06 PRODUCT DELIVERY AND STORAGE**

- A.** Materials delivered to the site shall be examined for damage or defects in shipping. Any defects shall be noted and reported to the Owners representative. Replacements, if necessary, shall be immediately re-ordered, so as to minimize any conflict with the construction schedule. Sound materials shall be stored above ground under protective cover or indoors so as to provide proper protection.

**PART 2 PRODUCTS**

**2.01 Cast Aluminum Pole Vault Box with Cover Plug**

BASE: TFPV001CA Pole Vault Box with TFPV003ALTR-CA Cover Plug as manufactured by:

Sportsfield Specialties Inc.  
P.O. Box 231  
41155 State Highway 10  
Delhi, NY 13753  
p. 888-975-3343  
f. 607-746-8481

**B. COMPONENTS:**

1. TFPV001CA Pole Vault Box fabricated with ½” Cast Aluminum having the following attributes:
  - A. Regulation Size
  - B. Cast Aluminum Setting Wings for Concrete Encasement
  - C. Powder Coating White (Yellow & Orange Available)

2. TFPV003ALTR-CA Cover Plug fabricated with 1/8" Aluminum having the following attributes:
  - A. Sized to Fill Void of Vault Box
  - B. Top Surface Recessed 1/2" to Accept Synthetic Track Material

**PART 3 EXECUTION**

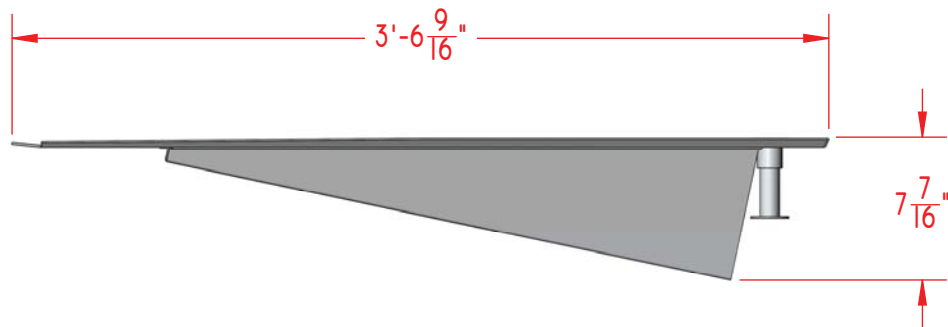
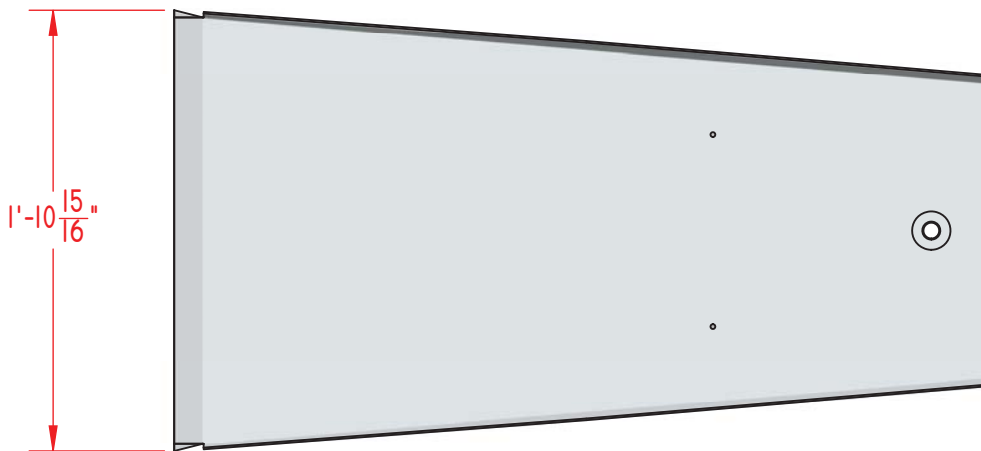
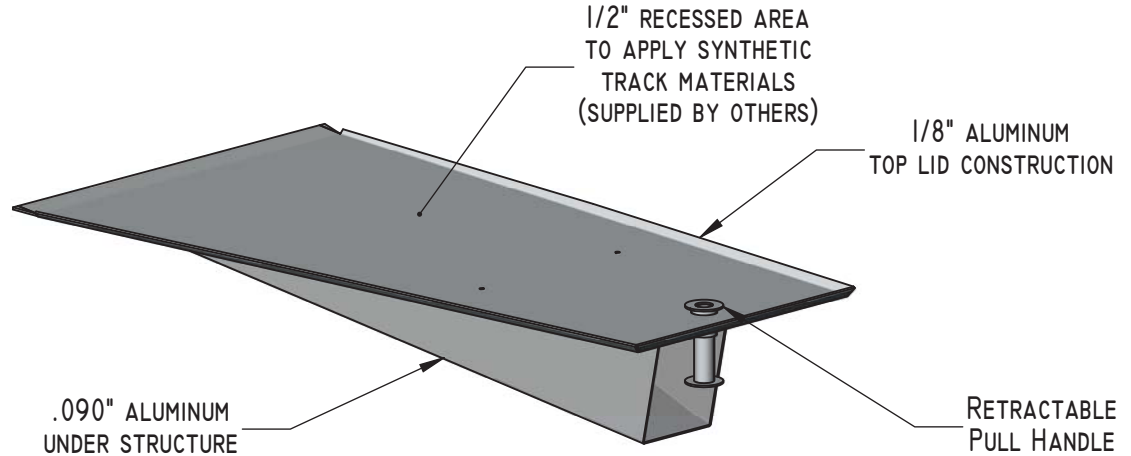
**3.01 INSTALLATION OF EQUIPMENT**

- A. All athletic equipment shall be installed as recommended with manufacturer's written directions, and as indicated on the drawings.

**END OF SECTION**

DESIGNED TO MEET THE DEMANDS  
OF MODERN SPORTS CONSTRUCTION

41155 ST. HWY 10  
PO BOX 231  
DELHI, NY 13753  
TOLL FREE: 888-975-3343  
FAX: 607-746-8481



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TFPV003ALTR-CA - CAST ALUMINUM VAULT BOX COVER PLUG

NOT TO SCALE

SPORTSFIELD SPECIALTIES INC 11012014

## **TFPV003ALTR-CA - Vault Box Cover Plug**

SECTION 11480 Athletic Equipment - Track & Field

### **PART 1 GENERAL**

#### **1.01 WORK INCLUDED**

**A.** Provide all equipment and materials, and do all work necessary to furnish and install the athletic equipment, as indicated on the drawings and as specified herein. Athletic equipment shall include, but not be limited to:

1. TFPV003ALTR-CA - Vault Box Cover Plug

#### **1.02 RELATED WORK**

**A.** Examine contract documents for requirements that affect work of this section. Other specification sections that directly relate to the work of this section include, but are not limited to:

1. Section 02200 – Earthwork; Excavation and Backfill and establishment of sub-grade elevations.
2. Section 02511 – Asphalt, Concrete, and Pavement
3. Section 02535 – Synthetic Track Surfacing
4. Section 02542 – Synthetic Field Surfacing
5. Section 03300 – Cast-in-Place Concrete

#### **1.03 REFERENCES**

**A.** Comply with applicable requirements of the following standards. Where these standards conflict with other specified requirements, the most restrictive requirements shall govern.

1. National Federation of State High School Associations (NFHS)
2. National Collegiate Athletic Association (NCAA)
3. International Amateur Athletic Association (IAAF)
4. American Sports Builders Association (ASBA)
5. Manufacturers Data and Recommended Installation Requirements

#### **1.04 SUBMITTALS**

**A.** Manufacturers Product Data

1. Provide manufacturers product data prior to actual field installation work, for Architects or Owners representatives



review.

**B. Shop Drawings**

1. Provide drawings of the manufacturers recommended installation and foundation requirements prior to actual field installation work, for Architects or Owners representatives review.

**1.05 QUALITY ASSURANCE**

- A.** Manufacturers warranties shall pass to the Owner and certification made that the product materials meet all applicable grade trademarks or conform to industry standards and inspection requirements.

**1.06 PRODUCT DELIVERY AND STORAGE**

- A.** Materials delivered to the site shall be examined for damage or defects in shipping. Any defects shall be noted and reported to the Owners representative. Replacements, if necessary, shall be immediately re-ordered, so as to minimize any conflict with the construction schedule. Sound materials shall be stored above ground under protective cover or indoors so as to provide proper protection.

**PART 2 PRODUCTS**

**2.01 Aluminum Vault Box Cover Plug**

- A.** BASE: TFPV003ALTR-CA - Vault Box Cover Plug as manufactured by:

Sportsfield Specialties Inc.  
P.O. Box 231  
41155 State Highway 10  
Delhi, NY 13753  
p. 888-975-3343  
f. 607-746-8481

**B. COMPONENTS:**

1. TFPV003ALTR-CA Cover Plug fabricated with 0.90in Aluminum understructure and .125in Aluminum top lid having the following attributes:

- A. Sized to Fill Void of Standard Cast Aluminum Vault Box
- B. Top Surface Recessed 0.50in to Accept Synthetic Track Material

**PART 3 EXECUTION**

**3.01 INSTALLATION OF EQUIPMENT**

- A.** All athletic equipment shall be installed as recommended with manufacturer's written directions, and as indicated on the drawings.

**END OF SECTION**

## **TFSPT001AL Shot Put Toe Board (Depressed Pad)**

SECTION 11480 Athletic Equipment - Track & Field

### **PART 1 GENERAL**

#### **1.01 WORK INCLUDED**

**A.** Provide all equipment and materials, and do all work necessary to furnish and install the athletic equipment, as indicated on the drawings and as specified herein. Athletic equipment shall include, but not be limited to:

1. TFSPT001AL Shot Put Toe Board (Depressed Pad)

#### **1.02 RELATED WORK**

**A.** Examine contract documents for requirements that affect work of this section. Other specification sections that directly relate to the work of this section include, but are not limited to:

1. Section 02200 – Earthwork; Excavation and Backfill and establishment of sub-grade elevations.
2. Section 02511 – Asphalt, Concrete, and Pavement
3. Section 02535 – Synthetic Track Surfacing
4. Section 02542 – Synthetic Field Surfacing
5. Section 03300 – Cast-in-Place Concrete

#### **1.03 REFERENCES**

**A.** Comply with applicable requirements of the following standards. Where these standards conflict with other specified requirements, the most restrictive requirements shall govern.

1. National Federation of State High School Associations (NFHS)
2. National Collegiate Athletic Association (NCAA)
3. International Amateur Athletic Association (IAAF)
4. American Sports Builders Association (ASBA)
5. Manufacturers Data and Recommended Installation Requirements

#### **1.04 SUBMITTALS**

**A.** Manufacturers Product Data

1. Provide manufacturers product data prior to actual field installation work, for Architects or Owners representatives

review.

**B. Shop Drawings**

1. Provide drawings of the manufacturers recommended installation and foundation requirements prior to actual field installation work, for Architects or Owners representatives review.

**1.05 QUALITY ASSURANCE**

- A.** Manufacturers warranties shall pass to the Owner and certification made that the product materials meet all applicable grade trademarks or conform to industry standards and inspection requirements.

**1.06 PRODUCT DELIVERY AND STORAGE**

- A.** Materials delivered to the site shall be examined for damage or defects in shipping. Any defects shall be noted and reported to the Owners representative. Replacements, if necessary, shall be immediately re-ordered, so as to minimize any conflict with the construction schedule. Sound materials shall be stored above ground under protective cover or indoors so as to provide proper protection.

**PART 2 PRODUCTS**

**2.01 Cast Aluminum Shot Put Toe Board (Depressed Pad)**

- A.** BASE: TFSPT001AL Shot Put Toe Board as manufactured by:

Sportsfield Specialties Inc.  
P.O. Box 231  
41155 State Highway 10  
Delhi, NY 13753  
p. 888-975-3343  
f. 607-746-8481

**B. COMPONENTS:**

1. Model # TFSPT001AL Cast Aluminum Toe Board having the following attributes:
  - A. Standard Size, 3.25in Height for Depressed Pad Installation
  - B. Powder Coated White
  - C. 34.92° Black Sector Identifiers

**PART 3 EXECUTION**

**3.01 INSTALLATION OF EQUIPMENT**

- A.** All athletic equipment shall be installed as recommended with manufacturer's written directions, and as indicated on the drawings.

**END OF SECTION**

DESIGNED TO MEET THE DEMANDS  
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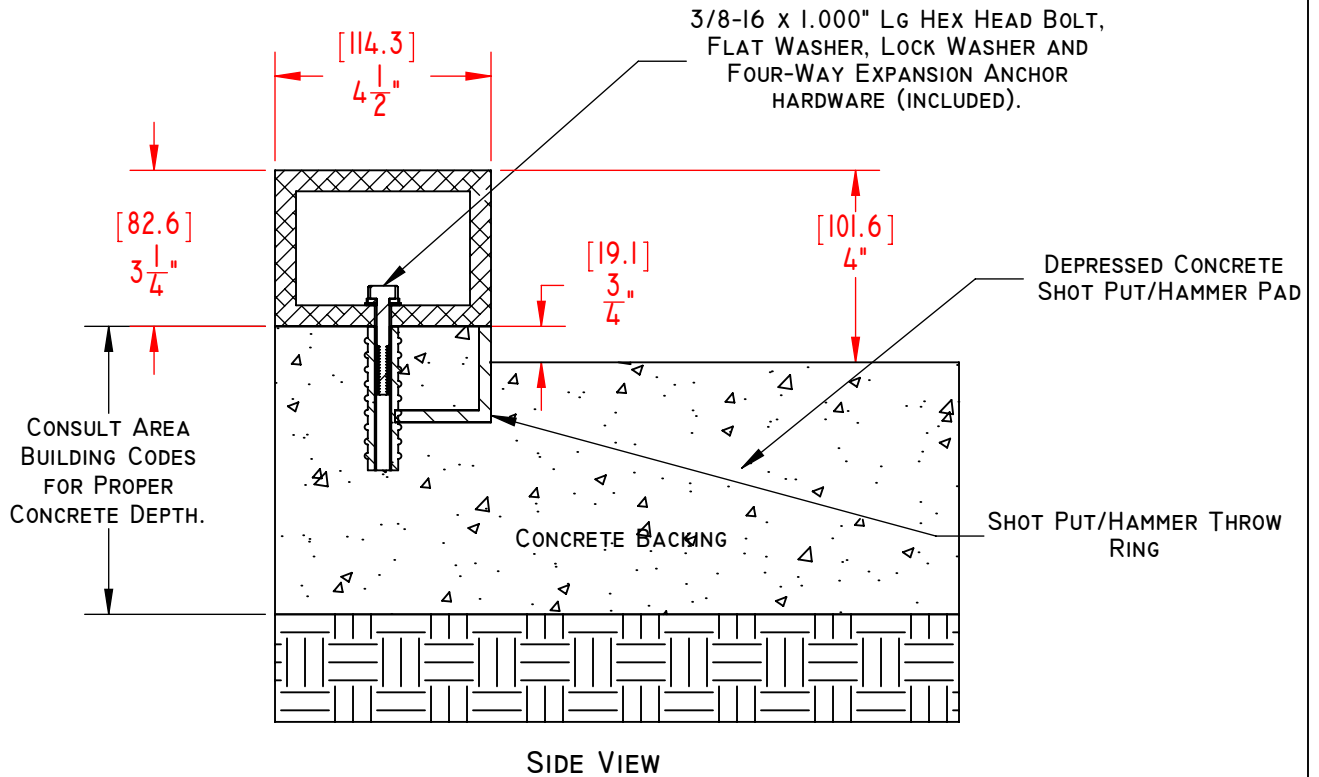
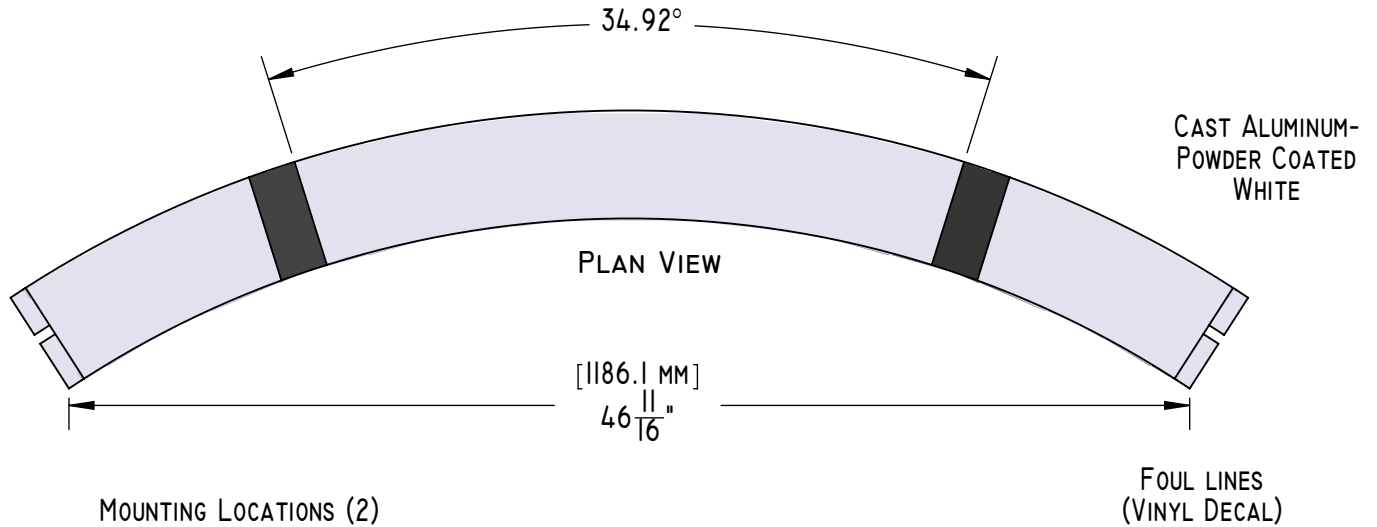


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**TFSPT001AL - SHOT PUT TOE BOARD  
DEPRESSED PAD INSTALLATION**

NOT TO SCALE

SPORTSFIELD SPECIALTIES INC 11012014

DESIGNED TO MEET THE DEMANDS  
OF MODERN SPORTS CONSTRUCTION

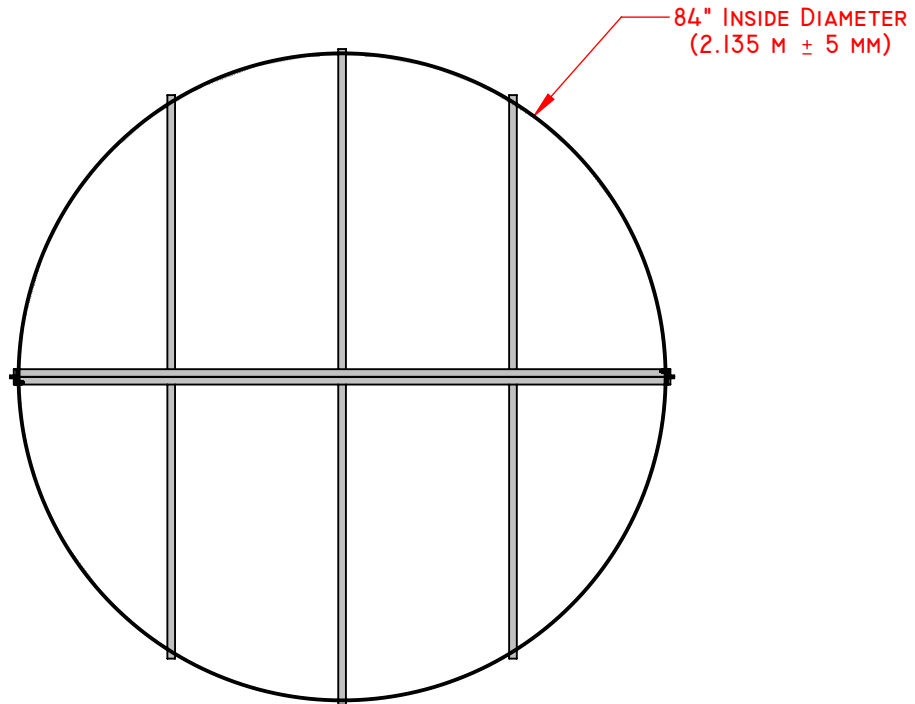


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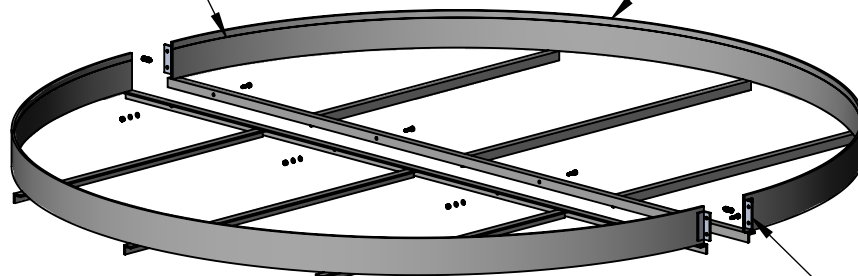
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FAX: 607-746-8481



3/4" (0.75") DEPRESSED  
CONCRETE FINISHING SCREED LINE

1/4" x 4" ALUMINUM  
ROLLED THROW RING



1" x 1" x 3/16" ALUMINUM  
ANGLE SUPPORTS

BOLT TOGETHER  
CONSTRUCTION  
STAINLESS STEEL  
HARDWARE INCLUDED

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**TFSWRING  
SHOT PUT/HAMMER WEB REINFORCED THROW RING**

NOT TO SCALE

SPORTSFIELD SPECIALTIES INC I2112014

## **TFSWRING Webbed Shot Put/Hammer Throw Ring**

SECTION 11480 Athletic Equipment - Field

### **PART 1 GENERAL**

#### **1.01 WORK INCLUDED**

**A.** Provide all equipment and materials, and do all work necessary to furnish and install the athletic equipment, as indicated on the drawings and as specified herein. Athletic equipment shall include, but not be limited to:

1. TFSWRING Webbed Shot Put/Hammer Throw Ring

#### **1.02 RELATED WORK**

**A.** Examine contract documents for requirements that affect work of this section. Other specification sections that directly relate to the work of this section include, but are not limited to:

1. Section 02200 – Earthwork; Excavation and Backfill and establishment of sub-grade elevations.
2. Section 02511 – Asphalt, Concrete, and Pavement
3. Section 02535 – Synthetic Track Surfacing
4. Section 02542 – Synthetic Field Surfacing
5. Section 03300 – Cast-in-Place Concrete

#### **1.03 REFERENCES**

**A.** Comply with applicable requirements of the following standards. Where these standards conflict with other specified requirements, the most restrictive requirements shall govern.

1. National Federation of State High School Associations (NFHS)
2. National Collegiate Athletic Association (NCAA)
3. International Amateur Athletic Association (IAAF)
4. American Sports Builders Association (ASBA)
5. Manufacturers Data and Recommended Installation Requirements

#### **1.04 SUBMITTALS**

**A.** Manufacturers Product Data

1. Provide manufacturers product data prior to actual field installation work, for Architects or Owners representatives



review.

**B. Shop Drawings**

1. Provide drawings of the manufacturers recommended installation and foundation requirements prior to actual field installation work, for Architects or Owners representatives review.

**1.05 QUALITY ASSURANCE**

- A.** Manufacturers warranties shall pass to the Owner and certification made that the product materials meet all applicable grade trademarks or conform to industry standards and inspection requirements.

**1.06 PRODUCT DELIVERY AND STORAGE**

- A.** Materials delivered to the site shall be examined for damage or defects in shipping. Any defects shall be noted and reported to the Owners representative. Replacements, if necessary, shall be immediately re-ordered, so as to minimize any conflict with the construction schedule. Sound materials shall be stored above ground under protective cover or indoors so as to provide proper protection.

**PART 2 PRODUCTS**

**2.01 Webbed Shot Put/Hammer Throw Ring**

- A.** BASE: TFSWRING Webbed Shot Putt/Hammer Throw Ring as manufactured by:

Sportsfield Specialties Inc.  
P.O. Box 231  
41155 State Highway 10  
Delhi, NY 13753  
p. 888-975-3343  
f. 607-746-8481

**B. COMPONENTS:**

1. TFSWRING fabricated with 2.0in x 2.0in x .25in Aluminum Angle, 84.0in Diameter, having the following attributes:
  - A. Aluminum Web Reinforcement

**PART 3 EXECUTION**

**3.01 INSTALLATION OF EQUIPMENT**

- A.** All athletic equipment shall be installed as recommended with manufacturer's written directions, and as indicated on the drawings.

**END OF SECTION**

DESIGNED TO MEET THE DEMANDS  
OF MODERN SPORTS CONSTRUCTION

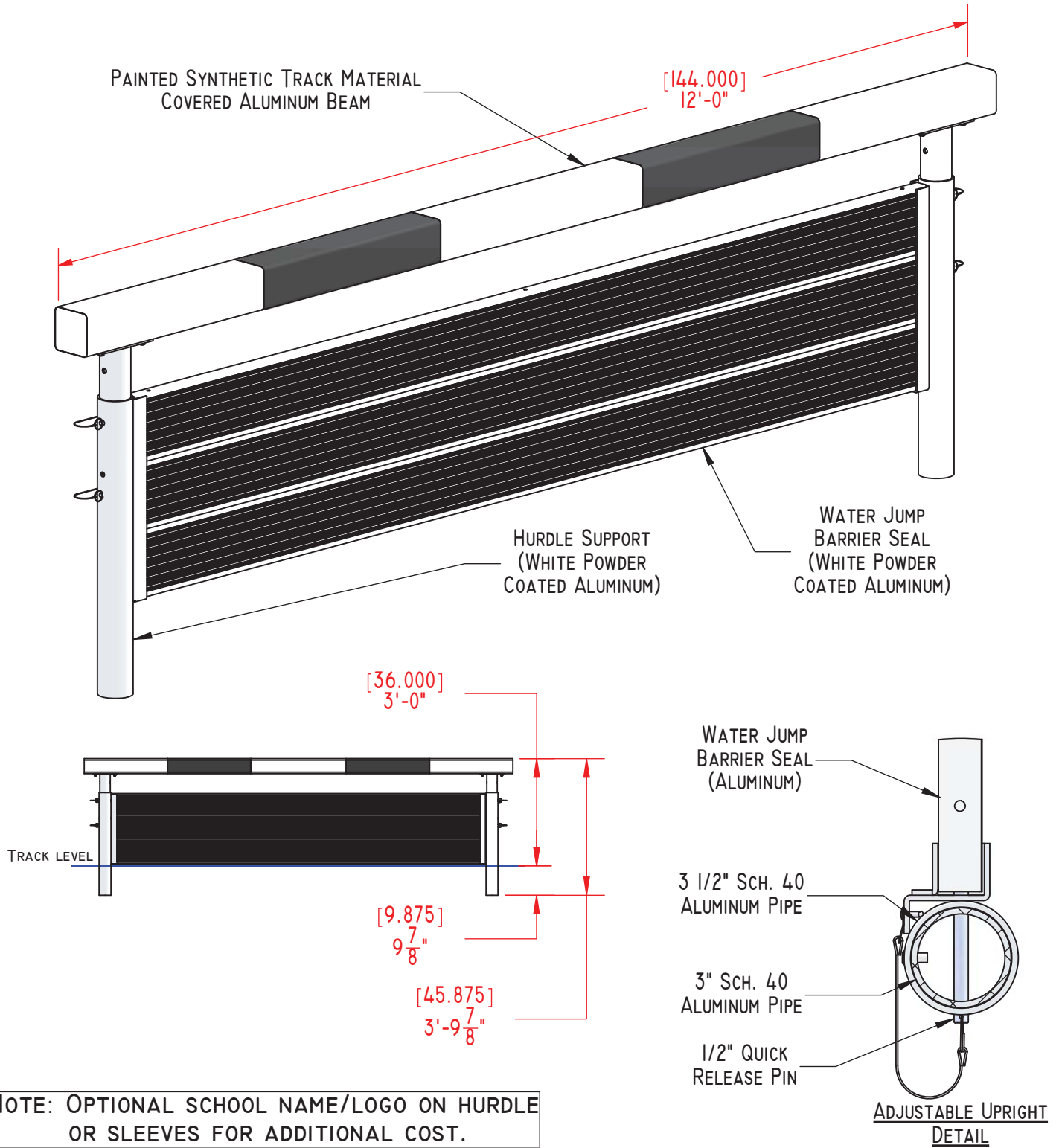


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DELHI, NY 13753  
TOLL FREE: 888-975-3343  
FAX: 607-746-8481



**NOTE: OPTIONAL SCHOOL NAME/LOGO ON HURDLE OR SLEEVES FOR ADDITIONAL COST.**

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**ADJUSTABLE STEEPLE CHASE HURDLE  
WJ5020 PLAN VIEW - MEN'S POSITION**

NOT TO SCALE

SPORTSFIELD SPECIALTIES INC 11012014

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OF MODERN SPORTS CONSTRUCTION

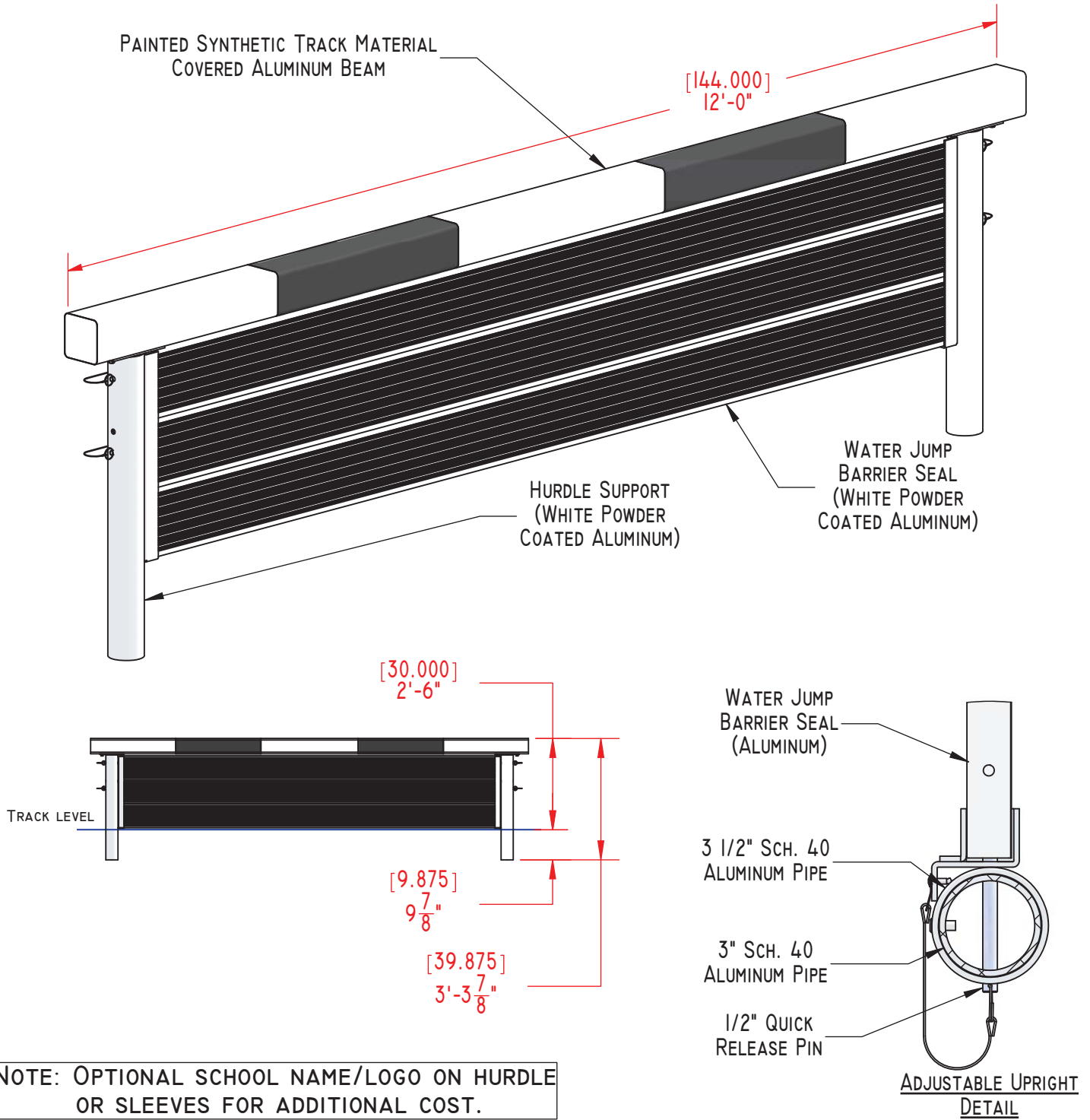


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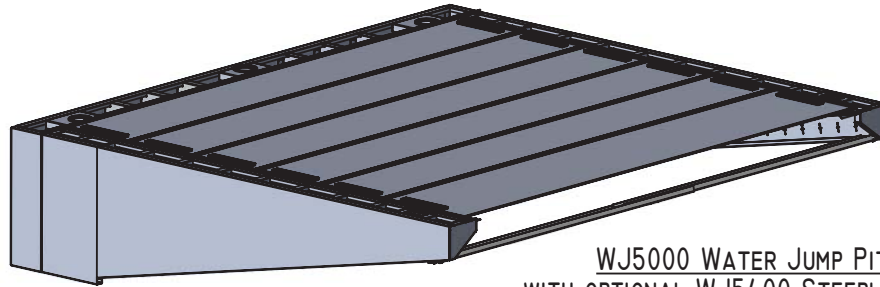
**ADJUSTABLE STEEPLE CHASE HURDLE  
WJ5020 PLAN VIEW - WOMEN'S POSITION**

NOT TO SCALE

SPORTSFIELD SPECIALTIES INC 11012014

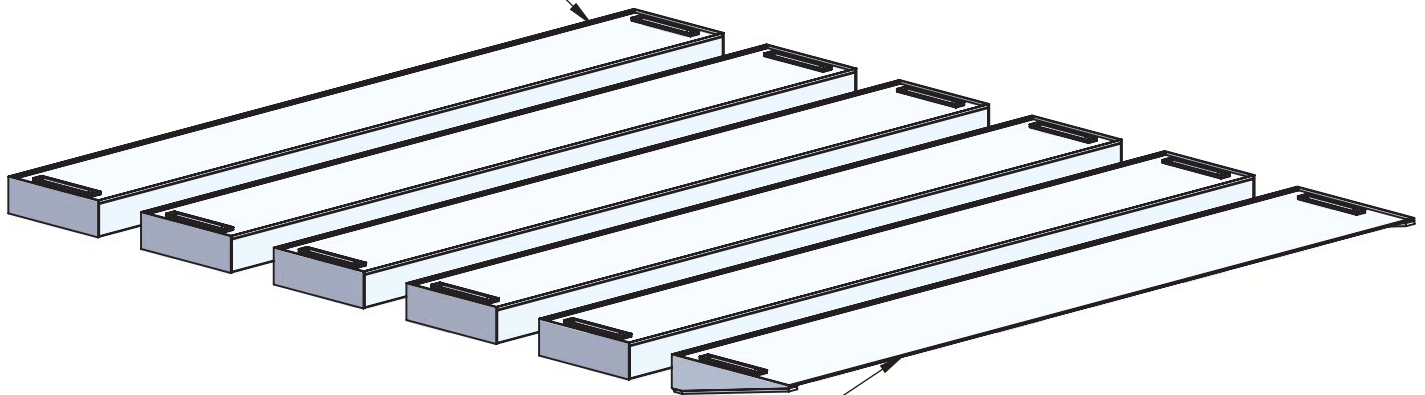
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PO BOX 231  
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TOLL FREE: 888-975-3343  
FAX: 607-746-8481



WJ5000 WATER JUMP PIT  
WITH OPTIONAL WJ5400 STEEPLECHASE  
COVER SET

(5) STANDARD STEEPLECHASE COVER  
PART# 5401



(1) WEDGE COVER  
PART# 5402

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**WJ5400 STEEPLECHASE WATER JUMP  
PIT PANEL COVER SET**

NOT TO SCALE

PRODUCT WEIGHT: 540 LBS.

SPORTSFIELD SPECIALTIES INC 11012014

## **TFLTP012SS International 12" Long/Triple Jump Take-Off Board**

SECTION 11480 Athletic Equipment - Track & Field

### **PART 1 GENERAL**

#### **1.01 WORK INCLUDED**

**A.** Provide all equipment and materials, and do all work necessary to furnish and install the athletic equipment, as indicated on the drawings and as specified herein. Athletic equipment shall include, but not be limited to:

1. TFLTP012SS International 12" Take-Off Board

#### **1.02 RELATED WORK**

**A.** Examine contract documents for requirements that affect work of this section. Other specification sections that directly relate to the work of this section include, but are not limited to:

1. Section 02200 – Earthwork; Excavation and Backfill and establishment of sub-grade elevations.
2. Section 02511 – Asphalt, Concrete, and Pavement
3. Section 02535 – Synthetic Track Surfacing
4. Section 02542 – Synthetic Field Surfacing
5. Section 03300 – Cast-in-Place Concrete

#### **1.03 REFERENCES**

**A.** Comply with applicable requirements of the following standards. Where these standards conflict with other specified requirements, the most restrictive requirements shall govern.

1. National Federation of State High School Associations (NFHS)
2. National Collegiate Athletic Association (NCAA)
3. International Amateur Athletic Association (IAAF)
4. American Sports Builders Association (ASBA)
5. American Wood Preserver's Association (AWPA)
6. Manufacturers Data and Recommended Installation Requirements

#### **1.04 SUBMITTALS**

**A.** Manufacturers Product Data

1. Provide manufacturers product data prior to actual field

installation work, for Architects or Owners representatives review.

**B. Shop Drawings**

1. Provide drawings of the manufacturers recommended installation and foundation requirements prior to actual field installation work, for Architects or Owners representatives review.

**1.05 QUALITY ASSURANCE**

- A.** Manufacturers warranties shall pass to the Owner and certification made that the product materials meet all applicable grade trademarks or conform to industry standards and inspection requirements.

**1.06 PRODUCT DELIVERY AND STORAGE**

- A.** Materials delivered to the site shall be examined for damage or defects in shipping. Any defects shall be noted and reported to the Owners representative. Replacements, if necessary, shall be immediately re-ordered, so as to minimize any conflict with the construction schedule. Sound materials shall be stored above ground under protective cover or indoors so as to provide proper protection.

**PART 2 PRODUCTS**

**2.01 International 12" Long/Triple Jump Take-Off Board**

- A.** BASE: TFLTP012SS International 12" Take-Off Board as manufactured by:

Sportsfield Specialties Inc.  
P.O. Box 231  
41155 State Highway 10  
Delhi, NY 13753  
p. 888-975-3343  
f. 607-746-8481

**B. COMPONENTS:**

1. International Model # TFLT012SS, 12.0in 16 Gauge Stainless Steel Tray, with Stainless Steel insert containing double surface support, 0.75in White Synthetic Polyboard Board, 0.75in Yellow Synthetic Polyboard Foul Strip, Lift Handles for Insert Removal, Stainless Steel

Adjustment Bolts, and 2 lbs of 'Jolly King' Plasticene. Overall  
Dimensions: 2.81in x 12.0in x 48.0in

**PART 3 EXECUTION**

**3.01 INSTALLATION OF EQUIPMENT**

- A.** All athletic equipment shall be installed as recommended with manufacturer's written directions, and as indicated on the drawings.

**END OF SECTION**



DESIGNED TO MEET THE DEMANDS  
OF MODERN SPORTS CONSTRUCTION



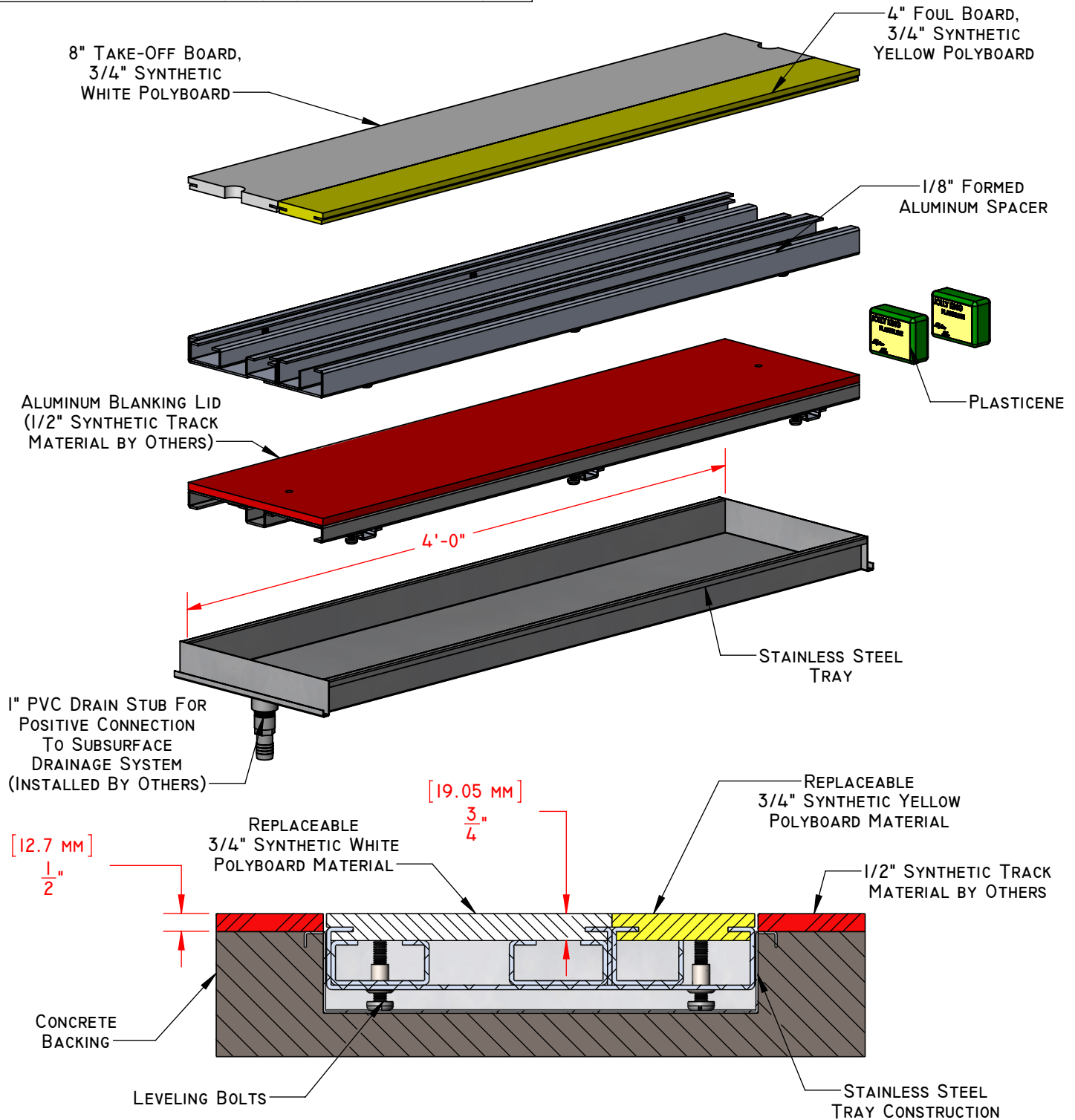
FieldTurf USA Inc

**SPORTSFIELD  
SPECIALTIES**

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PO BOX 231  
DELHI, NY 13753  
TOLL FREE: 888-975-3343  
FAX: 607-746-8481

UNITED STATES PATENT # 8,337,318, ISSUED DECEMBER 25, 2012



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**TFLTPO12SS-SYN - 12" LONG/TRIPLE JUMP TAKE-OFF BOARD SYSTEM WITH REPLACEMENT BLANKING LID**

NOT TO SCALE

SPORTSFIELD SPECIALTIES INC 02272015

DESIGNED TO MEET THE DEMANDS  
OF MODERN SPORTS CONSTRUCTION



FieldTurf USA Inc

**SPORTSFIELD  
SPECIALTIES**

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PO BOX 231  
DELHI, NY 13753  
TOLL FREE: 888-975-3343  
FAX: 607-746-8481

SET INCLUDES ALL HARDWARE  
AND TWO (2) POST CAPS

2-7/8" OD GALVANIZED  
12 GAUGE STEEL

INTERNAL WINDING  
MECHANISM WITH  
BRASS HAND CRANK

POWDER COATED  
BLACK FINISH

[42.00]  
3'-6"

3" DIAMETER  
PVC GROUND SLEEVES  
(SET OF 2)

[16.00]  
1'-4"

ACCESSORIES INCLUDED:

- REMOVABLE BRASS HAND CRANK
- TPGS POST GROUND SLEEVES
- TN NET
- TNS NET STRAP
- TNA NET ANCHOR

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# TSIB INTERNAL WIND TENNIS SYSTEM

NOT TO SCALE

SPORTSFIELD SPECIALTIES INC 08182015

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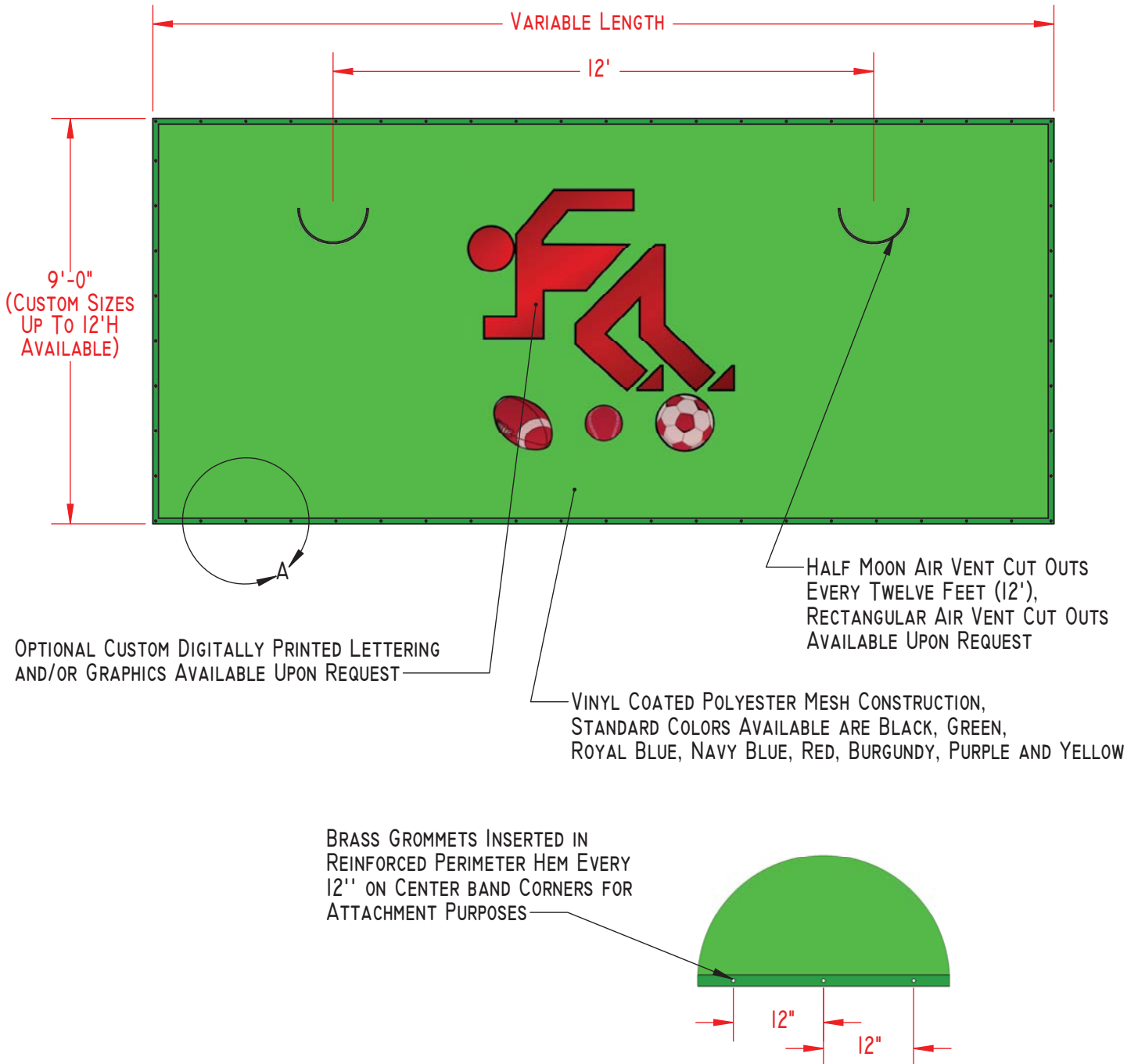


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**STANDARD PART NUMBERS:**

VCP9 - WINDSCREEN 9'H x VARIABLE LENGTH  
VCP9-CUSTOM - CUSTOM WINDSCREEN SIZES UP TO 12'H x VARIABLE LENGTH  
WDIGITAL - OPTIONAL DIGITALLY PRINTED GRAPHICS AND/OR LETTERING

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**VCP9 9'H VINYL COATED POLYESTER MESH  
WINDSCREEN MATERIAL**

NOT TO SCALE

SPORTSFIELD SPECIALTIES INC 11012014

DESIGNED TO MEET THE DEMANDS  
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MADE FROM TWO INCH SQUARE (2" x 2") HEAVY GAUGE ALUMINUM TUBE

SECTIONS MEASURE TWENTY FEET (20') IN LENGTH AND ARE  
NUMBERED FOR EASE OF INSTALLATION

FORM FITTED AND MANUFACTURED TO EXACT TRACK SPECIFICATIONS  
FROM PROVIDED PROJECT LAYOUT DRAWINGS AND INFORMATION,  
\*REQUIRED-BY OTHERS\*

CURBING SPLITS 1/2" ABOVE SYNTHETIC TRACK SURFACE ON  
ANCHOR CLIPS FOR EFFICIENT DRAINAGE

ALUMINUM FINISH IS SILVER OR GOLD ANODIZED (ELECTROPLATED)

IAAF, NCAA, AND USATF RULES COMPLIANT

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**TF852A - GILL ATHLETICS ANODIZED ALUMINUM TRACK CURB**

NOT TO SCALE

SPORTSFIELD SPECIALTIES INC 07262012



## Soccer Goal with Optional Mobility Kit Installation Notes

SG824R (SG4950), SG721R, SG618R

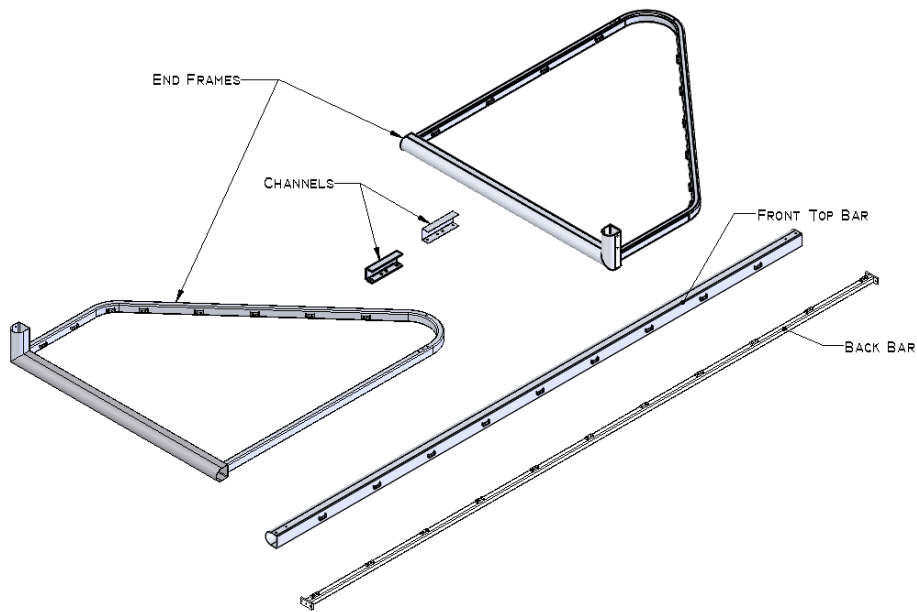


Figure 1

1. Begin by laying out all of the soccer goal components. Place the end frames far enough apart to fit the top crossbar between them with the net clips facing outwards. Place one channel at each connection. (Fig. 1).

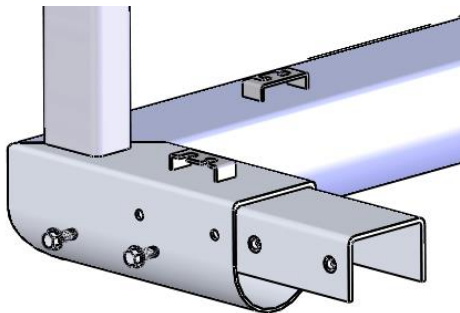


Figure 2A

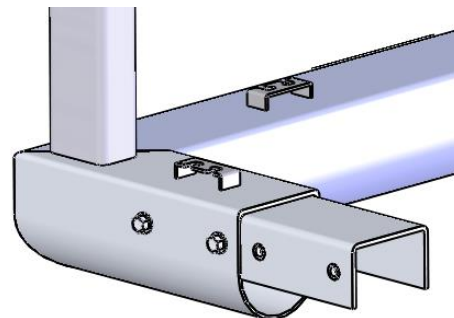


Figure 2B

2. Use (2) 3/8" – 16 x 1" serrated hex bolts to attach the top bar channel to the inside of each end frame (Figs. 2A & 2B). **Note: Do not tighten hardware until all bolts are in place.**

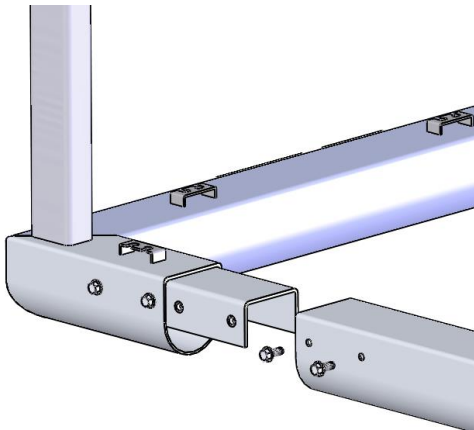


Figure 3A

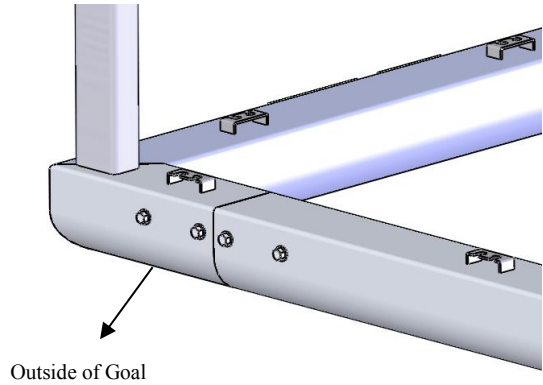


Figure 3B

3. Connect the end frames to the crossbar by sliding the crossbar over the channel (Fig. 3A), confirm all net clips are facing toward the outside of the goal. Use (2) 3/8" – 16 x 1" serrated hex bolts to attach the crossbar to each end frame (Fig. 3B). Tighten all hardware.

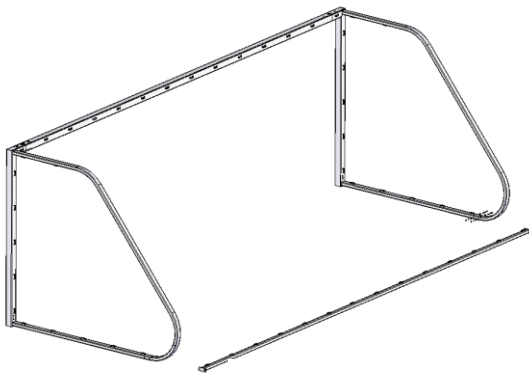


Figure 4

4. Before attaching the ground bar to the goal, carefully flip the goal into the proper position by lifting up on both ends of the crossbar. Place the ground bar between the two end frames (Fig. 4).

5. Attach the ground bar to the end frames with (2) 3/8"-16 x 4-1/2" bolts, (4) 3/8" flat washers, (1) 4952 (Frame Plate), (2) 3/8" lock washers, and (2) 3/8"-16 hex nuts. Verify the net clips are facing toward the outside of the goal. If football and soccer share an end line, position the ground bar on the inside holes. If soccer and football each have their own end line, position the ground bar on the outside holes. Tighten all hardware (Fig. 5).

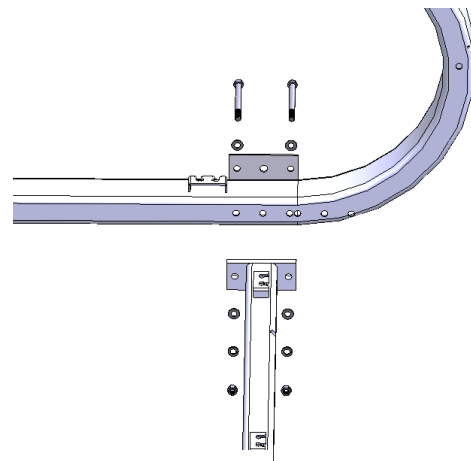


Figure 5

6. With the goal now fully assembled, place the net flat on the ground and locate the corners of the net. Locate the centerline of the bound edge that will be attached to the crossbar. The centerline of the binding will be attached to the centerline clip of the crossbar. Lay the soccer goal down on its face, attach the net by first pushing the outer binding through the clip, then securing in the groove (Fig. 6). Start in the middle of the goal and attach every other clip, and then go back through and attach the remaining clips. Once clipped, apply weight to the clipped net to stretch material. Next, work down both uprights and then back around the End Frame. Follow the same procedure used for the crossbar. Finish by attaching the net to the Ground Bar.

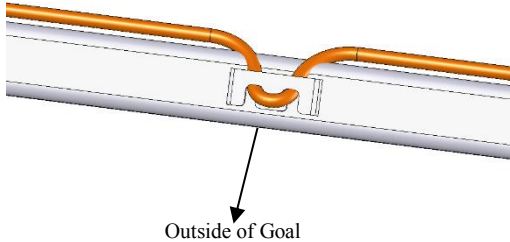


Figure 6

7. Install the goal strap from the inside of the goal. Route the strap through the goal clip as shown below (Figure 7) and loop the strap around the goal frame securing the strap to itself. Stretch the goal strap to the other side of the goal and attach as previously done.

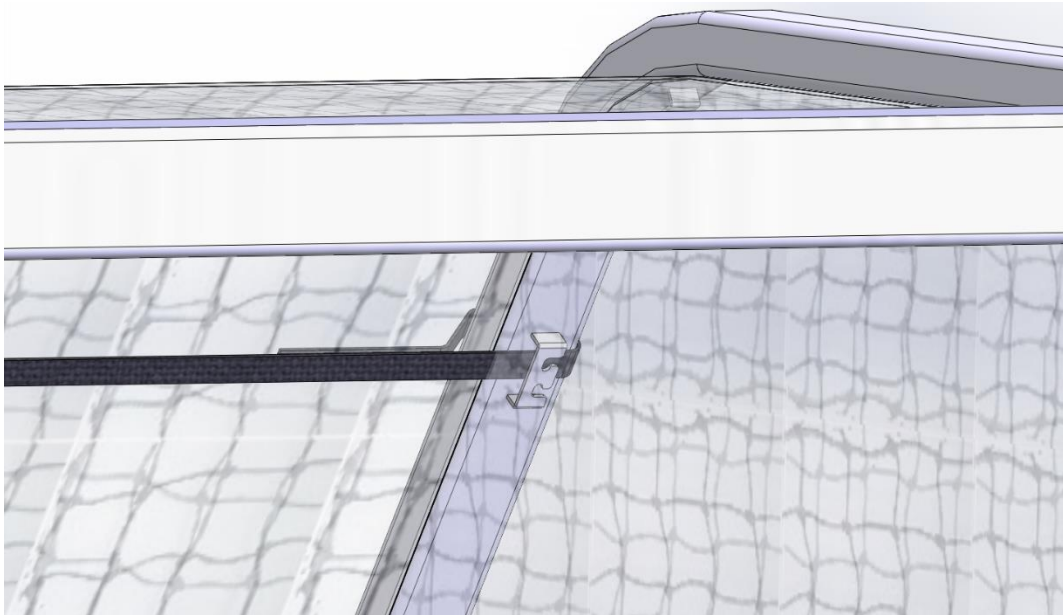


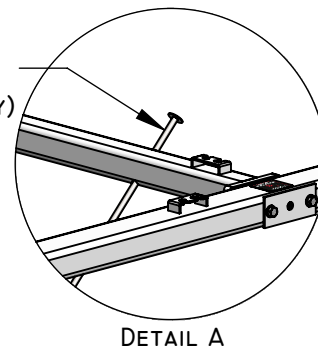
Figure 7

**- Standard Installation Complete -**

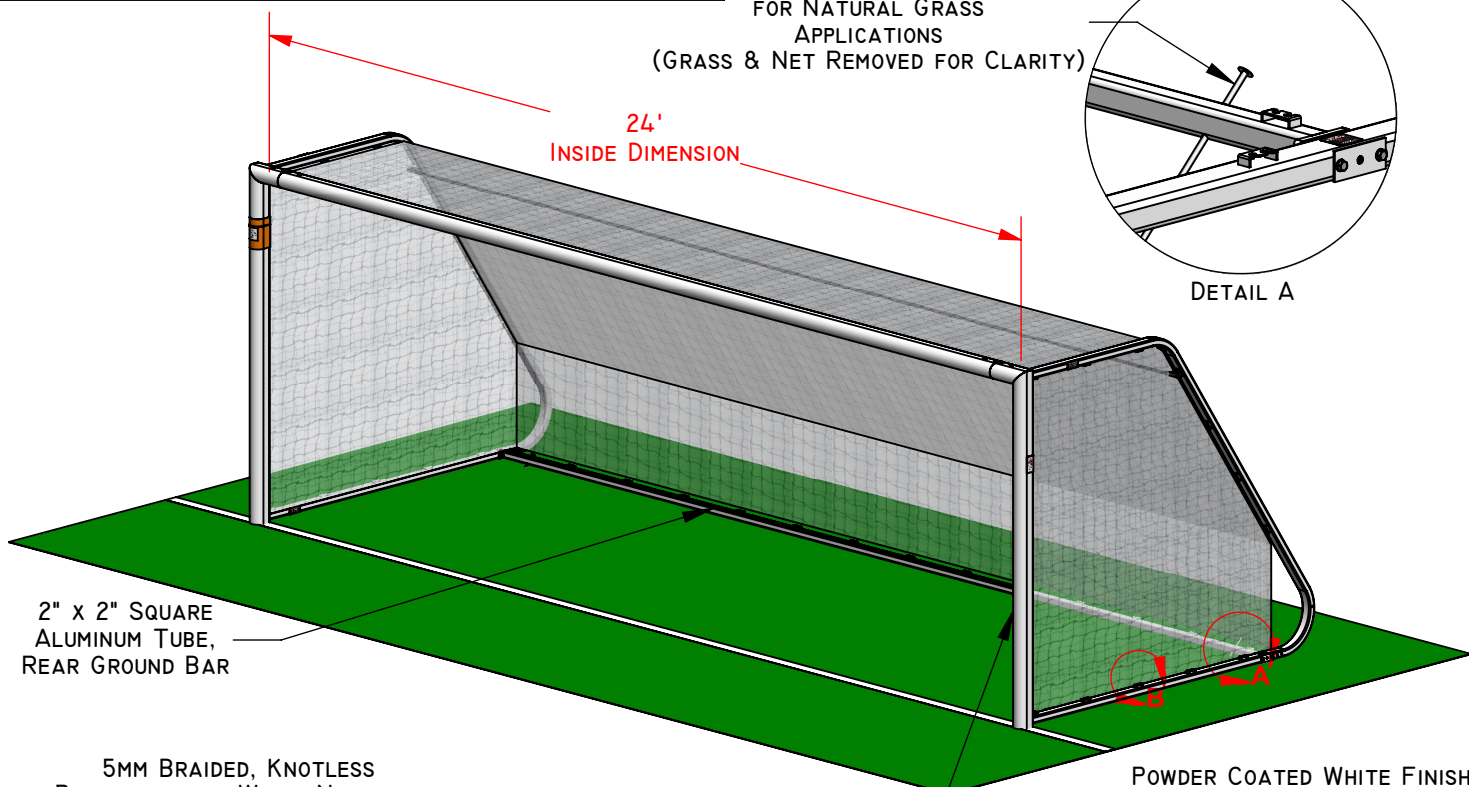
**OPTIONAL EQUIPMENT:**  
 SGMObILE® INTEGRATED SOCCER GOAL WHEEL KIT - SGMKR  
 SOCCER GOAL SAFETY SYSTEM - SG2S®  
 UNITED STATES PATENT #7,331,880, ISSUED FEBRUARY 19, 2008  
 UNITED STATES PATENT #7,527,569, ISSUED MAY 5, 2009  
 UNITED STATES PATENT #8,777,784, ISSUED JULY 15, 2014

MEETS AND EXCEEDS ASTM F2950-14 STANDARD  
 SAFETY AND PERFORMANCE SPECIFICATION FOR  
 SOCCER GOALS AND ASTM F1938-98 STANDARD  
 GUIDE FOR SAFER USE OF MOVABLE SOCCER GOALS

ANCHORING PIN  
 FOR NATURAL GRASS  
 APPLICATIONS  
 (GRASS & NET REMOVED FOR CLARITY)



24'  
 INSIDE DIMENSION



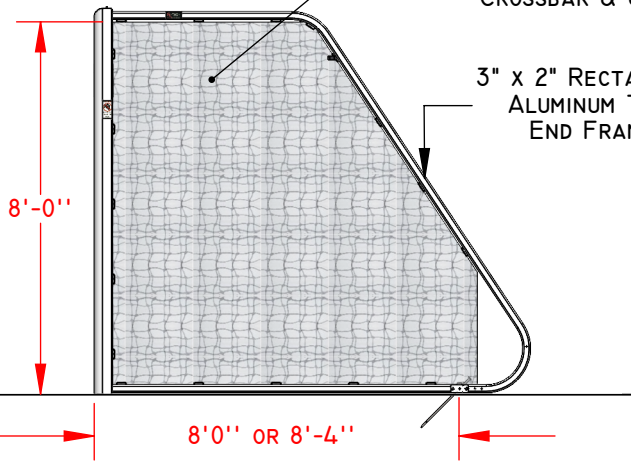
2" x 2" SQUARE ALUMINUM TUBE, REAR GROUND BAR

5MM BRAIDED, KNOTLESS POLYPROPYLENE WHITE NET WITH ROPE BOUND PERIMETER AND 4" SQUARE MESH

4" ROUND FACED ALUMINUM EXTRUSION, CROSSBAR & UPRIGHTS

POWDER COATED WHITE FINISH

3" x 2" RECTANGULAR ALUMINUM TUBE, END FRAMES

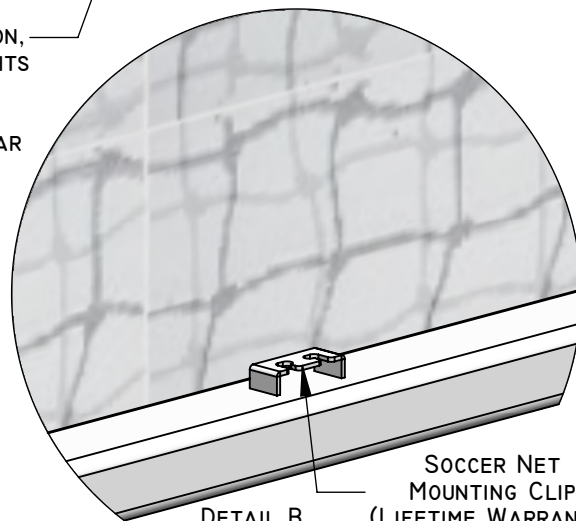


FINISH GRADE

8'-0"

8'-0" OR 8'-4"

FRONT OF POST TO REAR OF GROUND BAR



**PROPRIETARY AND CONFIDENTIAL**

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**SG824R (SG4950) 8' x 24' REGULATION SIZE  
 ROUND FACED SOCCER GOAL**

NOT TO SCALE

SPORTSFIELD SPECIALTIES INC 08202018



8. **THIS STEP IS FOR NATURAL GRASS SYSTEMS ONLY.** The final step is to anchor the goal to the ground preventing it from moving and/or tipping over. Put the goal into position and install the natural grass anchor system consisting of two (2) anchor pins. Drive the anchor pins through holes in the back bar and into the ground (Fig. 8).

**\*\*FOR IN-FILL TURF ANCHORING,  
PLEASE ASK US ABOUT OUR  
PATENTED SG2S™ AND FOR  
NATURAL GRASS, OUR SG2SNG  
SOCCER GOAL SAFETY SYSTEM  
United States Patent #7,331,880 – Issued February 19, 2008  
United States Patent #7,527,569 – Issued May 5, 2009**

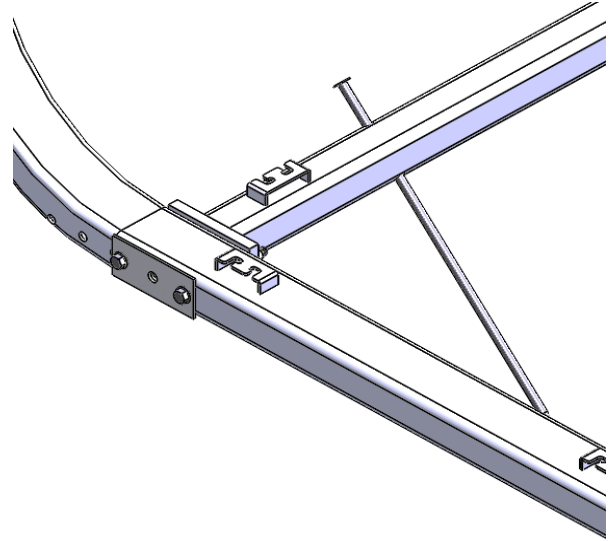


Figure 8

## Optional Mobility Kit

### Tools Required

The following tools will be required to install the Mobility Kit:

- Adjustable Wrench
- Needle Nose Pliers
- Full set of Allen Wrenches

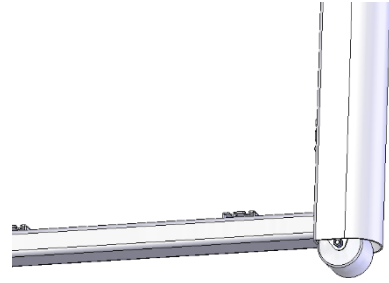


Figure 1 – SGMKR Mobility Kit

### Items Provided

Verify that the following items are included with the Mobility Kit you received:

- (2) Roller/Tube Assemblies (Fig. 3)
- (2) Ring clips pre-assembled to hold in pull pin (Fig. 4)
- (2) Handles with hardware (Fig. 2)

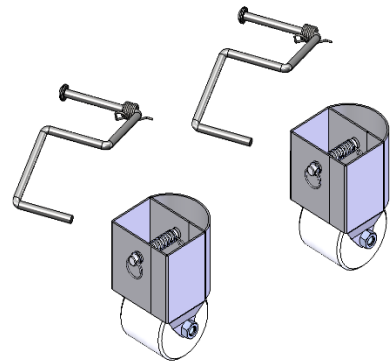


Figure 2 – Mobility Parts

### Install Process

1. Remove rollers from the support tube assembly by removing the bolt, nut, and washer; retain these for re-assembly later. Also remove the ring clip from the pull pin and set aside for re-assembly.

2. Insert the tube assembly, **without the roller or pull pin assembly**, into the bottom of the front goal post. Line up with the lower hole, then, by reaching your hand up through the tube assembly, reinsert the spring loaded pull pin assembly. Locate the hole in the pin towards the rear of the soccer goal front post washer and spring remain in the proper position on the slide assembly). This will allow the stainless steel pull pin to extend past the front post exposing a hole for the previously removed ring clip (Fig 5).

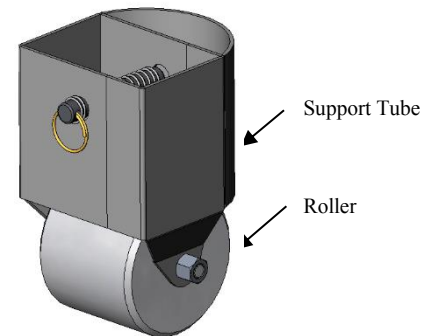


Figure 3 – Roller/Tube Assembly

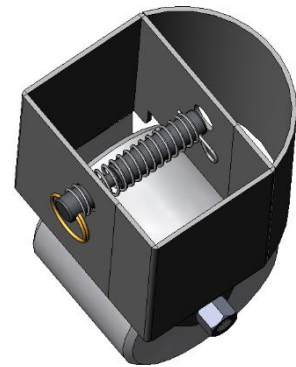


Figure 4 – Locating Pin in Tube Assembly

3. With the pin in place, re-insert the ring clip into the hole by rotating it into position. Once the clip is in place, release the assembly allowing the tube assembly to lock into place in the front post.

4. Re-assemble the roller and tube assembly using the hardware removed in Step 1.

5. Assemble the supplied handles to the end frame using (2) nylon washers, springs, and 3/8" push caps. Install the handle in the hole provided on the Soccer goal end frame (Figs. 6 & 7).

6. Duplicate Steps 1 through 5 for the opposite end frame.

7. With both sides of the soccer goal complete, the rollers can be moved up or down simply by pulling the ring clip and pin outward and sliding the entire roller/tube assembly either up or down in the slot (Fig. 5). Please make sure that all weight has been removed from the assembly prior to changing locations.

8. Using the handles, two can easily pull the goal to its playing location or storage area.

**IMPORTANT: The rollers should always be in the up position while in storage or while in use for game or practice.**

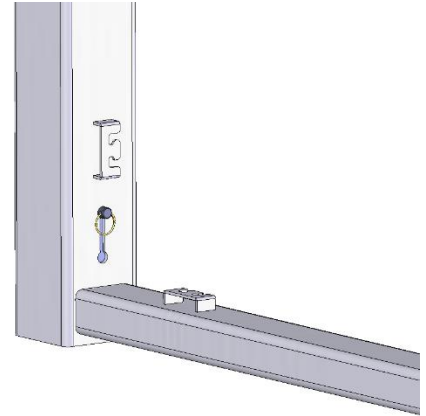


Figure 5 – Wheel in up position

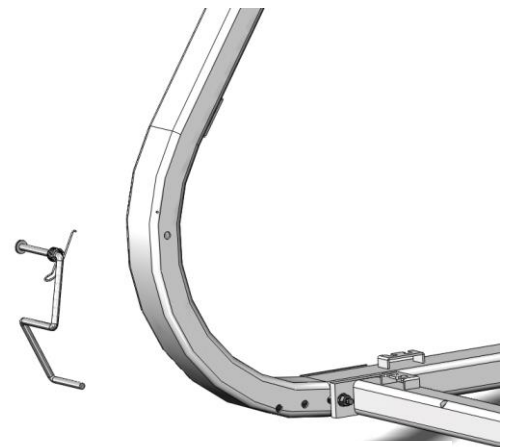


Figure 6 – Handle & end frame

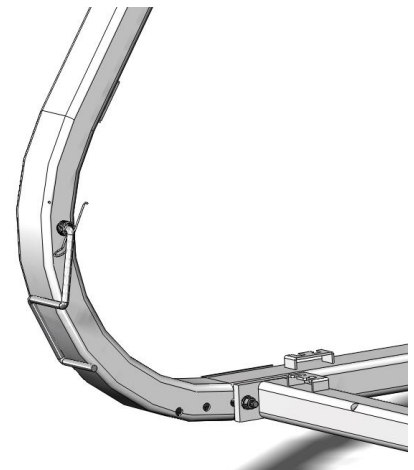


Figure 7 – Handle on end frame

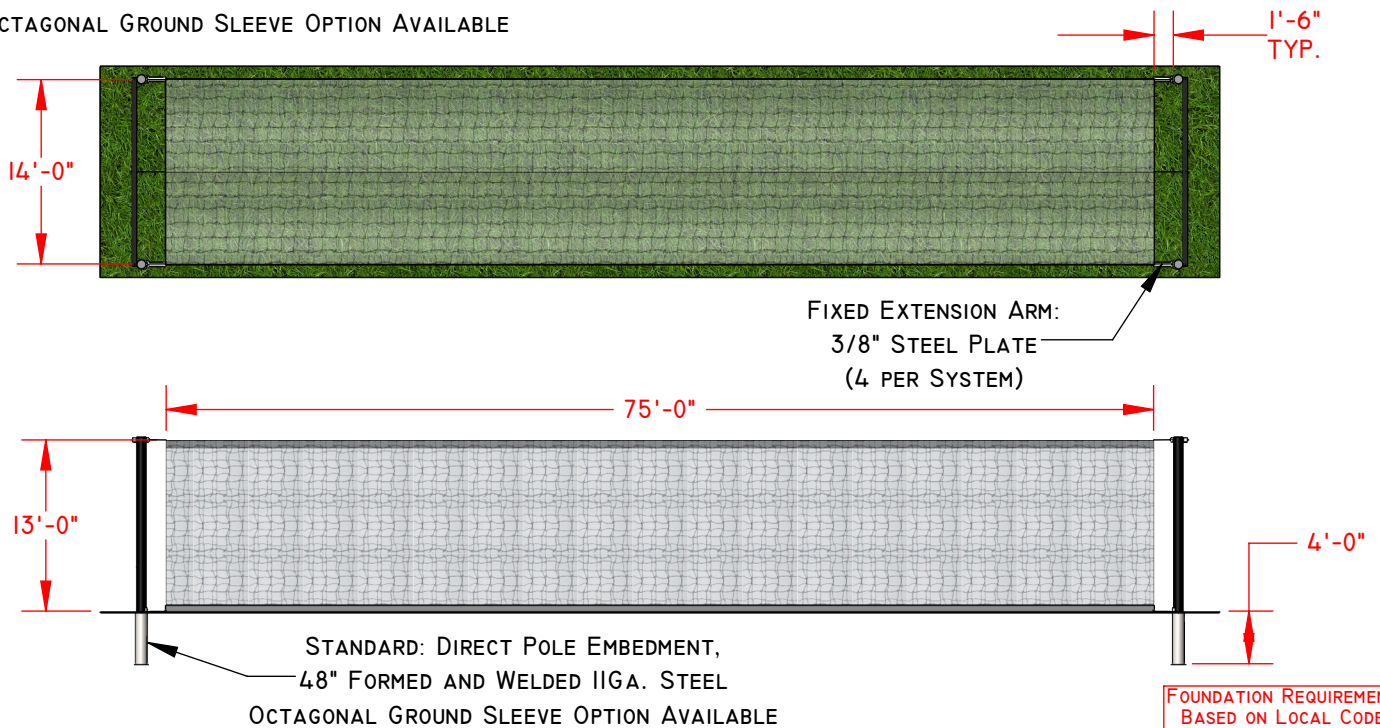
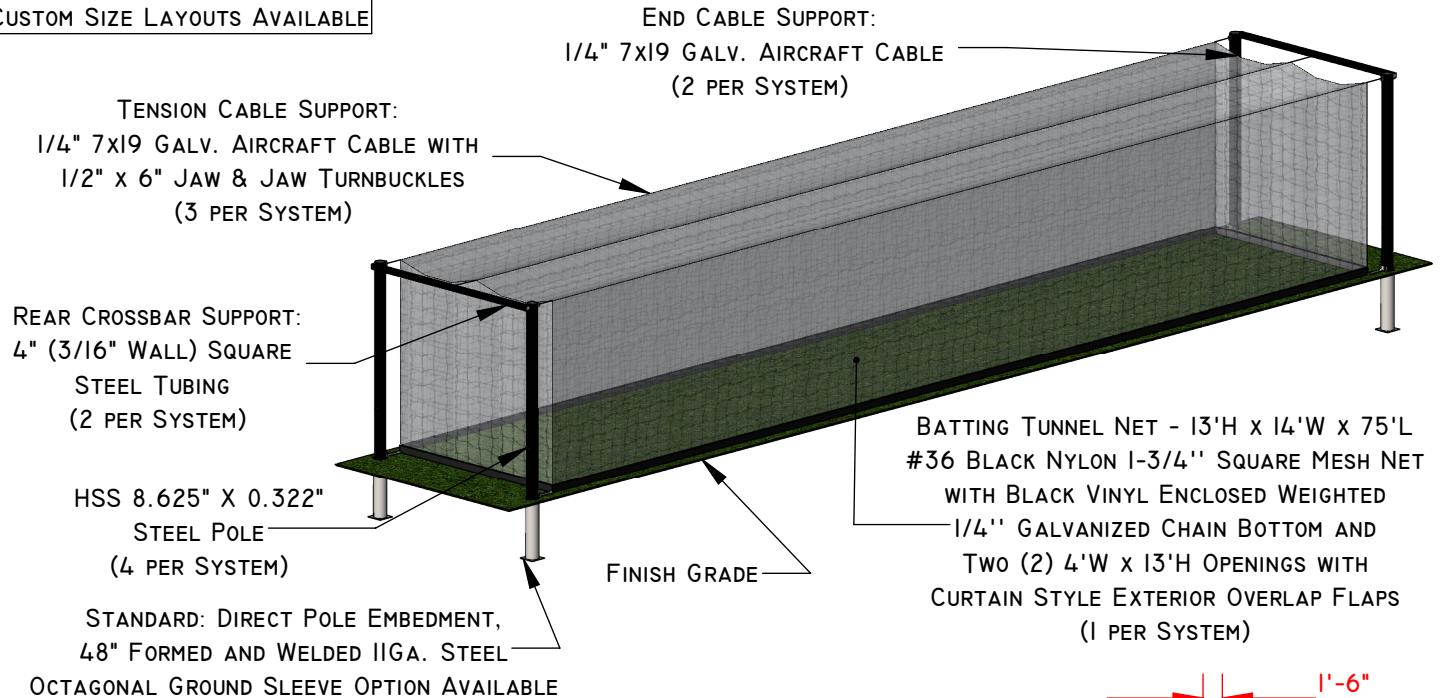
**SEE NEXT PAGE FOR VALUABLE SAFETY TIPS RELATED TO PORTABLE SOCCER GOALS**

### **Soccer Goal Safety Tips**

- \* Securely anchor, with pins and/or counterweights, movable soccer goals at ALL times.
- \* Anchor or chain goals together, to themselves in a folded down position, or to a nearby fence post, dugout, or any other sturdy structure when not in use. If this is not practical, store movable soccer goals in a place where children will not have access to them.
- \* Remove nets when goals are not in use.
- \* Verify structural integrity and check for secure connecting hardware before every use. Replace damaged or missing parts and/or fasteners immediately.
- \* NEVER allow anyone to climb on the net or goal framework.
- \* Ensure safety/warning labels are clearly visible (placed under the crossbar and on the sides of the front-posts at eye level).
- \* Fully disassemble goals for seasonal storage.
- \* Exercise extreme caution and provide adequate manpower when moving goals. Only authorized and properly trained personnel should move soccer goals.
- \* Always instruct players regarding the safe handling of and the potential dangers associated with movable soccer goals.
- \* Movable soccer goals should only be used on LEVEL (flat) fields.

BASE PLATE MOUNTED AND/OR  
CUSTOM SIZE LAYOUTS AVAILABLE

STANDARD BLACK POWDER COATED FINISH



SPORTSFIELD SPECIALTIES, INC. STRONGLY RECOMMENDS THE REMOVAL OF ALL NETS PRIOR TO EXPOSURE TO WINTER WEATHER, INCLUDING SNOW AND/OR ICE STORMS. WHENEVER POSSIBLE, THE NETS SHOULD ALSO BE LOWERED PRIOR TO ANY EXTREME WIND EVENTS. REMOVAL/LOWERING OF THE NETS WILL MITIGATE ANY UNFORESEEN DAMAGE TO THE POLES, NETS AND/OR ATTACHMENT HARDWARE. STORING NETS IN A DRY, PEST FREE LOCATION WILL HELP EXTEND THE LIFE OF THE NETS. SPORTSFIELD SPECIALTIES, INC. WILL NOT BE HELD LIABLE OR ASSUME RESPONSIBILITY FOR ANY DAMAGE TO THE NETS, POLES AND/OR CORRESPONDING ATTACHMENT HARDWARE IF THE NETS ARE NOT REMOVED/LOWERED PRIOR TO THE ABOVE DESCRIBED WIND AND/OR WEATHER EVENTS.

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**BTTBS (LGBBTTN-BS) - BASEBALL SINGLE TENSION BATTING TUNNEL**

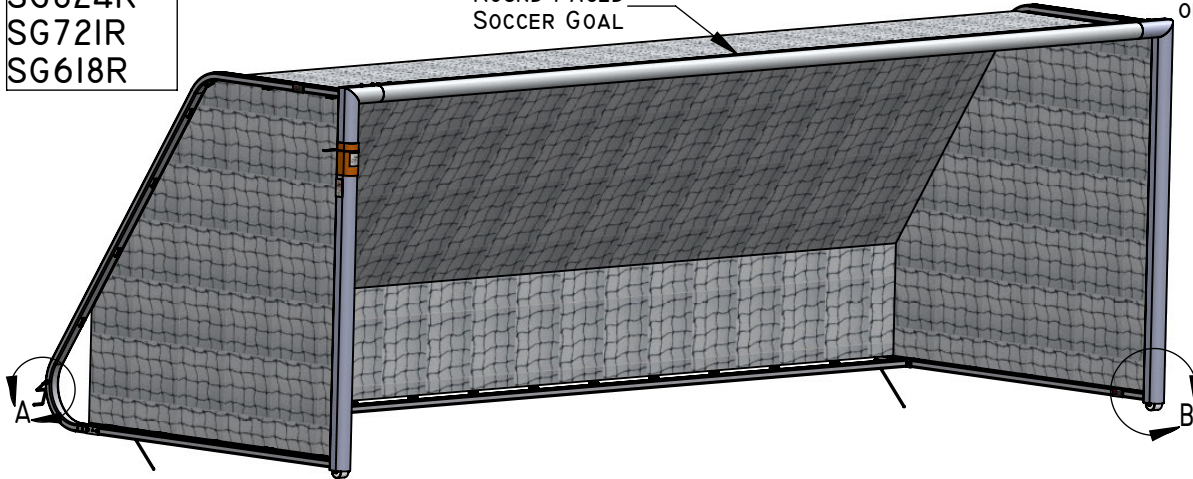
NOT TO SCALE

SPORTSFIELD SPECIALTIES INC 05302019

FOR USE WITH:  
 SG824R  
 SG721R  
 SG618R

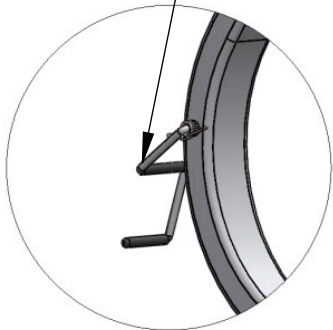
MOBILITY WHEEL KIT FOR  
 USE WITH SYNTHETIC TURF  
 OR NATURAL GRASS  
 APPLICATIONS

ROUND FACED  
 SOCCER GOAL



MOBILITY  
 HANDLE

STAINLESS STEEL  
 FRAME & HARDWARE



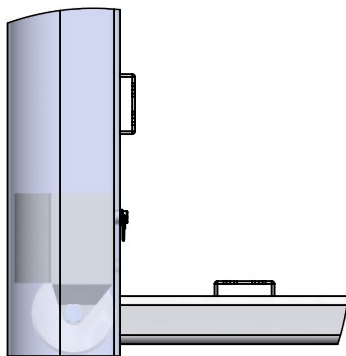
DETAIL A

CUSHIONED  
 RUBBER GRIP

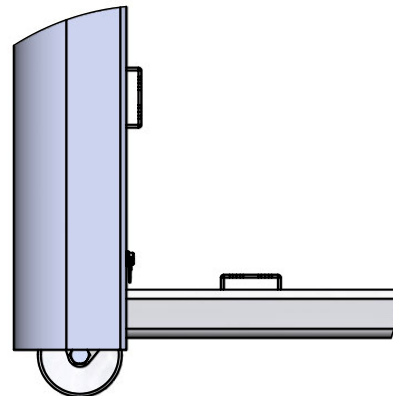
U.H.M.W.  
 PLASTIC ROLLER

MOBILITY  
 WHEEL

DETAIL B



WHEEL IN GAME POSITION



WHEEL IN MOBILE POSITION

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**SGMKR (SG4955) SGMOBILE®  
 ROUND FACED SOCCER GOAL INTEGRATED WHEEL KIT**

NOT TO SCALE

SPORTSFIELD SPECIALTIES INC 07262016

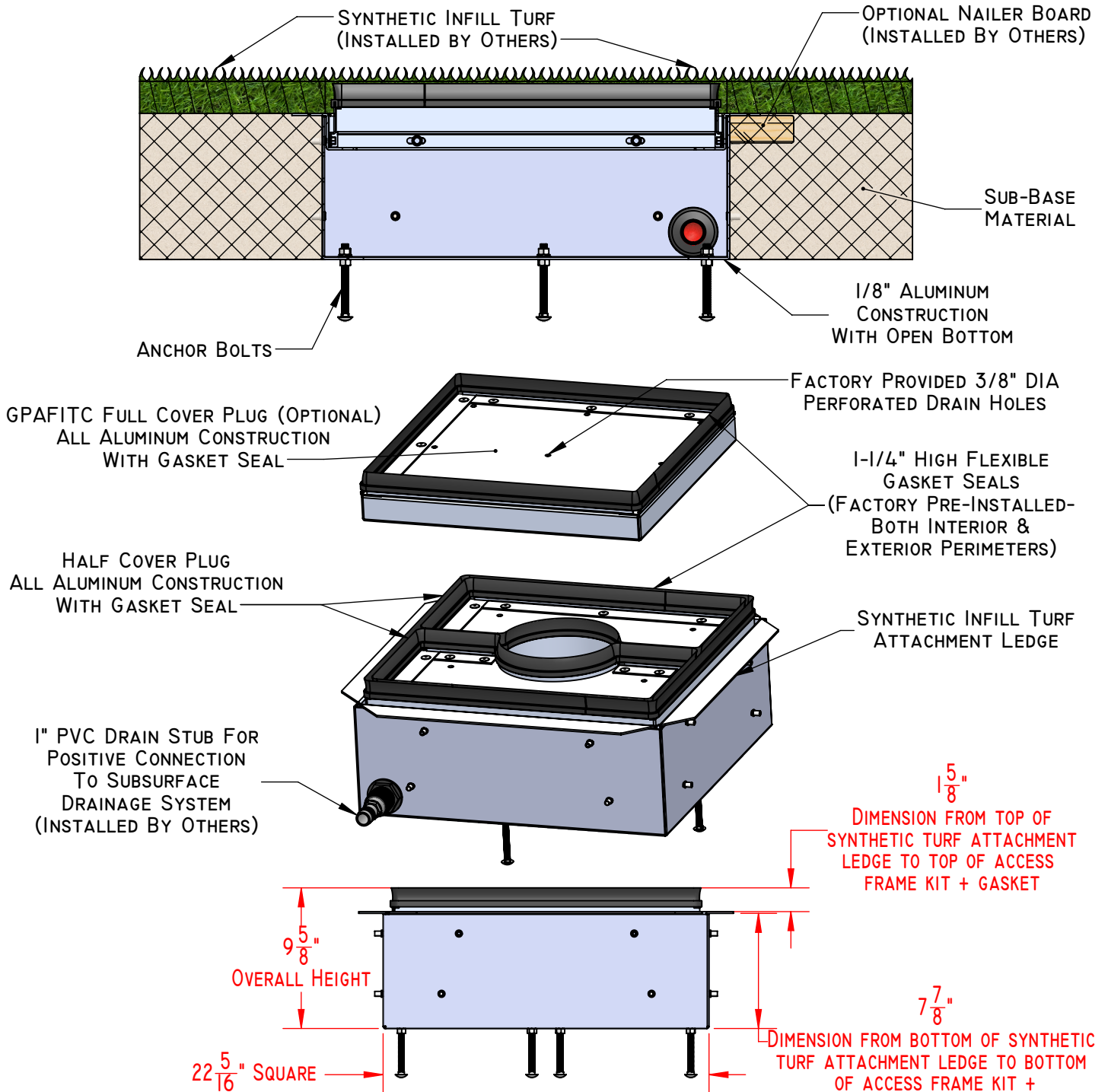
## **REPLACEMENT PARTS**

Contact Sportsfield Specialties Customer Service at 1-888-975-3343 for replacement hardware.



Sportsfield Specialties, Inc.  
P.O. Box 231  
41155 State Highway 10  
Delhi, N.Y. 13753  
Phone: 888-975-3343  
Fax: 607-746-8911  
[www.sportsfieldspecialties.com](http://www.sportsfieldspecialties.com)

**GPAFIT Access Frame Kit + FOR USE WITH GROUND SLEEVE AND BASE PLATE MOUNT  
 ADJUSTRIGHT® FOOTBALL GOAL POSTS INSTALLED IN SYNTHETIC TURF APPLICATIONS**



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**GPAFIT (GP4570) ACCESS FRAME KIT + WITH INFILL  
 RETAINER SYSTEM FOR SYNTHETIC TURF APPLICATIONS**

NOT TO SCALE

SPORTSFIELD SPECIALTIES INC 08222017



## **TFDDH - Discus and Hammer ThrowForm® System Dual Pad**

SECTION 11 68 33.43 Athletic Field Equipment - Track and Field Equipment

### **PART 1 GENERAL**

#### **1.01 WORK INCLUDED**

**A.** Provide all equipment and materials, and do all work necessary to furnish and install the athletic equipment, as indicated on the drawings and as specified herein. Athletic equipment shall include, but not be limited to:

1. TFDDH - Discus and Hammer ThrowForm® System Dual Pad

#### **1.02 RELATED WORK**

**A.** Examine contract documents for requirements that affect work of this section. Other specification divisions and sections that directly relate to the work of this section include, but are not limited to:

1. Division 03 – Concrete; Sections: Cast-in-Place Concrete
2. Division 31 – Earthwork; Sections: Excavation and Backfill and Establishment of Sub-Grade Elevations
3. Division 32 – Exterior Improvements; Sections: Athletic and Recreational Surfacing, Concrete and Asphalt

#### **1.03 REFERENCES**

**A.** Comply with applicable requirements of the following standards. Where these standards conflict with other specified requirements, the most restrictive requirements shall govern.

1. National Federation of State High School Associations (NFHS)
2. National Collegiate Athletic Association (NCAA)
3. International Association of Athletics Federations (IAAF)
4. American Sports Builders Association (ASBA)
5. Manufacturers Data and Recommended Installation Requirements

#### **1.04 SUBMITTALS**

**A.** Manufacturers Product Data

1. Provide manufacturers product data prior to actual field installation work, for Architects or Owners representatives

review.

**B.** Shop Drawings

1. Provide drawings of the manufacturers recommended installation and foundation requirements prior to actual field installation work, for Architects or Owners representatives review.

**1.05 QUALITY ASSURANCE**

- A.** Manufacturers warranties shall pass to the Owner and certification made that the product materials meet all applicable grade trademarks or conform to industry standards and inspection requirements.

**1.06 PRODUCT DELIVERY AND STORAGE**

- A.** Materials delivered to the site shall be examined for damage or defects in shipping. Any defects shall be noted and reported to the Owners representative. Replacements, if necessary, shall be immediately re-ordered, so as to minimize any conflict with the construction schedule. Sound materials shall be stored above ground under protective cover or indoors so as to provide proper protection.

**PART 2 PRODUCTS**

**2.01 TFDDH - Discus and Hammer ThrowForm® System Dual Pad**

- A.** BASE: TFDDH - Discus and Hammer ThrowForm® System Dual Pad as Manufactured and Supplied by:

Sportsfield Specialties, Inc.  
P.O. Box 231  
41155 State Highway 10  
Delhi, NY 13753  
p. 888-975-3343  
[www.sportsfieldspecialties.com](http://www.sportsfieldspecialties.com)

**B.** COMPONENTS:

1. TFDDH - Discus and Hammer ThrowForm® System Dual Pad:
  - a. 10' x 17'-2" x 6" Aluminum Four (4) Piece Forming Assembly
    - i. Formed 3/16" (0.1875") Aluminum Frame and Cross Bracing
      1. 3/16" (0.1875") Aluminum Staking Gussets

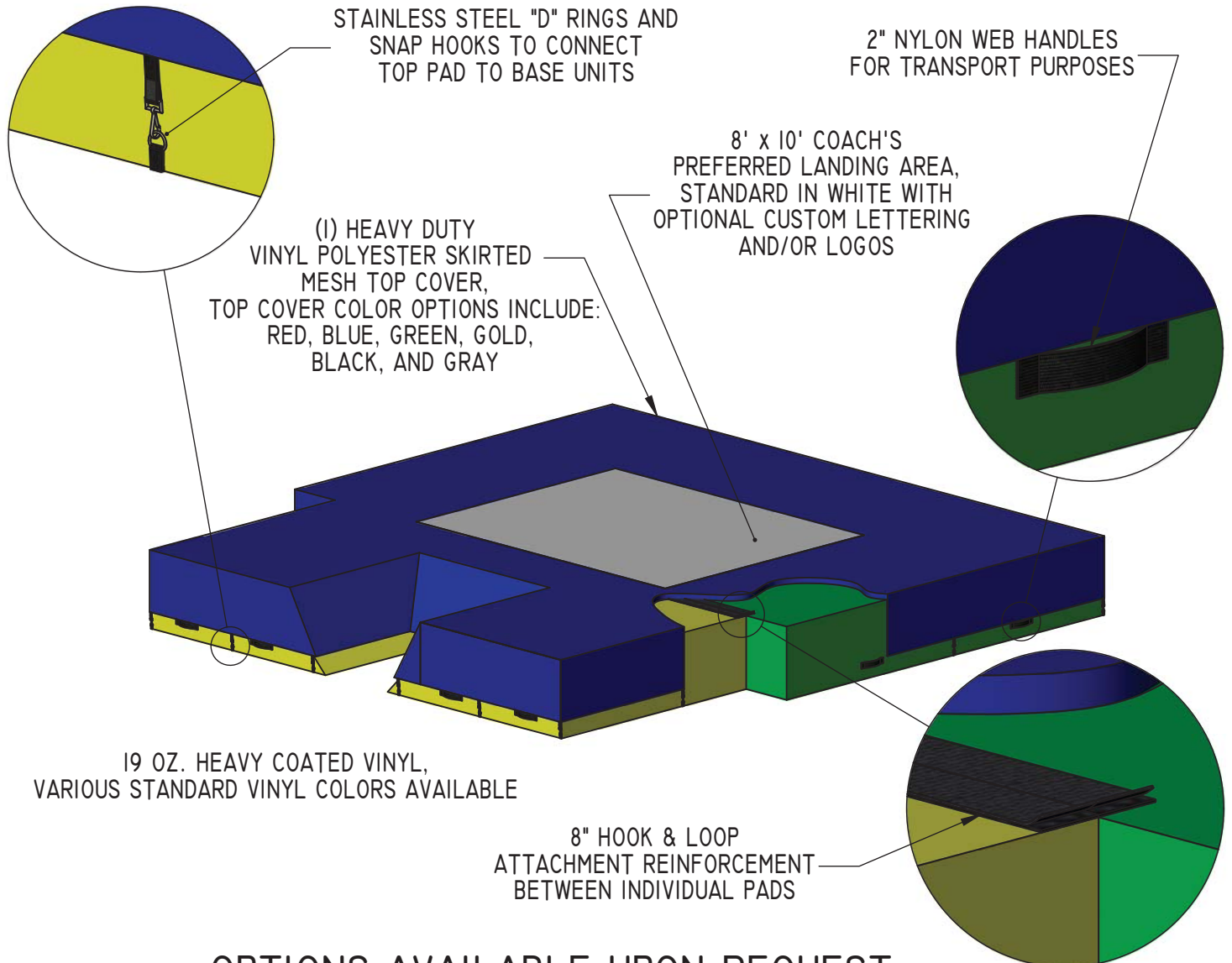
- 2. Rebar Notches
  - ii. Bolt Together Construction
- b. Discus Throw Ring:
  - i. Rolled 4" x 1/4" (0.25") Aluminum Flat Bar
  - ii. Inside Diameter: 98-1/2"
  - iii. 3/4" (0.75") Recessed Concrete Finishing Screed Line
  - iv. Integrally Welded to Forming Assembly
- c. Hammer Throw Ring:
  - i. Rolled 4" x 1/4" (0.25") Aluminum Flat Bar
  - ii. Inside Diameter: 84"
  - iii. 3/4" (0.75") Recessed Concrete Finishing Screed Line
  - iv. Integrally Welded to Forming Assembly
- d. Discus and Hammer Throw Ring Spacing: 7'-9 1/4" (2.37m) Center-to-Center
- e. Twenty (20) 1/2" (0.50") Diameter Aluminum Drainage Pipes Welded Flush with Repressed Concrete Pad
- f. Assembly Hardware

## **PART 3 EXECUTION**

### **3.01 INSTALLATION OF EQUIPMENT**

- A. All ThrowForm® Systems shall be installed as recommended per manufacturer's written instructions and as indicated on the drawings. Concrete anchoring foundations to be determined by others based on local soil conditions and building codes. Installer should have a minimum of five (5) ThrowForm® System installations or similar experience in the previous three (3) years.

**END OF SECTION**



**OPTIONS AVAILABLE UPON REQUEST:**

TFPV202ILAWC - CHAMPION BRONZE ALL WEATHER COVER

TFPV202ILGC - CHAMPION BRONZE GROUND COVER

TFPVBPREC642416 - BASE PROTECTORS (SET OF 2)

CUSTOM LETTERING AND/OR LOGOS

**MEETS AND/OR EXCEEDS ALL NFHS SPECIFICATIONS**

TFPVPBSC - PLANTING BOX SAFETY COLLAR, MANDATORY IN 2003, NFHS RULE 7, SECTION 5, ARTICLE 14\*  
\* ALL POLE VAULT LANDING PAD SYSTEMS COME STANDARD WITH A PLANTING BOX SAFETY COLLAR

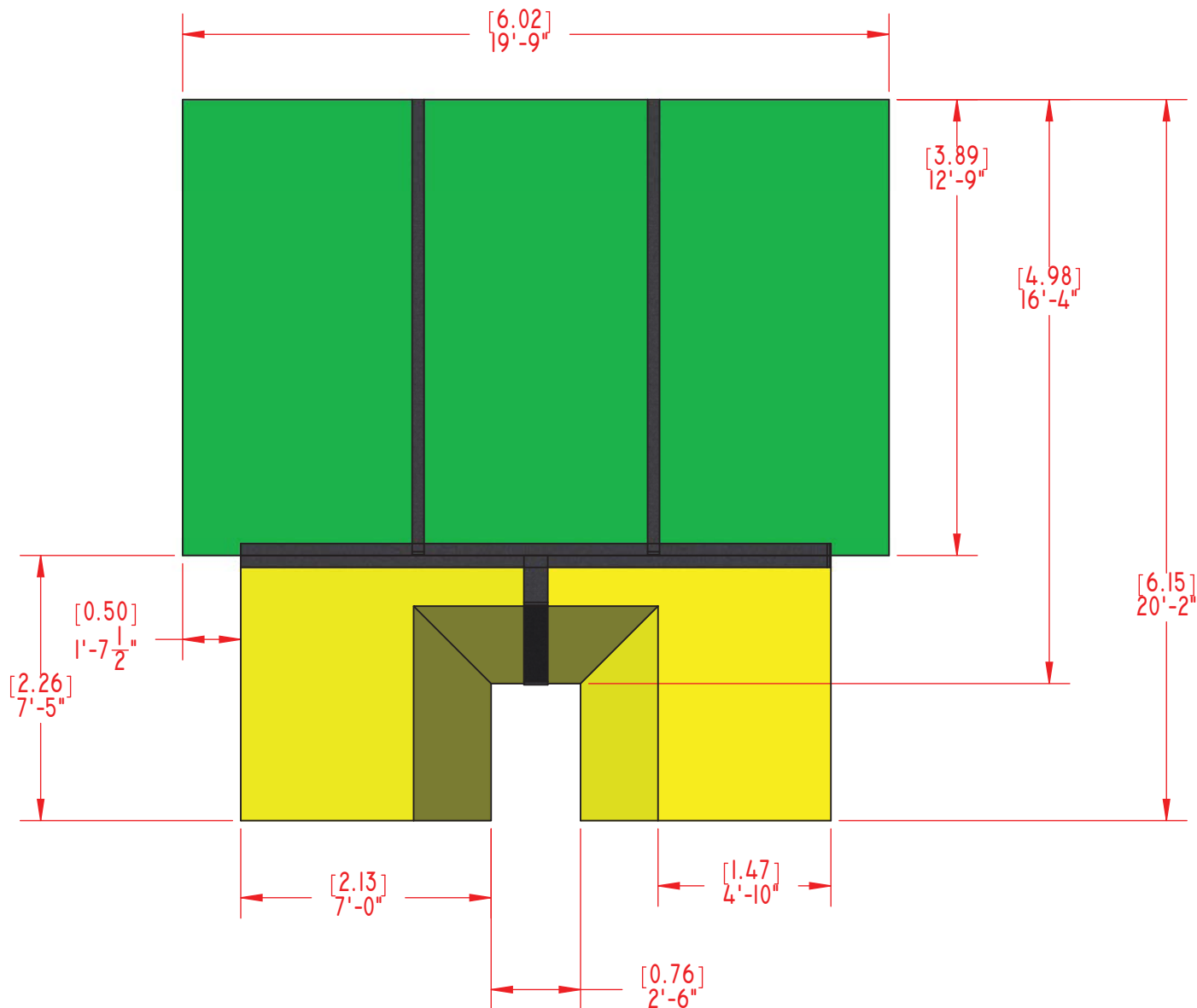
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**JUMPZONE® CHAMPION BRONZE POLE VAULT LANDING SYSTEM OVERVIEW  
TFPV202IL**

NOT TO SCALE

SPORTSFIELD SPECIALTIES INC 08172012



**MEETS AND/OR EXCEEDS ALL NFHS SPECIFICATIONS**

OVERALL SIZE: 19'-9" X 20'-2" X 26"

METRIC: 6.02M X 6.15M X .66M

THREE (3) BASE UNITS: 6'-7" X 12'-9" X 26" (GREEN)

TWO (2) FRONT SLANT UNITS: 8'-3" X 7'-5" X 26" (YELLOW)

ONE (1) SKIRTED MESH TOP COVER: (NOT SHOWN)

ONE (1) TFPVPBSC - PLANTING BOX SAFETY COLLAR (NOT SHOWN)

**PROPRIETARY AND CONFIDENTIAL**

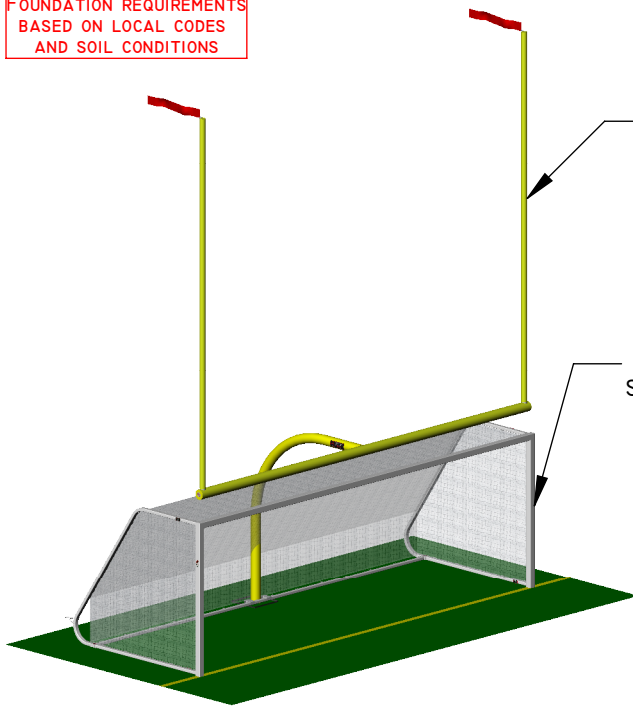
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**JUMPZONE® CHAMPION BRONZE POLE VAULT LANDING SYSTEM OVERVIEW  
TFPV2021L**

NOT TO SCALE

SPORTSFIELD SPECIALTIES INC 08172012

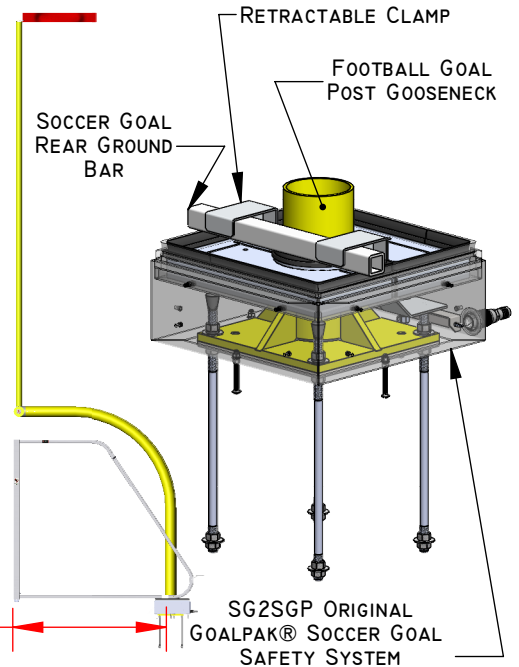
**FOUNDATION REQUIREMENTS  
BASED ON LOCAL CODES  
AND SOIL CONDITIONS**



ADJUSTRIGHT®  
FOOTBALL GOAL POST  
WITH 8' OFFSET GOOSENECK

SG824S  
SQUARE POST SOCCER GOAL  
WITH SGMKS INTEGRATED  
SGMOBILE® WHEEL KIT

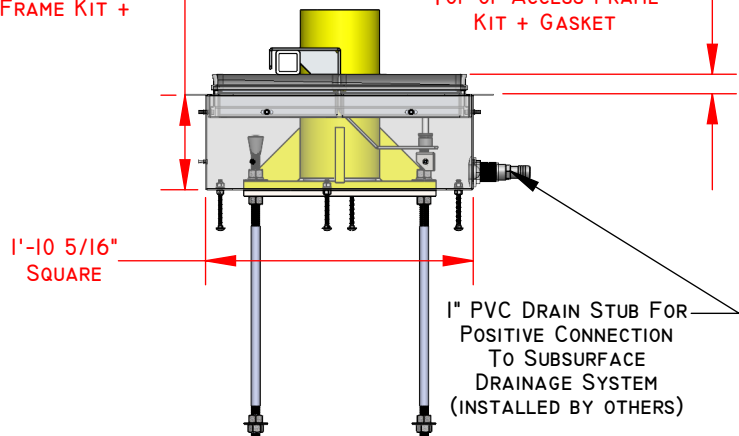
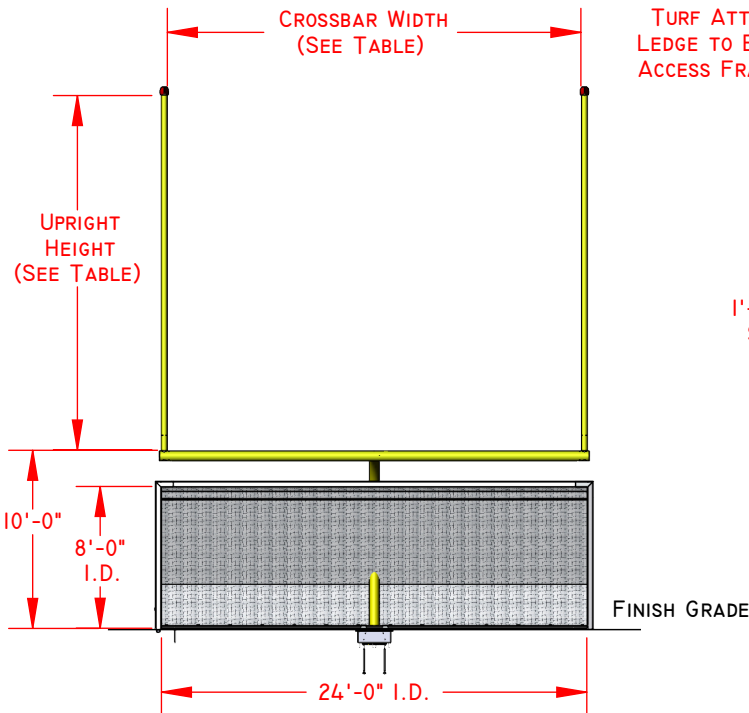
8'-0" OR 8'-4"  
FRONT OF SOCCER POST TO  
REAR OF BACK BAR  
(FRONT FACE OF GOOSENECK)



SG2SGP ORIGINAL  
GOALPAK® SOCCER GOAL  
SAFETY SYSTEM

7 7/8"  
DIMENSION FROM  
BOTTOM OF SYNTHETIC  
TURF ATTACHMENT  
LEDGE TO BOTTOM OF  
ACCESS FRAME KIT +

1 5/8"  
DIMENSION FROM TOP OF  
SYNTHETIC TURF  
ATTACHMENT LEDGE TO  
TOP OF ACCESS FRAME  
KIT + GASKET



PART NO.	UPRIGHT HEIGHT	MODEL	CROSSBAR WIDTH (I.D.)
GPKS20ADJPL	20'-0"	ADJUSTABLE	18'-6" / 23'-4"
GPKS20COLPL	20'-0"	COLLEGE	18'-6"
GPKS20HSPL	20'-0"	HIGH SCHOOL	23'-4"
GPKS30ADJPL	30'-0"	ADJUSTABLE	18'-6" / 23'-4"
GPKS30COLPL	30'-0"	COLLEGE	18'-6"
GPKS30HSPL	30'-0"	HIGH SCHOOL	23'-4"

**PROPRIETARY AND CONFIDENTIAL**  
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**ORIGINAL GOALPAK® FOOTBALL / SQUARE SOCCER GOAL SYSTEM, BASE PLATED MOUNTED**

NOT TO SCALE

SPORTSFIELD SPECIALTIES INC I2082017

OMNIA

### 3. Supplier Response

**Supplier must supply the following information for the Principle Procurement Agency to determine Supplier's qualifications to extend the resulting Master Agreement to Participating Public Agencies through OMNIA Partners.**

#### 3.1 Company

**A. Brief history and description of Supplier to include experience providing similar products and services:**

Date of incorporation: Nov 6, 1996 (FieldTurf International, Inc.)

Date of name change to FieldTurf USA, Inc.: Oct, 1 2004

Tarkett Sports is a world leader in athletic surfacing and is a division of Tarkett Group, which was established in 1886.

FieldTurf USA, Inc/Beynon Sports Surfaces/and Tarkett Indoor Flooring are all part of the Tarkett Sports Company.

**Tarkett Sports:**

Tarkett Sports covers all types of sports surfaces. It boasts a dominant position on its market, a full product line and key expertise at every level of sports. Tarkett Sports is a sports subsidiary of the Tarkett Group. Both FieldTurf and Beynon are part of the Tarkett Sports Division.

Years in Business: Tarkett Sports: 10 years

Years in Business: FieldTurf: 30 Years

Years in Business: Beynon: 40 Years

**TURF:**

FieldTurf was developed and engineered for athletes, by athletes. Before we came along, artificial turf was something to be avoided. The very phrase conjured up images of carpet and concrete, non-contact injuries, and careers ended prematurely. Natural grass was considered the only solution – even though it required constant maintenance and care. This was the environment in which we asked ourselves one question:

**“Can we make synthetic turf that is equal to or better than the best natural grass?”**

In seeking the answer to this question, we worked closely with athletes, former players, coaches, trainers, and doctors. Development included years of trials, tests, samples, equipment innovations and advanced formulas – all with the goal of developing an artificial turf system that

combined the performance properties of natural grass with the benefits of a synthetic solution. It worked.

- The first company in the synthetic turf industry to own and operate its own manufacturing plant
- The only artificial turf manufacturing operation in North America to have received three specific ISO certifications
- 450,000+ square-foot facility in Calhoun, Georgia
- Over 40 employees at the plant with a combined 300+ years of experience in the artificial turf industry
- Annual production capacity that exceeds the worldwide yearly demand for artificial turf
- Rigorous quality control and inspection
- In-house fiber manufacturing
- In-house coating line
- In-house tufting operation
- 50 + Local and Regional FieldTurf Sales Representatives

## TRACK/COURT

Beynon Sports Surfaces (a Tarkett Sports Company) running track surfaces are built to last. They are manufactured and installed with the highest attention to detail. Beynon systems showcase proven durability. Numerous Beynon surfaces have seen over 20 years of use.

Beynon controls all aspects of the manufacturing chain, which allows us to create the right product, regardless of the facility. Because our founder's name stands behind each track that we make, we take special care throughout the entire installation process. We do this by only using certified Beynon track installers, specialized equipment, and skilled craftsmen, which ensures impeccable results. Every Beynon track is manufactured in our ISO 9001 certified headquarters in Hunt Valley, Maryland, USA.

Beynon chemists create the world's most refined running track surfaces. Quality and attention to detail are the utmost importance. To Beynon Sports, that means overseeing every surface from raw material selection, to manufacturing the system for the specific needs of the coaches and student-athletes, all the way through installation. It also means having our track and field systems tested and certified according to IAAF and DIN standards to ensure that your athletes receive a superior product. We guarantee the finest raw materials, tireless research and development, and outstanding workmanship go into each system.

Our team is made up of the finest and most experienced in the industry, from world-famous track coaches to the leading polyurethane research chemists and the most experienced installation personnel. With them, and through vigorously researching and developing new environmentally sustainable technologies, we are able to bring your athletes the latest track and field surfacing innovations.



Beynon has a 50,000 sf. State-of-the-art manufacturing facility that is dedicated solely to the research and development, production, and quality assurance of our outdoor and indoor athletic surfacing systems. Beynon is equipped and has the capacity to manufacture and distribute materials needed for both internal and external demands. Beynon has over 2500 installations worldwide and has built an industry leading reputation for unmatched quality, durability, performance, and most importantly service.

Beynon manufacture's over 37 unique polyurethane components for the indoor and outdoor sports surfacing market. Beynon employs over 300 employees in the Peak Summer Months. Due to increased seasonality in the Northeast, a mature and established market, and the requirement for a Union-designated workforce, Beynon Sports partners with contractor dedicated to the same ideals and levels of workmanship and satisfaction.

Beynon is the leading Track Builder/installer in North America with over 50% Market Share.

### **About Beynon:**

Over 40 years ago, our founder, John T. Beynon, set out to revolutionize the sport surfacing industry. Since then, we have over 2500 installations worldwide and built an industry leading reputation for unmatched quality, durability, performance and most importantly, service.

Beynon surfaces are found in North America and Canada's most prestigious track and field facilities, reputed collegiate campuses, high schools, and city parks.

Not only do we strive to make you fast, but we help keep you safe. Our specialized, high performance synthetic athletic surfaces are designed for speed, competition, and most importantly, daily training. Should it be one of our thousands of outdoor tracks, indoor fieldhouses or multipurpose gymnasiums, you will feel the difference a Beynon surface makes.

In the spring of 2008, Beynon Sports joined the Tarkett Sports family, which combined the most recognized and prestigious name in the artificial turf market in FieldTurf with Beynon Sports' track and field, fieldhouse and gymnasium surfacing systems and a dedication to innovation, customer service, and excellence.

### **INDOOR COURT:**

Tarkett Sports is a world leader in athletic surfacing and is a division of Tarkett Group, which was established in 1886. Tarkett Sports has over 50,000 installations worldwide and has been the trusted surface of professional, elite, school and municipal facilities. Manufacturing excellence: ISO 9001 certified for leadership in quality, environment and safety management systems, Tarkett Sports' facilities in Chagrin Falls represent one of the most advanced manufacturing operations in North America.

## B. Total number and location of salespersons employed by Supplier.

See below: 35 + turf, 15+ track, 10+ Court and approved distributors.

### Turf Sales Representative

STATE	REPRESENTATIVE/DISTRIBUTOR	REGIONAL VP	INSTALLER
Alabama	Josh Keown	Jamie MacDonald	RS Global
Alaska	Donny Jones		Beyond The Turf
Arizona	Donny Jones		RS Global
Arkansas	David Ross	Jamie MacDonald	RS Global
California	Tim Coury/Andrew Rowley		FieldTurf Construction
Colorado	Jed Easterbrook	Jed Easterbrook	RS Global
Connecticut	Andrew Dyjak	Perry DiPiazza	Beyond The Turf
Delaware	John McShane	Jim Shanahan	LandTek
Florida	Chris Wedge	Jamie MacDonald	RS Global
Georgia	Josh Keown	Jamie MacDonald	Turf Dogs
Hawaii	Donny Jones/Andrew Rowley		FieldTurf Construction
Idaho	Jed Easterbrook	Jed Easterbrook	FieldTurf Construction
Illinois	Jonathan Huard	Jim Knazek	International Sports Surfaces
Indiana	Blake Centers	Jim Knazek	Beyond The Turf

Iowa	Brian Kramer	Jim Knazek	MidWest FieldTurf
Kansas	David Ross	Jim Knazek	Kerr Athletics
Kentucky	Bill Bamber/Patrick Zeni	Jim Shanahan	RS Global
Louisiana	Bryan Cox	Jamie MacDonald	RS Global
Maine	Northeast Turf	Perry DiPiazza	Beyond The Turf
Maryland	John McShane	Jim Shanahan	Beyond The Turf
Massachusetts	Andrew Dyjak	Perry DiPiazza	Beyond The Turf
Michigan	Blake Centers	Jim Knazek	Beyond The Turf
Minnesota	Brian Kramer	Jim Knazek	FT Install Group
Mississippi	Josh Keown	Jamie MacDonald	RS Global
Missouri	David Ross	Jim Knazek	Kerr Athletics
Montana	Jed Easterbrook	Jed Easterbrook	RS Global
Nebraska	Brian Kramer	Jim Knazek	MidWest FieldTurf
Nevada	Tim Coury/Andrew Rowley		FieldTurf Construction
New Hampshire	Northeast Turf	Perry DiPiazza	Northeast Turf
New Jersey	Perry DiPiazza		LandTek
New Mexico	Jed Easterbrook	Jed Easterbrook	RS Global
New York	LandTek/Chenango	Perry DiPiazza	LandTek/Chenango
North Carolina	Patrick Zeni	Jamie MacDonald	Turf Dogs
North Dakota	Brian Kramer	Jim Knazek	RS Global
Ohio	JC Field	Jim Knazek	Northeast Turf

Oklahoma	Chris Patton	Jamie MacDonald	RS Global
Oregon	Steve Coury		FieldTurf Construction
Pennsylvania	Bill Bamber Connor Schlegel – Western PA	Jim Shanahan	LandTek
Rhode Island	Northeast Turf	Perry DiPiazza	Northeast Turf
South Carolina	Patrick Zeni	Jamie MacDonald	Turf Dogs
South Dakota	Brian Kramer	Jim Shanahan	MidWest FieldTurf
Tennessee	Neil O'Donnell	Jim Knazek	RS Global
Texas	Bryan Cox- DFW/Houston Eric Lutz Chris Patton- North/East Texas	Jamie MacDonald	RS Global
Utah	Jed Easterbrook	Jed Easterbrook	RS Global
Vermont	Andrew Dyjak	Perry DiPiazza	Beyond The Turf
Virginia	John McShane	Jim Shanahan	Beyond The Turf
Washington	Donny Jones		FieldTurf Construction
West Virginia	Connor Schlegel	Jim Shanahan	Northeast Turf
Wisconsin	Blake Centers	Jim Knazek	FT Install Group
Wyoming	Jed Easterbrook	Jed Easterbrook	RS Global

Donnie Suttles- Sales Consultant in NC & SC

Chuck Bailey- VP- Strategic Accounts

**Track Sales Representatives**

STATE	REPRESENTATIVE/DISTRIBUTOR		
Alabama	Mike Smoak		
Alaska	Gary Logsdon		
Arizona	Greg Hull		
Arkansas	Dennis Regan		
California	Jeff Dickey		
Colorado	Dennis Regan		
Connecticut	Tom Mitchell		
Delaware	Drew Beynon		
Florida	Mike Smoak		
Georgia	Mike Smoak		
Hawaii	Gary Logsdon		
Idaho	Gary Logsdon/Reed McNeil		
Illinois	Bill Teten		
Indiana	Jim Dotson/ Archie Golas		
Iowa	Bill Teten		
Kansas	Dennis Regan		
Kentucky	Jim Dotson/ Archie Golas		
Louisiana	Bob Strano		
Maine	Tom Mitchell		
Maryland	Drew Beynon		
Massachusetts	Drew Beynon		
Michigan	Jim Dotson/ Archie Golas		
Minnesota	Bill Teten		
Mississippi	Bob Strano		
Missouri	Dennis Regan		
Montana	Gary Logsdon/Reed McNeil		
Nebraska	Bill Teten		
Nevada	Greg Hull		
New Hampshire	Tom Mitchell		
New Jersey	Tom Mitchell		
New Mexico	Greg Hull		
New York	Tom Mitchell		
North Carolina	Mike Smoak		
North Dakota	Bill Teten		
Ohio	Jim Dotson/ Archie Golas		
Oklahoma	Dennis Regan		
Oregon	Gary Logsdon		
Pennsylvania	Tom Mitchell		

Rhode Island	Tom Mitchell		
South Carolina	Mike Smoak		
South Dakota	Bill Teten		
Tennessee	Mike Smoak		
Texas	Bob Strano		
Utah	Greg Hull		
Vermont	Tom Mitchell		
Virginia	Drew Beynon		
Washington	Gary Logsdon/Reed McNeil		
West Virginia	Jim Dotson/Archie Golas		
Wisconsin	Bill Teten		
Wyoming	Jared Petrino		

#### Dealers/Distributors/Subs (criteria)

The criteria for selecting FieldTurf dealers and installers is as follows:

Each installer must complete a minimum of 2 supervised projects, in which an internal FieldTurf installer will work with the crew for the entirety of the project. If after 2 projects, FieldTurf feels the quality meets the standard we have set forth, these installers will be utilized for additional projects with supervision via periodic site visits and stop ins.

FieldTurf install partners such as LandTek, RSG, Beynon the Turf, Kerr Athletics and ISS have all been installing for FieldTurf exclusively for a minimum of the past 5 years. Other FieldTurf install partners such as Vasco, STS and Condor have been working exclusively with FieldTurf between 1-3 years. FieldTurf selects between employed installers by using designated territories.

Beynon Sports Surfaces also maintains stringent criteria and standards for dealers and installers: When selecting subcontractors, distributors, installers and other independent services Beynon Sports Surfaces (BSS) will seek out the most qualified firms with impeccable reputations and the ability to stand behind their work well beyond the warranty period expires. With over 2,500 track projects completed, BSS has developed an extensive network of reliable and professional subcontractors.

Due to the critical achievement of planarity and composition tolerances that are involved in track and field construction, we prefer to work with experienced contractors that are familiar with NCAA running track construction. If this is not possible, we take a proactive approach to work on-site with the contractor to insure all NCAA and IAAF requirements are achieved and Beynon Sports Surfaces' stringent quality thresholds are surpassed.

FieldTurf works with several subcontractors who either distribute, install product, or are subcontractors for Fieldturf/Beynon products or services related to sports construction. These subcontractors are authorized to promote FieldTurf's cooperative purchasing program: SmartBuy through the TIPS contract.

#### FieldTurf Authorized Turf Distributors:

- FieldTurf USA, Inc.
- The Landtek Group, Inc.

- Chenango Contracting, Inc
- MidWest FieldTurf
- Deluxe Athletics
- FieldTurf Northwest

**FieldTurf Authorized Subcontractors/Installers include but are not limited to:**

- Beynon Sports Surfaces
- Tarkett Indoor
- EasyTurf
- Sportsfield Specialties
- Brock Industries
- Renner Sports Surfaces
- American Athletic Court Inc
- The Landtek Group
- Clark Companies
- Chenango Contracting
- ELA Group, Inc
- Hinding Tennis
- Halecon,
- FieldTurf Northwest
- Deluxe Athletics
- King Sports
- Ace Tennis
- Maser Consulting
- Sports
- NIDY
- Vasco
- Shaker Flats
- Cape and Island
- Midwest FieldTurf
- Mountain West
- RS Global
- Beyond the Turf
- Kerr Athletics
- Desso
- Crafc0

**C. Number and location of support centers (if applicable) and location of corporate office:**

**1. World Headquarters:**

FieldTurf USA, Inc.  
7445 Cote-de-Liesse Road Suite 200  
Montreal Quebec H4T 1G2  
Canada  
Phone: +1 800-724-2969

**2. Manufacturing Headquarters:**

FieldTurf USA, Inc.  
Tarkett Sports/FieldTurf USA, Inc.  
175 N Industrial Blvd N.E.  
Calhoun GA 30701  
United States

**3. Beynon Sports Surfaces and FieldTurf West office:**



19600 SW 129<sup>th</sup> Avenue  
Tualatin OR 97062  
United States

Beynon Sports- Headquarters

16 Alt Road  
Hunt Valley Maryland 21030  
United States



16 Alt Road  
Hunt Valley Maryland 21030  
United States  
Tel: +1 (410) 771-9473  
Mobile: +1 (443) 417-6797  
Fax: +1 (410) 771 9479



#### 4. Additional Key Office Locations:

Beynon Sports Surfaces  
4263 N Selland Ave  
Fresno CA 93722  
United States

Beynon Sports Surfaces  
350 CR 255  
Georgetown Texas 78633  
United States

FieldTurf USA, Inc.  
903 N Opdyke Rd, Suite A1  
Auburn Hills Michigan 48326  
United States

**D. Annual Sales for the three previous fiscal years.**  
**a. Submit FEIN and Dunn & Bradstreet report.**

Annual Sales:  
2020: \$730,044,910  
2019: \$831,049,590  
2018: \$701,062,040

FieldTurf FEIN is 58-2330410.

See attached DUNN and Bradstreet report

**E. Describe any green or environmental initiatives or policies.**

**Response**

FieldTurf USA, Inc. and Beynon Sports Surfaces are industry leaders in LEED certifications and environmental initiatives. FieldTurf has recycled many fields using the raw materials to create many other products including school bags, coasters and even T-shirts. The “green machine” is a patented device that physically separates the needed raw materials for re-processing and eventual integration into new products.

**How FieldTurf is good for the Environment**

Believe it or not, it *is* easy being green. Reducing your shower time by just one minute can save 365 gallons of water a year. Not hosing down your patio or driveway can save 960.

And filling your bath tub up halfway can save 3,650. Just imagine how much water installing a FieldTurf artificial grass or synthetic turf system can save.

Actually, you don't have to imagine. Installing a FieldTurf artificial grass system for home landscaping alone can save a whopping 56,000 gallons of water per year. And on an average-sized sports field, that number skyrockets to millions of gallons per year.

When it comes to carbon footprints, there's simply no comparison between natural grass and FieldTurf artificial grass and synthetic turf systems. FieldTurf is lead free and 100% recyclable. We are a proud member of the U.S. Green Building Council and the Environmental Protection Agency's 'Greenscapes' program in addition to continuously setting new environmental standards throughout the synthetic turf industry.



*City of Chino Hills, CA*

By choosing FieldTurf artificial turf, you're becoming part of an environmental movement that not only saves clean drinking water, but also:

- Eliminates impact on water resources
- Eliminates the use of billions of pounds of harmful pesticides, fertilizers, fungicides and herbicides, used on natural grass, that can run off into ground water
- Significantly lowers the use of natural gas and other fossil fuels needed to produce lawn care chemicals

- Eliminates fuel-powered mowing, aerating, and re-seeding. Gas-powered lawn mowers alone can cause as much pollution in one hour as 10 cars. FieldTurf systems save millions of gallons of gas a year.
- Eliminates grass clippings that are among the biggest landfill contributors to the greenhouse effect. During the summer months, clippings alone can account for nearly half of a community's waste.
- Drastically lowers the use of paper and plastic products that support maintenance
- Removes millions of tires from landfill sites each year
- Can contribute toward numerous [Leadership in Energy and Environmental Design \(LEED\) credits](#)
- Is less likely to provoke asthma or allergy attacks
- Is not a breeding ground for the MRSA (staph) bacteria

### **We Even Recycle...**

When a FieldTurf installation finally comes to the end of its long life – it continues to help our planet. FieldTurf is 100% recyclable, and we were the first company in the industry to remove entire systems and recycle them. FieldTurf systems have become “new” materials for:

- School bags
- Batting cages
- Barn mats
- Top dressing for natural grass
- Lining for highway barrels and backing for road bases
- Tote bags
- T-shirts



*FieldTurf is safe for the entire family*

### **Proven Safe for the Environment**

The environmental benefits of artificial grass have been well documented for years. Hundreds of studies have been completed to discover the truth about any potential risks of artificial turf. Government health ministries and environmental bodies around the world have commissioned extensive research. So have world health organizations, leading universities and independent scientific committees. Elected officials have reacted to the concerns of their constituents by commissioning studies to get the facts – and each time artificial turf has been found to be safe.

Occasionally, groups opposed to artificial turf systems will use creative tactics to make it seem like it they are unsafe or untested – this simply is not true. There has been extensive testing, and ample research is available. You can read what the experts have to say in independent testing, studies and reports on the potential health and environmental impact of artificial turf by [downloading this collection of the actual research and conclusions](#).

### **Environmental Partners**

Beynon Sports Surfaces maintains its awareness in the green market place by being actively involved with organizations such as:

- USGBC (US Green Building Council)
- ASTM (American Standard testing Methods)
- FSCT (Federal Society of Coatings Technology)
- ACS (American Chemical Society)

- SPE (Society of Plastic Engineers)

Describe the business's "green" objectives (i.e. LEED, reducing footprint, etc.).

### **Leadership in Energy and Environmental Design**

The Leadership in Energy and Environmental Design (LEED®) Green Building Rating System™ represents the U.S. Green Building Council's effort to provide a national standard for what constitutes a "green building." It is utilized as a design guideline and certification tool for architects and designers seeking to develop high-performance, sustainable buildings.

The ability to be flexible allows LEED to evolve, taking advantage of new technologies and advancements in building science while prioritizing energy efficiency and CO<sub>2</sub> emissions reductions

The rating system defines the requirements, by category, to achieve each prerequisite and voluntary point. Projects earn one or more points toward certification by meeting or exceeding each credit's technical requirements. Points compute to a final score that relates to various levels of certification.

Our synthetic turf systems for athletic fields are designed to meet stringent criteria required to earn points under numerous categories of LEED v3. Based on the USGBC criteria, our products can assist architects and designers in obtaining important credits toward LEED certification.

Click [here](#) to access the USGBC website



### **LEED 2009 for New Construction and Major Renovations**

#### Water Efficiency

- WE Credit 1: Water Efficient Landscaping (2 – 4 points)

#### Materials & Resources

- MR Credit 2: Construction Waste Management (1 – 2 points)
- MR Credit 3: Materials Reuse (1 – 2 points)
- MR Credit 4: Recycled Content (1 – 2 points)
- MR Credit 5: Regional Materials (1 – 2 points)

### **LEED 2009 Existing Buildings: Operations & Maintenance**

#### Water Efficiency

- WE Credit 3: Water Efficient Landscaping (1 – 5 points)

#### **How Beynon is good for the Environment**

Beynon Sports Surfaces is committed to not only living up to environmental standards, but exceeding them. We lead the industry in research and development to bring our clients the most environmentally friendly products available by using natural polyols and renewable resources as well as removing hazardous materials.

Every product designed and manufactured and every athletic surfacing and running track system installed by Beynon Sports Surfaces contains no heavy metals, by design. This means that every product formulated by Beynon Sports Surfaces is zero-mercury or mercury free.

Our eco-components and research and development initiatives include:

- **100% SOLIDS PRIMER** - A two-component primer formulated for use on concrete substrates. Zero solvents are added. The primer is based on a new technology utilizing cashew oil.
- **ALIPHATIC COATINGS** - Beynon Sports Surfaces manufactured and supplied coatings exceed all federal and state regulations for volatile organic compounds (VOC).
- **100% SOLIDS 1-C SPRAY** - Beynon Sports Surfaces is the only manufacturer to supply a 100% solids structural spray, thus eliminating exposure to solvents.
- **WATER-BASED 1-C SPRAY** - A superb polyurethane spray coating for use in the application of texturing layers with no free isocyanate. Made without harmful chemicals, it's ideal for use around turf fields and enclosed areas BEYPUR 160. The best way to improve times and the environment.
- **BEYPUR 250 - 2-C** urethane utilizing natural-based polyols for bio-based polyurethane formulations.

- **WATER-BASED 2-C INDOOR COATING** - Odorless and solvent-free indoor coating for gymnasium and fieldhouse systems.
- **2-C URETHANES** - Formulated without heavy metals to create an eco-friendly and non-hazardous system.
- **POLYTURF PAD AND POUR LEED® CERTIFIED SYSTEM** - LEED is a rating system developed by the U.S. Green Building Council to set a benchmark for the design, construction, and operation of high-performance green facilities. PolyTurf Pad and Pour was designed specifically for this market.

### **BEYNON RUNNING TRACK SURFACE MANUFACTURING:**

Beynon Surfaces are built to last. They are manufactured and installed with the highest attention to detail. Beynon systems showcase proven durability. Numerous Beynon surfaces have seen over 20 years of use.

Beynon controls all aspects of the manufacturing chain, which allows us to create the right product, regardless of the facility. Because our founder's name stands behind each track that we make, we take special care throughout the entire installation process. We do this by only using certified Beynon track installers, specialized equipment, and skilled craftsmen, which ensures impeccable results.

Every Beynon track is manufactured in our ISO 9001 certified headquarters in Hunt Valley, Maryland, USA.

**Please See Attachment – FieldTurf LEED Certification**

**Please See Attachment – FieldTurf Innovation**

- F. Describe any diversity programs or partner supplier does business with and how Participating Agencies may use diverse partners through the Master Agreement. Indicate how, if at all, pricing changes when using diversity program. If there are any diversity programs, provide a list of diversity alliances and a copy of their certifications.**

Response: FieldTurf works with several small business subcontractors who are women owned, MBE owned, Veteran owned, or Disabled Veteran Owned. The following items are required as per FieldTurf's General Services Administration contract. For additional details, see response to section G as well.

**V. DESCRIPTION OF METHOD USED TO DEVELOP SUBCONTRACTING GOALS:** *FAR 19.704(a)(4) and the clause at 52.219-9(d)(4) require a description of the method used to develop the subcontracting goals. Explain or state the basis for establishing your proposed goals (i.e. based on historical data and experience, market research, etc.).*

FieldTurf USA, Inc. used the following method to develop the subcontracting goals:

- Use historical data and company experience to forecast
  - Evaluate accounting \$ history in order to help project realistic future goals

- Contact current suppliers to properly identify their business size and minority status, if applicable.
  - New process has been set up as of Oct. 2015 to obtain the Size Self Certification Form from each FieldTurf subcontractor. This system has been integrated into the accounting system so all subcontractors can be properly classified. In 2020 FieldTurf obtained over 40 more Size Self Certification forms and will continue to obtain more in 2021.
- Contact businesses that we know are located in HubZones and encourage them to apply.
- Continue the use of SBA.gov to help discover veteran-owned small business and SDVOSB.
- Keep records of all subcontracting companies (both direct and indirect).
  - File all size-certification forms
- Award and administer contracts for goods and services in a non-discriminatory manner.

**VI. DESCRIPTION OF METHOD USED TO IDENTIFY POTENTIAL SOURCES:** *Note:*

*Describe the method used to identify potential sources for solicitation purposes (e.g., existing company source lists, the System for Award Management (SAM), veterans service organizations, the National Minority Purchasing Council Vendor Information Service, the Research and Information Division of the Minority Business Development Agency in the Department of Commerce, or small, HUBZone, small disadvantaged, and women-owned small business trade associations). A firm may rely on the information contained in SAM as an accurate representation of a concern's size and ownership characteristics for the purposes of maintaining SB, VOSB, SDVOSB, HUBZone, SDB, and WOSB source lists.<sup>1</sup>*

FieldTurf USA, Inc. identifies potential subcontractors using the following source lists and organizations (please list your sources used):

- DSB
- System for Award Management (SAM)
- Business development organizations
- Business source lists
- Individual state license contractors lists
- Minority and small business trade associations

**VII. INCLUSION OF INDIRECT COSTS IN ESTABLISHING GOALS:** *FAR clause 52.219-9(d)(6) requires a statement as to whether or not the Offeror included indirect costs in establishing subcontracting goals, and a description of the method used to determine the proportionate share of indirect costs to be incurred with SB (including ANCs and Indian tribes), VOSB, SDVOSB, HUBZone, SDB (including ANCs and Indian tribes), and WOSB concerns.*

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<sup>1</sup> Use of SAM as a source list does not relieve a firm of its responsibilities to identify potential small business sources by other means (e.g., outreach, assistance, counseling, or publicizing subcontracting opportunities) in this clause. FAR 19.703 adds that the prime contractor may not require the use of SAM for the purposes of representing size or socioeconomic status in connection with a subcontract . . . and a prime contractor acting in good faith is not liable for misrepresentations made by its subcontractors regarding their size or socioeconomic status.



**CONTRACTORS SUBMITTING COMMERCIAL PLANS MUST INCLUDE INDIRECT COSTS<sup>2</sup> TO CAPTURE MAJOR COMPANY-WIDE EXPENSES AND MAXIMIZE OPPORTUNITIES FOR SMALL BUSINESSES.**

Indirect costs HAVE BEEN included in the dollar and percentage subcontracting goals stated above.

*Provide the method used to determine the proportionate share of indirect costs to be incurred with small business concerns for your contract below.*

FieldTurf response: The method used to determine the proportionate share of indirect costs to be incurred with Small business concerns is by keeping an offline spreadsheet of our small business subcontract partners and then identifying those that fall into the Indirect and overhead costs category.

**VIII. PROGRAM ADMINISTRATOR:** *FAR clause 52.219-9(d)(7) requires the name of the individual employed by the Offeror who will administer the Offeror's subcontracting program, and a description of the duties of the individual. Please add the contact information for this person (telephone number and email address), in case of questions, and provide an alternate point of contact, if applicable.*

Name: Sarah Morehead

Title/Position: SmartBuy Director of Operations

Address: 19600 SW 129<sup>th</sup> Ave.

City/State/Zip Code: Tualatin, OR 97062

Telephone number: 888-209-0065 ext. 230

Fax number: 503-692-4869

Email Address: [sarah.morehead@fieldturf.com](mailto:sarah.morehead@fieldturf.com)

Alternate POC with contact information:

Lesley Miles

SmartBuy Project Administrator

19600 SW 129<sup>th</sup> Ave. Tualatin, OR 97206

Phone: 888-209-0065

Fax: 503-692-4869

[lesley.miles@fieldturf.com](mailto:lesley.miles@fieldturf.com)

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**Duties:** FAR clause 52.219-9(e) requires that in order to effectively implement this plan to the extent consistent with efficient contract performance, the Contractor **shall** perform the following functions. Include these in the subcontracting plan, indicating your compliance with FAR 52.219-9:

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<sup>2</sup> Indirect costs represent the expenses of doing business that are NOT easily identified with a specific project (i.e. contract or grant) but are generally recognized as ordinary and necessary for the general operation of the Contractor's organization and the conduct of activities it performs. Types of indirect costs include routine supplies and general and administrative (G&A) expenses. However, fringe benefits (e.g. services or benefits provided to employees such as health insurance, payroll taxes, pension contribution, etc.), are NOT considered subcontracting and shall be excluded).

1. Assist SB, VOSB, SDVOSB, HUBZone, SDB and WOSB concerns by arranging solicitations, sufficient time for the preparation of bids, quantities, specifications, and delivery schedules so as to facilitate the participation by such concerns. Where the Contractor's lists of potential SB, VOSB, SDVOSB, HUBZone, SDB and WOSB subcontractors are excessively long, reasonable effort shall be made to give all such small business concerns an opportunity to compete over a period of time.
  2. Provide adequate and timely consideration of the potentialities of SB, VOSB, SDVOSB, HUBZone, SDB and WOSB concerns in all "make-or-buy" decisions.
  3. Counsel and discuss subcontracting opportunities with representatives of SB, VOSB, SDVOSB, HUBZone, SDB and WOSB firms.
  4. Confirm that a subcontractor representing itself as a HUBZone small business concern is certified by SBA as a HUBZone small business concern in accordance with 52-219-8(d)(2).
  5. Provide notice to subcontractors concerning penalties and remedies for misrepresentations of business status as SB, VOSB, SDVOSB, HUBZone, SDB and WOSB for the purpose of obtaining a subcontract that is to be included as part or all of a goal contained in the Contractor's subcontracting plan.
  6. For all competitive subcontracts over the simplified acquisition threshold in which a small business concern received a small business preference, upon determination of the successful subcontract offeror, prior to award of the subcontract the contractor must inform each unsuccessful small business subcontract offeror in writing of the name and location of the apparent successful offeror and if the successful subcontract offeror is a SB, VOSB, SDVOSB, HUBzone SB, SDB, or WOSB concern.
  7. Assign each subcontract the NAICS code and corresponding size standard that best describes the principle purpose of the subcontract.
- Other ways the Plan Administrator will ensure the company meets the goals of the plan **demonstrating "good faith effort"** [*Check those that will be done under this plan*]:
- Ensure the periodic rotation of potential subcontractors on bidders' lists.
  - Ensure that SB, VOSB, SDVOSB, HUBZone, SDB and WOSB concerns are included on the bidders' list for every subcontract solicitation for products and services they are capable of providing.
  - Ensure that subcontract procurement "packages" are designed to permit the maximum possible participation of SB, VOSB, SDVOSB, HUBZone, SDB and WOSB concerns.
  - Review subcontract solicitations to remove statements, clauses, etc., which might tend to restrict or prohibit SB, VOSB, SDVOSB, HUBZone, SDB and WOSB concerns.
  - Ensure that the subcontract bid proposal review board documents its reasons for not selecting any low bids submitted by SB, VOSB, SDVOSB, HUBZone, SDB and WOSB concerns.
  - Oversee the establishment and maintenance of contract and subcontract award records.
  - Attend or arrange for the attendance of company counselors at Business Opportunity Workshops, Minority Business Enterprise Seminars, Trade Fairs, etc.
  - Directly or indirectly counsel SB, VOSB, SDVOSB, HUBZone, SDB and WOSB concerns on subcontracting opportunities and how to prepare bids to the company.
  - Conduct or arrange training for purchasing personnel regarding the intent and impact of Section 8(d) of the Small Business Act on purchasing procedures
  - Develop and maintain an incentive program for buyers that support the subcontracting program.
  - Monitor the company's performance and make any adjustments necessary to achieve the subcontract plan goals.

- Coordinate the company's activities during compliance reviews by Federal agencies  
 Promote opportunities for small businesses on the company's website  
\_\_\_\_ Additional Duties: *[If your company or program administrator will perform additional subcontracting duties not shown above, please identify them here]*  
None

**IX. EQUITABLE OPPORTUNITY:** *FAR clause 52.219-9(d)(8) requires a description of the efforts the Offeror will make to assure that SB, VOSB, SDVOSB, HUBZone, SDB and WOSB concerns have an equitable opportunity to compete for subcontracts.*

**FieldTurf USA, Inc.** will make every effort to ensure that all small business concerns have an equitable opportunity to compete for subcontracts. These efforts may include one or more of the following activities: *(please indicate which of the following apply or adapt the list to fit your company's efforts)*

Outreach efforts to obtain sources:

- Contacting minority and small business trade associations  
 Contact business development organizations  
 Requesting sources from the SBA's Dynamic Small Business Search: ([https://web.sba.gov/pro-net/search/dsp\\_dsbs.cfm](https://web.sba.gov/pro-net/search/dsp_dsbs.cfm)) and/or the SAM.gov database  
 Attend small and minority business trade fairs and procurement conferences

Internal efforts to guide and encourage purchasing personnel:

- Present workshops, seminars and training programs  
 Establishing, maintaining and using small, HUBZone small, small disadvantaged, women-owned small, veteran-owned small, and service-disabled veteran-owned small business source lists, guides, and other data for soliciting subcontracts  
 Monitoring activities to evaluate compliance with the subcontracting plan

Other efforts: *(Please describe below.)*

Collaborate with sister companies in an attempt to discover new subcontracting opportunities.  
 Attend NIGP and other procurement conferences where small business and women owned business leaders are in attendance.

**X. ASSURANCES OF CLAUSE INCLUSION AND FLOW DOWN:** *FAR clause 52.219-9(d)(9) requires assurances that the Offeror will include the clause at 52.219-8, Utilization of Small Business Concerns (see 19.708(a)), in all subcontracts that offer further subcontracting opportunities, and that the Offeror will require all subcontractors (except small business concerns) that receive subcontracts in excess of \$750,000 (\$1,500,000 for construction of any public facility) with further subcontracting possibilities to adopt a subcontracting plan that complies with the requirements of this clause.*

**FieldTurf USA, Inc.** agrees to include the FAR Clause 52.219-8, "Utilization of Small Business Concerns" in all subcontracts that offer further subcontracting opportunities, and will require all subcontractors (*except small business concerns*) that receive subcontracts in excess of \$750,000 (\$1,500,000 for construction of any public facility) to adopt a subcontracting plan that complies with the requirements of the clause at 52.219-9, Small Business Subcontracting Plan.

**XI. ASSIGNMENT OF SIZE STANDARDS TO SUBCONTRACTS**

**FieldTurf USA, Inc.** agrees to assign North American Industry Classification System (NAICS) codes to subcontracts and further agrees to provide the socio-economic status of the successful subcontractor in the notification to the unsuccessful offerors for the subcontracts in accordance with FAR 52.219-9.

**XII. REPORTING AND COOPERATION:** *FAR clause 52.219-9(d)(10) requires assurances that the offeror will do the following.*

FieldTurf USA, Inc. agrees to:

- Cooperate in any studies or surveys as may be required
- Submit accurate Summary Subcontract Reports (SSR) in the Electronic Subcontracting Reporting System (eSRS) at [Link to eSRS](#), following the instructions provided on the eSRS home page, especially the guidance for accurately allocating a percentage of the subcontracted dollars to the federal agencies covered by the commercial subcontracting plan. **[See the “Quick Reference Guides for Federal Government Contractors Filing SSR for Commercial Plan” for allocation techniques.]**
- Enter the SSR in eSRS within 30 days after the end of the Government’s fiscal year, September 30.<sup>3</sup> Note: Failing to submit reports on time may be an indication of a lack of “good faith effort” (SBA regulation 13 CFR 125.3(d)).
- Correct and submit a revised SSR within 30 days of notice of rejection by the contracting officer
- Submit a new commercial plan to the cognizant contracting officer 30 days prior to the expiration of the current plan

<b>Calendar Period</b>	<b>Report Due</b>	<b>Due by</b>	<b>with email address for:</b>
10/01--09/30	SSR	10/30	Contracting Officer

**ASSISTANCE IN REPORT PREPARATION CAN ALSO BE FOUND IN THE ATTACHMENT, REPORTING INSTRUCTIONS FOR CONTRACTORS, or in guidance documents on the eSRS home page (<https://esrs.gov>), and from your local SBA Commercial Marketing Representative<sup>4</sup>.**

**Note: for contracts awarded by GSA’s Public Building Service (PBS), select PBS as the “agency to which the report is being submitted”, code 4740, in eSRS.**

**XIII. RECORDKEEPING:** *FAR clause 52.219-9(d)(11) requires a description of the types of records that will be maintained concerning procedures that have been adopted to comply with the requirements and goals in the plan, including establishing source lists; and a description of the efforts to locate SB (including ANCs and Indian tribes), VOSB, SDVOSB, HUBZone, SDB (including ANCs and Indian tribes), and WOSB concerns and to award subcontracts to them.*

FieldTurf USA, Inc. will maintain records concerning procedures that have been adopted to comply with the requirements and goals in the plan, including establishing source lists; and a description of efforts to locate SB (including ANCs and Indian tribes), VOSB, SDVOSB, HUBZone, SDB (including ANCs and Indian tribes), and WOSB concerns and award subcontracts to them. The records shall include at least the following (on a plant-wide or company-wide basis, unless otherwise indicated):

- Source lists (e.g., SAM), guides, and other data that identify SB (including ANCs and Indian tribes), VOSB, SDVOSB, HUBZone, SDB (including ANCs and Indian tribes), and WOSB concerns.

<sup>3</sup> Any SSR submitted prior to the period ending date (September 30) will be rejected.

<sup>4</sup> <https://www.sba.gov/document/support--commercial-market-representatives>

- Organizations contacted in an attempt to locate sources that are *SB* (including ANCs and Indian tribes), VOSB, SDVOSB, HUBZone, SDB (including ANCs and Indian tribes), or WOSB concerns.
- Records on each subcontract solicitation resulting in an award of more than \$150,000, indicating whether the following business concerns were solicited and if not, why not:
  - (A) Small businesses
  - (B) Veteran-owned small businesses
  - (C) Service-disabled veteran-owned small businesses
  - (D) HUBZone small businesses
  - (E) Small disadvantaged businesses
  - (F) Women-owned small businesses

If applicable, the reason award was not made to a small business concern.

- Records of any outreach efforts to contact:
  - (A) Trade associations
  - (B) Business development organizations
  - (C) Conferences and trade fairs to locate small, HUBZone small, small disadvantaged, service-disabled veteran-owned, and women-owned small business sources
  - (D) Veterans service organizations
- Records of internal guidance and encouragement provided to buyers through
  - (A) Workshops, seminars, training, etc.
  - (B) Monitoring performance to evaluate compliance with the program's requirements
- Other records to support your compliance with the subcontracting plan: (*Please describe below.*)

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#### **XIV. ADDITIONAL ASSURANCES:**

- **FieldTurf USA, Inc.** will make a good faith effort to acquire articles, equipment, supplies, services, or materials, or obtain the performance of construction work from the small business concerns that it used in preparing the bid or proposal, in the same or greater scope, amount, and quality used in preparing and submitting the bid or proposal.
- **FieldTurf USA, Inc.** will provide the Contracting Officer with a written explanation if the Contractor fails to acquire articles, equipment, supplies, services or materials or obtain the performance of construction work as described in (d)(12) of FAR clause 52.219-9. This written explanation must be submitted to the Contracting Officer within 30 days of contract completion.
- **FieldTurf USA, Inc.** will not prohibit a subcontractor from discussing with the Contracting Officer any material matter pertaining to the payment to or utilization of a subcontractor; and

- **FieldTurf USA, Inc.** assures that the offeror will pay its small business subcontractors on time and in accordance with the terms and conditions of the subcontract, and notify the contracting officer if **FieldTurf USA, Inc.** pays a reduced or an untimely payment to a small business subcontractor (see [52.242-5](#)).

#### **XV. COMMITMENT TO MAKE A “GOOD FAITH EFFORT”<sup>5</sup>**

**FieldTurf USA, Inc.** shall make a good faith effort to achieve the small business goals described in this plan by taking the efforts described below in addition to the efforts listed under Sections IV, VIII and Section IX of this plan: **[List additional efforts]**.

**FieldTurf USA, Inc.** will take the following steps to demonstrate compliance with a good faith effort in achieving small business subcontracting goals:

- Maintain liaison with FieldTurf’s procurement department
  - Monitor compliance on project specific basis where government and non-government contracts specifically call for minimum SME or MBE participation.
  - Administer the Company’s Small Business Subcontracting Plan
  - Maintain lists of previously used SB, HZSB, SDB, SDVOB, BOSB and WOSB
- Maintain a company-wide filing system to improve the categorization of our subcontractors

#### **G. Indicate if supplier holds any of the below certifications in any classified areas and include proof of such certification in the response:**

- Minority Women Business Enterprise: NO**
- Small Business Enterprise (SBE) or Disadvantaged Business Enterprise(DBE): NO**
- Historically Underutilized Business (HUB): NO**
- Historically Underutilized Business Zone Enterprise (HUBZone): NO**
- Other recognized diversity certificate holder: None**

#### **H. List any relationship with subcontractors or affiliates intended to be used when providing services and identify if subcontractors meet minority-owned standards. If any, list certifications subcontractors hold and certifying agency.**

Response: FieldTurf works with several small business subcontractors who are women owned, MBE owned, Veteran owned, or Disabled Veteran Owned.

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<sup>5</sup> Defined in SBA regulations 13 CFR 125.3(d)(3)

Supplies/Services	Large	Small	VOSB	SDVOSB	HUBZone	SDB	WOSB
<b>Installation of synthetic turf 238992, 237990,238900</b>	X	X	X	X	X	X	X
<b>Rental Equipment</b> 238990, 332710	X	X	X				
<b>Freight/Transport</b> 488510, 48411,484121	X	X				X	X
<b>Rock Supplier</b> 327300,423320,238910	X	X					
<b>Sand Suppliers</b> 423810	X	X					
<b>Fencing</b> 238990	X	X				X	
<b>Material Recycling</b> 238910	X	X					X
<b>Base Construction Contractors</b> 238992,541330,95410, 424220-237310	X	X				X	X
<b>Concrete Contractors</b> 238110	X	X			X		X
<b>Asphalt Paving</b> 237310	X	X				X	X
<b>Excavation and Demolition</b> 236116, 238910	X	X				X	X
<b>Tennis Court construction and surface installers 237990</b>	X	X				X	

<b>Electrical Services</b>	X	X		X			X
238210							
<b>Chemical Services</b>	X	X	X				
313310, 325611							

**Commercial Plan Period:** January 1, 2021 to December 31, 2021

**Projected annual sales (Company-wide):** **\$370,000,000**

**II. GOALS:**

*FAR clause 52.219-9(d) states that the subcontracting plan shall include the following: (1) Separate goals, expressed in terms of total dollars subcontracted, and as a percentage of total planned subcontracting dollars, for the use of small business (including ANCs and Indian tribes), veteran-owned small business, service-disabled veteran-owned small business, HUBZone small business, small disadvantaged business (including ANCs and Indian tribes) and women-owned small business WOSB concerns as subcontractors.*

**Remember:**

- **Commercial plans will always reflect annual company-wide goals**
- **Dollars and percentages to OTSB and total small businesses (including all socioeconomic subsets) must equal the total subcontracted to both categories in dollars and percentages.**

**FieldTurf USA, Inc. provides the following separate dollar and percentage goals, which are a percentage of the total subcontracting dollars for each business category:**



1. Estimated **TOTAL** dollars planned to be subcontracted to **all types of concerns** (generally for both commercial and government business, in support of commercial items sold during company fiscal year):

**Annual Commercial Purchases/Spend: \$185,000,000 = 100% subcontracted**

2. Total dollars planned to be subcontracted to those classified as **Other Than Small** Business concerns:

**Annual Commercial Purchases/Spend: \$ 99,000,000 = 53.5% of Total**

3. Total dollars planned to be subcontracted to **all Small** business concerns (including ANCs and Indian tribes), VOSB, SDVOSB, HUBZone, SDB (including ANCs and Indian tribes), and WOSB small business concerns:

**Annual Commercial Purchases/Spend: \$86,000,000 = 46.5% of Total**

**REMEMBER: COMPUTE THE PERCENTAGE FOR THE FOLLOWING BY USING THE TOTAL DOLLARS LISTED IN #1 ABOVE:**

4. Total dollars planned to be subcontracted to **veteran-owned small** business concerns (including service-disabled veteran-owned small businesses):

**Annual Commercial Purchases/Spend: \$ 5,550,000 = 3% of Total**

5. Total dollars planned to be subcontracted to **service-disabled veteran-owned small** business concerns (**subset of VOSB above and cannot be higher than #4 above**):

**Annual Commercial Purchases/Spend: \$ 5,550,000 = 3% of Total**

6. Total dollars planned to be subcontracted to **HUBZone small** business concerns:

**Annual Commercial Purchases/Spend: \$ 5,550,000 = 3 % of Total**

7. Total dollars planned to be subcontracted to **small disadvantaged** business concerns (including ANCs and Indian tribes):

**Annual Commercial Purchases/Spend: \$ 9,250,000 = 5% of Total**

8. Total dollars planned to be subcontracted to **women-owned small** business concerns:

**Annual Commercial Purchases/Spend: \$ 9,250,000 = 5% of Total**

Classified as per NAICS certification standards.

<b>Summary</b>		2020
<b>SBD (DBE, MBE)</b>		
American Tennis Courts Corp (ATC) Certified MBE	\$	6,500.00

Best Fence		\$	3,200.00
American Lawn and Tree Specialists		\$	1,188.00
Groshell Logistics Inc- Beynon East		\$	1,800.00
HARVEY HARRIS CONTRACTING,INC.- Beynon East		\$	36,150.00
OMA Construction		\$	233,076.00
Ohno Construction		\$	18,514.95
<b>Total</b>		<b>\$</b>	<b>300,428.95</b>
<b>Women Owned</b>			
BAS Recycling		\$	1,784,327.00
BEYOND THE TURF LTD		\$	2,662.10
KING SPORTS CONSTRUCTION		\$	4,553,416.00
SportTech Construction FieldTurf		\$	399,020.88
SportTech Construction Beynon		\$	184,842.00
American Asphalt Paving Co LLC - Beynon East		\$	39,285.00
ALLIED ENGINEERING PRODUCTS		\$	7,483.65
Ashton Staffing		\$	29,810.09
CAROLINA GREEN CORPORATION		\$	108,828.00
Anchor Transfer Services			31,204.44
GREENSGROOMER WORLDWIDE LLC			124,289.00
P.W. GILLIBRAND CO		\$	395,914.54
TERRA DYNAMICS INC		\$	81,253.51
SPORTS CONSULTING GROUP LLC			70,132.00
Lync Logistics LLC			42,759.69
MINNESOTA SODDING COMPANY LLC		\$	504.47
EAGLE TRANSPORTATION SERVICES, INC.		\$	10,370.00
Terradon		\$	138,749.33
TREASURE STATE ELECTRICAL CONTRACTING INC.		\$	63,000.00
<b>Total</b>		<b>\$</b>	<b>8,067,851.70</b>
<b>Historically Black Colleges and Universities (HBCU) and Minority Institutions (MI)</b>			
		\$	-
<b>HUB Zones (Historically Underutilized Business Zone)</b>			
JAR CONCRETE, LLC			5,739.50
CAROLINA GREEN CORPORATION		\$	108,828.00
<b>HUB Total</b>		<b>\$</b>	<b>114,567.50</b>
<b>Veteran-Owned SB</b>			

TD SPORTS GROUP LLC		\$	1,330,868.00
Lodging Source			598,310.00
<b>TOTAL</b>			<b>1,929,178.00</b>
<b>Service Disabled Veteran owned Small Business Concerns</b>		\$	-
<b>TOTAL</b>		\$	<b>10,412,026.15</b>

**I. Describe how supplier differentiates itself from competitors.**

**RESPONSE:**

**Turf:**

- FieldTurf has a patented infill system for the highest performance that layers silica sand with cryogenic rubber. The rubber and sand particles are a similar size to stay in suspension. Total infill exceeds 9 lbs. per sq. foot on a typical FieldTurf field. The FieldTurf infill allow for optimal safety and playability. Testing proves that all rubber fields like our competitors tend to migrate easily in the rain creating divots and changes in the infill levels. This infill variation that can be found in our competitor's all rubber infill fields impacts the safety of the turf system.
- PROVEN SAFETY:** FieldTurf's focus on Safety has led to numerous injury reducing innovations and improvements. The main reason FieldTurf continues to outperform all other turf companies in reducing injury is our patented san/rubber layered infill system. The findings of long-term testing programs show that FieldTurf is safer than any other synthetic turf system and equal to – if not better than- natural grass in most critical areas of player safety. No other company can make this claim
- FieldTurf fiber innovation also stands out from our competitors. Our fibers are produced at our very own facility in Germany. This state of the art facility was opened in 2010 and as a result has turned FieldTurf into one of the most vertically integrated companies in the world. The quality control process at the facility includes stringent testing of the yarn properties (tensile strength, uniformity, color verification.)
- SURELOCK COATING-** for maximum drainage. FieldTurf's patented backing offers drainage performance unequalled by any artificial turf product in the industry. A FieldTurf field is designed for all weather playability. Unlike the rest of the industry, the innovators at FieldTurf came up with a superior drainage solution for its Elite system. It's call SureLock coating. This patented system coats only the rows of fiber, leaving the rest of the carpet untouched and naturally porous.

5. **MULTI-SPORT SOLUTIONS** – for all sports and all levels. FieldTurf has long been the #1 choice for all sports and all levels. FieldTurf’s safety, performance, and durability levels are far superior to any other system. As the world’s largest synthetic turf company, you will find FieldTurf in many major stadiums, colleges, and high schools. Over 7500 fields installed.
6. **SINGLE SOURCE RESPONSIBILITY**- for customer security and satisfaction. FieldTurf has brought “single source responsibility” and quality to the forefront with its own manufacturing plants and quality control standards. Integrated, vertical manufacturing has paved the road toward true innovative and customer security, with fiber manufacturing, turfting, coating and testing all done in house in FieldTurf plants.

**FieldTurf is the only artificial turf company on the market to meet the most rigorous and comprehensive quality control standards:**

- ISO Certified manufacturing Plants
  - In-house fiber manufacturing
  - In-house coating of all turf products
  - In-house testing of each turf roll and its tuft bind
  - Testing of infill and the verification of its grade
  - Installation by FieldTurf certified installation crews.
7. **INSURED WARRANTY**- for complete peace of mind. FieldTurf was the first company in the industry to offer a third-party insured warranty. And while you’ll probably never need to use it, you can rest easy knowing that you are protected by the industry’s best warranty. It’s peace of mind that sets FieldTurf apart from the competition.
  8. **INSTALLATION METHOD** – for a stronger field. FieldTurf does not cut corners when it comes to installation of artificial turf fields. In order to lower their prices, many competing companies will cut corners on important installation procedures. This severely compromises the durability of the entire field.
    - FieldTurf has Sewn seams not glued like our competitors.
    - FieldTurf meticulously shears the fiber for inlaid sports markings- competitors cut the turf backing.
    - Precision infill layering = a safe surface
    - Experienced installation crews = quality assurance.
  9. **PROVEN DURABILITY**- for a better investment. Since its inception, FieldTurf has proven to be the most durable and longest –lasting synthetic turf system in the marketplace having installed more fields that are currently 8 years or older than all other competitor installations combined.
  10. **FIRST-CLASS SERVICE** – for your FieldTurf Experience. FieldTurf does not sever its customer relations once the contract has been signed. We take the time to follow up

with each and every one of our customers in order to ensure complete and consistent customer satisfaction. Customer satisfaction remains FieldTurf's number one priority.

FieldTurf products are made in America with local and Global materials! Manufactured in Georgia. 500 full time US employees and 700 US employees during peak season. 500,000 sf facility in Calhoun, GA. 5000 Fields installed in the United States.

See the FieldTurf and Beynon websites for additional College, NFL, and high school coaches testimonials, product information, longevity in the industry, expertise in turf, track, court industry. [www.fieldturf.com](http://www.fieldturf.com) and [www.beynonSports.com](http://www.beynonSports.com)

### **TRACK/COURT:**

Beynon controls all aspects of the manufacturing chain, which allows us to create the right product, regardless of the facility. Because our founder's name stands behind each track that we make, we take special care throughout the entire installation process. We do this by only using certified Beynon track installers, specialized equipment, and skilled craftsmen, which ensures impeccable results. Every Beynon track is manufactured in our ISO 9001 certified headquarters in Hunt Valley, Maryland, USA.

Beynon is the only sports surfacing company that offers customized track and field surfaces with our TUNED Systems. Your track can be tuned to match the desired feel under foot and force reduction range within IAAF parameters. Beynon can adjust the durometer of the track and field surface to make it more forgiving for training or more ideal for competition. We can even modify the force reduction in various areas of the track to accommodate the needs of specific events.

Key Separators from competition:

- Industry leader in the design, formulation, production and installation of outdoor track and field, and indoor fieldhouses and gymnasium polyurethane surfaces for high schools, universities and international arenas.
- Over 40 years' experience in the renovation and new construction of sports facilities.
- Manufacture over 37 unique polyurethane components for the indoor and outdoor sports surfacing market.
- Ability to tune track to owner's specification.

Key Competitive Advantages of Beynon:

- Manufacturer and Installer – Single Source Provider and Warranty.
- Third-Party Insured Warranty on All Projects (Only Track Manufacturer and Installer who can provide this).
- Bonding Capacity.
- Ability to bond a single project up to \$20,000,000
- Aggregate bonding capacity at \$75,000,000 • Seven (7) IAAF Certified Systems – Solution to Meet Any Budget
- Customization.

- All surfaces are designed, manufactured and installed to the precise durometer and force reduction desired
- All polyurethane products are made in Hunt Valley, Maryland, USA • Leading Builder in North America with >50% Market Share.
- Access to SmartBuy Cooperative Purchasing Division of FieldTurf.

Beynon chemists create the world's most refined running track surfaces. Quality and attention to detail are the utmost importance. To Beynon Sports, that means overseeing every surface from raw material selection, to manufacturing the system for the specific needs of the coaches and student-athletes, all the way through installation. It also means having our track and field systems tested and certified according to IAAF and DIN standards to ensure that your athletes receive a superior product. We guarantee the finest raw materials, tireless research and development, and outstanding workmanship go into each system. Our team is made up of the finest and most experienced in the industry, from world-famous track coaches to the leading polyurethane research chemists and the most experienced installation personnel. With them, and through vigorously researching and developing new environmentally sustainable technologies, we are able to bring your athletes the latest track and field surfacing innovations. Beynon also has 7 IAAF Certified Systems.

**Quality Control:**

FieldTurf has manufacturing facilities in the USA, France, and Spain. In addition FieldTurf opened a 500,000 square foot facility in Calhoun, GA with complete tufting and coating abilities. FieldTurf also reached triple ISO Certification (Environmental 14001, Occupational Health and Safety 18001, and Quality 9001) in 2010 which is the only turf company in North America and Canada with this distinction. Every Beynon track is manufactured in our ISO 9001 certified headquarters in Hunt Valley, Maryland, USA.

**THE BEYNON DIFFERENCE:**

Beynon surfaces are found in North America and Canada's most prestigious track and field facilities, reputed collegiate campuses, high schools, and city parks. Not only do we strive to make you fast but we help to keep you safe. Our specialized, high performance synthetic athletic surfaces are designed for speed, competition, and most importantly, daily training. Should it be at one of our thousands of outdoor tracks, indoor fieldhouses or multipurpose gymnasiums, you will feel the difference a Beynon surface makes.

**J. Describe any present or past litigation, bankruptcy or reorganization involving supplier.**

As with any large company conducting business in multiple markets throughout the United States, FieldTurf USA, Inc. occasionally is a party (generally as a plaintiff or claimant) to legal proceedings involving, without limitation, patent infringement, collection issues and other business operations matters. Additional information can be provided upon request. FieldTurf USA, Inc. has not filed for bankruptcy relief nor been involved in a corporate reorganization.

- K. Felony Conviction Notice: Indicate if the supplier
- Is a publicly held corporation and this reporting requirement is not applicable.  
Response: Private company.
  - Is not owned or operated by anyone who has been convicted of a felony; or  
Response: FieldTurf/Tarkett/Beynon are not owned by anyone who has been convicted of a felony.
  - Is owned or operated by and individual(s) who has been convicted of a felony and provide the names and convictions.  
Response: FieldTurf/Tarkett/Beynon are not owned by anyone who has been convicted of a felony.
- L. Describe any debarment or suspension actions taken against supplier.  
Response: NONE

### 3.2 Distribution, Logistics

- A. Each offeror awarded an item under this solicitation may offer their complete product and service offering/a balance of line. Describe the full line of products and services offered by the supplier.

Response:

**FieldTurf Product Offering – See pricing sheet for descriptions, details, and prices**

#### Turf Products:

##### FieldTurf Synthetic Turf Systems

FieldTurf CORE 2.5"/2.25"/2.0"

FieldTurf Revolution 360 2.5"/2.25"/2.0"

FieldTurf Classic HD 2.5"/2.25"/2.0"

FieldTurf XM7 2.5"/2.25"/2.0"

Fieldturf XT 2.5"/2.25"/2.0"

FieldTurf Vertex Prime 2.5"/2.25"/2.0"

FieldTurf Vertex Prime CORE 2.5"/2.25"/2"

FieldTurf Vertex 2.5"/2.25"/2.0"

FieldTurf Hockey Speed

FieldTurf Hockey Gold

FieldTurf EasyField – Removable Tray System

FieldTurf DoublePlay Speed Baseball Infield/Outfield

Fieldturf Double Play Natural Baseball Infield/Outfield

FieldTurf TripleThreat Speed Softball Infield/Outfield

FieldTurf TripleThreat Natural Softball Infield/Outfield  
FieldTurf Recover – Replacement Overlay  
FieldTurf Removable Batter/Umpire Area Baseball System

**Turf Inlaid Markings and Ancillary Items**

FieldTurf Inlaid Football Numbers/Arrows  
FieldTurf Inlaid Hash marks  
FieldTurf Inlaid Soccer Markings  
FieldTurf Logo  
FieldTurf – Endzone Letters  
FieldTurf - Field Hockey Lines  
FieldTurf - Lacrosse Lines  
FieldTurf - Baseball Lines  
FieldTurf – Flag Football Lines  
FieldTurf - Softball Lines  
FieldTurf – Football Restraining Lines  
FieldTurf – Lacrosse Tick Marks

**Testing/Field Monitoring/Misc Services:**

FieldTurf – GMAX  
FieldTurf Preshipment Testing  
FieldTurf Genius  
Turf removal/Disposal  
Supply and Installation of Natural Grass

**FieldTurf Underlayment Options**

Beynon E-Layer  
PDS Drain Tiles  
Proplay – Proplay  
ThermaGreen  
Brock Powerbase  
Brock SP 14  
Beynon Shock Base 19mm-26mm  
Versatile

**FieldTurf Alternate Turf Infill Options:**

FieldTurf CoolPlay  
EPDM  
EASY Fill – Coated Sand  
EnviroFill  
ECO-GRIND  
ECO-GREEN  
ECO-MAX  
PUREFILL – Cork  
PURESELECT – Olive Pits  
PURE GEO- Coconut  
TrueBlend



### FieldTurf Turf Grooming and Maintenance Options

FieldTurf GroomRight  
FieldTurf SweepRight  
FieldTurf SweepRight Pro  
FieldTurf Groomright Wings  
FieldTurf Tow Behind Magnet  
FieldTurf Static Brush  
FieldTurf Sweep  
FieldCare Maintenance Packages: 1, 5, 8  
PureCare Maintenance Packages 1, 5, 8

### FieldTurf Landscaping and Golf Options –EASYTURF

AirFieldTurf  
FieldTurf Command CORE  
FieldTurf Command Play Nutmeg  
FieldTurf Command Play Olive  
FieldTurf Command Play Fit Turf  
FieldTurf Olive Premium  
FieldTurf Nutmeg Premium  
FieldTurf Versa Lush  
FieldTurf All Purpose Blend  
FieldTurf Olive Ultra  
FieldTurf Nutmeg Ultra  
FieldTurf Ultra Pet  
FieldTurf General Purpose Thatch  
FieldTurf EasyPlay  
FieldTurf EasyPlay Color  
FieldTurf Classic HD Sports Turf  
FieldTurf Classic HD Sports Turf Color  
FieldTurf Tru-Roll Putting Green  
FieldTurf EasyTurf Signature Pro Tee Turf  
FieldTurf EasyTurf Signature Pro Driving Range Turf  
FieldTurf Playground Pad 12'  
FieldTurf Playground Pad 5'  
EastTurf Putting Green Pad

### Running Track Surfacing Solutions

#### Latex and Beynon Urethane Track Surfaces

L-2000  
Black or Red Polyresin (13mm)  
Poly-4000  
Beynon - BSS 50  
Beynon- BSS-100  
Beynon-BSS-200  
Beynon-BSS-300

Beynon- BSS-1000 10mm  
Beynon- BSS-1000 13mm  
Beynon-BSS-1000 ML  
Beynon-BSS-2000 13mm

**Resurfacing on an Existing Rubber Running Track**

Top-Coat (latex track)  
Black or Red Polyresin Resurfacing  
Beynon BSS-50RE  
Beynon-BSS -100RE  
Beynon-BSS-200RE  
Beynon-BSS-300RE  
Beynon-BSS-2000 RE 5mm  
Beynon-BSS-2000 RE 7mm  
Beynon WaterBased Spray WBSS  
Beynon Hobart Coating

**Track Misc. items**

Beynon- In-situ-Base  
Track Restripping  
Track Cleaning  
Fast Track 1  
Fast Track 3  
Fast Track 5  
Fast Track 8

**Field/Track/Court Equipment and Accessories**

Pole Vault Pit  
Take off Boards  
Shot Put Toe Boards  
Shot Put Rings  
Discus Rings  
Combination Hammer/Discus Cage  
Hammer/Discus Conversion Ring  
Water Jump Hurdle with Sleeves  
Water Jump Cover  
Removable Track Curbing  
Long jump Sand pits and traps  
Sand for Sand Pits and Traps  
Football Goal Posts-Set  
Access Frame Kit with Infill retainer System for Adjust Right Football Goal Posts Set  
Soccer Goals-Set  
Soccer Goal Wheel Kit  
Batting Cages  
SaniSport  
FieldTurf Cleanse Complete

## Indoor/Outdoor Court Options

Outdoor Court Surfacing – Plexipave

Tarkett Indoor Court Systems:

Omnisports	Compact	Sheet Vinyl Single Color
Omnisports	Speed	Sheet Vinyl Single Color
Omnisports	Multi-Use	Sheet Vinyl Single Color
Omnisports	Active +	Sheet Vinyl Single Color
Omnisports	PurePlay	Sheet Vinyl Single Color
Omnisports	Extreme	Sheet Vinyl Single Color
Omnisports	Dancefloor	Sheet Vinyl Single Color
Omnisports	HPL 7 mm with Compact	Sheet Vinyl Single Color
Omnisports	HPL 9 mm with Compact	Sheet Vinyl Single Color
Omnisports	Tarkolay	Underlayment
Omnisports	Weld Rod 5 mm	Weld Rod
Adhesive	Multi-Set	Adhesive
Adhesive	Multi-Poxy	Adhesive
Adhesive	Tarkotape	Adhesive
Game Line Paint	Gen-U-Line	Game Line Paint
Game Line Paint Primer	Gen-U-Line	Game Line Paint Primer
Linosport	2.5 mm	Linoleum Single Color
PolyTurf Plus Pad and Pour	ReStart	Polyurethane Single Color
PolyTurf Plus Pad and Pour	4+2	Polyurethane Single Color
PolyTurf Plus Pad and Pour	7+2	Polyurethane Single Color
PolyTurf Plus Pad and Pour	9+2	Polyurethane Single Color
PolyTurf Plus Pad and Pour	12+4	Polyurethane Single Color
Adhesive	BeyBond 50	Adhesive
Dancefloor	Dancefloor 3.5mm	Sheet Vinyl
Dancefloor	Inspiration with Dancefloor	Combination
Dancefloor	Inspiration Pro with Dancefloor	Combination
Lumaflex	Classic with Omnisports Compact	Combination
Lumaflex	Classic with Linosport 2.5mm	Combination
Lumaflex	Elite with Omnisports Compact	Combination
Lumaflex	Elite with Linosport 2.5mm	Combination
Lumaflex	Fit with Omnisports Compact	Combination
ClutchCourt	Performance	Wood 2nd and Better Maple
ClutchCourt	Performance Anchor	Wood 2nd and Better Maple
ClutchCourt	FlexLock	Wood 2nd and Better Maple
ClutchCourt	Trainer 3	Wood 2nd and Better Maple
ClutchCourt	Trainer 2	Wood 2nd and Better Maple
Dropzone	Speckle 8 mm Rolls	Rubber Up To 30% EPDM Color

Dropzone	Speckle 8 mm Interlocking Tiles	Rubber Up To 30% EPDM Color
Dropzone	Comfort 10.5 mm	Rubber Single Color
Dropzone	Comfort 14.5 mm	Rubber Single Color
Dropzone	Elite	Rubber
Dropzone	Power	Rubber
Dropzone	Flex	Rubber
Dropzone	Impact	Rubber
Dropzone	Droptile	Rubber Up To 30% EPDM Color
Dropzone	Droptile Max	Rubber Up To 30% EPDM Color
Dropzone	DropTurf	Indoor Artificial Turf
Dropzone	DropTurf Inlay	Turf Lines and Logos
EasyCourt	EasyCourt	Portable Flooring
EasyCourt	EasyField	Portable Flooring
ADA Transition	EasyCourt/Easyfield ADA Transitions	Accessory 1.75" x 22" x 36" □ Bla
Transition	EasyCourt/Easyfield Non - ADA Transitions	Accessory Transition
Game Line Painting	Basketball Game Line Painting	Painting Labor
Game Line Painting	Volleyball Game Line Painting	Painting Labor
Game Line Painting	Pickleball Game Line Painting	Painting Labor
Game Line Painting	Badminton Game Line Painting	Painting Labor
Game Line Painting	Tennis Game Line Painting	Painting Labor
Game Line Painting	Table Tennis Game Line Painting	Painting Labor
Game Line Painting	Logos	Painting Labor
Coved Base 4"	Resilient Base Standard Colors	Resilient Base 4" with Toe
Vented Coved Base	Vented Coved Base Standard Colors	Vented Resilient Base

### Site Work:

**Site Work includes but is not limited to any construction necessary to build base for Turf, Track, or Court surfaces to be placed on.**

New Construction – Sq. foot/yard pricing is for supply and installation of sports surfacing only. FieldTurf is prepared to offer turn-key solutions for the construction of the base of running tracks, courts, indoor flooring projects and fields through use of RS Means. The best value pricing for base or civil work is obtained through this costing method.

Site work or new construction may include but is not limited to: removal and disposal of existing sports surface, lighting, demolition, excavation, rock base aggregate, top rock, asphalt, concrete, sidewalks, turf shock absorption underlayment such as e-layer or padding, tie in to existing drainage, drainage systems, conduits, fencing, crack repair, asphalt repair, etc. which can be purchased through RS MEANS.

RS MEANS is self-contained and consists of a turn-key solution that includes a complete line-item listing of all the products, supplies, material, equipment, services, accessories and options with their description, specification, terms, conditions and associated pricing for each item, sub-assemblies and/or assemblies. FieldTurf reserves the right to offer a discount or "adjustment down" to the RS MEANS calculation to account for volume discounts or to stay within standard market pricing.

**Professional Services for any site work project**

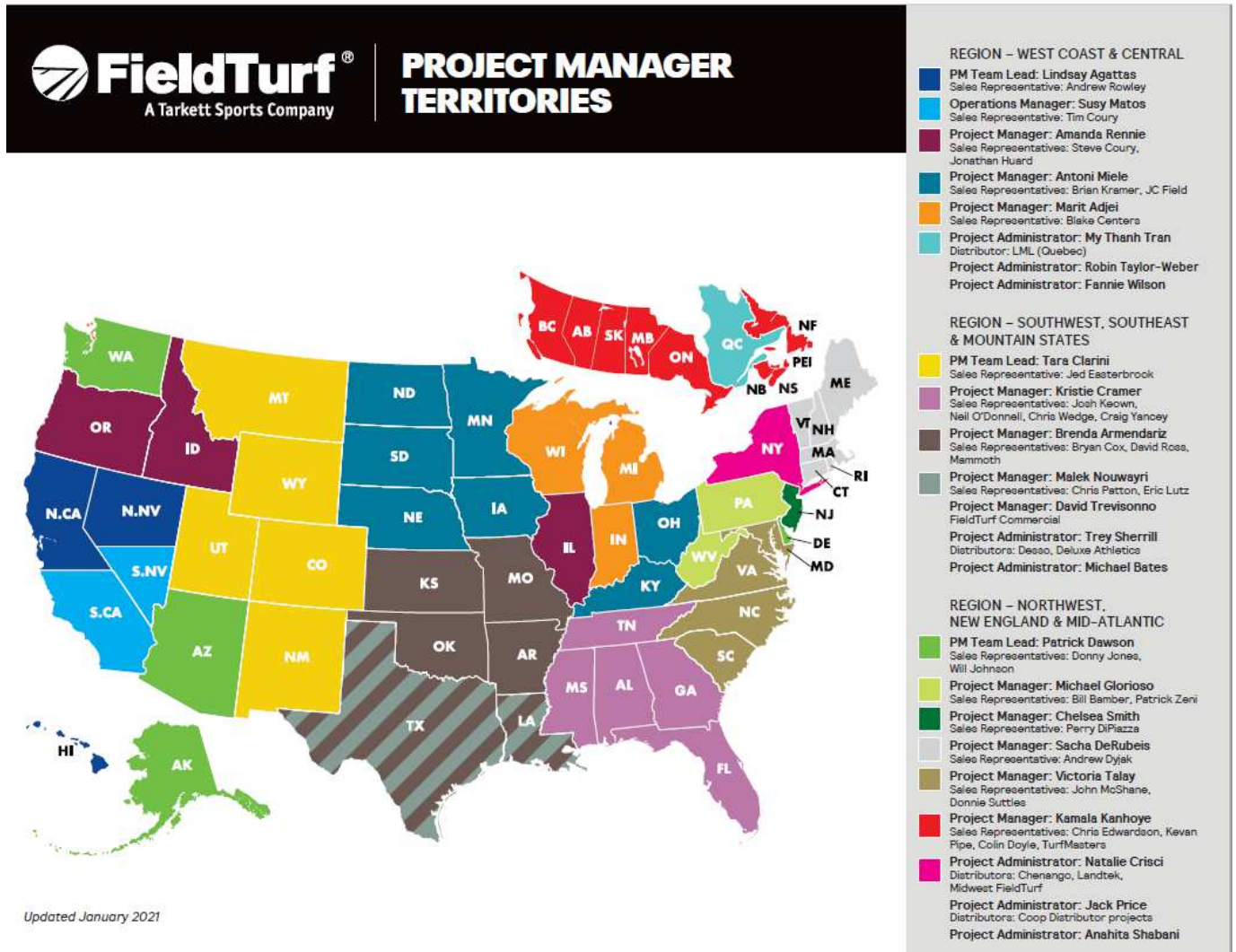
1. Project design, development or consultant/construction management.
2. Professional engineering services.
3. Installer/admin (tradesman) (not related to turf, track, or court installation. Project Administrator costs for site work

**B. Describe how supplier proposes to distribute the products/service nationwide. Include any states where products and services will not be offered under the Master Agreement, including US Territories and Outlying Areas.**

Response:

FieldTurf, Beynon, and Tarkett distribute products and services nationwide. See below for the FieldTurf project manager and sales team map. Additional shipping charges apply to areas

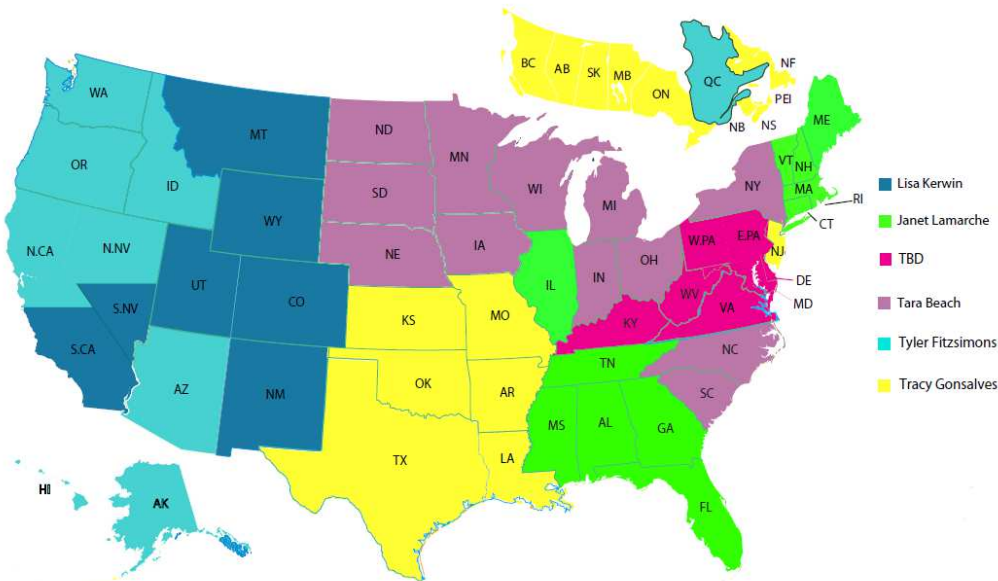
outside of the domestic states such as Alaska and Hawaii.



Below is also the FieldTurf customer service map showing nationwide coverage.

## Customer Service Regions

(January 2018)



### FIELDTURF'S QUALITY CONTROL IN MANUFACTURING

- A. FieldTurf owns and operates its own manufacturing plant in North America. Both tufting of the field fibers into the backing materials and coating of the turf system are done in-house. Outsourcing of either is unacceptable.

FieldTurf has full-time certified in-house inspectors at our manufacturing plant that are experts with industry standards.

- B. FieldTurf's full-time in-house certified inspectors shall perform pre-tufting fiber testing on tensile strength, elongation, tenacity, denier, shrinkage, and twist i.e., turns per inch, upon receipt of fiber spools from fiber manufacturer.
- C. Primary backing shall be inspected by the FieldTurf's full-time certified in-house inspectors before tufting begins.
- D. FieldTurf's in-house certified inspectors shall verify "pick count", yarn density in relation to the backing, to ensure the accurate amount of face yarn per square inch.
- E. FieldTurf's full-time, in-house, certified inspectors shall perform turf inspections at all levels of production including during the tufting process and at the final stages before the turf is loaded onto the truck for delivery.
- F. FieldTurf shall have its own, in-house laboratory where samples of turf are retained and

analyzed, based on standard industry tests, performed by full-time, in-house, certified inspectors.

- G. FieldTurf has ISO 9001, ISO 14001, and ISO 45001-2018 certifications demonstrating its manufacturing efficiency with regards to quality, environment and safety management systems.

FieldTurf is the only artificial turf company on the market to meet Q6, the most rigorous and comprehensive of quality control standards. The Q6 standard encompasses the six essential elements of quality control in relation to artificial turf; the ownership and management of a manufacturing plant, the testing of each roll fiber, the testing and grade of the infill, the success of certified in-house installation crews, the issuing of a 3<sup>rd</sup> Party insured warranty, and the accessibility and responsiveness of the customer service department. By conforming to Q6 standards, FieldTurf is able to ensure the success, safety and durability of every one of its FieldTurf fields.

#### **FieldTurf is vertically integrated for complete control**

FieldTurf is the only artificial turf manufacturing operation in North America and Canada to have received three specific ISO certifications. ISO 9001, ISO 14001 and ISO 45001-2018 certified for leadership in quality, environment and safety management systems. Our Calhoun, GA facility represents one of the only artificial turf manufacturing operations in North America to have receive these ISO certifications.

**FIBER PRODUCTION:** FieldTurf fibers are produced at Tarkett's very own facility in Germany. The quality control process at the facility includes stringent testing of the yarn properties (tensile strength, uniformity, color verification)

To ensure FieldTurf's standards are unmatched, a rigorous quality control process (based on extensive testing and inspections) is undertaken with every field that is put into production. First, yarn testing is performed, which includes tensile strength, elongation, tenacity, denier, shrinkage, and twist (turns per inch). The primary backing is inspected and the "pick count" or yarn density in relation to the backing- is verified to ensure the right amount of face yarn per square inch. Each tufting operator verifies the pile weight and pile height of the yarn to make sure that quality requirements are met every step of the way. If the pile weight is off by even the slightest amount, then it does not meet FieldTurf's stringent standards and the turf is reproduced to exact measurements. Testing continues throughout the entire tufting process until all rolls for a field are complete.

Once the rolls are complete, the fiber rows on the backing of each roll are carefully coated with polyurethane to complete Fieldturf's patented finger-unit backing design for enhanced fiber strength and optimal drainage efficiency. FieldTurf has full-time experienced coating inspectors at their facility in Calhoun, GA to ensure that the coating is applied properly. Once small error and the roll is pulled from the line and reproduced. Once the coating process is complete, every component of the finished carpet undergoes final inspection before it is packaged and loaded onto the trucks for transportation to the job site. Each roll of carpet is numbered and positioned in the exact order that it will be loaded onto the transporters. Once on site, the rolls are



unloaded and laid on the field in the specific order that was planned and designed by the head office engineering department. For every 5 rolls that are produced at the plant, a 2 ft by 15ft sample of turf is retained by the FieldTurf Research & Development department in Calhoun. These samples are carefully filed under the name of the corresponding field. This way the project can be verified through completion and beyond while the turf samples are analyzed on a regular basis. The state-of-the-art plant located in Calhoun is a big reason why FieldTurf is the number one choice of professional teams, high schools, colleges, and facility managers around the world. FieldTurf's ability to ensure the quality of its raw materials and its manufacturing from start to finish is the reason why it enjoys the best record for on-time delivery of its projects.

**C. Describe how Participating Agencies are ensured they will receive the Master Agreement pricing; include all distribution channels such as direct ordering, retail or in-store locations, through distributors, etc. Describe how Participating Agencies verify and audit pricing to ensure its compliance with the Master Agreement.**

Response:

Any OMNIA related proposals that are generated will be reviewed by a FieldTurf SmartBuy representative who approves the proposal for approved OMNIA pricing compliance. Furthermore, an OMNIA breakdown can also be provided that proves to the customer which product line and price are shown on the proposal for audit and full transparency purposes. Below is a sample FieldTurf OMNIA breakdown.

City of Long Beach El Dorado Park West Soccer OMNIA Breakdown.xlsx - Excel

FILE HOME INSERT PAGE LAYOUT FORMULAS DATA REVIEW VIEW DEVELOPER

Normal Page Break Page Custom Ruler Formula Bar Gridlines Headings Zoom 100% Zoom to Selection New Window Arrange All Freeze Panes Split Hide View Side by Side Synchronous Scrolling Reset Window Position Switch Windows Macros

N9

Line #	OMNIA Line #	ITEMS ON FIELDTURF OMNIA CONTRACT:	MRSP	9% OMNIA Discount	OMNIA Base Price	QTY	Unit	Total Extended	Additional Courtesy Discount	Final Cost to Customer
OMNIA/TCPN Breakdown										
1	18	FieldTurf Classic HD Z'	5.24	9%	4.77	83,490	SF	\$ 398,114		
1	76	FieldTurf Purefill (must be purchased with turf)	1.80	9%	1.64	83,490	SF	\$ 136,757		
1		<b>Turf and Purefill Sub Total</b>						<b>\$ 534,870</b>	<b>-133,304.31</b>	<b>\$ 401,565.03</b>
2	43	Inlaid Soccer Markings	8000	9%	7280.00	1	EA	\$ 7,280	-1,280.00	\$ 6,000
3	43	Inlaid Soccer Markings (Mini Markings)	8000	9%	7280.00	1	EA	\$ 7,280	-7,280.00	\$ -
4	76	Versatile Drainage Tiles	1.65	9%	1.50	83,490	SF	\$ 125,360	-8,474.23	\$ 116,886.01
5		Payment and Performance Bonds								\$ 5,900.08
		<b>TOTAL</b>								<b>\$ 530,352.11</b>

Soccer Field

Select destination and press ENTER or choose Paste

All distributors, internal project managers, sales teams, etc know that OMNIA proposals must go through a rigorous evaluation process to confirm compliance with OMNIA Master Agreement pricing.

**D. Identify all other companies that will be involved in processing, handling or shipping the products/service to the end user.**

Response:

List of approved subcontractors/dealer network:

FieldTurf Authorized Turf Distributors:

- FieldTurf USA, Inc.
- The Landtek Group, Inc.
- Chenango Contracting, Inc
- MidWest FieldTurf
- Deluxe Athletics
- FieldTurf Northwest

FieldTurf Authorized Subcontractors/Installers include but are not limited to:

- Beynon Sports Surfaces
- Tarkett Indoor
- EasyTurf
- Sportsfield Specialties
- Brock Industries
- Renner Sports Surfaces
- American Athletic Court Inc
- The Landtek Group
- Clark Companies
- Chenango Contracting
- ELA Group, Inc
- Hinding Tennis
- Halecon,
- FieldTurf Northwest
- Deluxe Athletics
- King Sports
- Ace Tennis
- Maser Consulting
- Sports
- NIDY
- Vasco
- Shaker Flats
- Cape and Island
- Midwest FieldTurf
- Mountain West
- RS Global
- Beyond the Turf
- Kerr Athletics
- Desso
- Crafc

Turf Installers by State

STATE	INSTALLER
Alabama	RS Global
Alaska	Beyond The Turf
Arizona	RS Global

Arkansas	RS Global
California	FieldTurf Construction
Colorado	RS Global
Connecticut	Beyond The Turf
Delaware	LandTek
Florida	RS Global
Georgia	Turf Dogs
Hawaii	FieldTurf Construction
Idaho	FieldTurf Construction
Illinois	ISS
Indiana	Beyond The Turf
Iowa	MidWest FieldTurf
Kansas	Kerr Athletics
Kansas	Mammoth Turf
Kentucky	RS Global
Louisiana	RS Global
Maine	Beyond The Turf
Maryland	Beyond The Turf
Massachusetts	Beyond The Turf
Michigan	Beyond The Turf
Minnesota	FT Install Group
Mississippi	RS Global
Missouri	Kerr Athletics
Montana	RS Global
Nebraska	MidWest FieldTurf
Nevada	FieldTurf Construction
New Hampshire	Northeast Turf
New Jersey	LandTek
New Mexico	RS Global
New York	LandTek/Chenango
North Carolina	Turf Dogs
North Dakota	RS Global
Ohio	Northeast Turf
Oklahoma	RS Global
Oregon	FieldTurf Construction
Pennsylvania	LandTek

Rhode Island	Northeast Turf
South Carolina	Turf Dogs
South Dakota	MidWest FieldTurf
Tennessee	RS Global
Texas	RS Global
Utah	RS Global
Vermont	Beyond The Turf
Virginia	Beyond The Turf
Washington	FieldTurf Construction
West Virginia	Northeast Turf
Wisconsin	FT Install Group
Wyoming	RS Global

**E. Provide the number, size, and location of Supplier’s distribution facilities, warehouses and retail network as applicable.**

**Response:**

FieldTurf products are made in America with local and Global materials! Manufactured in Georgia. 500 full time US employees and 700 US employees during peak season. 500,000 sf facility in Calhoun, GA. 5000 Fields installed in the United States.

FieldTurf USA, Inc. is a manufacturer which also sells, installs and services its products. FieldTurf is also a contractor engaged in various scopes of construction related to the installation of its products, sometimes through the involvement of subcontractors.

FieldTurf and Beynon are both Manufacturers. Below is the list of FieldTurf and Beynon sales teams that are employees of FieldTurf/Beynon companies. A list of the approved subcontractor dealer network team and subcontractor installation teams are provide as well.

All teams are dedicated to ensuring FieldTurf and Beynon sale of our products and services that are proposed in this RFP.

List of approved subcontractors/dealer network:

FieldTurf Authorized Turf Distributors:

- FieldTurf USA, Inc.
- The Landtek Group, Inc.
- Chenango Contracting, Inc
- MidWest FieldTurf
- Deluxe Athletics

- FieldTurf Northwest

FieldTurf Authorized Subcontractors/Installers include but are not limited to:

- Beynon Sports Surfaces
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- EasyTurf
- Sportsfield Specialties
- Brock Industries
- Renner Sports Surfaces
- American Athletic Court Inc
- The Landtek Group
- Clark Companies
- Chenango Contracting
- ELA Group, Inc
- Hinding Tennis
- Halecon,
- FieldTurf Northwest
- Deluxe Athletics
- King Sports
- Ace Tennis
- Maser Consulting
- Sports
- NIDY
- Vasco
- Shaker Flats
- Cape and Island
- Midwest FieldTurf
- Mountain West
- RS Global
- Beyond the Turf
- Kerr Athletics
- Desso
- Crafc0

#### Turf Installers by State

STATE	INSTALLER
Alabama	RS Global
Alaska	Beyond The Turf

Arizona	RS Global
Arkansas	RS Global
California	FieldTurf Construction
Colorado	RS Global
Connecticut	Beyond The Turf
Delaware	LandTek
Florida	RS Global
Georgia	Turf Dogs
Hawaii	FieldTurf Construction
Idaho	FieldTurf Construction
Illinois	ISS
Indiana	Beyond The Turf
Iowa	MidWest FieldTurf
Kansas	Kerr Athletics
Kansas	Mammoth Turf
Kentucky	RS Global
Louisiana	RS Global
Maine	Beyond The Turf
Maryland	Beyond The Turf
Massachusetts	Beyond The Turf
Michigan	Beyond The Turf
Minnesota	FT Install Group
Mississippi	RS Global
Missouri	Kerr Athletics
Montana	RS Global
Nebraska	MidWest FieldTurf
Nevada	FieldTurf Construction
New Hampshire	Northeast Turf
New Jersey	LandTek
New Mexico	RS Global
New York	LandTek/Chenango
North Carolina	Turf Dogs
North Dakota	RS Global
Ohio	Northeast Turf
Oklahoma	RS Global
Oregon	FieldTurf Construction

Pennsylvania	LandTek
Rhode Island	Northeast Turf
South Carolina	Turf Dogs
South Dakota	MidWest FieldTurf
Tennessee	RS Global
Texas	RS Global
Utah	RS Global
Vermont	Beyond The Turf
Virginia	Beyond The Turf
Washington	FieldTurf Construction
West Virginia	Northeast Turf
Wisconsin	FT Install Group
Wyoming	RS Global



Beynon Sports Surfaces (a Tarkett Sports Company) running track surfaces are built to last. They are manufactured and installed with the highest attention to detail. Beynon systems showcase proven durability. Numerous Beynon surfaces have seen over 20 years of use.

Beynon controls all aspects of the manufacturing chain, which allows us to create the right product, regardless of the facility. Because our founder's name stands behind each track that we make, we take special care throughout the entire installation process. We do this by only using certified Beynon track installers, specialized equipment, and skilled craftsmen, which ensures impeccable results. Every Beynon track is manufactured in our ISO 9001 certified headquarters in Hunt Valley, Maryland, USA.

Beynon chemists create the world's most refined running track surfaces. Quality and attention to detail are the utmost importance. To Beynon Sports, that means overseeing every surface from raw material selection, to manufacturing the system for the specific needs of the coaches and student-athletes, all the way through installation. It also means having our track and field systems tested and certified according to IAAF and DIN standards to ensure that your athletes receive a superior product. We guarantee the finest raw materials, tireless research and development, and outstanding workmanship go into each system.

Our team is made up of the finest and most experienced in the industry, from world-famous track coaches to the leading polyurethane research chemists and the most experienced installation personnel. With them, and through vigorously researching and developing new environmentally sustainable technologies, we are able to bring your athletes the latest track and field surfacing innovations.

#### Where are Our Operational Centers Located?

- 350 CR 255, Georgetown,  
Texas 78633  
(512) 778-6170

Main Contact: Rick Ediger

- 19600 SW 129th Avenue,  
Tualatin, Oregon 97062  
(503) 563-6396

Main Contact: Rob Gloeckner

- 4263 N Selland Ave,  
Fresno, California 93722  
(559) 840-1585

Main Contact: Mason Farnsworth

- 775 Canosa Ct.,  
Denver, Colorado 80204 (Renner Sports)  
(303) 825-3435

Main Contact: Greg McKenna

How Many Installation Teams Do We Have?

- Twenty-four (24) Installation Teams

How Many Regional Sales Offices Do We Have?

- Fourteen (14) Regional Sales Offices Across the United States

### **3.3 Marketing & Sales**

**A. Provide a detailed ninety-day beginning from award date of the Master Agreement describing the strategy to immediately implement the Master Agreement as supplier's primary go to market strategy for Public Agencies to supplier's teams nationwide, to include, but not limited to:**

- i. Executive leadership endorsement and sponsorship of the award as the public sector go-to-market strategy within first 10 days.**
- ii. Training and education of Supplier's national sales force with participation from the Supplier's executive leadership, along with the OMNIA Partners team within first 90 days.**

From day one of award, FieldTurf, Beynon, and Tarkett are prepared to immediately implement the OMNIA Master Agreement as per the following steps which are already in place:

SmartBuy is the dedicated Cooperative Purchasing Division of FieldTurf/Beynon. With over 30 years of combined experience and \$750 million revenue in cooperative purchasing, the SmartBuy team has enabled hundreds of municipalities including public schools, colleges, universities, cities, park/recreation departments, and counties to purchase their desired FieldTurf sports field, Beynon running track, or Beynon court.

FieldTurf, Beynon and Tarkett sales teams all receive direct instruction from the Tarkett Senior Leadership Team to utilize OMNIA cooperative purchasing and to incorporate the information into sales presentations and marketing materials.

The FieldTurf Cooperative Purchasing "SmartBuy" Division Team has worked with many municipalities and our sales teams to market, educate and guide municipal members in their purchase of Beynon running tracks, outdoor courts, and FieldTurf synthetic fields through OMNIA.

**We already have systems and processes in place to handle a high volume of Cooperative Purchasing projects through OMNIA. Additionally, our FieldTurf and Beynon sales**

forces are already currently utilizing OMNIA to maximize their sales efforts. OMNIA has already been a very successful cooperative in many different scenarios. FieldTurf and Beynon's National Sales Force is already currently trained on the use of the OMNIA contract.

**B. Provide a detailed ninety-day plan beginning from award date of the Master Agreement describing the strategy to market the Master Agreement to current Participating Public Agencies, existing Public Agency customers of supplier, as well as to prospective Public Agencies nationwide immediately upon award, to include, but not limited to:**

- i. Creation and distribution of a co-branded press release to trade publications**
- ii. Announcement, Master Agreement details and contact information published on Supplier's website within first 90 days.**
- iii. Design, publication and distribution of co-branded marketing materials within first 90 days.**
- iv. Commitment to attendance and participation with OMNIA Partners at national (ie NIGP Annual Forum, NPI Conference, etc.), regional (i.e. Regional NIGP Chapter Meetings, Regional Cooperative Summits, etc.) and supplier-specific trade shows, conferences and meetings throughout the term of the Master Agreement.**
- v. Commitment to attend, exhibit and participate at the NIGP Annual Forum in an area reserved by OMNIA Partners for partner suppliers. Booth space will be purchased and staffed by Supplier. In addition, Supplier commits to provide reasonable assistance to the overall promotion and marketing efforts for the NIGP Annual Forum, as directed by OMNIA Partners.**
- vi. Design and publication of national and regional advertising in trade publications throughout the term of the Master Agreement.**
- vii. Ongoing marketing and promotion of the Master Agreement throughout its term (case studies, collateral pieces, presentations, promotions, etc.)**
- viii. Dedicated OMNIA Partners internet web-based homepage on Supplier's website with:**
  - OMNIA Partners standard logo;**
  - Copy of original Request for Proposal;**
  - Copy of Master Agreement and amendments and amendments between Principal Procurement Agency and Supplier;**
  - Summary of Products and pricing;**
  - Marketing Materials**
  - Electronic link to OMNIA Partners' website including online registration page;**
  - A dedicated toll-free number and email address for OMNIA Partners**

As a current approved OMNIA vendor, FieldTurf USA, Inc. is very familiar with how to successfully market the contract to a variety of public and private institutions. We are open to incorporating any of the above suggestions as it best fits OMNIA's business model.

These include but are not limited to:

- Including OMNIA logo/link on SmartBuy and FieldTurf/Tarkett/Beynon websites
- Original RFP will be available via Logo/link and logo/link is also on OMNIA proposals.
- Copy of Master Agreement will be available via logo/link on FieldTurf websites.
- Summary of Products and pricing will be available via logo/link on FieldTurf websites
- OMNIA marketing materials and electronic link to OMNIA Partners' website will be available via FieldTurf websites.
- FieldTurf/SmartBuy representation at NIGA, NPI, other Regional events/conferences.
- FieldTurf SmartBuy Division explain to current and future OMNIA members the value and benefits on Contract Selling. Attend requested board meetings, council meetings, etc as part of our team to provide owners complete procurement information and opportunities for their sports surfaces project.
- Provide familiarity/knowledge of member state's cooperative procurement options.
- Include FieldTurf logo, product information, and when applicable, project. Testimonies and articles in the individual OMNIA state's cooperative marketing literature and brochures and websites.
- FieldTurf already has current existing co-branded OMNIA/FieldTurf marketing pieces in place and is capable of creating new pieces as needed through the FieldTurf/Tarkett marketing department.
- Integrate current subcontractors and architects into the OMNIA fold by explaining the value-added nature of the contract highlighting:
  - Its simplicity and ease of use.
  - Its defined, preferential pricing
  - Its proven potency in the marketplace
  - Which entities have used it and why
  - Attend customer/ client meetings to promote the OMNIA contract in conjunction with architects/ subcontractors
  - Demonstrate (through sales figures and other data) the current success of the contract and its potential to grow with continued understanding and participation. Many subs and architects do not fully realize the potential of the contract- our job is to change that.
  - SmartBuy will continue to generate new vehicles for OMNIA Master Agreement use such the UC/OMNIA/FieldTurf letters that recently were distributed to all UC Colleges.


Smart Buy Omnia Partners- NATIONAL 2021.pdf - Adobe Acrobat Reader DC (32-bit)

File Edit View Sign Window Help




Home Tools Smart Buy Omnia P... x



## Purchasing Made Easy



The Ultimate Surface Experience *and* Selection ...from SmartBuy!

**Sport surfaces available:**

- Beynon Running Tracks
- FieldTurf Synthetic Turf
- Tennis & Basketball Courts
- Complete Surface Construction

Omnia Partners is available for use by public and private schools, colleges, universities, cities, counties and other government agencies in many states.


Omnia Partners has established an annual contract to satisfy the needs of participating government entities in the purchase, installation, and maintenance of athletic surfaces. These contracts enable agencies to purchase on an "as needed" basis from competitively awarded contracts with high performance vendors.

**Contracts**


[FieldTurf USA, Inc. – Omnia Partners Bid RFP No. 16-22 # R162203 & Omnia Partners AZ #R171103](#)

**Benefits of Smart Buy Purchasing Program:**

- Pre-determined, preferential pricing through competitive bids.
- Eliminate duplication and expense of bid process.
- Turn-key process.
- Expedite the purchase/installation of sport surface.
- Obtain the products you want at a competitive price.



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A Tarkett Sports Company

**Sarah Morehead**  
Sarah.Morehead@fieldturf.com  
888-216-0085 ext. 230  
603-2870135  
[www.fieldturf.com](http://www.fieldturf.com)

50.4%

**Joseph Matoskey**  
Commercial Division Manager  
Sunburst Landscaping Inc.  
Cell: 802-300-0066  
[www.sunburstlandscaping.com](http://www.sunburstlandscaping.com)

The following information is already being inserted on FieldTurf OMNIA Turf/Track/Court proposals:

FieldTurf USA, Inc. is pleased to present the following proposal. Price estimates are based off of OMNIA Partners, previously known as The Cooperative Purchasing Network (TCPN) pricing.

FieldTurf – 7445 Cote-de-Liesse Road Suite 200 – Montreal, QC H4T 1G2 – Tel 1-800-724-2969  
[www.fieldturf.com](http://www.fieldturf.com)

OMNIA Partners is a buying co-op that public entities can use to purchase goods and services. It provides predetermined preferential pricing through approved vendors. Since the products have already been bid at the national level, individual schools do not have to duplicate the bidding process per OMNIA #R162203 or #R171103.

# OMNIA

PARTNERS

Click on the following OMNIA Partners hyperlink for contract due diligence documentation:  
[Omnia #R162203 or #R171103](#)

In addition, FieldTurf's marketing activities can be broken up in the following categories:

## **Print Advertising**

FieldTurf advertises in all major industry publications including:

- American Football Monthly
- Athletics Administration
- Athletic Business
- Athletic Management
- Coach & Athletic Director
- Coaching Management
- Collegiate Directories
- Government Recreation & Fitness
- Park & Recreation Business
- Recreation Management
- Sportsfield Management

In addition to these nationwide publications, FieldTurf advertises in over 30 state/regional publications. Our typical advertising budget exceeds \$120,000 annually.

## **E-Marketing**

FieldTurf's E-Marketing efforts are broken up into two categories:

### **Website**

The FieldTurf family of websites is made up of the following:

[www.fieldturf.com](http://www.fieldturf.com)  
[www.beynonports.com](http://www.beynonports.com)

FieldTurf has developed a customized webpage for the OMNIA/SmartBuy program:  
[www.smartbuycooperative.com](http://www.smartbuycooperative.com)



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Potential customers are directed to specific pages like:  
<http://www.fieldturf.com/smartbuy-purchasing-program/>

FieldTurf's websites average over 35,000 unique visitors per month.

### **Direct Mailing**

FieldTurf has a lead database with over 20,000 potential customers. Frequent messages are sent to various customer groups – most of which contain messaging pertaining to the SmartBuy program.

### **Trade Shows**

FieldTurf attends well over 200 trade shows per year nationwide. At each of these shows FieldTurf makes our best efforts to educate potential clients about the benefits of using OMNIA. Our OMNIA program managers personally attend a large number of the shows as well.

Alabama Athletics Directors (AHSAA)  
Mississippi Coaches Ass. (MACA)  
Florida Educational Facility Planners Ass. (FEFPA)  
Arizona Park and Rec (AZPRA)  
Florida Recs and Park Ass. (FRPA)  
Texas Ass of School Administrators & Boards  
American School Business Officials (ASBO)  
NFHS - National HS ADs  
NSBA - National School Boards Show  
NABC - Basketball Coaches  
NIRSA - Intramural & Recreation  
NACDA - National AD Show  
NACO - National Association of Counties  
NIGP - National Govt Purchasing  
ICMA - International County Mgmt  
ASLA - American Society of Landscape Architects  
NRPA - National Park & Rec  
ABKA - Pet Care Services  
ASBO - American School Business Officials  
NLC - National League of Cities  
TES - Education Show  
Greenbuild  
Athletic Business  
Home Builders Show  
Golf Industry Show  
AASA - American School Administrators  
VASBO - Virginia School Business Officials  
ECAC - Eastern Collegiate Athletic Conference  
WADA - Wisconsin AD Show  
National Soccer Coaches Association of America  
Home Builders Show  
NATIONAL INTRAMURAL-RECREATIONAL  
SPORTS ASSOCIATION  
Stadia Expo  
NJCM - New Jersey Conference of Mayors  
CADA - Colorado Athletic Directors Association  
IADA - Illinois Athletic Director's Association  
Boys & Girls Club  
Virginia Association of School Business Officials  
National High School Athletic Coaches Association  
San Angelo Football Clinic  
Facilities Operators Conference  
MD/DC ASBO  
Council of Educational Facility Planners Intl.  
NJSLM - NJ State League of Municipalities  
TPSCA - Texas Private School Coaches Association  
FAC - FLORIDA ASSOCIATION OF COUNTIES  
OSBA - OHIO SCHOOL BOARD ASSOCIATION



CCM - CONNECTICUT CONFERENCE OF MUNICIPALITIES  
Texas High School Coaches Association  
Arkansas High School Coaches Association  
KANSAS ASSOCIATION OF SCHOOL BOARDS  
All-Star Sports Week  
GRPA - Georgia Recreation & Park Association  
OCA - Oklahoma Coaches Association  
PSBA - Pennsylvania School Boards Association  
CRPA - Connecticut Recreation & Parks Association  
SBE - School Building Expo  
PRPS - Pennsylvania Recreation & Park Society  
NACO - National Association of Counties  
WASB - Wisconsin State Education Convention  
IASB - Illinois Association of School Boards  
PRPS - Pennsylvania Recreation & Park Society  
National Institute of Governmental Purchasing  
Home Builder's Show  
Pet Care Services Association Convention & Expo  
Greenbuilders 2010  
ASLA - American Society of Landscape Architects  
Directors of Athletic Directors of New Jersey  
NJRPA - New Jersey Park and Rec  
NJASLA - NJ Landscape Architects  
IIAAA - Indiana ADs  
MIAAA - Missouri Athletic Directors  
NMAA - New Mexico Activities Association  
ASBO MD/DC Maryland  
Eastern Collegiate Athletic Conference (ECAC)  
International County Management (ICM)  
National Parks & Rec (NRPA)  
Florida Ass. of School Business Officials (FASBO)  
Alberta Recreation and Park Association  
Louisiana AD (LHSAA)  
Wisconsin State Education Convention  
National HS AD Show (NFHS/NIAAA0)  
Colorado Association of School Boards (CASB)  
United States Speciality Sports Association (USSSA)  
International Homebuilders Show (NAHB)  
National Soccer Coaches Convention (NSCAA)  
NJ Landscape Architects (NJASLA)  
Golden Triangle Coaches Clinic  
Kansas Park and Rec (KRPA)  
Minnesota AD (MIAAA)  
Kansas Athletic Administrators (KIAAA)  
Texas HS AD (THSADA)  
Texas Ass of School Bus Off (TASBO)  
Pennsylvania School Bus Off (PASBO)

Virginia AD  
Indiana AD  
Michigan AD (MIAAA)  
South Dakota AD (SDIAAA)  
Iowa HS AD (IHSAA)  
Georgia Athletic Directors Ass (GADA)  
New Jersey AD (DAANJ)  
New Jersey Park and Rec (NJRPA)  
California Park and Rec (CRPS)  
New York State ADA (NYSAAA)  
Minnesota Football Coaches Clinic (MNFCC)  
California Foundation of Community Colleges  
NJ School Building & Grounds Ass. (NJSBGA)  
Utah Interscholastic AD Ass (UIAAA)  
Maryland Park and Rec (MRPA)  
Missouri AD (MIAAA)  
National Intramural Rec Show (NIRSA)  
Tennessee Athletic Directors Conference (TIAAA)  
California Ass. of School Business Officials  
California Parks and Recreation (CARPD)  
New Jersey Conference of Mayors (NJCM)  
Michigan School Business Officials (MSBO)  
Colorado Athletic Director (CADA)  
Maryland School Business Officials (MASBO)  
Illinois Athletic Directors (IADA)  
Florida Athletic Directors (FIAAA)  
Alberta School Business Officials (ASBOA)  
Virginia Ass. of School Business officials (VASBO)  
Federation of Canadian Municipalities (FCM)  
National AD Show (NACDA)  
Georgia Athletic Coaches Ass. (GACA)  
Florida Association of Counties (FAC)  
Idaho Ass. of School Adm (ISSA)  
Idaho Ass. of School Principals (IASSP)  
Idaho AD Ass (IDAAA)  
Washington Secondary School AD Ass (WSSAAA)  
Oregon Athletic Directors Ass (OADA)  
Washington Ass of School Bus Officials (WASBO)  
Oregon Ass of School Bus Off (OASBO)  
Montana Coaches Ass. (MCA)  
Oregon Schools Facilities Management (OSFMA)  
NW All Sports Clinic (NWASC)  
Oklahoma Coaches Association (OCA)  
NAtional Ass. of Counties (NACO)  
Wyoming Coaches Association (WCA)  
CAAD - Connecticut Athletic Directors  
SDIAAA - South Dakota Athletic Directors  
VIAAA - Virginia Athletic Directors

KIAAA - Kansas Athletic Directors  
PRO - Ontario Park & Rec  
National School Plant Managers Association  
OASBO - Ontario School Business Officials  
CAIS - Connecticut Independent Schools  
WFX - Worship Facilities Expo  
OCAA - Ontario Colleges Athletic Association  
MASBO - Missouri School Business Officials  
AEMA - Athletic Equipment Managers  
GACA - Georgia Athletic Coaches Association  
ASBA - Arkansas School Boards  
AHSADCA - Alabama HS Athletic Directors  
NACBA - National Church Business  
OCA - Oklahoma Coaches Association  
STA - Sports Turf Association  
AQLM - Quebec Municipalities  
PASBO - Pennsylvania School Business Officials  
CCM - Connecticut Municipalities  
NJSBA  
GRPA - Georgia Recreation & Parks  
NLC - National League of Cities  
NJSLM - New Jersey Municipalities  
CASB - Colorado School Boards  
KASB - Kansas School Boards  
ABCA - American Baseball Coaches Association  
Training Show  
MSBO - Michigan School Business Officials  
Ontario Association of School Business Officials  
MSBA - Missouri School Boards' Association  
Ohio Interscholastic Athletic Administrators  
Arizona Interscholastic Athletics Administrator's  
Association  
INDIANA SCHOOL BOARDS ASSOCIATION  
WADA - Wisconsin Athletic Directors Association  
APRA - Arizona Parks and Recreation Association  
WFCA-Wisconsin Football Coaches Association  
OSSBA - Oklahoma State School Boards Association  
Kentucky High School Athletic Association  
NJSBA - New Jersey School Board Association  
IAPD - Illinois Association of Park Districts  
TASA - Texas Association of School Administrators  
VRPS - Virginia Recreation & Park Society  
Georgia Association of School Facility  
Administrators  
Association of School Business Officials Intl.  
Illinois Parks and Rec (IPRA/IAPD)  
American Baseball Coaches Ass. (ABCA)  
Sports Turfs Managers Ass. (STMA)

US Youth Soccer Workshop (USYSA)  
Park and Rec Ontario (PRO)  
Soccer Champions Coaches Clinic  
New England Football Coaches Clinic (NEFCC)  
Coalition for adequate School Housing (CASH)  
Pennsylvania State AD (PSADA)  
Connecticut Athletic Directors (CAAD)  
National High School Athletic Coaches Ass.  
IIAAA - Indiana Athletic Directors  
Missouri Association of School Administrators  
National Gov't Purchasing (NIGP)  
MIAAA - Minnesota Athletic Directors  
NABC - National Association of Basketball Coaches  
MIAAA - Missouri Athletic Directors  
Ohio Association of School Business Officials  
FIAAA - Florida Athletic Directors  
BGCA - Boys & Girls Club  
NATA - National Athletic Trainers Association  
NHSACA - National HS Athletic Coaches  
TPSCA - Texas Private School Coaches  
ASLA - American Landscape Architects  
San Angelo Football Clinic  
WFX Fall - Worship Facilities Expo  
OSBA - Ohio School Boards  
Greenbuild  
CPRA - Connecticut Parks & Recreation  
IHRSA  
AUSA - Association of U.S. Army Exposition  
NABC- Indianapolis  
Florida Interscholastic Athletic Administrators  
SBE - School Building Expo  
Stadium Managers Association  
MIAAA - Michigan Athletic Directors  
MRPA - Maryland Park & Rec  
CADA - Colorado Athletic Directors  
Council of Educational Facility Planners Intl.  
MSBO - Michigan School Business Officials  
AIA - American Institute of Architects  
IADA - Illinois Athletic Directors  
BCPRA - BC Parks & Recreation  
SBE - School Building Expo  
NACO - National Association of Counties  
NIGP - National Government Purchasing  
Athletic Business  
K-12 Summit  
MSBA - Missouri School Boards  
IASB - Illinois School Boards  
IPRA - Illinois Park & Rec

FCM - Federation of Canadian Municipalities  
BC Park and Rec (BCPRA)  
California AD show (CSADA)  
Texas High School Coaches Ass. (THSCA)  
PSADA - Pennsylvania State Athletic Directors  
ICMA - Intl County Management  
National School Board Ass (NSBA)  
National Intramural Recreation & Sports Association  
PGA Merchandise Show  
TASA - Texas Superintendents  
NSBA - National School Boards  
AIA - American Institute of Architects  
NRPA - National Recreation & Park  
NACDA - National AD Show  
Home Builders Show  
NACDA - National Athletic Directors Association  
ASBO - American School Business Officials  
AFCA - American Football Coaches  
THSCA - Texas HS Coaches Association  
NFHS - National High School Athletic Directors  
American Football Coaches Association  
NSBA - National School Boards Association

**C. Describe how Supplier will transition any existing Public Agency customers' accounts to the Master Agreement available nationally through OMNIA Partners. Include a list of current cooperative contracts (regional and national) supplier holds and describe how the Master Agreement will be positioned among the other cooperative agreements.**

As explained above, FieldTurf USA, Inc. is very familiar with how to effectively promote the purchasing program.

This includes but is not limited to:

- A. Showcasing our previous successes with current OMNIA projects to acquire new clients.
- B. Continue the explanation of contractual language to sales force, administration & executives within the company so all parties on the same page.
- C. Explain the “who/ what/ when/ where/ why” with sales force to successfully land OMNIA based accounts.
- D. Market at trade shows with FieldTurf/ OMNIA.
- E. Arrange lunch and learns with other OMNIA vendors, as needed.
- F. Continue to use co-branded fliers.

- G. Sponsor/ attend events on a case-by-case basis to get in front of OMNIA clients (i.e. LA lunch and learn with other TCPN NIPA vendors)
- H. Send contract document links accompanied by promotional/ information language. For example:

As discussed, please see attached the various documents explaining the OMNIA purchasing process. OMNIA allows municipalities, park and recreation authorities and other public entities to purchase FieldTurf without duplicating the bid process. Overall, it eliminates the time consuming, cumbersome and costly parts of the traditional bid process (writing specs, qualifying bidders etc.) and allows you to select pre-bid FieldTurf products at a competitive price while still satisfying IL bid laws. Membership is free and requires only a one page simple form to join.

As FieldTurf believes this to be OMNIA's strongest strength (governmental entity status) when FieldTurf meets with government based clients, the sales force and or Co-op Director will stress:

- The fact that OMNIA products and services have already been bid at the National level.
- Present a list of Governmental customers that have already purchased using OMNIA.
- Explain the governmental entity link in detail with supporting documentation.
- Explain the "turn-key" nature of the contract.
- Refer the potential customer to other customers satisfied with the process.

**D. Acknowledge Supplier agrees to provide its logo(s) to OMNIA Partners and agrees to provide permission for reproduction of such logo in marketing communications and promotions. Acknowledge that use of OMNIA Partners logo will be required permission for reproduction as well.**

FieldTurf agrees to provide logo(s) to OMNIA Partners and agrees to request permission for reproduction of OMNIA logo as well.

**E. Confirm supplier will be proactive in direct sales of Supplier's good and services to Public Agencies nationwide and the timely follow up to leads established by OMNIA Partners. All sales materials are to use the OMNIA Partners logo. At a minimum, the Supplier's sales initiative should communicate:**

- i. Master Agreement was competitively solicited and publicly awarded by Principal Procurement Agency.**
- ii. Best Government pricing**
- iii. No cost to participate**
- iv. Non-exclusive**

FieldTurf agrees to be proactive in direct sales of products through OMNIA Master Agreement nationwide and to ensure timely follow up to leads established by OMNIA Partners. Cooperative Purchasing Sales materials will use OMNIA Partners logo and will communicate the items listed above. Additionally, FieldTurf promotes the benefits of the transparency and control of the project and process, the ease of use, and the ability to have a turn-key project.

**F. Confirm Supplier will train its national sales force on Master Agreement. At a minimum, sales training should include:**

- i. Key features of Master Agreement**
- ii. Working knowledge of the solicitation process**
- iii. Awareness of the range of Public Agencies that can utilize the Master Agreement through OMNIA Partners.**
- iv. Knowledge of benefits of the use of cooperative contracts.**

FieldTurf confirms that the national sales force will be trained on the new Master Agreement, will know the key features of the Master Agreement, will have working knowledge of the solicitation process, and will have an awareness of the range of public agencies that can utilize the Master Agreement through OMNIA Partners.

FieldTurf/Beynon/Tarkett sales representatives have had 17 years experience of promoting cooperative purchasing contracts such as TCPN, NIPA, and now OMNIA. That is a benefit FieldTurf brings to the table is that the sales teams are already trained and will be updated on the new Master Agreement. Over the past 17 years, FieldTurf has had over \$100,000,000 in sales via OMNIA/OMNIA.

The Sales Teams already work diligently with a wide variety of municipalities including but not limited to: K-12 schools, Colleges, Universities, Cities, Counties, Park and Rec, state agencies.

In 2021, to date, FieldTurf has had approximately \$6M in sales through OMNIA.

2020: approximately \$5M in sales

2019: approximately \$11M in sales

2018: approximately \$8M in sales

**Provide the name, title, email, and phone number for the person(s) who will be responsible for:**

- i. Executive Support**



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**Eric DALIERE**

President – Tarkett North America & Tarkett Sports

T: +1 440 903 4536 M: +1 917-783-3360  
30000 Aurora Rd, Solon, OH 44139



**ii. Marketing**

**Darren Gill**

Vice President, Global Marketing



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Montreal Quebec H4T 1G2  
Canada

Tel: +1 514-340-9311 ext. 140

Other: +1 800-724-2969 ext. 140

Mobile: +1 514-862-4094

Fax: +1 514-340-9374

Email: [DGill@fieldturf.com](mailto:DGill@fieldturf.com)

[www.fieldturf.com](http://www.fieldturf.com)

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**iii. Sales**

**Martin Olinger**

Senior Vice-President Sales



175 N Industrial Blvd NE  
Calhoun GA 30701

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Fax: +1 514-340-9374  
Email: [Martin.Olinger@fieldturf.com](mailto:Martin.Olinger@fieldturf.com)  
[www.fieldturf.com](http://www.fieldturf.com)

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#### iv. Sales Support

**Eric Fisher**  
Director of Sales- SmartBuy



19600 SW 129th Avenue Suite A  
Tualatin OR 97062  
United States  
Tel: +1 503 563 6395  
Other: +1 888-209-0065  
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Fax: +1 503-692-8659  
Email: [Eric.Fisher@smartbuycooperative.com](mailto:Eric.Fisher@smartbuycooperative.com)

**Sarah Morehead**  
Director of Operations- SmartBuy



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Mobile: +1 503-267-0165

Fax: +1 503-692-8659

Email: [Sarah.Morehead@smartbuycooperative.com](mailto:Sarah.Morehead@smartbuycooperative.com)

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## v. Financial Reporting

**Pedro Azevedo**

Chief Financial Officer



7445 Cote-de-Liesse Road Suite 200  
Montreal Quebec H4T 1G2  
Canada

Tel: +1 514 375 2561

Other: +1-800-724-2969 ext 2561

Mobile: +1 514-463-3953

Fax: +1 514-340-0857

Email: [Pedro.Azevedo@tarkettsports.com](mailto:Pedro.Azevedo@tarkettsports.com)

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## vi. Accounts Payable

**Christapor Papazian**

AP & AR Manager



Tarkett Sports  
7445 Cote-de-Liesse Road Suite 200  
Montreal Quebec H4T 1G2  
Canada

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Mobile: [+1 514-248-0296](tel:+15142480296)

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Fax: [+1 514-340-0857](tel:+15143400857)

IM: [christapor.papazian@tarkett.com](mailto:christapor.papazian@tarkett.com)

Email: [christapor.papazian@tarkettsports.com](mailto:christapor.papazian@tarkettsports.com)



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## vii. Contracts

**Indina Remy**  
Legal Counsel, Manager



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Montreal Quebec H4T 1G2  
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Fax: +1 514-340-9374  
IM: indina.remy@tarkett.com  
Email: indina.remy@tarkettsports.com

## H. Describe in detail how Supplier's national sales force is structured, including contact information for the highest-level executive in charge of the sales team.

FieldTurf sales team is in a regional structure with Regional VP's responsible for several Regional Sales Managers. See chart below.

Highest-level Executive in charge of sales team:

**Martin Olinger**  
Senior Vice-President Sales



175 N Industrial Blvd NE  
Calhoun GA 30701  
United States  
Tel: +1 404-229-4135  
Other: +1 800-724-2969  
Fax: +1 514-340-9374  
Email: [Martin.Olinger@fieldturf.com](mailto:Martin.Olinger@fieldturf.com)  
[www.fieldturf.com](http://www.fieldturf.com)

Function	Name	Title	Phone	Email
Contract Manager	Eric Fisher	Director of Sales	503-708-6548	<a href="mailto:Eric.Fisher@smartbuycooperative.com">Eric.Fisher@smartbuycooperative.com</a>
Contract Operations Manager	Sarah Morehead	Director of Operations- SmartBuy Sports Company	503-267-0165	<a href="mailto:Sarah.morehead@smartbuycooperative.com">Sarah.morehead@smartbuycooperative.com</a> 15+ YEARS OF SALES & OPERATIONS EXPERIENCE
Sales Manager	Eric Fisher	Director of Sales	503-708-6548	<a href="mailto:Eric.Fisher@smartbuycooperative.com">Eric.Fisher@smartbuycooperative.com</a>
Customer & Support Manager	Thomas Mullins	Vice President of Installations	706-280-6383	<a href="mailto:Thomas.Mullins@tarkettsports.com">Thomas.Mullins@tarkettsports.com</a>
Distributors, Dealers, Installers, Sales Reps	Josh Keown; Jamie MacDonald	Regional VP, Regional Sales Manager Installer: RS Global, Turf Dogs <b>States: AL, GA, MS,</b>	1-815-482-8942  404-556-8265	<a href="mailto:Jamie.MacDonald@fieldturf.com">Jamie.MacDonald@fieldturf.com</a> ; <a href="mailto:Josh.Keown@fieldturf.com">Josh.Keown@fieldturf.com</a>
	Donny Jones	Regional VP Installer: RS Global, Beyond the Turf, <b>States: AK, AZ</b>	WA: 360-668-8989 AZ: 602-284-8987	<a href="mailto:donny@ftnw.com">donny@ftnw.com</a>
	Tim Coury; Andrew Rowley	Regional Sales Manager, Regional VP Installer: FieldTurf Construction <b>States: CA, WA, NV</b>	707-586-8873	<a href="mailto:andrew@fieldturfnorcal.com">andrew@fieldturfnorcal.com</a> <a href="mailto:tcfieldturf@gmail.com">tcfieldturf@gmail.com</a>
	Jed Easterbrook;	Regional VP <b>States: CO, ID, MT, NM, UT, WY</b>	303-775-6773	<a href="mailto:Jed.Easterbrook@fieldturf.com">Jed.Easterbrook@fieldturf.com</a>
	Andrew Dyjak; Perry DiPiazza	Regional Vice President, NE Regional Vice-President of Sales  Installer: RS Global, Beyond the Turf <b>States: CT, NV VT</b>	860-333-7839 201-776-7767	<a href="mailto:Andrew.Dyjak@fieldturf.com">Andrew.Dyjak@fieldturf.com</a> <a href="mailto:Perry.DiPiazza@external.fieldturf.com">Perry.DiPiazza@external.fieldturf.com</a>

	John McShane; Jim Shanahan	Regional Sales Manager, Regional VP Installer: LandTek, Beyond the Turf <b>States: DE, MD</b>	301-907-4727 610-585-8707	<a href="mailto:John.McShane@fieldturf.com">John.McShane@fieldturf.com</a> <a href="mailto:Jim.Shanahan@fieldturf.com">Jim.Shanahan@fieldturf.com</a>
	Chris Wedge; Jamie MacDonald	Regional Sales Manager, Regional VP of Sales Installer: RS Global <b>States: FL</b>	352-242-7620 815-482-8942	<a href="mailto:Chris.Wedge@fieldturf.com">Chris.Wedge@fieldturf.com</a> <a href="mailto:Jamie.MacDonald@fieldturf.com">Jamie.MacDonald@fieldturf.com</a> ;
	Jonathan Huard; Jim Knazek	Regional Vice-President, Central Region, Installers: International Sports Surfaces <b>States: IL</b>	440-221-9620 630-474-9817	<a href="mailto:Jim.Knazek@fieldturf.com">Jim.Knazek@fieldturf.com</a> <a href="mailto:Jonathan.Huard@fieldturf.com">Jonathan.Huard@fieldturf.com</a>
	Brian Kramer, Jim Knazek	Regional Sales Manager, Regional Sales Manager Installers: MidWest FieldTurf, FT Install Grop, MidWest FieldTurf, RS Global <b>States: IA, MN, NE, ND</b>	816-550-3037 440-221-9620	<a href="mailto:Jim.Knazek@fieldturf.com">Jim.Knazek@fieldturf.com</a> <a href="mailto:Brian.Kramer@fieldturf.com">Brian.Kramer@fieldturf.com</a>
	David Ross, Jim Knazek;	Regional Vice-President, Central Region Installers: Kerr Athletics <b>States: KS, MO</b>	816-886-8097 440-221-9620	<a href="mailto:David.Ross@fieldturf.com">David.Ross@fieldturf.com</a> <a href="mailto:Jim.Knazek@fieldturf.com">Jim.Knazek@fieldturf.com</a>
	Jim Shanahan;	Regional VP		<a href="mailto:Jim.Shanahan@fieldturf.com">Jim.Shanahan@fieldturf.com</a>

		Installer: RS Global, Northeast Turf <b>States: KY, WV</b>	610-585- 8707	
	Bryan Cox,	Regional Sales Manager Installer: RS Global <b>States: LA, TX</b>	303-775- 6773	Bryan.Cox@fieldturf.com
	Blake Centers; Jim Knazek	Regional Sales Manager, Regional Vice- President, Central Region Installer: Beyond the Turf, FT Install Group, <b>States: IN, MI, WI</b>	773-569- 6814 440-221- 9620	<a href="mailto:blake.centers@fieldturf.com">blake.centers@fieldturf.com</a>  Jim.Knazek@fieldturf.com
	Neil O'Donnell	Regional Sales Manager Installer: RS Global <b>States: TN</b>	615 -665 - 1495	Neil.O'Donnell@fieldturf.com
	Perry Dipiazza	Regional Vice President, NE Installer: Northeast Turf, LandTek, Chenango, Beyond the Turf, <b>States: RI, ME, NH, NJ, NY</b>	201-776- 7767	<a href="mailto:Perry.Dipiazza@external.fieldturf.com">Perry.Dipiazza@external.fieldturf.com</a>
	Jamie MacDonald	Vice-President Sales Operations, Sales Installer: Turf Dogs <b>States: SC</b>	815-482- 8942	<a href="mailto:Jamie.MacDonald@fieldturf.com">Jamie.MacDonald@fieldturf.com</a> ;
	Jim Knazek	Vice-President Sales		Jim.Knazek@fieldturf.com

		Operations, Sales Installer: Northeast Turf <b>States: OH</b>	440-221- 9620	
	David Ross	Regional Sales Manager Installer: RS Global <b>States: OK</b>	816-886- 8097	<a href="mailto:David.Ross@fieldturf.com">David.Ross@fieldturf.com</a>
	Bill Bamber;	Regional NE Sales Manager,  Installer: LandTek <b>States: PA</b>	610-827- 7979	<a href="mailto:Bill.Bamber@fieldturf.com">Bill.Bamber@fieldturf.com</a>
	Donny Jones, Andrew Rowley	Regional VP, Regional VP Installers: FieldTurf Construction <b>States: HI</b>	360-668- 8989, 602-284- 8987 707 -586- 8873	<a href="mailto:donny@ftnw.com">donny@ftnw.com</a> <a href="mailto:andrew@fieldturfncorcal.com">andrew@fieldturfncorcal.com</a>
	John McShane; Jim Shanahan	Regional Sales Manager, Regional VP Installers: Beyond the Turf <b>States: VA</b>	301-907- 4727  610-585- 8707	<a href="mailto:Jim.Shanahan@fieldturf.com">Jim.Shanahan@fieldturf.com</a> <a href="mailto:John.McShane@fieldturf.com">John.McShane@fieldturf.com</a>
	Brian Kramer; Jim Shanahan	Regional Sales Manager, Regional Vice- President of Sales, Sales Installers: MidWest FieldTurf <b>States: SD</b>	610-585- 8707  816-550- 3037	<a href="mailto:Jim.Shanahan@fieldturf.com">Jim.Shanahan@fieldturf.com</a> <a href="mailto:Brian.Kramer@fieldturf.com">Brian.Kramer@fieldturf.com</a>
	Steve Coury	Regional Sales Manager Installer; FieldTurf Construction <b>States: OR</b>	503-939- 1832	<a href="mailto:scouryfieldturf@gmail.com">scouryfieldturf@gmail.com</a>

Consultants & Trainers	Eric Fisher/Sarah Morehead	Director of Sales/Dir of Operations	503-708-6548 503 563 6390	<a href="mailto:Sarah.Morehead@smartbuycooperative.com">Sarah.Morehead@smartbuycooperative.com</a> ; Eric.Fisher@smartbuycooperative.com
Technical, Maintenance & Support Services	Thomas Mullins	Vice President of Installations	706-280-6383	<a href="mailto:Thomas.Mullins@tarkettsports.com">Thomas.Mullins@tarkettsports.com</a>
Quotes, Invoicing & Payments	Christapor Papazian	AP&AR Manager - Finance	514-375-2616	Christapor.Papazian@tarkettsports.com
Warranty & After the Sale	Thomas Mullins	Vice President of Installations	706-280-6383	<a href="mailto:Thomas.Mullins@tarkettsports.com">Thomas.Mullins@tarkettsports.com</a>
Financial Manager	Christapor Papazian	AP&AR Manager - Finance	514 -375-2616	Christapor.Papazian@tarkettsports.com

**I. Explain in detail how the sales teams will work with the OMNIA Partners team to implement, grow and service the national program.**

Response:

FieldTurf and Beynon’s National Sales Force is already currently trained on the use of the OMNIA contract and promote it wherever possible. We will continue to be diligent in our marketing of the contract by doing the following things (but not limited to):

- Hold regional breakout meetings with FieldTurf and Beynon personnel promoting the contract and answering questions.
- Attend lunch and learns/ presentations in conjunction with sales force to “draw the connection” between the FieldTurf/ Beynon product and the OMNIA method of delivery.
- Join OMNIA for special events with FieldTurf/ Beynon personnel as needed.
- Conference calls, as necessary, with a clear sales strategy as to how/ when/ where to promote the contract- this includes identifying “target rich” owners and entities.
- Continue to monitor progress and process implementation to continue to build sales in currently successful regions and gain sales in underperforming regions.

**I. Explain in detail how Supplier will manage the overall national program throughout the term of the Master Agreement, including ongoing coordination of marketing and sales efforts, timely new Participating Public Agency account set-up, timely contract administration ,etc.**

Response:



SmartBuy is the dedicated Cooperative Purchasing Division of FieldTurf/Beynon. With over 17 years of Cooperative Purchasing experience and \$750 million in cooperative purchasing contract value, the SmartBuy team has enabled hundreds of municipalities including public schools, colleges, universities, cities, park/recreation departments, and counties to purchase their desired FieldTurf sports field, Beynon running track, or Tarkett court. SmartBuy is the division of FieldTurf that manages the overall national program throughout the term of the Master Agreement, including ongoing coordination of marketing and sales efforts, timely new Participating Public Agency account setup, contract administration, and contract management.

SmartBuy's years of Cooperative Purchasing expertise ensure the following in terms of OMNIA contract management:

- Corporate Top Down Instruction to incorporate OMNIA into sales presentations.
- SmartBuy-Dedicated Team to market, educate, and manage the OMNIA Contract
- Promoting OMNIA Contract to Municipalities
- Coordinate communication between FieldTurf, Beynon, Tarkett and customers.
- Coordinate internal communication regarding OMNIA contract to FieldTurf Accounting, Legal/Contract Department, Sales, and Marketing.
- SmartBuy is responsible for reporting and ensuring payment of OMNIA admin fee.

SmartBuy and FieldTurf set the stage for success of the OMNIA contract by communicating the contract's value, knowing the contract thoroughly, and communicating the proper use of contracted products and services to end user.

SmartBuy and FieldTurf Sales teams work with OMNIA member regarding project scope of work, sports surfacing products, budget, and time frame. FieldTurf and Beynon project managers generate customer proposals with relative OMNIA pricing and language. Customer reviews and approves proposal and then issues a PO to FieldTurf. Simple, legal, quick process to meet the customer's needs.

SmartBuy will interact with OMNIA and members in the following ways:

- Explain OMNIA contractual language to OMNIA members so all parties are on the same page. This is done by providing the due diligence legal documents and addressing any question customers have.
- Explain the “who/ what/ when/ where/ why” with sales forces and OMNIA members to successfully land OMNIA based accounts.
- Market at trade shows with OMNIA.
- Generate co-branded fliers.
- Sponsor & attend events to get in front of OMNIA clients. Attend requested board meetings, council meetings, etc. as part of our team to provide owners complete procurement information and opportunities for their sports surfaces project.

- Provide familiarity/knowledge of member state's cooperative procurement options.

**J. State the amount of Supplier's Public Agency sales for the previous fiscal year. Provide a list of Supplier's top 10 Public Agency customer, the total purchases for each for the previous fiscal year along with a key contact for each.**

Response:

FieldTurf/Tarkett sales to Public Agencies is about 75% of our annual sales = \$550M

Public Agency Customer	Total Purchase value for the previous fiscal year	Key Contact Name	Key Contact E-mail	
Center Grove Community School Corporation, IN	\$1.5M	Scott Knapp, Athletic Director	KNAPPS@CENTERGROVE.K12.IN.US	OMNIA
City School District of The City of Schednectady, NY	\$700K	Mike Barry, Director of Facilities	barrym@schenectady.k12.ny.us	OMNIA
University of North Florida, FL	\$800K	Richard Elmore, Asst. Director Univ Facility Planning	relmore@unf.edu	OMNIA
Splendor Independent School District, TX	\$1M	Kevin Lynch, Chief Financial Officer	klynch@splendoraisd.org	OMNIA
Fulton County Schools, GA	\$4M	Michael Peek, Director of Maintenance/Operations	peekm@fultonschools.org	OMNIA
Cypress-Fairbanks Independent School District, TX	\$7M	Kevin Krenek, Asst. Varsity Coach/JV Head Coach	kevin.krennek@cfisd.net	Bid or other
Hall County Schools, GA	\$8M	Matt Cox, Executive Director of Facilities & Construction	Matt.Cox@hallco.org	Bid or other

Gwinnett County Board of Education, GA	\$6.5M	Carey Bell, Engineering Review Coordinator	carey.w.bell@gcpsk12.org	Bid or other
Fairfax County Public Schools, VA	\$5M	Angela David, Facilities	acdavid@fcps.edu	Bid or other
Westmont Hilltop School District, PA	\$5M	Thomas Mitchell, Superintendent	trm@whsd.org	Bid or other

**K. Describe Supplier’s information systems capabilities and limitations regarding order management through receipt of payment, including description of multiple platforms that may be used for any of these functions.**

FieldTurf USA, Inc. operates utilizing a combination of Syspro information system for order management and Project Mates for electronic Document Storage.

SYSPRO software has been in place at FieldTurf for over 8 years and ensures that the following functions are implemented to satisfy our large and varied customer base:

- Sales Management
- Accounting Software
- Inventory Management
- Production Management
- Warehouse Management
- Planning and Scheduling
- Order Management
- Business Intelligence

Syspro provide real-time view of FieldTurf’s key business drivers with actionable business –critical insights for quicker analysis, decision-making and execution.

Syspro allows FieldTurf divisions to all have the most current information on all the projects from a proposal being generated and entered into the system to a PO or contract issued, to ordering, accounting, production, turf delivery scheduling, and payment process. From start to finish Syspro contains the information for FieldTurf to perform at the highest level of business productivity.

Customer's have the choice to issue a purchase order, use a standard FieldTurf Sales Agreement, issue an AIA contract, or use their own specific contract.

**L. Provide the Contract Sales (as defined in Section 10 of the OMNIA Partners Administrative Agreement) that Supplier will guarantee each year under the Master Agreement for the initial three years of the Master Agreement (Guaranteed Contract Sales).**

**To the extent Supplier guarantees minimum Contract Sales, the Administrative Fee shall be calculated based on the greater of the actual Contract Sales and the Guaranteed Contract Sales.**

Response:

Year 1: 1 Million

Year 2: 1 Million

Year 3: 1 Million

**M. Even though it is anticipated many Public Agencies will be able to utilize the Master Agreement without further formal solicitation, there may be circumstances where public Agencies will issue their own solicitations. The following options are available when responding to a solicitation for Products covered under the Master Agreement.**

**i. Respond with Master Agreement pricing (Contract Sales reported to OMNIA Partners)**

**ii. If competitive conditions require pricing lower than the standard Master Agreement not-to-exceed pricing, Supplier may respond with lower pricing through the Master Agreement. If Supplier is awarded the contract, the sales are reported as Contract Sales to OMNIA Partners under the Master Agreement.**

**iii. Respond with pricing higher than Master Agreement only in the unlikely event that the Public Agency refuses to utilize Master Agreement (Contract Sales are not reported to OMNIA Partners).**

**iv. If alternative or multiple proposals are permitted, respond with pricing higher than Master Agreement, and include Master Agreement as the alternate or additional proposal.**

**Detail Supplier's strategies under these options when responding to a solicitation.**



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Response: FieldTurf always encourages customers to use cooperative purchasing options and strongly promotes OMNIA as described in previous responses in this bid. FieldTurf has over \$30M contract value worth of sales over the course of many years with TCPN/Region 4/NIPA/OMNIA. Ultimately, it is up to the customer to choose the procurement process based on their procurement regulations and requirements.



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# How FieldTurf Can Contribute To Obtaining LEED® Credits

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## How FieldTurf Can Contribute To Obtaining LEED® Credits

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**WE Credit 1.2:** Water Efficient Landscaping: No Potable Water Use or No Irrigation  
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- 1 Point

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- 1 Point

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- 1 Point in addition to MR Credit 4.1

**MR Credit 5.1:** Regional Materials: 10% Extracted, Processed & Manufactured Regionally  
- 1 Point

**MR Credit 5.2:** Regional Materials: 20% Extracted, Processed & Manufactured Regionally  
- 1 Point in addition to MR Credit 5.1

## How FieldTurf Can Contribute To Obtaining LEED® Credits

### The Leadership in Energy and Environmental Design

The Leadership in Energy and Environmental Design (LEED®) Green Building Rating System™ represents the U.S. Green Building Council's effort to provide a national standard for what constitutes a "green building." It is utilized as a design guideline and certification tool for architects and designers seeking to develop high-performance, sustainable buildings.

LEED Version 2.2 is an updated version of the rating system for New Construction, Major Renovations, and Water Efficiency. It is designed to guide and distinguish high-performance commercial and institutional projects.

The rating system defines the requirements, by category, to achieve each prerequisite and voluntary point. Projects earn one or more points toward certification by meeting or exceeding each credit's technical requirements. Points compute to a final score that relates to one of four possible levels of certification.

FieldTurf's synthetic turf systems for athletic fields are designed to meet stringent criteria required to potentially earn points under 1 out of the 10 categories of LEED-NC. Based on this criteria, FieldTurf's products can assist architects and designers in obtaining up to 10 points toward LEED certification.



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## How FieldTurf Can Contribute To Obtaining LEED® Credits

### FieldTurf Recycled Content

**Product:** FieldTurf - Rubber & Sand Infill

**Dimensions (mm):**

Thickness	as specified
Length	as specified
Width	as specified

**Color:** Black

**Recycled Content:**

Total	70% (volume)
Post-Consumer	100%
Pre-Consumer	N/A

### LEED-NC (New Construction) CREDIT AREAS POTENTIALLY IMPACTED BY FIELDTURF

Category	Credit Title	Credit Number	No of Points Attainable
Materials & Resources	Construction Waste Management	MR 2.1	1
Materials & Resources	Construction Waste Management	MR 2.2	1
Materials & Resources	Materials Reuse	MR 3.1	1
Materials & Resources	Materials Reuse	MR 3.2	1
Materials & Resources	Recycled Content	MR 4.1	1
Materials & Resources	Recycled Content	MR 4.2	1
Materials & Resources	Regional Materials	MR 5.1	1
Materials & Resources	Regional Materials	MR 5.2	1
Water Efficiency	Water Efficiency Landscaping	WE 1.1	1
Water Efficiency	Water Efficiency Landscaping	WE 1.2	1

## How FieldTurf Can Contribute To Obtaining LEED® Credits

### WE Credit 1.1: Water Efficient Landscaping: Reduce by 50% - 1 Point

**Intent**

Limit or eliminate the use of potable water, or other natural surface or subsurface water resources available on or near the project site, for landscape irrigation.

**Requirements**

Reduce potable water consumption for irrigation by 50% from a calculated mid-summer baseline case.

Reductions shall be attributed to any combination of the following items:

- Plant species factor
- Irrigation efficiency
- Use of captured rainwater
- Use of recycled wastewater
- Use of water treated and conveyed by a public agency specifically for non-potable uses

**Potential Technologies & Strategies**

Perform a soil/climate analysis to determine appropriate plant material and design the landscape with native or adapted plants to reduce or eliminate irrigation requirements. Where irrigation is required, use high-efficiency equipment and/or climate-based controllers.

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### WE Credit 1.2: Water Efficient Landscaping: No Potable Water Use or No Irrigation - 1 Point in addition to WE Credit 1.1

**Intent**

Eliminate the use of potable water, or other natural surface or subsurface water resources available on or near the project site, for landscape irrigation.

**Requirements**

Achieve WE Credit 1.1.and:

Use only captured rainwater, recycled wastewater, recycled greywater, or water treated and conveyed by a public agency specifically for non-potable uses for irrigation.

**OR**

Install landscaping that does not require permanent irrigation systems. Temporary irrigation systems used for plant establishment are allowed only if removed within one year of installation.

**Potential Technologies & Strategies**

Perform a soil/climate analysis to determine appropriate landscape types and design the landscape with indigenous plants to reduce or eliminate irrigation requirements. Consider using stormwater, greywater, and/or condensate water for irrigation.

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## How FieldTurf Can Contribute To Obtaining LEED® Credits

## How FieldTurf Can Contribute To Obtaining LEED® Credits

### **MR Credit 2.1:** Construction Waste Management: Divert 50% From Disposal **1 Point**

#### **Intent**

Divert construction, demolition and land-clearing debris from disposal in landfills and incinerators. Redirect recyclable recovered resources back to the manufacturing process. Redirect reusable materials to appropriate sites.

#### **Requirements**

Recycle and/or salvage at least 50% of non-hazardous construction and demolition debris. Develop and implement a construction waste management plan that, at a minimum, identifies the materials to be diverted from disposal and whether the materials will be sorted on-site or comingled. Excavated soil and land-clearing debris do not contribute to this credit. Calculations can be done by weight or volume, but must be consistent throughout.

#### **Potential Technologies & Strategies**

Establish goals for diversion from disposal in landfills and incinerators and adopt a construction waste management plan to achieve these goals. Consider recycling cardboard, metal, brick, acoustical tile, concrete, plastic, clean wood, glass, gypsum wallboard, carpet and insulation. Designate a specific area(s) on the construction site for segregated or comingled collection of recyclable materials, and track recycling efforts throughout the construction process. Identify construction haulers and recyclers to handle the designated materials. Note that diversion may include donation of materials to charitable organizations and salvage of materials on-site.

### **MR Credit 2.2:** Construction Waste Management: Divert 75% From Disposal - **1 Point in addition to MR Credit 2.1**

#### **Intent**

Divert construction and demolition debris from disposal in landfills and incinerators. Redirect recyclable recovered resources back to the manufacturing process. Redirect reusable materials to appropriate sites.

#### **Requirements**

Recycle and/or salvage an additional 25% beyond MR Credit 2.1 (75% total) of non-hazardous construction and demolition debris. Excavated soil and land-clearing debris do not contribute to this credit. Calculations can be done by weight or volume, but must be consistent throughout.

#### **Potential Technologies & Strategies**

Establish goals for diversion from disposal in landfills and incinerators and adopt a construction waste management plan to achieve these goals. Consider recycling cardboard, metal, brick, acoustical tile, concrete, plastic, clean wood, glass, gypsum wallboard, carpet and insulation. Designate a specific area(s) on the construction site for segregated or comingled collection of recyclable materials, and track recycling efforts throughout the construction process. Identify construction haulers and recyclers to handle the designated materials. Note that diversion may include donation of materials to charitable organizations and salvage of materials on-site.

### **MR Credit 3.1:** Materials Reuse: 5% - **1 Point**

#### **Intent**

Reuse building materials and products in order to reduce demand for virgin materials and to reduce waste, thereby reducing impacts associated with the extraction and processing of virgin resources.

#### **Requirements**

Use salvaged, refurbished or reused materials such that the sum of these materials constitutes at least 5%, based on cost, of the total value of materials on the project. Mechanical, electrical and plumbing components and specialty items such as elevators and equipment shall not be included in this calculation. Only include materials permanently installed in the project. Furniture may be included, providing it is included consistently in MR Credits 3-7.

#### **Potential Technologies & Strategies**

Identify opportunities to incorporate salvaged materials into building design and research potential material suppliers. Consider salvaged materials such as beams and posts, flooring, paneling, doors and frames, cabinetry and furniture, brick and decorative items.

### **MR Credit 3.2:** Materials Reuse: 10% **1 Point in addition to MR Credit 3.1**

#### **Intent**

Reuse building materials and products in order to reduce demand for virgin materials and to reduce waste, thereby reducing impacts associated with the extraction and processing of virgin resources.

#### **Requirements**

Use salvaged, refurbished or reused materials for an additional 5% beyond MR Credit 3.1 (10% total, based on cost). Mechanical, electrical and plumbing components and specialty items such as elevators and equipment shall not be included in this calculation. Only include materials permanently installed in the project. Furniture may be included, providing it is included consistently in MR Credits 3-7.

#### **Potential Technologies & Strategies**

Identify opportunities to incorporate salvaged materials into building design and research potential material suppliers. Consider salvaged materials such as beams and posts, flooring, paneling, doors and frames, cabinetry and furniture, brick and decorative items.



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## How FieldTurf Can Contribute To Obtaining LEED® Credits

### **MR Credit 4.1:** Recycled Content: 10% (post-consumer + 1/2 pre-consumer) **1 Point**

#### **Intent**

Increase demand for building products that incorporate recycled content materials, thereby reducing impacts resulting from extraction and processing of virgin materials.

#### **Requirements**

Use materials with recycled content such that the sum of post-consumer recycled content plus one-half of the pre-consumer content constitutes at least 10% (based on cost) of the total value of the materials in the project.

The recycled content value of a material assembly shall be determined by weight. The recycled fraction of the assembly is then multiplied by the cost of assembly to determine the recycled content value.

Mechanical, electrical and plumbing components and specialty items such as elevators shall not be included in this calculation. Only include materials permanently installed in the project. Furniture may be included, providing it is included consistently in MR Credits 3–7.

Recycled content shall be defined in accordance with the International Organization of Standards document, *ISO 14021—Environmental labels and declarations—Self-declared environmental claims (Type II environmental labeling)*.

Post-consumer material is defined as waste material generated by households or by commercial, industrial and institutional facilities in their role as end-users of the product, which can no longer be used for its intended purpose.

Pre-consumer material is defined as material diverted from the waste stream during the manufacturing process. Excluded is reutilization of materials such as rework, regrind or scrap generated in a process and capable of being reclaimed within the same process that generated it.

#### **Potential Technologies & Strategies**

Establish a project goal for recycled content materials and identify material suppliers that can achieve this goal. During construction, ensure that the specified recycled content materials are installed. Consider a range of environmental, economic and performance attributes when selecting products and materials.

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## How FieldTurf Can Contribute To Obtaining LEED® Credits

### **MR Credit 4.2:** Recycled Content: 20% (post-consumer + 1/2 pre-consumer) **1 Point in addition to MR Credit 4.1**

#### **Intent**

Increase demand for building products that incorporate recycled content materials, thereby reducing the impacts resulting from extraction and processing of virgin materials.

#### **Requirements**

Use materials with recycled content such that the sum of post-consumer recycled content plus one-half of the pre-consumer content constitutes an additional 10% beyond MR Credit 4.1 (total of 20%, based on cost) of the total value of the materials in the project.

The recycled content value of a material assembly shall be determined by weight. The recycled fraction of the assembly is then multiplied by the cost of assembly to determine the recycled content value.

Mechanical, electrical and plumbing components and specialty items such as elevators shall not be included in this calculation. Only include materials permanently installed in the project. Furniture may be included, providing it is included consistently in MR Credits 3–7.

Recycled content shall be defined in accordance with the International Organization of Standards document, *ISO 14021—Environmental labels and declarations—Self-declared environmental claims (Type II environmental labeling)*.

Post-consumer material is defined as waste material generated by households or by commercial, industrial and institutional facilities in their role as end-users of the product, which can no longer be used for its intended purpose.

Pre-consumer material is defined as material diverted from the waste stream during the manufacturing process. Excluded is reutilization of materials such as rework, regrind or scrap generated in a process and capable of being reclaimed within the same process that generated it.

#### **Potential Technologies & Strategies**

Establish a project goal for recycled content materials and identify material suppliers that can achieve this goal. During construction, ensure that the specified recycled content materials are installed. Consider a range of environmental, economic and performance attributes when selecting products and materials.

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LEED VERSION 2.2  
US GREEN BUILDING COUNCIL

LEED for New Construction Version 2.2 - October 2005

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## How FieldTurf Can Contribute To Obtaining LEED® Credits

**MR Credit 5.1:** Regional Materials: 10% Extracted, Processed & Manufactured Regionally - **1 Point**

**Intent**

Increase demand for building materials and products that are extracted and manufactured within the region, thereby supporting the use of indigenous resources and reducing the environmental impacts resulting from transportation.

**Requirements** - See location map on next page.

Use building materials or products that have been extracted, harvested or recovered, as well as manufactured, within 500 miles of the project site for a minimum of 10% (based on cost) of the total materials value. If only a fraction of a product or material is extracted/harvested/recovered and manufactured locally, then only that percentage (by weight) shall contribute to the regional value. Mechanical, electrical and plumbing components and specialty items such as elevators and equipment shall not be included in this calculation. Only include materials permanently installed in the project. Furniture may be included, providing it is included consistently in MR Credits 3–7.

**Potential Technologies & Strategies**

Establish a project goal for locally sourced materials, and identify materials and material suppliers that can achieve this goal. During construction, ensure that the specified local materials are installed and quantify the total percentage of local materials installed. Consider a range of environmental, economic and performance attributes when selecting products and materials.

**MR Credit 5.2:** Regional Materials: 20% Extracted, Processed & Manufactured Regionally - **1 Point in addition to MR Credit 5.1**

**Intent**

Increase demand for building materials and products that are extracted and manufactured within the region, thereby supporting the use of indigenous resources and reducing the environmental impacts resulting from transportation.

**Requirements** - See location map on next page.

Use building materials or products that have been extracted, harvested or recovered, as well as manufactured, within 500 miles of the project site for an additional 10% beyond MR Credit 5.1 (total of 20%, based on cost) of the total materials value. If only a fraction of the material is extracted/harvested/recovered and manufactured locally, then only that percentage (by weight) shall contribute to the regional value.

**Potential Technologies & Strategies**

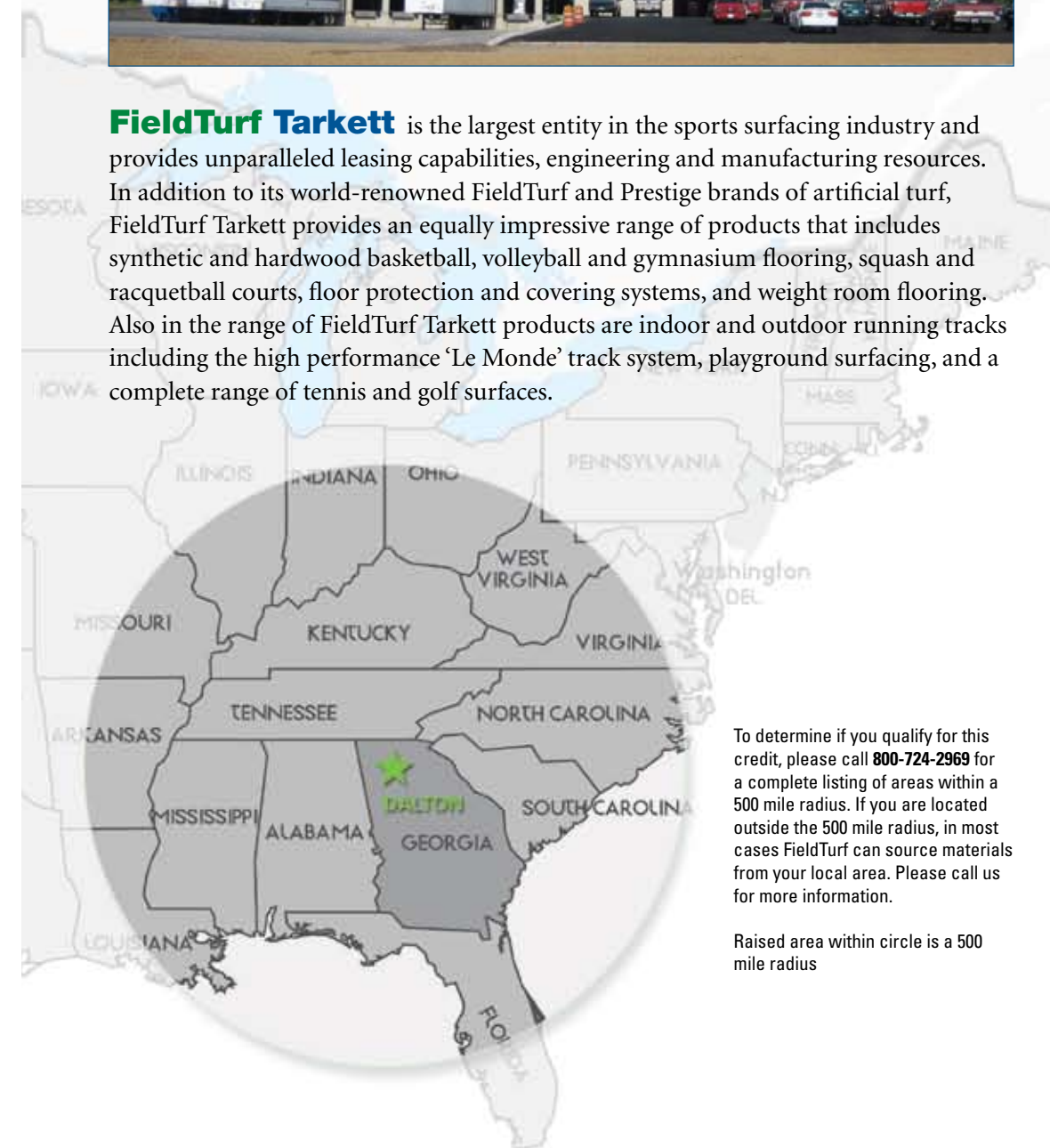
Establish a project goal for locally sourced materials and identify materials and material suppliers that can achieve this goal. During construction, ensure that the specified local materials are installed. Consider a range of environmental, economic and performance attributes when selecting products and materials.

## How FieldTurf Can Contribute To Obtaining LEED® Credits



FieldTurf Tarkett manufacturing facility in Dalton, GA

**FieldTurf Tarkett** is the largest entity in the sports surfacing industry and provides unparalleled leasing capabilities, engineering and manufacturing resources. In addition to its world-renowned FieldTurf and Prestige brands of artificial turf, FieldTurf Tarkett provides an equally impressive range of products that includes synthetic and hardwood basketball, volleyball and gymnasium flooring, squash and racquetball courts, floor protection and covering systems, and weight room flooring. Also in the range of FieldTurf Tarkett products are indoor and outdoor running tracks including the high performance 'Le Monde' track system, playground surfacing, and a complete range of tennis and golf surfaces.



To determine if you qualify for this credit, please call **800-724-2969** for a complete listing of areas within a 500 mile radius. If you are located outside the 500 mile radius, in most cases FieldTurf can source materials from your local area. Please call us for more information.

Raised area within circle is a 500 mile radius



LEED VERSION 2.2  
US GREEN BUILDING COUNCIL

**FIELD** turf®

**The greatest turf on earth.®**

**FieldTurf Tarkett®**  
UNITED IN SPORT®

1-800-724-2969 [info@fieldturfarkett.com](mailto:info@fieldturfarkett.com) [www.fieldturfarkett.com](http://www.fieldturfarkett.com)



# THE STAGE OF SPORTS EVOLUTION



# Why Artificial Turf is the SMART OPTION



Increased field usage for the life of the surface

Creates significant new revenue stream from field rentals

Greatly reduces the overall costs of field maintenance

Saves billions of gallons of clean water each year

Eliminates the use of billions of pounds of chemicals each year

Diverts millions of tires from landfill sites each year

Eliminates grass clippings and fuel-powered mowing, aerating and re-seeding

Provides the opportunity to obtain multiple LEED credits

**Here's what independent reviews often find when comparing Natural Grass and Artificial Turf fields:**

*"Despite the higher up-front and future replacement costs, an artificial turf MCPS Stadium field provides a substantially lower net cost per hour of use than any of the natural grass options because of the substantially increased hours of use and additional revenue generated from that increased use."*

**Montgomery County Work Group**

20 Year Cost Summary						
	Artificial Turf	Bermuda (Sand Base)	Kentucky BG (Sand Base)	Bermuda (Native Soil)	Cool Season (Native Soil)	
20 Year Net Costs	Initial Capital Cost	1,125,000	530,000	580,000	150,000	75,000
	20 Year Replacement Cost*	1,280,000	150,000	175,000	100,000	60,000
	20 Year Maintenance / Other Costs	206,000	1,000,000	1,000,000	900,000	500,000
	20 Year Total Costs	2,611,000	1,680,000	1,755,000	1,150,000	635,000
	20 Year Revenue - MCPS**	1,600,000	-	-	-	-
	20 Year Net Cost - MCPS	1,011,000	1,680,000	1,755,000	1,150,000	635,000
Cost Per Hour of Use	Annual Hours of Use	<b>2,300</b>	600	500	400	300
	20 Year Net Cost Per Hour of Use - MCPS	<b>21.98</b>	140.00	175.50	143.75	105.83

You know artificial turf makes sense.

## So...what now?

Time to find the right **turf partner.**

\*Assumes two artificial turf carpet replacements (after years 8 and 16) and one major natural grass rehab after year 12.  
 \*\*No revenue assumed for natural grass fields since MCPS would reserve these fields only for MCPS team games and practices.

# WHY FIELDTURF IS THE RIGHT TURF PARTNER

Since our invention of the original long pile artificial turf system some 15 years ago, we've been consistently innovating the industry.

**Today, we don't just make turf. We make a difference.**

Our dedication to innovation helps us make a difference for athletes, facility owners and operators – every single day.

## PROVEN SAFETY

We've invested in key partnerships to study the issues that matter – like how compared to natural grass, FieldTurf can help reduce concussions and lower body injuries.

### 5 Year High School Football Study

- 44% Fewer Concussion Injuries Combined
- 43% Fewer ACL Injuries Combined
- 34% Fewer Ligament Tears
- 25% Fewer Injuries (Lasting 22+ Days)
- 20% Fewer 3rd Degree Injuries
- 16% Fewer Injuries (Lasting 1-2 Days)

Source: American Journal of Sports Medicine  
HIGH SCHOOL FOOTBALL SAFETY STUDY: FIELDTURF VS. NATURAL GRASS, A 5-YEAR PROSPECTIVE STUDY

### 3 Year College Football Study

- 24% Fewer High Ankle Sprains
- 23% Fewer Injuries on 4-8+ Year Old Surface
- 20% Fewer Muscle Strains / Tears
- 20% Fewer Ligament Tears
- 20% Fewer Severe Injuries
- 12% Fewer Concussions

Source: American Journal of Sports Medicine  
COLLEGE FOOTBALL SAFETY STUDY: FIELDTURF VS. NATURAL GRASS, A 3-YEAR PROSPECTIVE STUDY

## SUPERIOR PERFORMANCE

Not only do our systems mirror the look and feel of natural grass – they replicate its performance! When compared to competitive turf systems, FieldTurf showcases superior performance.

### Rotational traction values for each surface

Surface	Rotational Traction (Nm)
FieldTurf Revolution	53.1
Kentucky Bluegrass	52.3

See study for full results.

Source: The Pennsylvania State University  
COMPARISON OF ROTATIONAL TRACTION OF ATHLETIC FOOTWEAR ON VARYING PLAYING SURFACES USING DIFFERENT NORMAL LOADS

## GLOBAL EXPERIENCE

With over 5000 installations in North America and 7500 worldwide, FieldTurf has been the surface of choice for the last 20+ years.

Association	Number of Fields
NFL	20
FIFA 1 / 2 Star	211
NCAA Div I	500+

## UNMATCHED DURABILITY

Manufactured and installed with the highest attention to detail, FieldTurf turf systems showcase proven durability. There are over 5000 FieldTurf fields still in use that are 8 or more years old.

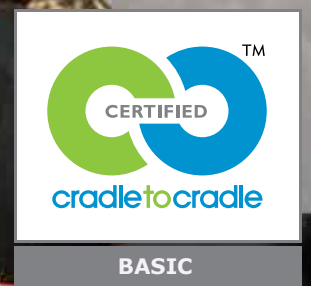
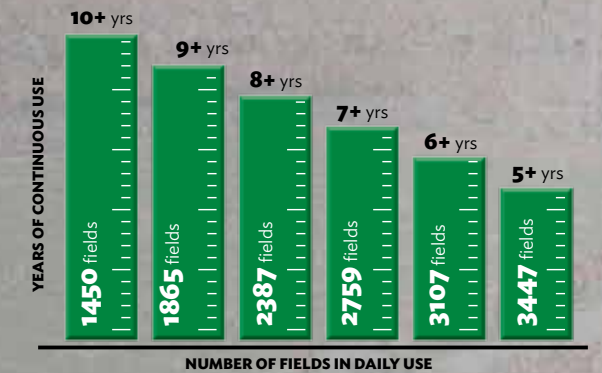
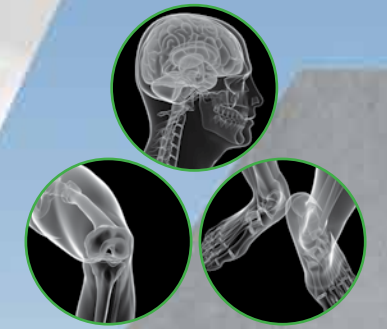
Years of Use	Number of Fields
10+	1450
9+	1865
8+	2387

## ENDLESS INNOVATION

From the original 3 layer infill system; to our SureLock coating drainage system; to our game-changing CoolPlay system – our patented innovations continue to change the game.

## HONESTLY GREEN

Being green is not a cliché for us. It's a reality. Each year we help save millions of gallons of fresh water and eliminate tons of chemicals and pesticides. Our Cradle to Cradle™ certification is just part of our ongoing commitment to use recycled content in our manufacturing and convert old turf fields into new, reusable materials.



# WE MAKE THE GAME SAFER

## Heavyweight infill systems rise above.

Exhaustive study confirms that infill weight plays a key role in reducing player injuries.

**Systems with >9.0 lbs/sq ft are proven safer!**

Study presented at the 2014 annual American Orthopaedic Society for Sports Medicine (AOSSM) meeting. Percentage of Reduced Incidence of Injury on FieldTurf comparing FieldTurf with infill weight of >9 lbs/sq ft to other turf systems with 0 lbs to 5.9 lbs/sq ft of infill weight.



**Concussion Injuries Combined**  
**8.3%**

lower incidence of injury between FieldTurf >9 lbs/sq ft and 3-5.9 lbs/sq ft



**Total Injuries**  
**20.5%**

lower incidence of injury between FieldTurf >9 lbs/sq ft and 3-5.9 lbs/sq ft



**Severe Injuries**  
**16.8%**

lower incidence of injury between FieldTurf >9 lbs/sq ft and 3-5.9 lbs/sq ft



**Player-to-Turf Collisions**  
**36.9%**

lower incidence of injury between FieldTurf >9 lbs/sq ft and 3-5.9 lbs/sq ft



**Adverse Weather Conditions Combined**  
**26.3%**

lower incidence of injury between FieldTurf >9 lbs/sq ft and 3-5.9 lbs/sq ft



**Turf Age (4 to 8+ years)**  
**33.8%**

lower incidence of injury between FieldTurf >9 lbs/sq ft and 3-5.9 lbs/sq ft



**Turf Age (8+ years)**  
**72.7%**

lower incidence of injury between FieldTurf >9 lbs/sq ft and 3-5.9 lbs/sq ft



# MANUFACTURING EXCELLENCE



## FIBER PRODUCTION:

Our fibers are produced at our very own facility in Germany, making FieldTurf one of the most vertically integrated companies in the world. The quality control process at our facility follows stringent testing of the yarn properties, including tensile strength, uniformity and color verification.



## TUFTING EXPERTISE:

Once the fiber is produced it is ready for tufting. This takes place at our 500,000 square-foot manufacturing plant in Calhoun, Georgia. This plant is an ultra-modern facility in the heart of carpet country, with dedicated employees who have 300+ years of combined experience in the artificial turf industry.



## COATING INNOVATION:

One of the most sophisticated coating lines in the artificial turf industry is at the heart of FieldTurf's Calhoun plant. It features our patented SureLock coating system which leaves 40% of the turf backing porous for industry-leading field drainage.



## IN-HOUSE LOGO PRODUCTION:

Our specialized manufacturing capabilities allow us to bring your logo to life. Our logo experts can reproduce the most intricate and complex turf logos - and we do it all in-house. No matter the size, shape, color or detail of your logo, our team will reproduce it and bring it to life in your field.



## EXPERIENCED INSTALLERS:

Installing a FieldTurf field is an art. Our installers are experienced and fully trained in all aspects of the FieldTurf product. These qualified experts are the ones our customers can count on to make sure that every FieldTurf field is installed to perform exactly as expected.

FieldTurf controls all aspects of the manufacturing value chain. This provides our customers with a high level of quality assurance.

# WHICH SYSTEM IS RIGHT FOR YOU?

## EACH OF OUR CUSTOMERS HAS UNIQUE NEEDS.

Our “Customer-First” philosophy guides YOU to identify the type of field YOU need.

And while many turf companies try to sell you “their best product” without ever knowing your needs, FieldTurf opts for a different approach. Our “Customer-First” philosophy guides you to identify the type of field you need. Our sports turf systems today are very different from anything else. Each is constructed with meticulous fiber and infill design criteria, to serve the unique needs of very different customers.

### FIBER

#### SLIT-FILM

- Consists of wider fibers designed to lie over and encapsulate the infill, while absorbing heavy use from kicks, drags, tackles and slides
- Designed to withstand the highest use and provide durable, long-lasting fields



#### MONOFILAMENT

- Resilient individual monofilament fibers designed to stand upright
- Designed primarily for grass-like aesthetics and proper ball-roll characteristics; monofilament fibers give the field the desired appearance of perfectly mowed, healthy natural grass



#### HYBRID

- A combination of monofilament fibers and a slit-film fiber in the same stitch
- Designed to provide fiber resilience while encapsulating the infill for the life of the field



### INFILL SYSTEMS

#### THREE-LAYER

- One of the most intricate and meticulous infill systems available today, this system can only be achieved by experienced installers
- Designed to provide the best Gmax and energy restitution results, providing athletes with improved safety and performance

##### AVAILABLE SYSTEMS

- REVOLUTION 360 • CLASSIC HD
- VERTEX PRIME



#### TWO-LAYER

- This homogeneous infill system consists of a sand base with crumb rubber to provide the proper firmness required for optimal athletic performance while providing proper shock absorption

##### AVAILABLE SYSTEMS

- XM6 • XT • VERTEX



#### LOW-INFILL

- Built on a pad, these systems utilize a basic design, re-engineered with new age technology to offer an alternative surface solution constructed with thatch and either little rubber or completely rubber-free

##### AVAILABLE SYSTEMS

- VINTAGE SERIES
- HOCKEY MULTI



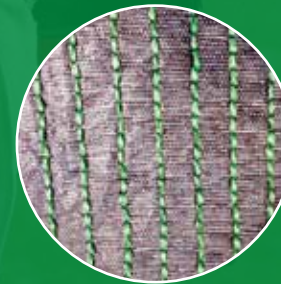
### GAUGE

Gauge refers to the distance between the rows of fibers. FieldTurf has the ability to produce a wide variety of gauges – but our standard systems are produced with a 3/4” gauge.

This wide gauge 3/4” spacing allows for proper cleat penetration of the infill. Proper penetration enables the athlete to plant, twist and release just like they do on natural grass – without undue torque transmitted to the knees and ankles. As a result, chances of injuries are greatly reduced.

Other turf systems typically use a very narrow gauge usually 3/8” or 1/2”. This narrow gauge results in turf that is overly dense, preventing the same penetration and positive biomechanical functions found on FieldTurf and natural grass.

The result is that the athlete plays on or in the fibers – not in the infill. This can cause the fibers to wear faster and makes it more difficult for the athlete to get solid footing, causing slippage.



### TURF BACKING

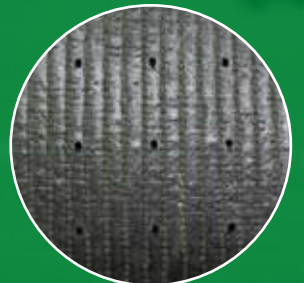
#### FINGER-UNIT / SURELOCK

- This backing delivers ultimate strength, stability and drainage
- A patented finger-unit seals only the rows of fibers, leaving the backing 40% porous, allowing for unmatched drainage.



#### SOLID COATED / PERFORATED

- While not quite as effective as the finger-unit backing, this backing provides good tuft bind and stability
- This solid coated backing is perforated to facilitate drainage



# WHICH INFILL IS RIGHT FOR YOU?

The infill system is one of the most important aspects of all synthetic turf fields. It is the basis for the safety of the turf system by providing the appropriate cushioning to absorb impact. The infill provides the foundation to a field's performance level by offering traction for players to cut, plant and release just like they would on natural grass.

The infill is spread between the fibers to deliver what the athlete needs – a safe surface with proper performance attributes. The infill market is becoming more complex with new products being introduced at a rapid rate. With so many choices, it is important to understand the difference between the various infill types and materials.



Cryogenic Rubber

## CRYOGENIC SBR

Cryogenic rubber is the cleanest and highest grade of recycled crumb rubber granule. Made from ground-up recycled tires, which have first been cryogenically frozen and then shattered, it provides a cleaner, smoother and rounded particle. It stays in suspension within a sand particle mix and is less likely to float in water.



Ambient Rubber

## AMBIENT SBR

Ambient rubber is made from tires that are ground up at ambient temperatures. It results in a rougher and more irregular crumb than cryogenic rubber, with considerably more loose particulate. Its jagged edges attract water bubbles that can make it prone to flotation and displacement in wet conditions.



CoolPlay

## COOLPLAY

CoolPlay utilizes FieldTurf's exclusive and innovative Extruded Cork Composite top dressing which allows the system to deliver the same behavior and overall stability as the elite systems but with an added heat reduction feature – up to 35° F cooler!



PureFill

## PUREFILL

FieldTurf's PureFill cork infill is an all-natural infill. It is an organic, recyclable and sustainable product that is harvested from the cork oak tree every nine years, without harming the trees. It is 100% environmentally-friendly and non-toxic.



EcoMax

## ECOMAX

EcoMax is an extruded composite of recycled materials and thermoplastic elastomer (TPE). It is a new, impact absorbing infill that offers safe and comfortable performance and the best value in its category regarding durability, price and performance.



EcoGreen

## ECOGREEN

EcoGreen is built from premium, virgin TPE that have been selected for their characteristics to deliver a stable surface over the long-term. Each pellet has built-in memory and rebounds back to its original shape after compression. Resistant to UV degradation, it is a durable and fully recyclable infill alternative.



EcoGrind

## ECOGRIND

EcoGrind is one of the most cost-efficient alternatives to SBR. Made from post-industrial recycled products, these reclaimed materials are ground-up to create a new, clean, eco-friendly infill and another alternative to crumb rubber. EcoGrind is the ideal answer for high use facilities looking for a proven infill solution.

## PROVEN SAFE

Independent tests confirm that FieldTurf infill materials meet or exceed the stringent EN 71-3 requirements used in validating the safety of children's toys and materials.

# WE ARE AS COMMITTED TO YOUR PROGRAM AS YOU ARE

And we're with you for the long term. When you buy a field from FieldTurf, you're buying from a company that knows how to take care of you. It's what we do best. We like to think of ourselves as the most trusted turf company. And every day that your athletes play on our turf, you will understand why.

## CUSTOMER CONNECT

As a FieldTurf customer you will enjoy exclusive access to our online community, Customer Connect. You will appreciate this convenient service which offers users a full resource of maintenance content and an online store.



## AFTERCARE SERVICE

FieldTurf's FieldCare Maintenance Program secures your investment by adding to your field's life, delivering consistent high performance and providing significant cost savings. We'll even build a customized program just for you.



### INITIAL TRAINING

We'll make sure you know everything about your new FieldTurf field. After your field is installed, our experts will teach you exactly how to care for your new surface and keep it performing in top condition.

### RESPONSE TIME

We pride ourselves on quick and effective response time. Our specially trained FieldTurf crews are always standing by. You'll never be stranded with a FieldTurf team that's here to handle any situation that may arise.



*"The FieldTurf team has done a tremendous job at our school. We have 3 FieldTurf fields on our campus (2 outdoor and 1 indoor) and their commitment and responsiveness to our needs is second to none. They do what they promise in a timely manner and are always courteous and professional. We enjoy dealing with a company who puts our needs first."*

**Dan MacLean**, Head Football Coach  
Detroit Country Day School

*"In the fall of 2013 we had Field Care come in and refurbish our football field. By the time they were done the field looked like new! I would recommend Field Care if you have any problems with your synthetic turf fields."*

**Erich Kiel**, Facilities Coordinator  
Eastern Michigan University





# THE CHOICE OF FOOTBALL AT EVERY LEVEL

With fields at over 20 NFL teams, 150 premier NCAA programs and thousands of prestigious High Schools across the country, FieldTurf is the home of Football. Every year over 5 million snaps are taken on our surfaces. Trust FieldTurf's renowned performance, safety and quality.



*"We went with FieldTurf because we wanted the best! Even after several years of use, it still looks and plays like new. We can see the difference our surface makes on the entire football team and directly affects our play and performance."*

**Steve Smith** - Head Football Coach and Athletic Director, Piedmont High School

*"...the biggest difference for me was our ability to stick our foot in the ground. FieldTurf really made a difference... we were able to really make some sharp cuts on that surface."*

**Brian Kelley** - Head Coach, Notre Dame

*"FieldTurf provides the best possible game and practice surfaces for our teams while maintaining the consistency and integrity of these high-use fields."*

**Jim Nolan, Sr.** - Vice President of Finance, Administration and Operations for Gillette Stadium

**20%**



**FEWER LIGAMENT TEARS**

**12%**



**LESS CONCUSSIONS**

**3 Year College Football Study**  
Source: COLLEGE FOOTBALL SAFETY STUDY:  
FIELDTURF VS. NATURAL GRASS,  
A 3-YEAR PROSPECTIVE STUDY  
AMERICAN JOURNAL OF SPORTS MEDICINE



# BEAUTIFUL TURF FOR THE BEAUTIFUL GAME




**FC BARCELONA**  
OFFICIAL SPORTS SURFACES SUPPLIER



## THE PITCH OF CHAMPIONS

FieldTurf is the choice of football around the globe. And it's the choice of top clubs like FC Barcelona, Ajax, Arsenal, Liverpool, West Ham United, Paris Saint Germain, Olympique Lyonnais, Werder Bremen, and Seattle Sounders.

Independent studies show that FieldTurf fiber technology delivers grass-like playability and ideal ball roll.

Our heavyweight infill system and wide gauge tufting allow us to achieve exceptional results for safety, energy restitution and performance.



Creighton University

Century Link Field

Gillette Stadium

SC Cambuur



[18]



[19]



University of Oregon

University of Houston

Brooklyn Cyclones

University of Texas

Oregon State University

University of Louisville

Dartmouth College

Sweeny High School

# BASEBALL SOFTBALL

## THE 5 PILLARS BEHIND FIELDTURF DOUBLEPLAY

### SURFACE SPEED

Fast or grass-like, we customize surface speed to your program

### NATURAL AESTHETICS

Unique fiber height for the most realistic appearance

### REDUCED INFILL SPLASH

Documented infill splash reduction

### INNOVATIVE DURABILITY SOLUTIONS

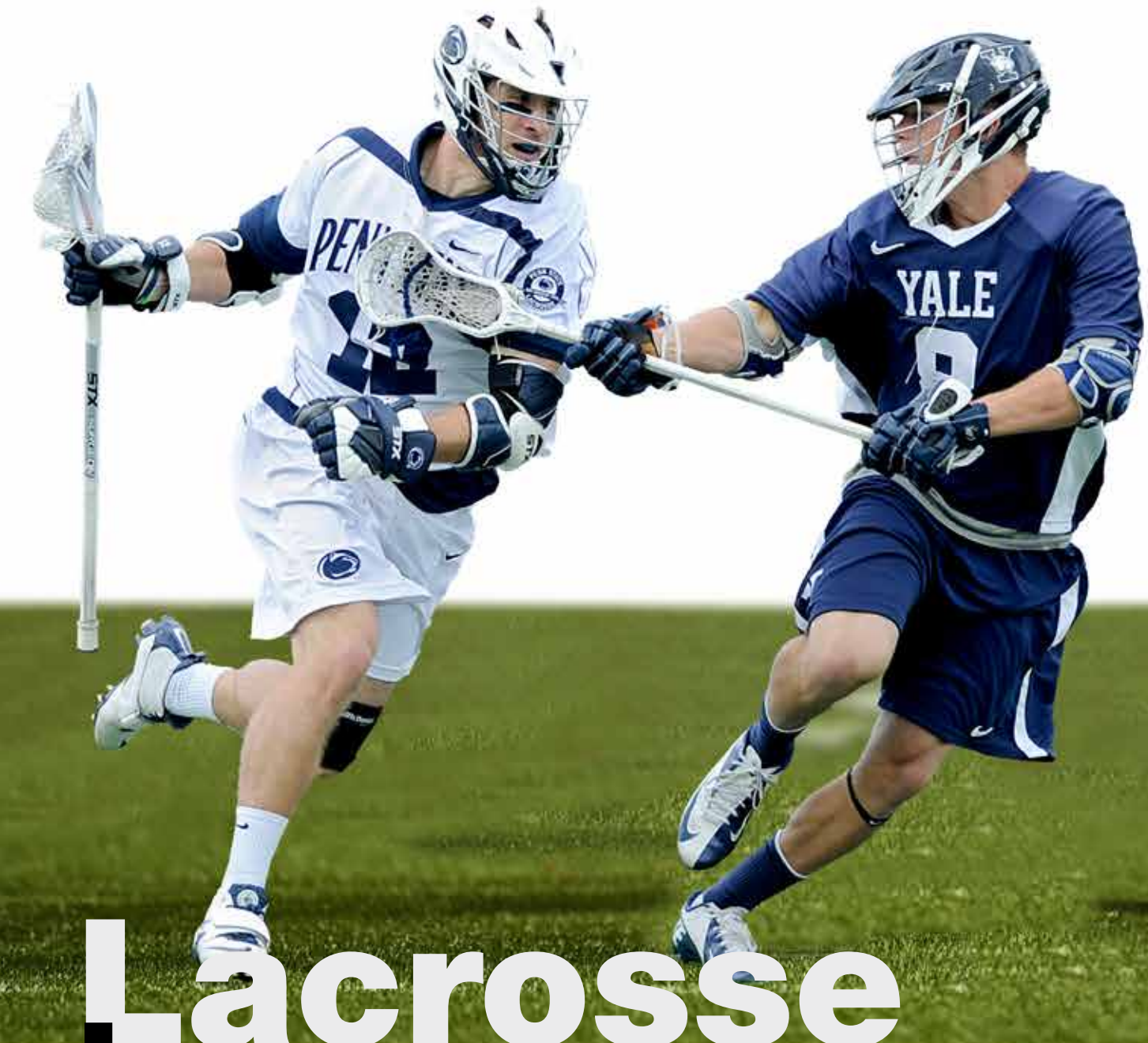
Tufted technologies for longer-lasting high-use areas

### COACH APPROVED

We don't leave the site until Coach is satisfied!



*"Man this stuff is good. I believe that playing on our FieldTurf field has helped in terms of getting our guys used to consistent play and focusing on making plays. It has been a contributor to our success and has helped Oregon State Baseball strive to reach the next level."*  
Pat Casey, Oregon State Beavers



# Lacrosse Lacrosse

We've been at the forefront of the impressive growth of Lacrosse. LAX players of all ages are playing on FieldTurf, from local clubs to the top college teams. Some of the best programs chose FieldTurf. It can take a beating and still provide the world-class performance you demand.



# Rugby Rugby

FieldTurf's infill provides the same biomechanical properties as natural grass, giving players the best possible footing. Investing in a turf field means your surface will stand up to the constant beating your Rugby programs can put on a field.



WORLD RUGBY™

Syracuse University



University of Louisville



Cardiff Arms Park - UK



University of Notre Dame





# THINK BIG

Some of the largest sports complexes in the world look to FieldTurf to bring their vision to life.

**Golden Eagle Regional Park**  
Sparks, NV  
13 Fields - 1,400,000 sq. ft.

**Medford Sports Park**  
Medford, OR  
11 Fields - 968,000 sq. ft.

**Washington State University**  
Pullman, WA  
7 Fields - 878,322 sq. ft.

**University of Notre Dame**  
Notre Dame, IN  
6 Fields - 717,444 sq. ft.

**Starfire Sports Complex**  
Tukwila, WA  
8 Fields - 632,000 sq. ft.

**Chino Hills Community Park Field**  
Chino Hills, CA  
6 Fields - 615,000 sq. ft.

**Regional Athletic Fields**  
Lacey, WA  
6 Fields - 552,000 sq. ft.

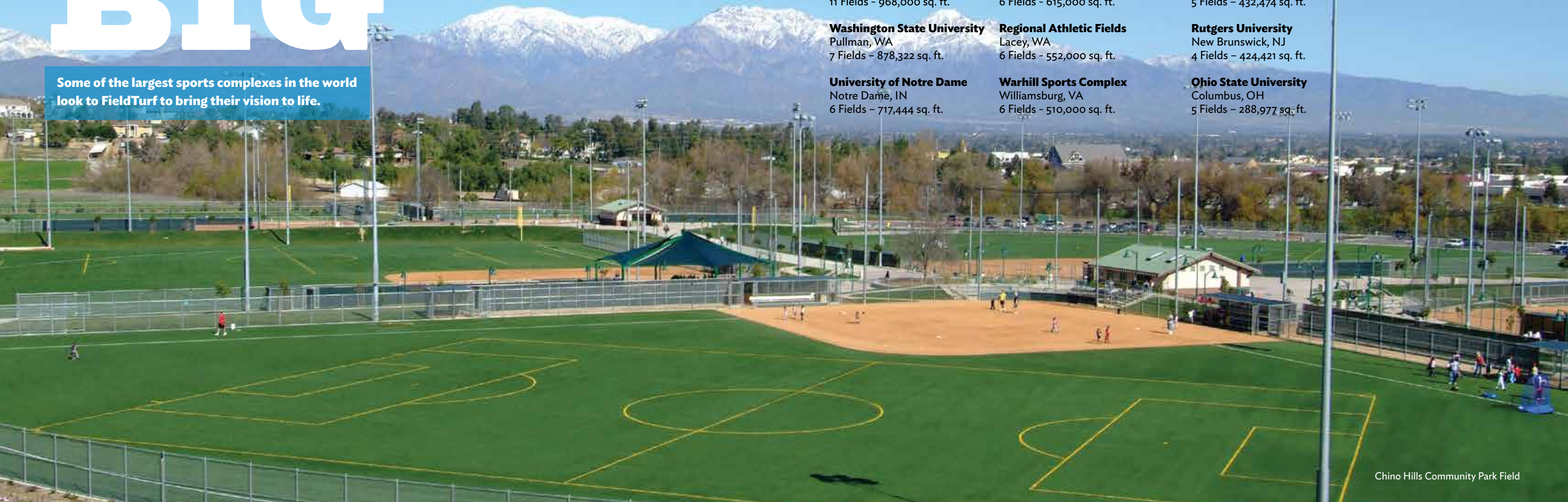
**Warhill Sports Complex**  
Williamsburg, VA  
6 Fields - 510,000 sq. ft.

**Mass Youth Soccer Association**  
Lancaster, MA  
5 Fields - 445,000 sq. ft.

**Syracuse University**  
Syracuse, NY  
5 Fields - 432,474 sq. ft.

**Rutgers University**  
New Brunswick, NJ  
4 Fields - 424,421 sq. ft.

**Ohio State University**  
Columbus, OH  
5 Fields - 288,977 sq. ft.



Chino Hills Community Park Field

## THINK PROUD

Nothing gives us more pride than being selected to provide the right turf to our troops wherever they may be.

United States Air Force Academy

United States Military Academy

United States Coast Guard Academy

United States Naval Academy



# what the experts say!

**SAFE**  
**DURABLE**  
**PROVEN**



**KEVIN ANDERSON**  
DIRECTOR OF ATHLETICS  
UNIVERSITY OF MARYLAND

"This FieldTurf project has been an overall success for the University of Maryland. Our playing surface at Capital One Field at Byrd Stadium has improved student-athlete safety through this innovative CoolPlay technology. We also now have had the ability to attract outside events to our campus, generating revenue and continuing to improve the on-campus lives of our students and our community."



**TOM CALDER**  
DIRECTOR OF ATHLETICS AND RECREATION  
JOHNS HOPKINS BLUE JAYS

"After looking at different options, FieldTurf was the best choice for us. We believe playing on FieldTurf's baseball-specific product will further develop our program and give us an excellent opportunity to continue our winning tradition."



**MARK RICHT**  
HEAD FOOTBALL COACH  
UNIVERSITY OF GEORGIA

"When we were looking to replace our synthetic field, I wanted to continue our relationship with FieldTurf. We like the quality and we are very excited about using CoolPlay. It will reduce the temperature of our turf for the safety of our players."



**TERRY HOSSACK**  
ASSOCIATE VICE-PRESIDENT  
UNIVERSITY OF TULSA

"We couldn't be happier with the new FieldTurf CoolPlay turf system. The field is noticeably cooler as promised and the players love it! The CoolPlay system is a great way to battle the Oklahoma heat and keep our players safe. It is impressive how FieldTurf created a cool high performance artificial turf system; it's just what we needed."



**JOEY SAPUTO**  
PRESIDENT  
MONTREAL IMPACT

"We are proud to offer the local community a good quality field, all the while having it available for use for all the club's teams, from the Espoirs in our sport-etudes program all the way to the pros in MLS. This new field is another step in the progression of our club and our sport."



**DON PATKO**  
ATHLETIC DIRECTOR FACILITIES OPERATIONS  
OHIO STATE UNIVERSITY

"Since we started on FieldTurf in 2007 at the stadium, our surface has consistently provided excellent footing for our players throughout the season."



**DANNY MACIOCIA**  
HEAD FOOTBALL COACH  
UNIVERSITÉ DE MONTRÉAL

"Our FieldTurf field has been a key part of our success! The ability to start using our field earlier in season has been instrumental in developing our athletes and team play. We are beyond impressed with the consistency and performance of our field."



**JIM NOLAN**  
SENIOR VICE PRESIDENT OF FINANCE,  
ADMINISTRATION & OPERATIONS  
NEW ENGLAND PATRIOTS

"When we made the decision to install a new turf surface, we underwent an extensive evaluation and testing program of many other turf products in the marketplace. Selecting the FieldTurf Revolution product was a well-informed decision. What we are getting is an elite level turf system that will significantly benefit our players for years to come."



**ELMAR BOLOWICH**  
HEAD MEN'S SOCCER COACH  
CREIGHTON UNIVERSITY

"FieldTurf Revolution is an exceptional product. It has proven its worth in terms of durability, playability and visual appeal. FieldTurf has significantly contributed to the fact that Morrison Stadium is considered the #1 college soccer venue in the country."



**NEEL DURBIN**  
DIRECTOR OF SCHOOLS  
DYERSBURG CITY SCHOOLS

"FieldTurf has exceeded our expectations at every level. The sales personnel worked with us to meet our needs with the product and scheduling. The TCPN procurement process sped up the process and guaranteed a low price for our needs. The installation team was efficient, friendly and professional and every step was ahead of schedule."



**TODD WHITTING**  
HEAD BASEBALL COACH  
UNIVERSITY OF HOUSTON

"FieldTurf DoublePlay plays more like a natural ball field than anything else we have seen. From a product and company standpoint, FieldTurf is the right choice for us."



**JOHN HAVERSTOCK**  
STADIUM MANAGER  
McMAHON STADIUM

"We went and visited other facilities with the surface and we also received input from (Stamps equipment manager) George Hopkins and (assistant general manager) Mike Petrie based on the players' experience with turfs in other CFL stadiums. FieldTurf does many, many fields across North America and in fact I believe its market share is greater than all of its competitors combined."



**JAIME SHERWOOD**  
DIRECTOR OF ATHLETICS  
WAYZATA HIGH SCHOOL

"We had our initial FieldTurf field for a decade now and can confidently say that this investment has paid dividends throughout our entire organization both immediately in the short-term and each and every year thereafter."



**TIMOTHY WISE**  
SENIOR ASSOCIATE ATHLETIC DIRECTOR  
UNIVERSITY OF MIAMI

"We feel as though this upgrade to FieldTurf for our facility sends a positive message to our athletes that we want them to play on the highest performing surfaces, so they can perform at their best. We did a lot of research into what surface would be best for us and this is the one."



**GLEN SHILLING**  
HEADMASTER  
DETROIT COUNTRY DAY SCHOOL

"We looked at many different products in the industry and the same holds true today as it did more than a decade ago – nothing in the marketplace compares to what the FieldTurf product offers in terms of safety and playability. When we originally decided to install FieldTurf on our Stadium Field, we expected an excellent level of service and product and that is exactly what we experienced over the last 13 years. We are excited to continue our longstanding relationship with the world leader in artificial turf."



**GREG BYRNE**  
DIRECTOR OF ATHLETICS  
UNIVERSITY OF ARIZONA

"We've been extremely pleased with our FieldTurf CoolPlay that was installed at Arizona Stadium. The surface has provided a great enhancement to our stadium and has served as a benefit for our coaches and student-athletes because of the quality of service and its much lower temperature than normal artificial surfaces. The FieldTurf, along with our other stadium upgrades, has made a tremendous difference in our environment at Arizona Stadium."

THE STAGE OF SPORTS EVOLUTION.



THE ULTIMATE  
SURFACE EXPERIENCE

## TAB 3- PERFORMANCE CAPABILITY

### b) Performance Capability

i. Include a detailed response to Appendix D, Exhibit A, OMNIA Partners Response for National Cooperative Contract. Responses should highlight experience, demonstrate a strong national presence, describe how Offeror will educate its national sales force about the Contract, describe how products and services will be distributed nationwide, include a plan for marketing the products and services nationwide, and describe how volume will be tracked and reported to OMNIA Partners.

**RESPONSE:** See included FieldTurf's detailed Partner's Response for Appendix D, Exhibit A.

ii. The successful Offeror will be required to sign Appendix D, Exhibit B, OMNIA Partners Administration Agreement prior to Contract award. Offerors should have any reviews required to sign the document prior to submitting a response. Offeror's response should include any proposed exceptions to OMNIA Partners Administration Agreement on Appendix B, Terms and Conditions Acceptance Form.

**RESPONSE:** See FieldTurf's signed documents.

iii. Include completed Appendix D, Exhibits F. Federal Funds Certifications and G. New Jersey Business Compliance.

**RESPONSE:** See FieldTurf's signed documents.

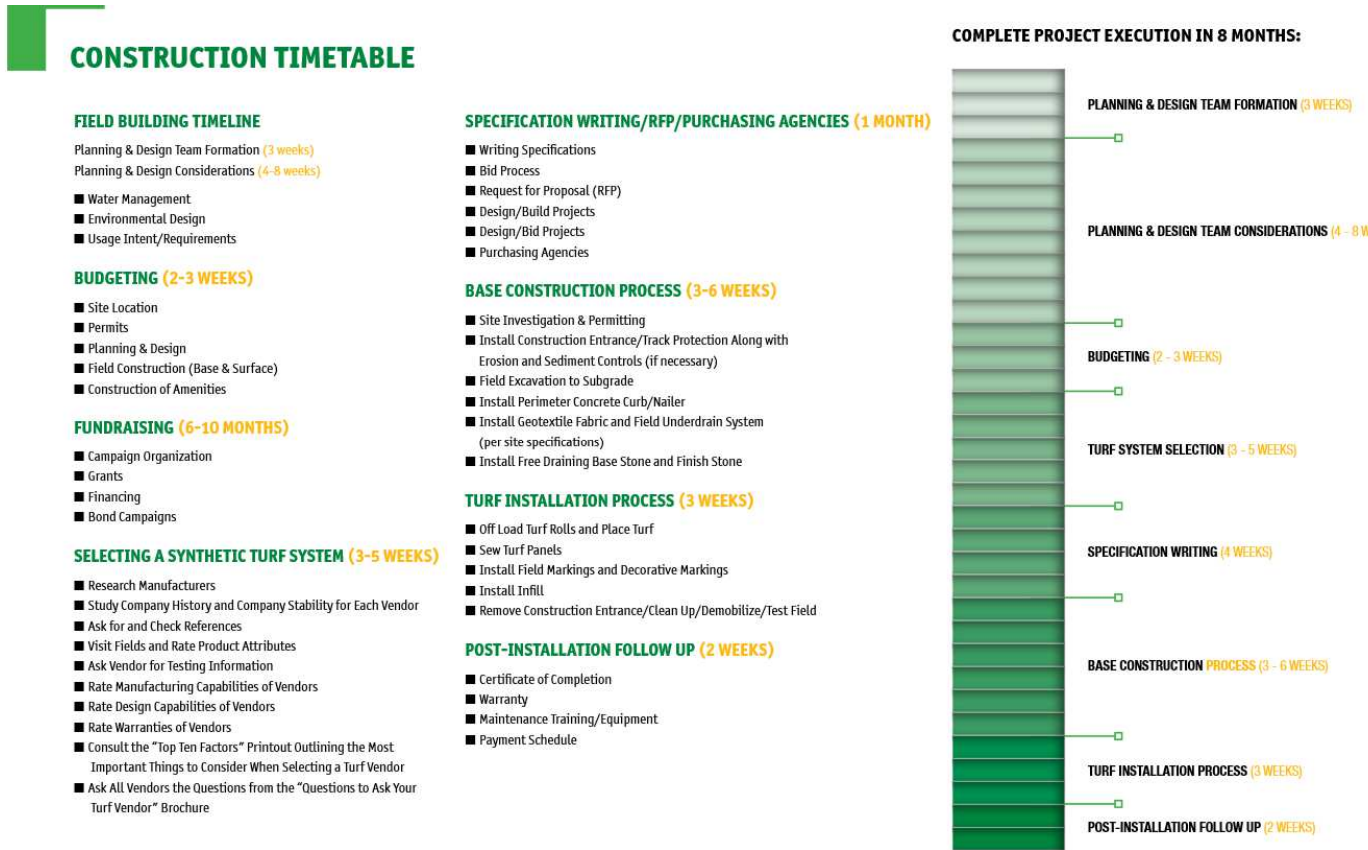
iv. Describe how Offeror responds to emergency orders.

**RESPONSE:** FieldTurf can respond very quickly to emergency orders especially when partnering with OMNIA. FieldTurf completes a site visit, generates an OMNIA proposal based on the scope of work required, when customer is ready they can issue a PO/Contract, and once PO/Contract is received then manufacturing of turf can begin and install is scheduled. Average speed for this process is typically a month for turf installation. Process can be expedited based on special conditions. New England Patriot's field was constructed, manufactured and installed in less than 10 days from proposal stage to completion of project.

v. What is Offeror's average Fill Rate?

**RESPONSE:** For a standard Turf field with existing acceptable base, the process takes about 1 month based on customer’s ability to approve drawings and layout. For full construction build projects that include the base that the turf is installed upon, the process typically takes 120 days.

The construction timetable for a synthetic turf facility will vary depending on the permit requirements, conditions of the site, the size of the surface being installed, the resources of the contractor, and the weather. Planning, design and permitting can take as little as a month or as much as several years. It is important to remember that projects should not be bid before environmental and other approvals are obtained, as revisions can lead to costly change orders. Once the permitting and bidding process is complete, the actual turf construction phase, from excavation and base work to the installation of the turf, can take anywhere between 7-10 weeks depending on the weather. The typical construction process is as follows:



vi. What is Offeror’s average on time delivery rate? Describe Offeror’s history of meeting the shipping and delivery timelines.

**RESPONSE:**

**FieldTurf is nearly perfect at on time delivery rate.**

**FieldTurf is vertically integrated for complete control**

FieldTurf controls all aspects of the manufacturing value chain. From start to finish, we are in control of your field. FieldTurf has steered a high-growth industry in the proper direction with first-class manufacturing facilities, and a carefully engineered product. FieldTurf has brought “single source responsibility” and quality to the forefront with its manufacturing plant.

FieldTurf is the first company in the synthetic industry to own and operate its own manufacturing plant.

FieldTurf is the only artificial turf manufacturing operation in North America and Canada to have received three specific ISO certifications. ISO 9001, ISO 14001 and ISO 45001-2018 certified for leadership in quality, environment and safety management systems. Our Calhoun, GA facility represents one of the only artificial turf manufacturing operations in North America to have receive these ISO certifications.

**FIBER PRODUCTION:** FieldTurf fibers are produced at Tarkett’s very own facility in Germany. The quality control process at the facility includes stringent testing of the yarn properties (tensile strength, uniformity, color verification)

**TUFTING AND COATING:** Once the fiber is produced, it is ready for tufting and coating which takes place at our 500,000 square foot facility in Calhoun, Georgia. The Calhoun facility employs over 40 employees, with hundreds of years of experience combined in the artificial turf industry. Facility is over 11 years old.

- Annual production capacity that exceeds the worldwide yearly demand for artificial turf
- Rigorous quality control and inspection
- In-house fiber manufacturing
- In-house coating line
- In-house tufting operation

From tufting, to coating, to full QC inspections, right on to shipping and installation, the equipment and space available in the Calhoun plant work together to further ensure that FieldTurf is the market leader in quality product. The plant features 10 tufting machines with an annual production capacity of 630,000,000square feet of turf – enough to supply over 7800 football fields per year. The new coating line that is at the heart of the Calhoun plant allows FieldTurf to set a new standard for turf quality and durability. It is an innovative coating process that has been developed by the industry leader in order to continue to focus on quality control and customer satisfaction.

To ensure FieldTurf’s standards are unmatched, a rigorous quality control process (based on extensive testing and inspections) is undertaken with every field that is put into production. First, yarn testing is performed, which includes tensile strength, elongation, tenacity, denier, shrinkage, and twist (turns per inch). The primary backing is inspected and the “pick count” or yarn density in relation to the backing- is verified to ensure the right amount of face yarn per square inch. Each tufting operator verifies the pile weight and pile height of the yarn to make sure that quality requirements are met every step of the way. If the pile weight is off by even the slightest amount, then it does

not meet FieldTurf's stringent standards and the turf is reproduced to exact measurements. Testing continues throughout the entire tufting process until all rolls for a field are complete.

Once the rolls are complete, the fiber rows on the backing of each roll are carefully coated with polyurethane to complete FieldTurf's patented finger-unit backing design for enhanced fiber strength and optimal drainage efficiency. FieldTurf has full-time experienced coating inspectors at their facility in Calhoun, GA to ensure that the coating is applied properly. Once small error and the roll is pulled from the line and reproduced. Once the coating process is complete, every component of the finished carpet undergoes final inspection before it is packaged and loaded onto the trucks for transportation to the job site. Each roll of carpet is numbered and positioned in the exact order that it will be loaded onto the transporters. Once on site, the rolls are unloaded and laid on the field in the specific order that was planned and designed by the head office engineering department. For every 5 rolls that are produced at the plant, a 2 ft by 15ft sample of turf is retained by the FieldTurf Research & Development department in Calhoun. These samples are carefully filed under the name of the corresponding field. This way the project can be verified through completion and beyond while the turf samples are analyzed on a regular basis. The state-of-the-art plant located in Calhoun is a big reason why FieldTurf is the number one choice of professional teams, high schools, colleges, and facility managers around the world. FieldTurf's ability to ensure the quality of its raw materials and its manufacturing from start to finish is the reason why it enjoys the best record for on-time delivery of its projects.

vii. Describe Offeror's return and restocking policy.

**RESPONSE:** Not applicable to this type of product/service. If additional attic stock is requested it is priced on a case-by-case basis. If the product has not been manufactured then there is no cost to restock. Owner provides a signed layout confirming the product, color, game lines etc before manufacturing begins.

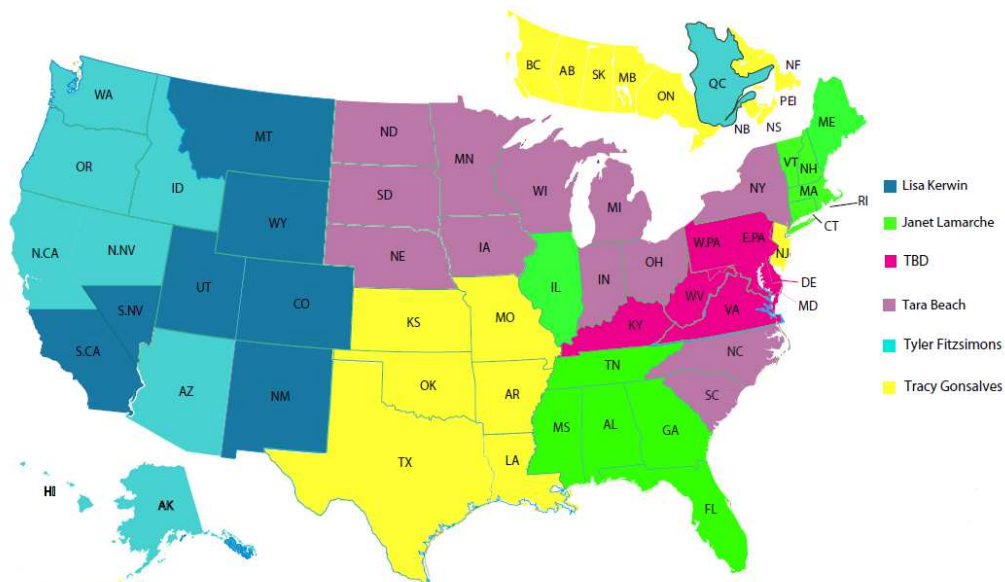
viii. Describe Offeror's ability to meet service and warranty needs.

**RESPONSE:**  
**FIRST-CLASS SERVICE** – for your FieldTurf Experience. FieldTurf does not sever its customer relations once the contract has been signed. We take the time to follow up with each and every one of our customers in order to ensure complete and consistent customer satisfaction. Customer satisfaction remains FieldTurf's number one priority.

Providing a high quality product and outstanding customer service has been a part of FieldTurf’s successful business model since day One. Our customers are our number one priority, which is why we have taken the time to assemble an experienced and dedicated customer service department. We proactively follow up with each and every one of our customers to ensure complete and continuous satisfaction. There are not any geographic regions of the US that FieldTurf cannot provide a certified technician to perform warranty work. Please see our Customer Service Representative Region map below to see that the entire US is covered.

## Customer Service Regions

(January 2018)



ix. Describe Offeror’s customer service/problem resolution process. Include hours of operation, number of service, etc.

RESPONSE:

### FieldTurf: Maintenance & Commitment to Service

Hrs. of Operation: 24 hours/ 7 days a week



We respond to customers within 24 hours. Should something be an emergency, we do try to get on site asap - weather and crew availability permitting.

At FieldTurf, if a customer comes to us with a concern, we try to handle it as quickly as possible.

We will evaluate the nature of the complaint and see how we can assist or fix the issue. If there is an unresolved complaint that we cannot resolve, we would direct the customer to the appropriate department/manager.

Both FieldTurf and Beynon have dedicated Customer Service divisions with more than 10 fulltime employees that cover the entire US to address any questions regarding an owner's sports surface questions. In addition, FieldTurf & Beynon have about 10-15 customer service teams across the nation and regionally.

### **Thomas Mullins**

Vice President of Installations and Customer Service



175 N Industrial Blvd NE  
Calhoun Georgia 30701  
United States

Email: [Thomas.Mullins@tarkettsports.com](mailto:Thomas.Mullins@tarkettsports.com)

In addition to our constant commitment to exceptional customer care, our customer service department has assembled a comprehensive manual that covers all field care issues. Each FieldTurf customer receives a maintenance guideline that covers everything from field grooming to gum removal, and field protection. The guidelines also come with a complete maintenance video – the perfect tool to educate field managers and groundskeepers.

x. Describe Offeror's invoicing process. Include payment terms and acceptable methods of payments. Offerors shall describe any associated fees pertaining to credit cards/p-cards.

### RESPONSE:

Standard FieldTurf Payment terms are as follows:

The Purchase Price shall be payable to Supplier by way of wire transfer or banker's check in accordance with the following payment schedule:

5.1 **Fifty percent (50%)** of the Purchase Price due upon Customer's execution of this Agreement;

5.2 **Forty percent (40%)** of the Purchase Price upon shipment of the Product from Supplier's manufacturing facility;

Remaining balance of **ten percent (10%)** upon substantial completion of the field, which shall be achieved when Customer is able to use the field for its intended purpose, even if punchlist items remain and the Certificate of Completion has not been executed by Customer.

Supplier will issue an invoice to Customer upon the occurrence of each of the events listed above, and payment of each invoice is due within ten (10) days following the date to the applicable invoice.

If this project is located in a state in which release of final payment and/or retainage is governed by statute or other applicable law, Customer shall use its best efforts to undertake all appropriate measures, including without limitation the recording of a notice of completion, so that final payment hereunder, including retainage, if any, shall be released to Supplier without delay. In all cases, Supplier shall be entitled to receive final payment, including retainage, if any, no later than the earliest eligible date according to applicable statute or law. If the lawful payment or release is delayed through no fault of Supplier, Owner shall pay Supplier interest thereon at the rate indicated below, as of the date when payment or release first became due by law.

***DISCLAIMER: THIS IS A SAMPLE OF FIELDTURF'S STANDARD SALES AGREEMENT FORM.  
FIELDTURF RESERVES THE RIGHT TO MODIFY ITS STANDARD FORM OF AGREEMENT FROM  
TIME TO TIME OR AS REQUIRED FOR A PARTICULAR PROJECT***

Supplier shall be entitled to recover all costs and expenses, including attorney fees, associated with collection procedures in the event that Supplier pursues collection of payment of any past due invoice.

Any unpaid balance bears interest at a rate of ten percent (10%) per year or at the legal rate to the extent required by applicable law or statute.

No Credit Card or p-card payments can be accepted.

xi. Describe Offeror's contract implementation/customer transition plan.

RESPONSE:

SmartBuy is the dedicated Cooperative Purchasing Division of FieldTurf/Beynon. With over 25 years of combined experience and \$500 million revenue in cooperative purchasing, the SmartBuy team has enabled hundreds of municipalities including public schools, colleges, universities, cities, park/recreation departments, and counties to purchase their desired FieldTurf sports field, Beynon running track, or Beynon court. The following steps will be used to market the OMNIA Group contract:

- Corporate Top Down Instruction to incorporate OMNIA GROUP into sales presentations.
- Continued Education for the nationwide Beynon and FieldTurf sales teams and regional Vice President Team
- SmartBuy-Dedicated Team to Market and Manage OMNIA GROUP Contract
- Promoting OMNIA GROUP Contract to Municipalities
- Print Advertising and direct mailing
- Trade Show attendance
- Electronic, Web, and Social Media site advertising

FieldTurf is aware that the marketing success depends on communicating the contract's value, knowing the contract thoroughly, and communicating the proper use of contracted products and services to end user.

From day one of award, FieldTurf, Beynon, and Tarkett are prepared to immediately implement the OMNIA Master Agreement as per the following steps which are already in place:

SmartBuy is the dedicated Cooperative Purchasing Division of FieldTurf/Beynon. With over 30 years of combined experience and \$750 million revenue in cooperative purchasing, the SmartBuy team has enabled hundreds of municipalities including public schools, colleges, universities, cities, park/recreation departments, and counties to purchase their desired FieldTurf sports field, Beynon running track, or Beynon court.

FieldTurf, Beynon and Tarkett sales teams all receive direct instruction from the Tarkett Senior Leadership Team to utilize OMNIA cooperative purchasing and to incorporate the information into sales presentations and marketing materials.

The FieldTurf Cooperative Purchasing “SmartBuy” Division Team has worked with many municipalities and our sales teams to market, educate and guide municipal members in their purchase of Beynon running tracks, outdoor courts, and FieldTurf synthetic fields through OMNIA.

**We already have systems and processes in place to handle a high volume of Cooperative Purchasing projects through OMNIA. Additionally, our FieldTurf and Beynon sales forces are already currently utilizing OMNIA to maximize their sales efforts. OMNIA has already been a very successful cooperative in many different scenarios. FieldTurf and Beynon’s National Sales Force is already currently trained on the use of the OMNIA contract.**

As a current approved OMNIA vendor, FieldTurf USA, Inc. is very familiar with how to successfully market the contract to a variety of public and private institutions. We are open to incorporating any of the above suggestions as it bests fits OMNIA’s business model.

These include but are not limited to:

- Including OMNIA logo/link on SmartBuy and FieldTurf/Tarkett/Beynon websites
- Original RFP will be available via Logo/link and logo/link is also on OMNIA proposals.
- Copy of Master Agreement will be available via logo/link on FieldTurf websites.
- Summary of Products and pricing will be available via logo/link on FieldTurf websites
- OMNIA marketing materials and electronic link to OMNIA Partners’ website will be available via FieldTurf websites.
- FieldTurf/SmartBuy representation at NIGA, NPI, other Regional events/conferences.
- FieldTurf SmartBuy Division explain to current and future OMNIA members the value and benefits on Contract Selling. Attend requested board meetings, council meetings, etc as part of our team to provide owners complete procurement information and opportunities for their sports surfaces project.
- Provide familiarity/knowledge of member state’s cooperative procurement options.
- Include FieldTurf logo, product information, and when applicable, project. Testimonies and articles in the individual OMNIA state’s cooperative marketing literature and brochures and websites.
- FieldTurf already has current existing co-branded OMNIA/FieldTurf marketing pieces in place and is capable of creating new pieces as needed through the FieldTurf/Tarkett marketing department.
- Integrate current subcontractors and architects into the OMNIA fold by explaining the value-added nature of the contract highlighting:

- Its simplicity and ease of use.
- Its defined, preferential pricing
- Its proven potency in the marketplace
- Which entities have used it and why
- Attend customer/ client meetings to promote the OMNIA contract in conjunction with architects/ subcontractors
- Demonstrate (through sales figures and other data) the current success of the contract and its potential to grow with continued understanding and participation. Many subs and architects do not fully realize the potential of the contract- our job is to change that.
- SmartBuy will continue to generate new vehicles for OMNIA Master Agreement use such the UC/OMNIA/FieldTurf letters that recently were distributed to all UC Colleges.

xii. Describe the financial condition of Offeror

**RESPONSE:**

Very Stable Financial situation.

FieldTurf and Beynon Sports are part of the Tarkett Group. Tarkett is a global leader in innovative and sustainable solutions for flooring and sports surfaces. With a wide range of products including vinyl, linoleum, carpet, rubber, wood & laminate, synthetic turf and athletics track, the Group serves customers in more than 100 countries worldwide. With 11,000 employees and 30 production sites, Tarkett sells 1.3 million square meters of flooring every day, for hospitals, schools, housing, hotels, offices, stores and sports fields. Committed to sustainable development, the Group has implemented an eco-innovation strategy and promotes circular economy. Tarkett net sales of 2,739 billion euros in 2019 are balanced between Europe, North America and new economies.

Tarkett is listed on Euronext Paris (compartment A, ticker TKTT, ISIN: FR0004188670). Please go to the link below for additional financial results and documents or see the 2020 Results.

<http://tarkett.com/en/content/financial-results>

FieldTurf has been operating continuously for over 15 years. Our history as the inventor of infilled artificial turf is well documented, but what's important is that

we've spent the necessary investment in innovation to stay ahead of the competition.

FieldTurf is owned by the \$2 Billion Tarkett Group.

During our time in business over 30 companies have entered and left the industry. This highlights the risk in dealing with some industry partners. In fact, there are over 500 fields installed currently in America that do not have any warranty protection. The solution? FieldTurf provides all of our clients with the best insured warranty in the business. Our annual aggregate is \$32,000,000 per year.

xiii. Provide a website link in order to review website ease of use, availability, and capabilities related to ordering, returns and reporting.

RESPONSE:

[www.tarkett.com](http://www.tarkett.com)

[www.fieldturf.com](http://www.fieldturf.com)

[www.beynonssports.com](http://www.beynonssports.com)

[www.smartbuycooperative.com](http://www.smartbuycooperative.com)

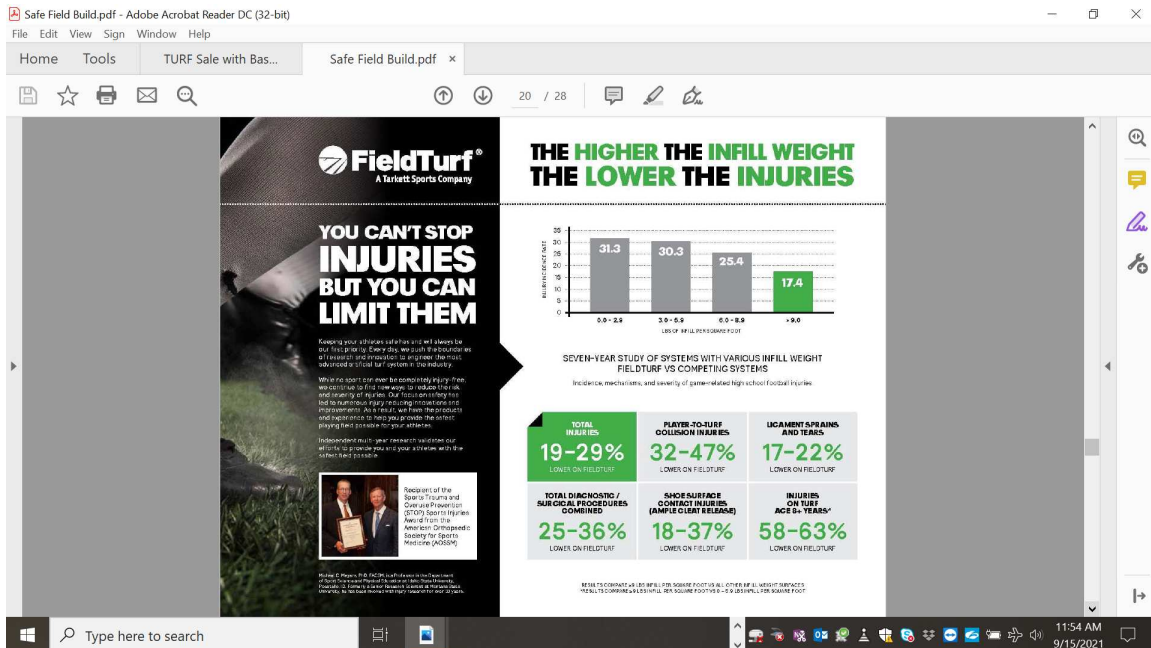
OMNIA LINK on SmartBuy website:

[https://www.omniapartners.com/publicsector/suppliers/fieldturf-usa-inc/overview#ctl00\\_PlaceHolderMain\\_TabbedWebPart\\_tab1](https://www.omniapartners.com/publicsector/suppliers/fieldturf-usa-inc/overview#ctl00_PlaceHolderMain_TabbedWebPart_tab1)

xiv. Describe the Offeror's safety record.

RESPONSE:

See exhibits of FieldTurf Safety Studies and FieldTurf Installation Safety Manual.



**YOU CAN'T STOP INJURIES BUT YOU CAN LIMIT THEM**

Keeping your athletes safe and well always be our first priority. Our field manufacturing process is a result of research and innovation to engineer the most advanced artificial turf systems in the industry.

While no sport can ever be completely injury-free, we continue to find new ways to reduce the risk and severity of injuries. Our manufacturing has led to numerous injury-reducing innovations and improvements. As a result, we have the research and resources to help you provide the safest playing field possible for your athletes.

Independent multi-year research validated our claims, and we now offer a system with the safest field possible.

Recipient of the Sports Turf Award of Excellence from the American College of Sports Medicine (ACSM) and the American Society for Sports Medicine (ASPM).

**THE HIGHER THE INFILL WEIGHT THE LOWER THE INJURIES**

INFILL WEIGHT (LB/1,000 SQ. FT.)	INJURY RATE (%)
0.0-2.5	31.3
2.0-5.0	30.3
5.0-7.5	25.4
>9.0	17.4

SEVEN-YEAR STUDY OF SYSTEMS WITH VARIOUS INFILL WEIGHT FIELDTURF VS. COMPETING SYSTEMS

Incidence, mechanism, and severity of game-related high school football injuries.

INJURY TYPE	FIELDTURF (%)	COMPETING SYSTEMS (%)
TOTAL INJURIES	19-29%	32-47%
PLAYER-TO-TURF COLLISION INJURIES	17-22%	32-47%
LIGAMENT SPRAINS AND TEARS	25-36%	58-63%
TOTAL DIAGNOSTIC / SURGICAL PROCEDURES COMBINED	18-37%	58-63%
SHOCK ABLATION CONTACT INJURIES (AMPEL CLUSTERS)	18-37%	58-63%
INJURIES ON TURF AGE 10+ YEARS*	18-37%	58-63%

\*BASED ON COMPACT AS 100 BY 100 SQUARE FOOTERS ALL OTHER BY 1.5 METERS SQUARES  
\*ALL TO COMPARE WITH 100 SQUARE FOOTERS - 10.0 INCHES - 100 SQUARE FOOT

xv. Provide any additional information relevant to this section.

**RESPONSE:**

FieldTurf, Tarkett and Beynon are also experts in field/track/court design and construction which is a substantial benefit to OMNIA members. We are a one stop shop for sports facility construction, product installation, and maintenance.

**FieldTurf is vertically integrated for complete control**

FieldTurf controls all aspects of the manufacturing value chain. From start to finish, we are in control of your field. FieldTurf has steered a high-growth industry in the proper direction with first-class manufacturing facilities, and a carefully engineered product. FieldTurf has brought “single source responsibility” and quality to the forefront with its manufacturing plant.

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- Annual production capacity that exceeds the worldwide yearly demand for artificial turf
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From tufting, to coating, to full QC inspections, right on to shipping and installation, the equipment and space available in the Calhoun plant work together to further ensure that FieldTurf is the market leader in quality product. The plant features 10 tufting machines with an annual production capacity of 630,000,000square feet of turf – enough to supply over 7800 football fields per year. The new coating line that is at the heart of the Calhoun plant allows FieldTurf to set a new standard for turf quality and durability. It is an innovative coating process that has been developed by the industry leader in order to continue to focus on quality control and customer satisfaction.

To ensure FieldTurf's standards are unmatched, a rigorous quality control process (based on extensive testing and inspections) is undertaken with every field that is put into production. First, yarn testing is performed, which includes tensile strength, elongation, tenacity, denier, shrinkage, and twist (turns per inch). The primary backing is inspected and the "pick count" or yarn density in relation to the backing- is verified to

ensure the right amount of face yarn per square inch. Each tufting operator verifies the pile weight and pile height of the yarn to make sure that quality requirements are met every step of the way. If the pile weight is off by even the slightest amount, then it does not meet FieldTurf's stringent standards and the turf is reproduced to exact measurements. Testing continues throughout the entire tufting process until all rolls for a field are complete.

Once the rolls are complete, the fiber rows on the backing of each roll are carefully coated with polyurethane to complete FieldTurf's patented finger-unit backing design for enhanced fiber strength and optimal drainage efficiency. FieldTurf has full-time experienced coating inspectors at their facility in Calhoun, GA to ensure that the coating is applied properly. Once small error and the roll is pulled from the line and reproduced. Once the coating process is complete, every component of the finished carpet undergoes final inspection before it is packaged and loaded onto the trucks for transportation to the job site. Each roll of carpet is numbered and positioned in the exact order that it will be loaded onto the transporters. Once on site, the rolls are unloaded and laid on the field in the specific order that was planned and designed by the head office engineering department. For every 5 rolls that are produced at the plant, a 2 ft by 15ft sample of turf is retained by the FieldTurf Research & Development department in Calhoun. These samples are carefully filed under the name of the corresponding field. This way the project can be verified through completion and beyond while the turf samples are analyzed on a regular basis. The state-of-the-art plant located in Calhoun is a big reason why FieldTurf is the number one choice of professional teams, high schools, colleges, and facility managers around the world. FieldTurf's ability to ensure the quality of its raw materials and its manufacturing from start to finish is the reason why it enjoys the best record for on-time delivery of its projects.

#### **GRADING:**

Depending on the site, additional excavation might be required in order to obtain proper planarity. The fill tends to be a locally available material such as stone or soil that is free of organic material. Once the subgrade is in place, the contractor will roll and compact the subgrade to a 95% compaction. In certain cases where the subbase prevents the proper flow of drainage and cannot be fully corrected, an impermeable geotextile separation fabric can be installed. The amount of excavation to subgrade is determined by the topo survey. This is critical in conjunction with Soil Boring and Test Pits in order to determine the amount of Topsoil to remove and calculate the amount of subgrade soils necessary to remove to achieve the designed subgrade.

**Nailer or curbing-** Usually before the construction of the base, a concrete curb w/notch or nailer attachment is installed around the perimeter of the field in order to attach the turf.

**Base Drainage-** There are two main types of subsurface drainage. One type consists of a flat drain 6" -12" wide and 1'-2" thick. Because of their unique shape, these drains allow for the proper movement of water. A more expensive and more efficient system uses perforated pipes 4"-10" in diameter. These pipes are laid in trenches, surrounded by filter and clean stone. Both types of pipes are sloped to the edges of the field where water is deposited in perimeter drains then pipes move the water to a disposal site such as a storm drain or catch basin. Each base is unique to the location and environment

and is critical for proper drainage. A traditional aggregate base will vary from 6"-12" thick with a specified slope. FieldTurf base will demonstrate percolation values conforming to required standards of approximately 10"-15" per hour.

Traditional Base construction: The aggregate base commonly will vary from 6"-12" thick, but may be up to 36" thick depending on the project. It is very important that the base be designed and installed with the turf manufacturer's requirements in mind so as not to void the turf warranty. The subsurface grade is usually 2" thick and features a smaller open graded stone that can be compacted to 95% proctor. The surface grade is typically .5%-1.5% depending on the intended use. Frequently the grade must be at least .5% to meet FIFA preferred soccer standards. The flatter grade has also been appreciated in football. The sub grade is typically composed of larger open graded stone and can once again be compacted for stability. The sub grade is typically greater than the surface grade to accommodate drainage. The base should be installed in several stages in order to ensure proper compaction. It is recommended that the aggregate be installed while damp with a laser-guided grader or dozer. Checking the base for any deficiencies prior to proceeding with the turf construction is crucial to the success of the field. FieldTurf will confirm grade and planarity of the bases we construct. A percolation test should be run on the base before the artificial turf surface is installed on top of it. The base should demonstrate percolation values confirming to required standards of approximately 10'-15" per hour. FieldTurf also performs a string-line test which is basically a 100-300 foot string that is tightly stretched across the top of our finish aggregate. This is the test to confirm that the grade is perfect before installing the turf. Our meticulous technique allows us to look forward to the day that this exacting test is completed allowing FieldTurf to begin their turf installation.

#### CONSTRUCTION TIMETABLE:

The construction timeline for a synthetic turf facility will vary depending on the permit requirements, conditions of the site, the size of the surface being installed, the resources of the contractor and the weather. Usually 6-7 weeks depending on weather. FieldTurf works with various subcontractors to perform base construction depending on location of field. These are subcontractors who are experts in sports surface base construction and are approved by FieldTurf.

New Construction – Sq. foot/yard pricing is for supply and installation of sports surfacing only. FieldTurf is prepared to offer turn-key solutions for the construction of the base of running tracks, courts, indoor flooring projects and fields through use of RS Means. The best value pricing for base or civil work is obtained through this costing method.

Site work or new construction may include but is not limited to: removal and disposal of existing sports surface, lighting, demolition, excavation, rock base aggregate, top rock, asphalt, concrete, sidewalks, turf shock absorption underlayment such as e-layer or padding, tie in to existing drainage, drainage systems, conduits, fencing, crack repair, asphalt repair, etc. which can be purchased through RS MEANS.

RS MEANS is self-contained and consists of a turn-key solution that includes a complete line-item listing of all the products, supplies, material, equipment, services, accessories and options with their description, specification, terms, conditions and associated pricing for each item, sub-assemblies and/or assemblies. FieldTurf reserves

the right to offer a discount or "adjustment down" to the RS MEANS calculation to account for volume discounts or to stay within standard market pricing.

Below is an example of the scope and permitting process for a > \$ 10 MM project in WA in which FieldTurf acted as GC responsible for all aspects of the project. In general, FieldTurf can perform as little or as much of the work as required by the client. Each project is different. Regardless, FieldTurf conducts basic site analysis which includes soil borings, various tests and develops GANTT charts and other documents to ensure all details are captured.

Mobilize.

- TESC/Site Security.
- Watering dust control.
- Demolish and dispose of asphalt/concrete.
- Strip and dispose of vegetation to an approved dump site.
- Excavate and dispose of unsuitable soils.
- Clean vegetation, fill and compact footing trenches.
- Cut and fill site.
- Establish subgrade with laser guided equipment.
- Excavate building footings, compact and backfill.
- Excavate bio drainage swales.
- Excavate and backfill electrical, sewer and water trenches.
- Supply and install storm drainage.
- Supply and install storm infiltration systems.
  - Infiltration below Zepfel stadium
  - Infiltration trench at baseball field
  - Storm Pipe
  - New Sewer Line
  - New 1.5" Water Line
  - Dry well next to softball field
  - Dry well next to practice field
  - Type 1 Catch Basins
  - Type 2 Manholes
- Form, pour and finish concrete walks.
- Form, pour and finish concrete dugouts.
- Form, pour and finish a 12"x12" concrete curbs at baseball, softball and practice fields.
- Form, pour and finish concrete stairs.
- Form, pour and finish concrete site concrete curbs (bus loop and parking lot).
- Supply, fine grade and compact crushed rock for asphalt pathways, bus loop, parking lot, fire lane, storage bin area, and concrete.
- Supply and install "Cornerstone" block walls. Backfill, supply drain rock and pipe.
- Salvage and set ecology blocks for storage bin area at batting cages.
- Furnish, fine grade and compact permeable aggregate for batting cages.
- Supply and install synthetic turf anchors
- Furnish, fine grade and compact sand and infield mix for baseball and softball fields.

- Furnish, fine grade and compact sand organic top soil for baseball, softball and practice fields.
- Supply and install big roll natural turf for baseball, softball and practice fields.
- Provide and plant landscaping (trees and shrubs).
- Supply fine grade basalt rock to specified landscape areas.
- Provide hydro-seeding.
- Provide turf maintenance.
- Supply and install baseball pitcher's and dugout mounds.
- Supply and install field markers.
- Supply and install (6) new tennis courts including
  - Weed Kill
  - Fence
  - 3.5" AC
  - Court Surfacing
  - Court Equipment per plans and specifications
- Build Track Events, Shot Put and Discuss including:
  - Excavate and dispose of all spoils and compact subgrade form the javelin, shot put, discus practice and discus competition areas
  - Form, pour and finish concrete curbs for tennis courts and shot put areas
  - Form, pour and finish concrete for the javelin runway, shot put, discus practice and discus competition pads
  - Furnish, fine grade and compact crushed rock for tennis court and field events
  - Furnish, fine grade and compact crushed red cinders for the shot put
  - Supply and install discus cage and throw ring
  - Supply and install seven (7) shot put toe boards
  - Supply and install javelin toe boards
  - Excavate and pour concrete footings for tennis court posts
- Supply and install baseball field and softball field backstops, field fence, tennis courts, dugouts, batting cages, foul poles and all fence related to the athletic fields.
- Construction of the 6 buildings and the dugouts ( dug out footings and slabs are included) and the stairs on the exterior of Building S100 along with the following:
  - Cold weather protection is included for the structural CMU (we would plan to do the majority of the veneer in the spring in order to insure quality of the product. Some would be done in the fall as well though.
  - DIVISION 3: CONCRETE
  - 03 30 00 Concrete Work As it pertains to the Field buildings
  - 03 45 00 Architectural Precast Concrete (Plant Cast) As it pertains to the Field buildings
  - DIVISION 4: MASONRY
  - 04 20 00 Unit Masonry As it pertains to the Field buildings
  - DIVISION 5: METALS
  - 05 12 00 Structural Steel As it pertains to the Field buildings
  - 05 30 00 Steel Decking As it pertains to the Field buildings
  - 05 40 00 Cold-Formed Metal Framing As it pertains to the Field buildings

- 05 50 00 Metal Fabrications As it pertains to the Field buildings, No Handrails included
- DIVISION 6: WOOD, PLASTICS AND COMPOSITES
- 06 10 00 Carpentry As it pertains to the Field buildings
- 06 41 00 Architectural Casework As it pertains to the field buildings
- DIVISION 7: THERMAL AND MOISTURE PROTECTION
- 07 11 13 Bituminous Dampproofing As it pertains to the Field buildings
- 07 21 00 Thermal Insulation As it pertains to the Field buildings
- 07 60 00 Flashing and Sheet Metal As it pertains to the Field buildings
- 07 61 13 Sheet Metal Roofing As it pertains to the Field buildings
- 07 84 13 Firestopping As it pertains to the Field buildings
- 07 91 00 Masonry Sealer As it pertains to the Field buildings
- 07 92 00 Joint Sealer As it pertains to the Field buildings
- DIVISION 8: OPENINGS
- 08 11 13 Hollow Metal Doors and Frames As it pertains to the Field buildings-using owner provided HM frames
- 08 33 23 Overhead Doors & Grilles As it pertains to the Field buildings
- 08 41 00 Aluminum Storefront and Curtainwall Systems As it pertains to the Field buildings Using owner supplied materials
- 08 71 00 Door Hardware As it pertains to the Field buildings
- 08 80 00 Glass and Glazing As it pertains to the Field buildings
- 08 90 00 Louvers and Vents As it pertains to the Field buildings
- DIVISION 9: FINISHES
- 09 25 00 Gypsum Drywall As it pertains to the Field buildings
- 09 51 13 Acoustical Ceilings As it pertains to the Field buildings
- 09 65 00 Resilient Flooring As it pertains to the Field buildings
- 09 91 00 Painting As it pertains to the Field buildings
- DIVISION 10: SPECIALTIES
- 10 11 00 Visual Display Devices As it pertains to the Field buildings
- 10 14 00 Signage As it pertains to the Field buildings
- 10 28 00 Toilet Accessories As it pertains to the Field buildings
- 10 51 13 Metal Lockers As it pertains to the Field buildings
- DIVISION 11: EQUIPMENT
- 11 40 10 Stainless Steel Fabrications As it pertains to the Field buildings
- DIVISION 20: COMMON REQUIREMENTS FOR FIRE SUPPRESSION, PLUMBING, AND HVAC
- 20 05 00 General Provisions AS it pertains to the field drawings
- 20 05 05 Project Closeout and System Start-Up AS it pertains to the field drawings
- 20 05 10 Basic Materials and Methods AS it pertains to the field drawings
- 20 05 13 Electrical Provisions for Mechanical Work AS it pertains to the field drawings
- 20 05 23 Valves AS it pertains to the field drawings

- 20 05 48 Vibration Isolation AS it pertains to the field drawings
- 20 05 50 Seismic Control AS it pertains to the field drawings
- 20 05 93 Testing, Adjusting, and Balancing AS it pertains to the field drawings
- 20 07 00 Mechanical Insulation AS it pertains to the field drawings
- 20 08 00 Commissioning of Common Mechanical Requirements AS it pertains to the field drawings
- 20 08 10 Systems Training AS it pertains to the field drawings
- 20 08 20 Systems Operations and Maintenance Manual AS it pertains to the field drawings s
- 20 21 10 Piping AS it pertains to the field drawings
- 20 21 15 Piping Specialties AS it pertains to the field drawings
- DIVISION 22: PLUMBING
- 22 08 00 Commissioning of Plumbing AS it pertains to the field drawings
- 22 11 16 Domestic Water System AS it pertains to the field drawings
- 22 13 16 Soil, Waste, Vent, and Storm Drain Piping Systems AS it pertains to the field drawings
- 22 40 00 Plumbing Fixtures AS it pertains to the field drawings
- 22 40 10 Plumbing Equipment AS it pertains to the field drawings
- DIVISION 23: HEATING, VENTILATING AND AIR CONDITIONING
- 23 08 00 Commissioning of HVAC AS it pertains to the field drawings
- 23 09 00 Automatic Temperature Controls AS it pertains to the field drawings
- 23 31 13 Air Distribution AS it pertains to the field drawings ns to the field drawings
- 23 33 00 Air Distribution Accessories AS it pertains to the field drawings
- 23 34 10 Air Distribution Equipment AS it pertains to the field drawings
- 23 37 13 Outlets and Inlets AS it pertains to the field drawings
- 23 41 00 Filters AS it pertains to the field drawings
- 23 81 00 Packaged HVAC Equipment AS it pertains to the field drawings
- 23 82 25 Terminal Heat Transfer Equipment AS it pertains to the field drawings
- Section 240500 General Provisions, complete, no exclusions.
- Section 240510 Basic Materials, complete, no exclusions.
- Section 240513 Electrical connections for equipment, complete, no exclusions.
- Section 240522 Wire and Cable, complete, no exclusions.
- Section 240524 Metal clad cabling, complete no exclusions.
- Section 240526 grounding, complete, no exclusions.
- Section 240529 Supporting devices, complete, no exclusions.
- Section 240533 Raceway systems, complete, no exclusions.
- Section 240534 Outlet boxes, complete, no exclusions.

- Section 240553 Identification, complete, no exclusions.
- Section 240800 Commissioning, complete, no exclusions.
- Section 260800 Commissioning of electrical systems, complete no exclusions.
- Section 260923 Lighting controls, complete no exclusions
- Section 262200 Transformers, complete no exclusions.
- Section 262416 Panelboards, complete, no exclusions.
- Section 262726 Wiring Devices, complete no exclusions.
- Section 265100 Lighting complete no exclusions.
- Section 265668 Sports lighting, complete, no exclusions.
- Section 265670 Sports lighting, complete, no exclusions.
- Section 271500 Telecommunications distribution systems.
- Section 275113 Intercom clock system, complete no exclusions.
- Section 281300 Security intrusion system, complete no exclusions.
- Section 282300 IP CCTV, complete no exclusions.
- Section 283111 Fire alarm system, complete no exclusions.
  - Installation Drawings, Submittals and Permits for all listed systems.
  - As Built Drawings and O&M Manuals for all listed systems.
  - Provide and install required cable for fire alarm and security systems.
  - Provide, install and trim all system field devices for all listed systems.
  - Provide and install head end equipment and panel trim for all listed systems.
  - Provide system programming and testing for fire alarm, security and CCTV.
  - Provide aiming and adjustments of cameras in coordination with the owner.
  
- FieldTurf has the ability to perform all scopes of work. We can perform but are not limited to:
  - a) Design Services and construction documentation including:
    - a. Topographic survey of proposed turf limits
    - b. Geotechnical investigation of proposed turf limits
    - c. Review existing Geotechnical information and Stormwater Calculations prepared by others
    - d. Erosion Control Plan
    - e. Layout Plan
    - f. Grading Plan
    - g. Utility Plan
    - h. Field Marking Plan
    - i. Detail Plans to include curbs, piping systems, base section, irrigation details, and additional details as required to complete the installation of the field
    - j. Furnish Sealed Drawings
    - k. Attend up to one (1) coordination meeting with the Local Permitting Authority
  - b) Mobilization



- c) Survey & layout of our work
  - d) Mass excavation to an average of 6" to 8" profile
  - e) Laser grade and compact subgrade
  - f) Furnish and install 6" x 12" concrete curb at perimeter limits of turf
  - g) Furnish and install geotextile fabric at the limits of turf
  - h) Supply and Install 2" x 4" nailer board on curb for turf attachment
  - i) Furnish and install perforated collector drain and tie into existing storm system
  - j) Furnish and install 12" wide flat panel drains 20' O.C. in a herringbone pattern that will gravity feed into the collector drain
  - k) Install (4) nyloplast basins within drainage system
  - l) Furnish and install 5" base stone
  - m) Furnish and install 1" base stone
  - n) Lasergrade and compact finish stone to FieldTurf tolerance
  - o) Site restoration
  - p) Furnish and install (1) set of regulation goal posts with 20' uprights and 8' goose-neck with foundations
- FieldTurf employs (6) full time construction managers (CM's) and often hires support based staff to assist in managing projects.
  - As GC, we oversee all functions on site including but not limited to:
    - On site meetings
    - Permitting
    - Design oversight/ Design Assist
    - Management of construction staff
    - Paperwork (progress reports, COC's, change orders, change management...)
    - Coordination of subcontractors
    - GAANT charts
    - Project flow charts

FieldTurf has some of the most experienced and knowledgeable installation crews in the industry. The success of your fields is heavily dependent on the quality of your installation crew.

### **TURF INSTALLATION – Installing the playing surface and amenities**

Once the base and drainage are completed, the events that follow will be determined by your preferences. The installation of fencing, lighting, bleachers, scoreboards, and/or track surfaces can happen before or after the installation of the artificial turf. The installation of the surface will include rolling out the large turf rolls across the field and seaming the rolls together. For optimal performance and longevity, the seams should be sewn together in order to prevent unwanted costs and hazards related to future seam failure.

### **Placement of turf rolls on the field**

Every component of the finished carpet should undergo numerous rounds of inspection before it is packaged and loaded onto the trucks for transportation to the job site from the turf company's manufacturing facility. Each roll of carpet is numbered and positioned in the exact order that it will be loaded onto the transporters. Once on site, the rolls are unloaded and laid on the field in the specific order that was planned and designated by the turf company's engineering department.

### **Sewing the turf panels**

FieldTurf's sewn seam method is proven in use on hundreds of fields in every locale possible. The key advantage of FieldTurf's sewn seams technique is that the thread does not go through the pile fibers; rather an extra flap of backing material called the selvedge edging acts as the sewing medium. FieldTurf's seams are actually hidden under the pile fabric. The number one maintenance problem associated with synthetic fields is that of loose unglued turf seams. Although glued seams are less expensive and easier, requiring no special equipment or expertise, sewing seams is the only way to assure a trouble-free seam and a long lasting, safe field.

### **Installation of Field Markings and Decorative Markings**

In order to keep prices down, many turf companies use a cut-out method to install lines, hash marks and logos. Once the turf has been laid out, the installation crew will outline the logo or hash mark and quickly cut it out from the turf's original backing. A turf's backing essentially forms the foundation for the field. As a whole, the foundation remains strong and sturdy, however, with each chunk removed that foundation grows increasingly unstable and brittle. This method should be avoided at all costs. FieldTurf's experienced installation crews take the time to shear the necessary fibers without compromising the durability of the turf backing. Once the fibers have been carefully sheared, an ultra-adhesive mixture is applied along the entire surface area of the logos and hash marks before being carefully installed.

### **Installing the Infill**

When the lines, numbers, markings and/or logos are completed, the turf is now ready for infilling. The infill is the athlete's source for cutting, planting, shock absorption and energy restitution. While the majority of the competition uses a loose and spongy all ambient rubber system, FieldTurf only incorporates a patented layered infill system that is comprised of silica sand and premium cryogenic rubber. The patented infill layering begins with several layers of clean, washed silica sand. This stabilizes and supports the entire system. This is followed by mixed infill layers. A mix of cryogenic rubber and silica sand is layered into the system. The rubber and sand particles are a similar size to stay in suspension, neither segregating nor compacting. Up to twenty one passes of the cryogenic rubber and silica sand mix are carefully added. Over 720,000 lbs of infill is layered into a typical, full size sports field. Larger sized cryogenic rubber top layers ensure that the rubber remains on top, providing a safe, forgiving surface.

### **Test the Field**

The most common test performed in the industry to measure shock attenuation is Gmax and should be performed by a certified testing laboratory. It is imperative that your field be tested right after the installation is complete and another 2-3 times throughout the life of the field. FieldTurf fields will record a Gmax value of less than 200 over the life of the field. Like most issues relating to filled turf systems, the issue of Gmax is not simple.

Generic rubber filled systems are too loose and unstable - and the fill too easily displaced in high use areas - to allow for American football play without a shock pad. FieldTurf, on the other hand, due to its heavier and more stable fill, is more than suitable for such applications without a separate shock pad. FieldTurf systems are well below the ASTM threshold of 200 g's. Moreover, 200 g's is considered the level above which the risk of fatal head injury is "non-zero" - i.e, the level at which fatalities can occur, and thus 200 g's is the threshold at which providers of sports surfacing and playground systems have attempted to stay under for obvious reasons.

### **Certificate of Completion**

The certificate of completion is a document issued by the manufacturer and presented to the customer as soon as the installation of the field is complete. It is the responsibility of the customer to insert all the information required on the document including his or her signature in order to validate the warranty. By signing the document the customer acknowledges that all the work performed has been completed to their standards. Once the certificate is received by either the distributor, sales rep or manufacturer the official warranty will be sent to the customer for their records.

**Exhibit A**  
**Response for National Cooperative Contract**

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**1.0 Scope of National Cooperative Contract**

Capitalized terms not otherwise defined herein shall have the meanings given to them in the Master Agreement or in the Administration Agreement between Supplier and OMNIA Partners.

**1.1 Requirement**

Region 4 ESC (hereinafter defined and referred to as “Principal Procurement Agency”), on behalf of itself and the National Intergovernmental Purchasing Alliance Company, a Delaware corporation d/b/a OMNIA Partners, Public Sector (“OMNIA Partners”), is requesting proposals for Sport Surfaces, Installation, and Related Material. The intent of this Request for Proposal is any contract between Principal Procurement Agency and Supplier resulting from this Request for Proposal (“Master Agreement”) be made available to other public agencies nationally, including state and local governmental entities, public and private primary, secondary and higher education entities, non-profit entities, and agencies for the public benefit (“Public Agencies”), through OMNIA Partners’ cooperative purchasing program. The Principal Procurement Agency has executed a Principal Procurement Agency Certificate with OMNIA Partners, an example of which is included as Exhibit D, and has agreed to pursue the Master Agreement. Use of the Master Agreement by any Public Agency is preceded by their registration with OMNIA Partners as a Participating Public Agency in OMNIA Partners’ cooperative purchasing program. Registration with OMNIA Partners as a Participating Public Agency is accomplished by Public Agencies entering into a Master Intergovernmental Cooperative Purchasing Agreement, an example of which is attached as Exhibit C, and by using the Master Agreement, any such Participating Public Agency agrees that it is registered with OMNIA Partners, whether pursuant to the terms of the Master Intergovernmental Purchasing Cooperative Agreement or as otherwise agreed to. The terms and pricing established in the resulting Master Agreement between the Supplier and the Principal Procurement Agency will be the same as that available to Participating Public Agencies through OMNIA Partners.

All transactions, purchase orders, invoices, payments etc., will occur directly between the Supplier and each Participating Public Agency individually, and neither OMNIA Partners, any Principal Procurement Agency nor any Participating Public Agency, including their respective agents, directors, employees or representatives, shall be liable to Supplier for any acts, liabilities, damages, etc., incurred by any other Participating Public Agency. Supplier is responsible for knowing the tax laws in each state.

This Exhibit A defines the expectations for qualifying Suppliers based on OMNIA Partners’ requirements to market the resulting Master Agreement nationally to Public Agencies. Each section in this Exhibit A refers to the capabilities, requirements, obligations, and prohibitions of competing Suppliers on a national level in order to serve Participating Public Agencies through OMNIA Partners.

These requirements are incorporated into and are considered an integral part of this RFP. OMNIA Partners reserves the right to determine whether to make the Master Agreement awarded by the Principal Procurement Agency available to Participating Public Agencies, in its sole and absolute discretion, and any party submitting a response to this RFP acknowledges that any award by the Principal Procurement Agency does not obligate OMNIA Partners to make the Master Agreement available to Participating Procurement Agencies.

## **1.2 Marketing, Sales and Administrative Support**

During the term of the Master Agreement OMNIA Partners intends to provide marketing, sales, partnership development and administrative support for Supplier pursuant to this section that directly promotes the Supplier's products and services to Participating Public Agencies through multiple channels, each designed to promote specific products and services to Public Agencies on a national basis.

OMNIA Partners will assign the Supplier a Director of Partner Development who will serve as the main point of contact for the Supplier and will be responsible for managing the overall relationship between the Supplier and OMNIA Partners. The Director of Partner Development will work with the Supplier to develop a comprehensive strategy to promote the Master Agreement and will connect the Supplier with appropriate stakeholders within OMNIA Partners including, Sales, Marketing, Contracting, Training, and Operations & Support.

The OMNIA Partners marketing team will work in conjunction with Supplier to promote the Master Agreement to both existing Participating Public Agencies and prospective Public Agencies through channels that may include:

- A. Marketing collateral (print, electronic, email, presentations)
- B. Website
- C. Trade shows/conferences/meetings
- D. Advertising
- E. Social Media

The OMNIA Partners sales teams will work in conjunction with Supplier to promote the Master Agreement to both existing Participating Public Agencies and prospective Public Agencies through initiatives that may include:

- A. Individual sales calls
- B. Joint sales calls
- C. Communications/customer service
- D. Training sessions for Public Agency teams
- E. Training sessions for Supplier teams

The OMNIA Partners contracting teams will work in conjunction with Supplier to promote the Master Agreement to both existing Participating Public Agencies and prospective Public Agencies through:

- A. Serving as the subject matter expert for questions regarding joint powers authority and state statutes and regulations for cooperative purchasing
- B. Training sessions for Public Agency teams
- C. Training sessions for Supplier teams
- D. Regular business reviews to monitor program success
- E. General contract administration

Suppliers are required to pay an Administrative Fee of 3% of the greater of the Contract Sales under the Master Agreement and Guaranteed Contract Sales under this Request for Proposal. Supplier will be required to execute the OMNIA Partners Administration Agreement (Exhibit B).

### **1.3 Estimated Volume**

The dollar volume purchased under the Master Agreement is estimated to be approximately \$80M annually. While no minimum volume is guaranteed to Supplier, the estimated annual volume is projected based on the current annual volumes among the Principal Procurement Agency, other Participating Public Agencies that are anticipated to utilize the resulting Master Agreement to be made available to them through OMNIA Partners, and volume growth into other Public Agencies through a coordinated marketing approach between Supplier and OMNIA Partners.

### **1.4 Award Basis**

The basis of any contract award resulting from this RFP made by Principal Procurement Agency will, at OMNIA Partners' option, be the basis of award on a national level through OMNIA Partners. If multiple Suppliers are awarded by Principal Procurement Agency under the Master Agreement, those same Suppliers will be required to extend the Master Agreement to Participating Public Agencies through OMNIA Partners. Utilization of the Master Agreement by Participating Public Agencies will be at the discretion of the individual Participating Public Agency. Certain terms of the Master Agreement specifically applicable to the Principal Procurement Agency (e.g. governing law) are subject to modification for each Participating Public Agency as Supplier, such Participating Public Agency and OMNIA Partners shall agree without being in conflict with the Master Agreement as a condition of the Participating Agency's purchase and not a modification of the Master Agreement applicable to all Participating Agencies. Participating Agencies may request to enter into a separate supplemental agreement to further define the level of service requirements over and above the minimum defined in the Master Agreement (i.e. invoice requirements, order requirements, specialized delivery, diversity requirements such as minority and woman owned businesses, historically underutilized business, governing law, etc.) ("Supplemental Agreement"). It shall be the responsibility of the Supplier to comply, when applicable, with the prevailing wage

legislation in effect in the jurisdiction of the Participating Agency. It shall further be the responsibility of the Supplier to monitor the prevailing wage rates as established by the appropriate department of labor for any increase in rates during the term of the Master Agreement and adjust wage rates accordingly. In instances where supplemental terms and conditions create additional risk and cost for Supplier, Supplier and Participating Public Agency may negotiate additional pricing above and beyond the stated contract not-to-exceed pricing so long as the added price is commensurate with the additional cost incurred by the Supplier. Any supplemental agreement developed as a result of the Master Agreement is exclusively between the Participating Agency and the Supplier (Contract Sales are reported to OMNIA Partners).

All signed Supplemental Agreements and purchase orders issued and accepted by the Supplier may survive expiration or termination of the Master Agreement. Participating Agencies' purchase orders may exceed the term of the Master Agreement if the purchase order is issued prior to the expiration of the Master Agreement. Supplier is responsible for reporting all sales and paying the applicable Administrative Fee for sales that use the Master Agreement as the basis for the purchase order, even though Master Agreement may have expired.

### **1.5 Objectives of Cooperative Program**

This RFP is intended to achieve the following objectives regarding availability through OMNIA Partners' cooperative program:

- A. Provide a comprehensive competitively solicited and awarded national agreement offering the Products covered by this solicitation to Participating Public Agencies;
- B. Establish the Master Agreement as the Supplier's primary go to market strategy to Public Agencies nationwide;
- C. Achieve cost savings for Supplier and Public Agencies through a single solicitation process that will reduce the Supplier's need to respond to multiple solicitations and Public Agencies need to conduct their own solicitation process;
- D. Combine the aggregate purchasing volumes of Participating Public Agencies to achieve cost effective pricing.

## **2.0 REPRESENTATIONS AND COVENANTS**

As a condition to Supplier entering into the Master Agreement, which would be available to all Public Agencies, Supplier must make certain representations, warranties and covenants to both the Principal Procurement Agency and OMNIA Partners designed to ensure the success of the Master Agreement for all Participating Public Agencies as well as the Supplier.

### **2.1 Corporate Commitment**

Supplier commits that (1) the Master Agreement has received all necessary corporate authorizations and support of the Supplier's executive management, (2) the Master Agreement is Supplier's primary "go to market" strategy for Public Agencies, (3) the Master Agreement will be promoted to all Public Agencies, including any existing

customers, and Supplier will transition existing customers, upon their request, to the Master Agreement, and (4) that the Supplier has read and agrees to the terms and conditions of the Administration Agreement with OMNIA Partners and will execute such agreement concurrent with and as a condition of its execution of the Master Agreement with the Principal Procurement Agency. Supplier will identify an executive corporate sponsor and a separate national account manager within the RFP response that will be responsible for the overall management of the Master Agreement.

## **2.2 Pricing Commitment**

Supplier commits the not-to-exceed pricing provided under the Master Agreement pricing is its lowest available (net to buyer) to Public Agencies nationwide and further commits that if a Participating Public Agency is eligible for lower pricing through a national, state, regional or local or cooperative contract, the Supplier will match such lower pricing to that Participating Public Agency under the Master Agreement.

## **2.3 Sales Commitment**

Supplier commits to aggressively market the Master Agreement as its go to market strategy in this defined sector and that its sales force will be trained, engaged and committed to offering the Master Agreement to Public Agencies through OMNIA Partners nationwide. Supplier commits that all Master Agreement sales will be accurately and timely reported to OMNIA Partners in accordance with the OMNIA Partners Administration Agreement. Supplier also commits its sales force will be compensated, including sales incentives, for sales to Public Agencies under the Master Agreement in a consistent or better manner compared to sales to Public Agencies if the Supplier were not awarded the Master Agreement.

## **3.0 SUPPLIER RESPONSE**

Supplier must supply the following information for the Principal Procurement Agency to determine Supplier's qualifications to extend the resulting Master Agreement to Participating Public Agencies through OMNIA Partners.

### **3.1 Company**

- A. Brief history and description of Supplier to include experience providing similar products and services.
- B. Total number and location of salespersons employed by Supplier.
- C. Number and location of support centers (if applicable) and location of corporate office.
- D. Annual sales for the three previous fiscal years.
  - a. Submit FEIN and Dunn & Bradstreet report.
- E. Describe any green or environmental initiatives or policies.
- F. Describe any diversity programs or partners supplier does business with and how Participating Agencies may use diverse partners through the Master Agreement. Indicate how, if at all, pricing changes when using the diversity program. If there



are any diversity programs, provide a list of diversity alliances and a copy of their certifications.

G. Indicate if supplier holds any of the below certifications in any classified areas and include proof of such certification in the response:

a. Minority Women Business Enterprise

Yes       No

If yes, list certifying agency: \_\_\_\_\_

b. Small Business Enterprise (SBE) or Disadvantaged Business Enterprise (DBE)

Yes       No

If yes, list certifying agency: \_\_\_\_\_

c. Historically Underutilized Business (HUB)

Yes       No

If yes, list certifying agency: \_\_\_\_\_

d. Historically Underutilized Business Zone Enterprise (HUBZone)

Yes       No

If yes, list certifying agency: \_\_\_\_\_

e. Other recognized diversity certificate holder

Yes       No

If yes, list certifying agency: \_\_\_\_\_

H. List any relationships with subcontractors or affiliates intended to be used when providing services and identify if subcontractors meet minority-owned standards. If any, list which certifications subcontractors hold and certifying agency.

I. Describe how supplier differentiates itself from its competitors.

J. Describe any present or past litigation, bankruptcy or reorganization involving supplier.

K. Felony Conviction Notice: Indicate if the supplier

a. is a publicly held corporation and this reporting requirement is not applicable;

b. is not owned or operated by anyone who has been convicted of a felony; or

c. is owned or operated by and individual(s) who has been convicted of a felony and provide the names and convictions.

L. Describe any debarment or suspension actions taken against supplier

### 3.2 Distribution, Logistics

A. Each offeror awarded an item under this solicitation may offer their complete product and service offering/a balance of line. Describe the full line of products and services offered by supplier.

- B. Describe how supplier proposes to distribute the products/service nationwide. Include any states where products and services will not be offered under the Master Agreement, including U.S. Territories and Outlying Areas.
- C. Describe how Participating Agencies are ensured they will receive the Master Agreement pricing; include all distribution channels such as direct ordering, retail or in-store locations, through distributors, etc. Describe how Participating Agencies verify and audit pricing to ensure its compliance with the Master Agreement.
- D. Identify all other companies that will be involved in processing, handling or shipping the products/service to the end user.
- E. Provide the number, size and location of Supplier's distribution facilities, warehouses and retail network as applicable.

### **3.3 Marketing and Sales**

- A. Provide a detailed ninety-day plan beginning from award date of the Master Agreement describing the strategy to immediately implement the Master Agreement as supplier's primary go to market strategy for Public Agencies to supplier's teams nationwide, to include, but not limited to:
  - i. Executive leadership endorsement and sponsorship of the award as the public sector go-to-market strategy within first 10 days
  - ii. Training and education of Supplier's national sales force with participation from the Supplier's executive leadership, along with the OMNIA Partners team within first 90 days
- B. Provide a detailed ninety-day plan beginning from award date of the Master Agreement describing the strategy to market the Master Agreement to current Participating Public Agencies, existing Public Agency customers of Supplier, as well as to prospective Public Agencies nationwide immediately upon award, to include, but not limited to:
  - i. Creation and distribution of a co-branded press release to trade publications
  - ii. Announcement, Master Agreement details and contact information published on the Supplier's website within first 90 days
  - iii. Design, publication and distribution of co-branded marketing materials within first 90 days
  - iv. Commitment to attendance and participation with OMNIA Partners at national (i.e. NIGP Annual Forum, NPI Conference, etc.), regional (i.e. Regional NIGP Chapter Meetings, Regional Cooperative Summits, etc.) and supplier-specific trade shows, conferences and meetings throughout the term of the Master Agreement
  - v. Commitment to attend, exhibit and participate at the NIGP Annual Forum in an area reserved by OMNIA Partners for partner suppliers. Booth space

will be purchased and staffed by Supplier. In addition, Supplier commits to provide reasonable assistance to the overall promotion and marketing efforts for the NIGP Annual Forum, as directed by OMNIA Partners.

- vi. Design and publication of national and regional advertising in trade publications throughout the term of the Master Agreement
  - vii. Ongoing marketing and promotion of the Master Agreement throughout its term (case studies, collateral pieces, presentations, promotions, etc.)
  - viii. Dedicated OMNIA Partners internet web-based homepage on Supplier's website with:
    - OMNIA Partners standard logo;
    - Copy of original Request for Proposal;
    - Copy of Master Agreement and amendments between Principal Procurement Agency and Supplier;
    - Summary of Products and pricing;
    - Marketing Materials
    - Electronic link to OMNIA Partners' website including the online registration page;
    - A dedicated toll-free number and email address for OMNIA Partners
- C. Describe how Supplier will transition any existing Public Agency customers' accounts to the Master Agreement available nationally through OMNIA Partners. Include a list of current cooperative contracts (regional and national) Supplier holds and describe how the Master Agreement will be positioned among the other cooperative agreements.
- D. Acknowledge Supplier agrees to provide its logo(s) to OMNIA Partners and agrees to provide permission for reproduction of such logo in marketing communications and promotions. Acknowledge that use of OMNIA Partners logo will require permission for reproduction, as well.
- E. Confirm Supplier will be proactive in direct sales of Supplier's goods and services to Public Agencies nationwide and the timely follow up to leads established by OMNIA Partners. All sales materials are to use the OMNIA Partners logo. At a minimum, the Supplier's sales initiatives should communicate:
- i. Master Agreement was competitively solicited and publicly awarded by a Principal Procurement Agency
  - ii. Best government pricing
  - iii. No cost to participate
  - iv. Non-exclusive
- F. Confirm Supplier will train its national sales force on the Master Agreement. At a minimum, sales training should include:

- i. Key features of Master Agreement
  - ii. Working knowledge of the solicitation process
  - iii. Awareness of the range of Public Agencies that can utilize the Master Agreement through OMNIA Partners
  - iv. Knowledge of benefits of the use of cooperative contracts
- G. Provide the name, title, email and phone number for the person(s), who will be responsible for:
  - i. Executive Support
  - ii. Marketing
  - iii. Sales
  - iv. Sales Support
  - v. Financial Reporting
  - vi. Accounts Payable
  - vii. Contracts
- H. Describe in detail how Supplier's national sales force is structured, including contact information for the highest-level executive in charge of the sales team.
- I. Explain in detail how the sales teams will work with the OMNIA Partners team to implement, grow and service the national program.
- I. Explain in detail how Supplier will manage the overall national program throughout the term of the Master Agreement, including ongoing coordination of marketing and sales efforts, timely new Participating Public Agency account set-up, timely contract administration, etc.
- J. State the amount of Supplier's Public Agency sales for the previous fiscal year. Provide a list of Supplier's top 10 Public Agency customers, the total purchases for each for the previous fiscal year along with a key contact for each.
- K. Describe Supplier's information systems capabilities and limitations regarding order management through receipt of payment, including description of multiple platforms that may be used for any of these functions.
- L. Provide the Contract Sales (as defined in Section 10 of the OMNIA Partners Administration Agreement) that Supplier will guarantee each year under the Master Agreement for the initial three years of the Master Agreement ("Guaranteed Contract Sales").

\$ \_\_\_\_\_ .00 in year one  
\$ \_\_\_\_\_ .00 in year two  
\$ \_\_\_\_\_ .00 in year three

To the extent Supplier guarantees minimum Contract Sales, the Administrative Fee shall be calculated based on the greater of the actual Contract Sales and the Guaranteed Contract Sales.

M. Even though it is anticipated many Public Agencies will be able to utilize the Master Agreement without further formal solicitation, there may be circumstances where Public Agencies will issue their own solicitations. The following options are available when responding to a solicitation for Products covered under the Master Agreement.

- i. Respond with Master Agreement pricing (Contract Sales reported to OMNIA Partners).
- ii. If competitive conditions require pricing lower than the standard Master Agreement not-to-exceed pricing, Supplier may respond with lower pricing through the Master Agreement. If Supplier is awarded the contract, the sales are reported as Contract Sales to OMNIA Partners under the Master Agreement.
- iii. Respond with pricing higher than Master Agreement only in the unlikely event that the Public Agency refuses to utilize Master Agreement (Contract Sales are not reported to OMNIA Partners).
- iv. If alternative or multiple proposals are permitted, respond with pricing higher than Master Agreement, and include Master Agreement as the alternate or additional proposal.

Detail Supplier's strategies under these options when responding to a solicitation.

**Exhibit B**  
**Administration Agreement, Example**

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**ADMINISTRATION AGREEMENT**

THIS ADMINISTRATION AGREEMENT (this "**Agreement**") is made this \_\_\_ day of \_\_\_\_\_ 20\_\_\_, between National Intergovernmental Purchasing Alliance Company, a Delaware corporation d/b/a OMNIA Partners, Public Sector ("**OMNIA Partners**"), and \_\_\_\_\_ ("**Supplier**").

**RECITALS**

**WHEREAS**, the \_\_\_\_\_ (the "**Principal Procurement Agency**") has entered into a Master Agreement effective \_\_\_\_\_, Agreement No \_\_\_\_\_, by and between the Principal Procurement Agency and Supplier, (as may be amended from time to time in accordance with the terms thereof, the "**Master Agreement**"), as attached hereto as Exhibit A and incorporated herein by reference as though fully set forth herein, for the purchase of \_\_\_\_\_ (the "**Product**");

**WHEREAS**, said Master Agreement provides that any or all public agencies, including state and local governmental entities, public and private primary, secondary and higher education entities, non-profit entities, and agencies for the public benefit (collectively, "**Public Agencies**"), that register (either via registration on the OMNIA Partners website or execution of a Master Intergovernmental Cooperative Purchasing Agreement, attached hereto as Exhibit B) (each, hereinafter referred to as a "**Participating Public Agency**") may purchase Product at prices stated in the Master Agreement;

**WHEREAS**, Participating Public Agencies may access the Master Agreement which is offered through OMNIA Partners to Public Agencies;

**WHEREAS**, OMNIA Partners serves as the cooperative contract administrator of the Master Agreement on behalf of Principal Procurement Agency;

**WHEREAS**, Principal Procurement Agency desires OMNIA Partners to proceed with administration of the Master Agreement; and

**WHEREAS**, OMNIA Partners and Supplier desire to enter into this Agreement to make available the Master Agreement to Participating Public Agencies and to set forth certain terms and conditions governing the relationship between OMNIA Partners and Supplier.

**NOW, THEREFORE**, in consideration of the payments to be made hereunder and the mutual covenants contained in this Agreement, OMNIA Partners and Supplier hereby agree as follows:

**DEFINITIONS**

1. Capitalized terms used in this Agreement and not otherwise defined herein shall have the meanings given to them in the Master Agreement.

## TERMS AND CONDITIONS

2. The Master Agreement and the terms and conditions contained therein shall apply to this Agreement except as expressly changed or modified by this Agreement. Supplier acknowledges and agrees that the covenants and agreements of Supplier set forth in the solicitation and Supplier's response thereto resulting in the Master Agreement are incorporated herein and are an integral part hereof.

3. OMNIA Partners shall be afforded all of the rights, privileges and indemnifications afforded to Principal Procurement Agency by or from Supplier under the Master Agreement, and such rights, privileges and indemnifications shall accrue and apply with equal effect to OMNIA Partners, its agents, employees, directors, and representatives under this Agreement including, but not limited to, Supplier's obligation to obtain appropriate insurance.

4. OMNIA Partners shall perform all of its duties, responsibilities and obligations as the cooperative contract administrator of the Master Agreement on behalf of Principal Procurement Agency as set forth herein, and Supplier hereby acknowledges and agrees that all duties, responsibilities and obligations will be undertaken by OMNIA Partners solely in its capacity as the cooperative contract administrator under the Master Agreement.

5. With respect to any purchases by Principal Procurement Agency or any Participating Public Agency pursuant to the Master Agreement, OMNIA Partners shall not be: (i) construed as a dealer, re-marketer, representative, partner or agent of any type of the Supplier, Principal Procurement Agency or any Participating Public Agency; (ii) obligated, liable or responsible for any order for Product made by Principal Procurement Agency or any Participating Public Agency or any employee thereof under the Master Agreement or for any payment required to be made with respect to such order for Product; and (iii) obligated, liable or responsible for any failure by Principal Procurement Agency or any Participating Public Agency to comply with procedures or requirements of applicable law or the Master Agreement or to obtain the due authorization and approval necessary to purchase under the Master Agreement. OMNIA Partners makes no representation or guaranty with respect to any minimum purchases by Principal Procurement Agency or any Participating Public Agency or any employee thereof under this Agreement or the Master Agreement.

6. OMNIA Partners shall not be responsible for Supplier's performance under the Master Agreement, and Supplier shall hold OMNIA Partners harmless from any liability that may arise from the acts or omissions of Supplier in connection with the Master Agreement.

7. Supplier acknowledges that, in connection with its access to OMNIA Partners confidential information and/or supply of data to OMNIA Partners, it has complied with and shall continue to comply with all laws, regulations and standards that may apply to Supplier, including, without limitation: (a) United States federal and state information security and privacy statutes, regulations and/or best practices, including, without limitation, the Gramm-Leach-Bliley Act, the Massachusetts Data Security Regulations (201 C.M.R. 17.00 et. seq.), the Nevada encryption statute (N.R.S. § 603A), the California data security law (Cal. Civil Code § 1798.80 et. seq.) and California Consumer Privacy Act (Cal. Civil Code § 1798.100 et. seq.); and (b) applicable industry and regulatory standards and best practices (collectively, "**Data Regulations**").

With regard to Personal Information that Supplier collects, receives, or otherwise processes under the Agreement or otherwise in connection with performance of the Agreement, Supplier agrees that it will not: (i) sell, rent, release, disclose, disseminate, make available, transfer, or otherwise

communicate orally, in writing, or by electronic or other means, such Personal Information to another business or third party for monetary or other valuable consideration; or (ii) retain, use, or disclose such Personal Information outside of the direct business relationship between Supplier and OMNIA Partners or for any purpose other than for the specific purpose of performance of the Agreement, including retaining, using, or disclosing such Personal Information for a commercial purpose other than for performance of the Agreement. By entering into the Agreement, Supplier certifies that it understands the specific restrictions contained in this Section 7 and will comply with them. For purposes hereof, "**Personal Information**" means information that identifies, relates to, describes, is reasonably capable of being associated with, or could reasonably be linked, directly or indirectly, with a particular consumer or household, and includes the specific elements of "personal information" as defined under Data Regulations, as defined herein. Supplier will reasonably assist OMNIA Partners in timely responding to any third party "request to know" or "request to delete" (as defined pursuant to Data Regulations) and will promptly provide OMNIA Partners with information reasonably necessary for OMNIA Partners to respond to such requests. Where Supplier collects Personal Information directly from Public Agencies or others on OMNIA Partners' behalf, Supplier will maintain records and the means necessary to enable OMNIA Partners to respond to such requests to know and requests to delete.

8. WITHOUT LIMITING THE GENERALITY OF THE FOREGOING, OMNIA PARTNERS EXPRESSLY DISCLAIMS ALL EXPRESS OR IMPLIED REPRESENTATIONS AND WARRANTIES REGARDING OMNIA PARTNERS' PERFORMANCE AS A CONTRACT ADMINISTRATOR OF THE MASTER AGREEMENT. OMNIA PARTNERS SHALL NOT BE LIABLE IN ANY WAY FOR ANY SPECIAL, INCIDENTAL, INDIRECT, CONSEQUENTIAL, EXEMPLARY, PUNITIVE, OR RELIANCE DAMAGES, EVEN IF OMNIA PARTNERS IS ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

#### **TERM OF AGREEMENT; TERMINATION**

9. This Agreement shall be in effect so long as the Master Agreement remains in effect, provided, however, that the provisions of Sections 3 – 8 and 11 – 22, hereof and the indemnifications afforded by the Supplier to OMNIA Partners in the Master Agreement, to the extent such provisions survive any expiration or termination of the Master Agreement, shall survive the expiration or termination of this Agreement.

#### **NATIONAL PROMOTION**

10. OMNIA Partners and Supplier shall publicize and promote the availability of the Master Agreement's products and services to Public Agencies and such agencies' employees. Supplier shall require each Public Agency to register its participation in the OMNIA Partners program by either registering on the OMNIA Partners website ([www.omniapartners.com/publicsector](http://www.omniapartners.com/publicsector)) or executing a Master Intergovernmental Cooperative Purchasing Agreement prior to processing the Participating Public Agency's first sales order. Upon request, Supplier shall make available to interested Public Agencies a copy of the Master Agreement and such price lists or quotes as may be necessary for such Public Agencies to evaluate potential purchases.

11. Supplier shall provide such marketing and administrative support as set forth in the solicitation resulting in the Master Agreement, including assisting in development of marketing materials as reasonably requested by Principal Procurement Agency and OMNIA Partners. Supplier shall be responsible for obtaining permission or license of use and payment of any license fees for all content and images Supplier provides to OMNIA Partners or posts on the OMNIA Partners website.



Supplier shall indemnify, defend and hold harmless OMNIA Partners for use of all such content and images including copyright infringement claims. Supplier and OMNIA Partners each hereby grant to the other party a limited, revocable, non-transferable, non-sublicensable right to use such party's logo (each, the "**Logo**") solely for use in marketing the Master Agreement. Each party shall provide the other party with the standard terms of use of such party's Logo, and such party shall comply with such terms in all material respects. Both parties shall obtain approval from the other party prior to use of such party's Logo. Notwithstanding the foregoing, the parties understand and agree that except as provided herein neither party shall have any right, title or interest in the other party's Logo. Upon termination of this Agreement, each party shall immediately cease use of the other party's Logo.

### **ADMINISTRATIVE FEE, REPORTING & PAYMENT**

12. An "Administrative Fee" shall be defined and due to OMNIA Partners from Supplier in the amount of \_\_ percent (\_\_%) ("**Administrative Fee Percentage**") multiplied by the total purchase amount paid to Supplier, less refunds, credits on returns, rebates and discounts, for the sale of products and/or services to Principal Procurement Agency and Participating Public Agencies pursuant to the Master Agreement (as amended from time to time and including any renewal thereof) ("**Contract Sales**"). From time to time the parties may mutually agree in writing to a lower Administrative Fee Percentage for a specifically identified Participating Public Agency's Contract Sales.

13. Supplier shall provide OMNIA Partners with an electronic accounting report monthly, in the format prescribed by OMNIA Partners, summarizing all Contract Sales for each calendar month. The Contract Sales reporting format is provided as Exhibit C ("**Contract Sales Report**"), attached hereto and incorporated herein by reference. Contract Sales Reports for each calendar month shall be provided by Supplier to OMNIA Partners by the 10<sup>th</sup> day of the following month. Failure to provide a Contract Sales Report within the time and manner specified herein shall constitute a material breach of this Agreement and if not cured within thirty (30) days of written notice to Supplier shall be deemed a cause for termination of the Master Agreement, at Principal Procurement Agency's sole discretion, and/or this Agreement, at OMNIA Partners' sole discretion.

14. Administrative Fee payments are to be paid by Supplier to OMNIA Partners at the frequency and on the due date stated in Section 13, above, for Supplier's submission of corresponding Contract Sales Reports. Administrative Fee payments are to be made via Automated Clearing House (ACH) to the OMNIA Partners designated financial institution identified in Exhibit D. Failure to provide a payment of the Administrative Fee within the time and manner specified herein shall constitute a material breach of this Agreement and if not cured within thirty (30) days of written notice to Supplier shall be deemed a cause for termination of the Master Agreement, at Principal Procurement Agency's sole discretion, and/or this Agreement, at OMNIA Partners' sole discretion. All Administrative Fees not paid when due shall bear interest at a rate equal to the lesser of one and one-half percent (1 1/2%) per month or the maximum rate permitted by law until paid in full.

15. Supplier shall maintain an accounting of all purchases made by Participating Public Agencies under the Master Agreement. OMNIA Partners, or its designee, in OMNIA Partners' sole discretion, reserves the right to compare Participating Public Agency records with Contract Sales Reports submitted by Supplier for a period of four (4) years from the date OMNIA Partners receives such report. In addition, OMNIA Partners may engage a third party to conduct an independent audit of Supplier's monthly reports. In the event of such an audit, Supplier shall provide all materials reasonably requested relating to such audit by OMNIA Partners at the location designated by OMNIA Partners. In the event an underreporting of Contract Sales and a resulting underpayment of

Administrative Fees is revealed, OMNIA Partners will notify the Supplier in writing. Supplier will have thirty (30) days from the date of such notice to resolve the discrepancy to OMNIA Partners' reasonable satisfaction, including payment of any Administrative Fees due and owing, together with interest thereon in accordance with Section 13, and reimbursement of OMNIA Partners' costs and expenses related to such audit.

## GENERAL PROVISIONS

16. This Agreement, the Master Agreement and the exhibits referenced herein supersede any and all other agreements, either oral or in writing, between the parties hereto with respect to the subject matter hereto and no other agreement, statement, or promise relating to the subject matter of this Agreement which is not contained or incorporated herein shall be valid or binding. In the event of any conflict between the provisions of this Agreement and the Master Agreement, as between OMNIA Partners and Supplier, the provisions of this Agreement shall prevail.

17. If any action at law or in equity is brought to enforce or interpret the provisions of this Agreement or to recover any Administrative Fee and accrued interest, the prevailing party shall be entitled to reasonable attorney's fees and costs in addition to any other relief to which it may be entitled.

18. This Agreement and OMNIA Partners' rights and obligations hereunder may be assigned at OMNIA Partners' sole discretion to an affiliate of OMNIA Partners, any purchaser of any or all or substantially all of the assets of OMNIA Partners, or the successor entity as a result of a merger, reorganization, consolidation, conversion or change of control, whether by operation of law or otherwise. Supplier may not assign its obligations hereunder without the prior written consent of OMNIA Partners.

19. All written communications given hereunder shall be delivered by first-class mail, postage prepaid, or overnight delivery on receipt to the addresses as set forth below.

A. OMNIA Partners:

OMNIA Partners  
Attn: President  
840 Crescent Centre Drive  
Suite 600  
Franklin, TN 37067

B. Supplier:

FieldTurf USA, Inc.  
175 N Industrial Blvd NE  
Calhoun, GA 30701  
\_\_\_\_\_

20. If any provision of this Agreement shall be deemed to be, or shall in fact be, illegal, inoperative or unenforceable, the same shall not affect any other provision or provisions herein contained or render the same invalid, inoperative or unenforceable to any extent whatever, and this Agreement will be construed by limiting or invalidating such provision to the minimum extent necessary to make such provision valid, legal and enforceable.

21. This Agreement may not be amended, changed, modified, or altered without the prior written consent of the parties hereto, and no provision of this Agreement may be discharged or waived, except by a writing signed by the parties. A waiver of any particular provision will not be deemed a waiver of any other provision, nor will a waiver given on one occasion be deemed to apply to any other occasion.

22. This Agreement shall inure to the benefit of and shall be binding upon OMNIA Partners, the Supplier and any respective successor and assign thereto; subject, however, to the limitations contained herein.

23. This Agreement will be construed under and governed by the laws of the State of Delaware, excluding its conflicts of law provisions and any action arising out of or related to this Agreement shall be commenced solely and exclusively in the state or federal courts in Williamson County Tennessee.

24. This Agreement may be executed in counterparts, each of which is an original but all of which, together, shall constitute but one and the same instrument. The exchange of copies of this Agreement and of signature pages by facsimile, or by .pdf or similar electronic transmission, will constitute effective execution and delivery of this Agreement as to the parties and may be used in lieu of the original Agreement for all purposes. Signatures of the parties transmitted by facsimile, or by .pdf or similar electronic transmission, will be deemed to be their original signatures for any purpose whatsoever.

[INSERT SUPPLIER ENTITY NAME]  
FieldTurf USA, Inc.

**NATIONAL  
INTERGOVERNMENTAL  
PURCHASING ALLIANCE  
COMPANY, A DELAWARE  
CORPORATION D/B/A OMNIA  
PARTNERS, PUBLIC SECTOR**



Signature  
Eric Dalieri

Name  
President

Title  
September 16, 2021

Date

Signature  
Sarah Vavra

Name  
Sr. Vice President, Public Sector  
Contracting

Title

Date

**Exhibit C**  
**Master Intergovernmental Cooperative Purchasing Agreement, Example**

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**MASTER INTERGOVERNMENTAL COOPERATIVE PURCHASING AGREEMENT**

This Master Intergovernmental Cooperative Purchasing Agreement (this “**Agreement**”) is entered into by and between those certain government agencies that execute a Principal Procurement Agency Certificate (“**Principal Procurement Agencies**”) with National Intergovernmental Purchasing Alliance Company, a Delaware corporation d/b/a OMNIA Partners, Public Sector and/or Communities Program Management, LLC, a California limited liability company d/b/a U.S. Communities (collectively, “**OMNIA Partners**”), in its capacity as the cooperative administrator, to be appended and made a part hereof and such other public agencies (“**Participating Public Agencies**”) who register to participate in the cooperative purchasing programs administered by OMNIA Partners and its affiliates and subsidiaries (collectively, the “**OMNIA Partners Parties**”) by either registering on the OMNIA Partners website ([www.omniapartners.com/publicsector](http://www.omniapartners.com/publicsector) or any successor website), or by executing a copy of this Agreement.

**RECITALS**

**WHEREAS**, after a competitive solicitation and selection process by Principal Procurement Agencies, in compliance with their own policies, procedures, rules and regulations, a number of suppliers have entered into “**Master Agreements**” (herein so called) to provide a variety of goods, products and services (“**Products**”) to the applicable Principal Procurement Agency and the Participating Public Agencies;

**WHEREAS**, Master Agreements are made available by Principal Procurement Agencies through the OMNIA Partners Parties and provide that Participating Public Agencies may purchase Products on the same terms, conditions and pricing as the Principal Procurement Agency, subject to any applicable federal and/or local purchasing ordinances and the laws of the State of purchase; and

**WHEREAS**, in addition to Master Agreements, the OMNIA Partners Parties may from time to time offer Participating Public Agencies the opportunity to acquire Products through other group purchasing agreements.

**NOW, THEREFORE**, in consideration of the mutual promises contained in this Agreement, and of the mutual benefits to result, the parties hereby agree as follows:

1. Each party will facilitate the cooperative procurement of Products.
2. The Participating Public Agencies shall procure Products in accordance with and subject to the relevant federal, state and local statutes, ordinances, rules and regulations that govern Participating Public Agency’s procurement practices. The Participating Public Agencies hereby acknowledge and agree that it is the intent of the parties that all provisions of this Agreement and that Principal Procurement Agencies’ participation in the program described herein comply with all applicable laws, including but not limited to the requirements of 42 C.F.R. § 1001.952(j), as may be amended from time to time. The Participating Public Agencies further acknowledge and agree that they are solely responsible for their compliance with all applicable “safe harbor” regulations, including but not limited to any and all obligations to fully and accurately report discounts and incentives.

3. The Participating Public Agency represents and warrants that the Participating Public Agency is not a hospital or other healthcare provider and is not purchasing Products on behalf of a hospital or healthcare provider; provided that the foregoing shall not prohibit Participating Public Agency from furnishing health care services so long as the furnishing of healthcare services is not in furtherance of a primary purpose of the Participating Public Agency.

4. The cooperative use of Master Agreements shall be in accordance with the terms and conditions of the Master Agreements, except as modification of those terms and conditions is otherwise required by applicable federal, state or local law, policies or procedures.

5. The Principal Procurement Agencies will make available, upon reasonable request, Master Agreement information which may assist in improving the procurement of Products by the Participating Public Agencies.

6. The Participating Public Agency agrees the OMNIA Partners Parties may provide access to group purchasing organization (“**GPO**”) agreements directly or indirectly by enrolling the Participating Public Agency in another GPO’s purchasing program, provided that the purchase of Products through the OMNIA Partners Parties or any other GPO shall be at the Participating Public Agency’s sole discretion.

7. The Participating Public Agencies (each a “**Procuring Party**”) that procure Products through any Master Agreement or GPO Product supply agreement (each a “**GPO Contract**”) will make timely payments to the distributor, manufacturer or other vendor (collectively, “**Supplier**”) for Products received in accordance with the terms and conditions of the Master Agreement or GPO Contract, as applicable. Payment for Products and inspections and acceptance of Products ordered by the Procuring Party shall be the exclusive obligation of such Procuring Party. Disputes between Procuring Party and any Supplier shall be resolved in accordance with the law and venue rules of the State of purchase unless otherwise agreed to by the Procuring Party and Supplier.

8. The Procuring Party shall not use this Agreement as a method for obtaining additional concessions or reduced prices for purchase of similar products or services outside of the Master Agreement. Master Agreements may be structured with not-to-exceed pricing, in which cases the Supplier may offer the Procuring Party and the Procuring Party may accept lower pricing or additional concessions for purchase of Products through a Master Agreement.

9. The Procuring Party shall be responsible for the ordering of Products under this Agreement. A non-procuring party shall not be liable in any fashion for any violation by a Procuring Party, and, to the extent permitted by applicable law, the Procuring Party shall hold non-procuring party harmless from any liability that may arise from the acts or omissions of the Procuring Party.

10. WITHOUT LIMITING THE GENERALITY OF THE FOREGOING, THE OMNIA PARTNERS PARTIES EXPRESSLY DISCLAIM ALL EXPRESS OR IMPLIED REPRESENTATIONS AND WARRANTIES REGARDING ANY PRODUCT, MASTER AGREEMENT AND GPO CONTRACT. THE OMNIA PARTNERS PARTIES SHALL NOT BE LIABLE IN ANY WAY FOR ANY SPECIAL, INCIDENTAL, INDIRECT, CONSEQUENTIAL, EXEMPLARY, PUNITIVE, OR RELIANCE DAMAGES, EVEN IF THE OMNIA PARTNERS PARTIES ARE ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. FURTHER, THE PROCURING PARTY ACKNOWLEDGES AND AGREES THAT THE OMNIA PARTNERS PARTIES SHALL HAVE NO LIABILITY FOR ANY ACT OR OMISSION BY A SUPPLIER OR

OTHER PARTY UNDER A MASTER AGREEMENT OR GPO CONTRACT.

11. This Agreement shall remain in effect until termination by either party giving thirty (30) days' written notice to the other party. The provisions of Paragraphs 6 - 10 hereof shall survive any such termination.

12. This Agreement shall take effect upon (i) execution of the Principal Procurement Agency Certificate, or (ii) registration on the OMNIA Partners website or the execution of this Agreement by a Participating Public Agency, as applicable.

**Participating Public Agency:**

FieldTurf USA, Inc.



Type text here

Authorized Signature  
Eric Dalieri

Name  
President - FieldTurf USA, Inc.

Title and Agency Name  
September 16, 2021

Date

**OMNIA Partners, as the cooperative administrator on behalf of Principal**

**Procurement Agencies:**

**NATIONAL INTERGOVERNMENTAL  
PURCHASING ALLIANCE COMPANY  
COMMUNITIES PROGRAM  
MANAGEMENT, LLC**

Signature  
Sarah E. Vavra

Name  
Sr. Vice President, Public Sector Contracting

Title

Date

**Exhibit D**  
**Principal Procurement Agency Certificate, Example**

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**PRINCIPAL PROCUREMENT AGENCY CERTIFICATE**

In its capacity as a Principal Procurement Agency (as defined below) for National Intergovernmental Purchasing Alliance Company, a Delaware corporation d/b/a OMNIA Partners, Public Sector ("**OMNIA Partners**"), [NAME OF PPA] agrees to pursue Master Agreements for Products as specified in the attached Exhibits to this Principal Procurement Agency Certificate.

I hereby acknowledge, in my capacity as \_\_\_\_\_ of and on behalf of [NAME OF PPA] ("**Principal Procurement Agency**"), that I have read and hereby agree to the general terms and conditions set forth in the attached Master Intergovernmental Cooperative Purchasing Agreement regulating the use of the Master Agreements and purchase of Products that from time to time are made available by Principal Procurement Agencies to Participating Public Agencies nationwide through OMNIA Partners.

I understand that the purchase of one or more Products under the provisions of the Master Intergovernmental Cooperative Purchasing Agreement is at the sole and complete discretion of the Participating Public Agency.

Authorized Signature, [PRINCIPAL PROCUREMENT AGENCY]

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Name

\_\_\_\_\_  
Title

\_\_\_\_\_  
Date





**Exhibit F**  
**Federal Funds Certifications**

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**FEDERAL CERTIFICATIONS**  
ADDENDUM FOR AGREEMENT FUNDED BY U.S. FEDERAL GRANT

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**TO WHOM IT MAY CONCERN:**

Participating Agencies may elect to use federal funds to purchase under the Master Agreement. This form should be completed and returned.

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**DEFINITIONS**

**Contract** means a legal instrument by which a non-Federal entity purchases property or services needed to carry out the project or program under a Federal award. The term as used in this part does not include a legal instrument, even if the non-Federal entity considers it a contract, when the substance of the transaction meets the definition of a Federal award or subaward

**Contractor** means an entity that receives a contract as defined in Contract.

**Cooperative agreement** means a legal instrument of financial assistance between a Federal awarding agency or pass-through entity and a non-Federal entity that, consistent with 31 U.S.C. 6302-6305:

- (a) Is used to enter into a relationship the principal purpose of which is to transfer anything of value from the Federal awarding agency or pass-through entity to the non-Federal entity to carry out a public purpose authorized by a law of the United States (see 31 U.S.C. 6101(3)); and not to acquire property or services for the Federal government or pass-through entity's direct benefit or use;
- (b) Is distinguished from a grant in that it provides for substantial involvement between the Federal awarding agency or pass-through entity and the non-Federal entity in carrying out the activity contemplated by the Federal award.
- (c) The term does not include:
  - (1) A cooperative research and development agreement as defined in 15 U.S.C. 3710a; or
  - (2) An agreement that provides only:
    - (i) Direct United States Government cash assistance to an individual;
    - (ii) A subsidy;
    - (iii) A loan;
    - (iv) A loan guarantee; or
    - (v) Insurance.

**Federal awarding agency** means the Federal agency that provides a Federal award directly to a non-Federal entity

**Federal award** has the meaning, depending on the context, in either paragraph (a) or (b) of this section:

- (a)(1) The Federal financial assistance that a non-Federal entity receives directly from a Federal awarding agency or indirectly from a pass-through entity, as described in § 200.101 Applicability; or
- (2) The cost-reimbursement contract under the Federal Acquisition Regulations that a non-Federal entity receives directly from a Federal awarding agency or indirectly from a pass-through entity, as described in § 200.101 Applicability.
- (b) The instrument setting forth the terms and conditions. The instrument is the grant agreement, cooperative agreement, other agreement for assistance covered in paragraph (b) of § 200.40 Federal financial assistance, or the cost-reimbursement contract awarded under the Federal Acquisition Regulations.
- (c) Federal award does not include other contracts that a Federal agency uses to buy goods or services from a contractor or a contract to operate Federal government owned, contractor operated facilities (GOCOs).
- (d) See also definitions of Federal financial assistance, grant agreement, and cooperative agreement.

**Non-Federal entity** means a state, local government, Indian tribe, institution of higher education (IHE), or nonprofit organization that carries out a Federal award as a recipient or subrecipient.

**Nonprofit organization** means any corporation, trust, association, cooperative, or other organization, not including IHEs, that:

- (a) Is operated primarily for scientific, educational, service, charitable, or similar purposes in the public interest;
- (b) Is not organized primarily for profit; and
- (c) Uses net proceeds to maintain, improve, or expand the operations of the organization.

**Obligations** means, when used in connection with a non-Federal entity's utilization of funds under a Federal award, orders placed for property and services, contracts and subawards made, and similar transactions during a given period that require payment by the non-Federal entity during the same or a future period.

**Pass-through entity** means a non-Federal entity that provides a subaward to a subrecipient to carry out part of a Federal program.

**Recipient** means a non-Federal entity that receives a Federal award directly from a Federal awarding agency to carry out an activity under a Federal program. The term recipient does not include subrecipients.

**Simplified acquisition threshold** means the dollar amount below which a non-Federal entity may purchase property or services using small purchase methods. Non-Federal entities adopt small purchase procedures in order to expedite the purchase of items costing less than the simplified acquisition threshold. The simplified acquisition threshold is set by the Federal Acquisition Regulation at 48 CFR Subpart 2.1 (Definitions) and in accordance with 41 U.S.C. 1908. As of the publication of this part, the simplified acquisition threshold is \$250,000, but this threshold is periodically adjusted for inflation. (Also see definition of § 200.67 Micro-purchase.)

**Subaward** means an award provided by a pass-through entity to a subrecipient for the subrecipient to carry out part of a Federal award received by the pass-through entity. It does not include payments to a contractor or payments to an individual that is a beneficiary of a Federal program. A subaward may be provided through any form of legal agreement, including an agreement that the pass-through entity considers a contract.

**Subrecipient** means a non-Federal entity that receives a subaward from a pass-through entity to carry out part of a Federal program; but does not include an individual that is a beneficiary of such program. A subrecipient may also be a recipient of other Federal awards directly from a Federal awarding agency.

**Termination** means the ending of a Federal award, in whole or in part at any time prior to the planned end of period of performance.

The following certifications and provisions may be required and apply when Participating Agency expends federal funds for any purchase resulting from this procurement process. Pursuant to 2 C.F.R. § 200.326, all contracts, including small purchases, awarded by the Participating Agency and the Participating Agency's subcontractors shall contain the procurement provisions of Appendix II to Part 200, as applicable.

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**APPENDIX II TO 2 CFR PART 200**

**(A) Contracts for more than the simplified acquisition threshold currently set at \$250,000, which is the inflation adjusted amount determined by the Civilian Agency Acquisition Council and the Defense Acquisition Regulations Council (Councils) as authorized by 41 U.S.C. 1908, must address administrative, contractual, or legal remedies in instances where contractors violate or breach contract terms, and provide for such sanctions and penalties as appropriate.**

Pursuant to Federal Rule (A) above, when a Participating Agency expends federal funds, the Participating Agency reserves all rights and privileges under the applicable laws and regulations with respect to this procurement in the event of breach of contract by either party.

Does offeror agree?  YES \_\_\_\_\_ Initials of Authorized Representative of offeror

ET

**(B) Termination for cause and for convenience by the grantee or subgrantee including the manner by which it will be effected and the basis for settlement. (All contracts in excess of \$10,000)**

Pursuant to Federal Rule (B) above, when a Participating Agency expends federal funds, the Participating Agency reserves the right to immediately terminate any agreement in excess of \$10,000 resulting from this procurement process in the event of a breach or default of the agreement by Offeror as detailed in the terms of the contract.

Does offeror agree? YES ED Initials of Authorized Representative of offeror

**(C) Equal Employment Opportunity. Except as otherwise provided under 41 CFR Part 60, all contracts that meet the definition of "federally assisted construction contract" in 41 CFR Part 60-1.3 must include the equal opportunity clause provided under 41 CFR 60-1.4(b), in accordance with Executive Order 11246, "Equal Employment Opportunity" (30 CFR 12319, 12935, 3 CFR Part, 1964-1965 Comp., p. 339), as amended by Executive Order 11375, "Amending Executive Order 11246 Relating to Equal Employment Opportunity," and implementing regulations at 41 CFR part 60, "Office of Federal Contract Compliance Programs, Equal Employment Opportunity, Department of Labor."**

Pursuant to Federal Rule (C) above, when a Participating Agency expends federal funds on any federally assisted construction contract, the equal opportunity clause is incorporated by reference herein.

Does offeror agree to abide by the above? YES ED Initials of Authorized Representative of offeror

**(D) Davis-Bacon Act, as amended (40 U.S.C. 3141-3148). When required by Federal program legislation, all prime construction contracts in excess of \$2,000 awarded by non-Federal entities must include a provision for compliance with the Davis-Bacon Act (40 U.S.C. 3141-3144, and 3146-3148) as supplemented by Department of Labor regulations (29 CFR Part 5, "Labor Standards Provisions Applicable to Contracts Covering Federally Financed and Assisted Construction"). In accordance with the statute, contractors must be required to pay wages to laborers and mechanics at a rate not less than the prevailing wages specified in a wage determination made by the Secretary of Labor. In addition, contractors must be required to pay wages not less than once a week. The non-Federal entity must place a copy of the current prevailing wage determination issued by the Department of Labor in each solicitation. The decision to award a contract or subcontract must be conditioned upon the acceptance of the wage determination. The non-Federal entity must report all suspected or reported violations to the Federal awarding agency. The contracts must also include a provision for compliance with the Copeland "Anti-Kickback" Act (40 U.S.C. 3145), as supplemented by Department of Labor regulations (29 CFR Part 3, "Contractors and Subcontractors on Public Building or Public Work Financed in Whole or in Part by Loans or Grants from the United States"). The Act provides that each contractor or subrecipient must be prohibited from inducing, by any means, any person employed in the construction, completion, or repair of public work, to give up any part of the compensation to which he or she is otherwise entitled. The non-Federal entity must report all suspected or reported violations to the Federal awarding agency.**

Pursuant to Federal Rule (D) above, when a Participating Agency expends federal funds during the term of an award for all contracts and subgrants for construction or repair, offeror will be in compliance with all applicable Davis-Bacon Act provisions.

Does offeror agree? YES ED Initials of Authorized Representative of offeror

**(E) Contract Work Hours and Safety Standards Act (40 U.S.C. 3701-3708). Where applicable, all contracts awarded by the non-Federal entity in excess of \$100,000 that involve the employment of mechanics or laborers must include a provision for compliance with 40 U.S.C. 3702 and 3704, as supplemented by Department of Labor regulations (29 CFR Part 5). Under 40 U.S.C. 3702 of the Act, each contractor must be required to compute the wages of every mechanic and laborer on the basis of a standard work week of 40 hours. Work in excess of the standard work week is permissible provided that the worker is compensated at a rate of not less than one and a half times the basic rate of pay for all hours worked in excess of 40 hours in the work week. The requirements of 40 U.S.C. 3704 are applicable to construction work and provide that no laborer or mechanic must be required to work in surroundings or under working conditions which are unsanitary, hazardous or dangerous. These requirements do not apply to the purchases of supplies or materials or articles ordinarily available on the open market, or contracts for transportation or transmission of intelligence.**

ED

Pursuant to Federal Rule (E) above, when a Participating Agency expends federal funds, offeror certifies that offeror will be in compliance with all applicable provisions of the Contract Work Hours and Safety Standards Act during the term of an award for all contracts by Participating Agency resulting from this procurement process.

Does offeror agree?  YES ED Initials of Authorized Representative of offeror

**(F) Rights to Inventions Made Under a Contract or Agreement.** If the Federal award meets the definition of "funding agreement" under 37 CFR §401.2 (a) and the recipient or subrecipient wishes to enter into a contract with a small business firm or nonprofit organization regarding the substitution of parties, assignment or performance of experimental, developmental, or research work under that "funding agreement," the recipient or subrecipient must comply with the requirements of 37 CFR Part 401, "Rights to Inventions Made by Nonprofit Organizations and Small Business Firms Under Government Grants, Contracts and Cooperative Agreements," and any implementing regulations issued by the awarding agency.

Pursuant to Federal Rule (F) above, when federal funds are expended by Participating Agency, the offeror certifies that during the term of an award for all contracts by Participating Agency resulting from this procurement process, the offeror agrees to comply with all applicable requirements as referenced in Federal Rule (F) above.

Does offeror agree?  YES ED Initials of Authorized Representative of offeror

**(G) Clean Air Act (42 U.S.C. 7401-7671q.) and the Federal Water Pollution Control Act (33 U.S.C. 1251-1387), as amended—Contracts and subgrants of amounts in excess of \$150,000 must contain a provision that requires the non-Federal award to agree to comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act (42 U.S.C. 7401-7671q) and the Federal Water Pollution Control Act as amended (33 U.S.C. 1251- 1387). Violations must be reported to the Federal awarding agency and the Regional Office of the Environmental Protection Agency (EPA)**

Pursuant to Federal Rule (G) above, when federal funds are expended by Participating Agency, the offeror certifies that during the term of an award for all contracts by Participating Agency member resulting from this procurement process, the offeror agrees to comply with all applicable requirements as referenced in Federal Rule (G) above.

Does offeror agree?  YES ED Initials of Authorized Representative of offeror

**(H) Debarment and Suspension (Executive Orders 12549 and 12689)—A contract award (see 2 CFR 180.220) must not be made to parties listed on the government wide exclusions in the System for Award Management (SAM), in accordance with the Executive Office of the President Office of Management and Budget (OMB) guidelines at 2 CFR 180 that implement Executive Orders 12549 (3 CFR part 1986 Comp., p. 189) and 12689 (3 CFR part 1989 Comp., p. 235), "Debarment and Suspension." SAM Exclusions contains the names of parties debarred, suspended, or otherwise excluded by agencies, as well as parties declared ineligible under statutory or regulatory authority other than Executive Order 12549.**

Pursuant to Federal Rule (H) above, when federal funds are expended by Participating Agency, the offeror certifies that during the term of an award for all contracts by Participating Agency resulting from this procurement process, the offeror certifies that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation by any federal department or agency. If at any time during the term of an award the offeror or its principals becomes debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation by any federal department or agency, the offeror will notify the Participating Agency.

Does offeror agree?  YES ED Initials of Authorized Representative of offeror

**(I) Byrd Anti-Lobbying Amendment (31 U.S.C. 1352)—Contractors that apply or bid for an award exceeding \$100,000 must file the required certification. Each tier certifies to the tier above that it will not and has not used Federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a member of Congress, officer or employee of Congress, or an employee of a member of Congress in connection with obtaining any Federal contract, grant or any other award covered by 31 U.S.C. 1352. Each tier must also disclose any lobbying with non-Federal funds that takes place in connection with obtaining any Federal award.**

**Such disclosures are forwarded from tier to tier up to the non-Federal award.**

Pursuant to Federal Rule (I) above, when federal funds are expended by Participating Agency, the offeror certifies that during the term and after the awarded term of an award for all contracts by Participating Agency resulting from this procurement process, the offeror certifies that it is in compliance with all applicable provisions of the Byrd Anti-Lobbying Amendment (31 U.S.C. 1352). The undersigned further certifies that:

(1) No Federal appropriated funds have been paid or will be paid for on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of congress, or an employee of a Member of Congress in connection with the awarding of a Federal contract, the making of a Federal grant, the making of a Federal loan, the entering into a cooperative agreement, and the extension, continuation, renewal, amendment, or modification of a Federal contract, grant, loan, or cooperative agreement.

(2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of congress, or an employee of a Member of Congress in connection with this Federal grant or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying", in accordance with its instructions.

(3) The undersigned shall require that the language of this certification be included in the award documents for all covered sub-awards exceeding \$100,000 in Federal funds at all appropriate tiers and that all subrecipients shall certify and disclose accordingly.

Does offeror agree? YES ED Initials of Authorized Representative of offeror

**(K) Prohibition on certain telecommunications and video surveillance services or equipment – Contracts and subgrants expending Federal loan or grant funds shall not: (i) procure or obtain; (ii) extend or renew a contract to procure or obtain; or (iii) enter into a contract (or extend or renew a contract) to procure or obtain equipment, services, or systems that uses covered telecommunications equipment or services as a substantial or essential component of any system, or as critical technology as part of any system.**

As described in Public Law 115-232, section 889, covered telecommunications equipment under Federal Rule (K) include:

(i) Telecommunications equipment produced by Huawei Technologies Company or ZTE Corporation (or any subsidiary or affiliate of such entities).

(ii) For the purpose of public safety, security of government facilities, physical security surveillance of critical infrastructure, and other national security purposes, video surveillance and telecommunications equipment produced by Hytera Communications Corporation, Hangzhou Hikvision Digital Technology Company, or Dahua Technology Company (or any subsidiary or affiliate of such entities).

(iii) Telecommunications or video surveillance services provided by such entities or using such equipment. \

(iv) Telecommunications or video surveillance equipment or services produced or provided by an entity that the Secretary of Defense, in consultation with the Director of the National Intelligence or the Director of the Federal Bureau of Investigation, reasonably believes to be an entity owned or controlled by, or otherwise connected to, the government of a covered foreign country.

Pursuant to Federal Rule (K) above, when a Participating Agency expends federal funds, offeror certifies that offeror will be in compliance with all applicable provisions of Federal Rule (K) during the term of an award for all contracts by Participating Agency resulting from this procurement process.

Does offeror agree? YES EX Initials of Authorized Representative of offeror

**(L) Domestic preferences for procurements – Contracts and purchase orders for work or products under a subaward must include a provision that requires the non- Federal entity to provide a preference for the purchase, acquisition, or use of goods, products, or materials produced in the United States (including but not limited to iron, aluminum, steel, cement, and other manufactured products).**

For the purposes of Federal Rule (L), "Produced in the United States" means, for iron and steel products, that all manufacturing processes, from the initial melting stage through the application of coatings, occurred in the United States. "Manufactured products" means items and construction materials composed in whole or in part of non-ferrous metals such as aluminum; plastics and polymer-based products such as polyvinyl chloride pipe; aggregates such as concrete; glass, including optical fiber; and lumber.

Pursuant to Federal Rule (L) above, when federal funds are expended by Participating Agency, the offeror certifies that during the term of an award for all contracts by Participating Agency member resulting from this procurement process, the offeror agrees to comply with all applicable requirements as referenced in Federal Rule (L) above.

Does offeror agree?  YES ET Initials of Authorized Representative of offeror

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#### RECORD RETENTION REQUIREMENTS FOR CONTRACTS INVOLVING FEDERAL FUNDS

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When federal funds are expended by Participating Agency for any contract resulting from this procurement process, offeror certifies that it will comply with the record retention requirements detailed in 2 CFR § 200.333. The offeror further certifies that offeror will retain all records as required by 2 CFR § 200.333 for a period of three years after grantees or subgrantees submit final expenditure reports or quarterly or annual financial reports, as applicable, and all other pending matters are closed.

Does offeror agree?  YES ET Initials of Authorized Representative of offeror

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#### CERTIFICATION OF COMPLIANCE WITH THE ENERGY POLICY AND CONSERVATION ACT

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When Participating Agency expends federal funds for any contract resulting from this procurement process, offeror certifies that it will comply with the mandatory standards and policies relating to energy efficiency which are contained in the state energy conservation plan issued in compliance with the Energy Policy and Conservation Act (42 U.S.C. 6321 et seq.; 49 C.F.R. Part 18).

Does offeror agree?  YES ET Initials of Authorized Representative of offeror

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#### CERTIFICATION OF COMPLIANCE WITH BUY AMERICA PROVISIONS

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To the extent purchases are made with Federal Highway Administration, Federal Railroad Administration, or Federal Transit Administration funds, offeror certifies that its products comply with all applicable provisions of the Buy America Act and agrees to provide such certification or applicable waiver with respect to specific products to any Participating Agency upon request. Purchases made in accordance with the Buy America Act must still follow the applicable procurement rules calling for free and open competition.

Does offeror agree?  YES ET Initials of Authorized Representative of offeror

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#### CERTIFICATION OF ACCESS TO RECORDS – 2 C.F.R. § 200.336

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Offeror agrees that the Inspector General of the Agency or any of their duly authorized representatives shall have access to any documents, papers, or other records of offeror that are pertinent to offeror's discharge of its obligations under the Contract for the purpose of making audits, examinations, excerpts, and transcriptions. The right also includes timely and reasonable access to offeror's personnel for the purpose of interview and discussion relating to such documents.

Does offeror agree?  YES ET Initials of Authorized Representative of offeror

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#### CERTIFICATION OF APPLICABILITY TO SUBCONTRACTORS

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Offeror agrees that all contracts it awards pursuant to the Contract shall be bound by the foregoing terms and conditions.

Does offeror agree?  YES ET Initials of Authorized Representative of offeror

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**Offeror agrees to comply with all federal, state, and local laws, rules, regulations and ordinances, as applicable. It is further acknowledged that offeror certifies compliance with all provisions, laws, acts, regulations, etc. as specifically noted above.**

Offeror's Name:  
Version July 27, 2021

FieldTurf USA, Inc.

175 N. Industrial Blvd NE

Address, City, State, and Zip Code: Calhoun, GA, 30701

Phone Number: (503) 563-6390 Fax Number: (514) 340-9374

Printed Name and Title of Authorized Representative:

Eric Dalhert, President

Email Address:

sarah.morehead@smartbuycooperative.com

Signature of Authorized Representative:



Date:

September 16, 2021

## FEMA SPECIAL CONDITIONS

Awarded Supplier(s) may need to respond to events and losses where products and services are needed for the immediate and initial response to emergency situations such as, but not limited to, water damage, fire damage, vandalism cleanup, biohazard cleanup, sewage decontamination, deodorization, and/or wind damage during a disaster or emergency situation. By submitting a proposal, the Supplier is accepted these FEMA Special Conditions required by the Federal Emergency Management Agency (FEMA).

"Contract" in the below pages under FEMA SPECIAL CONDITIONS is also referred to and defined as the "Master Agreement".

"Contractor" in the below pages under FEMA SPECIAL CONDITIONS is also referred to and defined as "Supplier" or "Awarded Supplier".

### **Conflicts of Interest**

No employee, officer, or agent may participate in the selection, award, or administration of a contract supported by a FEMA award if he or she has a real or apparent conflict of interest. Such a conflict would arise when the employee, officer, or agent, any member of his or her immediate family, his or her partner, or an organization which employs or is about to employ any of these parties, has a financial or other interest in or a tangible personal benefit from a firm considered for award. 2 C.F.R. § 200.318(c)(1); See also Standard Form 424D, ¶ 7; Standard Form 424B, ¶ 3. i. FEMA considers a "financial interest" to be the potential for gain or loss to the employee, officer, or agent, any member of his or her immediate family, his or her partner, or an organization which employs or is about to employ any of these parties as a result of the particular procurement. The prohibited financial interest may arise from ownership of certain financial instruments or investments such as stock, bonds, or real estate, or from a salary, indebtedness, job offer, or similar interest that might be affected by the particular procurement. ii. FEMA considers an "apparent" conflict of interest to exist where an actual conflict does not exist, but where a reasonable person with knowledge of the relevant facts would question the impartiality of the employee, officer, or agent participating in the procurement. c. Gifts. The officers, employees, and agents of the Participating Public Agency nor the Participating Public Agency ("NFE") must neither solicit nor accept gratuities, favors, or anything of monetary value from contractors or parties to subcontracts. However, NFE's may set standards for situations in which the financial interest is de minimus, not substantial, or the gift is an unsolicited item of nominal value. 2 C.F.R. § 200.318(c)(1). d. Violations. The NFE's written standards of conduct must provide for disciplinary actions to be applied for violations of such standards by officers, employees, or agents of the NFE. 2 C.F.R. § 200.318(c)(1). For example, the penalty for a NFE's employee may be dismissal, and the penalty for a contractor might be the termination of the contract.

### **Contractor Integrity**

A contractor must have a satisfactory record of integrity and business ethics. Contractors that are debarred or suspended, as described in and subject to the debarment and suspension regulations implementing Executive Order 12549, *Debarment and Suspension* (1986) and Executive Order 12689, *Debarment and Suspension* (1989) at 2 C.F.R. Part 180 and the Department of Homeland Security's regulations at 2 C.F.R. Part 3000 (Non-procurement Debarment and Suspension), must be rejected and cannot receive contract awards at any level.

### **Public Policy**

A contractor must comply with the public policies of the Federal Government and state, local government, or tribal government. This includes, among other things, past and current compliance with the:

- a. Equal opportunity and nondiscrimination laws
- b. Five affirmative steps described at 2 C.F.R. § 200.321(b) for all subcontracting under contracts supported by FEMA financial assistance; and FEMA Procurement Guidance June 21, 2016 Page IV- 7
- c. Applicable prevailing wage laws, regulations, and executive orders



### **Affirmative Steps**

For any subcontracting opportunities, Contractor must take the following Affirmative steps:

1. Placing qualified small and minority businesses and women's business enterprises on solicitation lists;
2. Assuring that small and minority businesses, and women's business enterprises are solicited whenever they are potential sources;
3. Dividing total requirements, when economically feasible, into smaller tasks or quantities to permit maximum participation by small and minority businesses, and women's business enterprises;
4. Establishing delivery schedules, where the requirement permits, which encourage participation by small and minority businesses, and women's business enterprises; and
5. Using the services and assistance, as appropriate, of such organizations as the Small Business Administration and the Minority Business Development Agency of the Department of Commerce.

### **Prevailing Wage Requirements**

When applicable, the awarded Contractor (s) and any and all subcontractor(s) agree to comply with all laws regarding prevailing wage rates including the Davis-Bacon Act, applicable to this solicitation and/or Participating Public Agencies. The Participating Public Agency shall notify the Contractor of the applicable pricing/prevailing wage rates and must apply any local wage rates requested. The Contractor and any subcontractor(s) shall comply with the prevailing wage rates set by the Participating Public Agency.

### **Federal Requirements**

If products and services are issued in response to an emergency or disaster recovery the items below, located in this FEMA Special Conditions section of the Federal Funds Certifications, are activated and required when federal funding may be utilized.

### **2 C.F.R. § 200.326 and 2 C.F.R. Part 200, Appendix II, Required Contract Clauses**

#### **1. REMEDIES**

- a. Standard. Contracts for more than the simplified acquisition threshold, currently set at \$250,000, must address administrative, contractual, or legal remedies in instances where contractors violate or breach contract terms, and provide for such sanctions and penalties as appropriate. See 2 C.F.R. Part 200, Appendix II(A).
- b. Applicability. This requirement applies to all FEMA grant and cooperative agreement programs.

#### **2. TERMINATION FOR CAUSE AND CONVENIENCE**

- a. Standard. All contracts in excess of \$10,000 must address termination for cause and for convenience by the non-Federal entity, including the manner by which it will be effected and the basis for settlement. See 2 C.F.R. Part 200, Appendix II(B).
- b. Applicability. This requirement applies to all FEMA grant and cooperative agreement programs.

### 3. EQUAL EMPLOYMENT OPPORTUNITY

When applicable:

- a. Standard. Except as otherwise provided under 41 C.F.R. Part 60, all contracts that meet the definition of "federally assisted construction contract" in 41 C.F.R. § 60-1.3 must include the equal opportunity clause provided under 41 C.F.R. § 60- 1.4(b), in accordance with Executive Order 11246, *Equal Employment Opportunity* (30 Fed. Reg. 12319, 12935, 3 C.F.R. Part, 1964-1965 Comp., p. 339), as amended by Executive Order 11375, *Amending Executive Order 11246 Relating to Equal Employment Opportunity*, and implementing regulations at 41 C.F.R. Part 60 (Office of Federal Contract Compliance Programs, Equal Employment Opportunity, Department of Labor). See 2 C.F.R. Part 200, Appendix II(C).
- b. Key Definitions.
  - i. Federally Assisted Construction Contract. The regulation at 41 C.F.R. § 60-1.3 defines a "federally assisted construction contract" as any agreement or modification thereof between any applicant and a person for construction work which is paid for in whole or in part with funds obtained from the Government or borrowed on the credit of the Government pursuant to any Federal program involving a grant, contract, loan, insurance, or guarantee, or undertaken pursuant to any Federal program involving such grant, contract, loan, insurance, or guarantee, or any application or modification thereof approved by the Government for a grant, contract, loan, insurance, or guarantee under which the applicant itself participates in the construction work.
  - ii. Construction Work. The regulation at 41 C.F.R. § 60-1.3 defines "construction work" as the construction, rehabilitation, alteration, conversion, extension, demolition or repair of buildings, highways, or other changes or improvements to real property, including facilities providing utility services. The term also includes the supervision, inspection, and other onsite functions incidental to the actual construction.
- c. Applicability. This requirement applies to all FEMA grant and cooperative agreement programs.
- d. Required Language. The regulation at 41 C.F.R. Part 60-1.4(b) requires the insertion of the following contract clause.

During the performance of this contract, the contractor agrees as follows:

**(1)** The contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, sexual orientation, gender identity, or national origin. The contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, color, religion, sex, sexual orientation, gender identity, or national origin. Such action shall include, but not be limited to the following:

Employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The contractor agrees to post in conspicuous places,

available to employees and applicants for employment, notices to be provided setting forth the provisions of this nondiscrimination clause.

**(2)** The contractor will, in all solicitations or advertisements for employees placed by or on behalf of the contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity, or national origin.

**(3)** The contractor will not discharge or in any other manner discriminate against any employee or applicant for employment because such employee or applicant has inquired about, discussed, or disclosed the compensation of the employee or applicant or another employee or applicant. This provision shall not apply to instances in which an employee who has access to the compensation information of other employees or applicants as a part of such employee's essential job functions discloses the compensation of such other employees or applicants to individuals who do not otherwise have access to such information, unless such disclosure is in response to a formal complaint or charge, in furtherance of an investigation, proceeding, hearing, or action, including an investigation conducted by the employer, or is consistent with the contractor's legal duty to furnish information.

**(4)** The contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice to be provided advising the said labor union or workers' representatives of the contractor's commitments under this section and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

**(5)** The contractor will comply with all provisions of Executive Order 11246 of September 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.

**(6)** The contractor will furnish all information and reports required by Executive Order 11246 of September 24, 1965, and by rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and accounts by the administering agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.

**(7)** In the event of the contractor's noncompliance with the nondiscrimination clauses of this contract or with any of the said rules, regulations, or orders, this contract may be canceled, terminated, or suspended in whole or in part and the contractor may be declared ineligible for further Government contracts or federally assisted construction contracts in accordance with procedures authorized in Executive Order 11246 of September 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.

**(8)** The contractor will include the portion of the sentence immediately preceding paragraph (1) and the provisions of paragraphs (1) through (8) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to section 204 of Executive Order 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The contractor will take such action with respect to any subcontract or purchase order as the administering agency may direct as a means of enforcing such provisions, including sanctions for noncompliance:

Provided, however, that in the event a contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the

administering agency, the contractor may request the United States to enter into such litigation to protect the interests of the United States.

The applicant further agrees that it will be bound by the above equal opportunity clause with respect to its own employment practices when it participates in federally assisted construction work: *Provided*, That if the applicant so participating is a State or local government, the above equal opportunity clause is not applicable to any agency, instrumentality or subdivision of such government which does not participate in work on or under the contract.

The applicant agrees that it will assist and cooperate actively with the administering agency and the Secretary of Labor in obtaining the compliance of contractors and subcontractors with the equal opportunity clause and the rules, regulations, and relevant orders of the Secretary of Labor, that it will furnish the administering agency and the Secretary of Labor such information as they may require for the supervision of such compliance, and that it will otherwise assist the administering agency in the discharge of the agency's primary responsibility for securing compliance.

The applicant further agrees that it will refrain from entering into any contract or contract modification subject to Executive Order 11246 of September 24, 1965, with a contractor debarred from, or who has not demonstrated eligibility for, Government contracts and federally assisted construction contracts pursuant to the Executive Order and will carry out such sanctions and penalties for violation of the equal opportunity clause as may be imposed upon contractors and subcontractors by the administering agency or the Secretary of Labor pursuant to Part II, Subpart D of the Executive Order. In addition, the applicant agrees that if it fails or refuses to comply with these undertakings, the administering agency may take any or all of the following actions: Cancel, terminate, or suspend in whole or in part this grant (contract, loan, insurance, guarantee); refrain from extending any further assistance to the applicant under the program with respect to which the failure or refund occurred until satisfactory assurance of future compliance has been received from such applicant; and refer the case to the Department of Justice for appropriate legal proceedings.

#### 4. DAVIS-BACON ACT

- a. Standard. All prime construction contracts in excess of \$2,000 awarded by non-Federal entities must include a provision for compliance with the Davis-Bacon Act (40 U.S.C. §§ 3141-3144 and 3146-3148) as supplemented by Department of Labor regulations at 29 C.F.R. Part 5 (Labor Standards Provisions Applicable to Contracts Covering Federally Financed and Assisted Construction). See 2 C.F.R. Part 200, Appendix II(D). In accordance with the statute, contractors must be required to pay wages to laborers and mechanics at a rate not less than the prevailing wages specified in a wage determination made by the Secretary of Labor. In addition, contractors must be required to pay wages not less than once a week.
- b. Applicability. The Davis-Bacon Act applies to the Emergency Management Preparedness Grant Program, Homeland Security Grant Program, Nonprofit Security Grant Program, Tribal Homeland Security Grant Program, Port Security Grant Program, and Transit Security Grant Program.
- c. Requirements. If applicable, the non-federal entity must do the following:
  - i. The non-Federal entity must place a copy of the current prevailing wage determination issued by the Department of Labor in each solicitation. The decision to award a contract or subcontract must be conditioned upon the acceptance of

the wage determination. The non-Federal entity must report all suspected or reported violations to the Federal awarding agency.

- ii. Additionally, pursuant 2 C.F.R. Part 200, Appendix II(D), contracts subject to the Davis-Bacon Act, must also include a provision for compliance with the Copeland "Anti-Kickback" Act (40 U.S.C. § 3145), as supplemented by Department of Labor regulations at 29 C.F.R. Part 3 (Contractors and Subcontractors on Public Building or Public Work Financed in Whole or in Part by Loans or Grants from the United States). The Copeland Anti- Kickback Act provides that each contractor or subrecipient must be prohibited from inducing, by any means, any person employed in the construction, completion, or repair of public work, to give up any part of the compensation to which he or she is otherwise entitled. The non-Federal entity must report all suspected or reported violations to FEMA.
- iii. Include a provision for compliance with the Davis-Bacon Act (40 U.S.C. 3141-3144, and 3146-3148) as supplemented by Department of Labor regulations (29 CFR Part 5, "Labor Standards Provisions Applicable to Contracts Covering Federally Financed and Assisted Construction").

Suggested Language. The following provides a sample contract clause:

Compliance with the Davis-Bacon Act.

- a. All transactions regarding this contract shall be done in compliance with the Davis-Bacon Act (40 U.S.C. 3141- 3144, and 3146-3148) and the requirements of 29C.F.R. pt. 5 as may be applicable. The contractor shall comply with 40 U.S.C. 3141-3144, and 3146-3148 and the requirements of 29 C.F.R. pt. 5 as applicable.
- b. Contractors are required to pay wages to laborers and mechanics at a rate not less than the prevailing wages specified in a wage determination made by the Secretary of Labor.
- c. Additionally, contractors are required to pay wages not less than once a week.

## 5. COPELAND ANTI-KICKBACK ACT

- a. Standard. Recipient and subrecipient contracts must include a provision for compliance with the Copeland "Anti-Kickback" Act (40 U.S.C. 3145), as supplemented by Department of Labor regulations (29 CFR Part 3, "Contractors and Subcontractors on Public Building or Public Work Financed in Whole or in Part by Loans or Grants from the United States").
- b. Applicability. This requirement applies to all contracts for construction or repair work above \$2,000 in situations where the Davis-Bacon Act also applies. It DOES NOT apply to the FEMA Public Assistance Program.
- c. Requirements. If applicable, the non-federal entity must include a provision for compliance with the Copeland "Anti-Kickback" Act (40 U.S.C. § 3145), as supplemented by Department of Labor regulations at 29 C.F.R. Part 3 (Contractors and Subcontractors on Public Building or Public Work Financed in Whole or in Part by Loans or Grants from the United States). Each contractor or subrecipient must be prohibited from inducing, by any means, any person

employed in the construction, completion, or repair of public work, to give up any part of the compensation to which he or she is otherwise entitled. The non-Federal entity must report all suspected or reported violations to FEMA. Additionally, in accordance with the regulation, each contractor and subcontractor must furnish each week a statement with respect to the wages paid each of its employees engaged in work covered by the Copeland Anti-Kickback Act and the Davis Bacon Act during the preceding weekly payroll period. The report shall be delivered by the contractor or subcontractor, within seven days after the regular payment date of the payroll period, to a representative of a Federal or State agency in charge at the site of the building or work.

Sample Language. The following provides a sample contract clause:

Compliance with the Copeland "Anti-Kickback" Act.

- a. Contractor. The contractor shall comply with 18 U.S.C. §874, 40 U.S.C. § 3145, and the requirements of 29 C.F.R. pt. 3 as may be applicable, which are incorporated by reference into this contract.
- b. Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clause above and such other clauses as FEMA may by appropriate instructions require, and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all of these contract clauses.
- c. Breach. A breach of the contract clauses above may be grounds for termination of the contract, and for debarment as a contractor and subcontractor as provided in 29 C.F.R. §5.12."

**6. CONTRACT WORK HOURS AND SAFETY STANDARDS ACT**

- a. Standard. Where applicable (see 40 U.S.C. §§ 3701-3708), all contracts awarded by the non-Federal entity in excess of \$100,000 that involve the employment of mechanics or laborers must include a provision for compliance with 40 U.S.C. §§ 3702 and 3704, as supplemented by Department of Labor regulations at 29 C.F.R. Part 5. See 2 C.F.R. Part 200, Appendix II(E). Under 40 U.S.C. § 3702, each contractor must be required to compute the wages of every mechanic and laborer on the basis of a standard work week of 40 hours. Work in excess of the standard work week is permissible provided that the worker is compensated at a rate of not less than one and a half times the basic rate of pay for all hours worked in excess of 40 hours in the work week. Further, no laborer or mechanic must be required to work in surroundings or under working conditions which are unsanitary, hazardous, or dangerous.
- b. Applicability. This requirement applies to all FEMA contracts awarded by the non-federal entity in excess of \$100,000 under grant and cooperative agreement programs that involve the employment of mechanics or laborers. It is applicable to construction work. These requirements do not apply to the purchase of supplies or materials or articles ordinarily available on the open market, or contracts for transportation or transmission of intelligence.
- c. Suggested Language. The regulation at 29 C.F.R. § 5.5(b) provides contract clause language concerning compliance with the Contract Work Hours and Safety Standards

Act. FEMA suggests including the following contract clause:

Compliance with the Contract Work Hours and Safety Standards Act.

(1) *Overtime requirements.* No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.

(2) *Violation; liability for unpaid wages; liquidated damages.* In the event of any violation of the clause set forth in paragraph (b)(1) of this section the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (b)(1) of this section, in the sum of \$27 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (b)(1) of this section.

(3) *Withholding for unpaid wages and liquidated damages.* The Federal agency or loan/grant recipient shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (b)(2) of this section.

(4) *Subcontracts.* The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraph (b)(1) through (4) of this section and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (b)(1) through (4) of this section.

**7. RIGHTS TO INVENTIONS MADE UNDER A CONTRACT OR AGREEMENT**

- a. Standard. If the FEMA award meets the definition of "funding agreement" under 37 C.F.R. § 401.2(a) and the non-Federal entity wishes to enter into a contract with a small business firm or nonprofit organization regarding the substitution of parties, assignment or performance of experimental, developmental, or research work under that "funding agreement," the non-Federal entity must comply with the requirements of 37 C.F.R. Part 401 (Rights to Inventions Made by Nonprofit Organizations and Small Business Firms Under Government Grants, Contracts and Cooperative Agreements), and any implementing regulations issued by FEMA. See 2 C.F.R. Part 200, Appendix II(F).
- b. Applicability. This requirement applies to "funding agreements," but it DOES NOT apply

to the Public Assistance, Hazard Mitigation Grant Program, Fire Management Assistance Grant Program, Crisis Counseling Assistance and Training Grant Program, Disaster Case Management Grant Program, and Federal Assistance to Individuals and Households – Other Needs Assistance Grant Program, as FEMA awards under these programs do not meet the definition of “funding agreement.”

- c. Funding Agreements Definition. The regulation at 37 C.F.R. § 401.2(a) defines “funding agreement” as any contract, grant, or cooperative agreement entered into between any Federal agency, other than the Tennessee Valley Authority, and any contractor for the performance of experimental, developmental, or research work funded in whole or in part by the Federal government. This term also includes any assignment, substitution of parties, or subcontract of any type entered into for the performance of experimental, developmental, or research work under a funding agreement as defined in the first sentence of this paragraph.

## 8. CLEAN AIR ACT AND THE FEDERAL WATER POLLUTION CONTROL ACT

- a. Standard. If applicable, contracts must contain a provision that requires the contractor to agree to comply with all applicable standards, orders, or regulations issued pursuant to the Clean Air Act (42 U.S.C. §§ 7401-7671q.) and the Federal Water Pollution Control Act as amended (33 U.S.C. §§ 1251-1387). Violations must be reported to FEMA and the Regional Office of the Environmental Protection Agency. See 2 C.F.R. Part 200, Appendix II(G).
- b. Applicability. This requirement applies to contracts awarded by a non-federal entity of amounts in excess of \$150,000 under a federal grant.
- c. Suggested Language. The following provides a sample contract clause.

### Clean Air Act

1. The contractor agrees to comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act, as amended, 42 U.S.C. § 7401 et seq.
2. The contractor agrees to report each violation to the Participating Public Agency and understands and agrees that the Participating Public Agency will, in turn, report each violation as required to assure notification to the Federal Emergency Management Agency, and the appropriate Environmental Protection Agency Regional Office.
3. The contractor agrees to include these requirements in each subcontract exceeding \$150,000 financed in whole or in part with Federal assistance provided by FEMA.

### Federal Water Pollution Control Act

1. The contractor agrees to comply with all applicable standards, orders, or regulations issued pursuant to the Federal Water Pollution Control Act, as amended, 33 U.S.C. 1251 et seq.



2. The contractor agrees to report each violation to the Participating Public Agency and understands and agrees that the Participating Public Agency will, in turn, report each violation as required to assure notification to the Federal Emergency Management Agency, and the appropriate Environmental Protection Agency Regional Office.
3. The contractor agrees to include these requirements in each subcontract exceeding \$150,000 financed in whole or in part with Federal assistance provided by FEMA.

## 9. DEBARMENT AND SUSPENSION

- a. Standard. Non-Federal entities and contractors are subject to the debarment and suspension regulations implementing Executive Order 12549, *Debarment and Suspension* (1986) and Executive Order 12689, *Debarment and Suspension* (1989) at 2 C.F.R. Part 180 and the Department of Homeland Security's regulations at 2 C.F.R. Part 3000 (Non-procurement Debarment and Suspension).
- b. Applicability. This requirement applies to all FEMA grant and cooperative agreement programs.
- c. Requirements.
  - i. These regulations restrict awards, subawards, and contracts with certain parties that are debarred, suspended, or otherwise excluded from or ineligible for participation in Federal assistance programs and activities. See 2 C.F.R. Part 200, Appendix II(H); and 2 C.F.R. § 200.213. A contract award must not be made to parties listed in the SAM Exclusions. SAM Exclusions is the list maintained by the General Services Administration that contains the names of parties debarred, suspended, or otherwise excluded by agencies, as well as parties declared ineligible under statutory or regulatory authority other than Executive Order 12549. SAM exclusions can be accessed at [www.sam.gov](http://www.sam.gov). See 2 C.F.R. § 180.530.
  - ii. In general, an "excluded" party cannot receive a Federal grant award or a contract within the meaning of a "covered transaction," to include subawards and subcontracts. This includes parties that receive Federal funding indirectly, such as contractors to recipients and subrecipients. The key to the exclusion is whether there is a "covered transaction," which is any non-procurement transaction (unless excepted) at either a "primary" or "secondary" tier. Although "covered transactions" do not include contracts awarded by the Federal Government for purposes of the non-procurement common rule and DHS's implementing regulations, it does include some contracts awarded by recipients and subrecipients.
  - iii. Specifically, a covered transaction includes the following contracts for goods or services:
    1. The contract is awarded by a recipient or subrecipient in the amount of at least \$25,000.
    2. The contract requires the approval of FEMA, regardless of amount.

3. The contract is for federally-required audit services.
  4. A subcontract is also a covered transaction if it is awarded by the contractor of a recipient or subrecipient and requires either the approval of FEMA or is in excess of \$25,000.
- d. Suggested Language. The following provides a debarment and suspension clause. It incorporates an optional method of verifying that contractors are not excluded or disqualified.

#### Suspension and Debarment

- (1) This contract is a covered transaction for purposes of 2 C.F.R. pt. 180 and 2 C.F.R. pt. 3000. As such, the contractor is required to verify that none of the contractor's principals (defined at 2 C.F.R. § 180.995) or its affiliates (defined at 2 C.F.R. § 180.905) are excluded (defined at 2 C.F.R. § 180.940) or disqualified (defined at 2 C.F.R. § 180.935).
- (2) The contractor must comply with 2 C.F.R. pt. 180, subpart C and 2 C.F.R. pt. 3000, subpart C, and must include a requirement to comply with these regulations in any lower tier covered transaction it enters into.
- (3) This certification is a material representation of fact relied upon by the Participating Public Agency. If it is later determined that the contractor did not comply with 2 C.F.R. pt. 180, subpart C and 2 C.F.R. pt. 3000, subpart C, in addition to remedies available to the Participating Public Agency, the Federal Government may pursue available remedies, including but not limited to suspension and/or debarment.
- (4) The bidder or proposer agrees to comply with the requirements of 2 C.F.R. pt. 180, subpart C and 2 C.F.R. pt. 3000, subpart C while this offer is valid and throughout the period of any contract that may arise from this offer. The bidder or proposer further agrees to include a provision requiring such compliance in its lower tier covered transactions.

## **10. BYRD ANTI-LOBBYING AMENDMENT**

- a. Standard. Each tier certifies to the tier above that it will not and has not used Federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, officer or employee of Congress, or an employee of a Member of Congress in connection with obtaining any Federal contract, grant or any other award covered by 31 U.S.C. § 1352. FEMA's regulation at 44 C.F.R. Part 18 implements the requirements of 31 U.S.C. § 1352 and provides, in Appendix A to Part 18, a copy of the certification that is required to be completed by each entity as described in 31 U.S.C. § 1352. Each tier must also disclose any lobbying with non-Federal funds that takes place in connection with obtaining any Federal award. Such disclosures are forwarded from tier to tier up to the Federal awarding agency.
- b. Applicability. This requirement applies to all FEMA grant and cooperative agreement programs. Contractors that apply or bid for a contract of \$100,000 or more under a federal grant must file the required certification. See 2 C.F.R. Part 200, Appendix II(I); 31 U.S.C. § 1352; and 44 C.F.R. Part 18.

c. Suggested Language.

Byrd Anti-Lobbying Amendment, 31 U.S.C. § 1352 (as amended)

Contractors who apply or bid for an award of \$100,000 or more shall file the required certification. Each tier certifies to the tier above that it will not and has not used Federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, officer or employee of Congress, or an employee of a Member of Congress in connection with obtaining any Federal contract, grant, or any other award covered by 31 U.S.C. § 1352. Each tier shall also disclose any lobbying with non-Federal funds that takes place in connection with obtaining any Federal award. Such disclosures are forwarded from tier to tier up to the recipient who in turn will forward the certification(s) to the awarding agency.

d. Required Certification. If applicable, contractors must sign and submit to the non-federal entity the following certification.

APPENDIX A, 44 C.F.R. PART 18 – CERTIFICATION REGARDING LOBBYING

Certification for Contracts, Grants, Loans, and Cooperative Agreements

The undersigned certifies, to the best of his or her knowledge and belief, that:

1. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.
2. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.
3. The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

The Contractor, FieldTurf USA Inc., certifies or affirms the truthfulness and accuracy of each statement of its certification and disclosure, if any. In addition, the Contractor understands and agrees that the provisions of 31 U.S.C. Chap. 38, Administrative Remedies for False Claims and Statements, apply to this certification and disclosure, if any.



Signature of Contractor's Authorized Official

Eric Dalliere, President

Name and Title of Contractor's Authorized Official

September 16, 2021

Date

## 11. PROCUREMENT OF RECOVERED MATERIALS

- a. Standard. A non-Federal entity that is a state agency or agency of a political subdivision of a state and its contractors must comply with Section 6002 of the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act. See 2 C.F.R. Part 200, Appendix II(J); and 2 C.F.R. §200.322.
- b. Applicability. This requirement applies to all contracts awarded by a non- federal entity under FEMA grant and cooperative agreement programs.
- c. Requirements. The requirements of Section 6002 include procuring only items designated in guidelines of the EPA at 40 C.F.R. Part 247 that contain the highest percentage of recovered materials practicable, consistent with maintaining a satisfactory level of competition, where the purchase price of the item exceeds \$10,000 or the value of the quantity acquired by the preceding fiscal year exceeded \$10,000; procuring solid waste management services in a manner that maximizes energy and resource recovery; and establishing an affirmative procurement program for procurement of recovered materials identified in the EPA guidelines.
- d. Suggested Language.
  - i. In the performance of this contract, the Contractor shall make maximum use of products containing recovered materials that are EPA-designated items unless the product cannot be acquired—
    1. Competitively within a timeframe providing for compliance with the contract performance schedule;
    2. Meeting contract performance requirements; or
    3. At a reasonable price.
  - ii. Information about this requirement, along with the list of EPA- designated items, is available at EPA's Comprehensive Procurement Guidelines web site, <https://www.epa.gov/smm/comprehensive-procurement-guideline-cpg-program>.
  - iii. The Contractor also agrees to comply with all other applicable requirements of Section 6002 of the Solid Waste Disposal Act."

## 12. ACCESS TO RECORDS

- a. Standard. All recipients, subrecipients, successors, transferees, and assignees must acknowledge and agree to comply with applicable provisions governing DHS access to records, accounts, documents, information, facilities, and staff. Recipients must give DHS/FEMA access to, and the right to examine and copy, records, accounts, and other documents and sources of information related to the federal financial assistance award and permit access to facilities, personnel, and other individuals and information as may be necessary, as required by DHS regulations *and* other applicable laws or program guidance. See DHS Standard Terms and Conditions: Version 8.1 (2018). Additionally, Section 1225 of the Disaster Recovery Reform Act of 2018 prohibits FEMA from providing reimbursement to any state, local, tribal, or territorial government, or private non-profit for activities made pursuant to a contract that purports to prohibit audits or internal reviews by the FEMA administrator or Comptroller General.

Access to Records. The following access to records requirements apply to this contract:

- i. The Contractor agrees to provide Participating Public Agency, the FEMA Administrator, the Comptroller General of the United States, or any of their authorized representatives access to any books, documents, papers, and records of the Contractor which are directly pertinent to this contract for the purposes of making audits, examinations, excerpts, and transcriptions.
- ii. The Contractor agrees to permit any of the foregoing parties to reproduce by any means whatsoever or to copy excerpts and transcriptions as reasonably needed.
- iii. The Contractor agrees to provide the FEMA Administrator or his authorized representatives access to construction or other work sites pertaining to the work being completed under the contract.
- iv. In compliance with the Disaster Recovery Act of 2018, the Participating Public Agency and the Contractor acknowledge and agree that no language in this contract is intended to prohibit audits or internal reviews by the FEMA Administrator or the Comptroller General of the United States.

### 13. CHANGES

- a. Standard. To be eligible for FEMA assistance under the non-Federal entity's FEMA grant or cooperative agreement, the cost of the change, modification, change order, or constructive change must be allowable, allocable, within the scope of its grant or cooperative agreement, and reasonable for the completion of project scope.
- b. Applicability. FEMA recommends, therefore, that a non-Federal entity include a changes clause in its contract that describes how, if at all, changes can be made by either party to alter the method, price, or schedule of the work without breaching the contract. The language of the clause may differ depending on the nature of the contract and the end-item procured.

### 14. DHS SEAL, LOGO, AND FLAGS

- a. Standard. Recipients must obtain permission prior to using the DHS seal(s), logos, crests, or reproductions of flags or likenesses of DHS agency officials. See DHS Standard Terms and Conditions: Version 8.1 (2018).
- b. Applicability. FEMA recommends that all non-Federal entities place in their contracts a provision that a contractor shall not use the DHS seal(s), logos, crests, or reproductions of flags or likenesses of DHS agency officials without specific FEMA pre-approval.
- c. "The contractor shall not use the DHS seal(s), logos, crests, or reproductions of flags or likenesses of DHS agency officials without specific FEMA pre-approval.

## 15. COMPLIANCE WITH FEDERAL LAW, REGULATIONS, AND EXECUTIVE ORDERS

- a. Standard. The recipient and its contractors are required to comply with all Federal laws, regulations, and executive orders.
- b. Applicability. FEMA recommends that all non-Federal entities place into their contracts an acknowledgement that FEMA financial assistance will be used to fund the contract along with the requirement that the contractor will comply with all applicable Federal law, regulations, executive orders, and FEMA policies, procedures, and directives.
- c. "This is an acknowledgement that FEMA financial assistance will be used to fund all or a portion of the contract. The contractor will comply with all applicable Federal law, regulations, executive orders, FEMA policies, procedures, and directives."

## 16. NO OBLIGATION BY FEDERAL GOVERNMENT

- a. Standard. FEMA is not a party to any transaction between the recipient and its contractor. FEMA is not subject to any obligations or liable to any party for any matter relating to the contract.
- b. Applicability. FEMA recommends that the non-Federal entity include a provision in its contract that states that the Federal Government is not a party to the contract and is not subject to any obligations or liabilities to the non-Federal entity, contractor, or any other party pertaining to any matter resulting from the contract.
- c. "The Federal Government is not a party to this contract and is not subject to any obligations or liabilities to the non-Federal entity, contractor, or any other party pertaining to any matter resulting from the contract."

## 17. PROGRAM FRAUD AND FALSE OR FRAUDULENT STATEMENTS OR RELATED ACTS

- a. Standard. Recipients must comply with the requirements of The False Claims Act (31 U.S.C. §§ 3729-3733) which prohibits the submission of false or fraudulent claims for payment to the federal government. See DHS Standard Terms and Conditions: Version 8.1 (2018); and 31 U.S.C. §§ 3801-3812, which details the administrative remedies for false claims and statements made. The non-Federal entity must include a provision in its contract that the contractor acknowledges that 31 U.S.C. Chap. 38 (Administrative Remedies for False Claims and Statements) applies to its actions pertaining to the contract.
- b. Applicability. FEMA recommends that the non-Federal entity include a provision in its contract that the contractor acknowledges that 31 U.S.C. Chap. 38 (Administrative Remedies for False Claims and Statements) applies to its actions pertaining to the contract.
- c. "The Contractor acknowledges that 31 U.S.C. Chap. 38 (Administrative Remedies for False Claims and Statements) applies to the Contractor's actions pertaining to this contract."

## 18. PROHIBITION ON CERTAIN TELECOMMUNICATIONS AND VIDEO SURVEILLANCE SERVICES OR EQUIPMENT

- a. Applicability: This requirement applies to all FEMA grant and cooperative agreement programs.
- b. Contracts and subgrants expending Federal loan or grant funds shall not: (i) procure or obtain; (ii) extend or renew a contract to procure or obtain; or (iii) enter into a contract (or extend or renew a contract) to procure or obtain equipment, services, or systems that uses covered telecommunications equipment or services as a substantial or essential component of any

system, or as critical technology as part of any system. See 2 C.F.R. Part 200, Appendix II, ¶ K.

- c. As described in Public Law 115-232, section 889, covered telecommunications equipment under 2 C.F.R. § 200.216 include:
  - i. Telecommunications equipment produced by Huawei Technologies Company or ZTE Corporation (or any subsidiary or affiliate of such entities).
  - ii. For the purpose of public safety, security of government facilities, physical security surveillance of critical infrastructure, and other national security purposes, video surveillance and telecommunications equipment produced by Hytera Communications Corporation, Hangzhou Hikvision Digital Technology Company, or Dahua Technology Company (or any subsidiary or affiliate of such entities).
  - iii. Telecommunications or video surveillance services provided by such entities or using such equipment.
  - iv. Telecommunications or video surveillance equipment or services produced or provided by an entity that the Secretary of Defense, in consultation with the Director of the National Intelligence or the Director of the Federal Bureau of Investigation, reasonably believes to be an entity owned or controlled by, or otherwise connected to, the government of a covered foreign country.

## 19. DOMESTIC PREFERENCES FOR PROCUREMENTS

- a. Applicability: This requirement applies to all FEMA grant and cooperative agreement programs.
- b. Contracts and purchase orders for work or products under a subaward must include a provision that requires the non-Federal entity to provide a preference for the purchase, acquisition, or use of goods, products, or materials produced in the United States (including but not limited to iron, aluminum, steel, cement, and other manufactured products). See 2 C.F.R. Part 200, Appendix II, ¶ L.
  - i. "Produced in the United States" means, for iron and steel products, that all manufacturing processes, from the initial melting stage through the application of coatings, occurred in the United States.
  - ii. "Manufactured products" means items and construction materials composed in whole or in part of non-ferrous metals such as aluminum; plastics and polymer-based products such as polyvinyl chloride pipe; aggregates such as concrete; glass, including optical fiber; and lumber.



Offeror agrees to comply with all terms and conditions outlined in the FEMA Special Conditions section of this solicitation.

Offeror's Name: Field Turf USA, Inc.

Address, City, State, and Zip Code: 175 N. Industrial Blvd NE, Calhoun, GA, 30701

Phone Number: (503) 563-6880 Fax Number: (514) 340-9374

Printed Name and Title of Authorized Representative: Eric Dalieré, President

Email Address: Sarah.morehead@smartbuycooperative.com

Signature of Authorized Representative: 

Date: September 16, 2021

**Exhibit G**  
**New Jersey Business Compliance**

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**NEW JERSEY BUSINESS COMPLIANCE**

Suppliers intending to do business in the State of New Jersey must comply with policies and procedures required under New Jersey statutes. All offerors submitting proposals must complete the following forms specific to the State of New Jersey. Completed forms should be submitted with the offeror's response to the RFP. Failure to complete the New Jersey packet will impact OMNIA Partners' ability to promote the Master Agreement in the State of New Jersey.

DOC #1	Ownership Disclosure Form
DOC #2	Non-Collusion Affidavit
DOC #3	Affirmative Action Affidavit
DOC #4	Political Contribution Disclosure Form
DOC #5	Stockholder Disclosure Certification
DOC #6	Certification of Non-Involvement in Prohibited Activities in Iran
DOC #7	New Jersey Business Registration Certificate

New Jersey suppliers are required to comply with the following New Jersey statutes when applicable:

- all anti-discrimination laws, including those contained in N.J.S.A. 10:2-1 through N.J.S.A. 10:2-14, N.J.S.A. 10:5-1, and N.J.S.A. 10:5-31 through 10:5-38;
- Prevailing Wage Act, N.J.S.A. 34:11-56.26, for all contracts within the contemplation of the Act;
- Public Works Contractor Registration Act, N.J.S.A. 34:11-56.26; and
- Bid and Performance Security, as required by the applicable municipal or state statutes.

**STATEMENT OF OWNERSHIP DISCLOSURE**

N.J.S.A. 52:25-24.2 (P.L. 1977, c.33, as amended by P.L. 2016, c.43)

This statement shall be completed, certified to, and included with all bid and proposal submissions. Failure to submit the required information is cause for automatic rejection of the bid or proposal.

**Name of Organization:** FieldTurf USA, Inc.

**Organization Address:** 175 N. Industrial Blvd NE,  
Calhoun, GA, 30701

**Part I Check the box that represents the type of business organization:**

- Sole Proprietorship (skip Parts II and III, execute certification in Part IV)
- Non-Profit Corporation (skip Parts II and III, execute certification in Part IV)
- For-Profit Corporation (any type)     Limited Liability Company (LLC)
- Partnership     Limited Partnership     Limited Liability Partnership (LLP)
- Other (be specific): \_\_\_\_\_

**Part II**

The list below contains the names and addresses of all stockholders in the corporation who own 10 percent or more of its stock, of any class, or of all individual partners in the partnership who own a 10 percent or greater interest therein, or of all members in the limited liability company who own a 10 percent or greater interest therein, as the case may be. **(COMPLETE THE LIST BELOW IN THIS SECTION)**

**OR**

No one stockholder in the corporation owns 10 percent or more of its stock, of any class, or no individual partner in the partnership owns a 10 percent or greater interest therein, or no member in the limited liability company owns a 10 percent or greater interest therein, as the case may be. **(SKIP TO PART IV)**

(Please attach additional sheets if more space is needed):

Name of Individual or Business Entity	Home Address (for Individuals) or Business Address
FieldTurf Tarkett USA HOLDINGS INC.	Corporation Trust Center 1209 Orange Street
	Wilmington, DE 19801

**Part III DISCLOSURE OF 10% OR GREATER OWNERSHIP IN THE STOCKHOLDERS, PARTNERS OR LLC MEMBERS LISTED IN PART II**

If a bidder has a direct or indirect parent entity which is publicly traded, and any person holds a 10 percent or greater beneficial interest in the publicly traded parent entity as of the last annual federal Security and Exchange Commission (SEC) or foreign equivalent filing, ownership disclosure can be met by providing links to the website(s) containing the last annual filing(s) with the federal Securities and Exchange Commission (or foreign equivalent) that contain the name and address of each person holding a 10% or greater beneficial interest in the publicly traded parent entity, along with the relevant page numbers of the filing(s) that contain the information on each such person. **Attach additional sheets if more space is needed.**

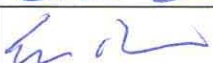
Website (URL) containing the last annual SEC (or foreign equivalent) filing	Page #'s
see attached	

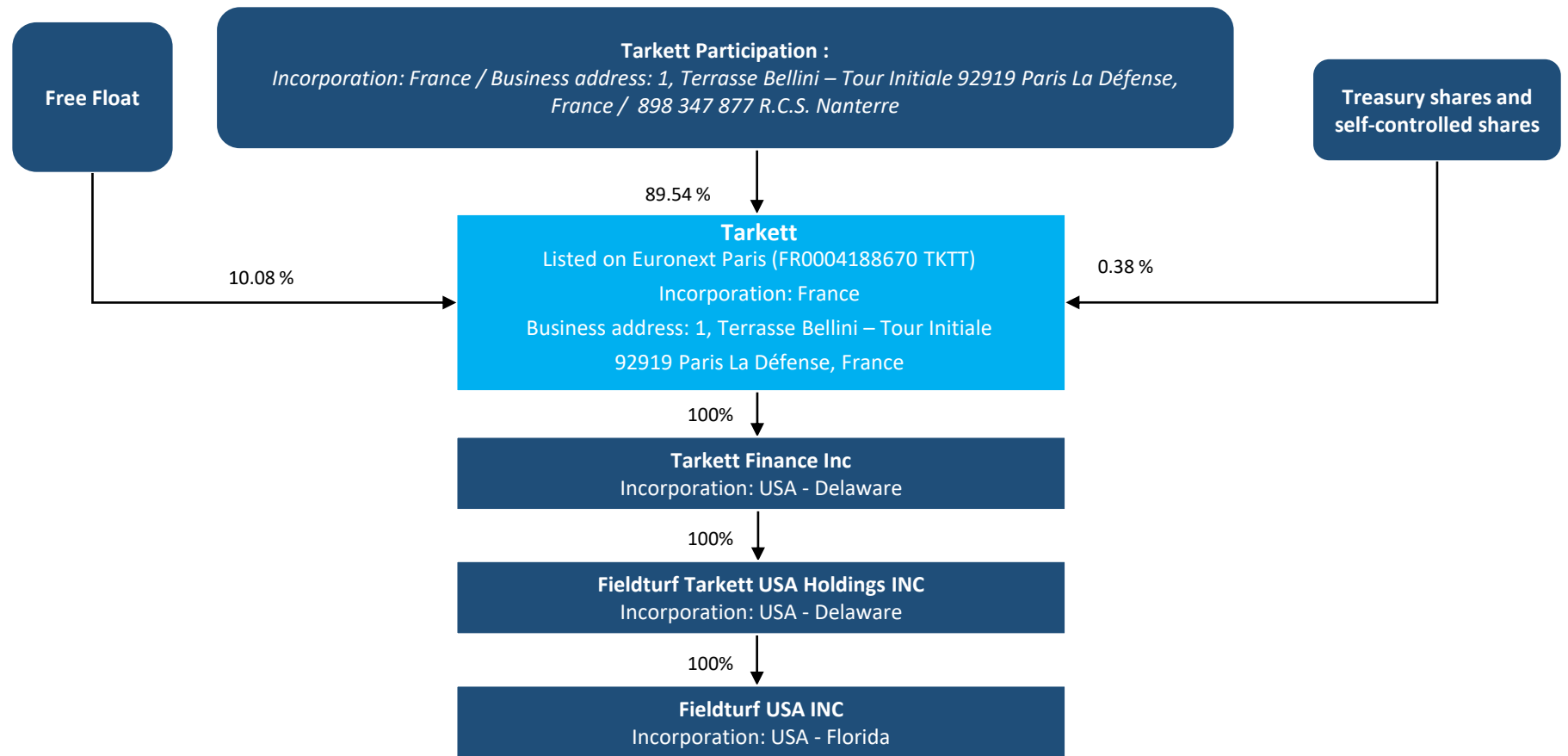
Please list the names and addresses of each stockholder, partner or member owning a 10 percent or greater interest in any corresponding corporation, partnership and/or limited liability company (LLC) listed in Part II **other than for any publicly traded parent entities referenced above.** The disclosure shall be continued until names and addresses of every noncorporate stockholder, and individual partner, and member exceeding the 10 percent ownership criteria established pursuant to N.J.S.A. 52:25-24.2 has been listed. **Attach additional sheets if more space is needed.**

Stockholder/Partner/Member and Corresponding Entity Listed in Part II	Home Address (for Individuals) or Business Address
see attached.	

**Part IV Certification**

I, being duly sworn upon my oath, hereby represent that the foregoing information and any attachments thereto to the best of my knowledge are true and complete. I acknowledge: that I am authorized to execute this certification on behalf of the bidder/proposer; that the **<name of contracting unit>** is relying on the information contained herein and that I am under a continuing obligation from the date of this certification through the completion of any contracts with **<type of contracting unit>** to notify the **<type of contracting unit>** in writing of any changes to the information contained herein; that I am aware that it is a criminal offense to make a false statement or misrepresentation in this certification, and if I do so, I am subject to criminal prosecution under the law and that it will constitute a material breach of my agreement(s) with the, permitting the **<type of contracting unit>** to declare any contract(s) resulting from this certification void and unenforceable.

Full Name (Print):	Eric Daltore	Title:	President
Signature:		Date:	Sept 16, 2021



**Org Chart as of August 31, 2021**

Link to Tarkett corporate website informations : <https://www.tarkett.com/en/content/information-total-number-voting-rights-and-shares>

Link to Tarkett 2020 Universal Registration Document (including Annual report): <https://www.tarkett.com/en/content/corporate-documents>

DOC #2

**NON-COLLUSION AFFIDAVIT**

<b>STANDARD BID DOCUMENT REFERENCE</b>	
	<b>Reference: VII-H</b>
Name of Form:	<b>NON-COLLUSION AFFIDAVIT</b>
Statutory Reference:	No specific statutory reference State Statutory Reference N.J.S.A. 52:34-15
Instructions Reference:	Statutory and Other Requirements VII-H
Description:	The Owner's use of this form is optional. It is used to ensure that the bidder has not participated in any collusion with any other bidder or Owner representative or otherwise taken any action in restraint of free and competitive bidding.

NON-COLLUSION AFFIDAVIT

PROV of Quebec  
State of New Jersey  
County of Montreal  
CITY

SS:

I, Eric Dalhère residing in Stowe  
(name of affiant) (name of municipality)  
in the County of \_\_\_\_\_ and State of Vermont of full  
age, being duly sworn according to law on my oath depose and say that:

I am President of the firm of FieldTurf USA, Inc.  
(title or position) (name of firm)

\_\_\_\_\_ the bidder making this Proposal for the bid

entitled RFP-22-05, and that I executed the said proposal with  
(title of bid proposal)

full authority to do so that said bidder has not, directly or indirectly entered into any agreement,  
participated in any collusion, or otherwise taken any action in restraint of free, competitive bidding in  
connection with the above named project; and that all statements contained in said proposal and in this  
affidavit are true and correct, and made with full knowledge that the Region 4 Education

Services Center relies upon the truth of the statements contained in said Proposal  
(name of contracting unit)

and in the statements contained in this affidavit in awarding the contract for the said project.

I further warrant that no person or selling agency has been employed or retained to solicit or secure such  
contract upon an agreement or understanding for a commission, percentage, brokerage, or contingent  
fee, except bona fide employees or bona fide established commercial or selling agencies maintained by

FieldTurf USA, Inc.

Subscribed and sworn to

before me this day

Eric Dalhère  
Signature

September 16, 2021

Eric Dalhère  
(Type or print name of affiant under signature)

Constance Vachon  
Notary public of

My Commission expires April 26, 2023.

(Seal)



**AFFIRMATIVE ACTION AFFIDAVIT**  
(P.L. 1975, C.127)

Company Name: Fieldturf USA, Inc.  
Street: 175 N. Industrial Blvd NE  
City, State, Zip Code: Calhoun, GA, 30701

**Proposal Certification:**

Indicate below company's compliance with New Jersey Affirmative Action regulations. Company's proposal will be accepted even if company is not in compliance at this time. No contract and/or purchase order may be issued, however, until all Affirmative Action requirements are met.

**Required Affirmative Action Evidence:**

Procurement, Professional & Service Contracts (Exhibit A)

Vendors must submit with proposal:

1. A photo copy of their Federal Letter of Affirmative Action Plan Approval

OR

2. A photo copy of their Certificate of Employee Information Report

OR

3. A complete Affirmative Action Employee Information Report (AA302) \_\_\_\_\_


**Public Work – Over \$50,000 Total Project Cost:**

A. No approved Federal or New Jersey Affirmative Action Plan. We will complete Report Form AA201-A upon receipt from the

B. Approved Federal or New Jersey Plan – certificate enclosed

*I further certify that the statements and information contained herein, are complete and correct to the best of my knowledge and belief.*

September 16, 2021  
Date

  
Authorized Signature and Title  
Eric Dalliere, President



Certification 34146

**CERTIFICATE OF EMPLOYEE INFORMATION REPORT**  
**RENEWAL**

This is to certify that the contractor listed below has submitted an Employee Information Report pursuant to N.J.A.C. 17:27-1.1 et. seq. and the State Treasurer has approved said report. This approval will remain in effect for the period of **15-MAR-2019** to **15-MAR-2022**

**FIELDTURF USA, INC.**  
**175 N. INDUSTRIAL BOULEVARD NE**  
**CALHOUN GA 30701**



*Elizabeth Maher Muoio*

ELIZABETH MAHER MUOIO  
State Treasurer

**P.L. 1995, c. 127 (N.J.A.C. 17:27)**  
**MANDATORY AFFIRMATIVE ACTION LANGUAGE**

**PROCUREMENT, PROFESSIONAL AND SERVICE**  
**CONTRACTS**

During the performance of this contract, the contractor agrees as follows:

The contractor or subcontractor, where applicable, will not discriminate against any employee or applicant for employment because of age, race, creed, color, national origin, ancestry, marital status, sex, affectional or sexual orientation. The contractor will take affirmative action to ensure that such applicants are recruited and employed, and that employees are treated during employment, without regard to their age, race, creed, color, national origin, ancestry, marital status, sex, affectional or sexual orientation. Such action shall include, but not be limited to the following: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided by the Public Agency Compliance Officer setting forth provisions of this non-discrimination clause.

The contractor or subcontractor, where applicable will, in all solicitations or advertisement for employees placed by or on behalf of the contractor, state that all qualified applicants will receive consideration for employment without regard to age, race, creed, color, national origin, ancestry, marital status, sex, affectional or sexual orientation.

The contractor or subcontractor, where applicable, will send to each labor union or representative of workers with which it has a collective bargaining agreement or other contract or understanding, a notice, to be provided by the agency contracting officer advising the labor union or workers' representative of the contractor's commitments under this act and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

The contractor or subcontractor, where applicable, agrees to comply with any regulations promulgated by the Treasurer pursuant to P.L. 1975, c. 127, as amended and supplemented from time to time and the Americans with Disabilities Act.

The contractor or subcontractor agrees to attempt in good faith to employ minority and female workers trade consistent with the applicable county employment goal prescribed by N.J.A.C. 17:27-5.2 promulgated by the Treasurer pursuant to P.L. 1975, C.127, as amended and supplemented from time to time or in accordance with a binding determination of the applicable county employment goals determined by the Affirmative Action Office pursuant to N.J.A.C. 17:27-5.2 promulgated by the Treasurer pursuant to P.L. 1975, C.127, as amended and supplemented from time to time.

The contractor or subcontractor agrees to inform in writing appropriate recruitment agencies in the area, including employment agencies, placement bureaus, colleges, universities, labor unions, that it does not discriminate on the basis of age, creed, color, national origin, ancestry, marital status, sex, affectional or sexual orientation, and that it will discontinue the use of any recruitment agency which engages in direct or indirect discriminatory practices.

The contractor or subcontractor agrees to revise any of its testing procedures, if necessary, to assure that all personnel testing conforms with the principles of job-related testing, as established by the statutes and court decisions of the state of New Jersey and as established by applicable Federal law and applicable Federal court decisions.

The contractor or subcontractor agrees to review all procedures relating to transfer, upgrading, downgrading and lay-off to ensure that all such actions are taken without regard to age, creed, color, national origin, ancestry, marital status, sex, affectional or sexual orientation, and conform with the applicable employment goals, consistent with the statutes and court decisions of the State of New Jersey, and applicable Federal law and applicable Federal court decisions.

The contractor and its subcontractors shall furnish such reports or other documents to the Affirmative Action Office as may be requested by the office from time to time in order to carry out the purposes of these regulations, and public agencies shall furnish such information as may be requested by the Affirmative Action Office for conducting a compliance investigation pursuant to Subchapter 10 of the Administrative Code (NJAC 17:27).



Signature of Procurement Agent

Eric Dalrière, President

## C. 271 POLITICAL CONTRIBUTION DISCLOSURE FORM

### Public Agency Instructions

This page provides guidance to public agencies entering into contracts with business entities that are required to file Political Contribution Disclosure forms with the agency. **It is not intended to be provided to contractors.** What follows are instructions on the use of form local units can provide to contractors that are required to disclose political contributions pursuant to N.J.S.A. 19:44A-20.26 (P.L. 2005, c. 271, s.2). Additional information on the process is available in Local Finance Notice 2006-1 ([http://www.nj.gov/dca/divisions/dlgs/resources/lfns\\_2006.html](http://www.nj.gov/dca/divisions/dlgs/resources/lfns_2006.html)). Please refer back to these instructions for the appropriate links, as the Local Finance Notices include links that are no longer operational.

1. The disclosure is required for all contracts in excess of \$17,500 that are **not awarded** pursuant to a “fair and open” process (N.J.S.A. 19:44A-20.7).
2. Due to the potential length of some contractor submissions, the public agency should consider allowing data to be submitted in electronic form (i.e., spreadsheet, pdf file, etc.). Submissions must be kept with the contract documents or in an appropriate computer file and be available for public access. **The form is worded to accept this alternate submission.** The text should be amended if electronic submission will not be allowed.
3. The submission must be **received from the contractor and** on file at least 10 days prior to award of the contract. Resolutions of award should reflect that the disclosure has been received and is on file.
4. The contractor must disclose contributions made to candidate and party committees covering a wide range of public agencies, including all public agencies that have elected officials in the county of the public agency, state legislative positions, and various state entities. The Division of Local Government Services recommends that contractors be provided a list of the affected agencies. This will assist contractors in determining the campaign and political committees of the officials and candidates affected by the disclosure.
  - a. The Division has prepared model disclosure forms for each county. They can be downloaded from the “County PCD Forms” link on the Pay-to-Play web site at <http://www.nj.gov/dca/divisions/dlgs/programs/lpcl.html#12>. They will be updated from time-to-time as necessary.
  - b. A public agency using these forms **should edit them to properly reflect the correct legislative district(s)**. As the forms are county-based, **they list all legislative districts** in each county. **Districts that do not represent the public agency should be removed from the lists.**
  - c. Some contractors may find it easier to provide a single list that covers all contributions, regardless of the county. These submissions are appropriate and should be accepted.
  - d. The form may be used “as-is”, subject to edits as described herein.
  - e. The “Contractor Instructions” sheet is intended to be provided with the form. It is recommended that the Instructions and the form be printed on the same piece of paper. The form notes that the Instructions are printed on the back of the form; where that is not the case, the text should be edited accordingly.
  - f. The form is a Word document and can be edited to meet local needs, and posted for download on web sites, used as an e-mail attachment, or provided as a printed document.
5. It is recommended that the contractor also complete a “Stockholder Disclosure Certification.” This will assist the local unit in its obligation to ensure that contractor did not make any prohibited contributions to the committees listed on the Business Entity Disclosure Certification in the 12 months prior to the contract (See Local Finance Notice 2006-7 for additional information on this obligation at [http://www.nj.gov/dca/divisions/dlgs/resources/lfns\\_2006.html](http://www.nj.gov/dca/divisions/dlgs/resources/lfns_2006.html)). A sample Certification form is part of this package and the instruction to complete it is included in the Contractor Instructions. NOTE: This section is not applicable to Boards of Education.

## C. 271 POLITICAL CONTRIBUTION DISCLOSURE FORM

### Contractor Instructions

Business entities (contractors) receiving contracts from a public agency that are NOT awarded pursuant to a “fair and open” process (defined at N.J.S.A. 19:44A-20.7) are subject to the provisions of P.L. 2005, c. 271, s.2 (N.J.S.A. 19:44A-20.26). This law provides that 10 days prior to the award of such a contract, the contractor shall disclose contributions to:

- any State, county, or municipal committee of a political party
- any legislative leadership committee\*
- any continuing political committee (a.k.a., political action committee)
- any candidate committee of a candidate for, or holder of, an elective office:
  - of the public entity awarding the contract
  - of that county in which that public entity is located
  - of another public entity within that county
  - or of a legislative district in which that public entity is located or, when the public entity is a county, of any legislative district which includes all or part of the county

The disclosure must list reportable contributions to any of the committees that exceed \$300 per election cycle that were made during the 12 months prior to award of the contract. See N.J.S.A. 19:44A-8 and 19:44A-16 for more details on reportable contributions.

N.J.S.A. 19:44A-20.26 itemizes the parties from whom contributions must be disclosed when a business entity is not a natural person. This includes the following:

- individuals with an “interest” ownership or control of more than 10% of the profits or assets of a business entity or 10% of the stock in the case of a business entity that is a corporation for profit
- all principals, partners, officers, or directors of the business entity or their spouses
- any subsidiaries directly or indirectly controlled by the business entity
- IRS Code Section 527 New Jersey based organizations, directly or indirectly controlled by the business entity and filing as continuing political committees, (PACs).

When the business entity is a natural person, “a contribution by that person’s spouse or child, residing therewith, shall be deemed to be a contribution by the business entity.” [N.J.S.A. 19:44A-20.26(b)] The contributor must be listed on the disclosure.

Any business entity that fails to comply with the disclosure provisions shall be subject to a fine imposed by ELEC in an amount to be determined by the Commission which may be based upon the amount that the business entity failed to report.

The enclosed list of agencies is provided to assist the contractor in identifying those public agencies whose elected official and/or candidate campaign committees are affected by the disclosure requirement. It is the contractor’s responsibility to identify the specific committees to which contributions may have been made and need to be disclosed. The disclosed information may exceed the minimum requirement.

The enclosed form, a content-consistent facsimile, or an electronic data file containing the required details (along with a signed cover sheet) may be used as the contractor’s submission and is disclosable to the public under the Open Public Records Act.

The contractor must also complete the attached Stockholder Disclosure Certification. This will assist the agency in meeting its obligations under the law. **NOTE: This section does not apply to Board of Education contracts.**

\* N.J.S.A. 19:44A-3(s): “The term “legislative leadership committee” means a committee established, authorized to be established, or designated by the President of the Senate, the Minority Leader of the Senate, the Speaker of the General Assembly or the Minority Leader of the General Assembly pursuant to section 16 of P.L.1993, c.65 (C.19:44A-10.1) for the purpose of receiving contributions and making expenditures.”

**C. 271 POLITICAL CONTRIBUTION DISCLOSURE FORM**

Required Pursuant to N.J.S.A. 19:44A-20.26

**This form or its permitted facsimile must be submitted to the local unit  
no later than 10 days prior to the award of the contract.**

**Part I – Vendor Information**

Vendor Name:	FieldTurf USA, Inc.		
Address:	175 N. Industrial Blvd NE		
City:	Calhoun	State:	GA
		Zip:	30701

The undersigned being authorized to certify, hereby certifies that the submission provided herein represents compliance with the provisions of N.J.S.A. 19:44A-20.26 and as represented by the Instructions accompanying this form.

  
Signature \_\_\_\_\_ Printed Name Eric Dalhère Title President

**Part II – Contribution Disclosure**

Disclosure requirement: Pursuant to N.J.S.A. 19:44A-20.26 this disclosure must include all reportable political contributions (more than \$300 per election cycle) over the 12 months prior to submission to the committees of the government entities listed on the form provided by the local unit.

Check here if disclosure is provided in electronic form

Contributor Name	Recipient Name	Date	Dollar Amount
			\$
/			

Check here if the information is continued on subsequent page(s)

NIA

**List of Agencies with Elected Officials Required for Political Contribution Disclosure**  
**N.J.S.A. 19:44A-20.26**

**County Name:**

State: Governor, and Legislative Leadership Committees

Legislative District #s:

State Senator and two members of the General Assembly per district.

County:

Freeholders

County Clerk

Sheriff

{County Executive}

Surrogate

Municipalities (Mayor and members of governing body, regardless of title):

**USERS SHOULD CREATE THEIR OWN FORM, OR DOWNLOAD  
FROM THE PAY TO PLAY SECTION OF THE DLGS WEBSITE A  
COUNTY-BASED, CUSTOMIZABLE FORM.**

**STOCKHOLDER DISCLOSURE CERTIFICATION**

**Name of Business:**

I certify that the list below contains the names and home addresses of all stockholders holding 10% or more of the issued and outstanding stock of the undersigned.

**OR**

I certify that no one stockholder owns 10% or more of the issued and outstanding stock of the undersigned.

**Check the box that represents the type of business organization:**

Partnership       Corporation       Sole Proprietorship

Limited Partnership       Limited Liability Corporation       Limited Liability Partnership

Subchapter S Corporation

**Sign and notarize the form below, and, if necessary, complete the stockholder list below.**

Stockholders:

Name: <u>FieldTurf Tarkett USA HOLDINGS, Inc.</u>	Name:
Home Address: <u>Corporation Trust Center 1209 Orange Street Wilmington, DE 19801</u>	Home Address:
Name: _____	Name:
Home Address: _____	Home Address:
Name: _____	Name:
Home Address: _____	Home Address:

Subscribed and sworn before me this 16<sup>th</sup> day of Sept., 2021

(Notary Public) Constance Vachon

My Commission expires: April 26, 2023

[Signature]  
(Affiant)  
Eric Dalhère, President  
(Print name & title of affiant)

(Corporate Seal)



**Certification of Non-Involvement in Prohibited Activities in Iran**

Pursuant to N.J.S.A. 52:32-58, Offerors must certify that neither the Offeror, nor any of its parents, subsidiaries, and/or affiliates (as defined in N.J.S.A. 52:32 – 56(e) (3)), is listed on the Department of the Treasury’s List of Persons or Entities Engaging in Prohibited Investment Activities in Iran and that neither is involved in any of the investment activities set forth in N.J.S.A. 52:32 – 56(f).

Offerors wishing to do business in New Jersey through this contract must fill out the Certification of Non-Involvement in Prohibited Activities in Iran here:

[http://www.state.nj.us/humanservices/dfd/info/standard/fdc/disclosure\\_investmentact.pdf](http://www.state.nj.us/humanservices/dfd/info/standard/fdc/disclosure_investmentact.pdf).

Offerors should submit the above form completed with their proposal.



STATE OF NEW JERSEY -- DIVISION OF PURCHASE AND PROPERTY  
DISCLOSURE OF INVESTMENT ACTIVITIES IN IRAN

Quote Number:

22-05

Bidder/Offeror:

FieldTurf USA Inc.

PART 1: CERTIFICATION

BIDDERS MUST COMPLETE PART 1 BY CHECKING EITHER BOX.

FAILURE TO CHECK ONE OF THE BOXES WILL RENDER THE PROPOSAL NON-RESPONSIVE.

Pursuant to Public Law 2012, c. 25, any person or entity that submits a bid or proposal or otherwise proposes to enter into or renew a contract must complete the certification below to attest, under penalty of perjury, that neither the person or entity, nor any of its parents, subsidiaries, or affiliates, is identified on the Department of Treasury's Chapter 25 list as a person or entity engaging in investment activities in Iran. The Chapter 25 list is found on the Division's website at <http://www.state.nj.us/treasury/purchase/pdf/Chapter25List.pdf>. Bidders must review this list prior to completing the below certification. Failure to complete the certification will render a bidder's proposal non-responsive. If the Director finds a person or entity to be in violation of law, s/he shall take action as may be appropriate and provided by law, rule or contract, including but not limited to, imposing sanctions, seeking compliance, recovering damages, declaring the party in default and seeking debarment or suspension of the party

PLEASE CHECK THE APPROPRIATE BOX:



I certify, pursuant to Public Law 2012, c. 25, that neither the bidder listed above nor any of the bidder's parents, subsidiaries, or affiliates is listed on the N.J. Department of the Treasury's list of entities determined to be engaged in prohibited activities in Iran pursuant to P.L. 2012, c. 25 ("Chapter 25 List"). I further certify that I am the person listed above, or I am an officer or representative of the entity listed above and am authorized to make this certification on its behalf. I will skip Part 2 and sign and complete the Certification below.

OR



I am unable to certify as above because the bidder and/or one or more of its parents, subsidiaries, or affiliates is listed on the Department's Chapter 25 list. I will provide a detailed, accurate and precise description of the activities in Part 2 below and sign and complete the Certification below. Failure to provide such will result in the proposal being rendered as non-responsive and appropriate penalties, fines and/or sanctions will be assessed as provided by law.

PART 2: PLEASE PROVIDE FURTHER INFORMATION RELATED TO INVESTMENT ACTIVITIES IN IRAN

You must provide a detailed, accurate and precise description of the activities of the bidding person/entity, or one of its parents, subsidiaries or affiliates, engaging in the investment activities in Iran outlined above by completing the boxes below.

EACH BOX WILL PROMPT YOU TO PROVIDE INFORMATION RELATIVE TO THE ABOVE QUESTIONS. PLEASE PROVIDE THOROUGH ANSWERS TO EACH QUESTION. IF YOU NEED TO MAKE ADDITIONAL ENTRIES, CLICK THE "ADD AN ADDITIONAL ACTIVITIES ENTRY" BUTTON.

Name \_\_\_\_\_ Relationship to Bidder/Offeror \_\_\_\_\_

Description of Activities \_\_\_\_\_

Duration of Engagement \_\_\_\_\_ Anticipated Cessation Date \_\_\_\_\_

Bidder/Offeror Contact Name \_\_\_\_\_ Contact Phone Number \_\_\_\_\_

ADD AN ADDITIONAL ACTIVITIES ENTRY

Certification: I, being duly sworn upon my oath, hereby represent and state that the foregoing information and any attachments thereto to the best of my knowledge are true and complete. I attest that I am authorized to execute this certification on behalf of the above-referenced person or entity. I acknowledge that the State of New Jersey is relying on the information contained herein and thereby acknowledge that I am under a continuing obligation from the date of this certification through the completion of any contracts with the State to notify the State in writing of any changes to the answers of information contained herein. I acknowledge that I am aware that it is a criminal offense to make a false statement or misrepresentation in this certification, and if I do so, I recognize that I am subject to criminal prosecution under the law and that it will also constitute a material breach of my agreement(s) with the State of New Jersey and that the State at its option may declare any contract(s) resulting from this certification void and unenforceable.

Full Name (Print): Eric Dalvere

Signature: 

Title: President

Date: September 16, 2021

DOC #7

**NEW JERSEY BUSINESS REGISTRATION CERTIFICATE  
(N.J.S.A. 52:32-44)**

Offerors wishing to do business in New Jersey must submit their State Division of Revenue issued Business Registration Certificate with their proposal here. Failure to do so will disqualify the Offeror from offering products or services in New Jersey through any resulting contract.

<https://www.njportal.com/DOR/BusinessRegistration/>



## STATE OF NEW JERSEY BUSINESS REGISTRATION CERTIFICATE

**Taxpayer Name:** FIELDTURF USA INC.  
**Trade Name:**  
**Address:** 175 N. INDUSTRIAL BLVD  
CALHOUN, GA 30701  
**Certificate Number:** 0933885  
**Effective Date:** September 06, 2002  
**Date of Issuance:** September 17, 2021

**For Office Use Only:**  
20210917102359076

DOC #8

**EEOAA EVIDENCE**

Equal Employment Opportunity/Affirmative Action  
Goods, Professional Services & General Service Projects

**EEO/AA Evidence**

Vendors are required to submit evidence of compliance with N.J.S.A. 10:5-31 et seq. and N.J.A.C. 17:27 in order to be considered a responsible vendor.

**One** of the following must be included with submission:

- Copy of Letter of Federal Approval
- Certificate of Employee Information Report
- Fully Executed Form AA302
- Fully Executed EEO-1 Report

See the guidelines at: [http://www.state.nj.us/treasury/contract\\_compliance/pdf/pa.pdf](http://www.state.nj.us/treasury/contract_compliance/pdf/pa.pdf) for further information.

I certify that my bid package includes the required evidence per the above list and State website.

Name: Eric Dalieré

Title: President

Signature: 

Date: Sept 16, 2021

Certification 34146

**CERTIFICATE OF EMPLOYEE INFORMATION REPORT**  
**RENEWAL**

This is to certify that the contractor listed below has submitted an Employee Information Report pursuant to N.J.A.C. 17:27-1.1 et. seq. and the State Treasurer has approved said report. This approval will remain in effect for the period of **15-MAR-2019** to **15-MAR-2022**

**FIELDTURF USA, INC.**  
**175 N. INDUSTRIAL BOULEVARD NE**  
**CALHOUN GA 30701**



*Elizabeth Maher Muoio*

ELIZABETH MAHER MUOIO  
State Treasurer

DOC #9  
MCBRIDE-PRINCIPLES



STATE OF NEW JERSEY DEPARTMENT OF THE TREASURY  
DIVISION OF PURCHASE AND PROPERTY

33 WEST STATE STREET, P.O. BOX 230  
TRENTON, NEW JERSEY 08625-0230

MACBRIDE PRINCIPALS FORM

BID SOLICITATION #: 22-05 VENDOR/BIDDER: FieldTurf USA, Inc.

VENDOR'S/BIDDER'S REQUIREMENT  
TO PROVIDE A CERTIFICATION IN COMPLIANCE WITH THE MACBRIDE PRINCIPALS  
AND NORTHERN IRELAND ACT OF 1989

Pursuant to Public Law 1995, c. 134, a responsible Vendor/Bidder selected, after public bidding, by the Director of the Division of Purchase and Property, pursuant to N.J.S.A. 52:34-12, must complete the certification below by checking one of the two options listed below and signing where indicated. If a Vendor/Bidder that would otherwise be awarded a purchase, contract or agreement does not complete the certification, then the Director may determine, in accordance with applicable law and rules, that it is in the best interest of the State to award the purchase, contract or agreement to another Vendor/Bidder that has completed the certification and has submitted a bid within five (5) percent of the most advantageous bid. If the Director finds contractors to be in violation of the principals that are the subject of this law, he/she shall take such action as may be appropriate and provided by law, rule or contract, including but not limited to, imposing sanctions, seeking compliance, recovering damages, declaring the party in default and seeking debarment or suspension of the party.

I, the undersigned, on behalf the Vendor/Bidder, certify pursuant to N.J.S.A. 52:34-12.2 that:



CHECK THE APPROPRIATE BOX

The Vendor/Bidder has no business operations in Northern Ireland; or



**OR**  
The Vendor/Bidder will take lawful steps in good faith to conduct any business operations it has in Northern Ireland in accordance with the MacBride principals of nondiscrimination in employment as set forth in section 2 of P.L. 1987, c. 177 (N.J.S.A. 52:18A-89.5) and in conformance with the United Kingdom's Fair Employment (Northern Ireland) Act of 1989, and permit independent monitoring of its compliance with those principals.

CERTIFICATION

I, the undersigned, certify that I am authorized to execute this certification on behalf of the Vendor/Bidder, that the foregoing information and any attachments hereto, to the best of my knowledge are true and complete. I acknowledge that the State of New Jersey is relying on the information contained herein, and that the Vendor/Bidder is under a continuing obligation from the date of this certification through the completion of any contract(s) with the State to notify the State in writing of any changes to the information contained herein; that I am aware that it is a criminal offense to make a false statement or misrepresentation in this certification. If I do so, I will be subject to criminal prosecution under the law, and it will constitute a material breach of **my** agreement(s) with the State, permitting the State to declare any contract(s) resulting from this certification to be void and unenforceable.

Signature

Date

September 16, 2021

Eric Dalieri, President

Print Name and Title

## Exhibit H Advertising Compliance Requirement

Pursuant to certain state notice provisions, including but not limited to Oregon Revised Statutes Chapter 279A.220, the following public agencies and political subdivisions of the referenced public agencies are eligible to register with OMNIA Partners and access the Master Agreement contract award made pursuant to this solicitation, and are hereby given notice of the foregoing request for proposals for purposes of complying with the procedural requirements of said statutes:

Nationwide:

State of Alabama	State of Hawaii	Commonwealth of Massachusetts	State of New Mexico	State of South Dakota
State of Alaska	State of Idaho	State of Michigan	State of New York	State of Tennessee
State of Arizona	State of Illinois	State of Minnesota	State of North Carolina	State of Texas
State of Arkansas	State of Indiana	State of Mississippi	State of North Dakota	State of Utah
State of California	State of Iowa	State of Missouri	State of Ohio	State of Vermont
State of Colorado	State of Kansas	State of Montana	State of Oklahoma	Commonwealth of Virginia
State of Connecticut	Commonwealth of Kentucky	State of Nebraska	State of Oregon	State of Washington
State of Delaware	State of Louisiana	State of Nevada	Commonwealth of Pennsylvania	State of West Virginia
State of Florida	State of Maine	State of New Hampshire	State of Rhode Island	State of Wisconsin
State of Georgia	State of Maryland	State of New Jersey	State of South Carolina	State of Wyoming
District of Columbia				

Lists of political subdivisions and local governments in the above referenced states / districts may be found at [http://www.usa.gov/Agencies/State\\_and\\_Territories.shtml](http://www.usa.gov/Agencies/State_and_Territories.shtml) and <https://www.usa.gov/local-governments>.

Certain Public Agencies and Political Subdivisions:

**CITIES, TOWNS, VILLAGES AND BOROUGHES INCLUDING BUT NOT LIMITED TO:**

BAKER CITY GOLF COURSE, OR  
CITY OF ADAIR VILLAGE, OR  
CITY OF ASHLAND, OR  
CITY OF AUMSVILLE, OR  
CITY OF AURORA, OR  
CITY OF BAKER, OR  
CITY OF BATON ROUGE, LA  
CITY OF BEAVERTON, OR  
CITY OF BEND, OR  
CITY OF BOARDMAN, OR  
CITY OF BONANAZA, OR  
CITY OF BOSSIER CITY, LA  
CITY OF BROOKINGS, OR  
CITY OF BURNS, OR  
CITY OF CANBY, OR  
CITY OF CANYONVILLE, OR  
CITY OF CLATSKANIE, OR  
CITY OF COBURG, OR  
CITY OF CONDON, OR  
CITY OF COQUILLE, OR  
CITY OF CORVALLI, OR  
CITY OF CORVALLIS PARKS AND RECREATION DEPARTMENT, OR  
CITY OF COTTAGE GROVE, OR  
CITY OF DONALD, OR  
CITY OF EUGENE, OR  
CITY OF FOREST GROVE, OR  
CITY OF GOLD HILL, OR  
CITY OF GRANTS PASS, OR  
CITY OF GRESHAM, OR  
CITY OF HILLSBORO, OR  
CITY OF INDEPENDENCE, OR

CITY AND COUNTY OF HONOLULU, HI  
CITY OF KENNER, LA  
CITY OF LA GRANDE, OR  
CITY OF LAFAYETTE, LA  
CITY OF LAKE CHARLES, OR  
CITY OF LEBANON, OR  
CITY OF MCMINNVILLE, OR  
CITY OF MEDFORD, OR  
CITY OF METAIRIE, LA  
CITY OF MILL CITY, OR  
CITY OF MILWAUKIE, OR  
CITY OF MONROE, LA  
CITY OF MOSIER, OR  
CITY OF NEW ORLEANS, LA  
CITY OF NORTH PLAINS, OR  
CITY OF OREGON CITY, OR  
CITY OF PILOT ROCK, OR  
CITY OF PORTLAND, OR  
CITY OF POWERS, OR  
CITY OF PRINEVILLE, OR  
CITY OF REDMOND, OR  
CITY OF REEDSPORT, OR  
CITY OF RIDDLE, OR  
CITY OF ROGUE RIVER, OR  
CITY OF ROSEBURG, OR  
CITY OF SALEM, OR  
CITY OF SANDY, OR  
CITY OF SCAPPOOSE, OR  
CITY OF SHADY COVE, OR  
CITY OF SHERWOOD, OR  
CITY OF SHREVEPORT, LA  
CITY OF SILVERTON, OR  
CITY OF SPRINGFIELD, OR  
CITY OF ST. HELENS, OR

CITY OF ST. PAUL, OR  
CITY OF SULPHUR, LA  
CITY OF TIGARD, OR  
CITY OF TROUTDALE, OR  
CITY OF TUALATIN, OR  
CITY OF WALKER, LA  
CITY OF WARRENTON, OR  
CITY OF WEST LINN, OR  
CITY OF WILSONVILLE, OR  
CITY OF WINSTON, OR  
CITY OF WOODBURN, OR  
LEAGUE OF OREGON CITIES  
THE CITY OF HAPPY VALLEY OREGON  
ALPINE, UT  
ALTA, UT  
ALTAMONT, UT  
ALTON, UT  
AMALGA, UT  
AMERICAN FORK CITY, UT  
ANNABELLA, UT  
ANTIMONY, UT  
APPLE VALLEY, UT  
AURORA, UT  
BALLARD, UT  
BEAR RIVER CITY, UT  
BEAVER, UT  
BICKNELL, UT  
BIG WATER, UT  
BLANDING, UT  
BLUFFDALE, UT  
BOULDER, UT  
CITY OF BOUNTIFUL, UT  
BRIAN HEAD, UT  
BRIGHAM CITY CORPORATION, UT  
BRYCE CANYON CITY, UT  
CANNONVILLE, UT  
CASTLE DALE, UT  
CASTLE VALLEY, UT  
CITY OF CEDAR CITY, UT  
CEDAR FORT, UT  
CITY OF CEDAR HILLS, UT  
CENTERFIELD, UT  
CENTERVILLE CITY CORPORATION, UT  
CENTRAL VALLEY, UT  
CHARLESTON, UT  
CIRCLEVILLE, UT  
CLARKSTON, UT  
CLAWSON, UT  
CLEARFIELD, UT  
CLEVELAND, UT  
CLINTON CITY CORPORATION, UT  
COALVILLE, UT  
CORINNE, UT  
CORNISH, UT  
COTTONWOOD HEIGHTS, UT  
DANIEL, UT  
DELTA, UT  
DEWEYVILLE, UT  
DRAPER CITY, UT  
DUCHESNE, UT  
EAGLE MOUNTAIN, UT  
EAST CARBON, UT  
ELK RIDGE, UT  
ELMO, UT  
ELSINORE, UT  
ELWOOD, UT  
EMERY, UT

ENOCH, UT  
ENTERPRISE, UT  
EPHRAIM, UT  
ESCALANTE, UT  
EUREKA, UT  
FAIRFIELD, UT  
FAIRVIEW, UT  
FARMINGTON, UT  
FARR WEST, UT  
FAYETTE, UT  
FERRON, UT  
FIELDING, UT  
FILLMORE, UT  
FOUNTAIN GREEN, UT  
FRANCIS, UT  
FRUIT HEIGHTS, UT  
GARDEN CITY, UT  
GARLAND, UT  
GENOLA, UT  
GLENDALE, UT  
GLENWOOD, UT  
GOSHEN, UT  
GRANTSVILLE, UT  
GREEN RIVER, UT  
GUNNISON, UT  
HANKSVILLE, UT  
HARRISVILLE, UT  
HATCH, UT  
HEBER CITY CORPORATION, UT  
HELPER, UT  
HENEFER, UT  
HENRIEVILLE, UT  
HERRIMAN, UT  
HIDEOUT, UT  
HIGHLAND, UT  
HILDALE, UT  
HINCKLEY, UT  
HOLDEN, UT  
HOLLADAY, UT  
HONEYVILLE, UT  
HOOPER, UT  
HOWELL, UT  
HUNTINGTON, UT  
HUNTSVILLE, UT  
CITY OF HURRICANE, UT  
HYDE PARK, UT  
HYRUM, UT  
INDEPENDENCE, UT  
IVINS, UT  
JOSEPH, UT  
JUNCTION, UT  
KAMAS, UT  
KANAB, UT  
KANARRAVILLE, UT  
KANOSH, UT  
KAYSVILLE, UT  
KINGSTON, UT  
KOOSHAREM, UT  
LAKETOWN, UT  
LA VERKIN, UT  
LAYTON, UT  
LEAMINGTON, UT  
LEEDS, UT  
LEHI CITY CORPORATION, UT  
LEVAN, UT  
LEWISTON, UT  
LINDON, UT



LOA, UT  
LOGAN CITY, UT  
LYMAN, UT  
LYNNDYL, UT  
MANILA, UT  
MANTI, UT  
MANTUA, UT  
MAPLETON, UT  
MARRIOTT-SLATERVILLE, UT  
MARYSVALE, UT  
MAYFIELD, UT  
MEADOW, UT  
MENDON, UT  
MIDVALE CITY INC., UT  
MIDWAY, UT  
MILFORD, UT  
MILLVILLE, UT  
MINERSVILLE, UT  
MOAB, UT  
MONA, UT  
MONROE, UT  
CITY OF MONTICELLO, UT  
MORGAN, UT  
MORONI, UT  
MOUNT PLEASANT, UT  
MURRAY CITY CORPORATION, UT  
MYTON, UT  
NAPLES, UT  
NEPHI, UT  
NEW HARMONY, UT  
NEWTON, UT  
NIBLEY, UT  
NORTH LOGAN, UT  
NORTH OGDEN, UT  
NORTH SALT LAKE CITY, UT  
OAK CITY, UT  
OAKLEY, UT  
OGDEN CITY CORPORATION, UT  
OPHIR, UT  
ORANGEVILLE, UT  
ORDERVILLE, UT  
OREM, UT  
PANGUITCH, UT  
PARADISE, UT  
PARAGONAH, UT  
PARK CITY, UT  
PAROWAN, UT  
PAYSON, UT  
PERRY, UT  
PLAIN CITY, UT  
PLEASANT GROVE CITY, UT  
PLEASANT VIEW, UT  
PLYMOUTH, UT  
PORTAGE, UT  
PRICE, UT  
PROVIDENCE, UT  
PROVO, UT  
RANDOLPH, UT  
REDMOND, UT  
RICHFIELD, UT  
RICHMOND, UT  
RIVERDALE, UT  
RIVER HEIGHTS, UT  
RIVERTON CITY, UT  
ROCKVILLE, UT  
ROCKY RIDGE, UT  
ROOSEVELT CITY CORPORATION, UT

Version July 27, 2021

ROY, UT  
RUSH VALLEY, UT  
CITY OF ST. GEORGE, UT  
SALEM, UT  
SALINA, UT  
SALT LAKE CITY CORPORATION, UT  
SANDY, UT  
SANTA CLARA, UT  
SANTAQUIN, UT  
SARATOGA SPRINGS, UT  
SCIPIO, UT  
SCOFIELD, UT  
SIGURD, UT  
SMITHFIELD, UT  
SNOWVILLE, UT  
CITY OF SOUTH JORDAN, UT  
SOUTH OGDEN, UT  
CITY OF SOUTH SALT LAKE, UT  
SOUTH WEBER, UT  
SPANISH FORK, UT  
SPRING CITY, UT  
SPRINGDALE, UT  
SPRINGVILLE, UT  
STERLING, UT  
STOCKTON, UT  
SUNNYSIDE, UT  
SUNSET CITY CORP, UT  
SYRACUSE, UT  
TABIONA, UT  
CITY OF TAYLORSVILLE, UT  
TOOELE CITY CORPORATION, UT  
TOQUERVILLE, UT  
TORREY, UT  
TREMONTON CITY, UT  
TRENTON, UT  
TROPIC, UT  
UINTAH, UT  
VERNAL CITY, UT  
VERNON, UT  
VINEYARD, UT  
VIRGIN, UT  
WALES, UT  
WALLSBURG, UT  
WASHINGTON CITY, UT  
WASHINGTON TERRACE, UT  
WELLINGTON, UT  
WELLSVILLE, UT  
WENDOVER, UT  
WEST BOUNTIFUL, UT  
WEST HAVEN, UT  
WEST JORDAN, UT  
WEST POINT, UT  
WEST VALLEY CITY, UT  
WILLARD, UT  
WOODLAND HILLS, UT  
WOODRUFF, UT  
WOODS CROSS, UT

**COUNTIES AND PARISHES INCLUDING BUT NOT LIMITED TO:**

ASCENSION PARISH, LA  
ASCENSION PARISH, LA, CLEAR OF COURT  
CADDO PARISH, LA  
CALCASIEU PARISH, LA  
CALCASIEU PARISH SHERIFF'S OFFICE, LA  
CITY AND COUNTY OF HONOLULU, HI  
CLACKAMAS COUNTY, OR

CLACKAMAS COUNTY DEPT OF TRANSPORTATION, OR  
CLATSOP COUNTY, OR  
COLUMBIA COUNTY, OR  
COOS COUNTY, OR  
COOS COUNTY HIGHWAY DEPARTMENT, OR  
COUNTY OF HAWAII, OR  
CROOK COUNTY, OR  
CROOK COUNTY ROAD DEPARTMENT, OR  
CURRY COUNTY, OR  
DESCHUTES COUNTY, OR  
DOUGLAS COUNTY, OR  
EAST BATON ROUGE PARISH, LA  
GILLIAM COUNTY, OR  
GRANT COUNTY, OR  
HARNEY COUNTY, OR  
HARNEY COUNTY SHERIFFS OFFICE, OR  
HAWAII COUNTY, HI  
HOOD RIVER COUNTY, OR  
JACKSON COUNTY, OR  
JEFFERSON COUNTY, OR  
JEFFERSON PARISH, LA  
JOSEPHINE COUNTY GOVERNMENT, OR  
LAFAYETTE CONSOLIDATED GOVERNMENT, LA  
LAFAYETTE PARISH, LA  
LAFAYETTE PARISH CONVENTION & VISITORS COMMISSION  
LAFOURCHE PARISH, LA  
KAUAI COUNTY, HI  
KLAMATH COUNTY, OR  
LAKE COUNTY, OR  
LANE COUNTY, OR  
LINCOLN COUNTY, OR  
LINN COUNTY, OR  
LIVINGSTON PARISH, LA  
MALHEUR COUNTY, OR  
MAUI COUNTY, HI  
MARION COUNTY, SALEM, OR  
MORROW COUNTY, OR  
MULTNOMAH COUNTY, OR  
MULTNOMAH COUNTY BUSINESS AND COMMUNITY SERVICES, OR  
MULTNOMAH COUNTY SHERIFFS OFFICE, OR  
MULTNOMAH LAW LIBRARY, OR  
ORLEANS PARISH, LA  
PLAQUEMINES PARISH, LA  
POLK COUNTY, OR  
RAPIDES PARISH, LA  
SAINT CHARLES PARISH, LA  
SAINT CHARLES PARISH PUBLIC SCHOOLS, LA  
SAINT LANDRY PARISH, LA  
SAINT TAMMANY PARISH, LA  
SHERMAN COUNTY, OR  
TERREBONNE PARISH, LA  
TILLAMOOK COUNTY, OR  
TILLAMOOK COUNTY SHERIFF'S OFFICE, OR  
TILLAMOOK COUNTY GENERAL HOSPITAL, OR  
UMATILLA COUNTY, OR  
UNION COUNTY, OR  
WALLOWA COUNTY, OR  
WASCO COUNTY, OR  
WASHINGTON COUNTY, OR  
WEST BATON ROUGE PARISH, LA  
WHEELER COUNTY, OR  
YAMHILL COUNTY, OR  
COUNTY OF BOX ELDER, UT  
COUNTY OF CACHE, UT

COUNTY OF RICH, UT  
COUNTY OF WEBER, UT  
COUNTY OF MORGAN, UT  
COUNTY OF DAVIS, UT  
COUNTY OF SUMMIT, UT  
COUNTY OF DAGGETT, UT  
COUNTY OF SALT LAKE, UT  
COUNTY OF TOOELE, UT  
COUNTY OF UTAH, UT  
COUNTY OF WASATCH, UT  
COUNTY OF DUCHESNE, UT  
COUNTY OF Uintah, UT  
COUNTY OF CARBON, UT  
COUNTY OF SANPETE, UT  
COUNTY OF JUAB, UT  
COUNTY OF MILLARD, UT  
COUNTY OF SEVIER, UT  
COUNTY OF EMERY, UT  
COUNTY OF GRAND, UT  
COUNTY OF BEVER, UT  
COUNTY OF PIUTE, UT  
COUNTY OF WAYNE, UT  
COUNTY OF SAN JUAN, UT  
COUNTY OF GARFIELD, UT  
COUNTY OF KANE, UT  
COUNTY OF IRON, UT  
COUNTY OF WASHINGTON, UT

**OTHER AGENCIES INCLUDING ASSOCIATIONS, BOARDS, DISTRICTS, COMMISSIONS, COUNCILS, PUBLIC CORPORATIONS, PUBLIC DEVELOPMENT AUTHORITIES, RESERVATIONS AND UTILITIES INCLUDING BUT NOT LIMITED TO:**

ADAIR R.F.P.D., OR  
ADEL WATER IMPROVEMENT DISTRICT, OR  
ADRIAN R.F.P.D., OR  
AGNESS COMMUNITY LIBRARY, OR  
AGNESS-ILLAHE R.F.P.D., OR  
AGRICULTURE EDUCATION SERVICE EXTENSION DISTRICT, OR  
ALDER CREEK-BARLOW WATER DISTRICT NO. 29, OR  
ALFALFA FIRE DISTRICT, OR  
ALSEA R.F.P.D., OR  
ALSEA RIVIERA WATER IMPROVEMENT DISTRICT, OR  
AMITY FIRE DISTRICT, OR  
ANTELOPE MEADOWS SPECIAL ROAD DISTRICT, OR  
APPLE ROGUE DISTRICT IMPROVEMENT COMPANY, OR  
APPLEGATE VALLEY R.F.P.D. #9, OR  
ARCH CAPE DOMESTIC WATER SUPPLY DISTRICT, OR  
ARCH CAPE SANITARY DISTRICT, OR  
ARNOLD IRRIGATION DISTRICT, OR  
ASH CREEK WATER CONTROL DISTRICT, OR  
ATHENA CEMETERY MAINTENANCE DISTRICT, OR  
AUMSVILLE R.F.P.D., OR  
AURORA R.F.P.D., OR  
AZALEA R.F.P.D., OR  
BADGER IMPROVEMENT DISTRICT, OR  
BAILEY-SPENCER R.F.P.D., OR  
BAKER COUNTY LIBRARY DISTRICT, OR  
BAKER R.F.P.D., OR  
BAKER RIVERTON ROAD DISTRICT, OR  
BAKER VALLEY IRRIGATION DISTRICT, OR  
BAKER VALLEY S.W.C.D., OR

BAKER VALLEY VECTOR CONTROL DISTRICT, OR  
BANDON CRANBERRY WATER CONTROL DISTRICT,  
OR  
BANDON R.F.P.D., OR  
BANKS FIRE DISTRICT, OR  
BANKS FIRE DISTRICT #13, OR  
BAR L RANCH ROAD DISTRICT, OR  
BARLOW WATER IMPROVEMENT DISTRICT, OR  
BASIN AMBULANCE SERVICE DISTRICT, OR  
BASIN TRANSIT SERVICE TRANSPORTATION  
DISTRICT, OR  
BATON ROUGE WATER COMPANY  
BAY AREA HEALTH DISTRICT, OR  
BAYSHORE SPECIAL ROAD DISTRICT, OR  
BEAR VALLEY SPECIAL ROAD DISTRICT, OR  
BEAVER CREEK WATER CONTROL DISTRICT, OR  
BEAVER DRAINAGE IMPROVEMENT COMPANY,  
INC., OR  
BEAVER SLOUGH DRAINAGE DISTRICT, OR  
BEAVER SPECIAL ROAD DISTRICT, OR  
BEAVER WATER DISTRICT, OR  
BELLE MER S.I.G.L. TRACTS SPECIAL ROAD  
DISTRICT, OR  
BEND METRO PARK AND RECREATION DISTRICT  
BENTON S.W.C.D., OR  
BERNDT SUBDIVISION WATER IMPROVEMENT  
DISTRICT, OR  
BEVERLY BEACH WATER DISTRICT, OR  
BIENVILLE PARISH FIRE PROTECTION DISTRICT 6,  
LA  
BIG BEND IRRIGATION DISTRICT, OR  
BIGGS SERVICE DISTRICT, OR  
BLACK BUTTE RANCH DEPARTMENT OF POLICE  
SERVICES, OR  
BLACK BUTTE RANCH R.F.P.D., OR  
BLACK MOUNTAIN WATER DISTRICT, OR  
BLODGETT-SUMMIT R.F.P.D., OR  
BLUE MOUNTAIN HOSPITAL DISTRICT, OR  
BLUE MOUNTAIN TRANSLATOR DISTRICT, OR  
BLUE RIVER PARK & RECREATION DISTRICT, OR  
BLUE RIVER WATER DISTRICT, OR  
BLY R.F.P.D., OR  
BLY VECTOR CONTROL DISTRICT, OR  
BLY WATER AND SANITARY DISTRICT, OR  
BOARDMAN CEMETERY MAINTENANCE DISTRICT,  
OR  
BOARDMAN PARK AND RECREATION DISTRICT  
BOARDMAN R.F.P.D., OR  
BONANZA BIG SPRINGS PARK & RECREATION  
DISTRICT, OR  
BONANZA MEMORIAL PARK CEMETERY DISTRICT,  
OR  
BONANZA R.F.P.D., OR  
BONANZA-LANGELL VALLEY VECTOR CONTROL  
DISTRICT, OR  
BORING WATER DISTRICT #24, OR  
BOULDER CREEK RETREAT SPECIAL ROAD  
DISTRICT, OR  
BRIDGE R.F.P.D., OR  
BROOKS COMMUNITY SERVICE DISTRICT, OR  
BROWNSVILLE R.F.P.D., OR  
BUELL-RED PRAIRIE WATER DISTRICT, OR  
BUNKER HILL R.F.P.D. #1, OR  
BUNKER HILL SANITARY DISTRICT, OR  
BURLINGTON WATER DISTRICT, OR  
BURNT RIVER IRRIGATION DISTRICT, OR  
BURNT RIVER S.W.C.D., OR

CALAPOOIA R.F.P.D., OR  
CAMAS VALLEY R.F.P.D., OR  
CAMELLIA PARK SANITARY DISTRICT, OR  
CAMMANN ROAD DISTRICT, OR  
CAMP SHERMAN ROAD DISTRICT, OR  
CANBY AREA TRANSIT, OR  
CANBY R.F.P.D. #62, OR  
CANBY UTILITY BOARD, OR  
CANNON BEACH R.F.P.D., OR  
CANYONVILLE SOUTH UMPQUA FIRE DISTRICT, OR  
CAPE FERRELO R.F.P.D., OR  
CAPE FOULWEATHER SANITARY DISTRICT, OR  
CARLSON PRIMROSE SPECIAL ROAD DISTRICT, OR  
CARMEL BEACH WATER DISTRICT, OR  
CASCADE VIEW ESTATES TRACT 2, OR  
CEDAR CREST SPECIAL ROAD DISTRICT, OR  
CEDAR TRAILS SPECIAL ROAD DISTRICT, OR  
CEDAR VALLEY - NORTH BANK R.F.P.D., OR  
CENTRAL CASCADES FIRE AND EMS, OR  
CENTRAL CITY ECONOMIC OPPORTUNITY CORP, LA  
CENTRAL LINCOLN P.U.D., OR  
CENTRAL OREGON COAST FIRE & RESCUE  
DISTRICT, OR  
CENTRAL OREGON INTERGOVERNMENTAL  
COUNCIL  
CENTRAL OREGON IRRIGATION DISTRICT, OR  
CHAPARRAL WATER CONTROL DISTRICT, OR  
CHARLESTON FIRE DISTRICT, OR  
CHARLESTON SANITARY DISTRICT, OR  
CHARLOTTE ANN WATER DISTRICT, OR  
CHEHALEM PARK & RECREATION DISTRICT, OR  
CHEHALEM PARK AND RECREATION DISTRICT  
CHEMULT R.F.P.D., OR  
CHENOWITH WATER P.U.D., OR  
CHERRIOTS, OR  
CHETCO COMMUNITY PUBLIC LIBRARY DISTRICT,  
OR  
CHILOQUIN VECTOR CONTROL DISTRICT, OR  
CHILOQUIN-AGENCY LAKE R.F.P.D., OR  
CHINOOK DRIVE SPECIAL ROAD DISTRICT, OR  
CHR DISTRICT IMPROVEMENT COMPANY, OR  
CHRISTMAS VALLEY DOMESTIC WATER DISTRICT,  
OR  
CHRISTMAS VALLEY PARK & RECREATION  
DISTRICT, OR  
CHRISTMAS VALLEY R.F.P.D., OR  
CITY OF BOGALUSA SCHOOL BOARD, LA  
CLACKAMAS COUNTY FIRE DISTRICT #1, OR  
CLACKAMAS COUNTY SERVICE DISTRICT #1, OR  
CLACKAMAS COUNTY VECTOR CONTROL  
DISTRICT, OR  
CLACKAMAS RIVER WATER  
CLACKAMAS RIVER WATER, OR  
CLACKAMAS S.W.C.D., OR  
CLATSKANIE DRAINAGE IMPROVEMENT  
COMPANY, OR  
CLATSKANIE LIBRARY DISTRICT, OR  
CLATSKANIE P.U.D., OR  
CLATSKANIE PARK & RECREATION DISTRICT, OR  
CLATSKANIE PEOPLE'S UTILITY DISTRICT  
CLATSKANIE R.F.P.D., OR  
CLATSOP CARE CENTER HEALTH DISTRICT, OR  
CLATSOP COUNTY S.W.C.D., OR  
CLATSOP DRAINAGE IMPROVEMENT COMPANY #15,  
INC., OR  
CLEAN WATER SERVICES  
CLEAN WATER SERVICES, OR

CLOVERDALE R.F.P.D., OR  
CLOVERDALE SANITARY DISTRICT, OR  
CLOVERDALE WATER DISTRICT, OR  
COALEDO DRAINAGE DISTRICT, OR  
COBURG FIRE DISTRICT, OR  
COLESTIN RURAL FIRE DISTRICT, OR  
COLTON R.F.P.D., OR  
COLTON WATER DISTRICT #11, OR  
COLUMBIA 911 COMMUNICATIONS DISTRICT, OR  
COLUMBIA COUNTY 4-H & EXTENSION SERVICE DISTRICT, OR  
COLUMBIA DRAINAGE VECTOR CONTROL, OR  
COLUMBIA IMPROVEMENT DISTRICT, OR  
COLUMBIA R.F.P.D., OR  
COLUMBIA RIVER FIRE & RESCUE, OR  
COLUMBIA RIVER PUD, OR  
COLUMBIA S.W.C.D., OR  
COLUMBIA S.W.C.D., OR  
CONFEDERATED TRIBES OF THE UMATILLA INDIAN RESERVATION  
COOS COUNTY AIRPORT DISTRICT, OR  
COOS COUNTY AIRPORT DISTRICT, OR  
COOS COUNTY AREA TRANSIT SERVICE DISTRICT, OR  
COOS COUNTY AREA TRANSIT SERVICE DISTRICT, OR  
COOS FOREST PROTECTIVE ASSOCIATION  
COOS S.W.C.D., OR  
COQUILLE R.F.P.D., OR  
COQUILLE VALLEY HOSPITAL DISTRICT, OR  
CORBETT WATER DISTRICT, OR  
CORNELIUS R.F.P.D., OR  
CORP RANCH ROAD WATER IMPROVEMENT, OR  
CORVALLIS R.F.P.D., OR  
COUNTRY CLUB ESTATES SPECIAL WATER DISTRICT, OR  
COUNTRY CLUB WATER DISTRICT, OR  
COUNTRY ESTATES ROAD DISTRICT, OR  
COVE CEMETERY MAINTENANCE DISTRICT, OR  
COVE ORCHARD SEWER SERVICE DISTRICT, OR  
COVE R.F.P.D., OR  
CRESCENT R.F.P.D., OR  
CRESCENT SANITARY DISTRICT, OR  
CRESCENT WATER SUPPLY AND IMPROVEMENT DISTRICT, OR  
CROOK COUNTY AGRICULTURE EXTENSION SERVICE DISTRICT, OR  
CROOK COUNTY CEMETERY DISTRICT, OR  
CROOK COUNTY FIRE AND RESCUE, OR  
CROOK COUNTY PARKS & RECREATION DISTRICT, OR  
CROOK COUNTY S.W.C.D., OR  
CROOK COUNTY VECTOR CONTROL DISTRICT, OR  
CROOKED RIVER RANCH R.F.P.D., OR  
CROOKED RIVER RANCH SPECIAL ROAD DISTRICT, OR  
CRYSTAL SPRINGS WATER DISTRICT, OR  
CURRY COUNTY 4-H & EXTENSION SERVICE DISTRICT, OR  
CURRY COUNTY PUBLIC TRANSIT SERVICE DISTRICT, OR  
CURRY COUNTY S.W.C.D., OR  
CURRY HEALTH DISTRICT, OR  
CURRY PUBLIC LIBRARY DISTRICT, OR  
DALLAS CEMETERY DISTRICT #4, OR  
DARLEY DRIVE SPECIAL ROAD DISTRICT, OR  
DAVID CROCKETT STEAM FIRE COMPANY #1, LA

DAYS CREEK R.F.P.D., OR  
DAYTON FIRE DISTRICT, OR  
DEAN MINARD WATER DISTRICT, OR  
DEE IRRIGATION DISTRICT, OR  
DEER ISLAND DRAINAGE IMPROVEMENT COMPANY, OR  
DELL BROGAN CEMETERY MAINTENANCE DISTRICT, OR  
DEPOE BAY R.F.P.D., OR  
DESCHUTES COUNTY 911 SERVICE DISTRICT, OR  
DESCHUTES COUNTY R.F.P.D. #2, OR  
DESCHUTES PUBLIC LIBRARY DISTRICT, OR  
DESCHUTES S.W.C.D., OR  
DESCHUTES VALLEY WATER DISTRICT, OR  
DEVILS LAKE WATER IMPROVEMENT DISTRICT, OR  
DEXTER R.F.P.D., OR  
DEXTER SANITARY DISTRICT, OR  
DORA-SITKUM R.F.P.D., OR  
DOUGLAS COUNTY FIRE DISTRICT #2, OR  
DOUGLAS S.W.C.D., OR  
DRAKES CROSSING R.F.P.D., OR  
DRRH SPECIAL ROAD DISTRICT #6, OR  
DRY GULCH DITCH DISTRICT IMPROVEMENT COMPANY, OR  
DUFUR RECREATION DISTRICT, OR  
DUMBECK LANE DOMESTIC WATER SUPPLY, OR  
DUNDEE R.F.P.D., OR  
DURKEE COMMUNITY BUILDING PRESERVATION DISTRICT, OR  
EAGLE POINT IRRIGATION DISTRICT, OR  
EAGLE VALLEY CEMETERY MAINTENANCE DISTRICT, OR  
EAGLE VALLEY R.F.P.D., OR  
EAGLE VALLEY S.W.C.D., OR  
EAST FORK IRRIGATION DISTRICT, OR  
EAST MULTNOMAH S.W.C.D., OR  
EAST SALEM SERVICE DISTRICT, OR  
EAST UMATILLA CHEMICAL CONTROL DISTRICT, OR  
EAST UMATILLA COUNTY AMBULANCE AREA HEALTH DISTRICT, OR  
EAST UMATILLA COUNTY R.F.P.D., OR  
EAST VALLEY WATER DISTRICT, OR  
ELGIN COMMUNITY PARKS & RECREATION DISTRICT, OR  
ELGIN HEALTH DISTRICT, OR  
ELGIN R.F.P.D., OR  
ELKTON ESTATES PHASE II SPECIAL ROAD DISTRICT, OR  
ELKTON R.F.P.D., OR  
EMERALD P.U.D., OR  
ENTERPRISE IRRIGATION DISTRICT, OR  
ESTACADA CEMETERY MAINTENANCE DISTRICT, OR  
ESTACADA R.F.P.D. #69, OR  
EUGENE R.F.P.D. # 1, OR  
EUGENE WATER AND ELECTRIC BOARD  
EVANS VALLEY FIRE DISTRICT #6, OR  
FAIR OAKS R.F.P.D., OR  
FAIRVIEW R.F.P.D., OR  
FAIRVIEW WATER DISTRICT, OR  
FALCON HEIGHTS WATER AND SEWER, OR  
FALCON-COVE BEACH WATER DISTRICT, OR  
FALL RIVER ESTATES SPECIAL ROAD DISTRICT, OR  
FARGO INTERCHANGE SERVICE DISTRICT, OR  
FARMERS IRRIGATION DISTRICT, OR  
FAT ELK DRAINAGE DISTRICT, OR

FERN RIDGE PUBLIC LIBRARY DISTRICT, OR  
FERN VALLEY ESTATES IMPROVEMENT DISTRICT,  
OR  
FOR FAR ROAD DISTRICT, OR  
FOREST GROVE R.F.P.D., OR  
FOREST VIEW SPECIAL ROAD DISTRICT, OR  
FORT ROCK-SILVER LAKE S.W.C.D., OR  
FOUR RIVERS VECTOR CONTROL DISTRICT, OR  
FOX CEMETERY MAINTENANCE DISTRICT, OR  
GARDINER R.F.P.D., OR  
GARDINER SANITARY DISTRICT, OR  
GARIBALDI R.F.P.D., OR  
GASTON R.F.P.D., OR  
GATES R.F.P.D., OR  
GEARHART R.F.P.D., OR  
GILLIAM S.W.C.D., OR  
GLENDALE AMBULANCE DISTRICT, OR  
GLENDALE R.F.P.D., OR  
GLENEDEN BEACH SPECIAL ROAD DISTRICT, OR  
GLENEDEN SANITARY DISTRICT, OR  
GLENWOOD WATER DISTRICT, OR  
GLIDE - IDLEYLD SANITARY DISTRICT, OR  
GLIDE R.F.P.D., OR  
GOLD BEACH - WEDDERBURN R.F.P.D., OR  
GOLD HILL IRRIGATION DISTRICT, OR  
GOLDFINCH ROAD DISTRICT, OR  
GOSHEN R.F.P.D., OR  
GOVERNMENT CAMP ROAD DISTRICT, OR  
GOVERNMENT CAMP SANITARY DISTRICT, OR  
GRAND PRAIRIE WATER CONTROL DISTRICT, OR  
GRAND RONDE SANITARY DISTRICT, OR  
GRANT COUNTY TRANSPORTATION DISTRICT, OR  
GRANT S.W.C.D., OR  
GRANTS PASS IRRIGATION DISTRICT, OR  
GREATER BOWEN VALLEY R.F.P.D., OR  
GREATER ST. HELENS PARK & RECREATION  
DISTRICT, OR  
GREATER TOLEDO POOL RECREATION DISTRICT,  
OR  
GREEN KNOLLS SPECIAL ROAD DISTRICT, OR  
GREEN SANITARY DISTRICT, OR  
GREENACRES R.F.P.D., OR  
GREENBERRY IRRIGATION DISTRICT, OR  
GREENSPRINGS RURAL FIRE DISTRICT, OR  
HAHLEN ROAD SPECIAL DISTRICT, OR  
HAINES CEMETERY MAINTENANCE DISTRICT, OR  
HAINES FIRE PROTECTION DISTRICT, OR  
HALSEY-SHEDD R.F.P.D., OR  
HAMLET R.F.P.D., OR  
HARBOR R.F.P.D., OR  
HARBOR SANITARY DISTRICT, OR  
HARBOR WATER P.U.D., OR  
HARNEY COUNTY HEALTH DISTRICT, OR  
HARNEY S.W.C.D., OR  
HARPER SOUTH SIDE IRRIGATION DISTRICT, OR  
HARRISBURG FIRE AND RESCUE, OR  
HAUSER R.F.P.D., OR  
HAZELDELL RURAL FIRE DISTRICT, OR  
HEBO JOINT WATER-SANITARY AUTHORITY, OR  
HECETA WATER P.U.D., OR  
HELIX CEMETERY MAINTENANCE DISTRICT #4, OR  
HELIX PARK & RECREATION DISTRICT, OR  
HELIX R.F.P.D. #7-411, OR  
HEPPNER CEMETERY MAINTENANCE DISTRICT, OR  
HEPPNER R.F.P.D., OR  
HEPPNER WATER CONTROL DISTRICT, OR

HEREFORD COMMUNITY HALL RECREATION  
DISTRICT, OR  
HERMISTON CEMETERY DISTRICT, OR  
HERMISTON IRRIGATION DISTRICT, OR  
HIDDEN VALLEY MOBILE ESTATES IMPROVEMENT  
DISTRICT, OR  
HIGH DESERT PARK & RECREATION DISTRICT, OR  
HIGHLAND SUBDIVISION WATER DISTRICT, OR  
HONOLULU INTERNATIONAL AIRPORT  
HOOD RIVER COUNTY LIBRARY DISTRICT, OR  
HOOD RIVER COUNTY TRANSPORTATION DISTRICT,  
OR  
HOOD RIVER S.W.C.D., OR  
HOOD RIVER VALLEY PARKS & RECREATION  
DISTRICT, OR  
HOODLAND FIRE DISTRICT #74  
HOODLAND FIRE DISTRICT #74, OR  
HORSEFLY IRRIGATION DISTRICT, OR  
HOSKINS-KINGS VALLEY R.F.P.D., OR  
HOUSING AUTHORITY OF PORTLAND  
HUBBARD R.F.P.D., OR  
HUDSON BAY DISTRICT IMPROVEMENT COMPANY,  
OR  
I N (KAY) YOUNG DITCH DISTRICT IMPROVEMENT  
COMPANY, OR  
ICE FOUNTAIN WATER DISTRICT, OR  
IDAHO POINT SPECIAL ROAD DISTRICT, OR  
IDANHA-DETROIT RURAL FIRE PROTECTION  
DISTRICT, OR  
ILLINOIS VALLEY FIRE DISTRICT  
ILLINOIS VALLEY R.F.P.D., OR  
ILLINOIS VALLEY S.W.C.D., OR  
IMBLER R.F.P.D., OR  
INTERLACHEN WATER P.U.D., OR  
IONE LIBRARY DISTRICT, OR  
IONE R.F.P.D. #6-604, OR  
IRONSIDE CEMETERY MAINTENANCE DISTRICT, OR  
IRONSIDE RURAL ROAD DISTRICT #5, OR  
IRRIGON PARK & RECREATION DISTRICT, OR  
IRRIGON R.F.P.D., OR  
ISLAND CITY AREA SANITATION DISTRICT, OR  
ISLAND CITY CEMETERY MAINTENANCE DISTRICT,  
OR  
JACK PINE VILLAGE SPECIAL ROAD DISTRICT, OR  
JACKSON COUNTY FIRE DISTRICT #3, OR  
JACKSON COUNTY FIRE DISTRICT #4, OR  
JACKSON COUNTY FIRE DISTRICT #5, OR  
JACKSON COUNTY LIBRARY DISTRICT, OR  
JACKSON COUNTY VECTOR CONTROL DISTRICT, OR  
JACKSON S.W.C.D., OR  
JASPER KNOLLS WATER DISTRICT, OR  
JEFFERSON COUNTY EMERGENCY MEDICAL  
SERVICE DISTRICT, OR  
JEFFERSON COUNTY FIRE DISTRICT #1, OR  
JEFFERSON COUNTY LIBRARY DISTRICT, OR  
JEFFERSON COUNTY S.W.C.D., OR  
JEFFERSON PARK & RECREATION DISTRICT, OR  
JEFFERSON R.F.P.D., OR  
JOB'S DRAINAGE DISTRICT, OR  
JOHN DAY WATER DISTRICT, OR  
JOHN DAY-CANYON CITY PARKS & RECREATION  
DISTRICT, OR  
JOHN DAY-FERNHILL R.F.P.D. #5-108, OR  
JORDAN VALLEY CEMETERY DISTRICT, OR  
JORDAN VALLEY IRRIGATION DISTRICT, OR  
JOSEPHINE COMMUNITY LIBRARY DISTRICT, OR

JOSEPHINE COUNTY 4-H & EXTENSION SERVICE DISTRICT, OR  
JOSEPHINE COUNTY 911 AGENCY, OR  
JUNCTION CITY R.F.P.D., OR  
JUNCTION CITY WATER CONTROL DISTRICT, OR  
JUNIPER BUTTE ROAD DISTRICT, OR  
JUNIPER CANYON WATER CONTROL DISTRICT, OR  
JUNIPER FLAT DISTRICT IMPROVEMENT COMPANY, OR  
JUNIPER FLAT R.F.P.D., OR  
JUNO NONPROFIT WATER IMPROVEMENT DISTRICT, OR  
KEATING R.F.P.D., OR  
KEATING S.W.C.D., OR  
KEIZER R.F.P.D., OR  
KELLOGG RURAL FIRE DISTRICT, OR  
KENO IRRIGATION DISTRICT, OR  
KENO PINES ROAD DISTRICT, OR  
KENO R.F.P.D., OR  
KENT WATER DISTRICT, OR  
KERBY WATER DISTRICT, OR  
K-GB-LB WATER DISTRICT, OR  
KILCHIS WATER DISTRICT, OR  
KLAMATH 9-1-1 COMMUNICATIONS DISTRICT, OR  
KLAMATH BASIN IMPROVEMENT DISTRICT, OR  
KLAMATH COUNTY DRAINAGE SERVICE DISTRICT, OR  
KLAMATH COUNTY EXTENSION SERVICE DISTRICT, OR  
KLAMATH COUNTY FIRE DISTRICT #1, OR  
KLAMATH COUNTY FIRE DISTRICT #3, OR  
KLAMATH COUNTY FIRE DISTRICT #4, OR  
KLAMATH COUNTY FIRE DISTRICT #5, OR  
KLAMATH COUNTY LIBRARY SERVICE DISTRICT, OR  
KLAMATH COUNTY PREDATORY ANIMAL CONTROL DISTRICT, OR  
KLAMATH DRAINAGE DISTRICT, OR  
KLAMATH FALLS FOREST ESTATES SPECIAL ROAD DISTRICT UNIT #2, OR  
KLAMATH INTEROPERABILITY RADIO GROUP, OR  
KLAMATH IRRIGATION DISTRICT, OR  
KLAMATH RIVER ACRES SPECIAL ROAD DISTRICT, OR  
KLAMATH S.W.C.D., OR  
KLAMATH VECTOR CONTROL DISTRICT, OR  
KNAPPA-SVENSEN-BURNSIDE R.F.P.D., OR  
LA GRANDE CEMETERY MAINTENANCE DISTRICT, OR  
LA GRANDE R.F.P.D., OR  
LA PINE PARK & RECREATION DISTRICT, OR  
LA PINE R.F.P.D., OR  
LABISH VILLAGE SEWAGE & DRAINAGE, OR  
LACOMB IRRIGATION DISTRICT, OR  
LAFAYETTE AIRPORT COMMISSION, LA  
LAFOURCHE PARISH HEALTH UNIT – DHH-OPH REGION 3  
LAIDLAW WATER DISTRICT, OR  
LAKE CHINOOK FIRE & RESCUE, OR  
LAKE COUNTY 4-H & EXTENSION SERVICE DISTRICT, OR  
LAKE COUNTY LIBRARY DISTRICT, OR  
LAKE CREEK R.F.P.D. - JACKSON, OR  
LAKE CREEK R.F.P.D. - LANE COUNTY, OR  
LAKE DISTRICT HOSPITAL, OR  
LAKE GROVE R.F.P.D. NO. 57, OR  
LAKE GROVE WATER DISTRICT, OR

LAKE LABISH WATER CONTROL DISTRICT, OR  
LAKE POINT SPECIAL ROAD DISTRICT, OR  
LAKESIDE R.F.P.D. #4, OR  
LAKESIDE WATER DISTRICT, OR  
LAKEVIEW R.F.P.D., OR  
LAKEVIEW S.W.C.D., OR  
LAMONTAI IMPROVEMENT DISTRICT, OR  
LANE FIRE AUTHORITY, OR  
LANE LIBRARY DISTRICT, OR  
LANE TRANSIT DISTRICT, OR  
LANGELL VALLEY IRRIGATION DISTRICT, OR  
LANGLOIS PUBLIC LIBRARY, OR  
LANGLOIS R.F.P.D., OR  
LANGLOIS WATER DISTRICT, OR  
LAZY RIVER SPECIAL ROAD DISTRICT, OR  
LEBANON AQUATIC DISTRICT, OR  
LEBANON R.F.P.D., OR  
LEWIS & CLARK R.F.P.D., OR  
LINCOLN COUNTY LIBRARY DISTRICT, OR  
LINCOLN S.W.C.D., OR  
LINN COUNTY EMERGENCY TELEPHONE AGENCY, OR  
LINN S.W.C.D., OR  
LITTLE MUDDY CREEK WATER CONTROL, OR  
LITTLE NESTUCCA DRAINAGE DISTRICT, OR  
LITTLE SWITZERLAND SPECIAL ROAD DISTRICT, OR  
LONE PINE IRRIGATION DISTRICT, OR  
LONG PRAIRIE WATER DISTRICT, OR  
LOOKINGGLASS OLALLA WATER CONTROL DISTRICT, OR  
LOOKINGGLASS RURAL FIRE DISTRICT, OR  
LORANE R.F.P.D., OR  
LOST & BOULDER DITCH IMPROVEMENT DISTRICT, OR  
LOST CREEK PARK SPECIAL ROAD DISTRICT, OR  
LOUISIANA PUBLIC SERVICE COMMISSION, LA  
LOUISIANA WATER WORKS  
LOWELL R.F.P.D., OR  
LOWER MCKAY CREEK R.F.P.D., OR  
LOWER MCKAY CREEK WATER CONTROL DISTRICT, OR  
LOWER POWDER RIVER IRRIGATION DISTRICT, OR  
LOWER SILETZ WATER DISTRICT, OR  
LOWER UMPQUA HOSPITAL DISTRICT, OR  
LOWER UMPQUA PARK & RECREATION DISTRICT, OR  
LOWER VALLEY WATER IMPROVEMENT DISTRICT, OR  
LUCE LONG DITCH DISTRICT IMPROVEMENT CO., OR  
LUSTED WATER DISTRICT, OR  
LYONS R.F.P.D., OR  
LYONS-MEHAMA WATER DISTRICT, OR  
MADRAS AQUATIC CENTER DISTRICT, OR  
MAKAI SPECIAL ROAD DISTRICT, OR  
MALHEUR COUNTY S.W.C.D., OR  
MALHEUR COUNTY VECTOR CONTROL DISTRICT, OR  
MALHEUR DISTRICT IMPROVEMENT COMPANY, OR  
MALHEUR DRAINAGE DISTRICT, OR  
MALHEUR MEMORIAL HEALTH DISTRICT, OR  
MALIN COMMUNITY CEMETERY MAINTENANCE DISTRICT, OR  
MALIN COMMUNITY PARK & RECREATION DISTRICT, OR  
MALIN IRRIGATION DISTRICT, OR  
MALIN R.F.P.D., OR

MAPLETON FIRE DEPARTMENT, OR  
MAPLETON WATER DISTRICT, OR  
MARCOLA WATER DISTRICT, OR  
MARION COUNTY EXTENSION & 4H SERVICE DISTRICT, OR  
MARION COUNTY FIRE DISTRICT #1, OR  
MARION JACK IMPROVEMENT DISTRICT, OR  
MARION S.W.C.D., OR  
MARY'S RIVER ESTATES ROAD DISTRICT, OR  
MCDONALD FOREST ESTATES SPECIAL ROAD DISTRICT, OR  
MCKAY ACRES IMPROVEMENT DISTRICT, OR  
MCKAY DAM R.F.P.D. # 7-410, OR  
MCKENZIE FIRE & RESCUE, OR  
MCKENZIE PALISADES WATER SUPPLY CORPORATION, OR  
MCMINNVILLE R.F.P.D., OR  
MCNULTY WATER P.U.D., OR  
MEADOWS DRAINAGE DISTRICT, OR  
MEDFORD IRRIGATION DISTRICT, OR  
MEDFORD R.F.P.D. #2, OR  
MEDFORD WATER COMMISSION  
MEDICAL SPRINGS R.F.P.D., OR  
MELHEUR COUNTY JAIL, OR  
MERLIN COMMUNITY PARK DISTRICT, OR  
MERRILL CEMETERY MAINTENANCE DISTRICT, OR  
MERRILL PARK DISTRICT, OR  
MERRILL R.F.P.D., OR  
METRO REGIONAL GOVERNMENT  
METRO REGIONAL PARKS  
METROPOLITAN EXPOSITION RECREATION COMMISSION  
METROPOLITAN SERVICE DISTRICT (METRO)  
MID COUNTY CEMETERY MAINTENANCE DISTRICT, OR  
MID-COLUMBIA FIRE AND RESCUE, OR  
MIDDLE FORK IRRIGATION DISTRICT, OR  
MIDLAND COMMUNITY PARK, OR  
MIDLAND DRAINAGE IMPROVEMENT DISTRICT, OR  
MILES CROSSING SANITARY SEWER DISTRICT, OR  
MILL CITY R.F.P.D. #2-303, OR  
MILL FOUR DRAINAGE DISTRICT, OR  
MILLICOMA RIVER PARK & RECREATION DISTRICT, OR  
MILLINGTON R.F.P.D. #5, OR  
MILO VOLUNTEER FIRE DEPARTMENT, OR  
MILTON-FREEWATER AMBULANCE SERVICE AREA HEALTH DISTRICT, OR  
MILTON-FREEWATER WATER CONTROL DISTRICT, OR  
MIROCO SPECIAL ROAD DISTRICT, OR  
MIST-BIRKENFELD R.F.P.D., OR  
MODOC POINT IRRIGATION DISTRICT, OR  
MODOC POINT SANITARY DISTRICT, OR  
MOHAWK VALLEY R.F.P.D., OR  
MOLALLA AQUATIC DISTRICT, OR  
MOLALLA R.F.P.D. #73, OR  
MONITOR R.F.P.D., OR  
MONROE R.F.P.D., OR  
MONUMENT CEMETERY MAINTENANCE DISTRICT, OR  
MONUMENT S.W.C.D., OR  
MOOREA DRIVE SPECIAL ROAD DISTRICT, OR  
MORO R.F.P.D., OR  
MORROW COUNTY HEALTH DISTRICT, OR  
MORROW COUNTY UNIFIED RECREATION DISTRICT, OR

MORROW S.W.C.D., OR  
MOSIER FIRE DISTRICT, OR  
MOUNTAIN DRIVE SPECIAL ROAD DISTRICT, OR  
MT. ANGEL R.F.P.D., OR  
MT. HOOD IRRIGATION DISTRICT, OR  
MT. LAKI CEMETERY DISTRICT, OR  
MT. VERNON R.F.P.D., OR  
MULINO WATER DISTRICT #1, OR  
MULTNOMAH COUNTY DRAINAGE DISTRICT #1, OR  
MULTNOMAH COUNTY R.F.P.D. #10, OR  
MULTNOMAH COUNTY R.F.P.D. #14, OR  
MULTNOMAH EDUCATION SERVICE DISTRICT  
MYRTLE CREEK R.F.P.D., OR  
NEAH-KAH-NIE WATER DISTRICT, OR  
NEDONNA R.F.P.D., OR  
NEHALEM BAY FIRE AND RESCUE, OR  
NEHALEM BAY HEALTH DISTRICT, OR  
NEHALEM BAY WASTEWATER AGENCY, OR  
NESIKA BEACH-OPHIR WATER DISTRICT, OR  
NESKOWIN REGIONAL SANITARY AUTHORITY, OR  
NESKOWIN REGIONAL WATER DISTRICT, OR  
NESTUCCA R.F.P.D., OR  
NETARTS WATER DISTRICT, OR  
NETARTS-OCEANSIDE R.F.P.D., OR  
NETARTS-OCEANSIDE SANITARY DISTRICT, OR  
NEW BRIDGE WATER SUPPLY DISTRICT, OR  
NEW CARLTON FIRE DISTRICT, OR  
NEW ORLEANS REDEVELOPMENT AUTHORITY, LA  
NEW PINE CREEK R.F.P.D., OR  
NEWBERG R.F.P.D., OR  
NEWBERRY ESTATES SPECIAL ROAD DISTRICT, OR  
NEWPORT R.F.P.D., OR  
NEWT YOUNG DITCH DISTRICT IMPROVEMENT COMPANY, OR  
NORTH ALBANY R.F.P.D., OR  
NORTH BAY R.F.P.D. #9, OR  
NORTH CLACKAMAS PARKS & RECREATION DISTRICT, OR  
NORTH COUNTY RECREATION DISTRICT, OR  
NORTH DOUGLAS COUNTY FIRE & EMS, OR  
NORTH DOUGLAS PARK & RECREATION DISTRICT, OR  
NORTH GILLIAM COUNTY HEALTH DISTRICT, OR  
NORTH GILLIAM COUNTY R.F.P.D., OR  
NORTH LAKE HEALTH DISTRICT, OR  
NORTH LEBANON WATER CONTROL DISTRICT, OR  
NORTH LINCOLN FIRE & RESCUE DISTRICT #1, OR  
NORTH LINCOLN HEALTH DISTRICT, OR  
NORTH MORROW VECTOR CONTROL DISTRICT, OR  
NORTH SHERMAN COUNTY R.F.P.D. OR  
NORTH UNIT IRRIGATION DISTRICT, OR  
NORTHEAST OREGON HOUSING AUTHORITY, OR  
NORTHEAST WHEELER COUNTY HEALTH DISTRICT, OR  
NORTHERN WASCO COUNTY P.U.D., OR  
NORTHERN WASCO COUNTY PARK & RECREATION DISTRICT, OR  
NYE DITCH USERS DISTRICT IMPROVEMENT, OR  
NYSSA ROAD ASSESSMENT DISTRICT #2, OR  
NYSSA RURAL FIRE DISTRICT, OR  
NYSSA-ARCADIA DRAINAGE DISTRICT, OR  
OAK LODGE WATER SERVICES, OR  
OAKLAND R.F.P.D., OR  
OAKVILLE COMMUNITY CENTER, OR  
OCEANSIDE WATER DISTRICT, OR  
OCHOCO IRRIGATION DISTRICT, OR

OCHOCO WEST WATER AND SANITARY AUTHORITY, OR  
ODELL SANITARY DISTRICT, OR  
OLD OWYHEE DITCH IMPROVEMENT DISTRICT, OR  
OLNEY-WALLUSKI FIRE & RESCUE DISTRICT, OR  
ONTARIO LIBRARY DISTRICT, OR  
ONTARIO R.F.P.D., OR  
OPHIR R.F.P.D., OR  
OREGON COAST COMMUNITY ACTION  
OREGON HOUSING AND COMMUNITY SERVICES  
OREGON INTERNATIONAL PORT OF COOS BAY, OR  
OREGON LEGISLATIVE ADMINISTRATION  
OREGON OUTBACK R.F.P.D., OR  
OREGON POINT, OR  
OREGON TRAIL LIBRARY DISTRICT, OR  
OTTER ROCK WATER DISTRICT, OR  
OWW UNIT #2 SANITARY DISTRICT, OR  
OWYHEE CEMETERY MAINTENANCE DISTRICT, OR  
OWYHEE IRRIGATION DISTRICT, OR  
PACIFIC CITY JOINT WATER-SANITARY AUTHORITY, OR  
PACIFIC COMMUNITIES HEALTH DISTRICT, OR  
PACIFIC RIVIERA #3 SPECIAL ROAD DISTRICT, OR  
PALATINE HILL WATER DISTRICT, OR  
PALMER CREEK WATER DISTRICT IMPROVEMENT COMPANY, OR  
PANORAMIC ACCESS SPECIAL ROAD DISTRICT, OR  
PANTHER CREEK ROAD DISTRICT, OR  
PANTHER CREEK WATER DISTRICT, OR  
PARKDALE R.F.P.D., OR  
PARKDALE SANITARY DISTRICT, OR  
PENINSULA DRAINAGE DISTRICT #1, OR  
PENINSULA DRAINAGE DISTRICT #2, OR  
PHILOMATH FIRE AND RESCUE, OR  
PILOT ROCK CEMETERY MAINTENANCE DISTRICT #5, OR  
PILOT ROCK PARK & RECREATION DISTRICT, OR  
PILOT ROCK R.F.P.D., OR  
PINE EAGLE HEALTH DISTRICT, OR  
PINE FLAT DISTRICT IMPROVEMENT COMPANY, OR  
PINE GROVE IRRIGATION DISTRICT, OR  
PINE GROVE WATER DISTRICT-KLAMATH FALLS, OR  
PINE GROVE WATER DISTRICT-MAUPIN, OR  
PINE VALLEY CEMETERY DISTRICT, OR  
PINE VALLEY R.F.P.D., OR  
PINWOOD COUNTRY ESTATES SPECIAL ROAD DISTRICT, OR  
PIONEER DISTRICT IMPROVEMENT COMPANY, OR  
PISTOL RIVER CEMETERY MAINTENANCE DISTRICT, OR  
PISTOL RIVER FIRE DISTRICT, OR  
PLEASANT HILL R.F.P.D., OR  
PLEASANT HOME WATER DISTRICT, OR  
POCAHONTAS MINING AND IRRIGATION DISTRICT, OR  
POE VALLEY IMPROVEMENT DISTRICT, OR  
POE VALLEY PARK & RECREATION DISTRICT, OR  
POE VALLEY VECTOR CONTROL DISTRICT, OR  
POLK COUNTY FIRE DISTRICT #1, OR  
POLK S.W.C.D., OR  
POMPADOUR WATER IMPROVEMENT DISTRICT, OR  
PONDEROSA PINES EAST SPECIAL ROAD DISTRICT, OR  
PORT OF ALSEA, OR  
PORT OF ARLINGTON, OR  
PORT OF ASTORIA, OR

PORT OF BANDON, OR  
PORT OF BRANDON, OR  
PORT OF BROOKINGS HARBOR, OR  
PORT OF CASCADE LOCKS, OR  
PORT OF COQUILLE RIVER, OR  
PORT OF GARIBALDI, OR  
PORT OF GOLD BEACH, OR  
PORT OF HOOD RIVER, OR  
PORT OF MORGAN CITY, LA  
PORT OF MORROW, OR  
PORT OF NEHALEM, OR  
PORT OF NEWPORT, OR  
PORT OF PORT ORFORD, OR  
PORT OF PORTLAND, OR  
PORT OF SIUSLAW, OR  
PORT OF ST. HELENS, OR  
PORT OF THE DALLES, OR  
PORT OF TILLAMOOK BAY, OR  
PORT OF TOLEDO, OR  
PORT OF UMATILLA, OR  
PORT OF UMPQUA, OR  
PORT ORFORD CEMETERY MAINTENANCE DISTRICT, OR  
PORT ORFORD PUBLIC LIBRARY DISTRICT, OR  
PORT ORFORD R.F.P.D., OR  
PORTLAND DEVELOPMENT COMMISSION, OR  
PORTLAND FIRE AND RESCUE  
PORTLAND HOUSING CENTER, OR  
POWDER R.F.P.D., OR  
POWDER RIVER R.F.P.D., OR  
POWDER VALLEY WATER CONTROL DISTRICT, OR  
POWERS HEALTH DISTRICT, OR  
PRAIRIE CEMETERY MAINTENANCE DISTRICT, OR  
PRINEVILLE LAKE ACRES SPECIAL ROAD DISTRICT #1, OR  
PROSPECT R.F.P.D., OR  
QUAIL VALLEY PARK IMPROVEMENT DISTRICT, OR  
QUEENER IRRIGATION IMPROVEMENT DISTRICT, OR  
RAINBOW WATER DISTRICT, OR  
RAINIER CEMETERY DISTRICT, OR  
RAINIER DRAINAGE IMPROVEMENT COMPANY, OR  
RALEIGH WATER DISTRICT, OR  
REDMOND AREA PARK & RECREATION DISTRICT, OR  
REDMOND FIRE AND RESCUE, OR  
RIDDLE FIRE PROTECTION DISTRICT, OR  
RIDGWOOD DISTRICT IMPROVEMENT COMPANY, OR  
RIDGWOOD ROAD DISTRICT, OR  
RIETH SANITARY DISTRICT, OR  
RIETH WATER DISTRICT, OR  
RIMROCK WEST IMPROVEMENT DISTRICT, OR  
RINK CREEK WATER DISTRICT, OR  
RIVER BEND ESTATES SPECIAL ROAD DISTRICT, OR  
RIVER FOREST ACRES SPECIAL ROAD DISTRICT, OR  
RIVER MEADOWS IMPROVEMENT DISTRICT, OR  
RIVER PINES ESTATES SPECIAL ROAD DISTRICT, OR  
RIVER ROAD PARK & RECREATION DISTRICT, OR  
RIVER ROAD WATER DISTRICT, OR  
RIVERBEND RIVERBANK WATER IMPROVEMENT DISTRICT, OR  
RIVERDALE R.F.P.D. 11-JT, OR  
RIVERGROVE WATER DISTRICT, OR  
RIVERSIDE MISSION WATER CONTROL DISTRICT, OR  
RIVERSIDE R.F.P.D. #7-406, OR



RIVERSIDE WATER DISTRICT, OR  
ROBERTS CREEK WATER DISTRICT, OR  
ROCK CREEK DISTRICT IMPROVEMENT, OR  
ROCK CREEK WATER DISTRICT, OR  
ROCKWOOD WATER P.U.D., OR  
ROCKY POINT FIRE & EMS, OR  
ROGUE RIVER R.F.P.D., OR  
ROGUE RIVER VALLEY IRRIGATION DISTRICT, OR  
ROGUE VALLEY SEWER SERVICES, OR  
ROGUE VALLEY SEWER, OR  
ROGUE VALLEY TRANSPORTATION DISTRICT, OR  
ROSEBURG URBAN SANITARY AUTHORITY, OR  
ROSEWOOD ESTATES ROAD DISTRICT, OR  
ROW RIVER VALLEY WATER DISTRICT, OR  
RURAL ROAD ASSESSMENT DISTRICT #3, OR  
RURAL ROAD ASSESSMENT DISTRICT #4, OR  
SAINT LANDRY PARISH TOURIST COMMISSION  
SAINT MARY PARISH REC DISTRICT 2  
SAINT MARY PARISH REC DISTRICT 3  
SAINT TAMMANY FIRE DISTRICT 4, LA  
SALEM AREA MASS TRANSIT DISTRICT, OR  
SALEM MASS TRANSIT DISTRICT  
SALEM SUBURBAN R.F.P.D., OR  
SALISHAN SANITARY DISTRICT, OR  
SALMON RIVER PARK SPECIAL ROAD DISTRICT, OR  
SALMON RIVER PARK WATER IMPROVEMENT  
DISTRICT, OR  
SALMONBERRY TRAIL INTERGOVERNMENTAL  
AGENCY, OR  
SANDPIPER VILLAGE SPECIAL ROAD DISTRICT, OR  
SANDY DRAINAGE IMPROVEMENT COMPANY, OR  
SANDY R.F.P.D. #72, OR  
SANTA CLARA R.F.P.D., OR  
SANTA CLARA WATER DISTRICT, OR  
SANTIAM WATER CONTROL DISTRICT, OR  
SAUVIE ISLAND DRAINAGE IMPROVEMENT  
COMPANY, OR  
SAUVIE ISLAND VOLUNTEER FIRE DISTRICT #30J,  
OR  
SCAPPOOSE DRAINAGE IMPROVEMENT COMPANY,  
OR  
SCAPPOOSE PUBLIC LIBRARY DISTRICT, OR  
SCAPPOOSE R.F.P.D., OR  
SCIO R.F.P.D., OR  
SCOTTSBURG R.F.P.D., OR  
SEAL ROCK R.F.P.D., OR  
SEAL ROCK WATER DISTRICT, OR  
SEWERAGE AND WATER BOARD OF NEW ORLEANS,  
LA  
SHANGRI-LA WATER DISTRICT, OR  
SHASTA VIEW IRRIGATION DISTRICT, OR  
SHELLEY ROAD CREST ACRES WATER DISTRICT,  
OR  
SHERIDAN FIRE DISTRICT, OR  
SHERMAN COUNTY HEALTH DISTRICT, OR  
SHERMAN COUNTY S.W.C.D., OR  
SHORELINE SANITARY DISTRICT, OR  
SILETZ KEYS SANITARY DISTRICT, OR  
SILETZ R.F.P.D., OR  
SILVER FALLS LIBRARY DISTRICT, OR  
SILVER LAKE IRRIGATION DISTRICT, OR  
SILVER LAKE R.F.P.D., OR  
SILVER SANDS SPECIAL ROAD DISTRICT, OR  
SILVERTON R.F.P.D. NO. 2, OR  
SISTERS PARKS & RECREATION DISTRICT, OR  
SISTERS-CAMP SHERMAN R.F.P.D., OR  
SIUSLAW PUBLIC LIBRARY DISTRICT, OR

SIUSLAW S.W.C.D., OR  
SIUSLAW VALLEY FIRE AND RESCUE, OR  
SIXES R.F.P.D., OR  
SKIPANON WATER CONTROL DISTRICT, OR  
SKYLINE VIEW DISTRICT IMPROVEMENT  
COMPANY, OR  
SLEEPY HOLLOW WATER DISTRICT, OR  
SMITH DITCH DISTRICT IMPROVEMENT COMPANY,  
OR  
SOUTH CLACKAMAS TRANSPORTATION DISTRICT,  
OR  
SOUTH COUNTY HEALTH DISTRICT, OR  
SOUTH FORK WATER BOARD, OR  
SOUTH GILLIAM COUNTY CEMETERY DISTRICT, OR  
SOUTH GILLIAM COUNTY HEALTH DISTRICT, OR  
SOUTH GILLIAM COUNTY R.F.P.D. VI-301, OR  
SOUTH LAFOURCHE LEVEE DISTRICT, LA  
SOUTH LANE COUNTY FIRE & RESCUE, OR  
SOUTH SANTIAM RIVER WATER CONTROL  
DISTRICT, OR  
SOUTH SHERMAN FIRE DISTRICT, OR  
SOUTH SUBURBAN SANITARY DISTRICT, OR  
SOUTH WASCO PARK & RECREATION DISTRICT, OR  
SOUTHERN COOS HEALTH DISTRICT, OR  
SOUTHERN CURRY CEMETERY MAINTENANCE  
DISTRICT, OR  
SOUTHVIEW IMPROVEMENT DISTRICT, OR  
SOUTHWEST LINCOLN COUNTY WATER DISTRICT,  
OR  
SOUTHWESTERN POLK COUNTY R.F.P.D., OR  
SOUTHWOOD PARK WATER DISTRICT, OR  
SPECIAL ROAD DISTRICT #1, OR  
SPECIAL ROAD DISTRICT #8, OR  
SPRING RIVER SPECIAL ROAD DISTRICT, OR  
SPRINGFIELD UTILITY BOARD, OR  
ST. PAUL R.F.P.D., OR  
STANFIELD CEMETERY DISTRICT #6, OR  
STANFIELD IRRIGATION DISTRICT, OR  
STARR CREEK ROAD DISTRICT, OR  
STARWOOD SANITARY DISTRICT, OR  
STAYTON FIRE DISTRICT, OR  
SUBLIMITY FIRE DISTRICT, OR  
SUBURBAN EAST SALEM WATER DISTRICT, OR  
SUBURBAN LIGHTING DISTRICT, OR  
SUCCOR CREEK DISTRICT IMPROVEMENT  
COMPANY, OR  
SUMMER LAKE IRRIGATION DISTRICT, OR  
SUMMERSVILLE CEMETERY MAINTENANCE  
DISTRICT, OR  
SUMNER R.F.P.D., OR  
SUN MOUNTAIN SPECIAL ROAD DISTRICT, OR  
SUNDOWN SANITATION DISTRICT, OR  
SUNFOREST ESTATES SPECIAL ROAD DISTRICT, OR  
SUNNYSIDE IRRIGATION DISTRICT, OR  
SUNRISE WATER AUTHORITY, OR  
SUNRIVER SERVICE DISTRICT, OR  
SUNSET EMPIRE PARK & RECREATION DISTRICT,  
OR  
SUNSET EMPIRE TRANSPORTATION DISTRICT, OR  
SURFLAND ROAD DISTRICT, OR  
SUTHERLIN VALLEY RECREATION DISTRICT, OR  
SUTHERLIN WATER CONTROL DISTRICT, OR  
SWALLEY IRRIGATION DISTRICT, OR  
SWEET HOME CEMETERY MAINTENANCE DISTRICT,  
OR  
SWEET HOME FIRE & AMBULANCE DISTRICT, OR  
SWISSHOME-DEADWOOD R.F.P.D., OR

TABLE ROCK DISTRICT IMPROVEMENT COMPANY,  
OR  
TALENT IRRIGATION DISTRICT, OR  
TANGENT R.F.P.D., OR  
TENMILE R.F.P.D., OR  
TERREBONNE DOMESTIC WATER DISTRICT, OR  
THE DALLES IRRIGATION DISTRICT, OR  
THOMAS CREEK-WESTSIDE R.F.P.D., OR  
THREE RIVERS RANCH ROAD DISTRICT, OR  
THREE SISTERS IRRIGATION DISTRICT, OR  
TIGARD TUALATIN AQUATIC DISTRICT, OR  
TIGARD WATER DISTRICT, OR  
TILLAMOOK BAY FLOOD IMPROVEMENT DISTRICT,  
OR  
TILLAMOOK COUNTY EMERGENCY  
COMMUNICATIONS DISTRICT, OR  
TILLAMOOK COUNTY S.W.C.D., OR  
TILLAMOOK COUNTY TRANSPORTATION DISTRICT,  
OR  
TILLAMOOK FIRE DISTRICT, OR  
TILLAMOOK P.U.D., OR  
TILLER R.F.P.D., OR  
TOBIN DITCH DISTRICT IMPROVEMENT COMPANY,  
OR  
TOLEDO R.F.P.D., OR  
TONE WATER DISTRICT, OR  
TOOLEY WATER DISTRICT, OR  
TRASK DRAINAGE DISTRICT, OR  
TRI CITY R.F.P.D. #4, OR  
TRI-CITY WATER & SANITARY AUTHORITY, OR  
TRI-COUNTY METROPOLITAN TRANSPORTATION  
DISTRICT OF OREGON  
TRIMET, OR  
TUALATIN HILLS PARK & RECREATION DISTRICT  
TUALATIN HILLS PARK & RECREATION DISTRICT,  
OR  
TUALATIN S.W.C.D., OR  
TUALATIN VALLEY FIRE & RESCUE  
TUALATIN VALLEY FIRE & RESCUE, OR  
TUALATIN VALLEY IRRIGATION DISTRICT, OR  
TUALATIN VALLEY WATER DISTRICT  
TUALATIN VALLEY WATER DISTRICT, OR  
TUMALO IRRIGATION DISTRICT, OR  
TURNER FIRE DISTRICT, OR  
TWIN ROCKS SANITARY DISTRICT, OR  
TWO RIVERS NORTH SPECIAL ROAD DISTRICT, OR  
TWO RIVERS S.W.C.D., OR  
TWO RIVERS SPECIAL ROAD DISTRICT, OR  
TYGH VALLEY R.F.P.D., OR  
TYGH VALLEY WATER DISTRICT, OR  
UMATILLA COUNTY FIRE DISTRICT #1, OR  
UMATILLA COUNTY S.W.C.D., OR  
UMATILLA COUNTY SPECIAL LIBRARY DISTRICT,  
OR  
UMATILLA HOSPITAL DISTRICT, OR  
UMATILLA R.F.P.D. #7-405, OR  
UMATILLA-MORROW RADIO AND DATA DISTRICT,  
OR  
UMPQUA S.W.C.D., OR  
UNION CEMETERY MAINTENANCE DISTRICT, OR  
UNION COUNTY SOLID WASTE DISPOSAL DISTRICT,  
OR  
UNION COUNTY VECTOR CONTROL DISTRICT, OR  
UNION GAP SANITARY DISTRICT, OR  
UNION GAP WATER DISTRICT, OR  
UNION HEALTH DISTRICT, OR  
UNION R.F.P.D., OR

UNION S.W.C.D., OR  
UNITY COMMUNITY PARK & RECREATION  
DISTRICT, OR  
UPPER CLEVELAND RAPIDS ROAD DISTRICT, OR  
UPPER MCKENZIE R.F.P.D., OR  
UPPER WILLAMETTE S.W.C.D., OR  
VALE OREGON IRRIGATION DISTRICT, OR  
VALE RURAL FIRE PROTECTION DISTRICT, OR  
VALLEY ACRES SPECIAL ROAD DISTRICT, OR  
VALLEY VIEW CEMETERY MAINTENANCE  
DISTRICT, OR  
VALLEY VIEW WATER DISTRICT, OR  
VANDEVERT ACRES SPECIAL ROAD DISTRICT, OR  
VERNONIA R.F.P.D., OR  
VINEYARD MOUNTAIN PARK & RECREATION  
DISTRICT, OR  
VINEYARD MOUNTAIN SPECIAL ROAD DISTRICT,  
OR  
WALLA WALLA RIVER IRRIGATION DISTRICT, OR  
WALLOWA COUNTY HEALTH CARE DISTRICT, OR  
WALLOWA LAKE COUNTY SERVICE DISTRICT, OR  
WALLOWA LAKE IRRIGATION DISTRICT, OR  
WALLOWA LAKE R.F.P.D., OR  
WALLOWA S.W.C.D., OR  
WALLOWA VALLEY IMPROVEMENT DISTRICT #1,  
OR  
WAMIC R.F.P.D., OR  
WAMIC WATER & SANITARY AUTHORITY, OR  
WARMSPRINGS IRRIGATION DISTRICT, OR  
WASCO COUNTY S.W.C.D., OR  
WATER ENVIRONMENT SERVICES, OR  
WATER WONDERLAND IMPROVEMENT DISTRICT,  
OR  
WATERBURY & ALLEN DITCH IMPROVEMENT  
DISTRICT, OR  
WATSECO-BARVIEW WATER DISTRICT, OR  
WAUNA WATER DISTRICT, OR  
WEDDERBURN SANITARY DISTRICT, OR  
WEST EAGLE VALLEY WATER CONTROL DISTRICT,  
OR  
WEST EXTENSION IRRIGATION DISTRICT, OR  
WEST LABISH DRAINAGE & WATER CONTROL  
IMPROVEMENT DISTRICT, OR  
WEST MULTNOMAH S.W.C.D., OR  
WEST SIDE R.F.P.D., OR  
WEST SLOPE WATER DISTRICT, OR  
WEST UMATILLA MOSQUITO CONTROL DISTRICT,  
OR  
WEST VALLEY FIRE DISTRICT, OR  
WESTERN HEIGHTS SPECIAL ROAD DISTRICT, OR  
WESTERN LANE AMBULANCE DISTRICT, OR  
WESTLAND IRRIGATION DISTRICT, OR  
WESTON ATHENA MEMORIAL HALL PARK &  
RECREATION DISTRICT, OR  
WESTON CEMETERY DISTRICT #2, OR  
WESTPORT FIRE AND RESCUE, OR  
WESTRIDGE WATER SUPPLY CORPORATION, OR  
WESTWOOD HILLS ROAD DISTRICT, OR  
WESTWOOD VILLAGE ROAD DISTRICT, OR  
WHEELER S.W.C.D., OR  
WHITE RIVER HEALTH DISTRICT, OR  
WIARD MEMORIAL PARK DISTRICT, OR  
WICKIUP WATER DISTRICT, OR  
WILLAKENZIE R.F.P.D., OR  
WILLAMALANE PARK & RECREATION DISTRICT, OR  
WILLAMALANE PARK AND RECREATION DISTRICT  
WILLAMETTE HUMANE SOCIETY

WILLAMETTE RIVER WATER COALITION, OR  
WILLIAMS R.F.P.D., OR  
WILLOW CREEK PARK DISTRICT, OR  
WILLOW DALE WATER DISTRICT, OR  
WILSON RIVER WATER DISTRICT, OR  
WINCHESTER BAY R.F.P.D., OR  
WINCHESTER BAY SANITARY DISTRICT, OR  
WINCHUCK R.F.P.D., OR  
WINSTON-DILLARD R.F.P.D., OR  
WINSTON-DILLARD WATER DISTRICT, OR  
WOLF CREEK R.F.P.D., OR  
WOOD RIVER DISTRICT IMPROVEMENT COMPANY,  
OR  
WOODBURN R.F.P.D. NO. 6, OR  
WOODLAND PARK SPECIAL ROAD DISTRICT, OR  
WOODS ROAD DISTRICT, OR  
WRIGHT CREEK ROAD WATER IMPROVEMENT  
DISTRICT, OR  
WYEAST FIRE DISTRICT, OR  
YACHATS R.F.P.D., OR  
YAMHILL COUNTY TRANSIT AREA, OR  
YAMHILL FIRE PROTECTION DISTRICT, OR  
YAMHILL SWCD, OR  
YONCALLA PARK & RECREATION DISTRICT, OR  
YOUNGS RIVER-LEWIS & CLARK WATER DISTRICT,  
OR  
ZUMWALT R.F.P.D., OR

**K-12 INCLUDING BUT NOT LIMITED TO:**

ACADIA PARISH SCHOOL BOARD  
BEAVERTON SCHOOL DISTRICT  
BEND-LA PINE SCHOOL DISTRICT  
BOGALUSA HIGH SCHOOL, LA  
BOSSIER PARISH SCHOOL BOARD  
BROOKING HARBOR SCHOOL DISTRICT  
CADDO PARISH SCHOOL DISTRICT  
CALCASIEU PARISH SCHOOL DISTRICT  
CANBY SCHOOL DISTRICT  
CANYONVILLE CHRISTIAN ACADEMY  
CASCADE SCHOOL DISTRICT  
CASCADES ACADEMY OF CENTRAL OREGON  
CENTENNIAL SCHOOL DISTRICT  
CENTRAL CATHOLIC HIGH SCHOOL  
CENTRAL POINT SCHOOL DISTRICT NO.6  
CENTRAL SCHOOL DISTRICT 13J  
COOS BAY SCHOOL DISTRICT NO.9  
CORVALLIS SCHOOL DISTRICT 509J  
COUNTY OF YAMHILL SCHOOL DISTRICT 29  
CULVER SCHOOL DISTRICT  
DALLAS SCHOOL DISTRICT NO.2  
DAVID DOUGLAS SCHOOL DISTRICT  
DAYTON SCHOOL DISTRICT NO.8  
DE LA SALLE N CATHOLIC HS  
DESCHUTES COUNTY SCHOOL DISTRICT NO.6  
DOUGLAS EDUCATIONAL DISTRICT SERVICE  
DUFUR SCHOOL DISTRICT NO.29  
EAST BATON ROUGE PARISH SCHOOL DISTRICT  
ESTACADA SCHOOL DISTRICT NO.10B  
FOREST GROVE SCHOOL DISTRICT  
GEORGE MIDDLE SCHOOL  
GLADSTONE SCHOOL DISTRICT  
GRANTS PASS SCHOOL DISTRICT 7  
GREATER ALBANY PUBLIC SCHOOL DISTRICT  
GRESHAM BARLOW JOINT SCHOOL DISTRICT  
HEAD START OF LANE COUNTY  
HIGH DESERT EDUCATION SERVICE DISTRICT  
HILLSBORO SCHOOL DISTRICT

HOOD RIVER COUNTY SCHOOL DISTRICT  
JACKSON CO SCHOOL DIST NO.9  
JEFFERSON COUNTY SCHOOL DISTRICT 509-J  
JEFFERSON PARISH SCHOOL DISTRICT  
JEFFERSON SCHOOL DISTRICT  
JUNCTION CITY SCHOOLS, OR  
KLAMATH COUNTY SCHOOL DISTRICT  
KLAMATH FALLS CITY SCHOOLS  
LAFAYETTE PARISH SCHOOL DISTRICT  
LAKE OSWEGO SCHOOL DISTRICT 7J  
LANE COUNTY SCHOOL DISTRICT 4J  
LINCOLN COUNTY SCHOOL DISTRICT  
LINN CO. SCHOOL DIST. 95C  
LIVINGSTON PARISH SCHOOL DISTRICT  
LOST RIVER JR/SR HIGH SCHOOL  
LOWELL SCHOOL DISTRICT NO.71  
SALEM-KEIZER PUBLIC SCHOOLS 24J  
MARION COUNTY SCHOOL DISTRICT 103  
MARIST HIGH SCHOOL, OR  
MCMINNVILLE SCHOOL DISTRICT NOAO  
MEDFORD SCHOOL DISTRICT 549C  
MITCH CHARTER SCHOOL  
MONROE SCHOOL DISTRICT NO.1J  
MORROW COUNTY SCHOOL DIST, OR  
MULTNOMAH EDUCATION SERVICE DISTRICT  
MULTISENSORY LEARNING ACADEMY  
MYRTLE PINT SCHOOL DISTRICT 41  
NEAH-KAH-NIE DISTRICT NO.56  
NEWBERG PUBLIC SCHOOLS  
NESTUCCA VALLEY SCHOOL DISTRICT NO.101  
NOBEL LEARNING COMMUNITIES  
NORTH BEND SCHOOL DISTRICT 13  
NORTH CLACKAMAS SCHOOL DISTRICT  
NORTH DOUGLAS SCHOOL DISTRICT  
NORTH WASCO CITY SCHOOL DISTRICT 21  
NORTHWEST REGIONAL EDUCATION SERVICE  
DISTRICT  
ONTARIO MIDDLE SCHOOL  
OREGON TRAIL SCHOOL DISTRICT NOA6  
ORLEANS PARISH SCHOOL DISTRICT  
PHOENIX-TALENT SCHOOL DISTRICT NOA  
PLEASANT HILL SCHOOL DISTRICT  
PORTLAND JEWISH ACADEMY  
PORTLAND PUBLIC SCHOOLS  
RAPIDES PARISH SCHOOL DISTRICT  
REDMOND SCHOOL DISTRICT  
REYNOLDS SCHOOL DISTRICT  
ROGUE RIVER SCHOOL DISTRICT  
ROSEBURG PUBLIC SCHOOLS  
SCAPPOOSE SCHOOL DISTRICT 1J  
SAINT TAMMANY PARISH SCHOOL BOARD, LA  
SEASIDE SCHOOL DISTRICT 10  
SHERWOOD SCHOOL DISTRICT 88J  
SILVER FALLS SCHOOL DISTRICT 4J  
SOUTH LANE SCHOOL DISTRICT 45J3  
SOUTHERN OREGON EDUCATION SERVICE  
DISTRICT  
SPRINGFIELD PUBLIC SCHOOLS  
SUTHERLIN SCHOOL DISTRICT  
SWEET HOME SCHOOL DISTRICT NO.55  
TERREBONNE PARISH SCHOOL DISTRICT  
THE CATLIN GABEL SCHOOL  
TIGARD-TUALATIN SCHOOL DISTRICT  
UMATILLA MORROW ESD  
WEST LINN WILSONVILLE SCHOOL DISTRICT  
WILLAMETTE EDUCATION SERVICE DISTRICT  
WOODBURN SCHOOL DISTRICT

YONCALLA SCHOOL DISTRICT  
ACADEMY FOR MATH ENGINEERING & SCIENCE  
(AMES), UT  
ALIANZA ACADEMY, UT  
ALPINE DISTRICT, UT  
AMERICAN LEADERSHIP ACADEMY, UT  
AMERICAN PREPARATORY ACADEMY, UT  
BAER CANYON HIGH SCHOOL FOR SPORTS &  
MEDICAL SCIENCES, UT  
BEAR RIVER CHARTER SCHOOL, UT  
BEAVER SCHOOL DISTRICT, UT  
BEEHIVE SCIENCE & TECHNOLOGY ACADEMY  
(BSTA) , UT  
BOX ELDER SCHOOL DISTRICT, UT  
CBA CENTER, UT  
CACHE SCHOOL DISTRICT, UT  
CANYON RIM ACADEMY, UT  
CANYONS DISTRICT, UT  
CARBON SCHOOL DISTRICT, UT  
CHANNING HALL, UT  
CHARTER SCHOOL LEWIS ACADEMY, UT  
CITY ACADEMY, UT  
DAGGETT SCHOOL DISTRICT, UT  
DAVINCI ACADEMY, UT  
DAVIS DISTRICT, UT  
DUAL IMMERSION ACADEMY, UT  
DUCHESNE SCHOOL DISTRICT, UT  
EARLY LIGHT ACADEMY AT DAYBREAK, UT  
EAST HOLLYWOOD HIGH, UT  
EDITH BOWEN LABORATORY SCHOOL, UT  
EMERSON ALCOTT ACADEMY, UT  
EMERY SCHOOL DISTRICT, UT  
ENTHEOS ACADEMY, UT  
EXCELSIOR ACADEMY, UT  
FAST FORWARD HIGH, UT  
FREEDOM ACADEMY, UT  
GARFIELD SCHOOL DISTRICT, UT  
GATEWAY PREPARATORY ACADEMY, UT  
GEORGE WASHINGTON ACADEMY, UT  
GOOD FOUNDATION ACADEMY, UT  
GRAND SCHOOL DISTRICT, UT  
GRANITE DISTRICT, UT  
GUADALUPE SCHOOL, UT  
HAWTHORN ACADEMY, UT  
INTECH COLLEGIATE HIGH SCHOOL, UT  
IRON SCHOOL DISTRICT, UT  
ITINERIS EARLY COLLEGE HIGH, UT  
JOHN HANCOCK CHARTER SCHOOL, UT  
JORDAN DISTRICT, UT  
JUAB SCHOOL DISTRICT, UT  
KANE SCHOOL DISTRICT, UT  
KARL G MAESER PREPARATORY ACADEMY, UT  
LAKEVIEW ACADEMY, UT  
LEGACY PREPARATORY ACADEMY, UT  
LIBERTY ACADEMY, UT  
LINCOLN ACADEMY, UT  
LOGAN SCHOOL DISTRICT, UT  
MARIA MONTESSORI ACADEMY, UT  
MERIT COLLEGE PREPARATORY ACADEMY, UT  
MILLARD SCHOOL DISTRICT, UT  
MOAB CHARTER SCHOOL, UT  
MONTICELLO ACADEMY, UT  
MORGAN SCHOOL DISTRICT, UT  
MOUNTAINVILLE ACADEMY, UT  
MURRAY SCHOOL DISTRICT, UT  
NAVIGATOR POINTE ACADEMY, UT  
NEBO SCHOOL DISTRICT, UT

NO UT ACAD FOR MATH ENGINEERING & SCIENCE  
(NUAMES), UT  
NOAH WEBSTER ACADEMY, UT  
NORTH DAVIS PREPARATORY ACADEMY, UT  
NORTH SANPETE SCHOOL DISTRICT, UT  
NORTH STAR ACADEMY, UT  
NORTH SUMMIT SCHOOL DISTRICT, UT  
ODYSSEY CHARTER SCHOOL, UT  
OGDEN PREPARATORY ACADEMY, UT  
OGDEN SCHOOL DISTRICT, UT  
OPEN CLASSROOM, UT  
OPEN HIGH SCHOOL OF UTAH, UT  
OQUIRRH MOUNTAIN CHARTER SCHOOL, UT  
PARADIGM HIGH SCHOOL, UT  
PARK CITY SCHOOL DISTRICT, UT  
PINNACLE CANYON ACADEMY, UT  
PIUTE SCHOOL DISTRICT, UT  
PROVIDENCE HALL, UT  
PROVO SCHOOL DISTRICT, UT  
QUAIL RUN PRIMARY SCHOOL, UT  
QUEST ACADEMY, UT  
RANCHES ACADEMY, UT  
REAGAN ACADEMY, UT  
RENAISSANCE ACADEMY, UT  
RICH SCHOOL DISTRICT, UT  
ROCKWELL CHARTER HIGH SCHOOL, UT  
SALT LAKE ARTS ACADEMY, UT  
SALT LAKE CENTER FOR SCIENCE EDUCATION, UT  
SALT LAKE SCHOOL DISTRICT, UT  
SALT LAKE SCHOOL FOR THE PERFORMING ARTS,  
UT  
SAN JUAN SCHOOL DISTRICT, UT  
SEVIER SCHOOL DISTRICT, UT  
SOLDIER HOLLOW CHARTER SCHOOL, UT  
SOUTH SANPETE SCHOOL DISTRICT, UT  
SOUTH SUMMIT SCHOOL DISTRICT, UT  
SPECTRUM ACADEMY, UT  
SUCCESS ACADEMY, UT  
SUCCESS SCHOOL, UT  
SUMMIT ACADEMY, UT  
SUMMIT ACADEMY HIGH SCHOOL, UT  
SYRACUSE ARTS ACADEMY, UT  
THOMAS EDISON - NORTH, UT  
TIMPANOGOS ACADEMY, UT  
TINTIC SCHOOL DISTRICT, UT  
TOOELE SCHOOL DISTRICT, UT  
TUACAHN HIGH SCHOOL FOR THE PERFORMING  
ARTS, UT  
UINTAH RIVER HIGH, UT  
UINTAH SCHOOL DISTRICT, UT  
UTAH CONNECTIONS ACADEMY, UT  
UTAH COUNTY ACADEMY OF SCIENCE, UT  
UTAH ELECTRONIC HIGH SCHOOL, UT  
UTAH SCHOOLS FOR DEAF & BLIND, UT  
UTAH STATE OFFICE OF EDUCATION, UT  
UTAH VIRTUAL ACADEMY, UT  
VENTURE ACADEMY, UT  
VISTA AT ENTRADA SCHOOL OF PERFORMING  
ARTS AND TECHNOLOGY, UT  
WALDEN SCHOOL OF LIBERAL ARTS, UT  
WASATCH PEAK ACADEMY, UT  
WASATCH SCHOOL DISTRICT, UT  
WASHINGTON SCHOOL DISTRICT, UT  
WAYNE SCHOOL DISTRICT, UT  
WEBER SCHOOL DISTRICT, UT  
WEILENMANN SCHOOL OF DISCOVERY, UT

**HIGHER EDUCATION**

ARGOSY UNIVERSITY  
BATON ROUGE COMMUNITY COLLEGE, LA  
BIRTHINGWAY COLLEGE OF MIDWIFERY  
BLUE MOUNTAIN COMMUNITY COLLEGE  
BRIGHAM YOUNG UNIVERSITY - HAWAII  
CENTRAL OREGON COMMUNITY COLLEGE  
CENTENARY COLLEGE OF LOUISIANA  
CHEMEKETA COMMUNITY COLLEGE  
CLACKAMAS COMMUNITY COLLEGE  
COLLEGE OF THE MARSHALL ISLANDS  
COLUMBIA GORGE COMMUNITY COLLEGE  
CONCORDIA UNIVERSITY  
GEORGE FOX UNIVERSITY  
KLAMATH COMMUNITY COLLEGE DISTRICT  
LANE COMMUNITY COLLEGE  
LEWIS AND CLARK COLLEGE  
LINFIELD COLLEGE  
LINN-BENTON COMMUNITY COLLEGE  
LOUISIANA COLLEGE, LA  
LOUISIANA STATE UNIVERSITY  
LOUISIANA STATE UNIVERSITY HEALTH SERVICES  
MARYLHURST UNIVERSITY  
MT. HOOD COMMUNITY COLLEGE  
MULTNOMAH BIBLE COLLEGE  
NATIONAL COLLEGE OF NATURAL MEDICINE  
NORTHWEST CHRISTIAN COLLEGE  
OREGON HEALTH AND SCIENCE UNIVERSITY  
OREGON INSTITUTE OF TECHNOLOGY  
OREGON STATE UNIVERSITY  
OREGON UNIVERSITY SYSTEM  
PACIFIC UNIVERSITY  
PIONEER PACIFIC COLLEGE  
PORTLAND COMMUNITY COLLEGE  
PORTLAND STATE UNIVERSITY  
REED COLLEGE  
RESEARCH CORPORATION OF THE UNIVERSITY OF  
HAWAII  
ROGUE COMMUNITY COLLEGE  
SOUTHEASTERN LOUISIANA UNIVERSITY  
SOUTHERN OREGON UNIVERSITY (OREGON  
UNIVERSITY SYSTEM)  
SOUTHWESTERN OREGON COMMUNITY COLLEGE  
TULANE UNIVERSITY  
TILLAMOOK BAY COMMUNITY COLLEGE  
UMPQUA COMMUNITY COLLEGE  
UNIVERSITY OF HAWAII BOARD OF REGENTS  
UNIVERSITY OF HAWAII-HONOLULU COMMUNITY  
COLLEGE  
UNIVERSITY OF OREGON-GRADUATE SCHOOL  
UNIVERSITY OF PORTLAND  
UNIVERSITY OF NEW ORLEANS  
WESTERN OREGON UNIVERSITY  
WESTERN STATES CHIROPRACTIC COLLEGE  
WILLAMETTE UNIVERSITY  
XAVIER UNIVERSITY  
UTAH SYSTEM OF HIGHER EDUCATION, UT  
UNIVERSITY OF UTAH, UT  
UTAH STATE UNIVERSITY, UT  
WEBER STATE UNIVERSITY, UT  
SOUTHERN UTAH UNIVERSITY, UT  
SNOW COLLEGE, UT  
DIXIE STATE COLLEGE, UT  
COLLEGE OF EASTERN UTAH, UT  
UTAH VALLEY UNIVERSITY, UT  
SALT LAKE COMMUNITY COLLEGE, UT  
UTAH COLLEGE OF APPLIED TECHNOLOGY, UT

**STATE AGENCIES**

ADMIN. SERVICES OFFICE  
BOARD OF MEDICAL EXAMINERS  
HAWAII CHILD SUPPORT ENFORCEMENT AGENCY  
HAWAII DEPARTMENT OF TRANSPORTATION  
HAWAII HEALTH SYSTEMS CORPORATION  
OFFICE OF MEDICAL ASSISTANCE PROGRAMS  
OFFICE OF THE STATE TREASURER  
OREGON BOARD OF ARCHITECTS  
OREGON CHILD DEVELOPMENT COALITION  
OREGON DEPARTMENT OF EDUCATION  
OREGON DEPARTMENT OF FORESTRY  
OREGON DEPT OF TRANSPORTATION  
OREGON DEPT. OF EDUCATION  
OREGON LOTTERY  
OREGON OFFICE OF ENERGY  
OREGON STATE BOARD OF NURSING  
OREGON STATE DEPT OF CORRECTIONS  
OREGON STATE POLICE  
OREGON TOURISM COMMISSION  
OREGON TRAVEL INFORMATION COUNCIL  
SANTIAM CANYON COMMUNICATION CENTER  
SEIU LOCAL 503, OPEU  
SOH- JUDICIARY CONTRACTS AND PURCH  
STATE DEPARTMENT OF DEFENSE, STATE OF  
HAWAII  
STATE OF HAWAII  
STATE OF HAWAII, DEPT. OF EDUCATION  
STATE OF LOUISIANA  
STATE OF LOUISIANA DEPT. OF EDUCATION  
STATE OF LOUISIANA, 26<sup>TH</sup> JUDICIAL DISTRICT  
ATTORNEY  
STATE OF UTAH

# Synthetic Turf Safety

## **PROVEN WITH SCIENCE**



THE ULTIMATE  
SURFACE EXPERIENCE

# Synthetic Turf Safety Proven With Science

## The Mother of Invention

The motivation for the invention of FieldTurf was twofold – improve the health and safety of players; and protect the planet.

When FieldTurf was just an idea, athletes were being beat up playing on the dangerous carpet surfaces of that era. Keeping grass fields in good condition required tons of harmful pesticides and chemicals, while irrigation wasted millions of gallons of clean water.

Health and safety was, is and always will be FieldTurf's DNA. Because we don't just make turf. We make a difference.

Over the past decade, our invention has improved player safety, reducing and preventing injuries around the globe. Our turf has eliminated millions of pounds of pesticides and harmful chemicals from the environment and saved billions of gallons of fresh water.

Recent news reports citing a possible link between crumb rubber and cancer have rightfully caused great concern to all. Unfortunately, these reports do not consider the decades of science studying exactly this subject.

Ongoing research continues the efforts to ensure that artificial playing fields reduce health and safety concerns. Not create them.

Before the acceptance of crumb rubber as an approved, safe, infill material for artificial turf, hundreds of studies had been commissioned and executed by health and safety experts worldwide.

The following pages look at some of their findings.

## CRUMB RUBBER

Crumb rubber, made from reclaimed tires, is an important part of the industry's premiere infill option for synthetic turf fields. It has been safely used in many products since being introduced in the early 1990s, and in playgrounds and tracks for much longer. The notoriously resilient SBR rubber material provides enhanced durability and cushioning to prevent injuries and keeps playing surfaces safe. Aside from its use in synthetic turf sports fields, SBR (Styrene-butadiene) rubber, referred to as crumb rubber, is also used in a variety of products from children's rubber toys to surgical gloves to food packaging, and even in chewing gum.

With the growing popularity of synthetic turf, questions have surfaced about the safety of the little black rubber pellets that protect our athletes. Hundreds of studies have been completed to understand any potential risks of artificial turf and its components. Government health ministries and environmental bodies in the U.S. and Europe have commissioned extensive research.

So have world health organizations, leading universities and independent scientific committees. Elected officials have reacted to the concerns of their constituents by commissioning studies to get the facts. The research has been done. The studies exist.

Read what the experts have said in independent testing, studies and reports on the potential health and environmental impact of artificial turf.



'crumb rubber is also used in a variety of products from children's toys to surgical gloves to food packaging, even chewing gum'



## INGESTION/ INHALATION

"The SVOCs identified based on library matches of their mass spectra were not present in toxicological databases evaluated and many are ubiquitous parts of consumer products. Similarly, the metal concentrations measured in field samples indicate that the risk would be de minimis among all populations expected to use artificial turf fields"

*Brian T. Pavilonis, Clifford P. Weisel, Brian Buckley, and Paul J. Liroy., "Bioaccessibility and Risk Exposure to Metals and SVOC's in Artificial Turf Field Fill Materials and Fibers (2013)"*

"The uptake of PAH of football players active on artificial grass fields with rubber crumb infill is minimal. If there is any exposure, then the uptake is very limited and within the range of uptake of PAH from environmental sources and/or diet."

*Joost G. M. van Rooij, Frans J. Jongeneelen, "Hydroxypyrene in urine of football players after playing on artificial sports field with tire crumb infill (December 2008)"*

"Genotoxicity testing of tire crumb samples following solvent extraction concluded that no DNA or chromosome-damaging chemicals were present. This suggests that ingestion of small amounts of tire crumb by small children will not result in an unacceptable hazard of contracting cancer."

*Enviro-Test Laboratories, Alberta Centre for Injury Control and Research, Department of Public Health Sciences, July 2003, 'Toxicological Evaluation for the Hazard Assessment of Tire Crumb for Use in Public Playgrounds'*

"Based upon the current evidence, a public health risk appears unlikely. A variety of governmental bodies including Norway, Sweden, New Jersey and California have recently reviewed the health issues; their assessments have not found a public health threat. Sources of exposure unrelated to artificial turf fields are likely more important than the turf fields for many chemicals."

*Connecticut Department of Public Health, October 2007, 'Artificial Turf Fields: Health Questions'*

"Based on the minimal concentrations of chemicals detected, it is considered very unlikely that any significant adverse vapor (inhalation) exposures would occur to humans in close proximity to where crumb rubber is used in outdoor applications."

*New Jersey Department of Environmental Protection, Division of Science, Research, and Technology, June 2007, 'Environmental Assessment and Risk Analysis - Preliminary Assessment of the Toxicity from Exposure to Crumb Rubber: its use in Playgrounds and Artificial Turf Playing Fields'*

"Two studies, one in California and one at Rutgers University did evaluate the cancer risk if children ingested a mouthable chunk of playground rubber (10 gram), using laboratory extraction methods to estimate the amount of chemicals that might become available in the stomach and absorbed into the body. Both studies found very low cancer risk from this scenario (Cal OEHHA 2007; Pavilonis et al. 2014). Thus, CT DPH finds no scientific support for a finding of elevated cancer risk from inhalation or ingestion of chemicals derived from recycled tires used on artificial turf fields."

*State of Connecticut Dept of Health - Brian Toal, Gary Ginsberg - Environmental and Occupational Health Assessment, Jan 2015*



'sources of exposure unrelated to artificial turf fields are likely more important than the turf fields'

## DERMAL CONTACT

"Tire crumb does not contain chemicals with high vapour pressures, exposure via inhalation deemed low risk. Oral ingestion deemed low risk because ingestion not likely, furthermore, question of how effective stomach acids and enzymes are at extracting toxic chemicals from tire crumb and transporting them into the blood stream."

*D.A. Birkholz, Director, Research & Development, ALS Laboratory Group, Edmonton, Alberta, October 2006, 'Assessing the Health and Environmental Impact from the Use of End-of-Life Tire Rubber Crumb as Artificial Turf in Sports Arenas'*

"Based on the available literature on exposure to rubber crumb by swallowing, inhalation and skin contact and our experimental investigations on skin contact we conclude that there is not a significant health risk due to the presence of rubber infill from used car tyres."

*INTRON, commissioned by two tyre associations, and supervised by the National Institute for Public Health and the Environment and by the Ministry of Housing, Spatial Planning and the Environment in the Netherlands, April 2008, 'Follow-up study of the environmental aspects of rubber infill'*

"Dermal exposure deemed low risk because carrier solvent is needed to extract toxic chemicals from tire crumb and to penetrate protective skin layers"

*D.A. Birkholz, Director, Research & Development, ALS Laboratory Group, Edmonton, Alberta, October 2006, 'Assessing the Health and Environmental Impact from the Use of End-of-Life Tire Rubber Crumb as Artificial Turf in Sports Arenas'*

"The uptake of PAH by athletes who have contact with crumb rubber synthetic turf is negligible. As far as dermal contact is concerned, the Norwegian Institute of Public Health and Radium Hospital (2006) carried out an extensive analysis of possible health concerns. The study found that there was no evidence to suggest that allergic reactions were caused by exposure to crumb rubber and speculated that latex in car tires was either - less available for uptake or was - deactivated as an allergen."

*University of California, Berkeley and the Corporation for Manufacturing Excellence (Manex), February 2010, 'Review of the Impacts of Crumb Rubber in Artificial Turf Applications'*

"Levels of chemicals in the air at synthetic turf fields do not raise a significant health concern. "

*New York State Department of Environmental Conservation & New York State Department of Health, May 2009, 'An Assessment of Chemical Leaching, Releases to Air and Temperature at Crumb-Rubber Infilled Synthetic Fields'*



'there is not a significant health risk due to the presence of rubber infill'



## AIR QUALITY

“Twenty air samples were collected above and around two synthetic turf playing surfaces in Connecticut. Ten of the samples were analyzed for volatile nitrosamine content and 10 were analyzed for benzothiazole and 4-(tert-octyl) phenol content. The samples were collected on warm, late summer days during periods of light to calm winds. In one case, the synthetic turf surface had been groomed three days prior to the sampling. The sampling was conducted during periods when the temperature of the crumb rubber in-fill material was elevated due to exposure to the sun. The combination of air temperatures, surface temperatures, wind speed and, the recent maintenance of one of the fields, are believed to be conditions favorable for generating maximum concentrations of the analytes in the air column above and around the playing surfaces. This study determined that under favorable conditions for vapor generation, no detectable concentrations of volatile nitrosamines or 4-(tert-octyl) phenol existed in the air column at a height of four feet above the tested synthetic playing surfaces or in the air either upwind or downwind of the fields.”

*Milone & MacBroom, engineering, landscape architecture, and environmental science firm based in Connecticut, December 2008, 'Evaluation of the Environmental Effects of Synthetic Turf Athletic Fields'*

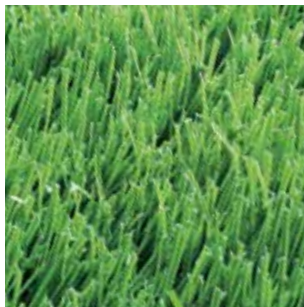
“The majority of the studies have been on higher surface area particles and have concluded they are currently acceptable. Therefore the larger granules used in artificial turf will have even less potential for emissions. For example a study undertaken by the Danish Ministry of the Environment concluded that the health risk on children’s playgrounds that contained both worn tyres and granulate rubber was insignificant. The available body of research does not substantiate the assumption that cancer resulting from exposure to SBR granulate infills in artificial turf could potentially occur.”

*Prof. Dr. Jiri Dvorak, FIFA, July 2006, 'An Open Letter concerning the potential cancer risk from certain granulate infills from artificial turf'*

“It is unlikely that any losses could occur to air or water in concentrations that would pose serious human or environmental risk. This opinion is supported by the reports and academic studies reviewed, which have shown insignificant environmental effects of such chemicals or release of volatiles and particulates into the atmosphere.”

*British Standards Institute (BSI), the Sports and Play Construction Association (SAPCA), March 2007, 'Twenty Questions [and Answers] on Rubber Granulate'*

‘larger granules used in artificial turf will have even less potential for emissions.’



## AIR QUALITY/VOCS

“The results of the INERIS Health Risk Evaluation, based on the concentration of the substances and worst-case scenarios, indicate that the VOC and aldehyde emissions from the three types of artificial grass fields studied in small and poorly ventilated indoor gymnasium situations are of no cause for concern for human health, for the workers installing the surfaces as well as for the general public, professional or amateur athletes, adults and children. In conclusion to its study, the INERIS stipulates that the health risks associated with the inhalation of VOC and aldehydes emitted by artificial grass fields in outdoor situations give no cause for concern towards human health.”

*Aliapur & Ademe (Environmental French Agency), 2007, 'Environmental and Health Evaluation of the Use of Elastomer Granulates (Virgin and from Used Tyres) as Filling in Third-Generation Artificial Turf'*

“We found there to be very little exposure of any substances, carcinogenic or not, in the vapors and dust that these fields generate under active use, summer conditions. Background levels of chemicals in urban and suburban air from heating sources and automobile traffic are much more significant sources of airborne carcinogens.”

*State of Connecticut Dept of Health - Brian Toal, Gary Ginsberg - Environmental and Occupational Health Assessment, Jan 2015*



‘indoor gymnasium situations are of no cause for concern for human health’

## WATER QUALITY

"The artificial (FieldTurf) field at Tabor Academy does not pose a threat to water quality or aquatic life. Water samples taken from the field in 2013 were tested for arsenic, cadmium, chromium, lead, mercury and zinc."

*Camp, Dresser, McKee and Smith, Inc, "Tabor Academy – Synthetic Turf Athletic Field Evaluation (March 2014)"*

"There is no significant threat from chemicals leaching into surface water and groundwater. While some chemicals can be released from crumb rubber over time, they are in small concentrations and are reduced by absorption, degradation and dilution - resulting in no significant impact on groundwater or surface water."

*New York State Department of Environmental Conservation & New York State Department of Health, May 2009, 'An Assessment of Chemical Leaching, Releases to Air and Temperature at Crumb-Rubber Infilled Synthetic Fields'*

"The evaluation of the stormwater drainage quality from synthetic turf athletic fields included the collection and analysis of eight water samples over a period of approximately one year from three different fields, the collection and analysis of samples of crumb rubber in-fill from the same three fields plus a sample of raw crumb rubber obtained from the manufacturer, and the evaluation of the effect of the stone base material on the pH of the drainage water. The results of the study indicate that the actual stormwater drainage from the fields allows for the complete survival of the test species called *Daphnia pulex*. An analysis of the concentration of metals in the actual drainage water indicates that metals do not leach in amounts that would be considered a risk to aquatic life as compared to existing water quality standards. Analysis of the laboratory based leaching potential of metals in accordance with acceptable EPA methods indicates that metals will leach from the crumb rubber but in concentrations that are within ranges that could be expected to leach from native soil."

*Milone & MacBroom, engineering, landscape architecture, and environmental science firm based in Connecticut, December 2008, 'Evaluation of the Environmental Effects of Synthetic Turf Athletic Fields'*

"Given that undiluted runoff is not likely and that three months is an outside estimate of the duration of toxicity, it is doubtful that tire crumb would present a significant risk of contamination in receiving surface waters or groundwater."

*Enviro-Test Laboratories, Alberta Centre for Injury Control and Research, Department of Public Health Sciences, July 2003, 'Toxicological Evaluation for the Hazard Assessment of Tire Crumb for Use in Public Playgrounds'*

"Several recent studies explored this concern in great depth and found no basis for health or environmental concern due to leaching of hazardous materials from synthetic turf installations, similar to the one at Maple Park. REAC believes that there is sufficient evidence to support the conclusion that the field design at Maple Park poses no risk to the local environment in Ridgewood."

*Ridgewood Environmental Advisory Committee (REAC) January-October 2009, 'Assessment of Environmental, Health and Human Safety Concerns Related to the Synthetic Turf Surface at Maple Park in Ridgewood, NJ'*



'no basis for health or environmental concern due to leaching of hazardous materials'



## PAHS / CANCER RISK

"The SVOCs identified based on library matches of their mass spectra were not present in toxicological databases evaluated and many are ubiquitous parts of consumer products. Similarly, the metal concentrations measured in field samples indicate that the risk would be de minimis among all populations expected to use artificial turf fields"

*Brian T. Pavilonis, Clifford P. Weisel, Brian Buckley, and Paul J. Liroy., "Bioaccessibility and Risk Exposure to Metals and SVOC's in Artificial Turf Field Fill Materials and Fibers (2013)"*

"The uptake of PAH of football players active on artificial grass fields with rubber crumb infill is minimal. If there is any exposure, then the uptake is very limited and within the range of uptake of PAH from environmental sources and/or diet."

*Joost G. M. van Rooij, Frans J. Jongeneelen, "Hydroxypyrene in urine of football players after playing on artificial sports field with tire crumb infill (December 2008)"*

"...risk is well below the de minimis level of  $1 \times 10^{-6}$  (one in one million), generally considered an acceptable cancer risk due to its small magnitude compared to the overall cancer rate"

*Office of Environmental Health Hazard Assessment / California Integrated Waste Management Board, "Evaluation of Health Effects of Recycled Waste Tires in Playground and Track Products (January 2007)"*

"Genotoxicity testing of tire crumb samples following solvent extraction concluded that no DNA or chromosome-damaging chemicals were present. This suggests that ingestion of small amounts of tire crumb by small children will not result in an unacceptable hazard of contracting cancer."

*Enviro-Test Laboratories, Alberta Centre for Injury Control and Research, Department of Public Health Sciences "Toxicological Evaluation for the Hazard Assessment of Tire Crumb for Use in Public Playgrounds (July 2003)"*

"The uptake of PAH by athletes who have contact with crumb rubber synthetic turf is negligible."

*University of California, Berkeley and the Corporation for Manufacturing Excellence (Manex), "Review of the Impacts of Crumb Rubber in Artificial Turf Applications (February 2010)"*

"Based upon the information reviewed on PAH exposure in humans and the results of the PAH air testing performed by J.C. Broderick & Associates, the potential for exposure to PAHs during normal use of the athletic field at Schreiber and Comsewogue appears to be minimal or insignificant."

*J.C. Broderick & Associates, commissioned by Schreiber High School and Comsewogue High School (NY), October 2007, 'Ambient Air Sampling for PAH's'*

"The studies to date have concluded that PAHs (Polynuclear Aromatic Hydrocarbons) are not released or at most negligibly released from tyre abradate (The University of Dortmund Institute for Environmental Research 1997). Epidemiological studies conducted by the Health Effects Institute, The World Health Organisation and other investigators do not implicate tyre wear particles in ambient air as contributing to human health effects (respiratory and cardiovascular diseases)."

*Prof. Dr. Jiri Dvorak, FIFA, July 2006, 'An Open Letter concerning the potential cancer risk from certain granulate infills from artificial turf'*

"the uptake is within the range of uptake of PAH from other environmental sources or diet"



## PAHS / CANCER RISK

“The majority of the studies have been on higher surface area particles and have concluded they are currently acceptable. Therefore the larger granules used in artificial turf will have even less potential for emissions. For example a study undertaken by the Danish Ministry of the Environment concluded that the health risk on children’s playgrounds that contained both worn tyres and granulate rubber was insignificant. The available body of research does not substantiate the assumption that cancer resulting from exposure to SBR granulate infills in artificial turf could potentially occur.”

*Prof. Dr. Jiri Dvorak, FIFA, July 2006, ‘An Open Letter concerning the potential cancer risk from certain granulate infills from artificial turf’*

“No significant differences were found between artificial football fields and urban sites. No differences were found between artificial football fields and “natural” football fields. There would not be any more risk on an artificial turf football field than there would be in the rest of the city.”

*Università degli Studi di Torino “Artificial Turf Football Fields: Environmental and Mutagenicity Assessment (July 2012)”*

“Overall, then, for several reasons, I find no reliable basis for the notion that crumb rubber in-filled synthetic turf fields pose a significant risk of cancer. Several groups of investigators, from academia, government, and consulting firms, have performed environmental monitoring and/or modeling studies of crumb rubber and synthetic turf fields, and have reached the same conclusion.”

*Laura C. Green, Ph.D., D.A.B.T., Consulting Toxicologist “Assessment of recent media reports of cancer among soccer players using synthetic turf fields (March 2014)”*

“The Connecticut Department of Public Health has evaluated the potential exposures and risks from athletic use of artificial turf fields. Our study of 5 fields in Connecticut in 2010-2011 was a comprehensive investigation of releases from the fields during active play. This study was conducted as a joint project with the CT DEEP and the University of CT Health Center and was peer-reviewed by the Connecticut Academy of Science and Engineering. Our study did not find a large amount of vapor or particle release from the fields confirming prior reports from Europe and the US.”

“We put these exposures into a public health context by performing a risk assessment. Our risk assessment did not find elevated cancer risk.”

*State of Connecticut Dept of Health - Brian Toal, Gary Ginsberg - Environmental and Occupational Health Assessment, Jan 2015*



## PAHS / CANCER RISK

“In summary, the scientific literature continues to suggest that exposure opportunities to artificial turf fields are not generally expected to result in health effects. Testing results on the crumb rubber infill indicated lead content less than CPSIA statutory limits established for children’s products.”

“With respect to cancer concerns reported in media stories, it is important to note that the reports of cancers were of a wide variety of different types, each with its own set of risk factors. In addition, our staff reviewed cancer incidence data for the Town of Medway. The Massachusetts Cancer Registry (MCR) is a population-based surveillance system that began collecting information in 1982 on Massachusetts residents diagnosed with cancer in the state. All newly diagnosed cancer cases among Massachusetts residents are required by law to be reported to the MCR within six months of the date of diagnosis (MGL, c.111, s.111B). This information is kept in a confidential database and reviewed for accuracy and completeness. Available information on the occurrence of cancers in children living in Medway indicates no diagnoses of Hodgkin Lymphoma, NHL, or osteosarcoma have been reported to the MCR in a search of their files from 2006 to the present. Although it is possible that a very recent diagnosis may not yet have been reported to the MCR, the fact that there are no reports of such cancers is reassuring.”

*Massachusetts Department of Public Health - Suzanne K. Condon, Associate Commissioner Director, Bureau of Environmental Health*

*‘Evaluation of health concerns related to the use of crumb rubber infill material for artificial turf fields in Medway, Massachusetts’*



PAHS /  
CANCER RISK

## YALE STUDY RESPONSE

**Noted toxicologist Laura C. Green, Ph.d., recent addressed the recently reported “Yale Study” from Connecticut non-profit group Environment and Human Health, Inc (EHHI).**

“For many reasons, the EHHI/Yale study does not demonstrate that rubber mulch or crumb rubber pose a significant risk of cancer (or other diseases).”

“First, the study has not been published (or released in any complete form) nor, to my knowledge, has it been peer reviewed. In fact, contrary to the press release, the study does not appear to have been written up in even an unpublished manuscript. At my request, Nancy Alderman of EHH was kind enough to supply me with a summary of some of the methods and a spreadsheet of the results to date: I have attached these materials to this memorandum.”

“Second, as far as I can tell, the summary results presented are entirely non-quantitative: there is no indication of the concentrations of any of the detected chemicals, let alone is there any attempt to assess levels of exposure or doses potentially received by children or others playing on or near rubber mulch or crumb rubber. Accordingly, there is no way to judge the degree to which any such exposures might be risky. Since all of us eat, drink, and otherwise contact at least trace levels of many carcinogens daily, it is crucial to be quantitative when assessing cancer-risks (and then acting upon those assessments). Absent at least semi-quantitative estimates of risk, informed judgments simply cannot be made.”

“Third, to the summary of the study-methods, the chemicals were detected in methylene chloride extracts of a mixture of ground and ungrounded crumb rubber or rubber mulch — but methylene chloride extraction is not a relevant or reliable means of assessing how rubber mulch in playgrounds might become solubilized or otherwise release chemicals that could then be absorbed across a child’s skin, for example, or across a child’s digestive tract (were he or she to ingest some rubber). For purposes of human health risk assessment, instead of using a non-biological solvent such as methylene chloride, one should use simulated sweat or simulated gastric fluid, as used in the published, peer-reviewed study by Pavilonis et al., 2014, for example, cited above.”



PAHS /  
CANCER RISK

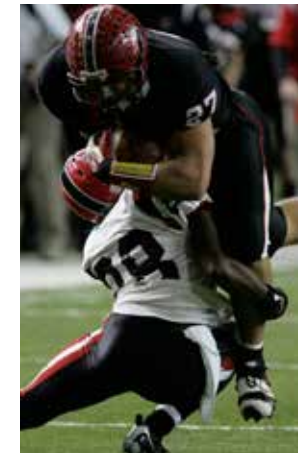
“Fourth, EHHI reports that eight of the chemicals detected in the methylene chloride extracts of at least one of the nine samples of mulch are “probable carcinogens” (there were another five samples of “infill” that are not considered here) — but none of these eight chemicals is so categorized by authoritative bodies, such as the International Agency for Research on Cancer (IARC), the U.S. National Toxicology Program (NTP), or the U.S. Environmental Protection Agency (EPA). Moreover, not one of the putative “probable carcinogens” is consistently detected in the samples of mulch.”

“For example, EHHI lists pyrene (detected in seven of the nine samples) as a carcinogen, but no rodent bioassays of pyrene are in fact positive; and, per U.S. EPA, “Overall, the database for pyrene is substantial, and the weight of evidence suggests that this PAH is not carcinogenic” (EPA--635--R--08--012A). Not surprisingly, then, neither IARC nor NTP lists pyrene as either known or a probable human carcinogen (See Here). Similarly, EHHI lists heptadecane (detected in one of the samples) as a carcinogen, but no rodent bioassays indicate that heptadecane is carcinogenic, and it is not listed as a carcinogen by either IARC or NTP. EHHI lists phthalamide as a carcinogen, but the NTP bioassays for phthalamide yielded negative results in male and female rats and mice, and it is not listed as a carcinogen by either IARC or NTP.”

“And EHHI lists 9,10--dimethylanthracene, fluoranthene, phenanthrene, 4--(1,1,3,3--tetramethylbutyl)--phenol, and 1--methylpyrene as carcinogens; but, again not one of these five chemicals is listed as a carcinogen by either IARC or NTP.”

“Finally, I would note that the chemicals butadiene and benzene were not detected in this EHHI/Yale study. Recall that these two chemicals are indeed established causes of cancer in humans, and that EHHI had hypothesized that both are present — and presumably bioavailable — at significant concentrations in crumb rubber and rubber mulch. I would add that the elevated temperatures used to dry and to analyze the samples would likely have obscured the presence of either compound, but it remains the case that the causal hypothesis raised by EHHI has yet to be supported by actual data or other reliable evidence.”

*Laura C. Green, Ph.D., D.A.B.T., Consulting Toxicologist  
June 29, 2015*



## MRSA/STAPH

The spread of MRSA has prompted parents and other concerned citizens to rightfully question why their children are getting sick. Recent research has proven that synthetic turf does not play a role in promoting MRSA/staph and the concerns are often brought on by companies or lobbyists with a vested interest in anti-microbial products.

### Research at Penn State confirms that Staph is not an issue on turf and that natural grass harbors more bacteria.

<http://plantscience.psu.edu/research/centers/ssrc/research/synthetic-turf-research-penn-state>

In conclusion, there are generally lower numbers of total microbes present in the infill or fibers of the synthetic turf systems tested compared to natural turfgrass rootzones and Staphylococcus aureus bacterium were not found on any of the playing surfaces. Staphylococcus aureus bacterium were found on towels and other devices used by athletes.

Under non-extreme temperature and very limited light conditions present during the indoor portion of this study, S. aureus survived on both synthetic and natural turfgrass for multiple days. However, the bacteria do not appear to thrive under these conditions as the numbers of surviving bacteria decrease significantly with time.

<http://plantscience.psu.edu/research/centers/ssrc/documents/human-health-issues-on-synthetic-turf-in-the-usa.pdf>

Based on the findings of the S. aureus survey, concern that infilled synthetic turf harbours and provides a breeding ground for S. aureus bacteria is unwarranted within the context of this study. S. aureus bacteria were found on a number of surfaces that athletes commonly come into contact with, such as towels and blocking pads; however, the tested synthetic turf did not contain any S. aureus. It is important to note that synthetic turf is more abrasive than natural turf grass and, as a result, breaks in the skin are more common, creating a pathway for infection when in contact with an infected surface.

The "Recommended Practices for the Maintenance of Infill Surfaces for NFL Games" states that "Clubs should not use antimicrobial agents on infill turf surfaces. The medical and scientific communities have not documented any benefit of using such agents on infill turf surfaces and there may be potential disbenefit to doing so."

#### RP 4: Anti-Bacterial Agents Recommendation recap:

The Centers for Disease Control and Prevention (CDC) does not recognize infill turf as a significant source of MRSA infections. [See Appendix E] As the CDC has stated "[t] here is a lack of evidence that large-scale use (e.g., spraying or fogging rooms or surfaces) of disinfectants will prevent MRSA infections more effectively than a more targeted approach of cleaning frequently-touched surfaces." [See Appendix E] This RP should not be interpreted as preventing the use of cleansing agents such as detergents and soaps to clean infill turf surfaces provided that such cleaning is performed in accordance with the recommendations of the applicable turf and cleaning agent manufacturers.

## MRSA/STAPH

### References on the Use of Anti-Bacterial Agents:

Aureden, K. and S. Garber. 2003. Methicillin-Resistant Staphylococcus aureus Infections Among Competitive Sports Participants --- Colorado, Indiana, Pennsylvania, and Los Angeles County, 2000- 2003. MMWR 52(33);793-795. <http://www.apic.org/AM/Template.cfm?Section=Reports1&Template=/CM/ContentDisplay.cfm&ContentFileID=4262>

Begier et al. 2004. A High-Morbidity Outbreak of Methicillin-Resistant Staphylococcus aureus among Players on a College Football Team, Facilitated by Cosmetic Body Shaving and Turf Burns. Clin Inf Dis;39:1446-53.

Kazakova et al. 2005. A Clone of Methicillin-Resistant Staphylococcus aureus among Professional Football Players. N Engl J Med;352:468-75.

McNitt, A.S. 2005. Synthetic turf in the USA - Trends and issues. Int. Turfgrass Soc. Res. J. 10:27-33.

McNitt, A.S., D.M. Petrunak, and T.J. Serensits. 2008. A Survey for the Presence of Staphylococcus aureus in the Infill Media of Synthetic Turf. Acta Horticulture. 783:567-572. <http://cropsoil.psu.edu/ssrc/research/microbial>

"Outbreaks of antibiotic-resistant strains of staph last year gained significant media attention, resulting in the temporary closing of school buildings and athletic facilities. Our research found that infilled synthetic turf systems do not harbor significant populations of staph bacteria to warrant concern."

*Dr. Andrew McNitt, Associate Professor of Soil Science at Penn State University, June 2007, 'A Survey of Microbial Populations in Infilled Synthetic Turf Fields'*

The California EPA's Office of Environmental Health Hazard Assessment conducted a review of available literature entitled, Chemicals and Particulates in the Air Above the New Generation of Artificial Turf Playing Fields, and Artificial Turf as a Risk Factor for Infection by Methicillin-Resistant Staphylococcus Aureus (MRSA). The review concluded that "there is a negligible human health risk from inhaling the air above synthetic turf and it is unlikely that the new generation of artificial turf is itself a source of MRSA."

*California EPA Office of Environmental Health Hazard Assessment, July 2009, 'Chemicals and Particulates in the Air Above the New Generation of Artificial Turf Playing Fields, and Artificial Turf as a Risk Factor for Infection by Methicillin-Resistant Staphylococcus Aureus (MRSA)'*

"This confirms what we thought all along," Cole said. "The speed with which we obtained the results is a testament to how clean things are there."

*Allegheny County Health Department, October 2007*

"There is no data to suggest that turf will ever spread MRSA. We sampled the turf for the Rams' investigation and didn't find it. We actually observed the game. We mapped where the contact on the turf occurred. We sampled those areas where the players were tackled. And then we sampled areas where there wasn't any direct contact to the turf. We didn't find any Staph or MRSA."

*Jeff Hageman, Centers for Disease Control, May 2006*

## MRSA/STAPH

“In the outbreaks of MRSA, the environment has not played a significant role in the transmission of MRSA. MRSA is transmitted most frequently by direct skin-to-skin contact. You can protect yourself from infections by practicing good hygiene (e.g., keeping your hands clean by washing with soap and water or using an alcohol-based hand rub and showering after working out); covering any open skin area such as abrasions or cuts with a clean dry bandage; avoiding sharing personal items such as towels or razors; using a barrier (e.g., clothing or a towel) between your skin and shared equipment; and wiping surfaces of equipment before and after use.”

*Centers for Disease Control, February 2005*

“We have an injury reporting tracking system and it’s limited by sample size, but we haven’t had any linkage to turf,” said the NCAA’s David Klossner. “I know there have been some reports in the media. The CDC continues to tell us that the turf is not a harbor for this MRSA/staph infection. And if things are handled appropriately as far as hygiene practices, common sense, and wound cleaning and coverage, then a lot of these things can be prevented.”

*NCAA Director of Health and Safety, David Klossner, November 2006*

“MRSA infection has never been reported in connection with the synthetic surface at Maple Park or similar field designs. Several studies have proven that there is no connection between current generation synthetic surfaces and MRSA infections.”

*Ridgewood Environmental Advisory Committee (REAC) January-October 2009, ‘Assessment of Environmental, Health and Human Safety Concerns Related to the Synthetic Turf Surface at Maple Park in Ridgewood, NJ’*

“Researchers found fewer bacteria detected on the artificial turf compared to natural turf, suggesting that the risk of infection to athletes using these fields was actually lower. However, more skin abrasions were observed in athletes using artificial turf fields than natural turf fields, and the study authors made various recommendations to help prevent skin abrasions (e.g., protective equipment or clothing) and prompt treatment of skin abrasions.”

*Massachusetts Department of Public Health - Suzanne K. Condon, Associate Commissioner Director, Bureau of Environmental Health  
‘Evaluation of health concerns related to the use of crumb rubber infill material for artificial turf fields in Medway, Massachusetts’*

The spread of MRSA has prompted parents and other concerned citizens to rightfully question why their children are getting sick. Recent research has proven that synthetic turf does not play a role in promoting MRSA/staph and the concerns are often brought on by companies or lobbyists with a vested interest in anti-microbial products.



## MRSA/STAPH

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In conclusion, there are generally lower numbers of total microbes present in the infill or fibers of the synthetic turf systems tested compared to natural turfgrass rootzones and Staphylococcus aureus bacterium were not found on any of the playing surfaces. Staphylococcus aureus bacterium were found on towels and other devices used by athletes.

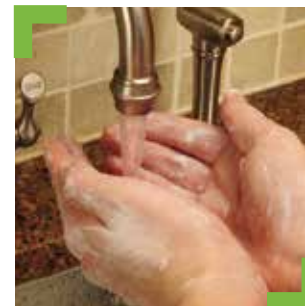
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<http://plantscience.psu.edu/research/centers/ssrc/documents/human-health-issues-on-synthetic-turf-in-the-usa.pdf>

Based on the findings of the S. aureus survey, concern that infilled synthetic turf harbours and provides a breeding ground for S. aureus bacteria is unwarranted within the context of this study. S. aureus bacteria were found on a number of surfaces that athletes commonly come into contact with, such as towels and blocking pads; however, the tested synthetic turf did not contain any S. aureus. It is important to note that synthetic turf is more abrasive than natural turf grass and, as a result, breaks in the skin are more common, creating a pathway for infection when in contact with an infected surface.

The “Recommended Practices for the Maintenance of Infill Surfaces for NFL Games” states that “Clubs should not use antimicrobial agents on infill turf surfaces. The medical and scientific communities have not documented any benefit of using such agents on infill turf surfaces and there may be potential disbenefit to doing so.”

‘there is  
no connection  
between current  
generation synthetic  
surfaces and MRSA  
infections’



## HEAT OVERVIEW

In most climates, heat on synthetic turf fields is not an issue. But on a hot summer day, things outside can get hot.

Dr. Andy McNitt, head of the Penn State Center for Sports Surface Research, advises trainers to be aware of the heat when practicing in the summer on clear days. He recommends cutting down on practice times, considering pulling players off fields earlier and taking more breaks to cool down.

Collected data indicated that the air temperature as measured at a distance of two feet above the synthetic turf surface ranged from one to five degrees greater than the observed ambient air temperature, while the temperature at the same height above the natural turf ranged from 3° F lower to 1° F greater than the ambient air temperature. The measured air temperature at a height of five feet above the synthetic turf more closely approximated the ambient air temperature. Measured air temperatures ranged from 2° F lower to 2° F greater than the ambient air temperature.

Time of day (hrs)	Ambient Temperature	Natural Grass		Synthetic Turf	
		Air Temperature 2 feet above surface	Air Temperature 5 feet above surface	Air Temperature 2 feet above surface	Air Temperature 5 feet above surface
	°F	°F	°F	°F	°F
12:00	101	99	101	103	101
12:30	101	99.7	101	104	101
13:00	103	100	103	104	101
13:30	102	101	102	103	101
14:00	101	100	101	103	101
14:30	99	97	99	104	101
15:00	99	100	99	104	101

"The results of the temperature measurements obtained from the fields studied in Connecticut indicate that solar heating of the materials used in the construction of synthetic turf playing surfaces does occur and is most pronounced in the polyethylene and polypropylene fibers used to replicate natural grass, rather than the crumb rubber particles. Rapid cooling of the fibers was noted if the sunlight was interrupted or filtered by clouds. Significant cooling was also noted if water was applied to the synthetic fibers in quantities as low as one ounce per square foot. The elevated temperatures noted for the fibers generally resulted in an air temperature increase of less than five degrees even during periods of calm to low winds."

*Milone & MacBroom, engineering, landscape architecture, and environmental science firm based in Connecticut*

'measured air temperatures ranged from 2° F lower to 2° F greater than the ambient air temperature'

## HEAT OVERVIEW

"The study entitled 'Incidence, Mechanisms, and Severity of Game-Related College Football Injuries on FieldTurf versus Natural Grass - A Three Year Prospective Study', shows that there were double the amount of heat-related illnesses on natural grass playing surfaces compared with FieldTurf artificial turf fields."

*Michael C. Meyers, PhD, FACSM, Department of Health and Human Development Montana State University*

"The ambient air above both surfaces differed by only 3°F at 12" above the surface and approximately 2°F at 39" (the approximate chest height of a typical youth athlete). The differences in the ambient air were undetectable without a thermometer. In both cases, the ambient air temperature above the surfaces was slightly higher than the general air temperature."

*Ridgewood Environmental Advisory Committee (REAC) January-October 2009, 'Assessment of Environmental, Health and Human Safety Concerns Related to the Synthetic Turf Surface at Maple Park in Ridgewood, NJ'*



'there were double the amount of heat-related illnesses on natural grass playing surfaces compared with FieldTurf artificial turf fields'

## LEAD



'young children are not at risk from exposure to lead in these fields'

In April 2008, some synthetic turf fields in New Jersey were shut down by the New Jersey Department of Health and Senior Services for elevated levels of lead. However, test results have since indicated there was no lead in the air, soil or in the dust created by the removal of one of the fields.

Both fields were subsequently re-opened.

Lead chromate is not lead carbonate, the lead formerly found in paint. This inorganic substance is used to color the synthetic turf fiber. In synthetic turf, the silica-coated, encapsulated pigment particles are used to improve performance characteristics and reduce toxicity. Bioavailability of lead from pigment is extremely low. It is almost completely insoluble, not an inhalation hazard and not readily absorbed by the body if ingested.

"In July 2008, a U.S. Product Safety Commission staff report concluded that synthetic turf fields are OK to install and play on for people of all ages. The evaluation of older and newer synthetic turf fields concluded that 'young children are not at risk from exposure to lead in these fields.' The report showed that newer fields had no lead or generally had the lowest lead levels. Although small amounts of lead were detected on the surface of some older fields, none of the tested fields released amounts of lead that would be harmful to children."

*U.S. Consumer Product Safety Commission, July 2008, "CPSC Staff Finds Synthetic Turf Fields OK to Install, OK to Play On"*

"Testing on FieldTurf fields have consistently shown 10-20 ppms or less than 5% of the lead level regarded as problematic. No cases of elevated blood lead levels in children have been linked to artificial turf on athletic fields in New Jersey and elsewhere."

*Center for Disease Control (CDC), June 2008, "Potential Exposure to Lead in Artificial Turf: Public Health Issues, Actions, and Recommendations"*

"Based on existing HUD Guidelines and EPA standards, lead hazard risk assessments at these four DPR synthetic turf fields did not identify lead hazards."

*New York City Department of Health and Mental Hygiene, January 2008*

"Lead chromate levels are well below that necessary to cause harm to children and athletes using the popular playing field surfaces. No acute health risks due to use of artificial turf fields, and risks due to chronic and repeated exposure are unlikely."

*New Jersey Department of Health and Senior Services (NJDHSS), April 2008*

"A sample of stormwater was collected from the drainage system of two fields on April 28, 2008, and July 24, 2008, respectively. The results showed that lead was not detected in the drainage from either field."

*Milone & MacBroom, engineering, landscape architecture, and environmental science firm based in Connecticut, December 2008, 'Evaluation of the Environmental Effects of Synthetic Turf Athletic Fields'*

"Because the lead chromate is encapsulated in the fibers, it is presumed not to be bioavailable (is not released through contact) and cannot be absorbed by humans or other living systems. Research shows that contact with, or incidental ingestion of, the fibers or rubber infill poses no health risk."

*Ridgewood Environmental Advisory Committee (REAC) January-October 2009, 'Assessment of Environmental, Health and Human Safety Concerns Related to the Synthetic Turf Surface at Maple Park in Ridgewood, NJ'*

## WHAT THE EXPERTS SAY

"The studies acknowledge that turf field materials contain hazardous constituents and that the public, notably children, are in contact with these hazardous constituents. What has not been demonstrated, however, is an exposure pathway by which the constituents can enter the body of the field users and do damage or initiate disease. For a hazardous material to actually present a risk for the end user there has to be a pathway of exposure and a way for the chemical to do damage."

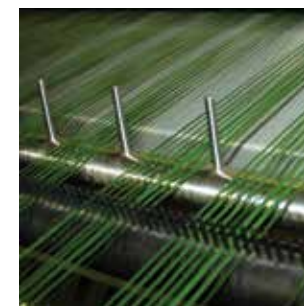
"One of the chemicals proposed as a hazardous constituent of crumb rubber illustrates this point. Carbon black is classified by the IARC as possibly carcinogenic to humans. Most of the data available linking carbon black to cancer comes from occupational studies, where workers were exposed to high concentrations of fine carbon black dust for many years. The studies evaluated during this review did not document the presence of fine particulate or specifically identify carbon black. It appears likely that the carbon black in artificial turf/crumb rubber systems remains bound in the relatively large chunks of tire rubber, making it unavailable for distribution as a fine dust and therefore unavailable for uptake by the field users. Based on the scientific research, there is neither the dose, nor the exposure route, to indicate a health hazard for artificial turf/crumb rubber field users."

"All studies acknowledge that additional data is needed to more fully assess potential exposures and possible health risks associate with the use of artificial turf fields with crumb rubber. In the meantime, leading public health agencies, such as the EPA and Consumer Product Safety Commission, are supporting continued use of artificial turf fields with crumb rubber."

*Literature Review For Health Risks Associated With Artificial Turf / Crumb Rubber  
Elizabeth Black, CIH  
April 12, 2015*

"The lead levels that were discovered are isolated to the core samples of the turf, and did not appear in the samples of dust, wipes and blades of artificial grass taken from the field - in other words, the lead is encapsulated in the fibers inside the turf and not leaching out to the surface to be ingested."

*Patrick Guilmette – PMT Group; premier environmental and consulting engineering firm in NY, NJ, CT, PA*





## WHAT THE EXPERTS SAY

“If a green synthetic turf field containing lead chromate is still green, then the lead chromate is still in the yarn. If the Yellow Chromate had leached out, the field would likely be blue. Lead chromate is stable when encapsulated in the fiber into which it is extruded. Being encapsulated in the fiber, the lead in the lead chromate is not readily bio-available - meaning that even if the yarn breaks down, the lead in the complex compound which is lead chromate is not readily absorbed by the body.”

*Dr. Davis Lee, Ph.D, Synthetic Organic Chemistry, Executive in Residence at the Georgia Institute of Technology School of Polymer, Textile, and Fiber Engineering, April 2008*

“In interpreting the health risk from these results, it is important to recognize that people do not ingest the actual turf fibers. The NJ and EPA soil standards of 400 mg/kg are based on an assumption that small children may ingest approximately 100 mg of soil per day through hand to mouth activity. Thus, comparing the concentration of lead in the turf fiber to an acceptable soil lead concentration is not an accurate way to evaluate the human health risk from exposure to lead in turf fibers and is likely to overestimate risk, because the turf fiber is unlikely to be ingested (if at all) to the same extent as lead in soil.

The best way to evaluate exposure to lead on synthetic turf fields is to evaluate the dust present on the surface of the field. When people play on the field, they may get dust onto their hands or other exposed skin, and transfer the dust into their mouth through normal hand to mouth activity. Thus, the primary route of exposure we are concerned with is ingestion of dust. Lead has no appreciable absorption through the skin, and the inhalation of dust from the field is expected to be minimal, as any dust is likely to adhere to the turf fiber or rubber crumb padding rather than becoming airborne.”

*Toxicologist Dr. Barbara D. Beck, a lecturer in Toxicology at Harvard; Former Chief of Air Toxics Staff in Region I EPA; Fellow, Interdisciplinary Programs in Health at the Harvard School of Public Health, May 2008*



‘none of the tested fields released amounts of lead that would be harmful to children’

## CONCLUSION

Concern for a safe and healthy environment is always of paramount importance. Going Green. Eco-friendly. Environmentally safe. These are common phrases heard over and over as we push for a clean, sustainable future.

The recent spate of media coverage concerning artificial/synthetic turf is more hype than fact. It is important to first get the truth from the science.

We are not aware of an injury or sickness diagnosed as a result of inhalation, ingestion, or of exposure to any of the components in the FieldTurf system.

Research and testing has been and continues to confirm that properly manufactured synthetic turf surfaces are a safe and sizeable contributor to an eco-friendly lifestyle.

Many countries have commissioned extensive studies to identify any potential dangers of crumb rubber (SBR). Throughout the years such research and testing has been carried out by world health associations, national health departments, municipal and federal groups, sporting associations, environmental protection groups, government ministries and official bodies.

These studies originated mostly in countries where environmental issues are of paramount importance. When the potential dangers were first presented, some countries even prohibited the use of SBR rubber in artificial grass fields. To our knowledge, the countries that originally restricted or prohibited the use of SBR have reversed their position since reviewing the data and results of the comprehensive studies they instituted.

**THE RESEARCH HAS BEEN DONE. THE STUDIES EXIST. GET THE FACTS AND FIND OUT FOR YOURSELF.**



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## **Incidence, Mechanisms, and Severity of Game-Related College Football Injuries on FieldTurf Versus Natural Grass : A 3-Year Prospective Study**

Michael C. Meyers

*Am J Sports Med* 2010 38: 687 originally published online January 14, 2010

DOI: 10.1177/0363546509352464

The online version of this article can be found at:

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# Incidence, Mechanisms, and Severity of Game-Related College Football Injuries on FieldTurf Versus Natural Grass

## A 3-Year Prospective Study

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**Background:** Numerous injuries have been attributed to playing on artificial turf. More recently, FieldTurf was developed to duplicate the playing characteristics of natural grass. No long-term studies have been conducted comparing game-related collegiate football injuries between the 2 playing surfaces.

**Hypothesis:** Collegiate athletes do not experience any difference in the incidence, mechanisms, and severity of game-related injuries between FieldTurf and natural grass.

**Study Design:** Cohort study; Level of evidence, 2.

**Methods:** Twenty-four universities were evaluated over 3 competitive seasons for injury incidence, injury category, time of injury, injury time loss, player position, injury mechanism, primary type of injury, grade and anatomical location of injury, type of tissue injured, trauma (head, knee, and shoulder), and environmental factors.

**Results:** In sum, 465 collegiate games were evaluated for game-related football injuries sustained on FieldTurf or natural grass during 3 seasons. Overall, 230 team games (49.5%) were played on FieldTurf versus 235 team games (50.5%) played on natural grass. A total of 2253 injuries were documented, with 1050 (46.6%) occurring during play on FieldTurf, and 1203 (53.4%) on natural grass. Multivariate analysis per 10 team games indicated significantly lower total injury incidence rates,  $F(3, 2249) = 3.468, P = .016, n - \beta = 0.778$ , on FieldTurf, 45.7 (95% confidence interval [CI], 44.2-46.3), versus natural grass, 51.2 (95% CI, 49.8-51.7). Significantly lower minor injury incidence rates, 38.0 (95% CI, 36.9-38.5) versus 39.9 (95% CI, 39.1-40.0,  $P = .001$ ), substantial injury incidence rates, 5.0 (95% CI, 4.3-5.6) versus 7.2 (95% CI, 6.6-7.7,  $P = .020$ ), and severe injury incidence rates, 2.7 (95% CI, 2.1-3.3) versus 4.1 (95% CI, 3.5-4.1;  $P = .049$ ), were documented on FieldTurf versus natural grass, respectively. Multivariate analyses also indicated significantly less trauma on FieldTurf when comparing injury time loss, injury situation, grade of injury, injuries under various field conditions, and temperature. No significant differences in head, knee, or shoulder trauma were observed between playing surfaces.

**Conclusion:** FieldTurf is in many cases safer than natural grass. It must be reiterated, however, that the findings of this study may be generalizable to only this level of competition. Because this study is still in the early stages, investigation is ongoing.

**Keywords:** artificial surface; knee; head; trauma

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For more than 40 years, numerous studies have attributed a greater risk and incidence of articular and concussive trauma to playing on artificial turf when compared with

natural grass.<sup>21,32,55</sup> Over the past decade, however, a new generation of synthetic surface was developed to duplicate the playing characteristics of natural grass: FieldTurf (Montreal, Quebec, Canada) is composed of a polyethylene fiber blend stabilized with a graded silica sand and cryogenically ground rubber infill. Although FieldTurf has been recommended as a viable option to natural grass in the prevention of high school football injuries,<sup>40</sup> research into its long-term effects on injuries at the collegiate level, during actual game conditions over several seasons of competition, has not been published in the scientific literature.

More than 1 million athletes play competitive football.<sup>23,43</sup> The number of knee surgeries is rising, and their

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One or more authors has declared a potential conflict of interest: Research was funded by FieldTurf, Montreal, Quebec, Canada.

cost plus rehabilitation is reaching into the millions of dollars each year.<sup>12,20,24,35,48,54</sup> Coupled with this is the psychological trauma and setbacks in training typically experienced by athletes after a significant injury.<sup>41</sup> As such, efforts to address ways to minimize predisposition to injury are warranted. Therefore, the purpose of this study was to quantify the incidence, mechanisms, and severity of game-related collegiate football injuries on FieldTurf versus natural grass. It was hypothesized that collegiate athletes would not experience any difference in the incidence, mechanisms, and severity of game-related injury between FieldTurf and natural grass.

## MATERIALS AND METHODS

### Population

Twenty-four universities, classified Division IA (FBS) by the National Collegiate Athletic Association, were evaluated for game-related football injuries sustained on FieldTurf and natural grass during a 3-year period (2006-2008). School selection was based on the availability of both playing surfaces during the competitive season, uniformity of sport skill level, and the presence of a full-time certified athletic training (ATC) staff, thereby minimizing the potential for injury reporting bias.<sup>11,49</sup> The study started with 11 universities over the first year and added 13 in year 2, yielding a total of 520 seasonal games. With the exception of deleting games played on other artificial surfaces ( $n = 55$ ), selection bias was avoided by reporting all remaining games and subsequent injuries on either FieldTurf or natural grass. This resulted in a total of 465 games over the 3-year period played on either FieldTurf ( $n = 230$ ) or natural grass ( $n = 235$ ).

Various stadiums using FieldTurf were used by all 24 schools during home and away games involving conference play in the Atlantic Coast, Big 12, Big East, Conference USA, Mountain West, Western Athletic Conference, and Pac-10. FieldTurf surfaces were considered high-quality surfaces by the ATCs. Different natural grass fields were used across the same geographical region, with similar quality and environmental influences. All teams had the opportunity to practice on either FieldTurf or natural grass.

To quantify the history and potential influence of prior injuries, all athletes underwent preparticipation physical examinations under the care of their team physicians/orthopaedic surgeons. Criteria for exclusion included (1) any known preexisting congenital or developmental factor that predisposed an athlete to potential injury and (2) the acknowledgment, complaint, or observed evidence of any medical or orthopaedic problem severe enough to compromise an athlete's performance or endanger his health as determined by self-response, medical history, and interview.<sup>40</sup>

### Procedures

Based on paradigms suggested in prior research,<sup>4,19,33,39,63</sup> this research used a multifactorial approach that encompassed teams playing on both surfaces during the same

period. This approach provided several advantages, including gaining a greater comparison of the nuances of each surface's influence on injury, avoiding limitations in data collection (eg, seasonal variation, subject randomization by surface), and minimizing difficulties that former studies have had in analyses and interpretation of findings.<sup>4,47</sup> For this prospective cohort study, a 2-sided single-page injury surveillance form was developed, based on criteria recommended and established in the literature (available as an appendix at <http://www.ajs.sagepub.com/supplemental>).<sup>13,25,33,40,42,44</sup> The form includes the following: athletic identification number; athletic trainer; date of injury; athlete weight; university; type of playing surface; surface quality; temperature at game time; year and skill level of athlete; where the injury occurred; weather and field conditions; injury category; time of injury; injury classification; injury time loss; position played at time of injury; injury situation; injury mechanism; personnel determining the injury; injury site location; principle body part; primary type of injury; grade of injury; occurrence of external bleeding; injury because of illegal action; head, eye, knee, shoulder, and thoracic/abdominal diagnosis; surgical intervention and time; and musculoskeletal, joint, or organ location of injury. The injury surveillance form was e-mailed to the head ATCs during the summer before the start of the football season. Communication was maintained to discuss potential concerns and ensure accuracy of collection, comprehensiveness of information, and ease of application.

The respective ATCs for each university were approached because of their daily interaction with the athletes and coaches during and after sport trauma and because of their expertise in injury recognition.<sup>11,40</sup> During the summer before the football season, all ATCs were provided with an overview of the purpose, procedures, benefits, time demands, and importance of the study. They were also provided with copies of the injury surveillance form and detailed instructions for completion to avoid the potential for performance and detection biases.<sup>47,49</sup> After full explanation, all ATCs appeared enthusiastic and agreed to participate in the data collection. The protocol was approved by the institutional review board at the university in which the study was based, and it was conducted in accordance with the guidelines for use of human participants as stipulated by the American College of Sports Medicine.<sup>2</sup>

All regular season conference and nonconference games and postseason bowl games were included. Injury data were recorded after game completion, with support from ATC notes to avoid lapse of memory leading to inaccuracy or response distortion.<sup>40,47</sup> All game-related injuries were evaluated by the attending head athletic trainer and team physicians on-site and, subsequently, in the physician's office when further follow-up and treatment were deemed necessary. Any sport trauma that occurred toward the end of the competitive schedule was monitored beyond the player's specific season to determine date of recovery and functional return to play.<sup>22,40</sup>

Completed injury surveillance forms were faxed to us within 5 working days after a game and were entered into the database before the next game. A follow-up telephone visit was used to obtain any additional information

pertaining to any changes or additions in diagnosis, treatment, or time to return to play. To avoid the potential for on-the-field detection bias,<sup>49</sup> a single-blind outcome approach was maintained throughout the study period, with total data collection, compilation, and analyses limited to the data coordinator.

## Definitions

Although any definition of injury and level of trauma lacks universal agreement and has its shortcomings,<sup>11,24,44,47</sup> this study attempted to define injury based on a combination of functional outcome, observation, and treatment.<sup>11,22,40,44,60</sup> A *reportable injury* was thus defined as any game-related football trauma that resulted in (1) an athlete missing all or part of a game, (2) time away from competition, (3) any injury reported or treated by the athletic trainer or physician, and (4) all cranial/cervical trauma reported.<sup>24,40</sup> Although some authors have recommended omitting minor injuries,<sup>44,47</sup> others have expressed a need to quantify and track these typically overlooked minor traumas to avoid underreporting of injury and to monitor those that may turn into chronic or overuse problems.<sup>14,25,42,66</sup> Prior studies have also revealed that 42% to 60% of competitive trauma results in minimal time loss and medical cost.<sup>24,40,63</sup> Therefore, a definition that included functional outcome, observation, and treatment on all injuries might more clearly quantify the unique nuances or trauma observed with each playing surface and so reduce the individual and player bias that allegedly influences injury reporting based solely on time loss.<sup>40,47</sup>

Injury time loss was based on the number of days absent from practice or game competition and was divided into 0, 1-2, 3-6, 7-9, 10-21, and 22 days or more of recovery time. Not surprisingly, a review of the literature revealed high subjectivity in the determination of what constitutes moderate or severe injury. Whereas any injury resulting in time loss of approximately 7 to 28 days has been considered moderate trauma and a time loss of  $\geq 21$  days has been defined as severe,<sup>16,26,27,63</sup> others have defined severe injury as  $\geq 28$  days before return to play<sup>15</sup> or any injury resulting in  $\geq 7$  days of time loss.<sup>25,33,46,53</sup> Furthermore, what constitutes a moderate injury in one athlete (eg, elbow injury in an offensive lineman) may be considered severe when diagnosed in another (eg, the throwing arm of a quarterback).<sup>5,53</sup> Therefore, as previously described, any trauma that required 0 to 6 days of time loss was defined as a *minor injury*; an injury that required 7 to 21 days of time loss, resulting in the athlete's being unable to return to play at the same competitive level, was a *substantial injury*; and trauma that required 22 or more days of time loss was a *severe injury*.<sup>40</sup> The delineation and subsequent analysis of minor, substantial, and severe injury served to minimize potential time loss bias.<sup>11,40,60</sup>

Injury category was quantified by player-to-player collision, player-to-turf collision, injuries attributed to shoe-surface interaction during player contact, injuries attributed to shoe-surface interaction without player contact, and muscle-tendon overload. Time of injury by pregame and game quarter of play was documented to delineate the

influence of fatigue over time from the potential surface influence on injury occurrence.<sup>40,63,66</sup>

Acute trauma was delineated from recurrent and overuse injury according to criteria previously published,<sup>36,39,40,62</sup> with acute trauma linked to an incidence that occurred during a competitive game versus repetitive exposure resulting in symptoms and injury to the same location during the season (recurrent). An *overuse injury* was defined as repetitive exposure resulting in trauma and sequelae with no definitive onset.<sup>39,66</sup>

To enhance optimal cell size and interpretation, the 23 player positions were condensed and analyzed by offense, defense, and special teams, as well as by power and skill positions (quarterback, backfield, offensive line, tight end, receiver, defensive line, linebacker, secondary).<sup>8</sup> *Mechanism of injury* was defined as that occurring while a player was blocked above or below the waist, tackled above or below the waist, blocking, tackling, impacting with the playing surface, stepped on, fallen on or kicked, sprinting or running with no player contact, catching/blocking a pass, clipped, experiencing heat illness, or injured from overuse. *Injury situation* was defined as trauma occurring during a specific play or event, such as warm-up, rushing, passing, pass catching, pass protection, pass rush, pass defense, kickoff return, point after touchdown, field goal, kickoff, punting, punt return, or fumble recovery.

To optimize analyses, primary type of injury was combined into the following categories: surface/epidermal (abrasion, laceration, puncture wound), contusion, concussion, inflammation (bursitis, tendinitis, fasciitis, synovitis, capsulitis, apophysitis), ligament sprain, ligament tear, muscle strain/spasm, muscle tear, cartilage tear, tendon strain, hyperextension, neural (burner, brachial plexus), subluxation/dislocation, and fracture (standard, epiphysial, avulsion, stress, osteochondral). Injuries were also defined according to grade (1, 2, or 3). Anatomical location of injury was combined from 40 physical areas and analyzed by type of trauma (cranial/cervical, upper extremity, thoracic, and lower extremity) and further analyzed by type of tissue injured (bone, joint, muscle, neural, other). Cranial/cervical trauma included grade 1 to 3 concussion, hematoma, post-concussion and second-impact syndromes, neurological sequelae (eg, stingers/burners, transient quadriplegia), vascular or dental injury, or associated fractures, sprains, and strains.<sup>40</sup> Neural trauma was restricted to any injury involving only concussion, associated syndromes, and neurological sequelae. Because of growing concerns addressing excessive head, knee, and shoulder trauma in football,<sup>11,20,40,47</sup> these areas were identified for further analyses (see Appendix 1, available in the online version of this article at <http://ajs.sagepub.com/supplemental/>).

Although studies have associated a greater rate of injury during competition under both dry and normal surface conditions,<sup>3,52</sup> there has been limited information on factors such as weather and the effect of playing under surface conditions that influence injury frequency.<sup>1,3,20,31,40,61</sup> Therefore, environmental factors, such as field conditions and temperature, were obtained before game time by each team's respective ATC and/or through the local airport climatic data center to ascertain the potential influence on

injury from changes in weather and surface conditions throughout the season.<sup>45</sup>

### Statistical Analyses

Because of variations in the frequency of injury within several categories potentiating inadequate cell size, statistical power, and limitations on analysis, some data were combined during the 3-year period based on prior recommendations in the literature.<sup>33,40,44</sup> This step resulted in the following categories: injury category, time of injury, injury classification, injury time loss, position played at time of injury, injury mechanism, injury situation, injury site location, primary type of injury, grade of injury, anatomical location of injury, type of tissue injured, head diagnosis, knee diagnosis, shoulder diagnosis, specific lower extremity joint and muscle trauma, and environmental factors. Tabular-frequency distributions were computed for data in each category using SPSS 15.0. For ease of interpretation, the percentages of total injuries within each category that occurred on the playing surface were calculated, and 95% confidence intervals (95% CIs) were determined as described elsewhere.<sup>51</sup>

Because most universities schedule a similar number of games each season, exposure to injury was defined in terms of team games, as previously recommended.<sup>40,63</sup> Based on this definition, and to approximate a standard season, injury incidence rate (IIR) was expressed using (1) injuries per 10 team games = (number of injuries/number of team games)  $\times$  10 and (2) injuries per team game = number of injuries/number of team games.

To achieve a more thorough understanding beyond traditional frequency analyses and to eliminate the possibility of irrelevant sources of error,<sup>37,39</sup> following the season, data were numerically recoded, grouped by playing surface (FieldTurf, natural grass), and subjected to multivariate analyses of variance and Wilks lambda criteria using general linear model procedures.<sup>37</sup> Data screening indicated no violations of multivariate normality, linearity, outliers, homogeneity of variance, multicollinearity, or singularity.<sup>59</sup> When significant main effects were observed, univariate post hoc procedures were performed within each dependent variable based on the total percentage of injuries reported on each playing surface. An experiment-wise type I error rate of .05 was established a priori, and least squared means procedures were required because of the uneven number of observations on which to compare differences between variables. Statistical power analyses ( $n - \beta$ ;  $n$ -size calculations) were performed at the  $P$  value selected to establish significance in this study.

## RESULTS

### Injury Incidence

A total of 465 collegiate games were evaluated for game-related football injuries sustained on FieldTurf and natural grass during 3 seasons (Table 1). Overall, 230 team

games were played on FieldTurf (49.5%) versus 235 team games played on natural grass (50.5%). A total of 2253 injuries were documented, with 1050 (46.6%) occurring during play on FieldTurf as compared to 1203 (53.4%) on natural grass.

When IIRs were compared between types of playing surface, there was a significant main effect,  $F(3, 2249) = 3.468, P = .016, n - \beta = .778$ , between surfaces by injury level. Total injuries per 10 team games, 45.7 (95% CI, 44.2-46.3) versus 51.2 (95% CI, 49.8-51.7), and injuries per team game, 4.6 (95% CI, 4.4-4.6) versus 5.1 (95% CI, 5.0-5.2), were documented on FieldTurf versus natural grass, respectively. When minor trauma (injuries requiring 0 to 6 days of rehabilitation) was compared, a significantly lower incidence of minor injuries ( $P = .0001$ ) per 10 team games, 38.0 (83.3%; 95% CI, 36.9-38.5) versus 39.9 (78.0%; 95% CI, 39.1-40.0), and injuries per team game, 3.8 (95% CI, 3.7-3.9) versus 4.0 (95% CI, 3.9-4.0), was documented on FieldTurf versus natural grass, respectively. When substantial trauma (injuries requiring 7 to 21 days of injury rehabilitation) was compared between type of playing surface, a significant lower incidence of substantial injuries ( $P = .020$ ) per 10 team games, 5.0 (95% CI, 4.3-5.6) versus 7.2 (95% CI, 6.6-7.7), and injuries per team game, 0.50 (95% CI, 0.43-0.56) versus 0.72 (95% CI, 0.66-0.77), was documented on FieldTurf versus natural grass, respectively. When severe trauma (injuries requiring 22 or more days of injury rehabilitation) was compared between type of playing surface, a significantly lower incidence of severe injuries ( $P = .049$ ) per 10 team games, 2.7 (95% CI, 2.1-3.3) versus 4.1 (95% CI, 3.5-4.7), and injuries per team game, 0.27 (95% CI, 0.21-0.33) versus 0.41 (95% CI, 0.35-0.47), was documented on FieldTurf versus natural grass, respectively.

The majority of trauma comprised acute injuries on both FieldTurf (88.7%; IIR = 40.5; 95% CI, 39.5-40.8) and natural grass (88.0%; IIR = 45.1; 95% CI, 43.6-45.7). Only 119 of 1050 injuries reported on FieldTurf (11.3%; IIR = 5.2; 95% CI, 4.5-5.8) and 144 of 1203 reported on natural grass (12.0%; IIR = 6.1; 95% CI, 5.5-6.7) were classified as recurrent trauma or complications from prior injury. As expected, upperclassmen received the majority of trauma on both playing surfaces. On FieldTurf, 330 injuries occurred to seniors (31.4%; IIR = 14.3; 95% CI, 13.5-15.0), 371 to juniors (35.3%; IIR = 16.1; 95% CI, 15.3-16.7), 240 to sophomores (22.9%; IIR = 10.4; 95% CI, 10.0-10.8), and 109 to freshmen (10.4%; IIR = 4.7; 95% CI, 4.1-5.4). On natural grass, 417 injuries were reported among seniors (34.7%; IIR = 17.7; 95% CI, 17.0-18.2), 378 among juniors (31.4%; IIR = 16.1; 95% CI, 15.2-16.7), 309 among sophomores (25.7%; IIR = 13.1; 95% CI, 12.4-13.8), and 99 among freshmen (8.2%; IIR = 4.2; 95% CI, 3.6-4.9).

### Head, Knee, and Shoulder Trauma

As shown in Appendix 1, there was no significant main effect,  $F(5, 2247) = 0.871, P = .500, n - \beta = .316$ , between surfaces by head injury when combined by all sources of

TABLE 1  
Incidence of Game-Related Collegiate Football Injuries Between FieldTurf and Natural Grass<sup>a</sup>

Variable	FieldTurf	IIR	95% CI	Natural Grass	IIR	95% CI	Total or Mean
Team games evaluated							
n	230			235			465
%	49.5			50.5			100.0
All injuries							
n	1050	45.7	44.2-46.3	1203	51.2	49.8-51.7	2253 <sup>b</sup>
%	46.6			53.4			100.0
Per 10 games	45.7			51.2			48.5
Per game	4.57			5.12			4.85
Minor injuries							
n	875	38.0	36.9-38.5	938	39.9	39.1-40.0	1813 <sup>c</sup>
%	83.3			78.0			80.5
Per 10 games	38.0			39.9			39.0
Per game	3.80			3.99			3.90
Substantial injuries							
n	114	5.0	4.3-5.6	169	7.2	6.6-7.7	283 <sup>d</sup>
%	10.9			14.0			12.6
Per 10 games	5.0			7.2			6.1
Per game	0.50			0.72			0.61
Severe injuries							
n	61	2.7	2.1-3.3	96	4.1	3.5-4.7	157 <sup>e</sup>
%	5.8			8.0			7.0
Per 10 games	2.7			4.1			3.4
Per game	0.27			0.41			0.34

<sup>a</sup>IIR, injury incidence rate; CI, confidence interval. Injuries per 10 team games = (number of injuries/number of team games) × 10. Injuries per team game = number of injuries/number of team games. Minor injury, 0 to 6 days of injury time loss; substantial injury, 7 to 21 days; severe injury, 22 or more days.

<sup>b</sup> $P = .016$ .

<sup>c</sup> $P = .001$ .

<sup>d</sup> $P = .020$ .

<sup>e</sup> $P = .049$ .

trauma, as well as no significant main effect,  $F(10, 2242) = 0.461$ ,  $P = .916$ ,  $n - \beta = .246$ , between surfaces by knee injury. A similar nonsignificant main effect,  $F(7, 2245) = 1.543$ ,  $P = .148$ ,  $n - \beta = .653$ , between surfaces by shoulder injury was also observed.

### Injury Category

As shown in Appendix 2 (available at <http://ajs.sagepub.com/supplemental/>), multivariate analysis indicated no significant playing surface effect by injury category,  $F(5, 2247) = 0.494$ ,  $P = .781$ ,  $n - \beta = .187$ . Confidence intervals, however, indicated a lower incidence of injuries attributed to player-to-player collision ( $P = .784$ ) on FieldTurf (54.3%; IIR = 24.8; 95% CI, 23.7-25.4) versus natural grass (54.9%; IIR = 28.0; 95% CI, 27.1-28.5), as well as a lower incidence of injuries attributed to shoe-surface interaction during contact ( $P = .520$ ) on FieldTurf (21.8%; IIR = 10.0; 95% CI, 9.8-10.0) versus natural grass (22.9%; IIR = 11.7; 95% CI, 11.1-12.3).

### Time of Injury

No significant main effect between playing surface was observed across time of injury,  $F(5, 2247) = 0.833$ ,

$P = .526$ ,  $n - \beta = .303$ . Confidence intervals (Appendix 2), however, indicated a lower incidence of injuries occurring during the second quarter of play ( $P = .186$ ) on FieldTurf (28.3%; IIR = 12.9; 95% CI, 12.2-13.5) versus natural grass (30.8%; IIR = 15.8; 95% CI, 14.9-16.4), as well as a lower incidence of injuries occurring during the third quarter ( $P = .609$ ) on FieldTurf (28.9%; IIR = 13.2; 95% CI, 12.4-13.8) versus natural grass (29.8%; IIR = 15.3; 95% CI, 14.4-15.9). Incidence rates for both FieldTurf and natural grass surfaces revealed that a limited number of injuries occurred during the pregame, increased from the first to second quarter, but declined from the third to the fourth quarter of play.

### Injury Time Loss

Findings indicated a significant playing surface effect by injury time loss,  $F(5, 2247) = 2.480$ ,  $P = .030$ ,  $n - \beta = .783$ , with subsequent post hoc analysis (Appendix 2) revealing a significantly lower incidence of injuries resulting in 7- to 9-day time loss ( $P = .017$ ) on FieldTurf (6.3%; IIR = 2.9; 95% CI, 2.3-3.5) versus natural grass (9.0%; IIR = 4.6; 95% CI, 4.0-5.2). A significantly lower incidence of injuries resulting in 22 days or more of time loss ( $P = .044$ ) was also reported on FieldTurf (5.8%; IIR = 2.7;



95% CI, 2.1-3.3) versus natural grass (8.0%; IIR = 4.1; 95% CI, 3.5-4.7).

### Position Played at Time of Injury

Although confidence intervals indicated lower incidences of offensive, defensive, and backfield injuries on FieldTurf, from a multivariate standpoint, no significant playing surface effect was observed between surfaces by overall player position (offense, defense, special teams),  $F(2, 2250) = 0.300$ ,  $P = .741$ ,  $n - \beta = .098$ , or by skill position,  $F(9, 2243) = 0.538$ ,  $P = .848$ ,  $n - \beta = .271$ .

### Injury Mechanism and Situation

Although no significant main effect,  $F(12, 2240) = 1.091$ ,  $P = .363$ ,  $n - \beta = .646$ , between surfaces by injury mechanism was observed, there was a significant main effect,  $F(14, 2238) = 2.170$ ,  $P = .007$ ,  $n - \beta = .971$ , between surfaces by injury situation. As shown in Appendix 3 (available at <http://ajs.sagepub.com/supplemental/>), post hoc analyses indicated a significantly lower incidence of injuries occurring during rushing plays ( $P = .040$ ) on FieldTurf (34.8%; IIR = 15.9; 95% CI, 15.0-16.5) versus natural grass (34.6%; IIR = 17.7; 95% CI, 16.9-18.2), as well as a significantly lower incidence of pass defense injuries ( $P = .023$ ) on FieldTurf (14.2%; IIR = 6.5; 95% CI, 5.8-7.1) versus natural grass (17.7%; IIR = 9.1; 95% CI, 8.6-9.4). Further analyses revealed significantly lower incidence of trauma reported during punting ( $P = .020$ ) on FieldTurf (1.0%; IIR = 0.5; 95% CI, 0.3-0.8) versus natural grass (2.3%; IIR = 1.2; 95% CI, 0.8-1.7), as well as a significantly lower number of injuries reported following pile-on ( $P = .011$ ) on FieldTurf (0.3%; IIR = 0.1; 95% CI, 0.0-0.4) when compared to natural grass (1.2%; IIR = 0.6; 95% CI, 0.4-1.0).

### Primary Type of Injury

As shown in Appendix 4 (available at <http://ajs.sagepub.com/supplemental/>), a significant main effect,  $F(14, 2238) = 1.771$ ,  $P = .042$ ,  $n - \beta = .907$ , by primary type of injury was noted between the 2 surfaces, with subsequent post hoc analysis revealing a significantly lower incidence of ligament tears ( $P = .024$ ) reported on FieldTurf (2.7%; IIR = 1.2; 95% CI, 0.9-1.7) versus natural grass (4.6%; IIR = 2.3; 95% CI, 1.9-2.9). A significantly lower incidence of muscle tears ( $P = .002$ ) was also reported on FieldTurf (0.3%; IIR = 0.1; 95% CI, 0.0-0.4) when compared to natural grass (1.7%; IIR = 0.9; 95% CI, 0.6-1.3).

### Grade and Anatomical Location of Injury

There was a significant main effect,  $F(2, 2250) = 12.337$ ,  $P = .0001$ ,  $n - \beta = .996$ , between surfaces by injury grade (Appendix 4). A significantly lower incidence of second-degree injuries ( $P = .0001$ ) was reported on FieldTurf (13.8%; IIR = 6.3; 95% CI, 5.7-6.9) versus natural grass

(19.5%; IIR = 10.0; 95% CI, 9.8-10.0), as well as a significantly lower incidence of third-degree injuries ( $P = .007$ ) on FieldTurf (8.9%; IIR = 4.0; 95% CI, 3.4-4.7) versus natural grass (12.4%; IIR = 6.3; 95% CI, 5.7-6.9).

In regard to location of injury, there was no significant main effect,  $F(3, 2249) = 1.675$ ,  $P = .170$ ,  $n - \beta = .442$ , between surfaces. Confidence intervals, however, indicated a lower incidence of upper extremity injuries ( $P = .045$ ) reported on FieldTurf (30.4%; IIR = 13.9; 95% CI, 13.1-14.5) versus natural grass (34.2%; IIR = 17.5; 95% CI, 16.7-18.0).

### Type of Tissue Injured

There was no significant main effect,  $F(5, 2247) = 0.559$ ,  $P = .732$ ,  $n - \beta = .208$ , between surfaces by tissue type. Confidence intervals, however, indicated a lower incidence of joint injuries ( $P = .969$ ) reported on FieldTurf (46.2%; IIR = 21.1; 95% CI, 20.3-21.6) versus natural grass (46.1%; IIR = 23.6; 95% CI, 22.6-24.2), as well as a lower incidence of muscle injuries ( $P = .997$ ) reported on FieldTurf (36.7%; IIR = 16.7; 95% CI, 15.9-17.3) versus natural grass (36.7%; IIR = 18.8; 95% CI, 18.1-19.1). When lower extremity joint trauma was analyzed, this study found a significant playing surface effect,  $F(7, 224) = 2.310$ ;  $P = .024$ ,  $n - \beta = .852$ , involving a significantly higher incidence ( $P = .001$ ) of distal tibiofibular ligament sprains on natural grass (12.9%; IIR = 1.8; 95% CI, 1.4-2.4) when compared to FieldTurf (4.7%; IIR = 0.6; 95% CI, 0.4-1.0).

### Environmental Factors

The attempt to quantify environmental conditions at time of injury revealed that the majority of injuries occurred during dry weather (see Appendix 5, available at <http://ajs.sagepub.com/supplemental/>). In regard to field conditions, there was a significant main effect,  $F(2, 2249) = 5.450$ ,  $P = .001$ ,  $n - \beta = .939$ , between surfaces, with a significantly lower incidence of injuries during no precipitation-dry field conditions ( $P = .003$ ) reported on FieldTurf (86.3%; IIR = 39.4; 95% CI, 38.4-39.6) versus natural grass (81.0%; IIR = 41.4; 95% CI, 40.3-42.0), as well as a significantly lower incidence of injuries during no precipitation-wet field conditions ( $P = .0001$ ) reported on FieldTurf (3.9%; IIR = 1.8; 95% CI, 1.3-2.3) versus natural grass (8.5%; IIR = 4.3; 95% CI, 3.7-5.0).

When analyzing data by cold days (eg,  $\leq 69^\circ\text{F}$ ) as compared to hot days (eg,  $\geq 70^\circ\text{F}$ ) as suggested by others,<sup>40,45</sup> there was a significant main effect,  $F(1, 2251) = 82.360$ ,  $P = .0001$ ,  $n - \beta = 1.000$ , between surfaces by environment temperature. A significantly higher incidence of injuries during cold days ( $P = .0001$ ) was reported on FieldTurf (54.3%; IIR = 24.8; 95% CI, 23.7-25.4) versus natural grass (35.4%; IIR = 18.1; 95% CI, 17.4-18.6). On hot days, a significantly lower incidence of injuries ( $P = .0001$ ) was also reported on FieldTurf (45.7%; IIR = 20.9; 95% CI, 20.2-21.3) versus natural grass (64.6%; IIR = 33.1; 95% CI, 31.9-33.7).

## DISCUSSION

The purpose of this prospective cohort study was to quantify the incidence, mechanisms, and severity of game-related collegiate football injuries on FieldTurf versus natural grass. It was hypothesized that collegiate athletes would not experience any difference in the incidence, mechanisms, and severity of game-related injury between FieldTurf and natural grass. Although similarities did exist between FieldTurf and natural grass, unique differences in sport trauma were observed between the 2 playing surfaces.

### Injury Incidence

Over the 3-season study, 2253 game-related injuries, or 31.3 injuries per university per season, were recorded among 24 universities competing on both surfaces, indicative of the athletic speed, strength, and subsequent other opportunities for trauma at the collegiate level of competition, when compared to 2.4 to 15.7 injuries per high school per season reported in prior studies.<sup>5,9,40</sup> The incidence of acute injury (88.3%) was similar to findings in earlier studies, ranging from 72% to 94%.<sup>40,47</sup> The incidence of substantial and severe trauma recorded in this study was similar to seasonal trauma reported elsewhere in football but in contrast to nonsignificant surface differences in the severity of trauma in soccer, which may be a function of the level of trauma/impact potential between the 2 sports.<sup>9,15,16,40,56</sup> Although the large variation in injury definition among these studies prevents an accurate comparison, both the total number and the number of minor, substantial, and severe injuries recorded in this study reflect the typical level of trauma observed at the collegiate level of play.

In addition to acute injury, repetitive or recurrent trauma is considered a major contributor to future trauma.<sup>18,21,27,40,65</sup> The incidence of recurrent cases over 3 seasons in this study ranged from 11.3% on FieldTurf to 12.0% on natural grass, higher than the 4.8% previously reported on FieldTurf at the high school level<sup>40</sup> but similar to the 13% to 17% of recurrent trauma reported in collegiate and professional high-contact field sports during a single season<sup>17,62</sup> and substantially lower than the 57% of prior injury recently reported in high school football on natural grass over a 3-year period.<sup>27</sup> Whether recurrent trauma was observed over the same surface in all studies is not known. The increased interest but paucity of studies that address recurrent trauma prevents further discussion at the collegiate level of play.

The higher incidence of injury to upperclassmen on both surfaces is solely attributed to greater playing exposure and subsequent predisposition to injury typically observed at this level of play, in which lower classmen receive less playing time.<sup>27,40</sup> With regard to foul play, the incidence (0.5%) of injury attributed to illegal action was negligible. This is lower than the 0.8% to 5.7% occurrence reported in prior collegiate and high school football<sup>24,40</sup> but in far contrast to the 25% to 62% reported among other intercollegiate and senior sports.<sup>14,46,67</sup> In summary, the lower rate of overall injury documented on FieldTurf may be attributed to the lower incidence of substantial and severe

trauma on the artificial surface when compared to natural grass.

### Head, Knee and Shoulder Injuries

There were no significant differences in head, knee, or shoulder trauma between the 2 surfaces. But when compared with that of high school football studies,<sup>11,40</sup> the greater incidence of first-degree and total concussions combined, as well as the greater incidence of anterior cruciate ligament-involved trauma, reiterates the level of severe trauma observed during collegiate competition on both surfaces (Appendix 1). The nonsignificant level of traumatic injury on FieldTurf is consistent with prior findings indicating similar nonsignificant playing surface effect.<sup>16,56</sup> These findings are in contrast to prior studies indicating a higher incidence of severe injury on artificial surfaces,<sup>20,53</sup> a reflection of earlier synthetic materials as opposed to the newer generation of artificial surfaces being installed today.

### Injury Category

Results of this study indicate no significant differences between playing surfaces across injury categories. Although prior efforts have noted a greater incidence of muscle-tendon overload injuries on FieldTurf during high school games and contributing findings as a function of faster play on a more compliant, elastic surface than that observed with natural grass,<sup>21,40</sup> this was not observed at this level of competition. Others have reported similar nonsignificant findings between artificial and natural grass surfaces.<sup>15,16,56</sup> As shown in Appendix 2, any univariate differences in player-to-player collisions and shoe-surface interaction during player contact between FieldTurf and natural grass were attributed to total injuries incurred rather than surface influence ( $P = .520-.784$ ).

### Time of Injury

Increasing fatigue over time and declines in available energy substrate and coordination predispose an athlete to injury.<sup>62,65</sup> The nonsignificant differences within and between playing surfaces in this study indicated minimal influence on injury incidence from pregame through the fourth quarter of play. As previously noted, the acute differences in the composition and quality of surfaces may have influenced the type and severity of trauma but did not affect the time of injury observed over the 3-season period. Again, univariate differences in second- and third-quarter trauma may be attributed to total injuries as opposed to actual surface differences ( $P = .186-.609$ ). Findings may also be reflective of the score and subsequent play calling of coaches.<sup>5,6,27,40</sup>

### Injury Time Loss

As similarly noted when discussing severity of injury, the polyethylene nature of FieldTurf, promoted as a nonabrasive

surface with a natural-earth feel, resulted in a significantly lower incidence of minor injuries requiring 0 to 6 days of time loss. Of primary concern is the significantly greater incidence of injuries ranging from 7 to 9 days of time loss and 22 days or more of time loss associated with competing on natural grass. In this study, increased incidence of injury resulting in extensive time loss ( $\geq 22$  days) is consistent with prior findings on natural grass at the high school level of competition.<sup>40</sup> Whether these findings with the natural grass surface are a function of decreasing turf quality with high temperatures (Appendix 5), lower surface compliance, and a higher coefficient of restitution observed following noncontact injuries on natural grass,<sup>13,51</sup> overuse because of multipurpose use, or simply the lack of resiliency of natural grass as the season progresses, is not clear and is beyond the control of this study.

### Position Played at Time of Injury

Whether data were grouped by generalized positions (eg, offense, defense, special teams) or by specific skill positions as described by others,<sup>18,19</sup> multivariate analyses indicated no significant effect of playing surface on position played at the time of injury. Although prior studies have expressed concerns with the greater impact forces and incidence of injuries among special team, offensive, defensive, and offensive backfield players while competing on artificial surfaces,<sup>21,40</sup> this study did not support those concerns. Unfortunately, at this time, the limited frequency of injury among some positions (eg, quarterback, tight end) may have prevented further in-depth analyses and discussion of potential injury differences and position susceptibility.

### Injury Mechanism and Situation

Prior authors have surmised that the more consistent artificial composition enhances the speed of the game<sup>5,40</sup> but allows for greater opportunity for injury owing to overextension and greater fatigue potential of muscles and a greater rate of acceleration, speed, and torque.<sup>36,40,55</sup> Nonetheless, there were no significant differences in injury mechanism between playing surfaces in this study (Appendix 3). In regard to the injury situation, the significantly lower incidence of injury on FieldTurf versus natural grass observed in situations involving rushing, pass defense, punting, and pile-on may be simply influenced by the quality of the playing surface or by several factors noted in the literature.<sup>4,7,18,32,36,39,40,65</sup> Risk factors repeatedly mentioned in the literature have included pivoting, change of direction, direct contact with an opposing player, deceleration, unfortunate mishaps (eg, moving pileup), or being jolted during an uncontrolled or compromised movement.<sup>5,37,56</sup> Others have identified equipment (eg, shoe/cleat design), the abrasive nature and variations in playing surfaces, and various anatomical and biomechanical influences.<sup>4,5,7,58</sup>

### Primary Type of Injury

The significantly lower incidence of ligament and muscle tears, as well as the lower incidence of ligament sprains

documented on FieldTurf, is consistent with prior findings indicating lower extremity sprains on artificial turf,<sup>15</sup> which may be related to the lower shoe-surface traction usually associated with a more consistent, compliant surface.<sup>40,44</sup> This is consistent with earlier summations noting an inverse relationship between the incidence of ligament trauma and surface compliance.<sup>51</sup> Although others have reported greater shoe-surface peak torque and rotational stiffness with artificial surfaces,<sup>34,64</sup> these studies were conducted under noncompetitive, laboratory conditions using traditional mechanical simulations lacking environmental variability, player contact, and the anatomical and neuromuscular complexities during actual sports performance, thus limiting comparison to on-the-field sports activity.<sup>28</sup> Further investigation into the biomechanics of the shoe-surface interaction beyond the laboratory setting will be necessary to elucidate more definitive causes.

### Grade and Anatomical Location of Injury

The significantly lower incidence of second- and third-degree injuries on FieldTurf (Appendix 4) is in contrast to nonsignificant findings on similar surfaces during high school football and soccer competition,<sup>40,56</sup> a level of play where the degree of speed, power, and subsequent impact trauma is lower than that observed at the collegiate or professional level of sport.<sup>5</sup> Findings may more clearly reflect the higher impact attenuation/shock absorbency of the more compliant turf surface at this level of play.<sup>15,40</sup>

In regard to anatomical location, the nonsignificant differences between playing surface are in contrast to earlier studies indicating a lower concussion rate on natural grass when compared to the earlier generation of artificial surfaces.<sup>13,20</sup> The overall incidence of cranial/cervical trauma, as well as the incidence of both upper and lower extremity injury on both surfaces in this study, were greater than that previously reported among high school, college, and professional athletes.<sup>9,13,20,21,29,40,47</sup> Results may reflect the level of athletic size and prowess, when comparing the time that these studies were conducted.<sup>5</sup>

### Type of Tissue Injured

This study did not establish the coefficient of restitution or degree of rebound; however, when compared to the polyethylene/cryogenic rubber composition of FieldTurf, lower extremity findings on natural grass seemed to reflect a less compliant surface and lower energy absorption at ground impact. The energy of impact is subsequently transferred back—in this case, to the lower extremity region—increasing the potential for trauma.<sup>65</sup> This may be reflected in the significantly higher incidence of distal tibiofibular ligament sprains on natural grass when compared to FieldTurf. Although others have reported a significantly greater incidence of ankle sprains, combining data derived from 8 brands of artificial turf,<sup>15</sup> the authors did not control for length and time of collection or variation in turf type or quality, methodological concerns that may have benefitted from further analyses.

## Environmental Factors

Limited attention has been directed toward the potential influence of weather conditions on injury during competition.<sup>21,40,45</sup> In this study, the majority of play and injuries occurred during conditions of no precipitation, therefore minimizing the opportunity to thoroughly ascertain possible influences under various field conditions. The significantly lower incidence of injury on FieldTurf during play on wet fields may reflect the more consistent surface that the turf provides during inclement weather. The significantly lower incidence of injuries on FieldTurf when temperatures remained above 70°F is in contrast to findings previously reported on other surfaces,<sup>40,45</sup> although those surfaces were an earlier type of turf or natural surfaces under drier conditions when compared to today's highly managed collegiate grass surfaces. The more consistent FieldTurf surface may not have impeded normal performance (eg, speed, impact) during games under cold weather conditions, thus contributing to the significant increase but lower total number of injuries when compared to injuries occurring with higher temperatures.

Contrary to that of prior studies on the original artificial turf surfaces, the significantly greater incidence of injury during hot days on natural grass supports prior findings that indicated enhanced shoe-surface interaction potentiating articular trauma with increasing turf temperature,<sup>45,60</sup> as well as reports of greater frequency of knee trauma with higher temperatures.<sup>44</sup> In summary, these findings are of clinical concern and warrant further investigation for optimal natural grass management practices.<sup>58</sup>

## Limitations

Several potential limitations to the study may have influenced the type and number of injuries reported. These included the inability to determine and control the inherent random variation in injury typically observed in high-collision team sports<sup>8,37</sup>; the strength and conditioning status of the athletes and variations in the type of equipment used<sup>4,5,7,25,31,36,59,68</sup>; the weather conditions and variations in field conditions<sup>1,7,22,30,56</sup>; the differences in postural/joint integrity, musculoskeletal structure, and biomechanics of movement<sup>4,7,10,31,38,66</sup>; the time of year<sup>7,15,31</sup>; the coaching style, experience, and play calling<sup>5,6,21,27,36,38</sup>; the quality of officiating and foul play<sup>64</sup>; the player's position and actual versus average time to exposure to injury<sup>5,11,22,25,27,32</sup>; the sport skill level, intensity of play, and fatigue level at time of injury<sup>20,27,31,32,50,59,65,68</sup>; the athlete's ephemeral response to help seeking, injury, and subsequent pain<sup>36,38,40,41,47</sup>; the unreported congenital/developmental factors predisposing an athlete to additional injury<sup>5,10,31,36,56,57,65</sup>; or, simply, any unforeseen mishap.<sup>37,40</sup> Also, there is always the opportunity for an injury to go unreported despite the comprehensive nature of any reporting system.<sup>5,24,36</sup>

Key strengths of the study included the opportunity to follow several universities during the 3-year period, which prevented seasonal injury fluctuations and individual

team effects and which enhanced the ability to identify differences and trends in surface effect. In addition, the combined method of assessing functional outcome, time loss, direct observation, and treatment records, as well as the daily interactions of ATCs and players evaluated in this study, minimized the potential for transfer bias and unreported injuries throughout the season.<sup>40,62</sup> The daily evaluation and follow-up telephone visits also increased the opportunity to quantify and track typically overlooked minor indices that often evolve into chronic or overuse problems.<sup>40,62</sup>

Note that the percentage of influence from risk factors other than simply surface type cannot be overlooked. Because of the inherent challenges of collecting data on multiple indices and on numerous teams and players over an extended period, the degree of influence from these risk factors remains a limitation that can only be acknowledged at this time.<sup>27,39,65</sup> The prospective cohort multivariate design did enhance sample size, result in randomization of play on both surfaces, control for seasonal and team variation, and allow for greater insight into significant and subtle differences between a new generation of artificial turf and natural grass.

Finally, the lack of a universally accepted definition of sport injury will continue to be a challenge and subsequent influence on injury interpretation.<sup>40,44</sup> With the concomitant difficulty in subjectively determining a plethora of surface conditions and quality of natural grass,<sup>40,58</sup> any attempt to interpret the injury-surface interaction with any degree of accuracy will continue to pose concerns.

## CONCLUSION

Although similarities did exist between FieldTurf and natural grass over the 3-year period of competitive play, there were significant differences in injury incidence, severity of injury, injury time loss, injury situation, grade of injury, injuries under various field conditions, and temperature. No significant differences in head, knee, or shoulder trauma were observed between playing surfaces. Both surfaces, from a statistical and clinical standpoint, exhibited unique injury mechanisms that need to be addressed to reduce the number of game-related collegiate football injuries. The hypothesis that collegiate athletes would not experience any difference in the incidence, mechanisms, and severity of game-related injury between FieldTurf and natural grass was not supported. FieldTurf is in many cases safer than natural grass. However, the findings of this study are generalizable to only this level of competition. Because this study is still in the early stages, investigation is ongoing.

## ACKNOWLEDGMENT

This research was funded by FieldTurf, Montreal, Canada. I wish to thank, by alphabetical order, Bill Bean, Dave Binder, Rob Blanc, Jeremy Busch, Mark Chisum, Mark Coberley, Randy Cohen, Jamey Coll, Greg Collins, Rob

Dalnoki, Terry DeZeeuw, David Gable, Adam Garmon, Barney Graff, Clint Haggard, Christopher Ina, Karl Kapchinski, Kyle Kostyun, David McCune, Kevin Morris, Mike O'Larey, Mike O'Shea, David Polanski, Miguel Rueda, Rex Sharp, Joshua Signs, Paul Silvestri, James Spooner, Erin Steinkamp, and Dwayne Treolo for their athletic training expertise and extensive data collection efforts during this study.

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# **FieldTurf USA Construction Site Health and Safety Manual**

Issued: November 10, 2009  
Ammended: August 2, 2010

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**Company Name: FieldTurf USA**

## **COMPANY SAFETY STATEMENT**

*FieldTurf USA SAFETY STATEMENT* is to provide a safe and healthful work place for our Employees, Subcontractors, Suppliers, and Customers, to observe all State and Federal Laws and Regulations, and follow all *FieldTurf USA* safety policies and procedures.

*FieldTurf USA* job site supervision and management will make every reasonable effort possible to eliminate the cause of accidents and minimize the occupational and environmental hazards associated with our work. Furthermore, we will make every effort to prevent the destruction of equipment, materials, and property owned by ourselves and to afford the same protection to our customers.

We have, and will, continue to maintain a program designed to train our employees, our subcontractors and our suppliers to follow safe practices and to recognize and correct unsafe working conditions on the job site.

Active participation and adherence to the *Safety Program* is a condition of each employee's employment and each subcontractor's contract. Each employee must clearly understand that it is everyone's responsibility to act and work in a safe manner.

Our goal is to completely eliminate accidents and injuries. *FieldTurf USA* objectives in job safety efforts are realistic. We do consider the possibility of occasional accidents, therefore we will strive to minimize their effects towards achieving our objectives: To be able to respond promptly and effectively, and to evaluate and learn from incidents in attempting to eliminate further occurrences.

## **FieldTurf USA Health and Safety Program SUMMARY**

The safety of our employees is a major consideration in the operation of our company. Every reasonable effort will be made by FieldTurf USA management and job site supervision to eliminate the cause of accidents and to minimize the occupational hazards associated with our work.

We will make every effort to prevent the destruction of equipment,



materials and property owned by FieldTurf USA and afford the same protection to our customers.

FieldTurf USA supervisors and employees will accept safety as a part of our construction operation and must clearly understand that it is his/her responsibility to act and work safely.

## **WHY A SAFETY PROGRAM?**

The high cost of job site accidents make it important for us to maintain an effective Construction Site Safety Program. This summary will guide management and supervision in an overview of that program. For more detailed instructions and understanding of our complete policy, reference should be made to the applicable section of the main Safety Manual.

## **POLICIES AND PROCEDURES**

The main Safety Manual will include, but not be limited to:

1. Statements of accountability
2. New Employee Induction
3. Job Safety Procedures
4. Rules and Regulations
5. Training
6. Communication Programs
7. Audits
8. Investigations and Reporting
9. Safety Performance Reporting
10. Legislation and Regulations

## **RESPONSIBILITIES**

### **Safety Manager**

The Safety Manager is responsible for ensuring that sound safety policies and procedures are developed for and effectively applied in the field.

### **FieldTurf USA Management**

FieldTurf USA Management and Construction Site Supervision will see that a satisfactory working environment is available and all tools and equipment are properly maintained to ensure personnel safety. They will ensure the effective application of Federal and/or State **OSHA** regulations

and FieldTurf USA safety policies and procedures in the field. This will include but not be limited to:

1. Safety Audits
2. Monitoring of working conditions
3. Corrective action when applicable
4. Review all accident and near miss investigations
5. Will participate in all investigations
6. Establish contact with absent employees through coordination with corporate management
7. Conduct Safety Talks
8. Maintain required First Aid/CPR certification

*Site Supervision will make safety a part of their daily routine.*

### **Employees**

Each employee will take reasonable care to protect his/her health and safety, as well as the health and safety of other workers who may be affected by their acts or omissions.

## **SUPERVISOR TRAINING**

Site Supervisors will have a thorough understanding of the company's Safety Program. The supervisor will be in total agreement with the program and be prepared to enforce every part of it. Training courses in accident prevention and First Aid/CPR should be completed and kept current. Site Safety Communication Programs are also in place with FieldTurf USA to further achieve continuous exposure to safety education and promotion.

## **EMPLOYEE TRAINING**

Safety training for a FieldTurf USA employee begins the very first day on the job. New hire employees will be given an indoctrination program. Additionally, each employee will receive continued instruction and training through close personal supervision, crew safety meetings, and the following of approved job instruction techniques.

## **FIRST AID/BLOOD BORNE PATHOGENS**

Management is responsible to ensure that First Aid services are supplied and maintained for workers. All supervisory personnel are **REQUIRED** to maintain current First Aid/CPR certification as per **OSHA** regulations.

All human blood and certain human body fluids are treated as if known to be infectious and the Blood Borne Pathogen regulations must be adhered to.

## **DISCIPLINE ACTION POLICY**

Employees who violate safety rules will be disciplined in order to protect their own safety and the safety of their co-workers. Depending on the severity and frequency of a safety violation, the appropriate steps will be taken for discipline action in accordance with FieldTurf USA policies and procedures.

## **DRUG AND ALCOHOL ABUSE POLICY**

FieldTurf USA prohibits the use, distribution, possession and/or being under the influence of any narcotics, controlled substance, or alcohol in the workplace. Our Company has implemented its Drug and Alcohol policy with a **ZERO tolerance limit** in order to prevent the adverse consequences caused by drug and alcohol abuse. Adherence to this policy is a condition of employment. Any violation of this policy, or the provisions set within our policy, may result in disciplinary action up to and including termination from our Company.

## **SEXUAL HARASSMENT POLICY**

FieldTurf USA will not tolerate sexual harassment in our workplace. Our policy reflects a **ZERO tolerance** for sexual harassment during work, during business involving the company, or while on company property, by an employee. This policy also includes customers, visitors, and independent contractors.

Management at all levels is responsible for preventing, stopping, and/or investigating allegations of workplace sexual harassment.

## **VIOLENCE IN THE WORKPLACE POLICY**

Threats, threatening behavior, or acts of violence against employees, visitors, guests, or other individuals by anyone (*including customers, vendors, solicitors, or other members of the public*) on FieldTurf USA job sites will not be tolerated.

Any person who exhibits substantial threatening behavior, (pushing, shoving, hitting, throwing of objects regardless of size, unwelcome name calling, abusive behavior, harassment, stalking, or intimidation) or

engages in violent acts will be removed from the premises as quickly as safety permits and will remain off the job site until the outcome of an investigation. (*Refer to the Safety Manual for steps to be taken from recognition to investigation of Violence in the Workplace.*)

## **HAZARD COMMUNICATION**

FieldTurf USA will provide employees with *access* to information on the physical and health hazards of chemical/s (controlled products) in the work place, safe handling precautions, and emergency and first aid procedures.

Supervisors will ensure that workers who handle or use controlled products are properly trained to identify labels and understand risk phrases, be able to understand applicable sections of an MSDS (*Material Safety Data Sheet*), be trained in emergency procedures that might occur and generally understand problems associated with the handling of controlled products. Supervisors will also ensure that all controlled products received on the job site are correctly labeled and that the current MSDS is available for these products.

Supervisors will also adhere to policy regulations in regards to subcontractors that may be working on site.

## **RECORDS AND STATISTICS**

FieldTurf USA must comply with Federal and/or State **OSHA** rules and regulations concerning the reporting and record keeping of all accidents, incidents, near misses, fatalities, and recordable injuries and illnesses.

The record keeping and reporting policy describes those requirements, and the steps that employees and management must follow to assure the adherence to those rules and regulations

FieldTurf USA must report to **WISHA** any fatality or hospitalization of two (2) or more employees. (**OR-OSHA** any workplace fatality or the hospitalization of three (3) or more employees.)

FieldTurf USA must report the following incidents to **OSHA/OROSHA/WISHA** (*whichever is applicable*) before the given time limits:

- (a) Fatalities 8 hrs after occurrence or employer knowledge
- (b) Catastrophe 8 hrs after occurrence or employer knowledge

©Overnight

Hospitalization 24 hrs after occurrence or employer knowledge

If a work related injury or illness results in medical treatment beyond first aid, it must be recorded. (**Contact Corporate Safety Management**)

FieldTurf USA prohibits discrimination against any employee for reporting a work-related fatality, injury, or illness.  
(Other state reporting requirements may differ from the above listed)

## **INSPECTIONS AND AUDITS**

Inspections and audits during working hours are a major means of accident prevention. Visual inspection is required to be performed by **ALL** employees on a daily basis. If an unsafe condition exists that requires the assistance of management, then it is the responsibility of the employee to immediately contact the Safety Supervisor or job Supervisor for corrective action.

## **NEAR MISS INCIDENT/ACCIDENT/ABSENCE INVESTIGATIONS**

The supervisor will investigate all incidents, which have a potential for serious injury or property damage, and the worker/s involved. Information should be gathered and a Near Miss Incident report should be completed.

All accidents must be reported immediately to the Supervisor, who will forward a completed Accident Investigation report to the Corporate Office within 24 hours. In the case of serious personal injury and/or property damage, the Corporate Safety Office must be notified immediately.

The investigation should contain all pertinent information required by our Safety Policy. If an employee has been immediately released for transitional/temporary modified light duty work by the attending physician, the supervisor must contact Corporate Safety Management according to *the Safety Manual*.

When an employee fails to report for work and has not provided the company with a reason, the supervisor will attempt to contact the employee that day, to ascertain the reason for his/her absence. The supervisor will determine the cause, and take appropriate follow-up steps.

Following any injury beyond first aid, or any near miss incident or first aid that shows suspicious behavior, an employee will be drug and/or alcohol tested in accordance with the company drug and alcohol policy.

## PERSONAL PROTECTIVE EQUIPMENT

All work carried out on job sites will require the use of Personal Protective Equipment for each employee. Basic Safety rules regarding the use of Personal Protective equipment will be enforced. The supervisor will issue additional rules and instructions as the need arises.

The seven categories of PPE are:

1. **Eyes:** Safety glasses, goggles, shields, mono-goggles
2. **Head:** Safety hard hat
3. **Ears:** Hearing protection, ear plugs,
4. **Respiratory System:** Respirators, disposable dust masks
5. **Hands:** Gloves
6. **Feet:** Safety Steel toed boots
7. **Whole Body:** Tyvak suits, barricades, shields,

## CONSTRUCTION SAFETY RULES

Employees are required to know and comply with the Construction Safety Rules. Failure to do so may result in corrective action being taken up to and including termination of employment.

A copy of the Construction Safety Rules will be provided to and reviewed with each employee who has not previously worked for the Company (*new hire orientation*). This will be done prior to commencement of work. The Construction Safety Rules will be reviewed at the start of each new project.

## ASSURED EQUIPMENT GROUNDING

All equipment will be inspected before each day's use. These inspections will be to determine if there are any defects in any cord, attachment cap, plug and receptacle of cord sets, and any equipment connected by a cord or plug.

Tests will be performed on all cord sets and receptacles that are not part of the permanent wiring of a building structure. These tests will be performed as required by the *Safety Manual*

Each cord set will be color coded with color tape in accordance with the quarterly code chart. <*Some states may require more stringent coding rules*>

## HAND TOOLS

All hand tools will be inspected for mushroom heads, split or defective handles, and other defects. If defects are present the tool must be properly identified as defective.

Use basic precautionary measures to ensure that unsafe conditions are not present while using hand tools.

Power tools will **NEVER** be left unattended without the source of the power being shut off.

Electric tools will be used in accordance with our assured grounding program.

## HANTA VIRUS

Due to exposure and health concerns over the Hanta Virus, guidelines have been established for dealing with rodents and their habitats.

If working on a client's site, notify the client immediately so cleanup can take place. If working on a construction site where FieldTurf USA is the General Contractor, supervision will follow the proper procedural steps.

Personal Protective Equipment will be used and proper disposal steps will be utilized. *(These can be found in Section 11.7 of the Safety Manual)*

Do not remove protective equipment, eat, drink or smoke until the cleanup is completed. If personal clothing has been exposed, remove and wash.

## HEARING PROTECTION

Supervision will ensure the mandatory wearing of hearing protection while engaged in work activities where decibel levels are 85 dB or higher. Hearing protection will be provided to all employees on the job site. If applicable, hearing tests will be provided as required by **OSHA**. Some customer/client locations may require hearing protection be worn regardless of noise level.

## MOBILE EQUIPMENT

Lift truck operation: An operator must have structured, documented

training records to operate any forklift.

Mobile equipment rules and regulations of our Safety Manual must be adhered to. *<Refresher must be performed every 3 years>*

## **RESPIRATORY PROTECTION**

It will be the responsibility of the site supervisor to determine when and where respiratory protection is required and what type of respiratory protection will be used.

Fit testing will be performed by an authorized person only. Under **NO** circumstances shall a worker wear a respirator for which a satisfactory facial fit has not been obtained. Once a respirator has been assigned, a positive/negative test check will be performed by the employee to ensure proper fit.

Voluntary wearing of company owned or personal respirator:

Voluntary use of a respirator can only be authorized if the wearer has a passing medical evaluation and has been informed of the content of Appendix D of **OSHA** rule 1910.134.

Disposable Dust Masks:

Required use of a disposable dust mask must have an acceptable medical evaluation. and the wearer must also be fit tested. This is not required for voluntary use of a disposable dust mask, however, the wearer must be informed of the contents of Appendix D of **OSHA** rule 1910.134

## **WELDING AND CUTTING**

Protective personal equipment will be worn when welding and cutting. This will include, but not be limited to, gloves, safety glasses and welder helmet. Use precautionary measures such as screens to protect other workers, warnings before striking an arc where others are working, and depositing electrode studs in a waste container.

Keep oxygen away from grease or oil and never handle oxygen equipment with oily hands or gloves. Cylinders with leaky valves will be taken to an open area away from the work site. Empty cylinders are to have valves in the closed position.

Store and transport cylinders properly. Correctly identify empty cylinders. Use safety procedures when working with oxy/acetylene torches. Open valves correctly, and open no more than one half turn. Inspect hoses for cracks, splits, or signs of wear. Replace defective hoses.



Electric ground cables must be attached to the piece being welded.

## **EXCAVATION AND TRENCHING**

Supervisors are responsible for ensuring that all guidelines within the Company procedures are strictly followed. Each contractor shall be responsible for providing a "Competent Person" who must have adequate excavation training and knowledge to perform his/her duties and ensure the safety of the employees.

For rules on Access/Regress, hazards from falling objects, warning systems, fall protection, water accumulation, safeguards, inspections, and atmospheric atmospheres, see *Section 14 of the Safety Manual*. This section also covers rules for protective systems, soil classifications, sloping and benching, supports, shield systems, and shoring,

Appropriate disciplinary action will be taken if the Safety Manual procedure is violated. Examples are: An employee entering an excavation/trench before it is adequately protected and before the competent person has approved entry, or any employee who dismantles or modifies any part of the protective system or equipment without the authorization of the competent person.

## **CRYSTALLINE SILICA**

Extreme caution will be taken at all times during the use of any material known to contain crystalline silica particles. Areas will be kept clean, no smoking will be allowed in the are, and portable ventilation system or respiratory protection will be used if necessary.

## **FIRE PROTECTION**

The foreman or supervisor will check for fire hazards prior to any work being performed. All heating equipment will be checked on a regular basis and proper safety precautions must be in place.

CO<sub>2</sub>, foam, or dry chemical type fire extinguishers must be available on all projects and located where the risk of fire exists. Extinguishers must be recharged immediately after use.

Flammable materials must be stored in safe locations, including oxygen and acetylene tanks. Extreme caution must be taken when welding and burning.

Foremen must report immediately to the Supervisor any fire damage occurring on their project.

Site regulations as to fire-watch, hot permits, hoses, etc. must be followed prior to welding, cutting, burning, or grinding.

## **SUB-CONTRACTORS**

All sub-contractors must comply with all provisions of **OSHA** and all applicable Federal, State, Municipal, Local and Customer safety regulations and shall perform work in accordance with the safety rules and regulations of FieldTurf USA

## **TOOL BOX TALKS**

Supervisors will hold a tool box meeting at least once per week, first thing in the morning to reinforce FieldTurf USA's commitment and philosophy toward safety, as a key component in our business operation. These meetings should last from 15 to 30 minutes, and all employees must personally sign an attendance sheet so a record is kept of the employees training. Sign in sheets will reflect topics discussed during the safety meeting.

## **VEHICLE OCCUPANT PROTECTION PROGRAM**

It is necessary for our Corporation to establish a basis for determining safe operating standards for operators of motor vehicles during the business of FieldTurf USA

All applicants shall have a valid, current drivers license for the type of vehicle driven, and a current (not to exceed 30 days prior to application) Department of Motor Vehicles report (MVR). Applicants whose MVR includes more than one (1) at fault accident or two (2) convictions for moving violations may not be eligible for employment.

All applicable employees will be given a copy of FieldTurf USA's Vehicle Occupant Protection Program and a "Striving for Better Driving" pamphlet. The employee will sign the acknowledgment form.

A new driver is considered on probation for the first 90 days of employment.

Active employees convicted of major citations may not be permitted to operate any vehicle on Company business and may be placed in a non-driving position.

Seatbelts are an essential element of our driver safety policy/procedures and will be worn at all times during the operation of a company vehicle.

**At no time** will an employee be permitted to carry any person in any Company vehicle that is not an employee of FieldTurf USA without prior consent.

Pre-shift Inspections, Preventative Maintenance, and Documentation will be performed on all Company Vehicles.

## **OSHA INSPECTION PROTOCOL**

This procedure is to establish a uniform procedure in the event of an Unscheduled site inspection by the Occupational Safety and Health Administration (OSHA). FieldTurf USA will comply and cooperate with any regulatory agency inspection efforts.

*(review this manual for further details)*

## **HIPP – HEAT ILLNESS PREVENTION PROGRAM**

Employees who work in outdoor places of employment or on job tasks in other areas at those times when the environmental risk factors for heat illness are present, are at risk for developing heat illnesses if they do not protect themselves appropriately.

Communication and purpose for knowledge in this area is vital in the protection of our employees and the prevention of injury or death from any heat related illness.

Employees must:

- ❖ Comply with the procedures in the Safety Manual Section 25
- ❖ Ensure they have drinking water available at all times when the environmental risk factor for heat illness is present
- ❖ Ensure they have access to a shaded area to prevent or recover from heat illness symptoms
- ❖ Report heat illness symptoms to their supervisor or safety Representative

Supervision will assure that all employees are properly instructed in the recognition of signs and symptoms for heat related emergencies.

Three types of heat related emergencies are:

Heat Stress  
Heat Exhaustion  
Heat Stroke

In case of a heat related emergency, the supervisor will be notified

**IMMEDIATELY**

Supervision will maintain preventative measures to assure that all employees are provided with hydration methods  
*(See the Safety Manual for further information)*

# FieldTurf USA Health and Safety Program

## COMPANY STATEMENT

Construction Site Safety Agreement  
Construction Site Contractor Agreement

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## Health and Safety Program

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## Health and Safety Program

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# **FieldTurf USA**

## **Health and Safety Program**

### **SECTION 1**

#### **CONSTRUCTION SITE SAFETY PROGRAM**

##### **1.1 INTRODUCTION**

A. Our Safety Program has been developed to provide the construction site superintendent with the necessary information, tools, and training to provide our employees and others impacted by our activities, with a safe working environment.

B. The safety of our employees is a major consideration in the operation of our company. We have a sincere desire to provide a safe working environment for our employees. Every reasonable effort will be made by FieldTurf USA management and job site supervision to eliminate the cause of accidents and minimize the occupational hazards associated with our work.

C. The nature of the construction business often places our workers in hazardous situations, but these can be well controlled when proper precautions are taken. This includes having the correct equipment, possessing the proper knowledge, identifying and circumventing potential hazards, and most importantly, approaching the issue of safe work habits with a professional attitude.

D. Furthermore, we will make every effort to prevent the destruction of equipment, materials and property owned by ourselves and we will make every effort to afford the same protection to our customers.

E. It is FieldTurf USA's intention to present our safety programs so that all of our employees will realize the benefits of safe work habits, and therefore, adhere to the programs and provide positive feedback when FieldTurf USA reviews current programs or is in the process of developing new procedures.

F. FieldTurf USA shift supervisors and employees will accept safety as a part of our construction operation and must clearly understand that it is his/her responsibility to act and work safely.

## 1.2 WHY A SAFETY PROGRAM?

A. Every employee engaged in construction work site activity is entitled to a work place that is free of unsafe conditions, unsafe acts, and health company has the responsibility to provide the proper safeguards. When employees are injured, everyone loses.

B. The employee loses because of the injury, pain, suffering, lost wages, and negative effects on the family. The company loses because the services of an experienced employee are lost. Furthermore, medical bills must be paid, a less experienced employee must be hired as a replacement, and damaged equipment must be repaired or replaced.

C. The loss total for accidents seems endless and in most cases is never fully defined. Accidents produce a "lose-lose" situation for everyone involved, but as long as humans are placed on job sites, the supervisor and his workers must do everything possible to prevent accidents.

D. The high cost of job site accidents make it important for us to maintain an effective Construction Site Safety Program. The moral obligations we have for our employees' welfare makes an effective safety program an imperative priority.

E. Safety is not automatic or is it a function that can be superimposed on a construction operation. Safety, like all other construction activity, is a program that must be planned, implemented, enforced, and provided with a feedback system.

## 1.3 POLICIES AND PROCEDURES

A. A basic safety plan comprised of "Safety Policies and Procedures" is to be developed within the Company. This plan is to be reviewed on an annual basis, but the contained policies and procedures may be changed and updated as the need arises. Any changes in these policies and procedures will be made available to all management and supervision in order for all training of employees to be kept up to date.

B. The Safety Policies and Procedures manual will include, but not be limited to the following:

1. Statements of accountability for the Safety Manager, Superintendent, Foremen and Employees.

2. **New Employee Safety Induction Program to be conducted by Safety Manager, Superintendent or Foremen. Check off list completed and returned.**

3. Safety Rules and Regulations
4. Individual Job Safety Procedures
5. Safety Training
6. Communication Programs for Safety Promotion and Education
7. Safety Audits
8. Accident Investigation and Reporting Procedures
9. Absence Investigation and Follow up
10. Accident Reporting and Appeal
11. Safety Legislation and Regulation

C. An annual Safety Plan is to be developed with the Company. This plan will review safety activities and performances of the previous year in the context of the Safety Policies and Procedures manual and will set objectives and outline specific activities, focal points, revisions to procedures, etc. for the coming year.

#### **1.4 RESPONSIBILITY OF "SAFETY" MANAGER**

A. The Safety Manager is responsible for ensuring that sound safety policies and procedures are developed for and effectively applied in the field. This basic responsibility shall include, but not be limited to the following:

1. Reviewing any safety reports or checklists to ensure that "problem trends" and repeat items are corrected.
2. Conducting a safety audit annually and site audits on a regular basis.
3. Reviewing all Accident Investigation reports to ensure they are serving their intended purpose.
4. Reviewing monthly and quarterly safety performance statistics with management in order to assess the effectiveness of the current safety activities.
5. Reviewing safety meeting reports to ensure that meaningful talks are being provided to employees. (JJ Keller Tool Box Talks recommended)

- 6 Organizing the annual Safety Conference.
7. Issuing safety topics and literature to foreman.
8. Ensure that First Aid/CPR certification and training are provided to FieldTurf USA supervision. **Emergency Signage to be posted at each job site.**

## **1.5 SAFETY RESPONSIBILITY OF FIELDTURF USA MANAGEMENT**

A. In realizing that no effective safety program activity can exist unless it has the complete backing of Management Personnel, our employees can be assured that they have Management's complete cooperation and interest in job safety. FieldTurf USA's objective is seeking out safe and efficient working practices.

B. Management also realizes the moral and legal obligation to provide a safe place of employment and to provide the necessary working environment to perform the work without creating unnecessary accident exposure.

C. FieldTurf USA Management and Construction site Supervision will see that a satisfactory working environment is available and all tools and equipment are properly maintained to ensure personnel safety.

D. Construction Site Management will ensure the effective application of Federal and/or State OSHA, and our own company regulations and safety policies and procedures in the field. This basic responsibility shall include, but not be limited to, the following:

1. Ensure that the foremen frequently monitor working conditions and work practices of their employees.
2. Ensure that foremen are taking prompt corrective action to rectify unsafe work practices and conditions. Review all Accident Investigation reports to ensure that accident causes are being properly investigated and appropriate corrective action is being taken. The Construction site Manager will participate directly in the investigation of all "serious" accidents. Establish and maintain contact with an absent employee to facilitate his return to work.

## 1.6 SAFETY RESPONSIBILITIES FOR SITE SUPERVISORS, GENERAL FOREMEN, FOREMEN

A. Our construction site supervisor is the member of FieldTurf USA management responsible for successful implementation of our safety program. You are delegated the responsibility of carrying out Company objectives, to provide a safe working environment to our employees and all others impacted by our activities, ensuring strict adherence to the procedures provided with this program, compliance to *OSHA* standards, by promoting safety awareness in employees and demonstrating, through day to day attitudes, actions, and plain old common sense, that safe job performance is a top priority. This basic responsibility shall include, but not be limited to, the following:

1. Provide general safety induction, instruction, and applicable training to new workers, prior to assignment of duties. **Complete Employee Safety Orientation documentation and return to office.**
2. Be sure to record all training given to each employee and submit the training documentation with your job book at the end of each project.
3. Provide required safety equipment and protective devices to employees.
4. Enforce *OSHA* regulations and Construction site safety rules.
5. Develop and administer an effective program of good Housekeeping **and regular site safety audits, return form to office.**
6. Conduct frequent inspections for unsafe work practices and conditions and prompt corrective action when required.
7. Conduct and complete the investigation and reporting of all accidents and near miss incidents.
8. Provide documented, meaningful weekly safety talks to employees in the field group.
9. Provide verbal recognition to the employee for "good" safety performance.
10. Maintain required First Aid/CPR certification and training.
11. **Complete Job Hazard Analysis for new tasks.**

B. You, FieldTurf USA Construction site Supervisor; represent the entire company to our employees and customers. Your actions provide signals to all others of our commitment to the safety program. It is very important that you are in agreement with the program and your actions reflect this commitment.

C. As the company's construction site representative, you must make safety a part of your daily routine. Once this principle is followed for several days, you will find that safety becomes routine - the desired effect. If a job is accomplished efficiently it is always the safe way.

D. The following is a typical supervisor's daily routine in accomplishing the daily safety tasks:

1. Begin the day as usual, with job instructions for the employees.
2. Include a brief review of the potential hazards on certain jobs to be done. For example, if a form is to be removed, point out that nails are to be removed as the form work is taken apart and the scrap is disposed of.
3. A quick "job box talk" on safety issues should be given prior to the beginning of work.
4. Inspect the job site as you walk around to see how the job is progressing. Check for *OSHA* violations and unsafe practices and conditions. Checklists, to assist you, are included in this manual.
5. Take time to review a job with an employee who is new to that particular type of work.
6. On a selected day, prior to the beginning of work, provide additional safety training in the form of a "tool box talk". Don't read the material word for word, review the issue with the workers and follow up with a brief question and answer period. Draw the employees into the conversation.
7. Be sure to record all training given to each employee and submit the training documentation with your job book at the end of each project.



## 1.7 SAFETY RESPONSIBILITY OF THE EMPLOYEE

A. A combined effort of FieldTurf USA Management, Supervisors and Foremen will ensure that each employee will take reasonable care to protect his health and safety, as well as the health and safety of other workers who may be affected by his acts or omissions. This basic responsibility shall include, but not be limited to, the following:

1. Conduct work activities in a manner that will not endanger them or their co-workers. **Sign Employee Commitment Statement**
2. Knowing and complying with all construction Site Safety Rules. **Complete and sign Safety Orientation.**
3. **Knowing and complying with Job Safety Practices/ Job Hazard Analysis.**
4. Knowing and complying with **OSHA** safety legislation and regulations.
5. Maintain good housekeeping within the work area.
6. Immediately report injuries, no matter how slight, to the job foreman/supervisor.
7. Immediately report any unsafe conditions to the job foreman/supervisor.
8. Cooperate in an accident investigation in order to prevent a further recurrence.

## 1.8 SUPERVISORY TRAINING

A. Construction Site Supervision will have a thorough understanding of the company's Construction Site Safety Program: The procedures and Rules. The supervisor will be in total agreement with the program, and be prepared to enforce every part of it. Supervisors will also be fully informed of the **OSHA** standards and methodology. Training courses in accident prevention and First Aid should be completed. There must always be at least one trained and qualified person for each shift on every job site. .

## 1.9 EMPLOYEE TRAINING

A. Employee safety training is defined as the process of developing one's skills in the use of safe work methods and in the application of safe practices established work practices.

B. Training is the most important part of any safety program. If it is done effectively, accidents will be reduced, and lost time due to accidents, will be prevented. Training should be provided for everyone.

C. Our training program is limited by the very nature of our employment possibilities. However, the supervisor must carry out a few steps.

For the workers, safety training begins the very first day on the job. Newly hired employees will be given an indoctrination program. This basic program will include, but not be limited to, the following:

1. Safety Orientation (use check list) & Construction Safety Rules
2. Job Safety Practices/ Job Hazard Analysis & Employee Commitment Statement
3. Safety Legislation and Regulations
4. Reporting of Injuries, Policy and Procedures
5. Personal Protective Equipment
6. Fire Extinguisher Locations and Procedures
7. Review of Employee Responsibilities
8. Orientation with regards to Hazards
9. MSDS locations
10. Medical Aid Practices
11. Job "Site Specific" Indoctrination
12. Weather related training (Heat stress, Cold conditions, etc)

D. Additionally, each employee will receive continued instruction and training through close personal supervision, crew safety meetings and the following of approved job instruction techniques. Task training will follow indoctrination training. This training provides the employee with the information required to perform a particular job function safely and efficiently. The most important part of the job training is to place the trainee with a journeyman until the trainee is capable of working safely and efficiently without supervision. Special consideration should be given to the selection of the

journeyman to be used to provide the training. The journeyman should possess good communication skills and a proven commitment to the company safety program.

## **1.10 SITE SAFETY COMMUNICATION PROGRAMS**

A. Good safety performance is achieved when employees have embraced safety, by continuous exposure to safety education and promotion.

### **1.10.01 Safety Meetings**

a. Each foreman will provide a safety talk to his employees once each week, or more often if necessary, and will file a Foreman's Safety Meeting report in the Site Job Book.

b. On long term jobs, where FieldTurf USA is acting as the Prime Contractor, the General Foreman will conduct weekly General Safety Meetings. These meetings are to be used to promote safety and discuss safety concerns of workers.

c. On long term jobs, where FieldTurf USA is a Subcontractor, the Foreman, or his designate, will take an active roll in the site Safety Committee.

### **1.10.02 Annual Safety Conference**

a. An annual Safety Conference will be held for all FieldTurf USA personnel including FieldTurf USA management, Managers, Supervisors, General Foremen, and Foremen. The conference will include a review of safety performance, training presentations, and other matters relative to safety.

## **1.11 FIRST AID/BLOOD BORNE PATHOGENS**

A. Management is responsible to ensure that First Aid services are supplied and maintained for workers. This will include Industrial First Aid Attendants and Equipment in accordance with *OSHA* regulations.

1. A basic First Aid Training Program will be made available to all full time employees.

2. All supervisory personnel are **REQUIRED** to maintain current First Aid/CPR certification as required by *OSHA* regulations.

3. Any worker sustaining an injury or illness that is, or may be, job related will report IMMEDIATELY to their supervisor, who will assist in acquiring treatment as soon as possible.

4. All human blood and certain human body fluids (semen, vaginal secretions, cerebrospinal fluid, saliva, and any body fluid that is visibly contaminated with blood) are treated as if known to be infectious for HIV (aids virus), hepatitis, and other **Blood Borne Pathogens**. All FieldTurf USA tool trailers and emergency trailers are equipped with **Blood Borne Pathogens** Cleanup Kits. Before cleanup begins, instructions contained within the kit must be read and directions followed closely to prevent contaminating yourself or anyone else.

5. In the event of clothing or skin contact with blood or other potentially infectious material, FieldTurf USA Site Manager or Supervisor will contact the Corporate Safety Manager who will ensure proper State Accident forms will be completed within

10 days. If vaccine or vaccination series are required, it will be available at no cost to the employee. If the employee declines to accept recommended care, a mandatory declination form will be signed.

## 1.12 DISCIPLINE ACTION POLICY

A. The following statement will be the foundation of our Disciplinary Policy:

***Asking this company to overlook a simple safety violation would be asking us to compromise our entire attitude toward the value of your LIFE***

B. FieldTurf USA Construction site Supervisors are in the position to enforce the Safety Policies and Procedures in this manual. Even though supervisors are in a position of authority, they may consider the acts of Discipline and Enforcement difficult and uncomfortable to deal with. However, they must remember that a broken bone, a severed limb, or the death of one of our co-workers is impossible to place value on.

C. Although we strive to ensure a positive and protective work atmosphere through our General and Safety Policies, employees who violate safety rules must be disciplined in order to protect their own safety and the safety of their co-workers. Depending on the severity and frequency of a safety violation, an employee may be:

1. Immediately discharged
2. Written warning and/or suspension given
3. Written warning given

D. The following list provides the guide for disciplinary actions for safety and general rule violations:

	1st Offense	2nd Offense	3rd Offense
GROUP "A"	Immediate discharge		
GROUP "B"	Warning or Suspension	Discharge	
GROUP "C"	Warning	Warning or Suspension	Discharge

E. The following disciplinary guidelines classify violations according to their seriousness (Groups A, B, and C) for which certain penalties are suggested.

F. Unsafe conduct by an employee may violate several provisions of the different groups.

G. The list is intended to suggest examples of inappropriate different behavior. It is not a comprehensive list of all safety violations for which an employee may be disciplined or discharged.

H. Each incident will be separately evaluated and categorized in an appropriate "Group", based on the severity of the violation.

### **1.12.01 Group "A"**

- a. Deliberate violation of any security, general, or safety rules
- b. Being intoxicated or under the influence of any controlled substances while at work.
- c. Deliberate or reckless misconduct that endangers the life or safety of others.
- d. Possession of alcohol or illegal drugs on Company (on-site) premises.

- e. Deliberate falsification of any documents related to safety matters.
- f. Fighting or deliberate harmful contact with co-workers
- g. Violation of "Violence in the Workplace" Policy
- h. Violation of "Sexual Harassment in the Workplace" Policy
- i. Driving a forklift or operation of any other machinery or equipment or vehicles without required approval.
- j. Failure to properly and immediately report any accident or injury
- k. Failure to properly and immediately report any accident involving company equipment

**1.12.02 Group "B"**

- a. Negligence that damages company client property
- b. Negligence that endangers the safety of others
- c. Unintentional safety violations that endanger the safety or health of others
- d. Failure to report conditions that one believes to be unsafe
- e. Smoking or eating in unauthorized areas
- f. Speeding or unsafe operation of a forklift, motorized equipment, or any other Company vehicles
- g. Failure to properly record safety information for which one is responsible
- h. Failure to report machine or tool deficiencies.

**1.12.03 Group "C"**

- a. Violation of "Personal Protective Equipment" (PPE) Policy that does not result in injury to oneself or others
- b. Poor housekeeping

- c. Failure to attend required safety meetings
- d. Failure to perform inspections of tools or machinery
- e. Failure to learn company safety rules and regulations
- f. Failure to report to work on time, or leaving the job site without prior notice to supervision
- g. Failure to return Company equipment and tools to appropriate lockup area at the end of each shift

I. Written warnings are a tool in which FieldTurf USA helps the employee to know where they stand, and what area to improve their performance. The Company will issue written warnings that include the reasons for the supervisor's dissatisfaction, a statement of corrective actions expected and suggestions for improvement, to avoid further violations.

J. A copy of any and/or all written violations will be given to the employee and the original will be placed in the employee file.

K. Any employee who receives a written warning must immediately acknowledge receipt by signing the warning. If the employee disagrees with the written warning, he/she may discuss reasons with their supervisor. The employee is obligated to inform the supervisor of any error at the time that the warning is issued. Any disagreements or changes must be noted on the "Disciplinary Notice to Employee" form, under comments.

L. Any employee who believes that a supervisor has not responded fairly to the employee's comments may contact FieldTurf USA Human Resources Department.

# FieldTurf USA

## Health and Safety Program

### SECTION 2

### DRUG AND ALCOHOL ABUSE

### POLICY

#### 2.1 INTRODUCTION

A. It is the stated policy of FieldTurf USA to ensure a healthful and safe work environment for our employees. In order to help carry out this policy, FieldTurf USA employees are required to meet the expectations of their respective positions by reporting to work in a mental and physical condition to meet those requirements.

#### 2.2 DRUG AND ALCOHOL ABUSE

A. The Company prohibits the use, distribution, possession and/or being under the influence (**Zero Tolerance**) of any narcotics, controlled substance, or alcohol in the workplace. The workplace includes company or client premises or any locations related to the company or client. Company or client premises include all properties such as facilities, land, platforms, structures, fixtures, and buildings.

B. Drug and alcohol abuse is recognized as a treatable illness, but will not be tolerated in the workplace. It is a dangerous condition that may lead to physical impairment, safety violations, and risk to the health and safety of yourself and co-workers. It significantly lowers job performance resulting in the negative impact of the Company's primary mission to deliver quality work in a timely manner to our clients.

#### 2.3 POLICY

A. *FieldTurf USA* has implemented this policy in order to prevent the adverse consequences caused by drug and alcohol abuse at the workplace. Adherence to this policy is a condition of employment. Any violation of this policy or the provisions set herein may result in disciplinary action up to and including termination from our Company.

B. Employees using over the counter medications or prescription drugs which may hinder or alter the employees ability to perform their job duties in a safe manner, must inform their supervisor of this



medication prior to beginning a scheduled shift.

1. A prescription medication will not be acceptable if it is older than one (1) year from the date of issue.

2. The Company reserves the right to request a physician determination of the effects of a prescription drug or over the counter medication, and if those effects may warrant the restriction of such use by the employee during work hours, or restriction of the employees work activity. This action by the Company is to ensure the safety of all its employees

C. FieldTurf USA reserves the right to possibly require drug and/or alcohol screening for any major projects.

D. Certain customer locations may require job drug and/or alcohol screening. Any job applicant or employee refusing to consent to these tests will be placed on a “positive” result status, and must meet the requirements of this policy to be considered for re-instatement.

E. The Company reserves the right to request a screening test based on "Reasonable Suspicion". Any employee refusing to consent to “Reasonable Suspicion” tests may be subject to disciplinary action up to and including termination. "Reasonable Suspicion" is an observation or observations of an employee's condition or performance that indicates controlled substance, illegal drug or alcohol use that may impair an employee's faculties. Examples include:

1. Altered work performance
2. Appearance (including noticeable odor of an alcohol beverage or marijuana)
3. Behavior
4. Speech

F. In all cases involving, or in relation to, a serious or potentially serious accident, incident, or “near miss” accident while in the course and scope of employment that results in, or has the potential to result in physical injury or property damage, a drug and/or alcohol test is required. (Recommendation to delete the following statement), In cases involving an incident/near miss accident, it will be the decision of the Safety Representative and/or Site Superintendent whether to conduct a drug/and or alcohol test.

## **G. RANDOM TESTING:**

1. Employees currently working on our sites may be subjected to random drug and/or alcohol testing. This **random testing** is to be coordinated by the FieldTurf USA corporate Safety Department. Supervision or management will **NOT** be excluded from random selection.
2. Employees will be selected for “Random Testing” using a certified computer non-bias selection program.
3. **Random testing will be conducted in accordance with State and Federal guidelines.**
4. If Random testing is performed and the result is found to be inconclusive, the sample will be forwarded to an approved testing facility for confirmation (LOD) Level of Detection testing.
5. At the time of an inconclusive pre-screen test result, the employee will be offered the option to be contacted by a Medical Review Officer (MRO) to discuss the drug and/or alcohol result, or to waive the option for contact. If the option for a contact by an MRO is accepted, the employee must provide a valid first and alternate contact phone number, and must make every possible effort to be available.
6. If a pre-screen test result is inconclusive, the employee will be suspended from work activities, removed from the work site, and must wait for a confirmed test result before FieldTurf USA can make it's decision of termination or continued employment.
7. If a confirmed test result is found to be negative, the employee will be returned to work based on work availability. Wages will be paid for the waiting period based upon their regular hours worked at the time of the original pre-screen testing, and upon the job duration.
8. If the confirmed test result is found to be positive, the employee will be terminated, with the termination beginning at the time of the original pre-screen testing. No wages will be paid past that time.

## **H. LABORATORY TESTING:**

1. In certain cases, an employee or job applicant will be sent for drug and/or alcohol testing in either a certified testing laboratory, or a

“collection facility”.

2. A “collection facility” will forward the collected sample to a certified testing facility after preliminary testing is performed.
3. All laboratory testing results will be based on LOD (Level of Detection) testing.
4. The results will be forwarded to the Corporate Safety Department representative.
5. Test results will be handled in the same manner as stipulated in the Random Testing section of this policy.
6. In some cases, a client may request that FieldTurf USA employees be tested via their program. All test results will be forwarded to the Corp. Safety Department and will fall under this policy requirements.

#### **I. SPECIMEN COLLECTON**

1. Specimen collection will be performed in accordance with State and Federal Guidelines.
2. Per policy requirements, there is a 3 hour time limit for Urine Drug, and 2 attempts for Breath alcohol.
3. If a sufficient sample cannot be collected within the times stipulated above, it will be treated as a “refusal of specimen” and will fall under the positive result portion of this policy.
4. The donor has the right to seek a physician follow-up within 72 hrs, at their expense, to decide if there is a valid medical reason for the insufficient sample. A letter stating that fact needs to be presented to the Corp. Safety Department within 24 hours of physician diagnosis, and sample collection will be arranged through the physician. If the result of the sample collection is negative at the LOD, wages will be reimbursed for the waiting period based upon the regular hours worked at the time of the *original* sample collection, and upon the job duration. If the test result is a confirmed positive, the donor will be under the requirements as stated in this policy.
5. Generally, in any of the above stipulated cases, which ends with a confirmed positive drug and/or alcohol test result, an employee is determined to be in violation of this policy and will be terminated

immediately. A job applicant will be considered ineligible for possible hire.

#### **J. REINSTATEMENT/PROBATION**

1. Both the employee and the job applicant will be in-eligible for possible employment or re-employment until:

a. Thirty (30) days (or client regulated duration) from the certified lab receipt of inconclusive pre-screen confirmation

b. The employee or job applicant submits to a drug and/or alcohol test at his or her own expense, which indicates compliance with this Policy. This drug test must be obtained through a certified laboratory *after* the 30 day waiting period and acceptable results must be received by the appropriate representative at FieldTurf USA's corporate Safety Department before the employee or job applicant is considered for possible employment or re-employment. The testing must have been obtained within 1 week (7 days) before submission of result to FieldTurf USA.

c. If an attempted re-instatement drug/alcohol test is found to be positive for any substance, then the employee will NOT be re-instated. Any future employment with the company will be reviewed by management and a determination will be forwarded to the employee.

d. The employee or job applicant must agree to submit to a possible drug and/or alcohol screen test within sixty (60) days following re-instated status, and unannounced drug testing for twelve (12) months, as a condition of continued eligibility.

e. If the employee or job applicant qualifies for possible employment or re-employment, they will also be included in pre-hire required testing, random testing, or any other testing requirements stated in this policy.

f. Any employee who refuses to submit to drug and/or alcohol testing as provided for in this policy is subject to termination.

g. Any job applicant who refuses to submit to drug and/or alcohol testing as provided for in this policy will not be considered for possible employment.

K. Adulteration of a testing specimen will result in:

1. Non-consideration of possible employment of any job applicant.
2. Immediate termination of the employee and may not be considered for re-employment.

L. FieldTurf USA reserves the right to inspect and/or search all Company property, as well as any employee's personal property on Company premises or job sites, for alcohol controlled substances, illegal drugs or related paraphernalia. Any employee that is found to possess drugs in violation of this policy will be immediately terminated and will not be considered for re-employment as stated in this policy. Illegal drugs will be turned over to the proper law enforcement authorities.

M. All subcontractors to FieldTurf USA will be required to comply with this policy.

N. **ASSISTANCE:**

1. FieldTurf USA recognizes that drug abuse and/or alcohol dependency are conditions that can be successfully treated. Confidential assistance with these types of problems is available through public and private agencies. Information on these agencies can be obtained through each job site Safety Representative. FieldTurf USA urges any applicant or employee who needs assistance to contact these agencies.

## 2.4 DRUG AND ALCOHOL ABUSE DEFINITIONS

A. For the purpose of this policy, the following definitions of terms is provided:

1. **Alcohol:** Means ethyl alcohol (ethanol). References to use of possession of alcohol include use or possession of any beverage, mixture or preparation containing alcohol.
2. **Controlled Substances:** Means any substance (other than alcohol but including prescription medicine) that has known mind or function altering effects that may impair or affect the ability to perform work, the access to which is controlled by law.
3. **Illegal Drugs:** Any form of drug, narcotic, hallucinogen, depressant, stimulant, cannabis or other substance capable of creating or maintaining impairment or otherwise affecting one's

physical, emotional or mental state; the sale, purchase, transfer, use of possession of which is prohibited by law.

4. **Employee:** any individual who performs work for *FieldTurf USA* is subject to the provisions of these guidelines.

5. **Company Premises:** Company premises include all company property, facilities, parking lots, garages, workplaces, storage structures and company owned vehicles and equipment.

6. **Under the Influence:** A detectable level of alcohol, illegal drugs or controlled substances in an employee's blood or urine reported by the laboratory, or use of alcohol, illegal drugs or controlled substances that results in any noticeable or perceptible impairment of the employee's mental or physical faculties or job performance.

7. **Reasonable Suspicion:** An observation or observations of an employee's condition or performance that indicates controlled substance, illegal drug or alcohol use that may impair an employee's faculties. Example include altered work performance, appearance (including noticeable odor of an alcoholic beverage or marijuana), behavior, speech or involvement in or relation to an accident, incident or "near miss" while in the course and scope of employment that results in or has the potential to result in physical injury or property damage.

**SAFETY FORM**

**ACKNOWLEDGEMENT  
DRUG AND ALCOHOL ABUSE  
POLICY AND PROCEDURE**

I, \_\_\_\_\_, acknowledge that I have received from **FieldTurf USA**, their Drug and Alcohol Policy, and understand that I am expected to cooperate with the administration of the policy and to comply with its terms.

---

**Employee Signature      Date**

# FieldTurf USA

## Health and Safety Program

### SECTION 3

#### SEXUAL HARASSMENT POLICY

##### 3.1 INTRODUCTION

A. FieldTurf USA will not tolerate sexual harassment in our workplace. Our policy has a **ZERO** tolerance for sexual harassment during work, during business involving the company, or while on company property by an employee. This policy also includes customers, visitors, and independent contractors.

B. No employee, either male or female, should be subject to unwelcome verbal or physical conduct that is sexual in nature or that shows hostility to the employee because of the employee's gender. Violation of this company policy may result in disciplinary action up to and/or including dismissal.

C. Management at all levels is responsible for preventing workplace sexual harassment. This responsibility includes immediately reporting conduct by anyone that may constitute sexual harassment, even if the conduct was sanctioned and regardless of how awareness of conduct was gained.

##### 3.2 DEFINITION

A. Sexual harassment, prohibited by law and by this Company, may include but not be limited to:

1. Unwelcome verbal or physical conduct of a sexual nature when submission to the conduct is made either an explicit or implicit term or condition of employment (such as promotion, training, overtime, assignment, leaves of absence, etc.)

***Example:*** Unwelcome questions or making unwelcome comments about another person's sexual activities, dating, personal or intimate relationships, or appearance.

2. Unwelcome verbal or physical conduct of a sexual nature when submission to or rejection of the conduct is used as a basis for making employment decisions.



**Example:** Offering or implying an employment related reward in exchange for sexual favors or submission to sexual conduct. Threatening or taking of a negative employment action, such as termination, demotion, denial of leave of absence, if sexual conduct is rejected.

3. The purpose or effect of substantially interfering with a person's work performance, or creating an intimidating, hostile, or offensive work environment.

**Example:** Unwelcome whistling, staring, or leering at another person. Unwelcome sexually suggestive or flirtatious gifts, letters, notes, e-mail or voice mail. Displaying or circulating pictures, objects, or written materials, including graffiti, cartoons, photographs, pinups, calendars, magazines, figurines, or novelty items, that are sexually suggestive or that demean a person because of their gender.

4. Unwelcome verbal or physical non-sexual conduct that denigrates or shows hostility toward a person because of his or her gender when the conduct has the purpose or effect of substantially interfering with a person's work performance, or creating an intimidating, hostile, or offensive work environment.

**Example:** Conduct or remarks that are sexually suggestive or show hostility to a person, including jokes, taunts, negative stereotyping, threats, blocking of physical movement, or bodily touching.

### **3.3 EMPLOYEE RESPONSIBILITY**

A. Any employee who believes that he or she has been subjected to sexual harassment, by anyone, is encouraged, but not required, to promptly tell the person that the conduct is unwelcome and ask the person to stop immediately. Anyone who receives such a request must comply with it and must not retaliate against the employee making the request.

B. Sexual harassment complaints must immediately be brought to the attention of the Company. The employee may choose to raise the complaint through his or her immediate supervisor, who will in turn contact a Corporate official. If the employee feels uncomfortable about discussing the complaint with their supervisor, the employee should feel free to bypass the supervisor and contact any member of Company management.

### **3.4 SUPERVISOR RESPONSIBILITY**

A. FieldTurf USA Supervision is required to immediately contact a Corporate official after receiving any employee's complaint of sexual harassment.

B. If a supervisor has not received a complaint, but suspects that conduct might constitute sexual harassment, the supervisor must immediately talk to the person or persons involved, and also to contact the Corporate official. Even if the suspected sexual harassment was sanctioned or involves persons who work in a department or shift other than the supervisors, the supervisor must report it.

### **3.5 INVESTIGATION AND RESOLUTION**

A. After notification of the employee's complaint, an interview by the Corporate official and the supervisor, if applicable, will immediately be initiated to gather all facts about the complaint. After completion of the investigation, appropriate management will make a determination. If warranted, disciplinary action up to and including discharge will be imposed. Other appropriate actions will be taken to correct problems caused by the conduct.

B. This policy also prohibits retaliation against employees who bring sexual harassment charges or assist in investigation charges. Retaliation in violation of this policy may result in discipline up to and/or including termination.

C. Any employee who reports sexual harassment or assists in an investigation will not be adversely affected in terms and conditions of employment, discriminated against, or discharged because of the complaint, report or assistance.

*All complaints will be handled confidentially*

# FieldTurf USA

## Health and Safety Program

### SECTION 4

### VIOLENCE IN THE WORKPLACE

### POLICY

#### 4.1 INTRODUCTION

A. FieldTurf USA strives toward making all areas of our workplaces safe from personal and mental harm. Our company boasts a **ZERO** tolerance for any violence in the workplace.

B. No employee, male or female, should be subjected to verbal or bodily abuse by another employee. Violation of this policy may result in disciplinary action up to and/or including dismissal.

#### 4.2 INAPPROPRIATE BEHAVIOR

A. A Strong workplace violence program starts with understanding exactly what workplace violence is. This inappropriate behavior can be portrayed in either physical or verbal form.

B. Although it usually does not cause physical injury, verbal workplace violence such as unwelcome name calling, obscene language, abusive behavior, harassment, stalking, or intimidation, is as detrimental to a healthy and safe work environment as physical violence.

C. Verbal violence can lead to physical results which can include kicking, pushing or shoving, hitting, throwing of objects regardless of the size or type of object being thrown, and whether a person is the target of the thrown object. Physically touching another employee in an intimidating, malicious, or sexually harassing manner, which includes slapping, poking, pinching, grabbing or acts of obscene gestures are all forms of physical workplace violence.

#### 4.3 FACTS AND FIGURES

A. The Bureau of Labor and Statistics estimates that on average, 1.7 million people were victims of violence in the workplace each year from 1993 through 1999. Homicide was the third leading cause of occupational death (2nd leading cause of death for men, and leading cause of death in the workplace for women.) That estimates to

approximately 800 homicides per year.

B. Every year, one out of every four employees is attacked, threatened or harassed at work. Nearly 500,000 victims of violent crime in the workplace lose an estimated 1.8 million workdays each year and more than \$55 million in lost wages.

#### **4.4 RECOGNITION**

A. The causes of workplace violence are varied and can come from both internal and external sources. Supervisors and employees should be on the look out for any signs, which could develop into a safety concern.

B. Some of the characteristics of a potentially violent person are:

1. Sudden changes in behavior, suspicious or paranoid of fellow workers.
2. Anxiety or irritability, uncontrollable temper
3. Depression or withdrawal, delusional beliefs about others in the workplace, especially supervisors.
4. Excessive drinking or drug use
5. Noted sexual problems, including harassment, recent rejection or failed relationship
6. Excessive altercations, repeated threats, desperation over a disciplinary action.
7. Being argumentative
8. Fascination with weapons
9. Someone being ridiculed, degraded or bullied at work.
10. Someone in a financial crisis

#### **4.5 PREVENTION: DO'S AND DON'TS**

A. The following are guidelines of prevention and what you should or shouldn't do in case of violence in the workplace:

1. Take threats **SERIOUSLY**

2. Understand existing policy on Violence in the Workplace
3. Follow safety and prevention guidelines
4. Don't dismiss threats of violence as "venting" or "blowing off steam"!
5. Discourage disrespect and degrading behavior toward others
6. Report offensive or intimidating behavior
7. Learn to recognize, avoid, and safely diffuse volatile situations.

#### **4.6 POLICY**

A. Nothing is more important to FieldTurf USA than the safety and security of its employees. Threats, threatening behavior, or acts of violence against employees, visitors, guests, or other individuals by anyone (*including customers, vendors, solicitors, or other members of the public*) on FieldTurf USA job sites **will not be tolerated**.

B. Any person who exhibits substantial threatening behavior, (pushing, shoving, hitting, throwing of objects regardless of size, unwelcome name calling, abusive behavior, harassment, stalking, or intimidation) or engages in violent acts will be removed from the premises as quickly as safety permits and will remain off the job site until the outcome of an investigation.

C. FieldTurf USA will initiate a decisive and appropriate response. This response may include, but is not limited to:

1. Suspension and/or termination of any business relationship
2. Reassignment of job duties
3. Suspension and/or termination of employment
4. Criminal prosecution of the person or persons involved.

#### **4.7 SUPERVISOR RESPONSIBILITY**

A. Supervisors play a vital role to the success of the program. Supervisors must be prepared to handle incident reports and encourage strict adherence to the program. Supervisors must encourage workers to report incidents. Reporting threats is among the primary keys to an effective workplace violence program.

B. The employee must understand and be confident that there is no fear of repercussion if they do report an incidence of violence, and that FieldTurf USA values the issue of confidentiality.

C. Once a supervisor receives a report, they should:

1. Investigate objectively and fill out a "Workplace Violence Incident Report".
2. Verify accuracy of the report.
3. Document all relevant facts on the form.
4. Take appropriate disciplinary action.

#### **4.8 EMPLOYEE RESPONSIBILITY**

A. All FieldTurf USA employees are responsible for notifying supervision or management of any threats, which they have witnessed, received, or has been told that another person has witnessed or received.

B. Even without an actual threat, personnel will report any behavior they have witnessed which they regard as threatening or violent when that behavior is job related or might be carried out on a company controlled site.

C. Employees are responsible for making this report regardless of the relationship between the individual who initiated the threat or threatening behavior and the person or persons who were threatened.

D. This policy also requires all individuals who apply for or obtain a protective or restraining order, which lists company locations as being protected, to provide to management with:

1. A copy of the petition and declarations used to see the order
2. A copy of any temporary protective or restraining order, which is granted
3. A copy of any protective or restraining order, which is made permanent.

E. FieldTurf USA understands the sensitivity of the information requested and has developed confidentiality procedures, which recognize and respect the privacy of the reporting employee(s).

# FieldTurf USA

## Health and Safety Program

### SECTION 5

#### HAZARD COMMUNICATION POLICY

##### 5.1 INTRODUCTION

A. FieldTurf USA is firmly committed to providing each of its employees a safe and healthy work environment. It is the policy of the company to promote and sustain the efficient application of a Hazard Communication Program and to ensure that employees receive the fullest knowledge, training and protection in the handling of products that could be harmful to their health.

##### 5.2 COMPLIANCE

A. FieldTurf USA will provide employees with access to information on the physical and health hazards of chemicals in the work place, safe handling precautions, and emergency and first aid procedures. This program has been based on **OSHA** Hazard Communication standard (**OSHA 3084**) and MSDS (Material Safety Data Sheet.) Cooperation and strict compliance with this program is needed from all levels of the workforce.

##### 5.3 RESPONSIBILITIES

A. Each domestic project shall implement a "site specific" Hazard Communication Program utilizing the FieldTurf USA main program and will be included as part of the project "start-up" supplies.

B. The project Safety Manager is responsible for the development and administration of the project Hazard Communication Program. The project safety department, as required by the program, will provide employee training

C. The procurement department is responsible for maintaining an ongoing inventory of all chemicals and substances that fall within the regulations of the Hazard Communication Standard and obtain the material safety data sheet for each respective product or chemical. The procurement department is also responsible for assuring that all chemicals and substances are properly labeled.

D. Supervisors will ensure that workers who handle or use controlled products are properly trained to identify labels and understand risk phrases, be able to understand applicable sections of a MSDS, be trained in emergency procedures that might occur and generally understand problems associated with the handling of controlled products. Supervisors will also ensure that all controlled products received on the job site are correctly labeled and that the current MSDS is available for these products.

E. Sub-Contractors: Sub-Contractors must have their own MSDS's on site. To insure that our sub-contractors work safely, it is the responsibility of the project safety department or supervisor to provide sub-contractors with the following information:

1. Hazardous chemicals to which they may be exposed while on the job site.
2. Have copies of a MSDS on hand and make available to the subcontractors Foreman/Supervisor should they request it.
3. Precautions the employees may take to lessen the possibility of exposure by usage of appropriate measure.

F. Workers will follow all the established procedures for the use and handling of controlled products that include, when required, the wearing of proper personal protective equipment. All employees are responsible for complying with the FieldTurf USA Hazard Communication Program and to follow all rules and regulations.

## **5.4 TRAINING**

A. All job site employees working with, or potentially exposed to, hazardous chemicals will be properly trained in the requirements of the Hazard Communication Program and properly informed concerning the potential hazards of the materials to which they may be exposed.

B. Information and training will be provided at the time of an employee's initial assignment to work, through;

1. C-Stop requirements
2. Refresher courses
3. Job site orientation classes



#### 4. Safety meetings

5. Periodic updates and reinforcement that will be conducted through verbal or written communications at safety meetings, or as appropriate.

C. The extent of information provided will include material safety data sheets and other available information as used in training employees concerning hazards.

D. Prior to beginning work on any job site, all employees will be informed of the particular hazards associated with the work area(s) This will include unlabeled pipes and other potential hazards involved in the event of exposure to the materials (e.g., maintenance work, system failure, etc.) and expected to use the appropriate protective measures contained therein.

E. Employees will be made aware of the location and details of the written Hazard Communication Program and the Material Safety Data Sheets. **MSDS sheets will be available for review at each job site.**

F. Prior to any non-routine task performed that could involve exposure to hazardous material, the project safety department and/or Supervisor will carefully review all potential hazards of the task with the employee and will prescribe appropriate work practice procedures.

### **5.5 LABELING**

A. No hazardous chemical materials will be accepted for use unless labeled with identity of the hazardous chemical(s), appropriate hazard warning, and the MSDS.

B. All labels will be legible and prominently displayed on the container.

C. No label is to be marred or removed unless the container is immediately marked with the required information. No employee should remove any label. Any container without a label should be reported immediately.

D. The identity of the material that appears on the manufacturer label will be the same name to identify the material on the Hazardous Materials Inventory and the MSDS for that substance.

E. Hazardous chemicals that are transferred from labeled containers to portable containers must comply with **OSHA** standards.

## **5.6 MATERIAL SAFETY DATA SHEETS**

A. Every hazardous substance known to be present in the workplace will be listed in the MSDS Inventory Log Book. These materials will be updated whenever necessary to accurately reflect all the hazardous chemicals that are present. No hazardous material will be used unless an MSDS has been obtained and is on file **and at each job site**. Material Safety Data Sheets will be made readily available upon request.

### **5.6.01 Understanding the Material Safety Data Sheet**

a. Material Safety Data Sheets are designed to provide the employee with the information needed to establish proper work procedure, teach others how to handle chemical substances safely, and to keep FieldTurf USA in compliance with State and Federal laws and regulation. Although each MSDS may vary in length, they usually follow a general pattern of the Federal Occupational Safety and Health Administration (**OSHA**) form.

### **5.6.02 MSDS - Product Identification**

a. The introductory section of the MSDS lists the manufacturer name, address, and a telephone number to call in the event of an emergency. It then lists the chemical name and trade name, chemical family and formula, DOT shipping name, the hazard and the UN identification number. The name used on the product label should be the same as that used on the MSDS.

### **5.6.03 MSDS – Section One**

a. Section one lists the physical properties of the material. The data is crucial since it lists boiling point, vapor density, water solubility, specific gravity, percent volatile, evaporation rate, and appearance and odor.

### **5.6.04 MSDS – Section Two**

a. Hazardous ingredients are listed in section two and show any major components that make up the chemical. If a chemical manufacturer believes that releasing the specific chemical identity would reveal a trade secret, the "specific" chemical identity is being withheld as a trade secret, and the MSDS must

fully disclose the properties of the material.

#### **5.6.05 MSDS – Section Three**

a. Section three contains the fire and explosion data, which is useful in determining the conditions that could result in a gas, vapor, mist or dust explosion. An important property related to fire hazard is the flash point of a liquid and determines the flammability class of the product. This section also contains special fire fighting procedures and any unusual fire and explosion hazards.

#### **5.6.06 MSDS – Section Four**

a. Health hazard data is presented in section four. The toxic hazard data is stated in terms of the mode of exposure or test, the animal used, if applicable, and the concentration of the toxic during the testing. This section also presents a hazard classification for each route of entry such as inhaled, skin irritation, or ingestion.

#### **5.6.07 MSDS – Section Five**

a. Section five covers the effect of overexposure for inhalation, eye/skin contact, ingestion and other types of overexposure information. It states any medical conditions that are generally recognized as being aggravated by exposure to the material.

b. This section also indicates the permissible concentration of gas, vapor, mist dust, or fumes in air to which a person can safely be exposed without adverse health effect.

c. Emergency and first aid procedures are also explained in this section.

#### **5.6.08 MSDS – Section Six**

a. This section contains information regarding the reactivity of the substance, which under certain conditions, can burn, explode or release toxic substances. Changes in temperature, humidity, or pressure, as well as contact with other chemicals, can contribute to the instability of some substances. This section indicates the stability of the chemical, conditions and materials to avoid and hazardous decomposition products.

#### **5.6.09 MSDS – Section Seven**

a. Section seven contains the instructions for steps to be taken in case of an accidental release or spill. It usually includes some action to stop the spill and control its spread, as well as evacuation procedure where applicable.

b. It also describes any special disposal procedure to ensure that waste material is disposed of according to Federal, State and Local regulations.

#### **5.6.10 MSDS – Section Eight**

a. Special protection of the individual who might have to work with a substance is explained in this section. Proper respiratory, skin and eye protection, as well as any other special protective equipment that may be necessary, will be listed. Engineering control requirements and general storage conditions are also shown in this area.

#### **5.6.11 MSDS – Section Nine**

a. Section nine covers precautions to be taken during handling, storage, and label statements for use on containers, placards and any other information on any aspect of safety or health not covered in the other sections.

# FieldTurf USA

## Health and Safety Program

### SECTION 6

#### RECORDS AND STATISTICS

##### 6.1 INTRODUCTION

A. FieldTurf USA must comply with all Federal and/or State **OSHA** rules and regulations concerning the reporting and record keeping of all accidents, near misses, fatalities, and recordable injuries and illnesses.

B. The following policy describes those requirements, and the steps that employees and management must follow to assure the adherence to those rules and regulations.

##### 6.2 REPORTING

A. FieldTurf Builders must report to WISHA any fatality or hospitalization of two (2) or more employees. (**OR-OSHA** any workplace fatality or the hospitalization of three (3) or more employees.) These requirements may differ for other states.

B. FieldTurf USA must report the following incidents to **OSHA, OROSHA** and/or **WISHA** (*whichever is applicable*) before the given time limits:

(a) Fatalities 8 Hrs after occurrence or employer knowledge

(b) Catastrophe 8 Hrs after occurrence or employer knowledge

© Overnight Hospitalization 24 Hrs after occurrence or employer knowledge

C. If a work related injury or illness results in medical treatment beyond first aid, it must be recorded. (**Contact Corporate Safety Management**)

D. FieldTurf USA prohibits discrimination against any employee for reporting a work-related fatality, injury, or illness.

## **6.3 RECORDS AND STATISTICS**

### **6.3.01 Inspection of Vehicles and Machinery**

- a. Records shall be kept on the maintenance and repair of each unit.
- b. Maintenance and repair records shall be kept on file by the supervisor in charge of such equipment. Such records shall be readily available upon request.

### **6.3.02 Investigation of Accidents**

- a. Reports of accidents/near miss incidents that occur in the Construction Group will be kept on file at the Site office and by the Safety Manager at Corporate Office. (*For more information, refer to the main safety manual*)
- b. All accident/near miss incident reports are to be made available per Occupation Health and Safety Regulations. (**OSHA**)

### **6.3.03 Safety Committee – Long Term Projects**

- a. Minutes of meetings shall be recorded and kept on file at the Site Office and Corporate Office. These records are to be made available per the Occupational Health and Safety Regulations. (**OSHA**)
- b. Minutes of Safety committee meetings are to be posted in the lunchroom on the safety bulletin board. Copies of Safety committee minutes are to be sent to the construction Manager.

### **6.3.04 Accident /Incident/Near Miss Report Forms - State**

- a. Accident report forms shall be completed for all injuries or illnesses that result in medical treatment (all but for the most minor incidences) and sent to **Corporate Safety Office within 24 hours**. (*Contact Corporate Safety Manager for definition of “minor incident”*)
- b. Forms are to be completed and sent to the Corporate Office within 24 hours of any reportable incident, accident, or near miss. A copy will be kept in the site job box.

### **6.3.05 Daily Safety Sign-In Sheet**

a. Daily safety meetings topics shall be recorded on the form provided (*safety sign-in sheet*) and kept on file in the site job box and be returned to the Corporate office at the end of the project.

### **6.3.06 Inspection Reports**

a. Inspection reports are to be completed for all inspections and copies are to be kept in the on-site job box and sent to the Corporate office at the end of the project.

### **6.3.07 First Aid Record Book/OSHA 300 Log**

a. A first aid summary record shall be maintained for each job or project. (*See attached Form "Site Project First Aid Summary" at the end of this section*)

b. Each record of entry shall be signed by the First Aid Attendant or the person rendering first aid.

c. All first aid visits will be recorded on the Project first aid Summary form. This form is to be completed for every project and returned to the Corporate Office, even if no first aid visits occurred.

d. Any recordable injuries must be entered in the **OSHA 300 Log** within six working days after receiving information that a recordable case has occurred. **The OSHA 300 Summary Log will be posted at each job site from February 1, through April 30 for the previous year. Records are kept for 5 years and claims records are kept separate from employee safety records and medical records.**

### **6.3.08 Records of Training**

a. Training records will be maintained by Safety or Labor Depts. at the Corporate office.

# FieldTurf USA

## Health and Safety Program

### SECTION 7

### INSPECTIONS AND AUDITS PROCEDURE

#### 7.1 INTRODUCTION

A. The identification of unsafe conditions and work practices by means of Safety Inspections and audits during working hours is a major means of accident prevention.

B. Visual safety inspection is required to be performed by **ALL** employees on a daily basis. If a minor unsafe condition exists that can be corrected by an employee immediately, then it is the responsibility of that employee to do so. If an unsafe condition exists that requires the assistance of management, then it is the responsibility of the employee to immediately contact the Safety Supervisor or job Supervisor for corrective action.

C. Accordingly, management will ensure that:

1. Before the job begins, a Job Hazard Safety Analysis may be required. **See JHA form.**
2. For any documented hazards identified, a plan to eliminate or protect against the hazard (corrective action) will also have to be documented.

***Note: Job Hazards and Protective Measures will be part of the Site Orientation at the beginning of the job for all New Hire employees.***

3. The Safety Supervisor or designated representative will conduct a safety inspection once each week on long term projects (i.e. one month or more, or jobs designated by Corporate Safety as "long term") The "Safety Inspection Checklist" form checklist items that require corrective action shall be recorded. This form must be filled out completely, including any applicable action taken .
4. A copy of the Safety Inspection Audit form will be sent to the Corporate Safety Manager, and the original will be filed in the Job Box. **See Site Safety Audit forms.**



# **FieldTurf USA**

## **Health and Safety Program**

### **SECTION 8**

#### **NEAR MISS, INCIDENT, ACCIDENT, ABSENCE INVESTIGATIONS POLICY AND PROCEDURE**

##### **8.1 INTRODUCTION**

A. An event that can be classified as a "Near Miss Incident" is an act or unsafe condition that is providing a clue or warning, and steps must be taken to prevent an "accident".

B. An "Accident" is an incident that has resulted in an injury to the worker and may include damage to property.

C. Near Miss Incidents cannot be investigated if they are not reported. Our workers must realize the importance of reporting any incident, even if it can be viewed as an occurrence that is unusual or out of the ordinary. Reporting can recommend specific fixes for a mechanical or operational defect, but unless the investigation of such incidents can take place, then the defect is allowed to continue and will likely lead to more serious consequences.

D. A common reason that incidents go unreported is that, in some organizations, the incident investigation tends to be a search for the "guilty" rather than a search for the "facts". When incident investigations are handled as a search for facts and solutions for any potential problem, the entire organization is more likely to work together to report incidents and to correct deficiencies and prevent recurrence.

E. Establishing the basic cause and contributing factors of an incident is crucial to the development of effective recommendations to correct and prevent a recurrence.

F. Follow-up of a "Near Miss Incident", an "Accident Investigation" and an injured employee's "Absence", is another crucial step the Supervisor and Corporate Safety must participate in. It is a way to be assured that the corrective measures that may have been put in place,

are actually doing what they were intended for. Keeping in contact with an absent employee will also help in ways to return the employee to work as soon as reasonably possible.

## **8.2 NEAR MISS INCIDENT INVESTIGATIONS**

A. All incidents, which have a potential for serious injury or property damage, should be investigated by the Supervisor and the workers involved.

B. These incidents would include such things as equipment accidents, non-injury motor vehicle accidents, material damage, fires, weatherrelated incidents, as well as any other type of non-injury related incident, which might occur on the job site.

C. Pertinent information should be gathered and a Near Miss Incident Investigation Report should be completed. The investigation will produce a plan to keep an occurrence of the same nature from happening in the future.

D. Drug and/or alcohol testing following a near miss incident will be determined by the Supervisor and/or Safety Representative.

E. All "Near Miss" reports will become a safety topic for the next shift safety meeting.

## **8.3 ACCIDENT INVESTIGATIONS**

A. All accidents must be reported immediately to the Supervisor, who will forward a completed Accident Investigation Report to the Corporate Office within 24 hours.

B. Drug and/or alcohol testing following a "non-injury" accident will be determined by the supervisor and/or Safety Representative.

C. In the case of personal injury, serious personal injury and/or property damage, the Corporate Safety Office must be notified immediately. Any injury accident requires a Drug and/or Alcohol testing of the injured employee. Drug and/or Alcohol testing of any other non-injured employee directly involved in the accident will be determined by the Supervisor and/or Safety Representative. Corporate Management will take part in the investigation of any serious accident or incident.

D. An accident involving a fatality or the hospitalization of three or more employees is to be reported to **OSHA** (two or more employees to be reported to **WISHA**) within 8 hours, by phone or in person.

The Construction Manager and Corporate Safety Manager will be notified immediately. This will be followed by a written report within 24 hours. In addition:

1. Arrangements shall be made with the legal firm of the Company to have a representative present at the Coroner's inquest.
2. The Construction Manager or his/her designate will represent the Company, at the Coroner's inquest.

E. An investigation is to determine the root cause or causes, and attempt to find unsafe conditions, acts, or procedures. The Safety Committee, where applicable, will be involved in the investigation of accidents and will make recommendations for corrective action to prevent reoccurrence.

F. On arrival at an accident scene:

1. The scene should be secured.
2. The injured person should be treated and removed.
3. Photos should be taken and sketches made, if required.
4. Interviews conducted and information gathered.
5. Accurate records should be made.
6. Immediate follow-up on recommendations.

#### **8.4 INTERVIEW GROUND RULES**

- A. Choose a good location and time (the site of the incident if convenient and possible).
- B. Set the tone, this is a fact-finding interview, not an interrogation.
- C. Set the person at ease, be calm and unhurried, and be friendly and understanding.
- D. Express to the individual that the information given is important.
- E. Avoid leading questions, do not interrupt and do not make expressions (facial or verbal approval or disapproval).
- F. Be a good listener, and then summarize back to the person being interviewed so that there is no misunderstanding.

G. Take adequate notes.

H. Go to the scene of the incident with the person being interviewed. Do not assume that the location and/or job procedures are the same as you remember them to be.

I. Ask for suggestions as to how the incident could have been avoided.

J. Conclude the interview with a statement of sincere appreciation.

K. Correctly applied, incident investigations place no blame or fault on any individual involved.

## **8.5 ABSENCE INVESTIGATIONS AND FOLLOW-UP**

A. An integral part of good safety management is minimizing the number of lost workdays, a speedy recovery from illness or injury, and to reduce insurance costs. This policy applies to all workers and will be followed whenever appropriate.

B. FieldTurf USA defines “transitional” work as temporary modified work assignments, within the worker’s physical abilities, knowledge and skills. When feasible, transitional positions will be made available to injured employees in order to minimize or eliminate time loss.

C. Physical requirements of transitional/temporary work will be provided to the attending physician. Transitional/temporary positions are then developed with consideration of the worker’s physical abilities, the business needs of FieldTurf USA, and the availability of transitional work.

D. If professional medical treatment is sought, the worker should inform the attending physician FieldTurf USA has a return-to-work program with light duty/modified assignments available.

E. The worker should obtain a “Return-To-Work” Information form from the attending physician or the FieldTurf USA Light Duty – Restrictions form. The form must be returned to FieldTurf USA Human Resources or Corporate Safety Manager following the initial medical treatment. ***The worker cannot return to work without a release from the attending physician.***

F. If the attending physician has released the worker for transitional/temporary modified light duty work, the supervisor and worker must make sure that the worker does not go beyond either the duties of the job or the physician’s restrictions. If restrictions

change at any time, the worker must notify the supervisor at once and give the supervisor a copy of the new medical release. This release must be returned to FieldTurf USA Human Resources or Corporate Safety Manager.

G. An employee is to be encouraged to return to his/her job or any transitional/temporary modified light duty work as soon as he/she is physically able to do so. Failure to report for transitional/temporary modified light duty work that a Physician has released the worker for may jeopardize the workers compensation benefits and/or return to employment with FieldTurf USA

H. When an employee is absent from work for an extended period of time due to an accident, the employee will contact the Corporate Human Resources or Corporate Safety Manager at least once a week, preferably on Friday. The Corporate representative will then ascertain his/her physical condition, medical attention received, projected return to work date and offer any reasonable assistance that may be required.

I. While off work, it is the responsibility of the worker to supply Personnel with a current telephone number (listed or unlisted) and an address where the worker can be reached.

J. When an employee fails to report for work and has not provided the company with a reason, the Supervisor will attempt to contact the employee that day to ascertain the reason for his/her absence.

#### **8.5.01 JOB OFFER LETTER:**

- a. Upon receipt of a signed transitional /temporary Job Description form from the attending physician, a written Job Offer Letter may be prepared by the employer in the event light duty work is available. It will be mailed by both regular and certified mail to the worker's last known address or presented to the worker.
- b. The letter will note the doctor's approval and will explain the job duties, report date, wage, hours, report time duration of transitional/temporary work assignment, phone number and location of the transitional/temporary assignment.
- c. The worker will be asked to sign the bottom of the Job Offer Letter indicating acceptance or refusal of the offered work assignment. Copies of the Job Description, Work Releases, and Job Offer Letters will be forwarded to the insurance carrier.

# FieldTurf USA

## Health and Safety Program

### SECTION 9

### PERSONAL PROTECTIVE EQUIPMENT

### RULES/REGULATIONS

#### 9.1 INTRODUCTION

A. All work carried out on job sites will require the use of personal protective equipment for each employee. This safety program is to assist the Job Supervisor in the proper hazard identification of the workplace and the selection of the proper personal protective equipment to allow workers to perform their duties safely.

#### 9.2 RULES/REGULATIONS

A. There are seven (7) category's of Personal Protection Equipment. The following are some basic safety rules regarding the use of Personal Protective equipment while employed by the Company. The Supervisor will issue additional rules and instructions as the need arises.

##### 1. EYES:

- a. Double eye protection; face shield and safety eyewear is required for all chipping and grinding operations. Chemical splash goggles may be required while working with acids or caustics
- b. Safety glasses (ANSI Z-87.1) with rigid side shields shall be the minimum eye protection worn at all times, by all personnel, when required on special projects designated as eye protection required areas.
- c. Safety glasses or mono goggles must be worn over any prescription eyewear that is not ANSI Z.87.1 approved. ANSI approved prescription eyewear must have ANSI stamped or etched in the lenses. Employees must wear side shields with their prescription ANSI approved glasses.
- d. Employees are cautioned that a hazard exists when tinted

lenses are worn when moving from bright sunshine or lighted areas into dark. Only clear lenses can be worn at night or inside unless you are a welders' helper or a burner; then a No. 3 or No. 5 Infra-Dura lens may be worn while performing this type of work only.

e. All welders shall wear safety glasses under their welding hoods. Once the welding hood is removed, hard hats must be worn.

## **2. HEAD:**

a. Safety hard hats shall be worn in and around all places designated as hardhat areas.

## **3. EARS:**

a. Hearing protection is provided and is to be worn by employees who are exposed to excessive noise. Noise levels are stipulated by federal **OSHA** regulations. (*noise levels above 85db*) Some client locations require mandatory hearing protection at all times, regardless of the noise levels.

## **4. RESPIRATORY SYSTEM:**

a. Respirators of the proper type must be worn when performing any operation under conditions where the ventilation is not sufficient to prevent the inhaling of harmful amounts of dust, fibers, welding fume or other hazardous materials. (*For more in-depth information on Respirator requirements, see section 11 of this manual.*)

## **5. HANDS:**

a. Proper gloves are required when working with metal, sharp edges, rough or abrasive surfaces, or certain chemicals. Employees must check with their supervisors for proper and required hand protection that is required during each task.

## **6. FEET:**

a. Shoes must provide complete foot coverage and be in good condition.

## **7. WHOLE BODY:**

a. In traffic areas, adequate shields shall be placed around welding and/or grinding operations to protect other personnel in the area.

b. Fire and/or chemical resisting clothing may be required per job task

c. Clothing must be proper fitting with no loose clothing that can be caught in moving parts of machinery.

B. The above equipment, and/or any other type of safety equipment not listed, but necessary for the safe performance of your job, should be requested from your Foreman if not available at the tool room.



# FieldTurf USA

## Health and Safety Program

### SECTION 10 CONSTRUCTION SAFETY RULES

#### 10.1 INTRODUCTION

A. Safety is not taking a class or signing a paper. It is an attitude and a commitment on a continual basis. Employees are required to know and comply with the Construction Safety Rules. Failure to do so may result in corrective action being taken up to and including termination of employment.

B. The policy of FieldTurf USA is to provide a safe working environment and to ensure the development and maintenance of safe work practices within the environment.

C. A copy of the Construction Safety Rules will be provided to and reviewed with each employee who has not previously worked for the Company (*via New Hire Orientation*). This will be done prior to the commencement of work.

D. The Construction Safety Rules will be reviewed with employees at the start of each new project (*Job Site Orientation*).

#### 10.2 RULES

A. The following are FieldTurf USA "Basic Safety Rules" which have been established for the purpose of Accident Prevention. These basic rules include, but are not limited to:

1. Report **ALL** injuries to your supervisor or safety representative **IMMEDIATELY**.
2. FieldTurf USA will not tolerate any harassment due to Race, Color, Ancestry, Religion, National Origin, Physical Handicap, Medical Condition, Sex, Age or Marital Status.
3. Employees will not make or use derogatory comments, slurs, jokes, or any verbal sexual advances or propositions.

4. No Employee will be subjected to any Touching, Assaulting, Impeding or Blocking Movement from another employee/s. (*See Section 4 of this manual for more rules in regards to Violence in the Workplace*) Any person who exhibits substantial threatening behavior; pushing, shoving, hitting, throwing of objects regardless of size, unwelcome name calling, abusive behavior, harassment, stalking or intimidation, will be removed from the premises and will remain off the job site pending the outcome of an investigation which could lead to termination of employment with FieldTurf USA.

5. Employees are required to personally sign in on a daily basis. (The sign in sheet is located in the "tool room trailer".)

6. Personal vehicles must park in the designated contractor parking area. Vehicle operation on site requires that headlights are on and seat belts are worn.

7. Obey posted speed limits, which may vary by facility.

8. No workman shall operate or use any equipment in a manner that endangers himself or any other workman.

9. Report any unsafe conditions or equipment to your foreman immediately and warn any employee who may become involved.

10. The use of alcoholic beverages, drugs and their derivatives is strictly forbidden on the job. No person shall enter a job site while his/her ability to work is impaired. (*See Section 2 - Drug and Alcohol Abuse Policy and Procedure of this Manual*)

11. Horseplay is **STRICTLY** forbidden.

12. Never distract the attention of a fellow worker while he is working.

13. Never point an air hose at another employee. Never clean clothes or skin with compressed air.

14. Do not wear loose or torn clothing, which could get caught in machinery or other equipment.

15. Employees shall not wear jewelry that poses safety risks from

crushing, tearing away, or electrical shock. Jewelry that is not acceptable are dangling bracelets, necklaces, earrings larger than small studded types, or any other exposed facial jewelry when reporting for work. Watches with break-away bands, health-related bracelets and health-related necklaces may be worn.

16. Employees with long hair should take extra caution when working around moving/rotating equipment

17. Hearing protection is required at noise levels above 85 decibels (*anytime you must raise your voice to communicate*) over an 8 hour period (TWA). Exposure to loud noise can raise your blood pressure as high as 30 points in one day. It can make you more tired than you would normally be, and directly affects the central nervous system.

18. Protective goggles or face shields must be worn for all operations where the eyes or face are exposed to flying objects. (*e.g. cutting chipping, grinding*)

19. Gloves must be worn when handling material with sharp edges, rough abrasive surfaces, or when handling chemicals (ie: glue, pastes, etc).

20. Housekeeping is of the utmost importance. Work areas must be kept clean on a regular basis. At the beginning of the job make sure to route cords, leads, lines, and hoses underneath stairs and ladders, tape off to the mid-rail, or route overhead.

21. Floors must be kept clear of oils, grease, or other types of materials that create an unsafe condition.

22. Store hoses, cables, ropes, wires, etc. when not in use, so to prevent tripping hazards.

23. Protruding nails are to be removed or clinched over.

24. Hazardous materials must be identified, stored, and handled in accordance with the MSDS regulations. Many clients have specific procedures for disposal of hazardous wastes such as solvents, oily rags, aerosol cans, etc. These issues will be addressed in site-specific orientation.

**25. Material Handling/Mixing:**

a. Site supervisor will determine if any employee involved with mixing duties will be required to use either rubber or cotton gloves during the mixing process. An ANSI approved dust mask will also be required.

***NOTE: Required use of disposable dust masks institutes that the employee be physician approved and fit tested.***

b. Any mixing drill or electrical equipment used must be GFCI'd.

26. Spray bottles, or any other container, must be marked as to their contents.

27. You must have structured, documented training records to be authorized to operate any Lift Truck. Refresher training must be updated every three years for lift truck operation.

a. Operating any mobile equipment in an unsafe manner or out of the safe operational limits intended by the manufacturer will be grounds for immediate termination.

b. **Do not** operate any FieldTurf USA equipment or rental equipment under any circumstances, unless you have been authorized to do so. Unauthorized operation of equipment could result in termination of employment with FieldTurf USA

c. Seat belts must be used on all equipment at all times!

28. It is strictly forbidden to ride a load, crane hook, or material hoist.

29. No employee shall attempt to lift with a hoist, crane or other equipment, any equipment, any load greater than the rated capacity of such equipment.

30. Do not clean or adjust equipment or machinery while it is running or in motion when there is a danger of contact with the moving parts.

31. Guards must not be removed except for repair or adjustments and must be replaced before operating equipment.

*Note: Grinder guards must be kept in place.*

32. Never leave a machine running while it is unattended, except for stationary equipment (*welders, compressors, etc.*) or where special conditions prevail and precautions have been taken.

33. Only authorized personnel may do work of an electrical nature.

34. No worker shall use any portable electric tool unless it is effectively grounded. (GFCI'd)

35. Never lean against guardrails or handrails.

36. Never leave loose tools or materials where there is a danger of them falling.

37. Always face a ladder when climbing up or down.

38. Do not allow the accumulation of combustible materials. Good housekeeping is the best method of preventing fires.

39. If smoking is allowed at a customer site, employee will smoke in designated "SMOKING AREAS" **ONLY!**

40. Gasoline powered motors must be stopped and allowed to cool before refueling and the **No Smoking** rule observed. Fire extinguisher should be readily available.

41. Gasoline, oil, grease, and other flammable liquids are to be stored clear of the work area.

42. Oxygen and acetylene must not be stored near gasoline, oil, or any source of heat and must be stored, transported, and used in an upright position.

43. Obtain permission from your foreman before using torches or welder in new work environments. (*i.e. hot work permits*)

44. Fire extinguishers must be replaced immediately after use.

## **LACK OF KNOWLEDGE OF SAFE WORK PRACTICES IS NO EXCUSE FOR THEIR VIOLATION!**

B. Obviously, no rulebook can cover all circumstances. If you have any questions about the work you have been assigned to, do not hesitate to ask your supervisor.

### **REMEMBER:**

***ACCIDENTS DON'T JUST HAPPEN. THEY ARE CAUSED!!***

# FieldTurf USA

## Health and Safety Program

### SECTION 11

#### JOB SAFETY

#### PROCEDURES

##### 11.1 INTRODUCTION

A. To ensure an accident-free environment it is essential that an employee know and recognize the various aspects of his job that are critical to safe job performance. Accordingly, Job Safety Procedures have been and will be developed and maintained as part of this manual.

B. While care was taken in the preparation of this manual, there are places where simplification or changes from the wording and methods exist. In such cases, regulations and engineering data will overrule this book.

##### 11.2 ASSURED EQUIPMENT GROUNDING

A. FieldTurf USA will follow **OSHA** guidelines: All temporary wiring will be Ground Fault Circuit Interrupted (GFCI'd).

B. FieldTurf USA has established and implemented an assured equipment grounding program that will be implemented for any electrical component that is not part of the permanent wiring of the building or structure.

1. Each cord set, attachment cap, plug and receptacle of cord sets, and any equipment connected by cord or plug, shall be inspected before each day's use for external defects such as deformed and missing pins, insulation damage, or indication of possible internal damage. Exceptions will be cord sets and receptacles that are fixed and not prone to damage.

2. Equipment found damaged, or defective may **NOT** be used until repaired.

3. The following tests shall be performed on all cord sets and receptacles that are not part of the permanent wiring of the building and/or structure:

- a. All equipment grounding connectors shall be tested for continuity and shall be electrically continuous.
- b. Each receptacle and attachment cap plug shall be tested for correct attachment of the equipment-grounding conductor. The equipment-grounding conductor shall be connected to its proper terminal.

4. All required tests will be performed:

- a. Before first use.
- b. Before equipment is returned to service following any repairs.
- c. Before equipment is used after any incident that can reasonably be suspected to have caused damage (e.g. when a cord is run over or pinched in a door)
- d. At intervals not to exceed 3 months, except the cord sets and receptacles that are fixed and not exposed to damage shall be tested at intervals not exceeding 6 months. <some states may require more stringent inspections and color coding>

5. Tests performed as required in this paragraph shall be recorded. This test record shall be as follows:

- a. Each cord set will be color coded with a color tape on the cord near the male end of the cord as follows:

White.....	January through March
Green.....	April through June
Red.....	July through September
Orange.....	October through December

### 11.3 HAND TOOLS

A. This procedure gives the basic guidelines for safe, handling, inspecting and use for hand tools:

- 1. Hand tools shall be kept in safe working condition.
- 2. Tools with mushroom heads, split and defective handles or other defects must not be used.



3. Sharp edged or pointed tools should not be carried in pockets without ample protection.
4. All hand tools should be used only for the purpose for which they were designed. (Pliers are not wrenches...pliers and wrenches are not hammers.... etc.)
5. Extensions shall not be used on wrench handles to increase leverage unless the wrench is specifically designed for use with such extensions.
6. When power tools are left unattended, the source of power should be turned off.
7. Grinding on the side of a grinding wheel is prohibited, unless the wheel is designed and set up for such work.
8. Those approved portable electric tools that require a ground wire will be properly maintained and connected.
9. The removal of protective guards on grinders is prohibited.
10. All electric cords will be GFCI'd.

#### **11.4 HANTA VIRUS IN THE WORKPLACE**

A. It is critically important to protect your respiratory system and skin when handling dead rodents, droppings, nesting materials, and other areas of contact. Although the Hanta Virus is not particularly hardy, it is potentially lethal. All rodent-contaminated materials should be treated as infected. With recent exposure and health concerns over the Hanta Virus, the following establishes guidelines for dealing with rodents and their habitats.

*Note:* If working on client's site, notify client immediately so cleanup procedures can take place.  
If working on construction site where FieldTurf USA is the General Contractor, follow the procedures listed below.

##### **11.7.01 Personal Protective Equipment**

- a. Any enclosed area should be aired out for at least 30 minutes before cleanup begins.
- b. Always wear rubber gloves when cleaning up rodent carcasses and droppings, or when handling traps.

c. Wear a respirator that has a HEPA (P100) rating. Ordinary dust masks will NOT filter the virus.

d. If there is evidence of a lot of rodent activity, wear disposable coveralls. Any exposed clothing should be washed separately from the regular family laundry. Handle clothing with gloves. Wash in hot water and detergent, and dry in a hot dryer.

### **11.7.02 Clean Up and Disposal**

a. Before starting clean up, use insecticide to spray the area, following manufacturers' instructions.

b. Saturate the nest, dead rodent, or droppings with disinfectant (Lysol or 10:1 solution of household bleach). Let soak for 10 minutes. Air dry and let sunlight in if possible.

c. Use only wet cleaning techniques, such as damp mopping. **DO NOT** sweep, as this will spread the dust.

d. Pick up with a shovel and double bag rodent carcasses and other solid materials in a 10 percent (10%) household bleach solution. Dispose of the bagged material by burning or burial.

e. Once dropping and/or urine is removed, wipe area with a cloth moistened with Lysol ™ or Clorox ™ solution and let air-dry.

f. Towel, rags, disposable clothing, respirator filters and clean up material should be double bagged and put into refuse container.

g. Clean shovel with disinfectant or bleach solution.

h. Clean respirator with soap and water, then wipe down with Clorox solution, alcohol, or antiseptic towelettes.

i. Any reusable traps should be disinfected in a bleach solution.

j. Before removing rubber gloves, wash them in a bleach solution and then with soap and water. Wash your hands upon removal of the gloves.

### **11.7.03 Health Concerns**

a. Do not remove protective clothing until job is completed.

- b. Do not eat, drink, or smoke until job is completed.
- c. If personal clothing has been exposed, remove and wash according to the section above.

d. If an employee has any reason to suspect that they have been infected by Hanta Virus, they must seek medical attention.

#### **11.7.04 Use of a Vacuum**

a. If an industrial vacuum is used in the cleanup process, the bag should be removed carefully to avoid causing dust, and disposed of in a double bag. Turn the vacuum on and spray disinfectant into the intake of the vacuum to disinfect. Do not use vacuum that has brushes, as it will spread the dust.

#### **11.7.05 CONTROL**

A. To help minimize the risk of Hanta Virus, rodent populations must be controlled.

1. General cleanliness is very important
2. Get rid of trash, abandoned machinery, discarded tires, and other items that could serve as rodent nesting sites.
3. Use commercial traps, rodenticides or ultra-sonic devices.
4. Keep food and garbage in rodent-proof containers. Trash should be disposed of promptly.

#### **11.5 HEARING PROTECTION**

A. A major long-term problem in the Construction and Fabrication Industry is hearing loss.

B. In order to meet the minimum requirements, Management will ensure that:

1. Wearing of hearing protection is mandatory while engaged in work activities where decibel levels are 85 dB or higher.
2. Employees who are routinely exposed to excessive noise levels will be provided with hearing protection and trained for proper fit and the effects of noise on hearing.

## 11.6 MOBILE EQUIPMENT

A. The following procedure provides the rules and regulations of proper and safe operation of mobile equipment. These include, but are not limited to:

1. **Lift truck:** You must have structured, documented training records to be authorized to operate any lift truck. Recertification must be obtained every three (3) years for lift truck operation. Lift truck course will require "Hands On" training with evaluation.

**Laymor Sweeper, Spreader:** You must be trained and knowledgeable of safe operation of these pieces of equipment.

*Note:* Operating any mobile equipment in an unsafe manner or out of the safe operational limits intended by the manufacturer will be grounds for immediate termination.

2. Operation of equipment without authority will result in termination.

4. Do not ride on running boards or stand up in moving vehicles.

5. A driver shall **NOT** remain in the cab of a truck when it is being loaded or unloaded from overhead of the cab.

6. Vehicles and equipment will be operated in accordance with **OSHA** regulations and client safety policies.

7. Lift trucks will be daily inspected with documented inspections.

8. Manuals and/or Inspection records are to be kept in a weather resistant storage compartment or sleeve.

9. Operators are expected to know and work within the rated capacities of their machines.

10. Operators are required to go through the start up and shutdown procedures as described by their immediate supervisor.

11. Prior to operation, operators of mobile equipment must check for work hazards such as:

a. Drop-offs or holes

- b. Slopes
- c. Bumps or obstructions
- d. Debris
- e. Overhead obstructions and high voltage conductors
- f. Hazardous locations
- g. Inadequate surface and support to withstand the load imposed on them by the equipment
- h. Wind and weather conditions
- i. Unauthorized persons in the area
- j. Other possible unsafe conditions

12. Backing up of equipment without a clear view or a signal person is prohibited.

13. Seat belts must be worn at all times.

14. When equipment is stuck or broken down, the practice of pushing with another vehicle is forbidden.

15. Machines shall be towed using good tow cables and hooks.

16. Removal of "Do Not Operate" tags without proper authority is prohibited.

17. Operators will be off the machine during servicing or repair procedures.

18. All equipment will be shut down during any re-fueling or battery change. Re-fueling or battery change must be done in open and well ventilated areas.

19. Mobile equipment training from another training source may be recognized.

## **USE YOUR HEAD DON'T BECOME A STATISTIC**

### **11.7 RESPIRATORY PROTECTION**

A. Respirators are an effective method of protection against designated hazards when properly selected and worn. All workers will have fit tests done on respirators by an authorized person only. This will be recorded, and a respirator will be assigned to the worker.

1. It will be the responsibility of the site supervisor to determine

when and where respiratory protection is required and what type of respiratory protection will be used.

2. Worker must have completed the confidential respiratory medical health questionnaire and be *Physician Approved* before a fit test or any voluntary use of respirator can take place.

3. Under **NO** circumstances shall a worker wear a required respirator for which a satisfactory facial fit has not been obtained.

### **11.7.01 Disposable Dust Masks**

#### a. Voluntary Use

1. Fit tests are not required for workers who voluntarily wear disposable dust masks. However, OSHA does require that an employer ensures that the steps from *Section 11.7* of this manual are provided to the employee and followed.

2. Medical evaluations are not required

3. Training must contain procedures for cleaning, disinfecting, storing, repairing or removing from service.

#### b. Mandatory Use:

1. Because OSHA considers NIOSH-approved disposable dust masks as a respirator, a medical evaluation and fit testing is required prior to wearing as a mandatory use.

2. A quantitative fit test is acceptable, provided the test is conducted according to the recommendations of the respirator manufacturer. Also a fit factor of 100 should be used when conducting a quantitative fit test.

3. The generally accepted assigned protection factor (APF) is 10 for disposable respirators.

4. OSHA also requires that wearers of disposable dust masks conduct a fit check each time they don a respirator. The fit check may be conducted according to the manufacturer's instructions.

#### c. Types of Disposable Dust Masks

1. **NIOSH 8210 N95**: Particulate respirator that is an economical dust mask designed to help provide comfortable, reliable worker protection against certain **nonoil** based particles. Workplace applications include grinding, sanding, sweeping, bagging and other dusty operations. It's lightweight construction promotes greater worker acceptance and comfort and increased wear time.

2. **NIOSH 8212**: Designed for welding, torch cutting, soldering, brazing and working with molten metals and has an N95 rating. It fits easily under the welding faceshield. The "Cool Flow" extension valve and the cake-resistant filter provide cool, easy breathing.

3. **NIOSH 8511**: This Particulate respirators Exhalation Valve is uniquely designed to help provide comfort and protection. It is ideally suited for work settings that involve heat, humidity, or long periods of wear. Workplace applications include grinding, sanding, sweeping, bagging and other dusty/hot operations. The one-way valve is good for easy exhalation for cool dry comfort.

d. The number following the NIOSH number on disposable masks is an indication of filter efficiency. Filter materials are tested against particle having a diameter of 0.3 microns. This is an extremely small particle. Contrast with human hair, whose diameters range from 40 microns to 120 microns. So the number will indicate relative efficiency, with the "95" being 95% effective. The "100" is 99.97% effective, and is the current means of referring to a "HEPA" filter.

e. All disposable dust masks will be discarded after they become soiled, or breathing becomes difficult due to filter loading.

## **11.8 WELDING AND CUTTING**

### **A. Welding/Cutting procedures:**

1. Whenever possible, welding operations will be screened to protect other workers from welding flashes.
2. Welders will always wear gloves. Safety glasses must be worn under the welder helmet.
3. Deposit electrode studs in a waste container. If they are thrown

around they become a tripping and slipping hazard.

4. Always give a warning before striking an arc where others are working.

5. Never look at an arc flash, even for an instant. Be sure to turn your head completely away from the arc and also be careful of reflections, which may be dangerous.

6. Oxygen under high pressure may react violently with grease or oil. Take every precaution to keep oxygen away from grease or oil and never handle oxygen bottles, valves, regulators, hose or other fittings with oily or greasy hands and/or gloves.

7. Leaky valves or fittings on oxygen or compressed flammable gas cylinders that still leak with the closing of the valves, shall be taken to an open area away from the work site and any source of ignition, then slowly drained of gas. Empty cylinders must have valves closed.

8. Cylinders will be used and stored in an upright position and secured against accidental tipping.

9. Always consider cylinders as full and handle carefully.

10. Never move cylinders without the valve protector cap secured.

11. When cylinders are emptied, replace the protective cap and mark the cylinder "MT", with the date. (*MT cylinders must also be secured.*)

12. A crane should not lift cylinders unless they are in a cradle or a substantial stand.

13. Cylinders should never be used for any other purpose than to store gas.

14. Fumes from cutting or welding some metals with oxy/acetylene torches are very dangerous. Always avoid inhaling fumes of any kind.

15. Never open acetylene cylinder valves more than one half (1/2) turn and always leave the wrench on the valve in case of an emergency.

16. Always check the hose lines for signs of wear or splits. Replace



defective hoses.

17. Never cut or weld on any container that has previously contained any petroleum product, unless it has been properly steamed out and inspected by supervisory personnel.

18. Electric welding ground cables must always be attached to the piece being welded; not to some distant container. This rule applies especially to electrical cable shielding.

19. Stored oxygen and acetylene cylinders must be separated by at least 20 feet or a fire barrier 5 feet high with a minimum rating of 1/2 hour.

20. Cracked or broken site gauge covers must be replaced before use.

21. On occasion, lead based paint may be encountered on beams and lagging. Before proceeding with welding or cutting, **Federal, State,** and/or client procedures for removal must be strictly adhered to. Paint may have to be removed and waste materials properly disposed of. Respirators may also have to be worn.

22. Welding Health Hazard:

a. Hexavalent Chromium:

1. Follow all Company policies and guidelines under Section of this manual prior to welding on Stainless Steel.

b. Phosgene:

1. Various chlorinated hydrocarbons are used in degreasing agents such as trichloroethylene, methylene chloride (used as a chemical paint remover), or other cleaning operations. The vapors of these chemical are a concern in welding and cutting because the heat and ultraviolet radiation from the arc will decompose and form highly toxic and irritating phosgene gas.

2. For this reason, chlorinated solvents should be stored more than 200 feet from a welding arc, as the exposure to UV light can easily create phosgene by photo degradation.

# FieldTurf USA

## Health and Safety Program

### SECTION 12

### EXCAVATION AND TRENCHING PROCEDURE

#### 12.1 INTRODUCTION

A. FieldTurf USA Excavation and Trenching procedure is designed to help protect our employees against cave-ins and other unexpected hazards associated with this type of work.

B. This procedure applies to all contractors' performing work at the site that will make an open excavation in the earth's surface. Excavations are defined to include trenches.

#### 12.2 RESPONSIBILITY

A. FieldTurf USA Supervisors are responsible for ensuring that all guidelines within this procedure are strictly followed.

B. All employees are responsible for following all requirements outlined in this procedure.

C. Contractor employees designated as **Competent Person** are responsible for ensuring that the excavation/trench operation presents no foreseen hazards and meet all requirements of this procedure as well as all applicable rules and regulations. The Competent Person also has the authority to promptly eliminate any or all foreseen hazards as required by **OSHA 29 CFR 1926.650**.

#### 12.3 HAZARDS

A. Cave-in accidents are fifteen times more likely to result in death than any other work accident. Trench and excavation conditions can change in a short time creating dangerous conditions for workers.

1. Unstable soil conditions that create cave-in potential
2. Dangerous atmospheric conditions
3. Falling dangers for workers or falling objects
4. Overhead or underground utilities
5. Water accumulations or other environmental changes

6. Vehicular traffic

## 12.4 DEFINITIONS

A. The following definitions are applicable to this procedure:

1. **Accepted Engineering Practices** means those requirements that are compatible with standards of practice required by a registered professional engineer.

2. **Aluminum Hydraulic Shoring** means a pre-engineered shoring system comprised of aluminum hydraulic cylinders (cross braces) used in conjunction with vertical rails (uprights) or horizontal rails (walers). This system is designed, specifically to support the sidewalls of an excavation and prevent cave-ins.

3. **Bell-Bottom Pier Hole** is a type of shaft or footing excavation, the bottom of which is made larger than the cross section above to form a belled shape.

4. **Benching (Benching System)** is a method of protecting employees from cave-ins by excavating the sides of an excavation to form one or a series of horizontal levels or steps, usually with vertical or near-vertical surfaces between levels.

5. **Cave-In** means the separation of a mass of soil or rock material from the side of an excavation, or the loss of soil from under a trench shield or support system, and its sudden movement into the excavation, either by falling or sliding, in sufficient quantity so that it could entrap, bury, or otherwise injure and immobilize a person.

6. **Competent Person** is a person who is capable of identifying existing and predictable hazards in the surroundings, or working conditions which are unsanitary, hazardous, or dangerous to employees, and who has authorization to take prompt corrective measures to eliminate them.

7. **Cross Braces** mean the horizontal members of a shoring system installed perpendicular to the sides of the excavation, the ends of which bear against either uprights or Wales.

8. **Excavation** is any man-made cut, cavity, trench, or depression in an earth surface, formed by earth removal, regardless of size or depth.

9. **Faces or Sides** means the vertical or inclined earth surfaces formed

as a result of excavation work.

10. **Failure** is the breakage, displacement, or permanent deformation of a structural member or connection so as to reduce its structural integrity and its supportive capabilities.

11. **Hazardous Atmosphere** is an atmosphere that by reason of being explosive, flammable, poisonous, corrosive, oxidizing, irritating, oxygen deficient, toxic, or otherwise harmful, may cause death, illness, or injury.

12. **Kick-Out** is the accidental release or failure of a cross brace.

13. **Protective System** means a method of protecting employees from cave-ins, from material that could fall or roll from an excavation face or into an excavation, or from the collapse of adjacent structures. Protective systems include support systems, sloping and benching systems, shield systems, and other systems that provide the necessary protection.

14. **Ramp** is an inclined walking or working surface that is used to gain access to one point from another, and is constructed from earth or from structural materials such as steel or wood.

15. **Registered Professional Engineer** means a person who is registered as a professional engineer in the state where the work is to be performed. However, a professional engineer, registered in any state is deemed to be a "registered professional engineer" within the meaning of this standard when approving designs for "manufactured protective systems" or "tabulated data" to be used in interstate commerce.

16. **Sheeting** is the members of a shoring system that retain the earth in position and in turn are supported by other members of the shoring system.

17. **Shield (Shield System)** means a structure that is able to withstand the forces imposed on it by a cave-in and thereby protects employees within the structure. Shields can be permanent structures or can be designed to be portable and moved along as work progresses. Shields used in trenches are usually referred to as "trench boxes" or "trench shields".

18. **Shoring (Shoring System)** means a structure such as a metal hydraulic, mechanical or timber shoring system that supports the sides of an excavation and which is designed to prevent cave-ins.

19. **Sloping (Sloping System)** means a method of protecting employees from cave-ins by excavating to form sides of an excavation that are inclined away from the excavation so as to prevent cave-ins. The angle of incline required to prevent a cave-in varies with differences in such factors as the soil type, environmental conditions of exposure, and application of surcharge loads.

20. **Stable Rock** is natural soil mineral material that can be excavated with vertical sides and will remain intact while exposed. Unstable rock is considered to be stable when the rock material on the side or sides of the excavation is secured against caving-in or movement by rock bolts or by another protective system that has been designed by a registered professional engineer.

21. **Structural Ramp** means a ramp built of steel or wood usually used for vehicle access. Ramps made of soil or rock is not considered structural ramps.

22. **Support System** means a structure such as underpinning, bracing, or shoring, which provides support to an adjacent structure, underground installation, or the sides of an excavation.

23. **Tabulated Data** means tables and charts approved by a registered professional engineer and used to design and construct a protective system.

24. **Trench (Trench Excavation)** is a narrow excavation (in relation to its length) made below the surface of the ground. In general, the depth is greater than the width, but the width of a trench (measured at the bottom) is not greater than 15 feet (4.6 m). If forms or other structures are installed or constructed in an excavation so as to reduce the dimension measured from the forms or structure to the side of the excavation to 15 feet (4.6 m) or less at the bottom, the excavation is also considered to be a trench.

25. **Trench Box or Trench Shield:** See definition for "*Shield*".

26. **Uprights** are the vertical members of a trench shoring system placed in contact with the earth and usually positioned so that individual members do not contact each other. Uprights placed so that individual members are closely spaced, in contact with or interconnected to each other, are often called "sheeting".

27. **Wales** means horizontal members of a shoring system placed

parallel to the excavation face whose sides bear against the vertical members of the shoring system or earth.

## **12.5 PROCEDURE**

A. Each contractor shall be responsible for providing a "Competent Person. This person must have adequate excavation training and knowledge to perform his/her duties and ensure the safety of the employees.

B. A site condition analysis and written plan must be developed prior to any trenching or excavation begins. Daily inspections are required to ensure control of unstable conditions.

C. Prior to any excavation operation, it will be determined the approximate location of all utility installations that may be encountered. The Competent Person will notify the proper area owner, fire department, engineering departments, etc., prior to any digging and request the exact location of all installations such as fire lines, piping, conduit, etc. If the exact location cannot be determined, the excavation may proceed provided that extreme caution is used while opening the excavation.

D. A daily pre-excavation meeting ("Tool Box Talk") shall be held for all people directly involved in the operation to discuss any and all procedures and potential hazards associated with the work.

## **12.6 RULES**

### **A. Access/Regress**

1. Approved stairways, ladders or ramps shall be provided for access/egress in excavations that are 4 feet or more in depth and located so that an employee will not be required to travel more than 25 feet from any point within the excavation, for a safe means of egress. Any excavation deeper than four feet must have ladders, ramps or stairs at the exit. All stairways and ramps shall be equipped with standard handrails and toe-boards where applicable.

2. Ladders: All ladders shall extend a minimum of three feet above the surface and shall be secured.

3. Ramps: All structural ramps used for access/egress of employees and/or equipment, shall be designed by a qualified person and inspected by the Competent Person prior to use. The structural

members of the ramp shall be of uniform thickness and connected to prevent displacement. Also, all ramps shall be free from tripping hazards and the surface treated to prevent slipping.

#### B. Hazards from Falling Objects

1. All surface items located adjacent to the excavation that may create a hazard shall be removed to a safe location or securely supported as necessary.
2. No employee will be permitted underneath or adjacent to loads handled by any equipment. Operators may remain in the cabs of their vehicles during loading or unloading if the vehicle is equipped to provide adequate overhead protection.
3. Excavated or other loose materials located on the excavation face or surface shall be removed, secured with retaining devices, or by other acceptable means to prevent the materials from falling or sliding into the excavation. Surface materials, such as spoil, will be kept at least two feet from each edge of the excavation or adequate retaining devices used. The Competent Person and the Safety Representative must approve retaining devices.
4. No employee will be permitted to work on the faces of sloped or benched excavations above other employees.

#### C. Warning Systems

1. Employees working in areas that may contain vehicular traffic will wear warning vests marked with high visibility material.
2. All mobile excavation equipment must have audible electronic warning systems, including a functional horn for forward travel and a back-up alarm for reverse travel. When mobile equipment is operated adjacent to an excavation, warning systems such as barricades, stop logs, or hand signals must be used.

#### D. Fall Protection

1. Standard walkways, with handrails and toe-boards, will be provided and used where employees are required to cross over excavations.
2. All excavation areas must have the entire perimeter barricaded (*red tape, chain, mesh, etc.*) in accordance with **OSHA** barricading rules and regulations and FieldTurf USA safety rules. Substantial

wood or metal barricades in addition to the tape and tags must protect excavations that have accumulated water or are in high traffic areas. There shall be no openings left in the barricade in which a person could enter.

#### E. Water Accumulation

1. Employees shall not work in hazardous excavations in which there is accumulated water or water is accumulating unless there is an adequate water removal system in place that can control the amount of accumulating water to less than one inch. The Competent Person must monitor these systems to ensure proper operation.
2. When excavations change or prevent the natural drainage of surface water, suitable means must be provided to prevent the water from entering the excavation or accumulating adjacent to the excavation.

#### F. Safeguards

1. When excavations may affect the stability of adjacent structures, support systems (underpinning, bracing, etc.) must be provided to ensure the stability of the structure and protect the employees working in the excavation.
2. Excavation below the level of the base or footing of a foundation, or retaining wall, shall not be permitted unless a support system is installed or a registered professional engineer determines that the excavation will not endanger the stability of the structure or expose the employees to hazards.
3. When approaching the estimated location of underground installations, the exact location shall be determined by safe and acceptable means such as removing material with a shovel. All underground installation shall be protected or removed as necessary to safeguard employees.

#### G. Inspections

1. Inspections of the excavation, all related work and areas, and all protective systems and equipment, shall be conducted by the Competent Person on a daily basis, prior to the start of work, as needed throughout the shift, and after any hazard increasing occurrence. (rainstorms, high winds, etc.) These inspections will be documented and placed in the Job Box.



2. If the Competent Person finds evidence of hazardous conditions, all exposed employees must be immediately removed from the excavation until all necessary precautions have been taken and the Competent Person inspects the area and authorizes the work to continue.

3. Any hazardous or unsafe conditions will be documented and the corrective action taken will be noted. This documentation will be placed in the Job Box.

#### H. Hazardous Atmospheres

1. Excavations/Trenches four feet or greater in depth, (regardless of length or width) are considered confined spaces and therefore **ALL** Confined Space Entry Procedures apply. *(See Section 13 of this manual)*

### 12.7 PROTECTIVE SYSTEMS

A. Every excavation where a hazard exists, such as the potential for cave-ins, or is four feet or greater in depth, must have an adequate protective system to prevent cave-ins and protect every employee in the excavation. All protective systems shall be capable of withstanding all loads that could reasonably be expected to be applied or transmitted to the system.

#### 12.7.01 Soil Classification

a. The Competent Person must perform one visual and one manual inspection of soil samples from the excavation for a soil classification. The soil must then be classified as Type A, B, C, or Stable Rock. A soil classification is not required if all protective systems conform to the required of Type C soil.

b. The inspection methods, as well as the result of the inspection methods, are outlined in **OSHA 29 CFR 1926.652**, Appendix A to subpart P. *(All soil and rock deposits will be classified in accordance with this OSHA procedure)*

#### 12.7.02 Sloping and Benching

a. Excavation shall be sloped or benched in accordance with the following table:

<b>Soil or Rock Type</b>	<b>Maximum Allowable Slope (H:V)</b>
Stable Rock	Vertical (90 degrees)
Type A	$\frac{3}{4}$ : 1 (53 degrees)
Type B	1 : 1 (45 degrees)
Type C	1.5 : 1 (34 degrees)

**Note:** The numbers shown in parentheses, next to the maximum allowable slopes, are angles expressed in degrees from the horizontal.

b. A registered professional engineer must design sloping or bending for excavations greater than 20 feet in depth.

c. The unsupported vertical sides of all benched excavations shall be a maximum of 3.5 feet high with the overall benching system conforming to the maximum allowable slope for the specific type of rock or soil.

d. When two or more soil types are classified from the same excavation the weakest classification type (more stringent requirements) shall be used for the entire excavation.

### **12.7.03 Other Protective System**

#### **a. Options**

1. Support, shield, or other protective systems can be designed in accordance with the conditions and requirements of the following appendices to **OSHA** 29 CFR 1926.652

a. Appendix A to Subpart P - Soil Classification

b. Appendix C to Subpart P - Timber Shoring

c.. Appendix D to subpart P - Aluminum Hydraulic Shoring

2. Protective systems may be designed by using the manufacturer's data. The systems must be in accordance with all specifications, recommendations, and limitations issued or made by the manufacturer without deviation.
3. A registered professional engineer, registered in the state in which the work is to be performed may design protective systems.
4. All designs shall be in written form, signed by the registered professional engineer, and a copy of the design maintained at the job site for the duration of the excavation.

#### **b. Materials and Equipment**

1. All materials and equipment used for protective systems must be free from damage or defects and maintained in a manner consistent with the manufacturer's recommendations, and in a manner that will prevent employee exposure to unsafe conditions.
2. The Competent Person shall evaluate all materials and equipment used for protective systems on a daily basis. Any materials or equipment that are not suitable for continued use must be immediately removed from service and replaced with suitable materials before continuing work.

#### **c. Installation and Removal of Supports**

1. All members of a support system shall be securely fastened together and installed so as not to subject the members to loads exceeding their design or subject employees to unsafe conditions.
2. Removal of supports shall begin and progress from the bottom of the excavation and all precautions will be taken to ensure employee safety during the removal of supports. Back-filling of the excavation will progress with the removal of the support system.

#### **d. Shield Systems**

1. Shield systems shall be installed to restrict hazardous movement and shall not be subjected to loads exceeding the design of the system.
2. Employees will not be allowed in the shields when they are

being installed, removed, or moved and means will be provided to protect employees when entering or exiting the shielded areas.

*Note: Materials shall not be excavated greater than 1.5 feet below the bottom edge of a support or shield system.*

**e. Timber Shoring**

1. All timber shoring systems shall be designed in accordance with the conditions and requirements of **OSHA 29 CFR 1926.652 Appendix C to Subpart P - timber shoring.**
2. The tables provided in **OSHA 29 CFR 1926.652 Appendix C to Subpart P** shall be used to determine the minimum size of cross braces, wales, and uprights with respect to the depth of the trench.

**f. Aluminum Hydraulic Shoring**

1. All aluminum hydraulic shoring systems shall be designed in accordance with the conditions and requirements of **OSHA 29 CFR 1926.652 Appendix D to Subpart P - aluminum hydraulic shoring.**
2. The tables provided in **OSHA 29 CFR 1926.652 Appendix D to Subpart P** shall be used to determine the minimum size of cross braces, wales, and uprights with respect to the depth of the trench.

**g. Alternatives to Timber or Aluminum Hydraulic Shoring**

1. Pneumatic/Hydraulic Shoring
2. Trench Jacks (screw jacks)
3. Trench Shields (trench boxes)

**12.8 ENFORCEMENT**

A. Appropriate disciplinary action will be taken if this procedure is violated. Examples of violations may include, but are not limited to:

1. An employee entering an excavation/trench before it is adequately protected and before the Competent Person has approved entry.

2. An employee dismantles or modifies any part of the protective system or equipment without the authorization of the Competent Person.

B. If this procedure is violated, the appropriate Supervisor will document this violation on a disciplinary form (*See Section 1 of this manual*), keeping the original in the Job Box and sending a copy to the Corporate Safety Manager.

## **12.9 TRAINING**

A. Contractor employees required to perform the duties of the "Competent Person" as outlined in this procedure must have received classroom and hands on training from an accredited Excavation/Trending course.

# FieldTurf USA

## Health and Safety Program

### SECTION 13

### FIRE PROTECTION PLAN

#### 13.1 INTRODUCTION

A. There are three things that need to be present to produce a fire.

1. Enough **O<sub>2</sub>** (Oxygen) to sustain combustion
2. **Heat** to reach ignition temperature
3. **Fuel** or combustible materials

B. When used properly, a portable fire extinguisher can save lives and property by putting out a small fire, or containing it until help arrives.

C. A portable fire extinguisher is only useful under the right conditions

D. The conditions are right if:

1. The fire extinguisher is within easy reach of the worker, and is fully charged and in working order.
2. The fire extinguisher is rated for the type of fire at hand.
3. The extinguisher is large enough to put out the fire.
4. The worker is strong enough to lift and operate the extinguisher, and is familiar with its use.

E. Do not attempt to fight a fire if:

1. If the fire is spreading beyond the immediate area where it started, or is already a large fire.
2. If the fire could spread to block escape routes.
3. If there is no one trained in the proper operation of the

extinguisher.

4. If there is doubt about whether the extinguisher is designed for the type of fire at hand or is large enough to fight the fire.

F. It is reckless to fight a fire with an extinguisher in any one of these cases. Instead workers must leave immediately

G. Most portable fire extinguishers discharge in as little as 8 seconds.

H. In order to fight a fire correctly, an employee must know the classifications of Fires:

1. **Class A:** Wood, paper, cloth trash, plastics. any solids that are not metals.

2. **Class B:** Flammable liquids such as gasoline, oil, grease, or acetone. This includes flammable gases.

3. **Class C:** Electrical, any energized electrical equipment. (As long as it's "plugged in".

4. **Class D:** Metals such as potassium sodium, aluminum, magnesium. This requires Metal-X, foam and other special extinguishing agents.

I. It has been stated many times that the first five minutes of a fire are the most critical. If a fire goes beyond that time, it generally becomes uncontrollable by persons other than a fire department. This fact makes it very important that our company maintain fire fighting equipment to either put out a "starting" fire or at least keep it under control until larger fire fighting units arrive.

J. The risk and cost of fire on a Construction project can be extremely high in economic and human terms. The responsibility for providing a fire-safe area rests with the Supervisor and the employee performing the work.

K. Accordingly, the following Fire Protection Plan is established:

1. Before work is performed, the Foreman must check for fire hazards. Some of the most common hazards are wooden forms, scaffolding, scrap lumber, straw packing, paper wrappings, flammable liquids and oily rags. If there is any doubt regarding a hazard, contact the Supervisor.

2. All heating equipment must be checked on a regular basis, particularly where exposure to high winds may cause the extinguishing of pilot lights and subsequent explosion if they are re-ignited. Walls and rooks must be insulated at stove and pipe locations. Where tarpaulins are used to enclose an area, they should be securely fastened to avoid coming in contact with heaters.

3. *CO*<sub>2</sub>, foam or dry chemical type fire extinguishers must be available on all projects and located strategically where the risk of fire exists, particularly near fuel storage and refueling locations, construction sheds and storage buildings. Extinguishers must be recharged immediately after use. Regular periodic inspection and service of extinguishers must be carried out.

4. Gasoline, oil, greases, and other flammable fluids must be stored in safe locations. On the large tool room trailers they must be stored in the flammable materials storage locker. On smaller jobs or in the emergency trailers, flammable fluids must be kept 225 feet from ignition source and kept clear of work areas. "**No Smoking**" signs must be prominently placed in such storage areas and the "**No Smoking**" rule is strictly enforced. Gasoline and other flammables must be transported in closed metal containers (safety cans).

5. Oxygen and acetylene tanks must not be stored near oil dumps or gasoline, or near any source of heat, and must be stored securely in an upright position. When handling oxygen fittings, make sure hands and gloves are free of oil and grease.

6. Caution must be exercised when welding or burning near rubbish, tarpaulins, oil, or grease, in older buildings and in confined wall and ceiling sections. Adequate fire fighting equipment must be located at the site before any work is started where this type of hazard exists.

7. Burning and welding sparks cause more construction fires than any other ignition source. At some locations it may be unsafe to use a torch regardless of the precautions taken.

8. All fire prevention regulations established by owners or general contractors, particularly "**No Smoking**" must be observed.

9. Foremen must report immediately to the Supervisor any fire damage occurring on their project, whether or not this company



is involved.

10. The construction site owner must be advised, and his site regulations as to fire-watch, hot permits, hoses, etc. must be followed prior to welding, cutting, burning, or grinding.

11. Any employee who has been assigned the task as "fire watch" must have received FieldTurf USA fire watch training.

12. All fire extinguishers stored on site will have a monthly inspection completed and signed off on the inspection tag. Each fire extinguisher will have a complete annual inspection done.

*Note: Only fight a fire to the level you have been trained and the equipment available to you!*

# **FieldTurf USA**

## **Health and Safety Program**

### **SECTION 14**

#### **CRYSTALLINE SILICA**

##### **14.1 INTRODUCTION**

A. The following crystalline silica procedure is presented to familiarize our employees with the proper actions to take place upon encountering crystalline silica during the course of work. When handled correctly using prescribed methods and within established exposure limits, crystalline silica is not a health threat to humans. If handled incorrectly, without taking simple and straightforward steps to limit exposure, crystalline silica can cause debilitating and irreversible disease.

##### **14.2 BACKGROUND-CRYSTALLINE SILICA**

A. A naturally occurring substance found throughout the environment, crystalline silica is used in many workplaces as raw material for thousands of industrial products. Exposure to our employees can take place during installation, tear-out, and disposal of silica containing materials.

B. Crystalline silica has been classified as a cancer-causing agent (carcinogen). The greatest occupational threat comes from operations where crystalline silica (quartz) particles become airborne when silica-containing materials are disturbed by movement, cutting, mixing, breaking, etc. The health risks from crystalline silica derive from tiny particles, invisible to the naked eye, that when inhaled can become trapped in a worker's lungs during the course of one's duties. These particles are called respirable dust. Because of their minute size, the silica particles remain floating in an environment for long periods of time

C. Respirable crystalline silica can aggravate upper respiratory conditions such as asthma or emphysema. Most importantly, prolonged over-exposure to respirable crystalline silica can result in development of the lung disease silicosis. This is a non-reversible, progressive buildup of scar tissue that can result in reduced lung

capacity, debilitation disease, and in some cases premature death.

### 14.3 CONTROLLING EXPOSURE

A. Don't allow equipment, such as fork trucks, to run over material on the floor because the tires on the fork trucks will grind the material even finer and can be blown into the air where employees are working via the fan blades on the engine.

B. Keep the work area clean by picking up unused products.

C. Don't shake empty bags.

D. No smoking in the area where employees are using or demolishing silica-containing materials.

### 14.4 REDUCING EXPOSURE

A. Our procedure is designed to limit our employee's exposure to crystalline silica hazards. Being familiar with the danger of crystalline silica and potential exposure methods will reduce or eliminate exposure to workers by approaching suspect objects and materials with caution.

B. FieldTurf USA expects it's employees to cooperate and abide by this policy in a professional manner so our fellow workers and those of our customers can perform their work in a safe and controlled environment.

C. The legal limit set by OSHA in the air for Silica is 100 micrograms per cubic meter. This legal limit is called a "Permissible Exposure Limit" or "PEL". This limit is based on an 8 hour average exposure and is very low because it doesn't take much silica in the air to cause health problems.

Rule of Thumb: If dust containing silica is visible in the air it's almost always over the permissible limit.

D. Limiting your exposure by controlling your exposure is key; follow the steps in 14.3 Controlling Exposure and when in doubt wear an N95 Particulate Respirator. Keep dust away from you by facing up wind and never walk into a sand/dust cloud.

# **FieldTurf USA**

## **Health and Safety Program**

### **SECTION 15**

#### **SUB-CONTRACTORS PROCEDURE**

##### **15.1 INTRODUCTION**

A. It is the intent of FieldTurf USA to require each of its subcontractors to abide by all applicable safety regulations set forth in these policies. Subcontractors must also recognize and accept their responsibility to perform safely, by requiring them to actively participate in a formal safety program of their own.

##### **15.2 SUB-CONTRACTOR SAFETY REQUIREMENTS**

A. FieldTurf USA is ultimately responsible for all Sub-Contractor safety and therefore eligible for any OSHA fines due to the Sub-Contractor's violation of rules or regulations. The Safety Manager and the Construction Manager are responsible for determining the appropriate degree of company involvement and control necessary to promote safe sub-contractor performance. The determination is based on the size and hazards of the sub-contracted work and the potential impact of unsafe practices on employee safety and health, job costs, and schedules.

B. An effective sub-contractor accident prevention program is a mutual benefit, through improved employee and public relations and through increased efficiency and production. No accident prevention activity can be truly effective without the sincere cooperation of each sub-contractor performing work on the job site.

C. A sub-contractor representative must attend all safety meetings conducted by FieldTurf USA

##### **15.3 ENFORCEMENT**

A. The sub-contractor's safety compliance is achieved through enforcement of contractor obligation where other methods may fail. The sub-Safety contractor must comply with all provisions of OSHA and all applicable Federal, State, Municipal, Local and Customer safety regulations and shall perform work in accordance with the safety rules and regulations of

FieldTurf USA

B. Should a sub-contractor fail to satisfactorily comply with, or violate the established safety rules and regulations, the sub-contractor's supervisor must be notified to make corrections. Verbal notifications are supplemented by a written notification when necessary. The termination of a sub-contractor for violation of safety rules is a serious occurrence and should be done only when all other attempts to gain a subcontractor's compliance have failed.

C. Alternative methods of gaining sub-contractor compliance can be

1. To provide a complete safety related activity or service with subsequent billing (back charge) to the sub-contractor.
2. The removal of a sub-contractor's employee or supervisor for violation of safety rules or improper conduct, and/or suspension of all or part of a sub-contractor's work, until compliance with safety rules and procedures is obtained.

D. If alternative methods of gaining sub-contractor compliance are unsuccessful, termination of the contract should be initiated.

# FieldTurf USA

## Health and Safety Program

### SECTION 16

#### TOOL BOX TALKS PROCEDURE

##### 16.1 INTRODUCTION

A. Tool box talks provide excellent training for the employees and provide continuous reinforcement of the safety program.

B. Supervisors/Foremen will keep the subject timely. They will be sure all in attendance has signed the attendance sheet so a record is kept of the employees training. The topics of the meeting must also be documented. (*There is a place for topics on the attendance sign-in/sign-out sheet.*) this is a valuable record, as it not only lists who has been instructed, but also may be used as validation of our on-going safety program.

##### 16.2 HOW TO GIVE A TOOL BOX TALK

A. **Agenda** - Plan your agenda a few hours in advance to allow adequate preparation time. You should be able to present the topic without reading from the prepared script and lead a discussion afterwards. Whenever possible, use actual equipment to illustrate major points. Provide handout literature to supplement your presentation. Limit the length of your presentation to 30 minutes, and allow time (*up to 15 minutes*) for questions and answers from the group. Complete your presentation with a summary of important points.

B. **Format** - Conduct the meeting on a positive note. Promote teamwork and how tool box meetings provide valuable information and an opportunity for an open exchange of ideas. Offer compliments to the crew for a job well done (*if applicable*). Morale plays a large part in affecting productivity, job satisfaction, and safety. Keep the meeting informal to encourage participation. The purpose of the tool box talk is to get people to think about safety issues. Encourage the crew to offer safety suggestions about specific job site practices and conditions.

C. **Topic** - Choose timely topics. Direct the talk toward safety problems. Review recent injuries and near misses. (*What happened? Why? What should have been done?*) Review noted safety violations. Review

upcoming work schedule for the project.

**D. Place and Time** - Hold the meeting in the work area. The meeting should be held the first thing in the morning or immediately after lunch, when the workday will be least interrupted and the work relatively quiet. Hold a tool box meeting each day to reinforce FieldTurf USA commitment and philosophy toward safety as a key component in business operations.

**E. Documentation** – Always document the topics that were discussed in the Tool Box talk. The safety representative that conducts the meeting should document the topics on the daily sign in sheet.

# **FieldTurf USA Health and Safety Program**

## **SECTION 17 VEHICLE OCCUPANT PROTECTION PROGRAM COMPANY STATEMENT**

FieldTurf USA company statement is to provide a safe and healthful work place for our Employees', Sub-Contractors, Suppliers, and Customers; to observe all State and Federal Laws and Regulations; and to follow all FieldTurf USA safety policies and procedures.

Our supervision and management will make every reasonable effort possible to eliminate the cause of accidents and minimize the occupational hazards associated with our work. Furthermore, we will make every effort to prevent the destruction of vehicles owned by our company.

We have and will continue to maintain a program designed to train our employees to follow the guidelines and safe practices associated with the Vehicle Occupant Protection Program. Each employee must clearly understand that it is everyone's responsibility to act and work in a safe manner.

Our goal is to completely eliminate accidents and injuries. FieldTurf USA objectives in vehicle safety efforts are realistic. We do consider the possibility of occasional accidents, therefore we will strive to minimize their effects towards achieving our objectives: To be able to respond promptly and effectively, and to evaluate and learn from incidents in attempting to eliminate further occurrences.

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**William Walker, Operations Manager West Coast**

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**Date**



## **17.1 INTRODUCTION**

A. The safe operation of motor vehicles during the business of FieldTurf USA is imperative to the safety of the employees and the public.

B. Though it is not the intent of FieldTurf USA to police operators of company vehicles or to invade privacy of employees, it is necessary to establish a basis for determining safe operating standards for operators. The following shall apply to all persons operating Company vehicles or operating their own vehicles on Company business:

## **17.2 APPLICANTS**

A. An applicant shall have a valid, current drivers license for the type of vehicle driven, to be eligible for employment in a driving position.

B. An applicant shall provide a current (not to exceed 30 days prior to application), original Department of Motor Vehicle Report as part of the employment application process. FieldTurf USA may request a Motor Vehicle Report from our current insurance carrier as a part of the employment screening process as required.

C. Applicants whose Motor Vehicle Record (MVR) includes reports of more than one (1) at fault accident or two (2) convictions for moving violations may not be eligible for employment.

D. Applicants whose Motor Vehicle Record includes report of any major citation/citations may not be eligible for employment.

## **17.3 EMPLOYEES**

A. Driving record requirements:

1. Before any employee is cleared to operate a company vehicle, a current Motor Vehicles Report (MVR) must be presented to the company for acceptance. An update of the MVR for all drivers will be performed by FieldTurf USA insurance company as required.

2. All employees will be given a copy of FieldTurf USA Vehicle Occupant Protection Program and a "Striving for Better Driving" pamphlet. The employee will read this material and acknowledge by signing an acknowledgment form.

3. During the first 90 days of employment, a new driver is considered on probation. If during this probationary period, the employee encounters a chargeable accident, due to their fault, that employee may be placed in a non-driving position, or be subject to termination.

4. Management will review with the employee the Motor Vehicle Record of any employee whose record reveals the following:

- Two (2) or more moving violations
- One (1) at fault accident and one (1) moving violation

B. Employees meeting any of the above criteria will be subject to probation (*see Probation Notice form*) and subject to the Department of Motor Vehicles Pull Notice Program, which informs the Company immediately of violations, or accidents, which have occurred. The DMV Pull Notice Program will be imposed in lieu of the standard MVR review to ensure close scrutiny of driving related activity on Company business. If notification of a moving violation and/or at fault accident occurs while on probationary status, the employee may be placed in a non-driving position or be subject to termination at Management's direction.

C. If notified by our insurance company, management will review possible company vehicle driving suspensions or terminations with an employee whose MVR record reveals the following:

- Three (3) or more moving violations and/or accidents whether or not at fault (i.e., includes two (2) moving violations and one (1) at fault accident).
- Two (2) or more at fault accidents.

D. Those employees meeting any of the above criteria may be subject to termination from FieldTurf Builders

E. Active employees convicted of major citations may not be permitted to operate any vehicle on Company business and may be placed in a non-driving position. After Management's review, if it is determined that a non-driving position is not available, termination may result.

F. Seatbelts are an essential element of our driver safety policy/procedures. To emphasize seatbelt awareness, two (2) seatbelt violations while on Company business will equate to one (1) moving violation.

G. Management will review any accident involving an employee while on Company business. The employee may then be subject to disciplinary action up to or including termination, by Management.

H. If a required review of Motor Vehicle Record reveals major citations in other than Company vehicles, citation for failure to appear, or at fault accidents, Management shall review and determine if the employee should be permitted to continue to operate vehicles on Company business.

I. Because of the nature of our operations, it is sometimes more efficient for an employee to take a Company vehicle home rather than returning it to the yard. At no time will an employee be permitted to carry any person in any Company vehicle that is not an employee of FieldTurf USA without prior consent.

## **17.4 VEHICLE SAFETY**

### **A. Pre-Shift Inspections**

1. Review any inspection reports
2. Observe the general condition of the vehicle
3. Know how to inspect lights, fluid levels, tires, wheels and rims, brakes, steering system, suspension, exhaust system, and cargo.
4. Make sure the vehicle has emergency equipment
5. Know and observe the capacity of your vehicle
6. After-trip inspections should be performed
7. File a Vehicle Maintenance Notification with the proper corporate contact for repairs if necessary

### **B. Preventative Maintenance**

1. Perform preventative maintenance as instructed
2. Bring problems to the attention of management
3. In cold weather, inspect coolant and antifreeze levels. Be sure window wipers and washers are operating. Know how to properly use and install tire chains. Remove ice from handholds,

steps and deck plates.

4. In hot weather, pay attention to engine oil, coolant, belts, and hoses.

### **C. Documentation**

1. Carry the correct documentation with you:

- All drivers proof of insurance, owners card and the proper drivers license.
- Vehicle placards, written emergency response information

2. Make sure all documents are current

## **17.5 DRIVING SAFETY**

### **A. General Precautions**

1. All vehicles should be inspected by the operator before they are used. The following general precaution guidelines include but are not limited to:

- Never drive an unsafe vehicle
- Seat belts must be worn at all times during the operation of any company vehicle.
- Never overload a vehicle. Know the capacity maximum and how to check the weight.
- Look far enough ahead to respond safely while operating a vehicle. The need to stop suddenly and change lanes make it necessary to know what is going on all around you. Good drivers look 12 to 15 seconds ahead of their vehicle.
- Check mirrors regularly. Be aware of vehicles moving into your blind spots.
- Observe traffic and road conditions. Pay attention to signal lights and signs, anticipate changing lights. Use caution in situations that require you to slow down, stop or change lanes.
- Use all of your senses when operating your vehicle. Listen for horns, sirens, or problems with your engine. Get the feel of the road.
- Control the speed and direction of your vehicle. Use proper accelerating, steering, shifting of gears, and braking to maintain control. Hold the wheel properly. The wheel should be held firmly using both hands.
- Remember to apply the parking brake when you leave your vehicle.

- Keep space between your vehicle and others. Allow enough space for you to stop or maneuver safely.
- Hydroplaning: Prevent hydroplaning by checking the tread on your tires and slow down when driving in wet weather. If your vehicle begins to hydroplane, take your foot off the accelerator. This will allow the tires to contract the roadway.
- Never operate a vehicle if you are tired or ill.

## **B. Backing Up:**

1. Try to position the vehicle so you can back in a straight line. If you must back on a curved path, back to the driver's side so you can see. When backing up trailers, correct drift immediately. Pull forward to reposition your vehicle as needed.
2. Look at the path to be sure before backing up. Use mirrors and back up slowly.
3. Use a helper or spotter when possible. Helpers/Spotters should stand near the back of the vehicle where you can see them. Agree on a set of signals and know the signal for "STOP".

## **17.6 ACCIDENTS/COLLISIONS:**

### **A. If You Are Involved In An Accident Or Collision:**

1. If you are involved in a collision, you must stop. If you don't, you could be convicted of "hit and run" and be severely punished. Follow these basic guide rules:

#### **• GET OFF THE ROAD**

Beware of Traffic!! Get your vehicle out of any traffic area and park safely if it is possible. Use warning devices 200 to 300 feet behind the vehicles to warn approaching drivers (such as triangles or flares).

#### **• FIRST AID**

Give your attention first to anyone who may appear to be injured. If you are qualified, use emergency first aid where needed, and notify the police or highway patrol as soon as possible.

#### **• EXCHANGE INFORMATION**

Exchange your driver's license number, insurance policy number, registration information and address with anyone else involved in the collision. Notify FieldTurf Builders

corporate office *immediately*.

• **GET THE FACTS DOWN**

If there are witnesses to the collision, get their names, addresses and phone numbers if possible as well as their vehicle license numbers.

• **REPORTS**

Accidents, Mishaps, or Collisions must be reported *immediately* to the Corp. office. Contact the proper Insurance reporting agency per the insurance reporting card found in each vehicle, unless otherwise instructed by Corp office. Fill out a company "Vehicle Accident" form; send the original to the Corp. office and keep a copy. (*Attach a Motor Vehicles Division Accident Report Form if applicable*)

# COMPANY DRIVER POLICY

## Probation Notice

The safe operation of motor vehicles for the business of FieldTurf USA is imperative to the safety of the employees and the public.

Employee Name: \_\_\_\_\_

The Management of the Company has reviewed your driving record and has provided you a copy of your record.

If you disagree with the information provided, you will be given the opportunity to go to the DMV, correct the information and give us an updated/corrected copy of your driving record.

As defined in the Company Driver Policy, those employees with two (2) or more citations or accidents, whether or not at fault, or one (1) at-fault accident, are placed on probationary status and will be subject to having the Motor Vehicle Record reviewed as often as Management feels necessary.

*Because your Motor Vehicle Record is unsatisfactory, as defined by the Company Driver Policy, you are being placed on the DMV Pull Notice Program that informs the Company immediately upon a conviction of a driving violation or accident. We are doing this to assure that improvement in driving habits is achieved so that serious injuries and property damage can be avoided. Probationary status will remain in effect for a minimum period of twelve (12) months from the date noted below. At that time Management will review the driving status with the employee for consideration.*

If notification of a moving violation and/or at-fault accident occurs while in the program, the employee may be placed in a non-driving position or be subject to termination at Management's discretion.

Please note, there are very limited non-driving positions available in the Company and if you are excluded from your Company driving activities due to your driving record, we may not have a position for you.

**I HAVE READ AND UNDERSTAND THE DRIVER POLICY AND AGREE TO ITS TERMS.**

---

*Employee Signature Date*

---

*Management Signature Date*

***FIELDTURF USA***  
**Vehicle Occupant Protection Program**  
**Acknowledgment**

I, \_\_\_\_\_,

Have received and read the FieldTurf USA Inc. Vehicle Occupant Protection Plan policy and agree to abide by all rules and regulations stated therein.

\_\_\_\_\_  
*Employee Signature Date*

\_\_\_\_\_  
*Drivers License Number & State of Issue Exp. Date*

\_\_\_\_\_  
*Supervisor/Management Signature Date*



**FIELDTURF BUILDERS**  
**Vehicle Occupant Protection Program**  
**VEHICLE USE POLICY**  
**ACKNOWLEDGMENT**

The undersigned hereby understands and agrees that the vehicle being taken home at night, and titled to FieldTurf Builders, is not to be driven by anyone other than the employee. The undersigned further understands and agrees that the vehicle is not to be driven for personal use by the employee, nor will the employee allow family members or friends to be passengers.

---

*Employee Signature Date*

---

*Supervisor/Management Signature Date*

# FieldTurf USA

## Health and Safety Program

### SECTION 18

#### OSHA INSPECTION PROTOCOL

##### 18.1 INTRODUCTION

A. It is the objective of this Corporation to establish a uniform procedure in the event of an un-scheduled site inspection by the Occupational Safety and Health Administration (**OSHA**). FieldTurf USA will comply and cooperate with any regulatory agency inspection efforts. The procedures outlined in this safety manual section do not preclude advisory participation by the Corporate Safety Department.

B. The inspection of FieldTurf USA job sites fall into **OSHA**'s un-scheduled or un-programmed scope. These inspections are in response to alleged hazardous working conditions identified at a specific work site. This type of inspection responds to imminent dangers, fatalities, catastrophes, complaints and referrals. There are two types of inspections that can result depending on the reason or situation of the inspection.

##### 1. **Comprehensive**

*Comprehensive* inspections involve a complete inspection of the potentially high hazard work environment.

##### 2. **Partial**

A *Partial* inspection is limited to potentially hazardous areas, conditions or practices at the workplace. A *Partial* inspection may be expanded based on information gathered during the inspection.

##### 18.2 PRIOR TO, AND ARRIVAL OF, AN OSHA INSPECTOR

A. Un-scheduled inspections are conducted without advance notice, therefore, it is extremely important to have a designated individual on any job site that will be responsible for managing inspections by regulatory agencies. This designated person should be familiar with construction federal regulations, **OSHA** inspections procedures, and FieldTurf USA policies and procedures.

B. Corporate Safety must be notified immediately of any un-scheduled regulatory agency inspection.

C. Inspections are required to be conducted during normal work hours. Upon arrival at the job site, the **OSHA** compliance officer, (a *CHSO*) is required to contact the controlling contractor. ***CSHO's are required to carry picture identification, therefore, must produce verification of credentials.***

D. A *CSHO* should offer to conduct a pre-inspection or “opening” conference.

### **18.3 OPENING CONFERENCE**

A. An opening conference allows the *CSHO* to inform the employer of the purpose and procedures of the inspection. Always determine what the purpose of the inspection is.

B. If the inspection is due to an employee complaint, ask for a copy of the complaint.

C. Ask if the inspection is a *Comprehensive* or *Partial*.

D. If the inspection is revealed to be a *Partial*, then plan the inspection around the areas of ***alleged hazard ONLY***.

E. Determine if the scope includes any sampling such as atmospheric or noise, photographs, videotaping, etc. to obtain the equipment you will need.

F. Any records in compliance with the applicable standard requested by the *CSHO* prior to entering the inspection area must be made available for review. Examples of these applicable standard records are **OSHA** 200/300 logs (obtained through the Safety office), MSDS, hazardous communication program, or any standard requiring formal training documentation. Further records not required by the standard may be obtained through a court issued warrant or subpoena.

G. It must be determined at opening conference who will participate in the inspection “**walkthrough**”. It is mandatory that the FieldTurf USA designated person or persons accompany the inspector at all times during the inspection.

## 18.4 WALKTHROUGH INSPECTION

A. The following items are a minimum requirement during the inspection:

1. Be courteous and respectful to the *CSHO* at all times. Do not argue, make condescending remarks or make negative remarks regarding the work force.
2. **Do not** hurry the *CSHO* through the inspection.
3. Avoid self-incrimination yet answer questions as honestly as possible. If you are not sure or do not have the answer, say so. You do have the right to remain silent. Let the *CSHO* know you will get the answer for him in a timely fashion.
4. **Do not** openly admit to an element of violation of any of the standards.
5. Duplicate any photos, videos, or samples that the *CSHO* may require. If the *CSHO* takes a photo, attempt to capture the same picture from the same spot, angle, etc.
6. Take detailed notes. (i.e. where you went, who was interview, what was said)
7. If the *CSHO* makes an observation about a work practice or work place condition, write it down.
8. If the inspection is *Partial*, attempt to keep the walkthrough limited to the areas discussed in the opening conference.
9. Any identified hazards by the *CSHO*, must be corrected immediately if possible. This reinforces the “good faith” stand available to the company. Remember, the *CSHO* has the authority to Not Issue a citation when hazards are abated immediately.

## 18.5 CLOSING CONFERENCE

A. At the conclusion of the inspection, a closing conference will be held with FieldTurf USA representatives. This conference may be held at a later date if the *CSHO* has data that needs further interpretation.

B. In the closing conference, the *CSHO* will describe the alleged violations based upon findings of the inspection and/or the standard that has been violated. The company will then be given a date by which the violations must be abated. Copies of these violations will be sent via certified mail, and upon receipt, must be posted in a highly visible area for three days or until the violation has been abated. Compliance to abatement procedures must be critically documented and furnished to the **OSHA** area office before the abatement deadline.

C. At the point of closing conference, the Corporate Safety Department should have been notified and involved to assist in any reduction of penalty options. Alleged violations must be contested in writing within fifteen (15) working days after receipt of the citation.

# **FieldTurf USA**

## **Health and Safety Program**

### **SECTION 19**

#### **HIPP – HEAT ILLNESS PREVENTION PROGRAM**

##### **19.1 INTRODUCTION**

A. FieldTurf USA established its Safety Program in January, 2002. The program was implemented to provide a safe and healthful work place for our Employees, Subcontractors, Suppliers, and Customers; to observe all State and Federal Laws and Regulations; and follow all FieldTurf USA safety policies and procedures.

B. The nature of the construction business often places our workers in hazardous situations, but these can be well controlled when proper precautions are taken. This includes possessing the proper knowledge, identifying and circumventing potential hazards, and most importantly, approaching the issue of safe work habits with a professional attitude and proper training.

C. Employees who work in outdoor places of employment or on job tasks in other areas at those times when the environmental risk factors for heat illness are present, are at risk for developing heat illnesses if they do not protect themselves appropriately.

D. This policy will address the hazardous conditions faced with heat related emergencies, employee awareness, signs and symptoms of those effected by heat related emergencies, proper procedures to follow if these symptoms occur, and the responsibilities of supervision for training, recognition and implementation.

E. Communication and purpose for this intended knowledge is vital in the protection of our employees and the prevention of injury or death from any heat related illness.

##### **19.2 RESPONSIBILITY:**

A. It is the policy of FieldTurf USA that any employee participating in job tasks when environmental risk factors for heat illness are present will:

1. Comply with the procedures in this program
2. Ensure they have drinking water available at all times when the environmental risk factor for heat illness is present
3. Ensure they have access to a shaded area to prevent or recover from heat related symptoms
4. Report heat illness symptoms to their supervisor or safety representative.

B. Supervision will assure that *all employees* are properly instructed in the recognition of signs and symptoms for heat related emergencies through safety meetings and/or tool box talks. Orientation of any employee, or potential employee will include all aspects of this policy.

C. In case of a heat related emergency, the supervisor must be notified immediately.

D. Employees showing signs or symptoms of heat related illness must be relieved from duty and provided with a sufficient means to reduce body temperature.

E. Employees showing signs or symptoms of heat related illness must be carefully evaluated to determine whether it is appropriate to return to work or if medical attention is necessary.

F. A daily hazard assessment will be performed by the project supervisor and/or site safety representative, which will specifically address the environmental conditions and the potential personal risk for heat related emergencies.

G. Supervision will maintain preventative measures to assure that all employees are provided with hydration methods (providing drinkable water or other hydration approved liquids).

1. **Hydration Supply:** Ensure compliance with **OSHA/CALOSHA/OR-OSHA/WISHA** requirements of ample water supply. (**WISHA/CAL-OSHA** requirement of ¼ gal. of water per employee/hour)
2. Foremen are responsible to ensure an adequate number of water bottles are available at their work site. This can be included and checked with task

assessment sign off sheets.

3. Foremen will assign a worker to collect needed water bottles and relocate them to assigned work locations.

4. Water cups will be kept clean and available in a sanitary dispensing manner. Safety representative will inventory each water area to ensure the sanitation conditions of water cups, and to maintain litter free environment.

5. Supervisors shall remind employees to drink frequently.

### **19.3 DEFINITIONS**

#### **A. ACCLIMATIZATION:**

The term acclimatization means temporary adaptation of the body to work in the heat that occurs gradually when a person is exposed to it. Acclimatization peaks in most people within four to fourteen days of regular work for about two hours per day in the heat.

#### **B. ENVIRONMENTAL RISK FACTORS FOR HEAT ILLNESS:**

This means working conditions that create the possibility that heat illness could occur, including air temperature, relative humidity, radiant heat from the sun and other sources, conductive heat sources such as the ground, air movement, workload severity and duration, protective clothing and personnel protective equipment worn by the employee.

#### **C. HEAT ILLNESS:**

Heat illness means a serious medical condition resulting from the body's inability to cope with a particular heat load, and includes heat stress, heat exhaustion, and heat stroke.

#### **D. PERSONAL RISK FACTORS FOR HEAT ILLNESS:**

These are factors such as an individual's age, degree of acclimatization, health, water consumption, caffeine consumption, and use of prescription medications that can effect the body's water retention or other physiological responses to heat.

#### **E. PREVENTATIVE RECOVERY PERIOD:**

A period of time to recover from the heat in order to prevent heat illness.

#### **F. SHADE:**

The term "shade" means blockage of direct sunlight. Canopies, umbrellas, and other temporary structures or devices may be used to



provide shade. One indicator that blockage is sufficient is when objects do not cast a shadow in the area of blocked sunlight. Shade is not adequate when heat in the area of shade defeats the purpose of shade, which is to allow the body to cool.

1. For example, a car sitting in the sun does not provide acceptable shade to a person inside it, unless the car is running with air conditioning.

#### **G. DRINKING WATER:**

The department of Health's requirement must be satisfied by supplying potable water suitable for drinking by the public. Water packaged as a consumer product is an acceptable source of drinking water.

### **19.4 RECOGNITION AND CARE:**

A. There are basically 3 types of heat related emergencies.

1. Heat Stress
2. Heat Exhaustion
3. Heat Stroke

#### **B. Heat Stress:**

1. The first symptoms of any heat related emergency begins with painful muscle spasms, usually in the legs and abdomen. Have the employee move to a cool place and give cool water to drink. Lightly stretch the muscle and gently massage the area. Continue to observe the employee.

#### **C. Heat Exhaustion:**

1. Someone experiencing this condition will exhibit cool, moist pale, flushed skin, while complaining of headache, nausea, and/or dizziness. These will be accompanied by weakness and exhaustion. Move the employee to a cooler environment immediately. Loosen tight clothing and fan the employee or place them in front of a fan. If the employee is conscious, give them small amounts of cool water to drink. If the employee's condition does not improve, the supervisor or field safety representative must contact the Calpine site nurse immediately.

#### **C. Heat Stroke:**

1. Heat stroke is when the body has lost it's ability to cool itself down. This condition is **LIFE THREATENING**. Emergency

action steps must be taken immediately if any employee shows signs or symptoms of heat stroke. The employee will have a change in the level of consciousness, a high body temperature, with red, hot skin that can be either dry or moist. They will have rapid or weak pulse, and rapid or weak breathing. *CALL 911*  
Give the same care as for heat exhaustion until help arrives.

## 19.5 TRAINING

A. All employees working on job tasks where environmental risk factors are present for heat illness, will receive instruction before being assigned to work tasks. Topics shall include but not be limited to:

1. Environmental and personal risk factors
2. Procedures for identifying, evaluating, and controlling exposures to the environmental and personal risk factors
3. Employees who experience excessive sweating require frequent consumption of small quantities of water.
4. Importance of acclimatization
5. Different types, signs and symptoms of heat illness
6. Importance of immediately reporting symptoms or signs of heat illness in themselves or in co-workers to their supervisor or safety representative.
7. Procedures for responding to symptoms of possible heat illness, including how emergency medical services will be provided.

B. Supervisors:

1. Prior to assignment, supervisors must have training on the following topics:
  - a. The procedures to follow to implement the applicable provisions of this policy
  - b. The procedures to follow when an employee exhibits signs or symptoms consistent with possible heat-related illness, including emergency response procedures.
  - c. Procedures for moving employees to a place where

they can be reached by an emergency medical service provider, if necessary

d. How to provide clear and precise directions to the emergency medical provider who needs to find the work site

#### **19.6 MEDICAL PROVIDERS:**

A. Medical care and/or transportation will be provided either via EMS services through 911, an on-site emergency number, or the employee will be taken by the supervisor or field safety representative to the nearest medical or emergency medical facility.

## Summary

Order Reference: jean-claude.joly@tarkettsports.com | Report as of: 10-06-2020 | using Currency as USD

### FIELDTURF USA, INC.

Tradestyle(s): (FOREIGN PARENT IS FIELDTURF TARKETT  
INC, MONTREAL, CANADA.) +1

ACTIVE

SINGLE LOCATION

**Address:** 175 N Industrial Blvd Ne, Calhoun, GA,  
30701, UNITED STATES

**Phone:** +1 706-625-6533

**D-U-N-S:** 13-186-2364

**In Portfolio:** Yes

**Tags:** In Box

COVID Limited Margin Companies

**Alerts:** No alerts

#### Failure Score

47

(No change since last month)

#### Delinquency Score

76

(No change since last month)

#### Age of Business

23 years

1996 Year Started

#### Employees

184

#### Recent Alerts

There are no alerts to display.

#### Company Profile

##### D-U-N-S

13-186-2364

##### Legal Form

Corporation (US)

##### History Record

Clear

##### Date Incorporated

##### Mailing Address

United States

##### Telephone

+1 706-625-6533

##### Present Control Succeeded

1999

##### Employees

184

##### Age (Year Started)

23 years (1996)

##### Named Principal

Eric Daliere, CEO

##### Line of Business

11-06-1996

Trade contractor

**State of Incorporation**

Florida

**Ownership**

Not publicly traded

**Risk Assessment**

**Overall Business Risk**



**Maximum Credit Recommendation**

**US\$ 315,000**

The recommended limit is based on a moderately low probability of severe delinquency.

**Dun & Bradstreet Thinks...**

- Overall assessment of this organization over the next 12 months: **STABILITY CONCERNS**
- Based on the predicted risk of business discontinuation: **AVERAGE-RISK-OF-DISCONTINUED-OPERATIONS-OR-BUSINESS-INACTIVITY**
- Based on the predicted risk of severely delinquent payments: **LOW POTENTIAL FOR SEVERELY DELINQUENT PAYMENTS**

**D&B Viability Rating**

**Portfolio Comparison Score**



Company's risk level is: **MODERATE**

Probability that a company will go out of business, become dormant/inactive, or file for bankruptcy/insolvency within the next 12 months: **5.00 %**

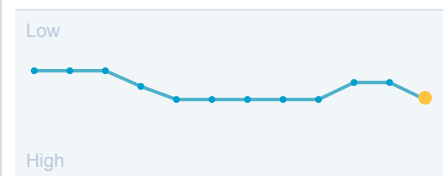
**Failure Score** Formerly Financial Stress Score



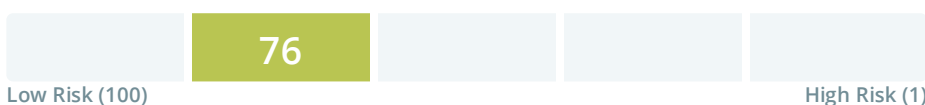
Company's risk level is: **MODERATE**

Probability of failure over the next 12 months: **0.27 %**

**Past 12 Months**



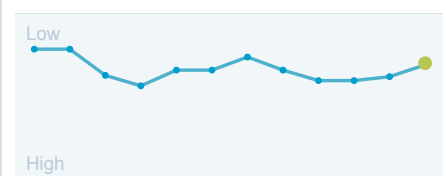
**Delinquency Score** Formerly Commercial Credit Score



Company's risk level is: **LOW-MODERATE**

Probability of delinquency over the next 12 months: **3.08 %**

**Past 12 Months**



PAYDEX ®

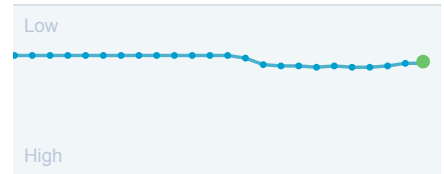
71

Low Risk (100)

Days Beyond Terms : 14

High Risk (0)

Past 24 Months



D&B Rating

Current Rating as of 06-21-2018

Employee Size

**1R**: 10 employees and over

Risk Indicator

**2**: Low Risk

Previous Rating

Employee Size

**1R**: 10 employees and over

Risk Indicator

**3**: Moderate Risk

Legal Events

Events	Occurrences	Last Filed
Bankruptcies	0	-
Judgements	0	-
Liens	0	-
Suits	0	-
UCC	2	03-11-2019

Trade Payments

Highest Past Due

**US\$ 15,000**

Highest Now Owing

**US\$ 100,000**

Total Trade Experiences

**45**

Largest High Credit

**US\$ 100,000**

Average High Credit

**US\$ 20,870**

Ownership

This company is a **Single Location**

Financial Overview

This company does not have a Financial Summary.

Country/Regional Insight

United States

Risk Category



The short-term economic improvement is likely to slow after recovering rapidly since the pandemic outbreak, creating long-term scars and divergences between economic sectors.

## Risk Assessment

### D&B Risk Assessment

#### Overall Business Risk



#### Maximum Credit Recommendation

**US\$ 315,000**

#### Dun & Bradstreet Thinks...

- Overall assessment of this organization over the next 12 months: **STABILITY CONCERNS**
- Based on the predicted risk of business discontinuation: **AVERAGE-RISK-OF-DISCONTINUED-OPERATIONS-OR-BUSINESS-INACTIVITY**
- Based on the predicted risk of severely delinquent payments: **LOW POTENTIAL FOR SEVERELY DELINQUENT PAYMENTS**

The recommended limit is based on a moderately low probability of severe delinquency.

### D&B Viability Rating

#### Portfolio Comparison Score



#### Rating Confidence Level



#### Data Depth

- Rich Firmographics
- Extensive Commercial Trading Activity
- Basic Financial Attributes

Level of Risk  
**Moderate**

Probability of becoming no longer viable  
**5.00%**

Percentage of businesses ranked with this score  
**11.00%**

Average probability of becoming no longer viable  
**5.00%**

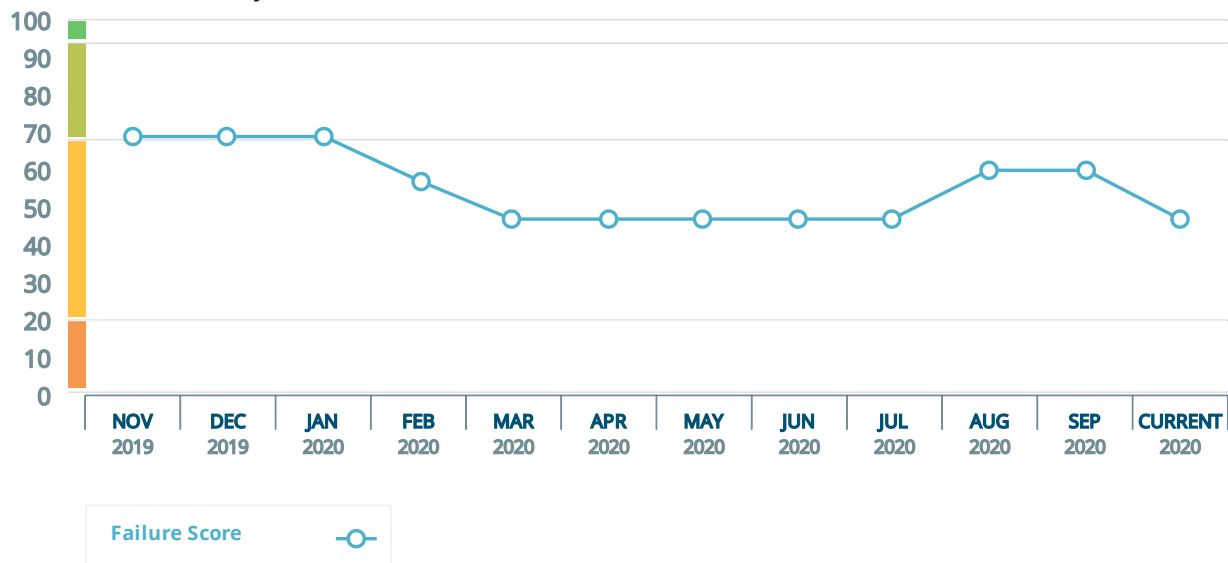
**Failure Score** Formerly Financial Stress Score



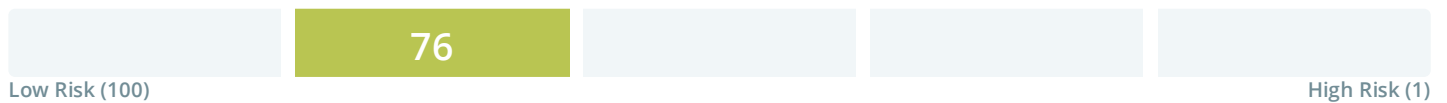
- Low proportion of satisfactory payment experiences to total payment experiences
- UCC Filings reported
- High number of enquiries to D&B over last 12 months
- High proportion of past due balances to total amount owing
- Unstable Paydex over last 12 months

Level of Risk <b>Moderate</b>	Raw Score <b>1472</b>	Probability of Failure <b>0.27%</b>	Average Probability of Failure for Businesses in D&B Database <b>0.48%</b>
----------------------------------	--------------------------	--	---

**Business and Industry Trends**



**Delinquency Score** Formerly Commercial Credit Score



- Higher risk industry based on delinquency rates for this industry
- Proportion of slow payments in recent months
- Proportion of past due balances to total amount owing



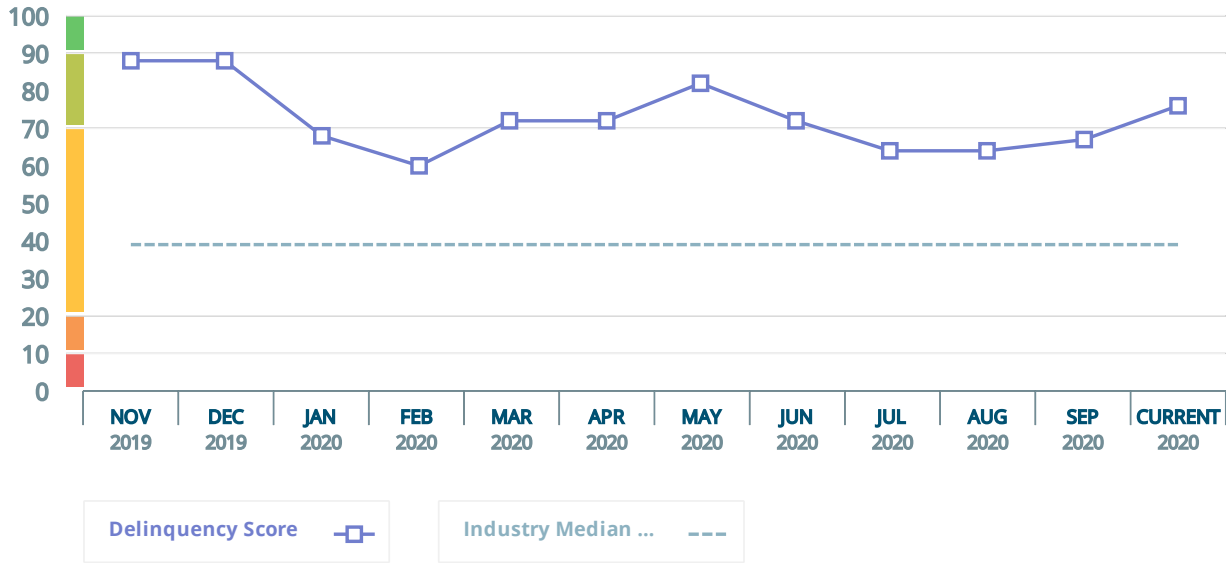
Level of Risk  
**Low-Moderate**

Raw Score  
**539**

Probability of Delinquency  
**3.08%**

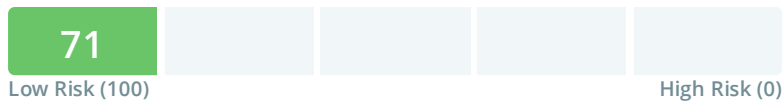
Compared to Businesses in D&B Database  
**10.20%**

Business and Industry Trends



PAYDEX ®

Based on 24 months of data

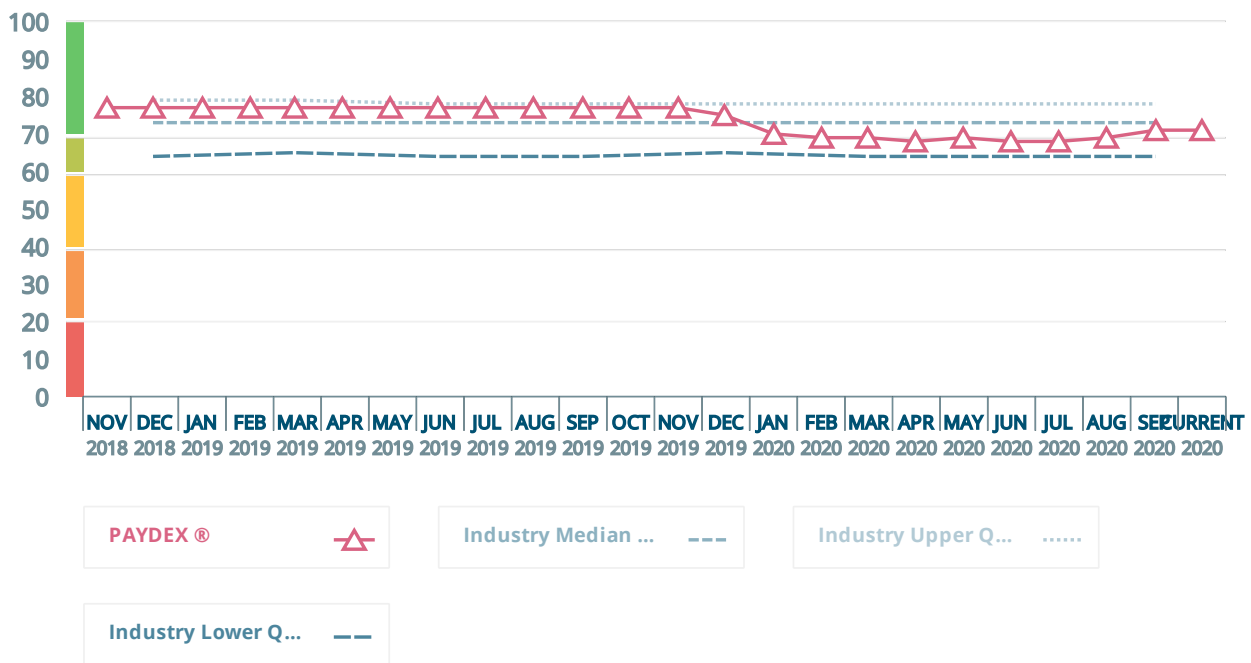


Risk of Slow Pay  
**Low**

Payment Behavior  
Days Beyond Terms: **14**

Business and Industry Trends

1799 - Trade contractor



D&B Rating

Current Rating as of 06-21-2018

Previous Rating

Employee Size

**1R**: 10 employees and over

Risk Indicator

**2**: Low Risk

Employee Size

**1R**: 10 employees and over

Risk Indicator

**3**: Moderate Risk

## Trade Payments

### Trade Payments Summary (Based on 24 months of data)

Overall Payment Behavior

**14**

Days Beyond Terms

% of Trade Within Terms

**76%**

Highest Past Due

**US\$ 15,000**

Highest Now Owing:

US\$ 100,000

Total Trade Experiences:

45

Largest High Credit:

US\$ 100,000

Average High Credit:

US\$ 20,870

Total Unfavorable Comments:

0

Largest High Credit:

US\$ 0

Total Placed in Collections:

0

Largest High Credit:

US\$ 0

### Trade Payments By Credit Extended (Based on 12 months of data)

Range of Credit Extended (US\$)	Number of Payment Experiences	Total Value	% Within Terms
100,000 & over	2	US\$ 200,000	75
50,000 - 99,999	2	US\$ 120,000	73
15,000 - 49,999	8	US\$ 240,000	70
5,000 - 14,999	7	US\$ 55,000	66
1,000 - 4,999	6	US\$ 10,500	78
Less than 1,000	5	US\$ 600	92

### Trade Payments By Industry (Based on 24 months of data)

Industry Category	Number of Payment Experiences	Largest High Credit (US\$)	% Within Terms (Expand to View)	1 - 30 Days Late (%)	31 - 60 Days Late (%)	61 - 90 Days Late (%)	91 + Days Late (%)
▼ 27 - Printing, Publishing and Allied Industries	1	10,000					

Industry Category	Number of Payment Experiences	Largest High Credit (US\$)	% Within Terms (Expand to View)	1 - 30 Days Late (%)	31 - 60 Days Late (%)	61 - 90 Days Late (%)	91 + Days Late (%)
2759 - Misc coml printing	1	10,000	0	50	50	0	0
▼ 28 - Chemicals and Allied Products	1	100,000					
2821 - Mfg plastics/resins	1	100,000	100	0	0	0	0
▼ 42 - Motor Freight Transportation and Warehousing	1	10,000					
4213 - Trucking non-local	1	10,000	50	50	0	0	0
▼ 47 - Transportation Services	1	7,500					
4789 - Transportation svcs	1	7,500	100	0	0	0	0
▼ 48 - Communications	1	100					
4813 - Telephone communictns	1	100	100	0	0	0	0
▼ 50 - Wholesale Trade - Durable Goods	3	35,000					
5049 - Whol misc profsn eqpt	1	250	100	0	0	0	0
5063 - Whol electrical equip	1	1,000	0	50	50	0	0
5085 - Whol industrial suppl	1	35,000	100	0	0	0	0
▼ 51 - Wholesale Trade - Nondurable Goods	6	35,000					
5113 - Whol service paper	2	7,500	100	0	0	0	0
5169 - Whol chemicals	3	30,000	98	2	0	0	0
5199 - Whol nondurable goods	1	35,000	50	50	0	0	0
▼ 57 - Home Furniture Furnishings and Equipment Stores	1	20,000					
5734 - Ret computer/software	1	20,000	0	100	0	0	0
▼ 59 - Miscellaneous Retail	2	1,000					
5943 - Ret stationery	2	1,000	100	0	0	0	0
▼ 61 - Nondepository Credit Institutions	2	45,000					
6153 - Short-trm busn credit	2	45,000	57	0	43	0	0
▼ 73 - Business Services	5	100,000					
7359 - Misc equipment rental	3	100,000	51	41	8	0	0
7363 - Help supply service	1	100	100	0	0	0	0
7379 - Misc computer service	1	2,500	100	0	0	0	0
▼ 75 - Automotive Repair, Services and Parking	1	100					
7513 - Truck rental/leasing	1	100	50	0	50	0	0
▼ 87 - Engineering Accounting Research Management and Related Services	1	1,000					
8711 - Engineering services	1	1,000	100	0	0	0	0

Industry Category	Number of Payment Experiences	Largest High Credit (US\$)	% Within Terms (Expand to View)	1 - 30 Days Late (%)	31 - 60 Days Late (%)	61 - 90 Days Late (%)	91 + Days Late (%)
▼ 99 - Nonclassifiable Establishments	4	65,000					
9999 - Nonclassified	4	65,000	78	22	0	0	0

## Trade Lines

Date of Experience	Payment Status	Selling Terms	High Credit (US\$)	Now Owes (US\$)	Past Due (US\$)	Months Since Last Sale
09/20	Pays Promptly	N60	35,000	35,000	0	1
09/20	Pays Promptly	-	7,500	2,500	0	1
09/20	Pays Promptly	-	2,500	0	0	Between 6 and 12 Months
09/20	Pays Prompt to Slow 30+	-	7,500	0	0	Between 4 and 5 Months
09/20	Pays Prompt to Slow 60+	-	45,000	30,000	0	1
09/20	-	Cash account	100	-	-	Between 6 and 12 Months
09/20	Pays Promptly	-	30,000	30,000	0	1
08/20	Pays Promptly	-	100,000	0	0	1
08/20	Pays Promptly	-	55,000	55,000	0	1
08/20	Pays Promptly	-	35,000	35,000	0	1
08/20	Pays Promptly	-	20,000	15,000	0	1
08/20	Pays Promptly	-	7,500	2,500	0	1
08/20	Pays Promptly	-	1,000	50	50	Between 6 and 12 Months
08/20	Pays Promptly	-	100	0	0	Between 4 and 5 Months
08/20	Pays Promptly	-	100	0	0	Between 2 and 3 Months
08/20	Pays Promptly	-	50	0	0	Between 6 and 12 Months
08/20	Pays Prompt to Slow 30+	-	100,000	100,000	15,000	1
08/20	Pays Prompt to Slow 30+	-	65,000	0	0	Between 2 and 3 Months
08/20	Pays Prompt to Slow 30+	-	10,000	10,000	5,000	1
08/20	Pays Prompt to Slow 30+	-	2,500	750	0	1
08/20	Pays Prompt to Slow 45+	-	100	0	0	Between 6 and 12 Months
08/20	Pays Prompt to Slow 60+	N30	20,000	15,000	2,500	1

Date of Experience	Payment Status	Selling Terms	High Credit (US\$)	Now Owes (US\$)	Past Due (US\$)	Months Since Last Sale
08/20	Pays Slow 30+	-	20,000	15,000	15,000	1
08/20	Pays Slow 30-60+	-	10,000	0	0	Between 2 and 3 Months
08/20	Pays Slow 30-60+	-	1,000	750	0	1
08/20	-	Cash account	50	-	-	Between 6 and 12 Months
08/20	-	Cash account	50	-	-	Between 6 and 12 Months
07/20	-	Cash account	250	-	-	1
07/20	-	Cash account	50	-	-	1
06/20	Pays Promptly	-	7,500	0	0	Between 6 and 12 Months
06/20	Pays Promptly	N30	250	250	50	1
06/20	-	Cash account	100	-	-	1
06/20	-	Cash account	50	-	-	Between 4 and 5 Months
05/20	Pays Promptly	-	1,000	0	0	Between 6 and 12 Months
04/20	-	Cash account	50	-	-	Between 2 and 3 Months
04/20	-	-	50	-	-	Between 2 and 3 Months
03/20	Pays Promptly	N30	2,500	0	0	Between 6 and 12 Months
03/20	-	Cash account	50	-	-	1
11/19	-	Cash account	500	-	-	Between 2 and 3 Months
11/19	-	Cash account	50	-	-	1
10/19	-	Cash account	250	-	-	Between 4 and 5 Months
10/19	-	Cash account	100	-	-	1
10/19	-	-	50	-	-	1
05/19	Pays Prompt to Slow 30+	-	35,000	7,500	0	1
08/18	Pays Promptly	-	5,000	0	0	Between 6 and 12 Months

## Legal Events

The following Public Filing data is for information purposes only and is not the official record. Certified copies can only be obtained from the official source.

<b>Judgements</b> <b>0</b> Latest Filing: -	<b>Liens</b> <b>0</b> Latest Filing: -	<b>Suits</b> <b>0</b> Latest Filing: -	<b>UCC Filings</b> <b>2</b> Latest Filing: 03-11-2019
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## Events

### UCC Filing - Original

Filing Date	03-11-2019
Filing Number	15519000372
Received Date	04-19-2019
Collateral	Equipment
Secured Party	CARD-MONROE CORP., HIXSON, TN
Debtors	FIELDTURF
Filing Office	WHITFIELD COUNTY SUPERIOR COURT CLERKS OFFICE, DALTON, GA

### UCC Filing - Original

Filing Date	11-01-2013
Filing Number	03813008699
Received Date	12-13-2013
Collateral	Leased Equipment
Secured Party	KANSAS STATE BANK OF MANHATTAN, MANHATTAN, KS
Debtors	FIELDTURF USA, INC.
Filing Office	COWETA COUNTY SUPERIOR COURT CLERKS OFFICE, NEWNAN, GA

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There may be additional UCC Filings in D&B's file on this company available by contacting 1-800-234-3867.

## Special Events

There are no Special Events recorded for this business.

## Company Profile

### Company Overview

D-U-N-S

Mailing Address

Employees

13-186-2364

**Legal Form**

Corporation (US)

**History Record**

Clear

**Date Incorporated**

11-06-1996

**State of Incorporation**

Florida

**Ownership**

Not publicly traded

United States

**Telephone**

+1 706-625-6533

**Present Control Succeeded**

1999

184

**Age (Year Started)**

23 years (1996)

**Named Principal**

Eric Daliere, CEO

**Line of Business**

Trade contractor

**Business Registration**

Corporate and business registrations reported by the secretary of state or other official source as of: 09-18-2020  
This data is for informational purposes only, certification can only be obtained through the Office of the Secretary of State.

<b>Registered Name</b>	FIELDTURF USA, INC.
<b>Corporation Type</b>	Corporation (US)
<b>Business Commenced On</b>	1996
<b>State of Incorporation</b>	FLORIDA
<b>Date Incorporated</b>	11-06-1996
<b>Registration ID</b>	P96000091255
<b>Registration Status</b>	ACTIVE
<b>Filing Date</b>	11-06-1996
<b>Where Filed</b>	STATE DEPARTMENT/CORPORATION DIVISION

**Registered Agent**

<b>Name</b>	C T CORPORATION SYSTEM
<b>Address</b>	1200 SOUTH PINE ISLAND ROAD, PLANTATION, FL, 333240000

**Registered Principal**

<b>Name</b>	ERIC DALIERE
<b>Title</b>	-
<b>Address</b>	-
<b>Name</b>	PEDRO AZEVEDO
<b>Title</b>	-
<b>Address</b>	-
<b>Name</b>	MARIE-FRANCE NANTEL
<b>Title</b>	-
<b>Address</b>	7445 COTE-DE-LIESSE, MONTREAL

## Principals

### Officers

ERIC DALIERE, CEO  
SOUHA AZAR, SEC  
PEDRO AZEVEDO, CFO  
ARIE-FRANCE NANTEL, ASST

### Directors

THE OFFICER(S)

## Company Events

### The following information was reported on: 11-03-2018

The Florida Secretary of State's business registrations file showed that Fieldturf USA, Inc. was registered as a Corporation on November 06, 1996, under the file registration number P96000091255.

Business started 1996. Present control succeeded Jan 1999. 100% of capital stock is owned by the parent company.

ERIC DALIERE. Antecedents are unknown.

SOUHA AZAR. Antecedents are unknown.

PEDRO AZEVEDO. 2012 present active here.

ARIE-FRANCE NANTEL. Antecedents are unknown.

## Business Activities And Employees

### The following information was reported on: 11-03-2018

#### Business Information

**Trade Names** (FOREIGN PARENT IS FIELDTURF TARKETT INC, MONTREAL, CANADA.); FIELD TURF USA

**Description** Foreign Parent is FieldTurf Tarkett Inc, Montreal, Canada. As noted, this company is a subsidiary of FieldTurf Tarkett Inc, DUNS# 25-543-6990, and reference is made to this report for background information on the parent company and its management.

Contractor specializing in artificial turf installation (100%).

All sales cash. Sells to general public, wholesalers, retailers and commercial concerns. Territory : International.

**Employees** 184 which includes officer(s). Undetermined employed here.

**Financing Status** Unsecured

**Import/Export** Import

**Seasonality** Nonseasonal.



## Business Information

Facilities	Occupies 250,000 sq. ft. in a single story building.
Location	Industrial section on main highway.

## SIC/NAICS Information

SIC Codes	SIC Description	Percentage of Business
1799	Trade contractor	-
17999902	Artificial turf installation	-

NAICS Codes	NAICS Description
238990	All Other Specialty Trade Contractors

## Government Activity

### Activity Summary

Borrower(Dir/Guar)	No
Administrative Debt	No
Contractor	Yes
Grantee	No
Party excluded from federal program(s)	No

## Financials

D&B currently has no financial information on file for this company

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# WE MAKE THE GAME SAFER

## Heavyweight infill systems rise above.

Exhaustive study confirms that infill weight plays a key role in reducing player injuries.

**Systems with >9.0 lbs/sq ft are proven safer!**

Study presented at the 2014 annual American Orthopaedic Society for Sports Medicine (AOSSM) meeting. Percentage of Reduced Incidence of Injury on FieldTurf comparing FieldTurf with infill weight of >9 lbs/sq ft to other turf systems with 0 lbs to 5.9 lbs/sq ft of infill weight.



**Concussion Injuries Combined**  
**8.3%**

lower incidence of injury between FieldTurf >9 lbs/sq ft and 3-5.9 lbs/sq ft



**Total Injuries**  
**20.5%**

lower incidence of injury between FieldTurf >9 lbs/sq ft and 3-5.9 lbs/sq ft



**Severe Injuries**  
**16.8%**

lower incidence of injury between FieldTurf >9 lbs/sq ft and 3-5.9 lbs/sq ft



**Player-to-Turf Collisions**  
**36.9%**

lower incidence of injury between FieldTurf >9 lbs/sq ft and 3-5.9 lbs/sq ft



**Adverse Weather Conditions Combined**  
**26.3%**

lower incidence of injury between FieldTurf >9 lbs/sq ft and 3-5.9 lbs/sq ft



**Turf Age (4 to 8+ years)**  
**33.8%**

lower incidence of injury between FieldTurf >9 lbs/sq ft and 3-5.9 lbs/sq ft



**Turf Age (8+ years)**  
**72.7%**

lower incidence of injury between FieldTurf >9 lbs/sq ft and 3-5.9 lbs/sq ft



# **BUILDING A SAFE PLAYING FIELD**

# WHAT MAKES A FIELD SAFE?

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A safe field is designed to allow for impact with the surface without causing harm to the athlete.

# THE RECIPE TO BUILDING A SAFE FIELD

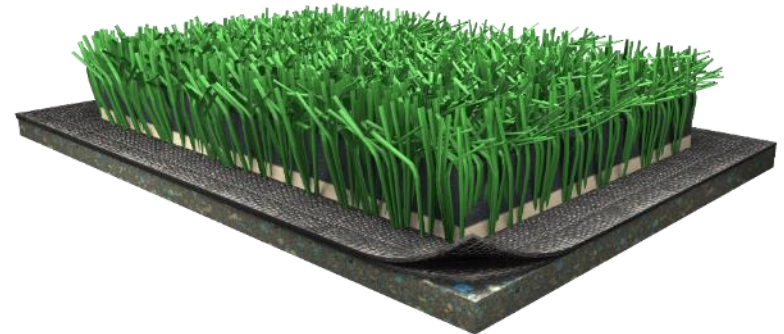
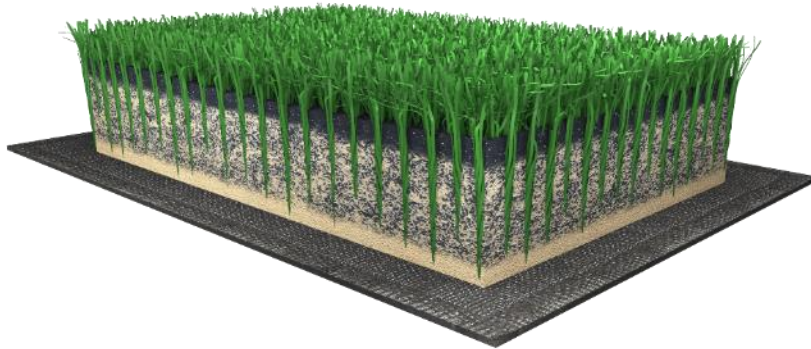
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In the industry today, there are two solutions being offered to make fields safe:

**1. BUILD WITH  
ADEQUATE INFILL**

**OR**

**2. ADD A SHOCK PAD**



# HOW TO MEASURE SAFETY?

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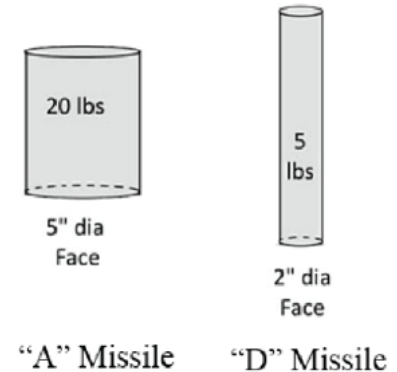
- Meet industry standards (ASTM)
- Meet GMAX recommended maximums
- Meet HIC recommended maximums
- Adhere to Peer-reviewed safety research recommendations

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# **UNDERSTANDING GMAX**

# HOW IS GMAX MEASURED?

Currently, the device used to measure surface hardness on synthetic turf is the **ASTM F355 “A missile”** device (Standard Test Method for Shock-Absorbing Properties of Playing Surface Systems and Materials). The corresponding test standard for the device is **ASTM F1936-10 (2015)** Standard Specification for Impact Attenuation of Turf Playing Systems as Measured in the Field, which “establishes an in situ test method and maximum impact attenuation value for all types of turf playing systems and for a number of sport-specific field layouts. It also includes a protocol for determining test point locations on fields that are lined for multiple sports.”



The **Clegg Hammer Tester (CIST)** defined by **ASTM F1702-10** (Standard Test Method for Measuring Impact-Attenuation Characteristics of Natural Playing Surface Systems Using a Lightweight Portable Apparatus) is another device used to measure field hardness and is typically used to test natural grass. It is used by the National Football League (NFL).



*In accordance with ASTM 1936-10 (2015), the “Clegg Hammer, as defined in Test Method F1702, is **not an appropriate device** for testing under this specification. Results obtained with a Clegg Hammer and subsequently adjusted by conversion factors or regression equations are not appropriate for inclusion in a report prepared in accordance with this specification.”*



*Some field owners invest in a Clegg Impact Tester so that they can monitor their fields on a regular basis. The cost of a Clegg Impact Tester is approximately \$4,000, far less expensive than the F355 device.*



# WHAT ARE THE RECOMMENDED MAXIMUMS?

---

In accordance with ASTM 1936-10, the recommended maximum “**Performance Requirements**” are:

- ▶ 6.1 When tested in accordance with this specification, **the average g-max at each test point shall be less than 200 g’s.**
- ▶ 6.2 If a turf playing system is tested in accordance with this specification, and the reported **average g-max of one or more test points is equal to or greater than 200 g’s**, the turf playing system should be brought into compliance and should not be used in the interim.



*The two devices use missiles of different weights and are not dropped from the same height. As a result, the Gmax values are not interchangeable. While the NFL uses an upper limit of 100 Gmax with the Clegg Impact Tester (CIST), ASTM F1936-10 (2005) sets an upper limit of 200 Gmax with the F355 device.*



*Architects and specifiers commonly specify a performance requirement less than the ASTM 1936-10 (2015) specified 200 g’s. While this is allowable, it is important to refer back to the ASTM recommendation.*

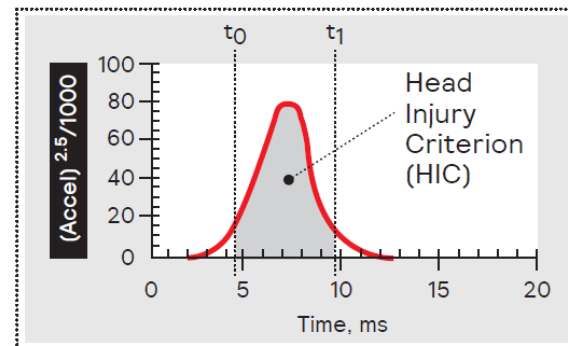
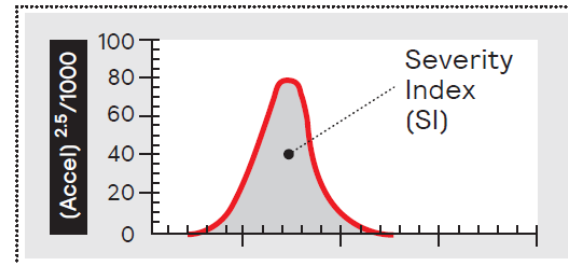
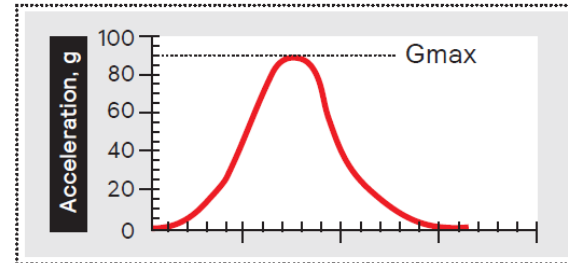
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# WHAT IS HIC?

# WHAT IS HIC?

**Head Injury Criterion (HIC)** is a measure of the likelihood of head injury arising from an impact. HIC is a measurement of impact severity based on published research describing the relationship between the magnitude and duration of impact accelerations and the risk of head trauma. Gmax and HIC, both measurements, can be measured by the same device, off of the same curve. As illustrated in the graphic, Gmax measures the “peak” G’s of the curve, while HIC measures the area and time of the curve.

At the 2012 STMA Conference, Dr. Andy McNitt of Pennsylvania State University indicated a near perfect correlation between Gmax and HIC for sports fields. Round-robin testing with leading testing agencies with NFL calibrated devices at Penn State University in 2013 confirmed there was a strong relationship between Gmax and HIC for the F355 (correlation = 0.94; R-squared value = 88.2) and F1292 device (correlation = 0.99; R-squared value = 98.3%).



## 3 MYTHS

---

**1**

**Lowering Gmax will  
make fields safer**

**2**

**Shock Pad = Player  
Safety**

**3**

**Infill doesn't matter**

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**Myth #1**

**LOWER GMAX = SAFER FIELDS**

# DOES LOWERING GMAX PREVENT CONCUSSIONS?

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Work done by leading researchers at Ottawa (ON) based Biokinetics and Associates for ASTM subcommittee F08 (Artificial Turf) by ASTM Task Group F08.65.13 concluded in May 2014 that “The Gmax test does NOT correlate with football head impact”.



*The current test is not a measurement for concussion and any belief that lowering the number will result in fewer head injuries is factually incorrect.*

Biokinetics

## Summary (May 2014):

- Vertical drop test sufficient to emulate football head impact (lin. acc. only)
- The G<sub>max</sub> test does **NOT** correlate with football head impact.

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# IF WE CAN'T TRUST GMAX, WHAT SHOULD WE DO?

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- The answer, trust your helmet and ignore the noise from the various turf manufacturers:
  - When a football helmet was worn, the turf had very little influence on the impact severity. This confirms that the helmet is responsible for the vast majority of the impact ride-down, not the turf.
  - In summary, when we consider that violent rotational motion is necessary for a concussion, and that a head-to-ground strike has rotational energy that is present *before* impact, and fact that most of the head's ride-down (or deceleration) comes from the helmet padding, it leads to the conclusion that the turf has remarkably little influence on concussion in football.

**Christopher Withnall, P.Eng.**

Senior Engineer

Biokinetics and Associates Ltd.

Office: +1 613 736 0384 x227

# CONCLUSION

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Lower Gmax  
does not equate  
to a safer field.



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**Myth #2**

**SHOCK PAD = PLAYER SAFETY**

# WHEN ARE SHOCK PADS REQUIRED?

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## Lightweight Turf / Alternative Infill

- Shock Pad **Required**
- Shock Pad masks deficiencies of turf system

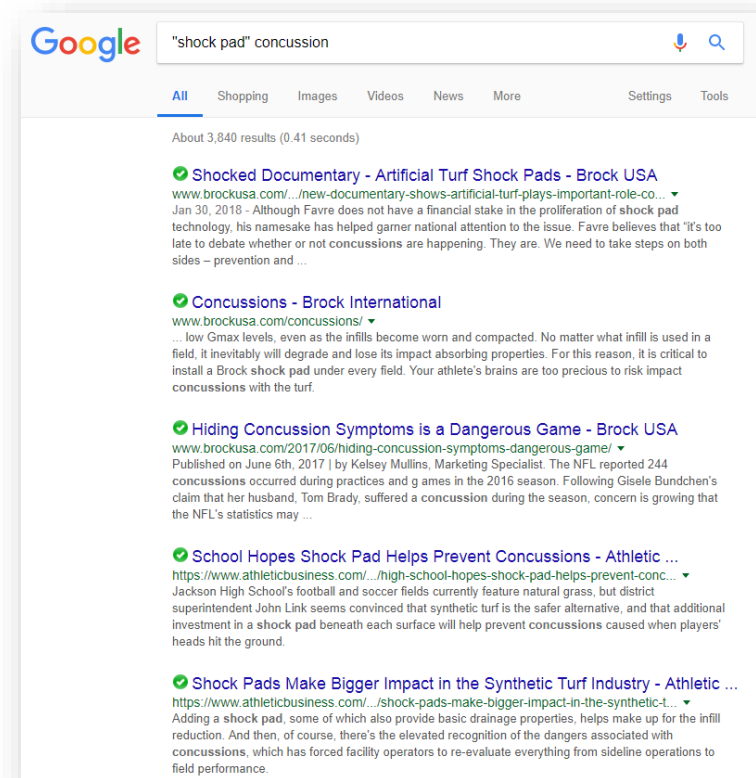
## Heavyweight Turf

- Shock Pad **Not Required**
- Decade of science supports the safety of non-padded systems.

**There is no third party epidemiological data that supports the safety claims made by the shock pad companies. Don't be fooled by Gmax / HIC data.**

# SHOCK PAD = PLAYER SAFETY

- Search for “shock pad” and “concussion” and all you’ll find is marketing propaganda from the leading shock pad company.
  - **No published third party research.**
  - **No epidemiological data.**



# CONCLUSION

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**There is no correlation between a shock pad and player safety.**

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**Myth #3**

**INFILL DOESN'T MATTER**



# YOU CAN'T STOP INJURIES BUT YOU CAN LIMIT THEM

Keeping your athletes safe has and will always be our first priority. Every day, we push the boundaries of research and innovation to engineer the most advanced artificial turf system in the industry.

While no sport can ever be completely injury-free, we continue to find new ways to reduce the risk and severity of injuries. Our focus on safety has led to numerous injury reducing innovations and improvements. As a result, we have the products and experience to help you provide the safest playing field possible for your athletes.

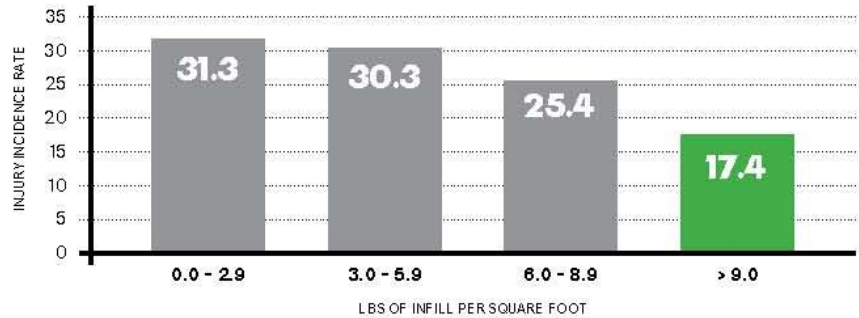
Independent multi-year research validates our efforts to provide you and your athletes with the safest field possible.



Recipient of the Sports Trauma and Overuse Prevention (STOP) Sports Injuries Award from the American Orthopaedic Society for Sports Medicine (AOSSM)

Michael C. Meyers, PhD, FACS, is a Professor in the Department of Sport Science and Physical Education at Idaho State University, Pocatello, ID. Formerly a Senior Research Scientist at Montana State University, he has been involved with injury research for over 30 years.

# THE HIGHER THE INFILL WEIGHT THE LOWER THE INJURIES



## SEVEN-YEAR STUDY OF SYSTEMS WITH VARIOUS INFILL WEIGHT FIELDTURF VS COMPETING SYSTEMS

Incidence, mechanisms, and severity of game-related high school football injuries

<b>TOTAL INJURIES</b> <b>19-29%</b> LOWER ON FIELDTURF	<b>PLAYER-TO-TURF COLLISION INJURIES</b> <b>32-47%</b> LOWER ON FIELDTURF	<b>LIGAMENT SPRAINS AND TEARS</b> <b>17-22%</b> LOWER ON FIELDTURF
<b>TOTAL DIAGNOSTIC / SURGICAL PROCEDURES COMBINED</b> <b>25-36%</b> LOWER ON FIELDTURF	<b>SHOE SURFACE CONTACT INJURIES (AMPLE CLEAT RELEASE)</b> <b>18-37%</b> LOWER ON FIELDTURF	<b>INJURIES ON TURF AGE 8+ YEARS*</b> <b>58-63%</b> LOWER ON FIELDTURF

RESULTS COMPARE ≥9 LBS INFILL PER SQUARE FOOT VS ALL OTHER INFILL WEIGHT SURFACES  
 \*RESULTS COMPARE ≥9 LBS INFILL PER SQUARE FOOT VS 0 - 5.9 LBS INFILL PER SQUARE FOOT

# INFILL DOESN'T MATTER

---

- Heavyweight infill has **PROVEN SAFETY** benefits and the long term real life field data supports the safety of heavyweight (9.0 lbs) of infill.
  - Think of how a pillow absorbs impact when the head hits it. A soft pillow with little to no filler will cause your head to sink to the bottom and likely impact the mattress. A pillow with more filler will support your head properly and will not “bottom out” like the seemingly “softer” pillow.
  - FieldTurf depends on its heavier, thicker, stable fill for shock absorbency. Because this kind of fill cannot physically displace to the point of danger, a pad is not needed. For lightweight mostly rubber filled systems, a pad is a logical necessity.

# ANALYSIS OF AGED 2.5" FIELDTURF FIELDS

LOCATION	CITY	STATE	INSTALL DATE	SYSTEM	PILE HEIGHT	TEST DATE	FIELD AGE	GMAX (AVG)	HIC (AVG)
John Adams Middle School	Santa Monica	CA	2008-01-01	Elite	2.5"	2015-01-28	7	144	427
Leland High School	San Jose	CA	2008-01-01	Elite	2.5"	2015-03-05	7	158	519
Leland High School	San Jose	CA	2008-01-01	Elite	2.5"	2015-03-05	7	157	512
New Lynnwood High School	Bothell	WA	2009-01-01	Elite	2.5"	2016-03-30	7	175	616
New Lynnwood High School	Bothell	WA	2009-01-01	Elite	2.5"	2016-03-30	7	177	611
Hiawatha Playfields	Seattle	WA	2009-01-01	Elite	2.5"	2016-03-30	7	179	624
NewLynnwood High School	Bothell	WA	2009-01-01	Elite	2.5"	2016-03-30	7	172	597
Vancouver Technical School	Vancouver	BC	2007-01-01	Elite	2.5"	2014-05-02	7	168	572
New Chiawana High School	Pasco	WA	2009-05-01	Elite	2.5"	2016-09-19	7	166	554
Kellogg Middle School	Shoreline	WA	2008-09-01	Elite	2.5"	2016-03-21	7	164	544
Shorecrest High School	Shoreline	WA	2007-01-01	Elite	2.5"	2014-09-01	7	152	486
Shorecrest High School	Shoreline	WA	2007-01-01	Elite	2.5"	2014-09-01	7	152	486
Hjorth Road Athletic Park	Surrey	BC	2008-10-01	Elite	2.5"	2016-06-01	7	156	502
Rice Eccles Stadium	Salt Lake City	UT	2009-01-01	Elite	2.5"	2016-09-09	7	152	485
Winskill Park	Delta	BC	2007-11-01	Elite	2.5"	2015-07-13	7	174	595
Newton Athletic Park	Newton	BC	2008-09-01	Elite	2.5"	2016-06-01	7	121	343
Dartmouth College	Hanover	NH	2006-08-01	Elite	2.5"	2014-07-25	8	136	411
John Adams Middle School	Santa Monica	CA	2008-01-01	Elite	2.5"	2016-01-28	8	162	510
John Adams Middle School	Santa Monica	CA	2008-01-01	Elite	2.5"	2016-01-28	8	150	456
South Surrey Athletic Park	Surrey	BC	2008-01-01	Elite	2.5"	2016-06-01	8	159	516
Sierra Vista High School	Baldwin Park	CA	2007-05-01	Elite	2.5"	2015-10-09	8	161	501
Baldwin Park High School	Baldwin Park	CA	2007-05-01	Elite	2.5"	2015-10-09	8	158	475
Rye County Day School	Rye	NY	2006-01-01	Elite	2.5"	2014-09-09	8	137	415
San Geronio High School	San Bernardino	CA	2006-08-01	Elite	2.5"	2015-06-08	8	168	587
Salisbury High School	Allentown	PA	2008-01-01	Elite	2.5"	2017-01-31	9	171	539
La Puente High School	Puente	CA	2006-01-01	Elite	2.5"	2015-04-03	9	157	494
South Sound Stadium	Olympia	WA	2005-01-01	Elite	2.5"	2014-04-14	9	145	468
Stiehl Stadium	Weston	WI	2005-01-01	Elite	2.5"	2014-05-22	9	146	467
Emerson College	Boston	MA	2004-09-01	Elite	2.5"	2014-10-24	10	146	436
Liberty High School	Brentwood	CA	2004-01-01	Elite	2.5"	2014-02-26	10	163	512
Lake Stevens Stadium	Lake Stevens	WA	2005-01-01	Elite	2.5"	2015-03-10	10	149	479
San Geronio High School	San Bernardino	CA	2006-01-01	Elite	2.5"	2016-03-14	10	155	475
Curry College	Milton	MA	2004-08-01	Elite	2.5"	2014-10-16	10	156	519
St. Michael's School	N. Andover	MA	2004-05-01	Elite	2.5"	2014-10-28	10	129	363
<b>AVERAGES</b>							7	160	498
							8	154	484
							9	155	492
							10	150	464

PROPER MAINTENANCE IS A KEY DRIVER  
IN MAINTAINING OPTIMAL GMAX VALUES



# CONCLUSION

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**Infill weight matters and is a key driver to player safety.**

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**RELY ON THE REAL SCIENCE**

# THE REAL SCIENCE

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- **There is no published data that shows a difference in concussion rates between artificial turf and natural grass.**
  - In an ongoing annual study that has tracked the number of concussions high school football players suffered on natural and synthetic surfaces over 12 years, Idaho State University research indicates that 11.8 percent of those total player-to-turf concussions occurred on natural grass, while 11.4 percent of them happened on synthetic turf.
- **There are two reasons for that:**

## ***Injuries are happening head-to-head, not head to turf:***

- In an ongoing annual study that has tracked the number of concussions high school football players suffered on natural and synthetic surfaces over 12 years, Idaho State University research indicates that 11.6 percent of all concussions are the result of player-to-turf contact.
- This is consistent with research from the National Football League (NFL) that published data in 2004 citing 11.4% from ground contact (Pellman, et al., 2004, Concussion in professional football: epidemiological features of game injuries and review of the literature- part 3). In 2000, Guskiewicz et al. (Epidemiology of concussion in collegiate and high school football players) found a 10% concussion rate on injuries with the ground.

## ***The helmet is the key to protection:***

- Laboratory testing by leading laboratory Biokinetics confirms that turf has very little influence on the impact severity. This confirms that the helmet is responsible for the vast majority of the impact ride-down, not the turf.

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# **ESTABLISHING MINIMUM SCOPE FOR PLAYER SAFETY**

# WHAT IS MINIMUM SCOPE?

- Minimum standards that should be established in a specification in order to maintain safe playing standards.
- Science suggests that the minimum threshold for player safety is 6.0 lbs of infill per square foot.

TABLE 1  
Incidence of Game-Related High School Football Injuries Between Artificial Turf Infill Systems By Infill Weight <sup>a</sup>

Variable (lbs infill/sq. foot)	≥9.0	6.0-8.9	3.0-5.9	0.0-2.9	Total/Mean
Games evaluated n (%)	528 (28.8)	521 (28.4)	525 (28.6)	263 (14.2)	1837 (100.0)
All injuries n (%) IIR (95% CI)	917 (19.7) 17.4 (16.9-17.7) <sup>aN</sup>	1324 (28.4) 25.4 (24.8-25.8) <sup>aF</sup>	1590 (34.2) 30.3 (29.9-30.5) <sup>aJ</sup>	824 (17.7) 31.3 (30.7-31.8) <sup>aK</sup>	4655 (100.0) 25.3
Minor injuries <sup>c</sup> n (%) IIR (95% CI)	666 (72.6) 12.6 (12.2-13.0) <sup>N</sup>	884 (66.8) 17.0 (16.5-17.3) <sup>F</sup>	1054 (66.3) 20.1 (19.8-20.2) <sup>J</sup>	488 (59.2) 18.6 (18.0-18.9) <sup>K</sup>	3092 (66.4) 16.8
Substantial injuries n (%) IIR (95% CI)	168 (18.3) 3.2 (2.8-3.6) <sup>N</sup>	322 (24.3) 6.2 (5.8-6.6) <sup>F</sup>	405 (25.5) 7.7 (7.3-8.1) <sup>J</sup>	263 (31.9) 10.0 (9.9-10.0) <sup>K</sup>	1158 (24.9) 6.3
Severe injuries n (%) IIR (95% CI)	83 (9.1) 1.6 (1.3-1.9) <sup>d</sup>	118 (8.9) 2.3 (1.9-2.6) <sup>d</sup>	131 (8.2) 2.5 (2.1-2.9) <sup>e</sup>	73 (8.9) 2.8 (2.3-3.3) <sup>e</sup>	405 (8.7) 2.2

<sup>a</sup>Wilks' λ severity of injury ( $F_{3,4648} = 5.087$ ;  $P = .0001$ ).

<sup>b</sup>IIR = (number of injuries/number of team games) x 10. IIR, injury incidence rate.

<sup>c</sup>Minor injury = 0 to 6 days of injury time loss; substantial injury = 7 to 21 days of injury time loss; severe injury = ≥22 days of injury time loss.

<sup>d</sup> $P < .05$ , <sup>e</sup> $P < .01$ , <sup>f</sup> $P < .001$ , <sup>N</sup> $P < .0001$ .

INCIDENCE, MECHANISMS, AND SEVERITY OF GAME-RELATED HIGH SCHOOL FOOTBALL INJURIES ACROSS ARTIFICIAL TURF SYSTEMS OF VARIOUS INFILL WEIGHT  
Michael C. Meyers, PhD, FACSM  
Idaho State University



# **BUILDING A SAFE PLAYING FIELD**

## TAB #4- Qualification and Experience

### c) Qualification and Experience

- i. Provide a brief history of the Offeror, including year it was established and corporate office location.

Date of incorporation: Nov 6, 1996 (FieldTurf International, Inc.)

Date of name change to FieldTurf USA, Inc.: Oct, 1 2004

#### **1. World Headquarters:**

FieldTurf USA, Inc.  
7445 Cote-de-Liesse Road Suite 200  
Montreal Quebec H4T 1G2  
Canada  
Phone: +1 800-724-2969

#### **2. Manufacturing Headquarters:**

FieldTurf USA, Inc.  
Tarkett Sports/FieldTurf USA, Inc.  
175 N Industrial Blvd N.E.  
Calhoun GA 30701  
United States

#### **Beynon Sports- Headquarters**

16 Alt Road  
Hunt Valley Maryland 21030

Tarkett Sports is a world leader in athletic surfacing and is a division of Tarkett Group, which was established in 1886.

FieldTurf USA, Inc/Beynon Sports Surfaces/and Tarkett Indoor Flooring are all part of the Tarkett Sports Company.

### **Tarkett Sports:**

Tarkett Sports covers all types of sports surfaces. It boasts a dominant position on its market, a full product line and key expertise at every level of sports. Tarkett Sports is a sports subsidiary of the Tarkett Group. Both FieldTurf and Beynon are part of the Tarkett Sports Division.

Years in Business: Tarkett Sports: 10 years

Years in Business: FieldTurf: 30 Years

Years in Business: Beynon: 40 Years

### **TURF:**

FieldTurf was developed and engineered for athletes, by athletes. Before we came along, artificial turf was something to be avoided. The very phrase conjured up images of carpet and concrete, non-contact injuries, and careers ended prematurely. Natural grass was considered the only solution – even though it required constant maintenance and care. This was the environment in which we asked ourselves one question:

**“Can we make synthetic turf that is equal to or better than the best natural grass?”**

In seeking the answer to this question, we worked closely with athletes, former players, coaches, trainers, and doctors. Development included years of trials, tests, samples, equipment innovations and advanced formulas – all with the goal of developing an artificial turf system that combined the performance properties of natural grass with the benefits of a synthetic solution. It worked.

- The first company in the synthetic turf industry to own and operate its own manufacturing plant
- The only artificial turf manufacturing operation in North America to have received three specific ISO certifications
- 450,000+ square-foot facility in Calhoun, Georgia
- Over 40 employees at the plant with a combined 300+ years of experience in the artificial turf industry
- Annual production capacity that exceeds the worldwide yearly demand for artificial turf
- Rigorous quality control and inspection
- In-house fiber manufacturing
- In-house coating line
- In-house tufting operation
- 50 + Local and Regional FieldTurf Sales Representatives

### **TRACK/COURT**



Beynon Sports Surfaces (a Tarkett Sports Company) running track surfaces are built to last. They are manufactured and installed with the highest attention to detail. Beynon systems showcase proven durability. Numerous Beynon surfaces have seen over 20 years of use.

Beynon controls all aspects of the manufacturing chain, which allows us to create the right product, regardless of the facility. Because our founder's name stands behind each track that we make, we take special care throughout the entire installation process. We do this by only using certified Beynon track installers, specialized equipment, and skilled craftsmen, which ensures impeccable results. Every Beynon track is manufactured in our ISO 9001 certified headquarters in Hunt Valley, Maryland, USA.

Beynon chemists create the world's most refined running track surfaces. Quality and attention to detail are the utmost importance. To Beynon Sports, that means overseeing every surface from raw material selection, to manufacturing the system for the specific needs of the coaches and student-athletes, all the way through installation. It also means having our track and field systems tested and certified according to IAAF and DIN standards to ensure that your athletes receive a superior product. We guarantee the finest raw materials, tireless research and development, and outstanding workmanship go into each system.

Our team is made up of the finest and most experienced in the industry, from world-famous track coaches to the leading polyurethane research chemists and the most experienced installation personnel. With them, and through vigorously researching and developing new environmentally sustainable technologies, we are able to bring your athletes the latest track and field surfacing innovations.

Beynon has a 50,000 sf. State-of-the-art manufacturing facility that is dedicated solely to the research and development, production, and quality assurance of our outdoor and indoor athletic surfacing systems. Beynon is equipped and has the capacity to manufacture and distribute materials needed for both internal and external demands. Beynon has over 2500 installations worldwide and has built an industry leading reputation for unmatched quality, durability, performance, and most importantly service. Beynon manufactures over 37 unique polyurethane components for the indoor and outdoor sports surfacing market. Beynon employs over 300 employees in the Peak Summer Months.

Due to increased seasonality in the Northeast, a mature and established market, and the requirement for a Union-designated workforce, Beynon Sports partners with contractor dedicated to the same ideals and levels of workmanship and satisfaction.

Beynon is the leading Track Builder/installer in North America with over 50% Market Share.

### **About Beynon:**

Over 40 years ago, our founder, John T. Beynon, set out to revolutionize the sport surfacing industry. Since then, we have over 2500 installations worldwide and built an



THE ULTIMATE  
SURFACE EXPERIENCE

industry leading reputation for unmatched quality, durability, performance and most importantly, service.

Beynon surfaces are found in North America and Canada's most prestigious track and field facilities, reputed collegiate campuses, high schools, and city parks.

Not only do we strive to make you fast, but we help keep you safe. Our specialized, high performance synthetic athletic surfaces are designed for speed, competition, and most importantly, daily training. Should it be one of our thousands of outdoor tracks, indoor fieldhouses or multipurpose gymnasiums, you will feel the difference a Beynon surface makes.

In the spring of 2008, Beynon Sports joined the Tarkett Sports family, which combined the most recognized and prestigious name in the artificial turf market in FieldTurf with Beynon Sports' track and field, fieldhouse and gymnasium surfacing systems and a dedication to innovation, customer service, and excellence.

#### **INDOOR COURT:**

Tarkett Sports is a world leader in athletic surfacing and is a division of Tarkett Group, which was established in 1886. Tarkett Sports has over 50,000 installations worldwide and has been the trusted surface of professional, elite, school and municipal facilities. Manufacturing excellence: ISO 9001 certified for leadership in quality, environment and safety management systems, Tarkett Sports' facilities in Chagrin Falls represent one of the most advanced manufacturing operations in North America.

- ii. Describe Offeror's reputation in the marketplace.

**RESPONSE:** FieldTurf and Beynon are leaders in artificial turf and athletic track surfacing. As on company with full control of all aspects of the manufacturing value chain, we are in full control for your project from start to finish. We are as committed to your program as you are, and we are with you for the long terms. When you buy a surface from FieldTurf and Beynon, you're buying from a company that know how to take care of you. It's what we do best.

**EXPERIENCED:** With over 20,000 installation for FieldTurf and 7,500 installations for Beynon, we've been the surface of choice for the last 20+ years.



iii. Describe Offeror's reputation of products and services in the marketplace.

**TRUSTED:** FieldTurf and Beynon are the trusted surface of the most elite programs in the world. FieldTurf has more NFL, MLS, DIV I NCAA (stadium and practice) fields and elite high school programs than any other artificial turf manufacturer. Beynon is the choice of more NCAA Div I programs and elite high school facilities than any other track surfacing manufacturer.

**FINANCIALLY STABLE:** Part of Tarkett Sports, a division of the Tarkett Group, a worldwide leader of innovative flooring and sports surface solutions, FieldTurf and Beynon have unprecedented financial support and stability. You can rest easy.

**CONSTRUCTION EXPERTS:** We are committed to first class customer service with a dedicated local staff that will be on-site whenever needed. By dealing with one company for all your sports surfacing needs, you can rest easy knowing you won't have to deal with multiple parties for any questions that may arise.

- Single Source Relationship
- Turn key projects
- Dedicated FieldTurf & Beynon Installation and Customer Service Crews
- Option of one Project Manager
- Option of one Construction Manager

**CERTIFIED TO MEET THE TOUGH STANDARDS:** ISO 9001 certified for leadership in quality, environment and safety management systems, our FieldTurf Calhoun facility and Beynon Hunt Valley facility represent two of the most advanced manufacturing operations in North America.

iv. Describe the experience and qualification of key employees.

We have assembled an experienced team to oversee your project from start to finish. Here are your key contacts before, during, and after the installation is complete

### FieldTurf Executive Team

#### Eric Daliere

President  
[edaliere@fieldturf.com](mailto:edaliere@fieldturf.com)

Eric Daliere joined Tarkett Sports from KKR Capstone where he has served as a Director for nearly 10 years. Eric had been focused on helping KKR's portfolio companies achieve their potential in terms of growth and operational excellence. He holds a B.A., with honors, from Northwestern University; and an M.B.A. from the Kellogg Graduate School of Management, Northwestern University.



#### Drew Beynon

Senior Vice President of Operations  
[DBeynon@@fieldturf.com](mailto:DBeynon@@fieldturf.com)

Drew Beynon joined FieldTurf with over 20 years of extensive business leadership experience from Accenture and Beynon Sports Surfaces. Where he held executive leadership positions in Manufacturing, Supply Chain, and Operations. Drew has focused on increasing organization performance by implementing operational discipline using Lean/6 Sigma Methodologies and World Class Manufacturing processes. He holds an undergraduate degree in Business Admin from Bucknell University and an MBA graduate degree from the University of North Carolina.



#### Martin Olinger

Senior Vice President of Sales, North America  
[molinger@fieldturf.com](mailto:molinger@fieldturf.com)

Martin Olinger has extensive experience in Senior Sales Positions with numerous leading companies in the sports industry such as Dunlop Maxfli Sports Corp., Cendant Corp. and Srixon Sports USA. He holds a B.S. in Business Administration from Miami University, a Major in General Management and a Minor in Marketing.



**Eric Fisher**

Director of Sales- SmartBuy



19600 SW 129th Avenue Suite A

Tualatin OR 97062

United States

Tel: +1 503 563 6395

Other: +1 888-209-0065

Mobile: +1 503-708-6548

Fax: +1 503-692-8659

Email: [Eric.Fisher@smartbuycooperative.com](mailto:Eric.Fisher@smartbuycooperative.com)

[www.smartbuycooperative.com](http://www.smartbuycooperative.com)

Description of role:

Eric Fisher is the SmartBuy Director of Sales and has over twelve years of experience in selling cooperative purchasing contracts. Eric is responsible for sales, marketing, and training of FieldTurf, Beynon, and Tarkett sales team on procedures to incorporate cooperative purchasing sales strategies to municipalities. Eric acts as a liaison between municipal customers, sales team members, and cooperative purchasing agencies and is committed to promoting the OMNIA Group contract.

SmartBuy is the dedicated Cooperative Purchasing Division of FieldTurf/Beynon. With over 30 years of combined experience and \$500 million revenue in cooperative purchasing, the SmartBuy team has enabled hundreds of municipalities including public schools, colleges, universities, cities, park/recreation departments, and counties to purchase their desired FieldTurf sports field, Beynon running track, or Beynon court.

Description of role:

Sarah Morehead 17 years with FieldTurf's Cooperative Purchasing Division. Responsible for cooperative purchasing proposal contract compliance, site work compliance, and daily operations of SmartBuy team. Sarah Morehead is also responsible for the proposal, bid compilation and pricing aspects of the program.

**Sarah Morehead**

Director of Operations- SmartBuy



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Tel: +1 503 563 6390  
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Email: [Sarah.Morehead@smartbuycooperative.com](mailto:Sarah.Morehead@smartbuycooperative.com)  
[www.smartbuycooperative.com](http://www.smartbuycooperative.com)

**Lesley Miles**  
SmartBuy Project Administrator



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Email: [Lesley.Miles@smartbuycooperative.com](mailto:Lesley.Miles@smartbuycooperative.com)  
[www.smartbuycooperative.com](http://www.smartbuycooperative.com)

**Ross Hinrichs**  
SmartBuy Project Manager



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Tel: +1 503 563 6394  
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Mobile: +1 503-593-9760  
Fax: +1 503-692-8659

Email: [Ross.Hinrichs@smartbuycooperative.com](mailto:Ross.Hinrichs@smartbuycooperative.com)

Ross and Lesley are responsible for sending proposal, submittals and other information to owner's and have eleven (11) years combined experience doing so.

**Mistie Beaudoin**

Project Administrator II



19600 SW 129th Avenue Suite A  
Tualatin OR 97062  
United States

Tel:

Other:

Mobile: 503-729-3734

Fax: 503-692-8659

Email: [Mistie.Beaudoin@smartbuycooperative.com](mailto:Mistie.Beaudoin@smartbuycooperative.com)

**Description of role:**

Mistie has been with FieldTurf for 2 years, and is responsible for reporting, contract documentation and any additional client needs, Mistie has several years of experience with customer care.

Accounting:

**Christapor Papazian**

AP & AR Manager



Tarkett Sports  
7445 Cote-de-Liesse Road Suite 200  
Montreal Quebec H4T 1G2  
Canada

Tel: [+1 514 375 2616](tel:+15143752616)

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Other: [+1 800 724 2969 Ext. 2616](tel:+18007242969)

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IM: [christapor.papazian@tarkett.com](mailto:christapor.papazian@tarkett.com)  
Email: [christapor.papazian@tarkettsports.com](mailto:christapor.papazian@tarkettsports.com)

Executive Team:

Eric Daliere- President  
Marty Olinger- VP Sales  
Drew Beynon- COO

v. Describe Offeror's experience working with the government section

RESPONSE:

85% of FieldTurf sales are to local governments and educational institutions. 45% to Educational Institutions such as K-12 School Districts, Colleges, and Universities. 40% to cities, counties, and park and recreation entities.

SmartBuy is the dedicated Cooperative Purchasing Division of FieldTurf/Beynon. With over 25 years of combined experience and over 1 Billion revenue in cooperative purchasing, the SmartBuy/FieldTurf/Beynon teams have enabled hundreds of municipalities including public schools, colleges, universities, cities, park/recreation departments, and counties to purchase their desired FieldTurf sports field, Beynon running track, or Tarkett court.

vi. Describe past litigation, bankruptcy, reorganization, state investigations of entity or current officers and directors.

RESPONSE:

**Bankruptcy:** None

**Litigation:** As with any large company engaged in multiple construction markets throughout the United States, FieldTurf occasionally is a party to litigation from time-to-time. Additional information can be provided upon request.

**Reorganization:** FieldTurf and Beynon Sports are part of the Tarkett Group. Tarkett is a global leader in innovative and sustainable solutions for flooring and sports surfaces. With a wide range of products including vinyl, linoleum, carpet, rubber, wood & laminate, synthetic turf and athletics track, the Group serves customers in more than 100 countries worldwide. With 11,000 employees and 30 production sites, Tarkett sells 1.3 million square meters of flooring every day, for hospitals, schools, housing, hotels, offices, stores and sports fields. Committed to sustainable development, the Group has implemented an eco-innovation strategy and promotes circular economy. Tarkett net sales of 2,739 billion euros in 2019 are balanced between Europe, North America and new economies.

Tarkett is listed on Euronext Paris (compartment A, ticker TKTT, ISIN: FR0004188670).

vii. Provide minimum of 5 customer references relating to the products and services within this RFP . Include entity name, contact name and title, contact phone and email, city, state, years serviced, description of services and annual volume.

Leander ISD, Jimmy Dissler, 512-844-9184, [jimmy.dissler@leanderisd.org](mailto:jimmy.dissler@leanderisd.org)

FieldTurf completed the following projects for Leander ISD:

Leander HS Turf Football Stadium	2016	Leander Independent SD	TX	Classic 2.5" and Site Work
Leander HS Turf Softball Field	2016	Leander Independent SD	TX	Classic 2" and Site Work
Leander HS Turf Baseball Field	2016	Leander Independent SD	TX	Classic 2" and Site Work
Leander HS Turf Practice Field	2016	Leander Independent SD	TX	Classic 2.5" and Site Work
AC Bible and Monroe- Leander Field replacements 2016	2016	Leander Independent SD	TX	Turf

Leander ISD	2016	Leander Independent SD	TX	Field Repair
Charles Rouse	2015	Leander Independent SD	TX	Classic 2.5"
Cedar Park & Vista Ridge	2014	Leander Independent SD	TX	Classic 2.5"
Charles Rouse High	2006	Leander Independent SD	TX	Duraspine 2.5" & Site
Vista Ridge/Cedar Park	2006	Leander ISD	TX	Duraspine 2.5" & Site

Total Value: \$6,249,079.29

Leander HS Turf Fields

Products and services used included FieldTurf HD Turf, inlaid football numbers and arrows, inlaid football hash bars, inlaid soccer markings, tufted home plate, an 8 year, 3<sup>rd</sup> party pre-paid insured warranty on the FieldTurf artificial grass surface, 2 year manufacturer warranty, base replacements, mats, G-max testing, Groomright, Sweepright, FT Classic installed in bull pen areas.

Vista Ridge High School & Cedar Park High School Turf Projects

Products used services used included FIELDTURF Monofilament 2.5" Synthetic Turf, Inlaid numbers and arrows, Inlaid Hash, Perimeter Soccer Markings, Endzone Letters, Coaches Boxes, 6' Offset Gooseneck Goal Posts, 1340 LF ADS Pipe, 6" Minimum Gravel Blanket, Nailer Board, 20 mil impervious liner. Excavated existing natural grass field, and facilitated base construction.

2 - Alvin ISS, Mike Bass, 281-728-9649, [mbass@alvinisd.net](mailto:mbass@alvinisd.net)

FieldTurf completed the following projects for Alvin ISS:

Alvin High School	2016	Alvin Independent School District	TX	Revolution 2.5"
Alvin ISD Stadium	2017	Alvin Independent School District	TX	FTRV 360 2.5"

Total Value: \$1,518,414.00

Alvin High School

Products and services used included removal and disposal of existing turf, inlaid football and soccer markings, dashed media lines, ATL panels, FieldTurf Revolution 360 2.5", Groomright, Sweepright, GMAX, Full Base Construction.

Alvin ISD District Stadium

Products and services used included FieldTurf Revolution 360 2.5", Inlaid Football Markings, Soccer Markings as needed, dashed media lines, alternating panels, groomright, sweepright, GMAX at completion, An 8 Year, third party insured warranty on the FieldTurf surfacing, Full Base Construction.

3 - Humble ISD, Troy Kite, 281-850-2784, [troy.kite@humble.k12.tx.us](mailto:troy.kite@humble.k12.tx.us)

FieldTurf completed the following projects for Humble ISD:

Humble ISD Fields - 6 fields	2019	Humble ISD TX	FTHD1, track and site work
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Total Value: \$5,947,117.00

Kingwood Stadium, Summer Creek High School, Atascocita Field, Turner Baseball, Turner Softball, Kingwood Park

Products and services used included XTHD-45 turf, Inlaid Football Numbers & Arrows, Inlaid Football Hash Marks, Inlaid Soccer Markings, Midfield Logo (Mild), End Zone Letters with Border, SMG Turfcare 1400, GMAX, Tufted HP, Inlaid Baseball Markings, full base construction of all fields

[Don.buck@ttu.edu](mailto:Don.buck@ttu.edu)

4 – Texas Tech, Don Buck, 806-834-0789, [Don.buck@ttu.edu](mailto:Don.buck@ttu.edu)

FieldTurf completed the following projects for Texas Tech University:

Texas Tech University	2005	Texas Tech University	TX	Classic 2.5" Site
Texas Tech Jones Stadium	2006	Texas Tech University	TX	Classic 2.5" & Site
Texas Tech Soccer Stadium	2006	Texas Tech University	TX	Duraspine 2.0" & Site
Texas Tech Weight Room	2007	Texas Tech University	TX	Synthetic Turf/ Weight room
Texas Tech Baseball	2016	Texas Tech University	TX	FTHD2
Texas Tech Field Replacement	2017	Texas Tech University	TX	Classic FTHD-1 2.5"

Texas Tech Practice Field Replacement	2018	Texas Tech University	TX	FTHD1 & site work REV360 2" & sitework
Texas Tech Indoor Soccer	2019	Texas Tech	TX	
Texas Tech Maintenance	2019	Texas Tech University	TX	

Total Value: \$6,509,167.97

Texas Tech Field Replacement

Products and Services used included FieldTurf Classic FTHD-1, Remove & Dispose of Existing Turf, Inlaid Football Numbers & Arrows, Inlaid Football Hash Marks, Center Logo: "T", 28' x 33', 4 Colors, End Zone Letters: 15' Tall, 2 Colors, "TEXAS TECH" "RED RAIDERS", 25 yard line logo: "XII" Big 12 conference x 2  
25 yard line logo: "Jones AT&T Stadium" x 2, goal posts, grading.

Texas Tech Indoor Soccer

Products and services used included removal and disposal of existing turf and infill, FieldTurf Revolution 360 2", Challenger DPPE 5mm Black non-infill turf field perimeter, Inlaid Soccer Markings, Gmax testing at completion of installation

Texas Tech Football Practice Field

Products and services used included removal/disposal of existing turf and infill and complete base build. FieldTurf Classic FTHD-1 2.5", Inlaid NCAA Football markings, Center logo: "TT", 28' x 33', 4 colors, End Zone letters: "TEXAS TECH" "RED RAIDERS", 2 colors, GMAX testing at completion of installation

5 – Texas State University, Jeremy Stolfa, 512-245-2023, Stolfa@txstate.edu

FieldTurf completed the following projects for Texas State University:

Texas State University Replacement	2016	Texas State University	TX	Rev 360 2.5 and site Logo replacement
Texas State University	2017	Texas State University	TX	FT Classic HD
Texas State University Baseball & Softball	2018	Texas State University	TX	2"

Total Value: \$2,561,398.53

Bobcat Stadium

Products and services used included was FieldTurf Revolution 2.5" Custom Maroon Pantone #504, Sweep Right sweeper, CoolPlay infill

Texas State University Baseball and Softball

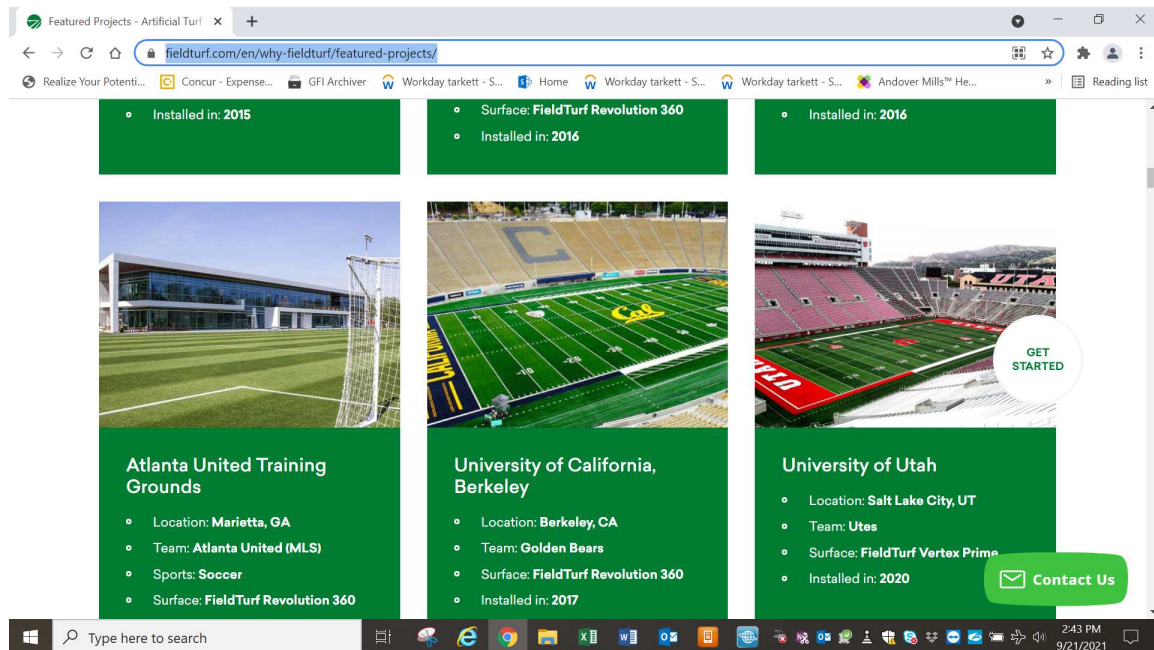
FieldTurf Classic HD 2" in the Outfield (green) and Infield (Rust), FieldTurf Vintage 1.75", with thatch on the warning track (Rust), survey and layout of baseball field, excavate field to 2 feet below finish stone grade, haul spoils offsite, lime stabilize subgrade 6" deep at entire baseball field limits, import roadbase, construct perimeters, Inlaid baseball markings, logos across field, Groomright, Sweepright, attic stock material for high wear replacements at 1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup> and batter's box.

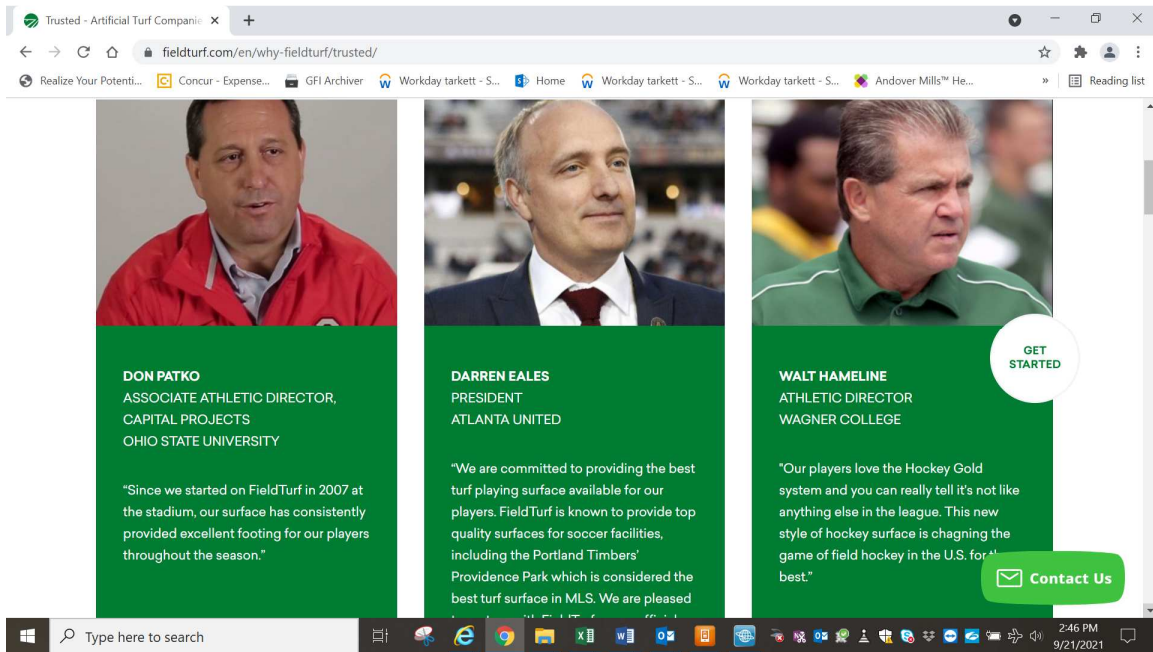
An 8 year 3<sup>rd</sup> party pre-paid insured warranty, supply and install conduits, trench for collector pipe drain system, supply and install power receptacle in turf comm. box at mound and behind home plate. Custom "Texas State" logos in standard FieldTurf color, custom outfield "Texas State" logos with custom Maroon color

**Additional References and Testimonials can be found on FieldTurf and Beynon websites:**

<https://fieldturf.com/en/why-fieldturf/featured-projects/>

<https://fieldturf.com/en/why-fieldturf/trusted/>






Trusted - Artificial Turf Compani... x +


fieldturf.com/en/why-fieldturf/trusted/

Realize Your Potenti... Concur - Expense... GFI Archiver Workday tarkett - S... Home Workday tarkett - S... Workday tarkett - S... Andover Mills™ He... Reading list




**DON PATKO**  
ASSOCIATE ATHLETIC DIRECTOR,  
CAPITAL PROJECTS  
OHIO STATE UNIVERSITY

"Since we started on FieldTurf in 2007 at the stadium, our surface has consistently provided excellent footing for our players throughout the season."



**DARREN EALES**  
PRESIDENT  
ATLANTA UNITED

"We are committed to providing the best turf playing surface available for our players. FieldTurf is known to provide top quality surfaces for soccer facilities, including the Portland Timbers' Providence Park which is considered the best turf surface in MLS. We are pleased



**WALT HAMELINE**  
ATHLETIC DIRECTOR  
WAGNER COLLEGE

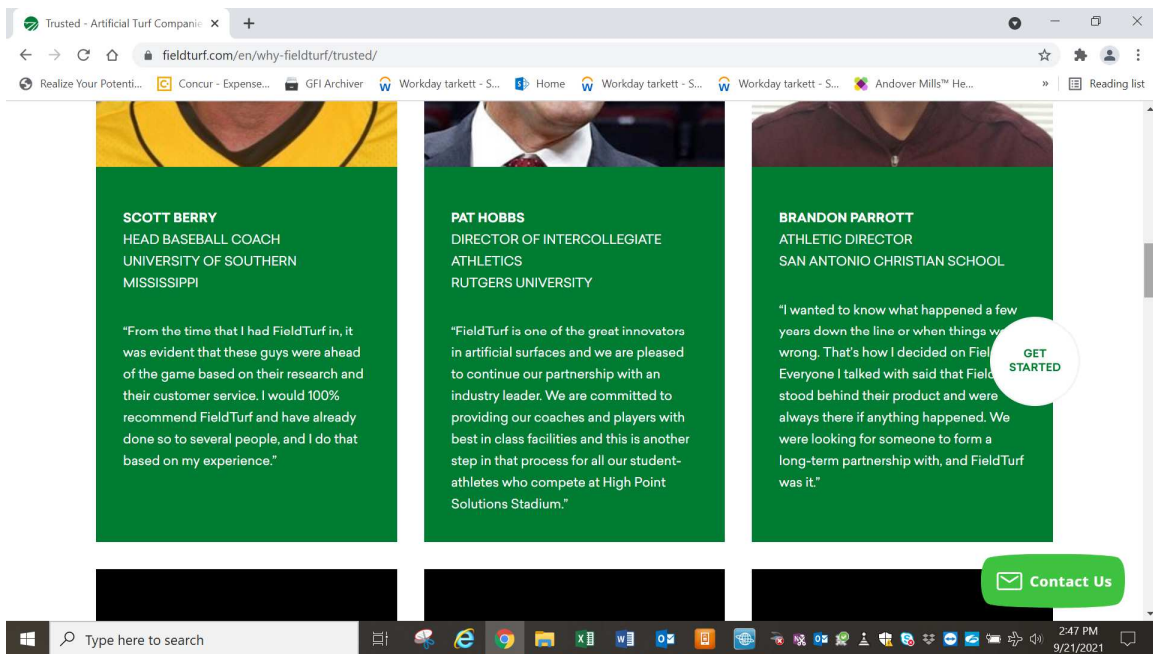
"Our players love the Hockey Gold system and you can really tell it's not like anything else in the league. This new style of hockey surface is chagnig the game of field hockey in the U.S. for the best."

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**SCOTT BERRY**  
HEAD BASEBALL COACH  
UNIVERSITY OF SOUTHERN  
MISSISSIPPI

"From the time that I had FieldTurf in, it was evident that these guys were ahead of the game based on their research and their customer service. I would 100% recommend FieldTurf and have already done so to several people, and I do that based on my experience."



**PAT HOBBS**  
DIRECTOR OF INTERCOLLEGIATE  
ATHLETICS  
RUTGERS UNIVERSITY

"FieldTurf is one of the great innovators in artificial surfaces and we are pleased to continue our partnership with an industry leader. We are committed to providing our coaches and players with best in class facilities and this is another step in that process for all our student-athletes who compete at High Point Solutions Stadium."



**BRANDON PARROTT**  
ATHLETIC DIRECTOR  
SAN ANTONIO CHRISTIAN SCHOOL

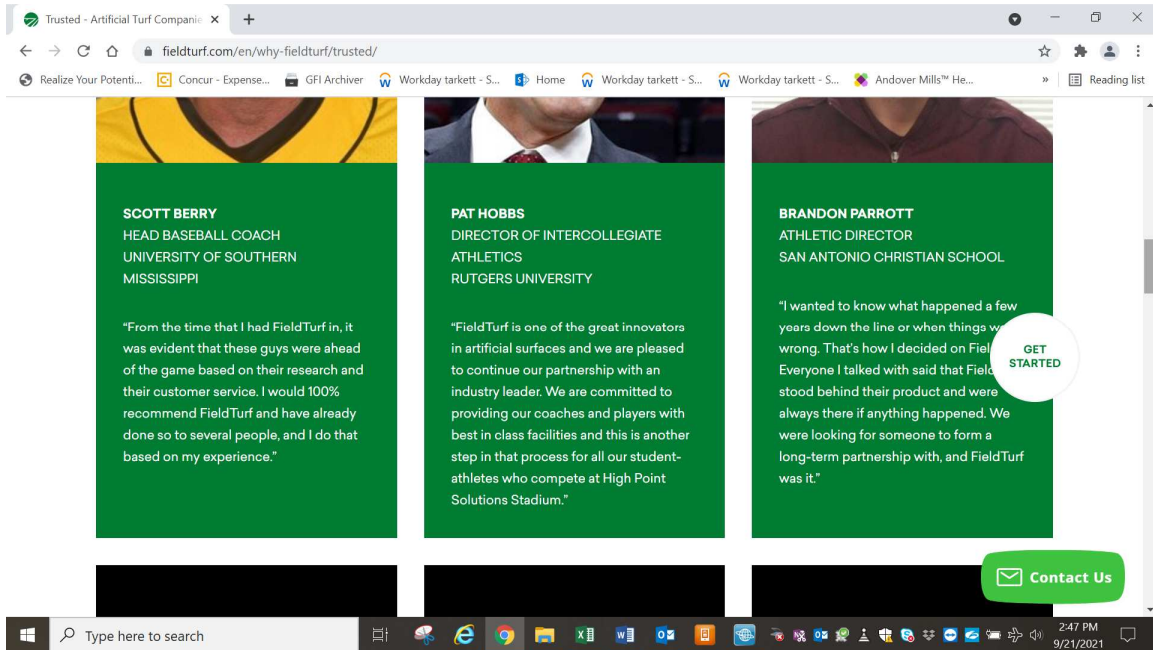
"I wanted to know what happened a few years down the line or when things went wrong. That's how I decided on FieldTurf. Everyone I talked with said that FieldTurf stood behind their product and were always there if anything happened. We were looking for someone to form a long-term partnership with, and FieldTurf was it."

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viii. Provide any additional information relevant to this section.

**American Sports Builders Association and Industry Awards 2016-2020.**  
More award information available upon request.

**2020**

FieldTurf Genius won the 2020 Sports Turf Managers Association (STMA) Innovative Award  
FieldTurf Genius was a finalist in the 2019 Yahoo Sports Technology Awards

**2019 American Sports Builder Awards:**

Concord High School  
Concord, CA  
*Design: Verde Design, Inc.*  
Participated in Project: FieldTurf; Beynon Sports Surfaces, Inc.;  
Brock USA; Sportsfield Specialties, Inc.

Tokay High School  
Lodi, CA  
*Design: Verde Design, Inc.*



Participated in Project: Brock USA; Sportsfield Specialties, Inc.;  
Musco Sports Lighting; FieldTurf; Beynon Sports Surfaces

Althoff Catholic High School  
Belleville, IL

*Construction:* Byrne & Jones Sports Construction  
Participated in Project: Sportsfield Speicalties, Inc.; FieldTurf;  
Musco Sports Lighting

Bryant University - Beirne Stadium  
Smithfield, RI

*Design:* Milone & MacBroom, Inc.  
Participated in Project: R.A.D. Sports, Inc.; Fieldturf; Musco Sports  
Lighting; Sportsfield Specialties, Inc.; Advanced Drainage Systems, Inc.

Blockside Field  
Swampscott, MA

*Design:* Huntress Associates, Inc.  
Participated in Project: Quirk Construction Corporation; FieldTurf;  
Sportsfield Specialties, Inc.; Brock USA; Musco Sports Lighting

Chaminade College Preparatory Baseball Stadium  
St. Louis, MO

*Construction:* Byrne & Jones Sports Construction  
Participated in Project: Sportsfield Specialties, Inc.; SportsEdge;  
FieldTurf

Manasquan High School  
Manasquan, NJ

*Design:* Suburban Consulting Engineers, Inc.  
Participated in Project: The LandTek Group, Inc.; Sports Labs USA;  
FieldTurf; Sportsfield Specialties, Inc.; GT Grandstands, Inc.; Advanced  
Polymer Technology, Inc.

Point Pleasant High School  
Borough of Point Pleasant, NJ

*Design:* Suburban Consulting Engineers, Inc.  
Participated in Project: The LandTek Group, Inc.; Ameritcan Athletic  
Courts, Inc.; FieldTurf; Beynon Sports Surfaces, Inc.; Sportsfield Specialties,  
Inc.; Advanced Drainage Systems, Inc.

UNC Kenan Stadium  
Chapel Hill, NC

*Construction:* Carolina Green Corp.

Participated in Project: Advanced Drainage Systems, Inc.; FieldTurf;  
Liberty Tire Recycling, Inc.

Hopkinton High School/Middle School Athletic Complex  
Hopkinton, MA

*Design:* Gale Associates, Inc.

Participated in Project: Green Acres Landscaping and Construction, Inc.;  
Sportsfield Specialties, Inc.; Musco Sports Lighting; FieldTurf;  
GT Grandstands, Inc.; USGreentech; Brock USA

Mills Pond Park - Soccer & Lacrosse Complex  
Ft. Lauderdale, FL

*Construction:* CSR Athletic Construction

Participated in Project: FieldTurf; Sportsfield Specialties, Inc.; Musco  
Sports Lighting

Northeastern University - Carter Playground Athletic Fields  
Boston, MA

*Design:* Stantec's Sport Group

Participated in Project: FieldTurf; Chenango Contracting; Sportsfield  
Specialties, Inc.; Brock USA

### **2018 American Sports Builder Awards:**

Saguaro High School Stadium  
Scottsdale, AZ

*Construction:* Elite Sports Builders

Participated in Project: Line Design, Inc.; FieldTurf; SportsEdge,  
Gill Athletics; Stockmeier Urethanes, USA, Inc.

Benicia High School  
Benicia, CA

*Design:* Verde Design, Inc.

Participated in Project: Robert A. Bothman, Inc.; Sportsfield Specialties,  
Inc.; Fieldturf Tarkett; Beynon Sports Surfaces, Inc.

Daytona Beach Municipal Stadium  
Daytona Beach, FL

*Construction:* Nidy Sports Construction

Participated in Project: FieldTurf; Advanced Drainage Systems, Inc.

Indian Creek School  
Crownsville, MD

*Design:* Gale Associates, Inc.

Participated in Project: FieldTurf; Brock USA; USGreentech;  
Sportsfield Specialties, Inc.

The Attanasio Family Field at Murray Stadium Brown University  
Providence, RI

*Design:* Gale Associates, Inc.

Participated in Project: R.A.D. Sports; Sportsfield Specialties, Inc.;  
FieldTurf

Paul Goode Field  
San Francisco, CA

*Design:* Verde Design, Inc.

Participated in Project: Robert A. Bothman, Inc.; FieldTurf;  
Beynon Sports Surfaces; Brock USA; Sportsfield Specialties, Inc.

**2017 American Sports Builder Awards:**

- Franklin & Marshall College ASFC Schnader Field House  
Lancaster, PA

*Design:* Sasaki Associates, Inc.

Participated in Project: Beynon Sports Surfaces, Inc.;  
Sportsfield Specialties, Inc.; Douglas Sports

- MIT Running Track at Steinbrenner Stadium  
Cambridge, MA

*Construction:* Cape and Island Tennis & Track

Participated in Project: Sportsfield Specialties, Inc.; Beynon Sports Surfaces,  
Inc.; Gezolan AGO

- Dartmouth College  
Hanover, NH

*Design:* Activitas, Inc.

Participated in Project: Clark Companies, Inc.; Brock USA;  
Copeland Coating Company, Inc.; Chenango Contracting; FieldTurf;

R.A.D. Sports, Inc.; Sportsfield Specialties, Inc.; Beynon Sports Surfaces, Inc.

- Cornell University - Schoellkopf Field  
Ithaca, NY

*Design:* Stantec Sport Group

Participated in Project: Clark Companies, Inc.; Chenango Contracting;

Fieldturf; Sportsfield Specialties, Inc.; Brock USA

- Boston College High School Athletic Facility  
Boston, MA  
*Design: Activitas, Inc.*  
Participated in Project: R.A.D. Sports; Cape and Island Tennis & Track;  
Sportsfield Specialties, Inc.; Beynon Sports Surfaces, Inc.
- Sunset High School Athletic Fields  
Beaverton, OR  
*Design: Cameron McCarthy Landscape Architecture & Planning*  
Participated in Project: FieldTurf USA, Inc.; Brock USA;  
Advanced Drainage Systems, Inc.

2016 American Sports Builder Awards:

- Tropical Memorial Park  
Miami, FL  
Construction: CSR Athletic Construction  
Participated in Project: Sportsfield Specialties, Inc.;  
Gill Athletics; Beynon Sport Surfaces, Inc.
- Virtue Field House at Middlebury College  
Middlebury, VT  
Design: Sasaki Associates, Inc.  
Participated in Project: Gill Athletics; Beynon Sports Surfaces, Inc.
- Banta Bowl - Lawrence University  
Appleton, WI  
Design: Rettler Corporation  
Participated in Project: Sportsfield Specialties, Inc.; FieldTurf
- Arrowhead Diamond Park at Evesham Township  
Marlton, NJ  
Construction: American Athletic Courts, Inc.  
Participated in Project: FieldTurf USA, Inc.
- Meadowwood Park Tennis Facility

Aurora, CO

Construction: Renner Sports Surfaces

Participated in Project: Kenneth W. Schmidt, Jr., PE; Douglas Industries;

LSI Courtsider Sports Lighting; Bakko Bak Bord

- Riverbank High School

Riverbank, CA

Design: Siegfried Engineering

Participated in Project: Sportsfield Specialties, Inc.;

Beynon Sports Surfaces, Inc.; ACO Sport, Div. of ACO Polymer Products

- The Gunnery

Washington, CT

Design: Milone & MacBroom, Inc.

Participated in Project: Sportsfield Specialties, Inc.;

ACO Sport, Div. of ACO Polymer Products;

FieldTurf Tarkett; R.A.D. Sports

- Cos Cob Park

Greenwich, CT

Design: Milone & MacBroom, Inc.

Participated in Project: DeRosa Sports Construction, Inc.;

ACO Sport, Div. of ACO Polymer Products;

Sportsfield Specialties, Inc.; FieldTurf Tarkett

- University of Florida Indoor Practice Field

Gainesville, FL

Construction: Nidy Sports Construction Co. Inc.

Participated in Project: FieldTurf

Company	Year	Project Name	City	State	System	Contact	Phone	Email
Beynon	2018	Kansas State University	Manhattan	KS	BSS 2000	Karol Rovelto	(785) 532-6567	krovelto@kstatesports.com
Beynon	2018	University of Minnesota	Minneapolis	MN	BSS 2000	Mark Coyle	(612) 624-4497	icaadmin@umn.edu
Beynon	2018	University of Michigan	Ann Arbor	MI	BSS 2000	Kevin Sullivan	(734) 647-1222	ksullivan@umich.edu
Beynon	2017	Oral Roberts University	Tulsa	OK	BSS 2000	Joe Dial	(918) 495-6839	jdial@oru.edu
Beynon	2017	University of Louisiana at Lafayette	Lafayette	LA	BSS 1000	Lon Badeaux	(337) 482-6313	lon.badeaux@louisiana.edu
FieldTurf	2021	Rutgers University	Piscataway	NJ	CORE	Matthew Colagiovanni	(732) 445-4223	mattc@scarletknights.com
FieldTurf	2020	Northwestern University Indoor	Evanston	IL	Revolution 360	Marcus Attles	(847) 467-6212	marcus.attles@northwestern.edu
FieldTurf	2021	University of Vermont	Burlington	VT	Vertex Prime	Jeff Schulman	(802) 656-7417	jeffrey.schulman@uvm.edu
FieldTurf	2021	University of Maine	Orono	ME	Vertex Prime Core	Josh Burke	(207) 581-2669	joshua.w.burke@maine.edu
FieldTurf	2021	University of Oregon Indoor	Eugene	OR	Vertex Prime Core	Rob Mullens	(541) 346-5455	athleticdirector@uoregon.edu
FieldTurf	2019	Creighton University Soccer Stadium	Omaha	NE	CORE	Brandon McCarville	(402) 660-5864	brandonmccarville@creighton.edu
FieldTurf	2019	University of North Texas Indoor Practice	Denton	TX	Classic HD	Terri Pierce	(940) 369-7693	Terri.Pierce@untsystem.edu
FieldTurf	2021	High Point University	High Point	NC	Prestige Vertex	Jason Sweet	(336) 841-9046	jsweet@highpoint.edu
FieldTurf	2019	Mercyhurst University - Tullio Field	Erie	PA	Prestige Vertex	Bradley M Davis	(978) 886-8968	bdavis2@mercyhurst.edu
FieldTurf	2019	Morgan State University Stadium Field	Baltimore	MD	Revolution 360	Larry Frazier	(443) 885-3333	Lawrence.Frazier@morgan.edu

Project Name	City	State	Date	Product
Wentzville High School	Wentzville	Missouri	10/30/2020	Vertex - 2"
Wagner Playground	New York	New York	10/29/2020	XT - 2"
Mayflower - Indoor Field House	Mayflower	Arkansas	10/29/2020	XTHD - 2.25'
May Whitney Elementary School	Lake Zurich	Illinois	10/28/2020	Revolution 360 - 2.5"
Joliet Park District - Softball Field #1	Joliet	Illinois	10/28/2020	XT - 2"
Joliet Park District - Softball Field #2	Joliet	Illinois	10/28/2020	XT - 2"
Joliet Park District - Softball Field #3	Joliet	Illinois	10/28/2020	XT - 2"
Joliet Park District - Softball Field #4	Joliet	Illinois	10/28/2020	XT - 2"
Joliet Park District - Softball Field #5	Joliet	Illinois	10/28/2020	XT - 2"
Joliet Park District - Softball Field #6	Joliet	Illinois	10/28/2020	XT - 2"
Kendall Soccer Park - Field 4	Miami	Florida	10/28/2020	Classic HD - 2"
Kendall Soccer Park - Field 5	Miami	Florida	10/28/2020	Classic HD - 2"
Plymouth State University	Plymouth	New Hampshire	10/28/2020	Vertex Prime - 2.5"
Reeves County Recreation Center Field	Pecos	Texas	10/28/2020	XTHD - 2.25
Vallejo High School Corbus Field	Vallejo	California	10/27/2020	Vertex Prime 2"
Corona Del Mar High School - Stadium	Newport Beach	California	10/26/2020	CORE - 2.5"
Magnuson Park Playfield 7	Seattle	Washington	10/26/2020	XTHD - 2.25"
Northwest Regional Park Field 1	Owings Mills	Maryland	10/26/2020	XTHD - 2.5"
Town of Babylon Tanner Park - Field #1	Lindenhurst	New York	10/26/2020	XT - 2"
Town of Babylon Tanner Park - Field #2	Lindenhurst	New York	10/26/2020	XT - 2"
Town of Babylon Tanner Park - Field #3	Lindenhurst	New York	10/26/2020	XT - 2"
Town of Babylon Tanner Park - Field #4	Lindenhurst	New York	10/26/2020	XT - 2"
Dow High School Field	Midland	Michigan	10/26/2020	XT - 2"
Rome High School Indoor	Rome	Georgia	10/26/2020	Classic HD - 2.5"
Egg Harbor High School	Egg Harbor Township	New Jersey	10/26/2020	Vertex Prime 2.25"
Bunnell Baseball	Stratford	Connecticut	10/26/2020	Vertex Prime 2.25"
Lockwood High School	Lockwood	Montana	10/26/2020	Vertex - 2"
Union College - Bailey Field	Schenectady	New York	10/26/2020	Classic HD - 2.5"
University of Florida - Maguire Field	Gainesville	Florida	10/26/2020	Classic HD - 2"
Ridge Road Multi Purpose	Washington	DC	10/23/2020	Vertex - 2.25"
Santa Clara High School	Santa Clara	California	10/23/2020	Vertex Prime - 2.25"
Celina Old Town Park - Field #1	Celina	Texas	10/23/2020	Vertex - 2"
Celina Old Town Park - Field #2	Celina	Texas	10/23/2020	Vertex - 2"
University of Texas - Softball New Bullpen	Austin	Texas	10/23/2020	HOCKEY MULTI
UCONN Practice Soccer	Storrs	Connecticut	10/22/2020	CORE - 2'
Ithaca High School Coop Dist	Johnson City	New York	10/22/2020	Vertex Prime 2.5"
Lees McRae College - Stadium	Banner Elk	North Carolina	10/22/2020	Vertex 2.25"
NBT Bank Stadium	Syracuse	New York	10/21/2020	VINTAGE40 - 2"
Snowden Grove - Complex A	Southaven	Mississippi	10/21/2020	Vertex - 2"
Abington Heights High School	Abington	Pennsylvania	10/20/2020	DA - 2.25"
Atlanta Rugby 2	Marietta	Georgia	10/20/2020	XT - 2.5"
Amsterdam High School	Amsterdam	New York	10/19/2020	Vertex Prime 2.5"
Jefferson Site Improvements- Passaic	Passaic	New Jersey	10/19/2020	XM7 - 2.25"
Upshur Park FLD1	Washington	DC	10/19/2020	Vertex Prime - 2"
Oxnard High School	Oxnard	California	10/19/2020	CORE - 2.5"
CFISD Cypress Ridge High School	Houston	Texas	10/19/2020	XT - 2"
Vernon Hills High School	Vernon Hills	Illinois	10/16/2020	Vertex - 2"
Rolling Meadows High School	Rolling Meadows	Illinois	10/16/2020	Vertex Prime - 2.5"
OSU Softball Hitting Barn	Corvallis	Oregon	10/12/2020	Revolution 360 - 2.5"
Rondout Valley High School	Accord	New York	10/12/2020	Vertex Prime - 2.5"
NCSD Alder Creek Middle School	Milwaukie	Oregon	10/12/2020	Classic HD - 2"
PWCS High School #13 Multipurpose	Gainesville	Virginia	10/12/2020	XTHD - 2.25"
Aberdeen Proving Grounds	Aberdeen Proving Ground	Maryland	10/12/2020	Vertex - 2.5"
Phenix City Central High School	Phenix City	Alabama	10/12/2020	Vertex - 2"
Snowden Grove- Complex C	Southaven	Mississippi	10/12/2020	Vertex - 2"
CFISD Cypress Ranch High School	Cypress	Texas	10/12/2020	XT - 2"
Town of Dewitt - Willis V Carrier Park Field #1	Syracuse	New York	10/9/2020	XT - 2"
Town of Dewitt - Willis V Carrier Park Field #2	Syracuse	New York	10/9/2020	XT - 2"
Johnson City Rec Field 1-2 LM	Johnson City	New York	10/9/2020	XTHD - 2.25"
Westminster College	New Wilmington	Pennsylvania	10/9/2020	Classic HD - 2"
Celina Old Town Park - Field #3	Celina	Texas	10/9/2020	Vertex - 2"
Celina Old Town Park - Field #4	Celina	Texas	10/9/2020	Vertex - 2"
Utah Valley University	Orem	Utah	10/8/2020	Vertex - 2"
Palmyra Macedon CSD	Palmyra	New York	10/5/2020	XT - 2.25"
NCSD - Rex Putnam High School	Milwaukie	Oregon	10/5/2020	Classic HD - 2"
Franciscan University	Steubenville	Ohio	10/5/2020	Vertex - 2.25"
San José State University - South Campus Field	San Jose	California	10/2/2020	CORE - 2.25"
Maine Endwell	Endwell	New York	10/2/2020	Classic HD - 2"
Hill Academy Caledon	Caledon	Ontario	10/2/2020	XM7 - 2"
Rondout LM	Johnson City	New York	10/1/2020	Vertex Prime - 2.5"
University of Maryland - Capital One Stadium	College Park	Maryland	10/1/2020	Classic HD - 2.5"
University of Maryland - Capital One Stadium	College Park	Maryland	10/1/2020	Hockey Gold
Cypress Ranch High School	Cypress	Texas	10/1/2020	XT - 2"

New Waterford Sports Hub	Halifax	Nova Scotia	9/30/2020	CORE - 2.25"
Palmyra Macedon CSD	Johnson City	New York	9/30/2020	XTHD - 2.25"
SCUSD Wilcox High School - Multiuse	Santa Clara	California	9/29/2020	Vertex Prime - 2.25"
San Jose High School	San Jose	California	9/29/2020	Vertex Prime - 2"
Pajaro Valley High School	Watsonville	California	9/28/2020	Vertex - 2"
Washington Tech High School -Stadium	Saint Paul	Minnesota	9/28/2020	Vertex - 2"
Amsterdam High School	Johnson City	New York	9/25/2020	Vertex Prime - 2.5"
Ithaca High School	Johnson City	New York	9/25/2020	Vertex Prime - 2.5"
Horsehead High School	Johnson City	New York	9/25/2020	Vertex Prime - 2.25"
Energy Capital Sports Complex	Gillette	Wyoming	9/24/2020	Revolution 360 - 2.25"
Glacken Park	Freeport	New York	9/24/2020	XT - 2"
Greenhills School	ANN ARBOR	Michigan	9/24/2020	Revolution 360 - 2"
Fremont High School	Oakland	California	9/23/2020	XM7 - 2.5"
Eagan High School	Eagan	Minnesota	9/23/2020	Vertex Prime - 2.5"
Perkiomen Valley High School	Collegeville	Pennsylvania	9/23/2020	XT - 2"
Belmont Sports Complex	Belmont	California	9/22/2020	Vertex Prime - 2"
Gowanda High School	Gowanda	New York	9/21/2020	Vertex - 2.25"
Gowanda High School	Gowanda	New York	9/21/2020	Vertex - 2.25"
Middletown - Normandy Park	Middletown	New Jersey	9/21/2020	Revolution 360 - 2.25"
PWCS High School #13 Stadium	Gainesville	Virginia	9/21/2020	XTHD - 2.25"
Central Cambria High School	Ebensburg	Pennsylvania	9/21/2020	Vertex Prime - 2.25"
Gowanda High School	Johnson City	New York	9/18/2020	Vertex Prime - 2.25"
Leonia High School	Leonia	New Jersey	9/18/2020	Revolution 360 - 2.25"
Midlothian Park District - REC Center	Midlothian	Illinois	9/17/2020	Vertex - 2.25"
The Williams School	Quaker Hill	Connecticut	9/16/2020	Vertex - 2.25"
Mission Playground	San Francisco	California	9/14/2020	Classic HD - 2"
Playa Vista Sports Park	Playa Vista	California	9/14/2020	Vertex Prime - 2"
Walsh University Stadium	North Canton	Ohio	9/14/2020	XT - 2.25"
Carthage College	Kenosha	Wisconsin	9/14/2020	Vertex Prime - 2"
Kamiakin High School - Stadium	Kennewick	Washington	9/14/2020	Revolution 360 - 2.5"
CFISD Cypress Woods High School - Baseball	Cypress	Texas	9/14/2020	XT - 2"
Syracuse University - Carrier Dome	Syracuse	New York	9/11/2020	Classic HD - 2.5"
City of Mountain Brook - Field 3	Mountain Brook	Alabama	9/11/2020	Vertex - 2"
City of Mountain Brook - Field 4	Mountain Brook	Alabama	9/11/2020	Vertex - 2"
Bensenville Sports Complex Indoor Baseball	Bensenville	Illinois	9/10/2020	XT - 2"
Bensenville Sports Complex - Indoor Mutiuse	Bensenville	Illinois	9/10/2020	XT - 2"
Mitchell College	New London	Connecticut	9/10/2020	XTHD - 2"
Bensenville Sports Complex	Bensenville	Illinois	9/10/2020	VINTAGE40
Capuchino High School - Stadium	San Bruno	California	9/9/2020	Vertex Prime - 2"
Mills High School - Stadium	Milbrae	California	9/9/2020	Vertex Prime - 2"
University of Florida	Gainesville	Florida	9/9/2020	Vertex - 2"
Copenhagen CSD Coop Dist	Copenhagen	New York	9/8/2020	Vertex - 2.25"
Cupertino High School	Cupertino	California	9/8/2020	Vertex Prime - 2"
Stratford High School	Stratford	Connecticut	9/8/2020	Vertex Prime - 2.5"
Lee University Rec/Intramural Field	Cleveland	Tennessee	9/8/2020	CORE - 2.25"
Morris Knolls High School	Denville	New Jersey	9/7/2020	Revolution 360 - 2.25"
GCISD - Robert E. Lee High School	Baytown	Texas	9/7/2020	Classic HD - 2"
Olympia High School	Olympia	Washington	9/4/2020	XTHD - 2"
Johnson City Rec Field 1 & 2	Johnson City	New York	9/4/2020	XTHD - 2.25"
Parsippany Smith Field	Parsippany	New Jersey	9/4/2020	Revolution 360 - 2.25"
Altamont Little League	Albuquerque	New Mexico	9/4/2020	VINTAGE40
CFISD Cypress Woods High School - Softball	Cypress	Texas	9/4/2020	XT - 2"
Denver Children's Hospital	Broomfield	Colorado	9/3/2020	Vertex - 2"
Menomonee Falls	Menomonee Falls	Wisconsin	9/3/2020	XM7 - 2"
Hillsborough High School	Hillsborough TWSP	New Jersey	9/2/2020	XM7 - 2.25"
Greece CSD - Olympia High School	Rochester	New York	9/2/2020	Vertex - 2.25"
USAFA Prep	COLORADO SPRINGS	Colorado	9/1/2020	Vertex - 2.5"
Gunnell Oval Extra Turf Area	Kearny	New Jersey	9/1/2020	Vertex - 2"
Capital High School - Stadium	Charleston	West Virginia	9/1/2020	Classic HD - 2.5"
Mission College	Santa Clara	California	9/1/2020	Vertex - 2"
The Salisbury School	Salisbury	Connecticut	9/1/2020	Vertex Prime - 2.25"
Westminster College	New Wilmington	Pennsylvania	8/31/2020	Vertex Prime - 2"
St Francis Episcopal School	Houston	Texas	8/31/2020	Classic HD - 2.5"
NCSA Adrienne Nelson High School	Happy Valley	Oregon	8/28/2020	Classic HD - 2"
Bob Shelden	Brookings	South Dakota	8/28/2020	Vertex - 2"
Greece CSD Olympia High School	Johnson City	New York	8/28/2020	Vertex Prime - 2.25"
Perkiomen Valley High School	Collegeville	Pennsylvania	8/28/2020	XT - 2.25"
Cullman High School	Cullman	Alabama	8/28/2020	Vertex - 2"
Tighe Field	Rockville	New York	8/27/2020	XT - 2.25"
Harrison High School	Harrison	New York	8/27/2020	Vertex - 2.25"
Lone Peak High School	Highland	Utah	8/27/2020	Vertex Prime - 2.25"
City of Mountain Brook - Field 5	Mountain Brook	Alabama	8/26/2020	Vertex - 2"
City of Mountain Brook - Field 6	Mountain Brook	Alabama	8/26/2020	Vertex - 2"
Lockport High School - Athletic Center	Lockport	Illinois	8/25/2020	Classic HD - 2"
King School Middle Field	Stamford	Connecticut	8/25/2020	Vertex - 2"
Edmonton Soccer Association	Edmonton	Alberta	8/24/2020	CORE - 2"
Word of Life Bible Institute	Pottersville	New York	8/24/2020	Vertex - 2.25"



Copenhagen CSD LM	Copenhagen	New York	8/24/2020	Vertex Prime - 2.25"
Bishops School	La Jolla	California	8/24/2020	Vertex Prime - 2.5"
Delaware County Christian School	Newtown Square	Pennsylvania	8/22/2020	Vertex - 2"
Smyrna Beach Sports Complex	New Smyrna Beach	Florida	8/21/2020	Classic HD - 2.25"
Great Valley High school	Malvern	Pennsylvania	8/20/2020	XT - 2"
East Williston UFSD	Old Westbury	New York	8/20/2020	Vertex - 2.25"
Charlotte Christian	Charlotte	North Carolina	8/20/2020	Classic HD - 2.25"
Elk Grove USD - Sheldon High School	Sacramento	California	8/20/2020	Revolution 360 - 2"
Frankenmuth High School	Frankenmuth	Michigan	8/19/2020	Revolution 360 - 2.5"
Frankenmuth High School	Frankenmuth	Michigan	8/19/2020	CORE - 2.5"
Nike Sports Complex	Naperville	Illinois	8/18/2020	Vertex Prime - 2.5"
Abilene High School Kansas - Stadium	Abilene	Kansas	8/18/2020	Vertex Prime - 2.25"
Algona High School	Algona	Iowa	8/17/2020	Vertex - 2.5"
San Jose City College	San Jose	California	8/17/2020	Vertex Prime - 2.5"
Ridgeline High School	Liberty Lake	Washington	8/17/2020	Vertex Prime - 2.5"
Nitro High School - Stadium	Nitro	West Virginia	8/17/2020	Classic HD - 2.5"
Radar Ridge Multi-Use	Dahlonega	Georgia	8/17/2020	Classic HD - 2.25"
Hasbrouck Heights Depken	Hasbrouck Heights	New Jersey	8/17/2020	Classic HD - 2.25"
Rosemount High School	Rosemount	Minnesota	8/17/2020	Vertex Prime - 2.5"
City of Mountain Brook	Mountain Brook	Alabama	8/17/2020	Vertex - 2"
Argyle High School - Stadium	Flower Mound	Texas	8/17/2020	XM7 - 2.25"
Greece CSD - Athena High School - Stadium	Rochester	New York	8/17/2020	CORE - 2.5"
Tyler Consolidated High School	Sisterville	West Virginia	8/14/2020	Classic HD - 2"
Little Ferry - Merhoff Field	Little Ferry	New Jersey	8/14/2020	Revolution 360 - 2.25"
University of Windsor Alumni Field	Windsor	Ontario	8/13/2020	CORE - 2.5"
Fontenelle Park	Omaha	Nebraska	8/13/2020	XT - 2"
DePaul Catholic High School	Wayne	New Jersey	8/13/2020	Vertex Prime - 2.25"
Greece Athena High School - Stadium	Johnson City	New York	8/13/2020	CORE - 2.5"
Virginia Union University - Hovey Field	Richmond	Virginia	8/13/2020	CORE - 2.5"
Frogtown Multi	St-Paul	Minnesota	8/12/2020	XTHD - 2.25"
Rome CSD Coop Dist	Rome	New York	8/12/2020	Vertex Prime - 2.5"
Pagel Field	Boston	Massachusetts	8/12/2020	Vertex - 2.25"
Gunnell Oval	Kearny	New Jersey	8/12/2020	Vertex - 2"
Westport PJ Romano	Westport	Connecticut	8/12/2020	Vertex - 2"
Woodland Hills High School	Pittsburg	Pennsylvania	8/12/2020	Vertex - 2"
Islander Middle School	Mercer Island	Washington	8/12/2020	XTHD - 2.25"
Socorro ISD	El Paso	Texas	8/12/2020	Vertex - 2"
Shenango High School - Wildcat Stadium	New Castle	Pennsylvania	8/11/2020	Classic HD - 2.25"
CPD Chase Park	Chicago	Illinois	8/10/2020	XT - 2.25"
Mitchell College	New London	Connecticut	8/10/2020	XTHD - 2"
Town of Oyster Bay James - Vernon Field	East Norwich	New York	8/10/2020	Vertex - 2.25"
Deptford Twsp High School - Stadium	Deptford Township	New Jersey	8/10/2020	Revolution 360 - 2.25"
Elk Grove USD - Cosumnes Oaks High School	Elk Grove	California	8/10/2020	Revolution 360 - 2"
Fontana Central City Park - Field #1	Fontana	California	8/10/2020	CORE - 2.5"
Fontana Central City Park - Field #2	Fontana	California	8/10/2020	CORE - 2.5"
Fontana Central City Park - Field #3	Fontana	California	8/10/2020	CORE - 2.5"
Central Cambria High School - Stadium	Ebensburg	Pennsylvania	8/7/2020	Vertex Prime - 2.25"
Langston Hughes High School Fulton County	Fairburn	Georgia	8/7/2020	CORE - 2.25"
LISD Vandegrift High School	Austin	Texas	8/7/2020	Classic HD - 2.5"
Browning High School - Field	Browning	Montana	8/6/2020	Vertex - 2.25"
Eagan High School - Stadium	Eagan	Minnesota	8/6/2020	Vertex Prime - 2.5"
Brookwood Elementary	HILLSBORO	Oregon	8/5/2020	XM7 - 2.25"
Woburn High School	Woburn	Massachusetts	8/5/2020	Vertex Prime - 2.5"
Middle School Hackensack Public Schools	Hackensack	New Jersey	8/5/2020	XT - 2"
Oswego High School LM	Johnson City	New York	8/5/2020	Vertex Prime - 2.5"
Rome CSD LM	Johnson City	New York	8/5/2020	Vertex Prime - 2.5"
Mead School District - Stadium	Mead	Washington	8/5/2020	Vertex Prime - 2.5"
University of Illinois	Champaign	Illinois	8/5/2020	Vertex - 2"
Morse High School	Bath	Maine	8/5/2020	XT - 2.5"
Oswego High School	Oswego	New York	8/4/2020	Vertex Prime - 2.5"
Cameron High School - Stadium	Cameron	West Virginia	8/4/2020	Vertex Prime - 2.5"
UW Denny Field	Seattle	Washington	8/3/2020	Classic HD - 2.25"
Browning High School	Browning	Montana	8/3/2020	Vertex - 2.25"
Rumson Fair Haven High School	Rumson	New Jersey	8/3/2020	CORE - 2.25"
East Hampton Union Free SD	East Hampton	New York	7/31/2020	Vertex - 2.25"
Evanston Robert Crown Center	Evanston	Illinois	7/31/2020	Vertex - 2"
Crestview High School Stadium Field	Columbiana	Ohio	7/31/2020	XT - 2.5"
Red Bank Regional High School	Little Silver	New Jersey	7/31/2020	Vertex Prime - 2.25"
Central Gwinnett High School Stadium Field	Lawrenceville	Georgia	7/31/2020	CORE - 2.5"
Continental Soldiers Park	Mahwah	New Jersey	7/31/2020	CORE - 2.25"
Ridgewood High School - Stevens Field	Ridgewood	New Jersey	7/30/2020	Revolution 360 - 2.25"
Roosevelt Elementary	South Salt Lake	Utah	7/30/2020	Vertex Prime - 2.25"
Waco ISD Stadium	Waco	Texas	7/30/2020	Revolution 360 - 2"
Betsy Head Park	Brooklyn	New York	7/29/2020	XT - 2"
Keystone Park	River Forest	Illinois	7/29/2020	Classic HD - 2"
Great Valley High School - Stadium	Malvern	Pennsylvania	7/29/2020	XT - 2.25"
Killingly High School	Dayville	Connecticut	7/29/2020	Vertex Prime - 2.5"

Socorro ISD Softball Field	El Paso	Texas	7/29/2020	Vertex - 2"
Ballard High School	Seattle	Washington	7/28/2020	Vertex - 2.25"
Meadow View School	Eugene	Oregon	7/27/2020	XT - 2.25"
Dryden High School Coop Dist	Dryden	New York	7/27/2020	Vertex - 2.25"
ASU Recreation Fields	Tempe	Arizona	7/27/2020	Vertex - 2"
Worthington Schools Minnesota - Trojan Field	Worthington	Minnesota	7/27/2020	Vertex Prime - 2.5"
Wellington High School - Stadium	Wellington	Florida	7/27/2020	Classic HD - 2.25"
LA Trade Tech	Los Angeles	California	7/27/2020	Revolution 360 - 2.25"
Doddridge High School	West Union	West Virginia	7/27/2020	CORE - 2"
Druid Hills Middle School	Tucker	Georgia	7/24/2020	DA-XM7-57-41-FG
George Washington High School - Stadium	Charleston	West Virginia	7/24/2020	Classic HD - 2.5"
Lipscomb Academy - Stadium	Nashville	Tennessee	7/24/2020	Revolution 360 - 2.25"
Weatherford College	Weatherford	Texas	7/24/2020	Vertex - 2"
Palmetto Ridge High School	Naples	Florida	7/23/2020	Classic HD - 2.25"
York High School	Elmhurst	Illinois	7/23/2020	CORE - 2.5"
Gateway Community Charters	West Sacramento	California	7/22/2020	XT - 2"
Kasberger Field	Newark	New Jersey	7/22/2020	FTVT45-XM7-39-NATURAL GRASS BB-FS
Cloverdale High School	Cloverdale	California	7/22/2020	Vertex Prime - 2"
Berthoud High School	Berthoud	Colorado	7/22/2020	Vertex - 2.25"
Harrison High School	Colorado Springs	Colorado	7/22/2020	Classic HD - 2.25"
Naperville Knoch Park	Naperville	Illinois	7/20/2020	Vertex Prime - 2.5"
La Trenta Field Montvale - Field 1	Montvale	New Jersey	7/20/2020	Classic HD - 2"
La Trenta Field Montvale - Field 2	Montvale	New Jersey	7/20/2020	Classic HD - 2"
SCUSD Santa Clara High School	Santa Clara	California	7/20/2020	Vertex Prime - 2.25"
Southridge High School - Stadium	Kennewick	Washington	7/20/2020	Revolution 360 - 2.25"
Santa Maria High School	Santa Maria	California	7/20/2020	XTHD - 2.25"
Rosemount High School - Stadium	Rosemount	Minnesota	7/20/2020	Vertex Prime - 2.5"
SCUSD Wilcox High School	Santa Clara	California	7/20/2020	Vertex Prime - 2.25"
Hinsdale Central High School - Stadium	Hinsdale	Illinois	7/20/2020	CORE - 2.5"
Andrew High School	Tinley Park	Illinois	7/17/2020	CORE - 2.5"
The Pathfinder Academy	Edmeston	New York	7/17/2020	Vertex - 2.25"
Jones County High School	Gray	Georgia	7/17/2020	Vertex Prime - 2.25"
Berlin Hiland	Millersburg	Ohio	7/17/2020	XM7 - 2"
Dryden High School	Johnson City	New York	7/16/2020	Vertex Prime - 2.25"
Word of Life LM	Johnson City	New York	7/16/2020	Vertex Prime - 2.25"
Paramus High School	Paramus	New Jersey	7/16/2020	Revolution 360 - 2.25"
South Kearns Elementary	Kearns	Utah	7/16/2020	Vertex Prime - 2.25"
Midland High School	Midland	Michigan	7/16/2020	XT - 2"
Gunnell Oval SB3 Soccer 6	Kearny	New Jersey	7/15/2020	Vertex - 2"
Westport Ginny Parker	Westport	Connecticut	7/15/2020	HOCKEY MULTI-6220-FO-STND
NCS D Milwaukie High School	Milwaukie	Oregon	7/15/2020	Classic HD - 2"
Elk Grove USD - Monterey Trail High School	Elk Grove	California	7/15/2020	Revolution 360 - 2"
Highland Middle School Multi	Bellevue	Washington	7/13/2020	XT - 2"
USAF A Bullpen Training Area	Colorado Springs	Colorado	7/13/2020	Classic HD - 2"
Golden Gate Elementary School	Naples	Florida	7/13/2020	Classic HD - 2"
Woodinville Fields Carol Edwards Center	Woodinville	Washington	7/13/2020	Vertex - 2"
St Marys Episcopal Day School	Tampa	Florida	7/13/2020	Classic HD - 2"
Hermantown Middle School Stadium	Hermantown	Minnesota	7/13/2020	Classic HD - 2.5"
Grand Rapids HS Noble Hall Field	Grand Rapids	Minnesota	7/13/2020	Vertex - 2.5"
Evergreen Campus Football	Seattle	Washington	7/10/2020	Revolution 360 - 2.5"
Village of Lynbrook Greis Park	Lynbrook	New York	7/10/2020	Vertex - 2.25"
Community School of Naples Stadium Field	Naples	Florida	7/10/2020	Classic HD - 2.25"
Cape Elizabeth HS REPL	Cape Elizabeth	Maine	7/10/2020	XT - 2.5"
Collins Hill High School Stadium Field	Suwanee	Georgia	7/10/2020	CORE - 2.5"
St Andrews Episcopal School Brumbaugh Field	Potomac	Maryland	7/10/2020	CORE - 2.25"
Coatesville High School	Coatesville	Pennsylvania	7/9/2020	Vertex - 2"
Beech High School - Stadium	Hendersonville	Tennessee	7/9/2020	Vertex - 2.25"
Pooler Stadium Field	Pooler	Georgia	7/9/2020	Vertex Prime - 2.25"
Traverse City - Thirlby Field	Traverse City	Michigan	7/9/2020	Vertex - 2.25"
East Leyden High School	Franklin Park	Illinois	7/9/2020	Vertex Prime - 2.5"
Naperville North High School	Naperville	Illinois	7/9/2020	Vertex Prime - 2.5"
Bel Air High School	Bel Air	Maryland	7/9/2020	Vertex - 2.25"
FTNW Chad McGraw Residence	Aburn	Washington	7/9/2020	XT - 2"
Brighton High School	Cottonwood Heights	Utah	7/9/2020	XTHD - 2.5"
Mitchell College	New London	Connecticut	7/8/2020	Vertex - 2.25"
Greece Arcadia High School - Stadium	Johnson City	New York	7/8/2020	CORE - 2.5"
Greece CSD Arcadia High School - Stadium	Rochester	New York	7/8/2020	CORE - 2.5"
Eanes ISD - Hill Country Middle School	Austin	Texas	7/8/2020	XT - 2.25"
South Charleston High School Stadium Field	Charleston	West Virginia	7/7/2020	Classic HD - 2.5"
DePaul College Prep High School	Chicago	Illinois	7/7/2020	Vertex Prime - 2.5"
College of William and Mary - Zable Stadium	Williamsburg	Virginia	7/7/2020	Revolution 360 - 2.5"
St Andrews Episcopal School - Hope Field	Potomac	Maryland	7/7/2020	CORE - 2.25"
West Milford High School	West Milford	New Jersey	7/7/2020	CORE - 2.25"
Niagara Wheatfield CSD	Sanborn	New York	7/6/2020	Vertex Prime - 2.25"
Pittsburg State University - Carnie Smith Stadium	Pittsburg	Kansas	7/4/2020	Vertex Prime - 2.5"
MARTA Lindbergh	Atlanta	Georgia	7/2/2020	VINTAGE40
Elgin High School	Elgin	Illinois	7/2/2020	Classic HD - 2.5"

West Islip UFSD	West Islip	New York	7/2/2020	Vertex - 2.25"
Tyler Consolidated High School - Stadium	Sistersville	West Virginia	7/1/2020	Vertex Prime - 2.5"
Waukee Second High School	Waukee	Iowa	6/30/2020	Vertex Prime - 2.5"
Clear Lake Iowa High School - Lions Field	Clear Lake	Iowa	6/30/2020	Vertex Prime - 2.5"
Wyckoff Memorial	Wyckoff	New Jersey	6/29/2020	Vertex - 2.25"
Conant High School	Hoffman Estates	Illinois	6/29/2020	Vertex Prime - 2.5"
Willamette High School	Eugene	Oregon	6/29/2020	XT - 2.5"
Atlantic High School	Atlantic	Iowa	6/29/2020	Vertex Prime - 2.5"
Edison High School	Richmond	Ohio	6/29/2020	Vertex - 2.25"
Coatesville High School - Stadium	Coatesville	Pennsylvania	6/29/2020	Vertex - 2.25"
Elk Grove USD - Elk Grove High School	Elk Grove	California	6/29/2020	Revolution 360 - 2"
Meadowcreek High School - Stadium	Norcross	Georgia	6/29/2020	CORE - 2.5"
Council Rock North High School	Newton	Pennsylvania	6/26/2020	Vertex Prime - 2.5"
Eanes ISD West Ridge Middle School	Austin	Texas	6/26/2020	XT - 2.25"
Parshall High School	Parshall	North Dakota	6/25/2020	Vertex - 2.25"
Glenbard North High School	Carol Stream	Illinois	6/25/2020	CORE - 2.5"
Maple Grove Sports Dome	Maple Grove	Minnesota	6/24/2020	Vertex Prime - 2.5"
Lester Brown Park	Miami Gardens	Florida	6/24/2020	XT - 2.25"
River Oaks Baptist School	Houston	Texas	6/24/2020	XT - 2"
Youngblood Coleman Park	San Francisco	California	6/23/2020	Vertex Prime - 2"
Sandburg High School	Orland Park	Illinois	6/23/2020	CORE - 2.5"
Park River Community Complex Legion Field	Park River	North Dakota	6/22/2020	Vertex - 2"
Natrona County High School	Casper	Wyoming	6/22/2020	XM7 - 2.25"
Highland High School	Highland	New York	6/22/2020	Vertex - 2.25"
East Williston	Old Westbury	New York	6/22/2020	XT - 2"
Niagara Wheatfield	Johnson City	New York	6/22/2020	Vertex Prime - 2.5"
West Seneca East High School	Johnson City	New York	6/22/2020	Vertex Prime - 2.5"
Forest Grove High School	Forest Grove	Oregon	6/22/2020	Classic HD - 2.5"
Bloomsburg University Redman Stadium	Bloomsburg	Pennsylvania	6/22/2020	Vertex Prime - 2.5"
Roxbury High School	Succasunna	New Jersey	6/22/2020	XM7 - 2.5"
Avon Lake High School	Avon Lake	Ohio	6/22/2020	Vertex Prime - 2.5"
Blaine High School	Blaine	Washington	6/22/2020	Revolution 360 - 2.5"
West Seneca East High School	Buffalo	New York	6/22/2020	Vertex Prime - 2.5"
CCISD Challenger - Columbia Stadium	Webster	Texas	6/22/2020	Vertex - 2.5"
Huntington UFSD	Huntington	New York	6/19/2020	Vertex - 2.25"
Otsego Public Schools - Bulldog Stadium	Otsego	Michigan	6/19/2020	Vertex Prime - 2.25"
Mountain Lakes High School	Mountain Lakes	New Jersey	6/17/2020	Revolution 360 - 2.25"
Indianola Middle School	Indianola	Iowa	6/17/2020	Vertex Prime - 2.5"
Greece CSD Olympia High School	Johnson City	New York	6/17/2020	CORE - 2.5"
Stagg High School	Palos Hills	Illinois	6/17/2020	CORE - 2.5"
PSJA High School Softball	San Juan	Texas	6/17/2020	Vertex - 2"
Lagrange High School	Lagrange	Georgia	6/16/2020	XTHD - 2.5"
St. Albans High School Stadium Field	St. Albans	West Virginia	6/16/2020	Classic HD - 2.5"
LSD Lockwood High School	Lockwood	Montana	6/16/2020	XT - 2.25"
LCPS Light Ridge High School	Aldie	Virginia	6/15/2020	XM7 - 2.5"
Fowler High School	Syracuse	New York	6/15/2020	Vertex Prime - 2.5"
Red Hook Town Park	Red Hook	New York	6/15/2020	Vertex - 2.5"
Freeport High School	Freeport	New York	6/15/2020	XT - 2"
Edina High School Field 1	Edina	Minnesota	6/15/2020	Classic HD - 2.5"
Wilmington Farm	Wilmington	North Carolina	6/15/2020	Revolution 360 - 2.25"
McGuffey High School	Claysville	Pennsylvania	6/15/2020	Classic HD - 2.25"
West Salem High School	Salem	Oregon	6/15/2020	XT - 2.5"
Saratoga Springs BB Field	Saratoga Springs	New York	6/15/2020	Classic HD - 2"
Saratoga Springs MP Field	Saratoga Springs	New York	6/15/2020	Vertex Prime - 2.5"
Wabash College	Crawfordsville	Indiana	6/15/2020	Revolution 360 - 2.5"
Harpeth Hall School	Nashville	Tennessee	6/15/2020	Vertex Prime - 2.25"
Diamond Bar High School	Diamond Bar	California	6/15/2020	Vertex Prime - 2.5"
Memorial Park Field - Park Ridge	Park Ridge	New Jersey	6/15/2020	Vertex Prime - 2.25"
St. Anne-Pacelli High School Stadium Combo Field	Columbus	Georgia	6/15/2020	Classic HD - 2.25"
Saint Genevieve High School	Panorama City	California	6/15/2020	Vertex Prime - 2.25"
Greece CSD Olympia High School	Rochester	New York	6/15/2020	CORE - 2.5"
Spring Branch ISD Memorial High School	Houston	Texas	6/15/2020	Classic HD - 2.5"
Warwick High School Stadium	Lititz	Pennsylvania	6/12/2020	Vertex Prime - 2.5"
Natomas High School	Sacramento	California	6/12/2020	Revolution 360 - 2"
Amend Soccer Park	Billings	Montana	6/11/2020	Vertex Prime - 2"
Salesianum Abessinio Stadium	Wilmington	Delaware	6/11/2020	Vertex - 2"
Germantown Sister Field	Fort Washington	Pennsylvania	6/11/2020	Vertex - 2"
Perspectives Charter	Chicago	Illinois	6/11/2020	Vertex - 2"
Lindenhurst Middle School	Lindenhurst	New York	6/10/2020	Vertex - 2.25"
John G. Lancaster Park	Lexington Park	Maryland	6/9/2020	Classic HD - 2.5"
Naperville Central High School	Naperville	Illinois	6/9/2020	Vertex Prime - 2.5"
PSJA Southwest High School	Pharr	Texas	6/9/2020	XT - 2"
Winona State University	Winona	Minnesota	6/8/2020	Classic HD - 2.5"
Central Valley High School	Spokane Valley	Washington	6/8/2020	Vertex Prime - 2.5"
Unniversity of New Haven	West Haven	Connecticut	6/8/2020	Classic HD - 2.5"
Huntington High School	Huntington	West Virginia	6/8/2020	Classic HD - 2.5"
Husson University Boucher	Bangor	Maine	6/8/2020	Vertex - 2.25"

CCISD Clear Falls High School	League City	Texas	6/8/2020	Vertex - 2.5"
Hinsdale South High School	Darien	Illinois	6/8/2020	CORE - 2.5"
Hill REC Bocce Field	Novato	California	6/5/2020	GF-FRG-XM7-P
MWFT BB Replacements	Denison	Iowa	6/5/2020	XTHD - 2"
Chenango Forks CSD	Binghamton	New York	6/5/2020	Vertex - 2.25"
Hill REC Sports Field	Novato	California	6/5/2020	Vertex Prime - 2"
Therrell High School	Atlanta	Georgia	6/5/2020	CORE - 2.5"
Spring Branch ISD Spring Woods High School	Houston	Texas	6/5/2020	Classic HD - 2.5"
Ottawa University	Ottawa	Kansas	6/3/2020	XT - 2"
Cameron Stadium	Lawton	Oklahoma	6/3/2020	XT - 2.25"
Princeton High School	Princeton	North Carolina	6/2/2020	Revolution 360 - 2.5"
Pine Ridge Park Field #4	Annandale	Virginia	6/1/2020	Classic HD - 2.5"
East Islip High School	Islip Terrace	New York	6/1/2020	Vertex - 2.25"
Betty T Ferguson Park	Bayshore	New York	6/1/2020	XTHD - 2.25"
College of Dupage	Glen Ellyn	Illinois	6/1/2020	Vertex Prime - 2"
Sevilla Elementary School	Phoenix	Arizona	6/1/2020	Revolution 360 - 2.5"
City of Rome GA - Barron Stadium	Rome	Georgia	6/1/2020	Vertex Prime - 2.5"
Walnut Valley High School	Walnut	California	6/1/2020	Vertex Prime - 2.5"
Syracuse High School	Syracuse	Utah	6/1/2020	Vertex - 2.25"
Mays High School	Atlanta	Georgia	6/1/2020	Classic HD - 2.5"
Central Catholic High School	Pittsburg	Pennsylvania	6/1/2020	Classic HD - 2.5"
Bensenville Sports Complex - Field #2	Bensenville	Illinois	5/29/2020	XT - 2"
Whitefield Academy Stadium	Smyrna	Georgia	5/27/2020	CORE - 2.25"
Bensenville Sports Complex Indoor Batting Cage	Bensenville	Illinois	5/26/2020	VINTAGE40
Bensenville Sports Complex - Field #1	Bensenville	Illinois	5/26/2020	XT - 2"
LSD Lockwood High School	Lockwood	Montana	5/25/2020	XT - 2.25"
Esperanza High School	Anaheim	California	5/22/2020	Vertex Prime - 2.5"
Hamburg High School	Hamburg	Pennsylvania	5/21/2020	Vertex Prime - 2.25"
Harpeth Hall School	Nashville	Tennessee	5/20/2020	Vertex Prime - 2.25"
USAFA Prep Turf and track	Colorado Springs	Colorado	5/18/2020	Vertex - 2.5"
LCPS Light Ridge High School	Aldie	Virginia	5/18/2020	XM7
PWCS High School #13 Stadium	Manassass	Virginia	5/18/2020	XTHD - 2.25"
Frogtown Multi-Use Athletic Field	St-Paul	Minnesota	5/13/2020	XTHD - 2.25"
University of Northern Colorado Field #2	Greeley	Colorado	5/11/2020	Classic HD - 2.5"
Brockway High School	Brockway	Pennsylvania	5/11/2020	Classic HD - 2.5"
Redland High School - North Campus Field	Redlands	California	5/11/2020	Vertex Prime - 2.5"
Skidmore College	Saratoga Springs	New York	5/11/2020	Hockey Gold Speed
Spackenkill CSD Coop Dist	Poughkeepsie	New York	5/8/2020	Vertex Prime - 2.5"
East Central ISD Stadium	San Antonio	Texas	5/6/2020	Classic HD - 2.5"
Skidmore College	Saratoga Springs	New York	5/5/2020	Hockey Gold
SUNY Albany Alumni Field	Albany	New York	5/5/2020	Hockey Gold Speed
Hill REC Bocce Field	Novato	California	5/4/2020	GF-FRG-XM7-P
University of Northern Colorado Field #1	Greeley	Colorado	5/4/2020	Classic HD - 2.5"
Pajaro Valley High School	Watsonville	California	5/4/2020	Vertex - 2"
Holmdel Township Field #2	Holmdel	New Jersey	5/4/2020	Classic HD - 2"
Holmdel Township Field #1	Holmdel	New Jersey	5/4/2020	Classic HD - 2"
Blaine High School	Blaine	Washington	5/4/2020	Revolution 360 - 2.5"
Park River Community Complex Legion Field	Park River	North Dakota	5/1/2020	Vertex - 2"
Little Leaguers of Kenosha - Southwest Field	Kenosha	Wisconsin	5/1/2020	Classic HD - 2"
Evergreen Campus	Seattle	Washington	5/1/2020	Revolution 360 - 2.5"
West Jackson High School	Hoschton	Georgia	5/1/2020	Revolution 360 - 2.25"
Midland High School	Midland	Michigan	5/1/2020	XT - 2"
Ottawa University - Field #1	Ottawa	Kansas	5/1/2020	XT - 2"
Decatur Central High School	Indianapolis	Indiana	4/28/2020	CORE - 2.5"
Evanston Robert Crown Center	Evanston	Illinois	4/28/2020	Vertex - 2"
Adolfo Camarillo High School	Camarillo	California	4/27/2020	CORE - 2.5"
Hueneme High School	Oxnard	California	4/27/2020	CORE0
Pacifica High School	Oxnard	California	4/27/2020	CORE - 2.5"
Socorro ISD Field #1	El Paso	Texas	4/27/2020	Vertex - 2"
Socorro ISD Field #2	El Paso	Texas	4/27/2020	Vertex - 2"
May Whitney Elementary School	Lake Zurich	Illinois	4/24/2020	Revolution 360 - 2.5"
Betsy Head Park	Brooklyn	New York	4/22/2020	XT - 2"
Corona Del Mar	Newport Beach	California	4/20/2020	CORE - 2.5"
Randolph Macon Practice Field	Ashland	Ashland	4/20/2020	Classic HD - 2.5"
Saddleback College Stadium	Mission Viejo	California	4/20/2020	Revolution 360 - 2.5"
Merrillville High School	Merrillville	Indiana	4/17/2020	Revolution 360 - 2.5"
Mayflower Stadium	Mayflower	Arkansas	4/15/2020	XT - 2.25"
LeMoynes College	Johnson City	New York	4/15/2020	Hockey Gold
FDU Madison New Field and Track	Teaneck	New Jersey	4/14/2020	Classic HD - 2.25"
Epicenter - Sports City Coffey Field #1	Santa Rosa	California	4/13/2020	Classic HD - 2"
Mercyhurst U - New Field	Erie	Pennsylvania	4/13/2020	Vertex - 2.25"
University of Memphis	Memphis	Tennessee	4/13/2020	Vertex Prime - 2.25"
Munster High School - Practice Field	Munster	Indiana	4/8/2020	Revolution 360 - 2.5"
Munster High School - Stadium	Munster	Indiana	4/8/2020	Revolution 360 - 2.5"
Town of Irondequoit McAvoy Park	Irondequoit	New York	4/8/2020	VINTAGE40
Barnegat High School	Barnegat	New Jersey	4/7/2020	Vertex - 2.25"
Margaret Hayward Playground	San Francisco	California	4/6/2020	Vertex Prime - 2"

Thompson Valley High School	Loveland	Colorado	4/6/2020	Vertex Prime - 2.25"
Edison High School	Edison	New Jersey	4/1/2020	Vertex Prime - 2"
Monterey Peninsula	Monterey	California	3/31/2020	Vertex - 2"
El Camino High School	South San Francisco	California	3/31/2020	Vertex Prime - 2"
Academy of the New Church	Bryn Athyn	Pennsylvania	3/30/2020	CORE - 2"
South Valley Little League	Albuquerque	New Mexico	3/30/2020	VINTAGE40
Waters Edge	Playa Vista	California	3/30/2020	Revolution 360 - 2"
City of New Rochelle Flower Park - Field #1	New Rochelle	New York	3/30/2020	XT - 2"
City of New Rochelle Flower Park - Field #2	New Rochelle	New York	3/30/2020	XTHD - 2"
Celina High School - Field #2	Celina	Texas	3/30/2020	Vertex Prime - 2"
Lompoc High School	Lompoc	California	3/30/2020	CORE - 2.5"
Palmview High School	La Joya	Texas	3/30/2020	Vertex - 2.5"
CPD Jane Addams REC Center - Field #2	Chicago	Illinois	3/26/2020	XTHD - 2.5"
Douglas Park	Chicago	Illinois	3/24/2020	XT - 2.5"
TD Place Stadium	Ottawa	Ontario	3/23/2020	CORE - 2.5"
Corona Del Mar High School	Newport Beach	California	3/23/2020	CORE - 2.5"
CPD Jackson Park	Chicago	Illinois	3/23/2020	XTHD - 2.25"
Celina High School - Field #1	Celina	Texas	3/23/2020	Vertex Prime - 2"
Monsignor Pace High School	Miami	Florida	3/22/2020	Classic HD - 2.25"
Iowa West Sports Complex	Council Bluff	Iowa	3/20/2020	Vertex - 2.25"
Munster High School	Munster	Indiana	3/20/2020	Revolution 360 - 2.5"
Munster High School	Munster	Indiana	3/20/2020	Revolution 360 - 2.5"
University of Missouri	Kansas City	Missouri	3/19/2020	CORE - 2"
New York Giants	East Rutherford	New Jersey	3/17/2020	Classic HD - 2.25"
Lightridge High School	Aldie	Virginia	3/16/2020	XM7
Buford Legion Field #1	Buford	Georgia	3/16/2020	Vertex - 2"
Buford Legion Field #4	Buford	Georgia	3/16/2020	Vertex - 2"
Mount View High School	Welch	West Virginia	3/16/2020	XT - 2.5"
Waterford High School	Waterford	Connecticut	3/16/2020	XT - 2"
San Mateo County Youth Service Center	San Mateo	California	3/13/2020	XT - 2.25"
Novato High School	Novato	California	3/10/2020	Classic HD - 2"
Margaret Hayward	San Francisco	California	3/10/2020	Vertex Prime - 2"
Lake Park West High School	Roselle	Illinois	3/10/2020	XT - 2"
Bernard Brown Park	Uniondale	New York	3/9/2020	Classic HD - 2"
Pittsburg High School	Pittsburg	Kansas	3/9/2020	CORE - 2.25"
Dartmouth Indoor Fieldhouse	Hanover	New Hampshire	3/6/2020	Vertex - 2.25"
Buford High School	Buford	Georgia	3/6/2020	Vertex - 2"
Seguin High School - Matador Stadium	Seguin	Texas	3/6/2020	Vertex Prime - 2.5"
University of Florida - Stadium	Gainesville	Florida	3/5/2020	Classic HD - 2"
Cypress Park Woodbridge	Port Reading	New Jersey	3/4/2020	Classic HD - 2"
University of Florida - Batting Tunnels	Gainesville	Florida	3/3/2020	DPPE 5MM-FG DURAPLAY PREMIER
Lawrence Dumont Stadium	Wichita	Kansas	3/2/2020	VINTAGE40
Topeka Seaman High School	Topeka	Kansas	3/2/2020	Vertex Prime - 2.5"
Nike Headquarters Building 6	Beaverton	Oregon	3/2/2020	Revolution 360 - 2.5"
New Sherwood High School - Field #1	Sherwood	Oregon	2/28/2020	XTHD - 2.5"
New Sherwood High School - Field #2	Sherwood	Oregon	2/28/2020	XT - 2"
Lake Belton High School - Field #1	Belton	Texas	2/28/2020	XT - 2"
Bergen Catholic High School	Oradell	New Jersey	2/27/2020	CORE - 2.25"
Utah Valley University	Orem	Utah	2/27/2020	Vertex - 2"
HPAC	Salisbury	Maryland	2/26/2020	Classic HD - 2"
Norco College	Norco	California	2/24/2020	Revolution 360 - 2.25"
Medford Sports Complex Field #1	Medford	New York	2/24/2020	XT - 2"
Medford Sports Complex Field #2	Medford	New York	2/24/2020	XT - 2"
Moriches Athletic Complex Field #4	Coram	New York	2/24/2020	XT - 2"
Red Lion	Vincentown	New Jersey	2/24/2020	XTHD - 2"
Santa Barbara High School	Santa Barbara	California	2/24/2020	CORE - 2.5"
City of Margate - Southeast Park	Margate	Florida	2/21/2020	Classic HD - 2.25"
Monument Valley High School Field #1	Keyenta	Arizona	2/17/2020	Vertex - 2.25"
Monument Valley High School Field #2	Keyenta	Arizona	2/17/2020	Vertex - 2.25"
Lake Belton High School - Field #2	Belton	Texas	2/17/2020	XT - 2"
D'Ambola East Hanover	East Hanover	New Jersey	2/14/2020	Classic HD - 2.25"
Novato High School	Novato	California	2/14/2020	Vertex Prime - 2"
Saxon Wood Park	Yonkers	New York	2/14/2020	XT - 2"
Tibbetts Brook Park Field #1	Yonkers	New York	2/14/2020	XT - 2"
Tibbetts Brook Park Field #2	Yonkers	New York	2/14/2020	XT - 2"
Tibbetts Brook Park Field #3	Yonkers	New York	2/14/2020	XT - 2"
Draper Recreation Center	Draper	Utah	2/13/2020	Vertex - 2.25"
Texas A&M University	Corpus Christi	Texas	2/12/2020	Classic HD - 2.25"
Jose Marti Middle School	Elizabethport	New Jersey	2/10/2020	Classic HD - 2"
Ruben Ayala Park	Chino	California	2/10/2020	Classic HD - 2"
Ottawa University	Ottawa	Kansas	2/10/2020	Vertex - 2"
UIUC Irwin Indoor Expansion	Champaign	Illinois	2/10/2020	Classic HD - 2.5"
Civic Center	Santa Monica	California	2/10/2020	Vertex Prime - 2"
Comal ISD High School Field #1	New Braunfels	Texas	2/10/2020	VINTAGE45
Comal ISD High School Field #2	New Braunfels	Texas	2/10/2020	VINTAGE45
Lake Belton High School	Belton	Texas	2/10/2020	XM7 - 2.25"
Blacksburg High School	Blacksburg	Virginia	2/7/2020	XT - 2.25"

East Carolina University	Grenville	North Carolina	2/6/2020	DA50
Connetquot High School JR Varsity - Field #1	Bohemia	New York	2/3/2020	XT - 2"
Connetquot High School JR Varsity - Field #2	Bohemia	New York	2/3/2020	XT - 2"
Connetquot High School Varsity - Field #1	Bohemia	New York	2/3/2020	XT - 2"
Connetquot High School Varsity - Field #2	Bohemia	New York	2/3/2020	XT - 2"
USAFA Baseball acement	Colorado Springs	Colorado	1/29/2020	Vertex - 2"
Ottawa University Baseball	Ottawa	Kansas	1/27/2020	Vertex - 2"
Ottawa University - Field #2	Ottawa	Kansas	1/27/2020	XT - 2"
Morgan State University - Indoor	Baltimore	Maryland	1/27/2020	Hockey Gold
Woodbridge High School	Irvine	California	1/27/2020	CORE - 2.5"
Grove City High School Eagle Stadium	Grove City	Pennsylvania	1/24/2020	Classic HD - 2.25"
University of Houston	Houston	Texas	1/24/2020	Classic HD - 2.5"
Snook ISD Football	Snook	Texas	1/22/2020	XT - 2.5"
John J Burns Park	Masspequa Park	New York	1/20/2020	XT - 2"
Sulphur Park Pattison Field #2	Sulphur	Louisiana	1/20/2020	XT - 2"
Sulphur Park Pattison Field #4	Sulphur	Louisiana	1/20/2020	XT - 2"
Friends University Baseball Infield	Wichita	Kansas	1/20/2020	Vertex - 2"
Sulphur Park Pattison Field 1	Sulphur	Louisiana	1/20/2020	XT - 2"
Comal ISD High School	New Braunfels	Texas	1/20/2020	XM7 - 2.25"
Sterling High School Field #1	Baytown	Texas	1/20/2020	Classic HD - 2"
Miami 2020 Super Bowl Experience Indoor	Miami Beach	Florida	1/19/2020	XT - 2"
University of Virginia -The Park Rec Fields	Charlottesville	Virginia	1/18/2020	Classic HD - 2"
Buford Legion Baseball Field 2	Buford	Georgia	1/17/2020	Vertex - 2"
Smith Lake Park - Field #1	Stafford	Virginia	1/17/2020	XT - 2.25"
Smith Lake Park - Field #2	Stafford	Virginia	1/17/2020	XT - 2.25"
Hurlburt AFB Track Field	Hurlburt Field	Florida	1/16/2020	XT - 2.25"
Union County High School	Blairsville	Georgia	1/16/2020	CORE - 2.25"
Seaford High School	Seaford	New York	1/15/2020	Vertex - 2.25"
Starkville Academy	Starkville	Mississippi	1/13/2020	XT - 2"
William Chrisman High School	Independence	Missouri	1/13/2020	XT - 2"
Chatham University Graham Field	Wilkinsburg	Pennsylvania	1/13/2020	Vertex - 2.25"
Yucca Valley High School	Yucca Valley	California	1/13/2020	Revolution 360 - 2.5"
City of Midland Hogan Park SB Field 1	Midland	Texas	1/13/2020	Vertex - 2"
City of Midland Hogan Park SB Field 2	Midland	Texas	1/13/2020	Vertex - 2"
Lake Belton High School - Field #1	Temple	Texas	1/13/2020	XTHD - 1.7"
Lake Belton High School - Field #2	Temple	Texas	1/13/2020	XTHD - 1.7"
Robert E. Lee High School Field #2	Baytown	Texas	1/13/2020	Classic HD - 2"
Sterling High School Field #3	Baytown	Texas	1/10/2020	Classic HD - 2"
All Saints Catholic School	Jupiter	Florida	1/9/2020	XTHD - 2"
Hillsboro Stadium	Hillsboro	Oregon	1/9/2020	CORE - 2"
FNC Baseball Infield #10	Oxford	Mississippi	1/7/2020	Classic HD - 2"
FNC Baseball Infield #11	Oxford	Mississippi	1/7/2020	Classic HD - 2"
FNC Baseball Infield #12	Oxford	Mississippi	1/7/2020	Classic HD - 2"
FNC Baseball Infield #9	Oxford	Mississippi	1/7/2020	Classic HD - 2"
Sulphur Park Frasch Field #19	Sulphur	Louisiana	1/6/2020	XT - 2"
Sulphur Park Frasch Field #20	Sulphur	Louisiana	1/6/2020	XT - 2"
Hampton High School Stadium Field Henry County	Hampton Bay	Georgia	1/6/2020	Revolution 360 - 2.25"
City of Midland Hogan Park SB Field 3	Midland	Texas	1/6/2020	Vertex - 2"
City of Midland Hogan Park SB Field 4	Midland	Texas	1/6/2020	Vertex - 2"
RVC Sports Complex	Rockville Centre	New York	1/4/2020	XTHD - 2"
Gwen Cherry Park	Miami	Florida	1/3/2020	Classic HD - 2.25"
Piedmont Hills High School	San Jose	California	1/2/2020	Vertex - 2.25"
Georgetown Day School LMS Main Field	Washington	DC	1/1/2020	Classic HD - 2"
University High School	Morgantown	West Virginia	12/27/2019	Classic HD - 2"
Golden Eagle Regional Park Field #15	Sparks	Nevada	12/23/2019	XT - 2"
Golden Eagle Regional Park Infield 13	Sparks	Nevada	12/23/2019	XT - 2"
Golden Eagle Regional Park Infield 14	Sparks	Nevada	12/23/2019	XT - 2"
North Middle School	Everett	Washington	12/23/2019	Vertex - 2"
University of Southern Mississippi	Hattiesburg	Mississippi	12/23/2019	Vertex - 2"
Slater Elementary	Mountain View	California	12/23/2019	Classic HD - 2"
Kellenberg High School	Uniondale	New York	12/20/2019	Vertex - 2.25"
Goose Creek Memorial High School Field #3	Baytown	Texas	12/20/2019	Classic HD - 2"
Anderson University	Anderson	South Carolina	12/18/2019	XT - 2.5"
The Pingry School Driveway Field	Basking Ridge	New Jersey	12/18/2019	Classic HD - 2"
Golden Eagle Regional Park Infield 10	Sparks	Nevada	12/16/2019	XT - 2"
Golden Eagle Regional Park Infield 11	Sparks	Nevada	12/16/2019	XT - 2"
Golden Eagle Regional Park Infield 12	Sparks	Nevada	12/16/2019	XT - 2"
Pittsford Sports Authority	Rochester	New York	12/16/2019	XT - 2.25"
Everglades School	Ochopee	Florida	12/16/2019	Classic HD - 2"
Starfire Sports Field #10	Tukwila	Washington	12/16/2019	Classic HD - 2"
Buford Legion Field #3	Buford	Georgia	12/16/2019	Vertex - 2"
53rd Ave Park	Hillsboro	Oregon	12/16/2019	Vertex - 2.25"
Starfire Sports Field #9	Tukwila	Washington	12/16/2019	Classic HD - 2"
King Collegiate High School	San Lorenzo	California	12/16/2019	Vertex Prime - 2"
Hillcrest High School	Midvale	Utah	12/16/2019	Vertex - 2.25"
Mount Si High School	Snoqualmie	Washington	12/16/2019	Vertex - 2.25"
Puyallup Valley Sports Complex	Puyallup	Washington	12/16/2019	Vertex - 2.25"

Goose Creek Memorial High School - Field #1	Baytown	Texas	12/16/2019	Classic HD - 2"
Splendora ISD SB Infield	Splendora	Texas	12/16/2019	XT - 2"
Sulphur Parks McMurry Field #41	Sulphur	Louisiana	12/13/2019	XT - 2"
Oceanside High School	Oceanside	New York	12/13/2019	Vertex - 2"
Port Washington UFSD	Port Washington	New York	12/12/2019	XM7 - 2.25"
Tubman Elementary School	Washington	DC	12/12/2019	CORE - 2.5"
Sulphur Parks McMurry Field #40	Sulphur	Louisiana	12/11/2019	XT - 2"
Rutgers University	Piscataway	New Jersey	12/11/2019	Vertex - 2"
University of Minnesota - Gibson Nagurski Indoor	Minneapolis	Minnesota	12/11/2019	Classic HD - 2.25"
Inter Miami Beckham MLS Training Field	Miami	Florida	12/11/2019	Revolution 360 - 2.25"
Splendora ISD	Splendora	Texas	12/11/2019	XT - 2"
Lasalle Secondary School Sudbury	Sudbury	Ontario	12/9/2019	Classic HD - 2"
Wake Forest University	Winneapolis	New Jersey	12/9/2019	Vertex Prime - 2"
Concordia University - Field #2	Austin	Texas	12/9/2019	Classic HD - 2"
University of Louisville - Infield	Louisville	Kentucky	12/5/2019	Classic HD - 2"
Westminster School	Atlanta	Georgia	12/5/2019	Vertex Prime - 2.25"
Grace Place - Sports Field	Naples	Florida	12/4/2019	Classic HD - 2"
Ft Polk Multipurpose	Fort Polk	Louisiana	12/4/2019	Revolution 360 - 2.25"
St. Lucie Mets Agility Field	Port St. Lucie	Florida	12/3/2019	XTHD - 2"
St. Lucie Mets Batting Tunnels	Port St. Lucie	Florida	12/3/2019	VINTAGE40
Kent State University Field House	Kent	Ohio	12/3/2019	Vertex - 2"
James Madison University - Eagle Field	Harrisonburg	Virginia	12/3/2019	Vertex - 2"
Victor High School	Victor	New York	11/26/2019	Vertex Prime - 2.5"
City of Payson Rumsey North - Field #1	Payson	Arizona	11/25/2019	XM7 - 2"
City of Payson Rumsey North - Field #2	Payson	Arizona	11/25/2019	XM7 - 2"
Buford High School	Buford	Georgia	11/22/2019	Vertex - 2"
Mentor High School Varsity	Mentor	Ohio	11/22/2019	Vertex - 2"
Francis T. Maloney High School	Meriden	Connecticut	11/21/2019	Vertex - 2.5"
Aurora University	Montgomery	Illinois	11/21/2019	Vertex - 2"
Solon Recreation Center Field #3	Solon	Ohio	11/21/2019	Vertex - 2"
City of Midland Ulmer Park	Midland	Texas	11/21/2019	Vertex - 2"
PSJA Memorial High School - Softball	Alamo	Texas	11/21/2019	Vertex - 2"
CPD Jane Addams REC Center - Field #1	Chicago	Illinois	11/20/2019	XTHD - 2"
Ward Melville High School	Setauket East	New York	11/20/2019	Vertex - 2.25"
PSJA North High School - Field #1	Pharr	Texas	11/20/2019	Vertex - 2"
New Sherwood High School	Sherwood	Oregon	11/19/2019	Classic HD - 2.25"
Elizabeth Forward Stadium	Elizabeth	Pennsylvania	11/18/2019	Classic HD - 2.25"
Goulds Park -Football Field	Miami	Florida	11/18/2019	Classic HD - 2.25"
Morgantown High School	Morgantown	West Virginia	11/18/2019	Classic HD - 2.5"
Shoreline Middle School	Santa Cruz	California	11/18/2019	Classic HD - 2"
Stony Brook Indoor	Stony Brook	New York	11/18/2019	Revolution 360 - 2.5"
Piedmont College	Demorest	Georgia	11/18/2019	CORE - 2"
New Sherwood High School - Multiuse	Sherwood	Oregon	11/15/2019	XTHD - 2.5"
Hadley Park Soccer Field	Miami	Florida	11/15/2019	Revolution 360 - 2.25"
Muleshoe ISD	Muleshoe	Texas	11/15/2019	Revolution 360 - 2.5"
City of Bowie Allen Pond Park - Field #1	Bowie	Maryland	11/14/2019	CORE - 2"
Valley Stream Central High School	Valley Stream	New York	11/13/2019	XM7 - 2.25"
Brown Park - Outfield	Omaha	Nebraska	11/11/2019	XT - 2"
North Hall High School	Gainesville	Georgia	11/11/2019	Vertex - 2"
Our Lady of Lourdes High School	Poughkeepsie	New York	11/11/2019	Vertex Prime - 2.5"
Mount Si High School	Snoqualmie	Washington	11/11/2019	Vertex - 2.25"
Seton Hall University	South Orange	New Jersey	11/11/2019	Vertex Prime - 2"
PSJA Memorial High School - Baseball	Alamo	Texas	11/11/2019	XT - 2"
King Park	San Mateo	California	11/8/2019	Vertex Prime - 2"
ODU SRC Field	Norfolk	Virginia	11/8/2019	Vertex Prime - 2"
Orville H. Platt High School	Meriden	Connecticut	11/6/2019	Vertex - 2.5"
North Canton Hoover High School	North Canton	Ohio	11/6/2019	XM7 - 2.25"
Christian Brothers High School	Sacramento	California	11/5/2019	Revolution 360 - 2"
Choctaw Middle School	Choctaw	Oklahoma	11/4/2019	Classic HD - 2.25"
Mater Dei School	Bethesda	Maryland	11/4/2019	CORE - 2"
Idea Toros College Prep Soccer Field	Edinburg	Texas	11/4/2019	Revolution 360 - 2.5"
PSJA North High School - Field #2	Pharr	Texas	11/4/2019	XT - 2"
Holiday Park East Field	Ft. Lauderdale	Florida	11/1/2019	Classic HD - 2.25"
New Sherwood High School	Sherwood	Oregon	11/1/2019	Vertex - 2.25"
Crimson Cliffs High School	St. George	Utah	11/1/2019	Revolution 360 - 2.25"
Miami Beach Senior High School Stadium	Miami Beach	Florida	10/31/2019	XT - 2.25"
Susan B Anthony Elementary	Daly City	California	10/31/2019	Classic HD - 2"
Jefferson Junior High School	Woodridge	Illinois	10/30/2019	Classic HD - 2"
Community College of Baltimore County Dundalk	Dundalk	Maryland	10/29/2019	XT - 2.5"
St Helens Jr High School	St. Helens	Oregon	10/28/2019	XT - 2.25"
Chehalis Recreation Park Infield 1	Chehalis	Washington	10/28/2019	VINTAGE40
Chehalis Recreation Park Infield 2	Chehalis	Washington	10/28/2019	VINTAGE40
Chehalis Recreation Park Infield 3	Chehalis	Washington	10/28/2019	VINTAGE40
Chehalis Recreation Park Infield 4	Chehalis	Washington	10/28/2019	VINTAGE40
Sylvan Park Playfield	St. Paul	Minnesota	10/28/2019	XT - 2.25"
Santa Rosa Junior College	Santa Rosa	California	10/28/2019	Vertex Prime - 2.25"
Hollis-Brookline High School	Hollis	New Hampshire	10/25/2019	Vertex - 2"

SUNY Cortland Wallace	Cortland	New York	10/24/2019	Vertex - 2"
Lamar County High School Practice Field	Barnesville	Georgia	10/24/2019	Revolution 360 - 2.25"
Sandia High School	Albuquerque	New Mexico	10/23/2019	XT - 2"
West Point High School	Avondale	Arizona	10/23/2019	Revolution 360 - 2.5"
Ecole Cure Antoine Labelle	Laval	Quebec	10/21/2019	Vertex - 2.3"
Avon Softball Field	Avon	Ohio	10/21/2019	XT - 2"
Hall Park	Dixon	California	10/21/2019	Vertex Prime - 2.25"
Currey Ingram	Brentwood	Tennessee	10/21/2019	Revolution 360 - 2.25"
Minneapolis North High School	Minneapolis	Maine	10/17/2019	XT - 2.25"
Albert Lea High School	Albert Lea	Minnesota	10/15/2019	XT - 2"
Eastern Regional Park	Middle River	Maryland	10/15/2019	XTHD - 2.5"
Ward Melville High School - Field #1	East Setauket	New York	10/15/2019	XT - 2"
Ward Melville High School - Field #2	East Setauket	New York	10/15/2019	XT - 2"
Overland High School	Aurora	Colorado	10/15/2019	Vertex - 2.25"
New Verona - Lacrosse/Soccer Field	Verona	Wisconsin	10/14/2019	Revolution 360 - 2"
SUNY Oneonta	Oneonta	New York	10/11/2019	Vertex Prime - 2"
Holiday Park South - Multi Purpose Field	Ft. Lauderdale	Florida	10/11/2019	Classic HD - 2"
Mount Vernon Nazarene University	Mount Vernon	Ohio	10/9/2019	Revolution 360 - 2.25"
Philadelphia Union	Wayne	Pennsylvania	10/9/2019	Revolution 360 - 2"
Red Deer Baseball Dome	Red Deer Country	Alberta	10/7/2019	XT - 2"
Doddridge High School - Field #2	West Union	West Virginia	10/7/2019	Classic HD - 2"
Saddleback College - Practice Fields	Mission Viejo	California	10/7/2019	Revolution 360 - 2.5"
Mesquite ISD Horn High School	Mesquite	Texas	10/7/2019	Revolution 360 - 2.25"
Vestal CSD - Field #1	Vestal	New York	10/4/2019	Classic HD - 2"
Vestal CSD - Field #2	Vestal	New York	10/4/2019	Classic HD - 2"
Amend Soccer Geotech Proposal	Billings	Montana	10/3/2019	Vertex Prime - 2"
New Milford High School - Cafeteria Field	New Milford	New Jersey	10/1/2019	Vertex Prime - 2.25"
Smoky Hill High School	Aurora	Colorado	10/1/2019	Vertex - 2.25"
Othello Regional Park	Knoxville	Maryland	9/30/2019	Vertex Prime - 2.5"
Utica District Park	Frederick	Maryland	9/30/2019	Vertex Prime - 2.5"
Saghalie Park	Federal Way	Washington	9/30/2019	CORE - 2"
Patterson Mill High School	Bel Air	Maryland	9/25/2019	Vertex - 2.5"
CPD Ogden Park	Chicago	Illinois	9/24/2019	XT - 2.5"
Pickens High School	Jasper	Georgia	9/24/2019	Vertex - 2"
Silver Terrace	San Francisco	California	9/24/2019	Vertex Prime - 2"
Minnesota Mankato Sports Dome Field	Mankato	Minnesota	9/23/2019	XT - 2.5"
Romeoville High School JV - Field #2	Romeoville	Illinois	9/23/2019	Classic HD - 2"
Romeoville High School JV -Field #1	Romeoville	Illinois	9/23/2019	Classic HD - 2"
Lehi High School	Lehi	Utah	9/23/2019	Revolution 360 - 2.25"
Reed and Grant Park - Field #1	Santa Clara	California	9/23/2019	Revolution 360 - 2"
Reed and Grant Park - Field #3	Santa Clara	California	9/23/2019	Revolution 360 - 2"
Reed and Grant Park - Field #4	Santa Clara	California	9/23/2019	Revolution 360 - 2"
Reed and Grant Park - Field #5	Santa Clara	California	9/23/2019	Revolution 360 - 2"
Poteet High School	Mesquite	Texas	9/23/2019	Revolution 360 - 2.25"
Fargo North High School - Stadium	Fargo	North Dakota	9/20/2019	Vertex - 2.25"
Phoenix CSD High School	Phoenix	New York	9/19/2019	Vertex Prime - 2.5"
FCPA Nottoway Park Diamond #1	Vienna	Virginia	9/18/2019	XTHD - 2"
Whittier Regional Vocational School	Haverhill	Massachusetts	9/18/2019	Vertex - 2"
Marietta College Don Schaly Stadium	Marietta	Ohio	9/18/2019	Vertex - 2"
Conifer High School	Conifer	Colorado	9/17/2019	XT - 2"
Conifer High School	Conifer	Colorado	9/17/2019	XT - 2"
Bridgetown Regional Community School	Bridgetown	Nova Scotia	9/16/2019	Revolution 360 - 2.25"
Adlai Stevenson High School	Lincolnshire	Illinois	9/16/2019	CORE - 2.25"
Rutgers University	Piscataway	New Jersey	9/16/2019	Vertex Prime - 2"
Altimira Middle School	Sonoma	California	9/16/2019	Classic HD - 2"
Miller School	Charlottesville	Virginia	9/16/2019	Vertex - 2"
Tampa Preparatory School - Stadium	Tampa	Florida	9/16/2019	Classic HD - 2"
New Verona - Football Stadium	Verona	Wisconsin	9/13/2019	Revolution 360 - 2"
New Milford High School - Stadium	New Milford	New Jersey	9/12/2019	Vertex Prime - 2.25"
Baltimore NE Regional Rec Center	Parkville	Maryland	9/11/2019	XTHD - 2.5"
Woodinville High School	Woodinville	Washington	9/11/2019	Vertex - 2.25"
Allegany Limestone Central School District	Allegany	New York	9/10/2019	Vertex Prime - 2.25"
Foran High School	Milford	Connecticut	9/9/2019	XTHD - 2"
McKinley Athletic Facilities	Champaign	Illinois	9/9/2019	XT - 2.5"
City of Grass Valley - Memorial Park	Grass Valley	California	9/9/2019	Vertex Prime - 2"
Ackerman Park Soccer Fields	Glen Ellyn	Illinois	9/9/2019	Classic HD - 2.25"
Roosevelt Island Octagon Field	Roosevelt Island	New York	9/9/2019	Vertex - 2"
Grove City College	Grove city	Pennsylvania	9/9/2019	Vertex Prime - 2.25"
University of North Texas - Outdoor Practice	Denton	Texas	9/9/2019	Classic HD - 2.5"
North Mesquite High School	Mesquite, Dallas	Texas	9/6/2019	Revolution 360 - 2.25"
Paul VI Catholic High School Loudon Campus	Chantilly	Virginia	9/5/2019	XTHD - 2.25"
Eastside UHigh SchoolD Foothill High School	San Jose	California	9/5/2019	Vertex Prime - 2"
Cherry Crest Elementary School	Bellevue	Washington	9/3/2019	XTHD - 2.5"
Forest Hills High School Field #2	Sidman	Pennsylvania	9/3/2019	Classic HD - 2"
Mercyhurst University Field #2	Erie	Pennsylvania	9/3/2019	Vertex - 2.25"
Hendrix Park - Football Field	Ellabell	Georgia	9/3/2019	Vertex Prime - 2.25"
Kennewick High School South Field	Kennewick	Washington	9/3/2019	Revolution 360 - 2.5"



Terrain Soccer Royal Saint David	Quebec	Quebec	8/30/2019	XM
Seminary Park	Lutherville-Timonium	Maryland	8/30/2019	XT - 2.5"
Waterbury Municipal Stadium	Waterbury	Connecticut	8/30/2019	Vertex - 2.25"
East Carolina University - Field #2	Greenville	North Carolina	8/30/2019	Classic HD - 2.5"
Indian Creek High School	Wintersville	Ohio	8/30/2019	Vertex Prime - 2.25"
West Jefferson Middle School	Conifer	Colorado	8/30/2019	Vertex - 2.25"
Ewing Township High School	Ewing Township	New Jersey	8/30/2019	Revolution 360 - 2.25"
Easton Area High School	Easton	Pennsylvania	8/29/2019	Vertex Prime - 2"
Paul VI Catholic High School	Chantilly	Virginia	8/28/2019	Classic HD - 2"
Riverside High School	Belle	West Virginia	8/28/2019	Classic HD - 2.5"
Edgewood High School	Edgewood	Maryland	8/28/2019	Vertex - 2.25"
Indy Premier Soccer Club - Field #1	Noblesville	Indiana	8/27/2019	XM7 - 2"
Indy Premier Soccer Club - Field #2	Noblesville	Indiana	8/27/2019	XM7 - 2"
AISD Cooper High School - Field #2	Abilene	Texas	8/26/2019	XT - 2"
McMinnville Patton Field	McMinnville	Oregon	8/26/2019	XT - 2"
Pritzker School	Chicago	Illinois	8/26/2019	Vertex - 1.7"
Colorado Academy Baseball	Denver	Colorado	8/26/2019	VINTAGE40
Salt Lake Community College	West Jordan	Utah	8/26/2019	XT - 2"
Williamson College Harvey	Media	Pennsylvania	8/26/2019	Vertex - 2.25"
Lenape Valley High School - Field #1	Stanhope	New Jersey	8/26/2019	Vertex Prime - 2.25"
Lenape Valley High School - Field #2	Stanhope	New Jersey	8/26/2019	Vertex Prime - 2"
Kipp Stadium	Columbus	Ohio	8/26/2019	Revolution 360 - 2.5"
Rutgers Newark	Newark	New Jersey	8/26/2019	CORE - 2.25"
Spiritridge Elementary School	Bellevue	Washington	8/23/2019	XTHD - 2.5"
The Walker School	Marietta	Georgia	8/23/2019	Vertex Prime - 2.25"
University at Albany	Albany	New York	8/23/2019	Vertex Prime - 2.5"
Wilkes University	Wikes-Barre	Pennsylvania	8/23/2019	Vertex Prime - 2.5"
Ramsey High School Stadium	Ramsey	New Jersey	8/23/2019	Revolution 360 - 2.25"
University of North Texas - Indoor Practice	Denton	Texas	8/23/2019	Classic HD - 2.5"
Beacon High School Coop Dist	New York	New York	8/22/2019	Vertex - 2.5"
Indian Hills High School	Oakland	New Jersey	8/22/2019	Vertex Prime - 2.25"
Woodlawn High School	Gwynn Oak	Maryland	8/21/2019	XTHD - 2.5"
Cardinal Newman High School	Santa Rosa	California	8/21/2019	Vertex Prime - 2"
Forest Hills High School Field #1	Sidman	Pennsylvania	8/21/2019	Classic HD - 2.25"
Columbia University	New York	New York	8/20/2019	Vertex - 2"
Round Lake High School	Round Lake	Illinois	8/20/2019	Vertex Prime - 2.5"
AISD Cooper High School - Field #1	Abilene	Texas	8/19/2019	XT - 2"
Westport Staples High School - Stadium	Westport	Connecticut	8/19/2019	Vertex - 2"
Minnetonka High School Veterans Field	Minnetonka	Minnesota	8/19/2019	Classic HD - 2.5"
North Middle School	Everett	Washington	8/19/2019	Vertex - 2"
Thomas Proctor High School Coop Dist	Utica	New York	8/19/2019	XTHD - 2.25"
University of Charleston Welch	Charleston	West Virginia	8/19/2019	XT - 2"
Whitpain Twp Center Square Park	Blue Bell	Pennsylvania	8/19/2019	Vertex - 2"
Ramapo High School	Franklin Lakes	New Jersey	8/19/2019	Vertex Prime - 2.25"
University of Utah	Salt Lake City	Utah	8/19/2019	Vertex Prime - 2.25"
OSU Softball Field Conversion	Corvallis	Oregon	8/19/2019	Revolution 360 - 2.5"
Sallisaw Stadium	Sallisaw	Oklahoma	8/17/2019	Classic HD - 2.25"
Chippewa High School Memorial Park	Doylestown	Ohio	8/16/2019	XT - 2.25"
Choate Rosemary Hall	Wallingford	Connecticut	8/16/2019	Vertex Prime - 2.25"
Clyde Hill Elementary School	Bellevue	Washington	8/16/2019	XTHD - 2"
Laporte Middle School	Laporte	Indiana	8/16/2019	XT - 2.25"
Overlea High School	Baltimore	Maryland	8/16/2019	XT - 2.5"
Freedom High School - Stadium	South Riding	Virginia	8/16/2019	XM7 - 2.5"
FCPA Larry Graves Park Field #1	Falls Church	Virginia	8/15/2019	Classic HD - 2.5"
Queen Anne's County High School	Centreville	Maryland	8/15/2019	Classic HD - 2.5"
Upper Darby High School	Drexel Hill	Pennsylvania	8/15/2019	Vertex Prime - 2.25"
Minooka High School	Minooka	Illinois	8/15/2019	XM7 - 2.5"
Ardmore Elementary School	Bellevue	Washington	8/14/2019	XTHD - 2.5"
Kent Island High School	Stevensville	Maryland	8/14/2019	Classic HD - 2.5"
Sissonville High School	Sissonville	West Virginia	8/14/2019	Classic HD - 2.5"
Park Center High School - Field #1	Minneapolis	Maryland	8/14/2019	Vertex Prime - 2.5"
NSC Multi Purpose Field	Blaine	Maryland	8/14/2019	XM7 - 2.25"
High Point University	High Point	North Carolina	8/13/2019	XTHD - 2.25"
Campbell County High School	Gillette	Wyoming	8/13/2019	Revolution 360 - 2.25"
Horseshoe Lake Roxbury	Succasunna	New Jersey	8/13/2019	XM - 2.25"
BISD Burlson High School MPI	Burlson	Texas	8/12/2019	Revolution 360 - 2.5"
American Fork High School	American Fork	Utah	8/12/2019	Revolution 360 - 2.25"
Ashburnham-Oakmont	Westminster	Massachusetts	8/12/2019	Vertex Prime - 2.25"
Athens High School - Stadium	Athens	Alabama	8/12/2019	Vertex - 2.25"
Valley Stream SD North High School	Valley Stream	New York	8/12/2019	XM7 - 2.25"
Trinity Christian School - Stadium	Lubbock	Texas	8/12/2019	Vertex - 2"
Byram Hills High School Coop Dist	Armonk	New York	8/9/2019	XT - 2.25"
The Governors Academy	Byfield	Massachusetts	8/9/2019	Vertex - 2.5"
GWU Barcroft Park	Arlington	Virginia	8/9/2019	Classic HD - 2"
Irondequoit Sports Center	Rochester	New York	8/9/2019	XTHD - 2.5"
Hanover High School	Hanover	New Hampshire	8/9/2019	Vertex Prime - 2.5"
Ridgewood High School	Ridgewood	New Jersey	8/9/2019	Vertex Prime - 2.25"

Monmouth Regional High School	Tinton Falls	New Jersey	8/9/2019	XM7 - 2.25"
Northport Multi Purpose Field	Northport	New York	8/9/2019	XM7 - 2.25"
AISD Shotwell Annex Football	Abilene	Texas	8/8/2019	Vertex - 2.25"
Western Boone High School	Thorntown	Indiana	8/8/2019	Classic HD - 2.25"
Loomis Chaffee	Windsor	Connecticut	8/8/2019	Vertex - 2.25"
Minnetonka High School - Upper South	Minnetonka	Minnesota	8/8/2019	XT - 2.25"
Albert Lea High School	Albert Lea	Minnesota	8/8/2019	XM7 - 2.25"
Bernard Zell Anshe Emet Day School	Chicago	Illinois	8/7/2019	Classic HD - 2"
FCPS Westfield High School Practice	Chantilly	Virginia	8/7/2019	XTHD - 2.5"
Voorhees High School	Glen Gardner	New Jersey	8/7/2019	Revolution 360 - 2.25"
Diablo Vista Middle School	Danville	California	8/6/2019	Vertex Prime - 2.25"
Bolingbrook High School Varsity - Field #1	BoilingBrook	Illinois	8/6/2019	Classic HD - 2"
Greenwich Country Day School	Greenwich	Connecticut	8/6/2019	Vertex - 2"
Bolingbrook High School Varsity - Field #2	BoilingBrook	Illinois	8/6/2019	Classic HD - 2"
Briar Woods High School Stadium	Ashburn	Virginia	8/6/2019	XM7 - 2.5"
University School of Jackson	Jackson	Tennessee	8/6/2019	XM7 - 2.25"
Sterling High School Field #2	Baytown	Texas	8/6/2019	Classic HD - 2.25"
Northwestern Lehigh High School	New Tripoli	Pennsylvania	8/5/2019	Classic HD - 2.5"
Life Time Sports - Field #1	Edian	Minnesota	8/5/2019	Vertex Prime - 2"
Spring Lake Park High School - Practice Field	Spring Park	Minnesota	8/5/2019	Vertex Prime - 2.5"
Union High School	Camas	Washington	8/5/2019	Vertex - 2.25"
St Croix Valley REC Facility	Stillwater	Minnesota	8/5/2019	Revolution 360 - 2.5"
Grant Elementary School	San Jose	California	8/3/2019	Vertex Prime - 2"
Bethany Lutheran College	Mankato	Minnesota	8/2/2019	Vertex - 2"
Platteville Elementary	Platteville	Colorado	8/2/2019	Vertex - 2"
Fairless High School Stadium	Navarre	Ohio	8/2/2019	XT - 2.25"
New Town High School	Owings Mills	Maryland	8/2/2019	XT - 2.5"
Lander Valley High School	Lander	Wyoming	8/2/2019	Vertex - 2.25"
Westlane Secondary School	Niagara Falls	Ontario	8/1/2019	Vertex - 2.25"
Elgin Public Schools	Elgin	Oklahoma	8/1/2019	Classic HD - 2.25"
Redwood High School Moody Field	Larkspur	California	8/1/2019	Vertex - 2"
Glennwood High School	Glenwood	Iowa	8/1/2019	Vertex - 2.25"
Northern Valley Demarest	Demarest	New Jersey	8/1/2019	Revolution 360 - 2"
Mercyhurst University Field #1	Erie	Pennsylvania	7/31/2019	Vertex - 2.25"
Glacier Site New Middle School	SeaTac	Washington	7/31/2019	Vertex - 2.25"
North Schuylkill High School	Ashland	Pennsylvania	7/31/2019	Vertex Prime - 2.25"
Kamiak High School	Mukilteo	Washington	7/31/2019	Revolution 360 - 2.25"
Robert E. Lee High School Field #1	Baytown	Texas	7/31/2019	Classic HD - 2.25"
Cardinal Mooney High School	Sarasota	Florida	7/30/2019	Classic HD - 2.25"
Centenary Baseball	Centenary	New Jersey	7/30/2019	XT - 2"
Downers Grove South High School Practice	Downers Grove	Illinois	7/30/2019	XTHD - 2.5"
Loyola University Recreation Field	Chicago	Illinois	7/29/2019	Classic HD - 2"
San Lorenzo Valley High School	Felton	California	7/29/2019	Vertex Prime - 2"
Scotia-Glenville Central School District	Scotia	New York	7/29/2019	Vertex - 2.25"
Northern Valley Old Tappan	Old Tappan	New Jersey	7/29/2019	Revolution 360 - 2"
Timpanogos High School	Orem	Utah	7/29/2019	Revolution 360 - 2.25"
Wayne Valley High School	Wayne	New Jersey	7/29/2019	Revolution 360 - 2.25"
LA Southwest College	Los Angeles	California	7/29/2019	CORE - 2.5"
Mann Elementary	Washington	DC	7/29/2019	CORE - 2.5"
University of Rhode Island	Kingston	Rhode Island	7/29/2019	CORE - 2.25"
Columbia Heights Educational Campus	Washington	DC	7/26/2019	CORE - 2.5"
Tamarac Soccer Field # 4	Tamarac	Florida	7/26/2019	Classic HD - 2.25"
IMMACULATE HEART ACADEMY	Township of Washington	New Jersey	7/26/2019	MULTI50
Seton Catholic Central High School	Binghamton	New York	7/26/2019	Vertex Prime - 2.5"
Vestal CSD Stadium	Vestal	New York	7/26/2019	Vertex Prime - 2.5"
Fair Lawn Center Rec MP	Fairlawn	New Jersey	7/26/2019	Revolution 360 - 2"
The College of New Jersey	Ewing Township	New Jersey	7/26/2019	CORE - 2"
Creighton University	Omaha	Nebraska	7/25/2019	CORE - 2"
Claremont Middle School	Oakland	California	7/25/2019	Classic HD - 2"
Gillette College	Gillette	Wyoming	7/25/2019	Revolution 360 - 2.25"
AISD Abilene High School - Field #1	Abilene	Texas	7/24/2019	XT - 2"
Bald Eagle High School	Bellefonte	Pennsylvania	7/24/2019	Vertex Prime - 2.25"
Wachusett High School	Holden	Massachusetts	7/24/2019	Vertex - 2"
Northbrook Park District	Northbrook	Illinois	7/24/2019	Classic HD - 2"
Yelm High School Stadium	Yelm	Washington	7/24/2019	Revolution 360 - 2.5"
Eldorado High School	Albuquerque	New Mexico	7/24/2019	XT - 2.25"
River View High School Stadium	Bradshaw	West Virginia	7/24/2019	XT - 2.5"
Stanwood High School	Stanwood	Washington	7/24/2019	CORE - 2.5"
Glenvar High School	Salem	Virginia	7/23/2019	Classic HD - 2.5"
Legion Field Stadium	Birmingham	Alabama	7/23/2019	Revolution 360 - 2.5"
BCISD Bay City - Stadium	Bay City	Texas	7/22/2019	Vertex Prime - 2.5"
Dougherty Valley High School	San Ramon	California	7/22/2019	Vertex Prime - 2.25"
Westport Wakeman	Westport	Connecticut	7/22/2019	Vertex - 2"
Southampton UFSD	South Hampton	New York	7/22/2019	Vertex - 2.25"
Yorba Linda High School	Yorba Linda	California	7/22/2019	Vertex Prime - 2.5"
Rubidoux High School	Riverside	California	7/22/2019	CORE - 2.5"
University of Toledo	Toledo	Ohio	7/22/2019	CORE - 2.25"

Alden Central School District	Alden	New York	7/19/2019	Vertex Prime - 2.5"
CLK Calumet Public School	Calumet	Michigan	7/19/2019	Revolution 360 - 2.25"
Trinity University - Stadium	San Antonio	Texas	7/19/2019	Vertex Prime - 2.5"
Old Dominion University - Stadium	Norfolk	Virginia	7/18/2019	Classic HD - 2.25"
Nonnewaug High School	Woodbury	Connecticut	7/18/2019	Vertex - 2.5"
CPS Esmond Elementary	Chicago	Illinois	7/18/2019	MULTI45
Metro Lawrence Townships Central	Indianapolis	Indiana	7/18/2019	Vertex - 2.25"
Pleasant Valley High School	Broadheadville	Pennsylvania	7/18/2019	Vertex - 2.25"
Mountain Ridge High School	Herriman	Utah	7/18/2019	Revolution 360 - 2.25"
AISD Abilene High School - Field #2	Abilene	Texas	7/17/2019	XT - 2"
Del Rio Middle School	Del Rio	Texas	7/17/2019	XM7 - 2.25"
Anne Darling Elementary School	San Jose	California	7/17/2019	Vertex Prime - 2"
University of Illinois	Champaign	Illinois	7/17/2019	Classic HD - 2.5"
Western New England University	Springfield	Massachusetts	7/17/2019	Classic HD - 2.5"
Heritage High School	Vancouver	Washington	7/17/2019	Vertex - 2.25"
Vestal CSD Stadium	Johnson City	New York	7/17/2019	Vertex Prime - 2.5"
Saraland High School	Saraland	Alabama	7/17/2019	CORE - 2.25"
Bozeman High School Van Winkle	Bozeman	Montana	7/16/2019	Vertex Prime - 2.25"
Wayzata Central Middle School	Plymouth	Minnesota	7/16/2019	Classic HD - 2.5"
Leland High School - Field #2	San Jose	California	7/16/2019	Vertex Prime - 2"
Complexe Sportif Alphonse Desjardins	Trois-Rivieres	Quebec	7/15/2019	Revolution 360 - 1.7"
Burlingame High School	Burlingame	California	7/15/2019	Vertex Prime - 2"
Golden Gate High School	Naples	Florida	7/15/2019	Classic HD - 2.25"
Green Farms Academy	Green Farms	Connecticut	7/15/2019	Vertex Prime - 2"
Metro Lawrence Townships North	Indianapolis	Indiana	7/15/2019	Vertex - 2.25"
Centereach Stadium	Centereach	New York	7/15/2019	XT - 2.25"
Sea Cloud Park	Foster City	California	7/15/2019	Vertex Prime - 2"
Sportsfield Park	Newark	California	7/15/2019	Vertex Prime - 2"
Washington Elementary School	San Jose	California	7/15/2019	Vertex Prime - 2"
Caperton Indoor	Morgantown	West Virginia	7/15/2019	Revolution 360 - 2.5"
Monroe High School	Monroe	Washington	7/15/2019	Revolution 360 - 2.5"
New Providence High School	New Providence	New Jersey	7/15/2019	Revolution 360 - 2.25"
Presque Isle Middle School	Presque Isle	Maine	7/15/2019	Revolution 360 - 2"
Wayne Hills High School	Wayne	New Jersey	7/15/2019	Revolution 360 - 2.25"
Newfield Stadium	Seldon	New York	7/15/2019	XT - 2.25"
Souderton Area High School Stadium	Souderton	Pennsylvania	7/15/2019	XT - 2.25"
Goose Creek Memorial High School Field #2	Baytown	Texas	7/15/2019	Classic HD - 2.25"
Wilson Senior High School	Washington	DC	7/15/2019	CORE - 2.5"
Celina High School - D Zone	Celina	Texas	7/12/2019	XM7 - 2.5"
Empire Gardens Elementary School	San Jose	California	7/12/2019	Vertex Prime - 2"
Gardner Elementary School	San Jose	California	7/12/2019	Vertex Prime - 2"
Sage Park Scalise Field	Berlin	Connecticut	7/12/2019	Vertex - 2"
Horace Mann Elementary School	San Jose	California	7/12/2019	Vertex Prime - 2"
Lowell Elementary School	San Jose	California	7/12/2019	Vertex Prime - 2"
Spring Lake Park High School - Stadium	Spring Park	Minnesota	7/12/2019	Vertex Prime - 2.5"
Sparta High School	Sparta Township	New Jersey	7/12/2019	Vertex - 2.25"
Livonia CSD Coop Dist	Livonia	New York	7/12/2019	XTHD - 2"
Johns Creek High School Fulton County	Johns Creek	Georgia	7/12/2019	CORE - 2.25"
Morgan State University - Stadium	Baltimore	Maryland	7/11/2019	Revolution 360 - 2.5"
AISD Cooper High School Football	Abilene	Texas	7/10/2019	Vertex - 2.25"
Austin Achieve High School	Austin	Texas	7/10/2019	Vertex Prime - 2.5"
Youngs Sportsplex	Welland	Ontario	7/10/2019	Revolution 360 - 2.25"
Canlan Wolfedale - Multisport 2	Mississauga	Ontario	7/10/2019	XTHD - 2.25"
FCPA Lee District Park #4	Alexandra	Virginia	7/10/2019	Classic HD - 2.5"
Montclair Mountainside Park Infield	Upper Montclair	New Jersey	7/10/2019	Classic HD - 2"
Niles North High School	Skokie	Illinois	7/10/2019	Vertex Prime - 2.5"
Northeastern University - Parsons Field	Brookline	Massachusetts	7/10/2019	Vertex Prime - 2"
Scotia Glenville CSD LM	Johnson City	New York	7/10/2019	Vertex Prime - 2.25"
Warren Hills High School	Washington	New Jersey	7/10/2019	Vertex Prime - 2.25"
Greendale High School	Greendale	Wisconsin	7/10/2019	Revolution 360 - 2.25"
Toms River High School East	Tomas Rivers	New Jersey	7/10/2019	Revolution 360 - 2.25"
University of Michigan Elbel Field	Ann Arbor	Michigan	7/10/2019	XTHD - 2"
Towns County High School	Hiawassee	Georgia	7/10/2019	CORE - 2.25"
Astoria Park	Astoria	New York	7/9/2019	XT - 2"
Hickory High School	Hermitage	Pennsylvania	7/9/2019	XT - 2"
Kolm Memorial Park	Hicksville	New York	7/9/2019	XTHD - 2.25"
Roosevelt Senior High School	Washington, DC	Maryland	7/9/2019	CORE - 2.5"
Okoboji High School - Stadium	Milford	Iowa	7/8/2019	Vertex - 2.5"
Interlake High School	Bellevue	Washington	7/8/2019	Vertex - 2.25"
Saraland Indoor Facility	Saraland	Alabama	7/8/2019	Vertex Prime - 2.25"
Sammamish High School	Bellevue	Washington	7/8/2019	Vertex - 2.25"
Xavier High School	Cedar Rapids	Iowa	7/8/2019	Vertex - 2.25"
Desert Hills High School	St. George	Utah	7/8/2019	Revolution 360 - 2.25"
Estancia High School	Costa Mesa	California	7/8/2019	Revolution 360 - 2.5"
Monrovia High School	Monrovia	California	7/8/2019	Revolution 360 - 2.5"
Helena High School	Helena	Alabama	7/8/2019	XM7 - 2.25"
South Meadows Middle School	Hillboro	Oregon	7/8/2019	XM7 - 2"

Wagner College Field Hockey	Staten Island	New York	7/8/2019	Hockey Gold
Wagner College	Staten Island	New York	7/8/2019	Hockey Gold Speed
Bakersfield College	Bakersfield	California	7/5/2019	CORE - 2.5"
West Fargo Sheyenne	West Fargo	North Dakota	7/5/2019	Vertex - 2.25"
University of Iowa - Kinnick Stadium	Iowa City	Iowa	7/5/2019	Revolution 360 - 2.5"
Osseo High School - Field #2	Maple Grove	Minnesota	7/4/2019	Vertex Prime - 2.5"
Osseo High School - Field #1	Maple Grove	Minnesota	7/4/2019	Vertex Prime - 2.5"
Shaler Biles Field	Pittsburgh	Pennsylvania	7/3/2019	Vertex Prime - 2.25"
Westfield Kehler Stadium	Westfield	New Jersey	7/3/2019	Vertex - 2.25"
Marietta High School NorthCutt Stadium	Marietta	Georgia	7/3/2019	Revolution 360 - 2.25"
FCPA Nottoway Park Diamond #5	Vienna	Virginia	7/3/2019	XTHD - 2"
Tri Cities High School	East Point	Georgia	7/3/2019	CORE - 2.25"
Pinecrest Academy Stadium	Cumming	Georgia	7/2/2019	DA57
University of Oregon	Eugene	Oregon	7/2/2019	Vertex Prime - 2.5"
AISD Shotwell Stadium	Abilene	Texas	7/1/2019	Vertex Prime - 2.25"
El Toro High School	Lake Forest	California	7/1/2019	CORE - 2.5"
Allen Park Phase 2 - Field #1	Farmingdale	New York	7/1/2019	Classic HD - 2"
Olympic Park - Field #3	Schaumburg	Illinois	7/1/2019	Vertex Prime - 2"
Olympic Park - Field #1	Schaumburg	Illinois	7/1/2019	Vertex Prime - 2"
Olympic Park - Field #2	Schaumburg	Illinois	7/1/2019	Vertex Prime - 2"
South Jefferson CSD	Adams	New York	7/1/2019	Vertex Prime - 2.5"
Walpole High School	Walpole	Massachusetts	7/1/2019	Vertex Prime - 2.25"
Kamiak High School	Mukilteo	Washington	7/1/2019	Revolution 360 - 2.5"
North Hunterdon High School	Annandale	New Jersey	7/1/2019	Revolution 360 - 2.25"
Franklin High School	Reisterstown	Maryland	7/1/2019	XTHD - 2.5"
Stephen Decatur High School	Berlin	Maryland	7/1/2019	XM7 - 2.5"
Romeoville High School	Romeoville	Illinois	7/1/2019	CORE - 2.5"
Kinkaid School - Field #1	Houston	Texas	7/1/2019	Classic HD - 2"
Fort Hill High School	Cumberland	Maryland	6/28/2019	Vertex Prime - 2.5"
University of Minnesota - Half Practice Bierman Field	Minneapolis	Minnesota	6/28/2019	Classic HD - 2.5"
Park High School - Stadium	Cottage Grove	Minnesota	6/28/2019	Vertex Prime - 2.5"
Conotton Vally High School	Bowerston	Ohio	6/28/2019	Revolution 360 - 2.5"
Dumont High School	Dumont	New Jersey	6/28/2019	Revolution 360 - 2.25"
Kennedy Park MP	Hempstead	New York	6/28/2019	XT - 2.25"
Banneker High School	Atlanta	Georgia	6/27/2019	CORE - 2.25"
West Mifflin High School	West Mifflin	Pennsylvania	6/27/2019	Classic HD - 2.5"
Notre Dame New Indoor Practice Facility	Notre Dame - St. Joseph	Indiana	6/27/2019	Revolution 360 - 2.5"
Allen Park Phase 2	Farmingdale	New York	6/27/2019	XTHD - 2.25"
FCPA Greenbrier Park Field #5	Chantilly	Virginia	6/26/2019	Classic HD - 2.5"
St Marys High School Annapolis	Colorado Springs	Colorado	6/26/2019	Vertex - 2.25"
Toms River High School South	Toms River	New Jersey	6/26/2019	Revolution 360 - 2.25"
Sto Rox High School	McKees Rocks	Pennsylvania	6/26/2019	XTHD - 2.25"
Henry Sibley High School	Mendota Heights	Minnesota	6/26/2019	XM7 - 2.25"
AISD Abilene High School - Field #3	Abilene	Texas	6/25/2019	Vertex - 2.25"
Complexe Sportif Marie Victorin	Montreal	Quebec	6/25/2019	Vertex - 2.3"
James Griffin Stadium	St. Paul	Minnesota	6/25/2019	Vertex - 2"
Bolingbrook High School	BoilingBrook	Illinois	6/24/2019	CORE - 2.5"
Coronado High School	Coronado	California	6/24/2019	Vertex Prime - 2.5"
Cumberland Valley Eagle View Middle School	Mechanicsburg	Pennsylvania	6/24/2019	Vertex Prime - 2.5"
Harvard Westlake Middle School	Los Angeles	California	6/24/2019	Vertex Prime - 2.5"
East Carolina University - Field #1	Greenville	North Carolina	6/24/2019	Classic HD - 2.5"
La Jolla Country Day School	La Jolla	California	6/24/2019	Vertex Prime - 2"
Kingston CSD Practice Field	Kingston	New York	6/24/2019	Classic HD - 2.5"
Lockport CSD	Lincoln	New York	6/24/2019	Vertex - 2.25"
West Des Moines Valley High School	Des Moines	Iowa	6/24/2019	Vertex Prime - 2.5"
Copley High School	Akron	Ohio	6/24/2019	Revolution 360 - 2.5"
Herriman High School	Herriman	Utah	6/24/2019	Revolution 360 - 2.25"
James Madison University Rec Field	Harrisonburg	Virginia	6/24/2019	XT - 2.5"
James Logan High School	Union City	California	6/24/2019	XM7 - 2"
Pulaski Stadium	Milwaukie	Wisconsin	6/24/2019	XT - 2.25"
Farmingdale State College	Farmingdale	New York	6/21/2019	XTHD - 2.25"
Windsor High School	Windor	California	6/21/2019	CORE - 2"
Alami Heights - Cambridge Elementary School	San Antonio	Texas	6/20/2019	XM7 - 2.5"
Cedar Grove Panther Park	Cedar Grove	New Jersey	6/20/2019	Classic HD - 2"
Saint Thomas Academy	Mendota Heights	Minnesota	6/20/2019	Classic HD - 2.5"
Rhodes Jordan Park	Lawrence Ville	Georgia	6/20/2019	DA65
Terra Nova High School	Pacifica	California	6/20/2019	Vertex Prime - 2"
Wantagh High School	Wantagh	New York	6/20/2019	Vertex - 2.25"
Loudoun United Stadium	Leesburg	Virginia	6/20/2019	Revolution 360 - 2.25"
Baldwin Park Field #2	Baldwin	New York	6/20/2019	XT - 2"
National Sports Center - Indoor Field	Blaine	Minnesota	6/20/2019	CORE - 2"
Graham Reservoir	Mountain View	California	6/19/2019	Classic HD - 2.25"
Crown Point football	Crown Point	Illinois	6/19/2019	Revolution 360 - 2.5"
Maple Grove Fernbrook	Maple Grove	Minnesota	6/18/2019	Vertex Prime - 2.5"
Coolidge High School Stadium	Washington	DC	6/18/2019	Revolution 360 - 2.5"
Westlane Secondary School	Niagara Falls	Ontario	6/17/2019	Vertex - 2.25"
Jefferson High School	Daly City	California	6/17/2019	Vertex Prime - 2"

McMinnville High School	McMinnville	Oregon	6/17/2019	Classic HD - 2.5"
Jack Miller Stadium Martinelli	Ashland	Ohio	6/17/2019	XM7 - 2.25"
Hall High School - Stadium	West Hartford	Connecticut	6/17/2019	Vertex - 2.25"
Canby High School	Canby	Oregon	6/17/2019	XT - 2.5"
United States Air Force Academy-Turf and Track	Colorado Springs	Colorado	6/16/2019	Vertex - 2.5"
Merritt Field Cresskill	Cresskill	New Jersey	6/14/2019	Classic HD - 2"
Sutton Middle School Sidelines	Atlanta	Georgia	6/14/2019	Revolution 360 - 2.5"
Toms River High School North	Toms River	New Jersey	6/14/2019	Revolution 360 - 2.25"
Kosciuszko Soccer Park	Chicago	Illinois	6/14/2019	XT - 2"
Cegep de Trois Rivieres	Trois-Rivieres	Quebec	6/13/2019	Vertex - 2.3"
Fairmont State University	Fairmont	West Virginia	6/13/2019	Classic HD - 2.5"
Virginia Military Institute	Lexington	Virginia	6/13/2019	CORE - 2"
Hoffman Estates High School	Hoffman Estates	Illinois	6/11/2019	Vertex Prime - 2.5"
Justin Siena High School	Napa	California	6/11/2019	Vertex Prime - 2.25"
West Morris Mendham High School	Mendham	New Jersey	6/11/2019	VINTAGE45
United States Coast Guard Academy	New London	Connecticut	6/11/2019	Classic HD - 2.5"
Seattle Seahawks - Century Link Field 2019	Seattle	Washington	6/11/2019	Revolution 360 - 2.5"
Chaminade College Preparatory Stadium	West Hills	California	6/10/2019	Vertex Prime - 2.25"
Santa Teresa High School	San Jose	California	6/10/2019	Vertex - 2.25"
Bonita High School	La Verne	California	6/10/2019	Classic HD - 2.5"
Jefferson County School	Charles Town	West Virginia	6/10/2019	Classic HD - 2.5"
Neshannock High School Field #1	New Castle	Pennsylvania	6/10/2019	Classic HD - 2.5"
Neshannock High School Field #2	New Castle	Pennsylvania	6/10/2019	Classic HD - 2"
Todd Field Hastings High School	Hastings	Minnesota	6/10/2019	Vertex - 2.5"
Treadwell Park	Sandy Hook	Connecticut	6/10/2019	Classic HD - 2.5"
Palatine High School	Palatine	Illinois	6/10/2019	Vertex Prime - 2.5"
Inderkum High School	Sacramento	California	6/10/2019	Revolution 360 - 2"
James Madison University Stadium	Harrisonburg	Virginia	6/10/2019	Revolution 360 - 2.5"
Lake Forest High School Football	Lake Forest	Illinois	6/10/2019	Revolution 360 - 2.5"
Matchpoint NY Pitch	Brooklyn	New York	6/10/2019	XT - 2"
North Springs Charter High School	Sandy Springs	Georgia	6/10/2019	CORE - 2.25"
Wellness and Events Center	Newark	New Jersey	6/10/2019	CORE - 2.25"
Burleson ISD Elks Stadium	Burleson	Texas	6/7/2019	Revolution 360 - 2.5"
Center High School	Antelope	California	6/7/2019	Vertex Prime - 2"
Caledonia Mumford High School Coop Dist	Caledonia	New York	6/7/2019	Vertex - 2.25"
West Fargo Packer Field	West Fargo	North Dakota	6/6/2019	Vertex - 2.25"
Navy Marine Corps Memorial Stadium	Annapolis	Maryland	6/6/2019	CORE - 2.5"
Complexe Val des Arbres	Laval	Quebec	6/5/2019	Vertex - 2.3"
Break Away Sports Field 1	Madison	Wisconsin	6/5/2019	XT - 2"
Break Away Sports Field 2	Madison	Wisconsin	6/5/2019	XT - 2"
Cooperstown All Star - LA Dodgers Field	New York	New York	6/4/2019	XTHD - 2"
Celina High School	Celina	Texas	6/3/2019	Classic HD - 2.5"
Howard County - Troy Park	Elkridge	Maryland	6/3/2019	CORE - 2.5"
Landon School Stadium	Bethesda	Maryland	6/3/2019	CORE - 2"
St Ignatius College Prep	San Francisco	California	6/3/2019	XM7 - 2.25"
Bolsa Grande High School	Garden Grove	California	6/3/2019	Revolution 360 - 2.5"
Barrington High School	Barrington	Illinois	6/3/2019	Vertex Prime - 2.5"
Coyer Field LM	Johnson City	New York	6/3/2019	Vertex Prime - 2.25"
Douglas High School	Douglas	Wyoming	6/3/2019	Vertex Prime - 2.25"
Dickinson College Field #1	Carlisle	Pennsylvania	6/3/2019	Classic HD - 2.5"
Putnam City High School Infield	Oklahoma City	Oklahoma	6/3/2019	Vertex - 2"
Framingham State University	Framingham	Massachusetts	6/3/2019	Vertex - 2.25"
Coyer Field	Buffalo	New York	6/3/2019	Vertex - 2.25"
Duquesne University	Pittsburgh	Pennsylvania	6/3/2019	Vertex - 2.5"
Pennsylvania College of Technology	Williamsport	Pennsylvania	6/3/2019	Vertex Prime - 2"
Evanston High School	Evanston	Illinois	6/3/2019	Revolution 360 - 2.5"
Mt SAC Athletics	Walnut	California	6/3/2019	Revolution 360 - 2.5"
Valparaiso University Football Field	Valparaiso	Indiana	6/3/2019	Revolution 360 - 2.25"
Washington Massillon	Massillon	Ohio	6/3/2019	CORE - 2.5"
Grand Island Senior High School	Grand Island	Nebraska	5/31/2019	Classic HD - 2.5"
King George V	St. John	Newfoundland	5/31/2019	Revolution 360 - 2.5"
Towson University - Football Practice	Towson	Maryland	5/31/2019	Revolution 360 - 2.5"
Towson University Soccer	Towson	Maryland	5/31/2019	Revolution 360 - 2.5"
Meredith College	Raleigh	North Carolina	5/31/2019	CORE - 2.25"
Onondaga Community College	Syracuse	New York	5/30/2019	Vertex Prime - 2.5"
Newfield High School	Selden	New York	5/30/2019	XT - 2.25"
The Haverford School	Haverford	Pennsylvania	5/29/2019	Vertex Prime - 2.25"
Towson University	Towson	Maryland	5/29/2019	Revolution 360 - 2.5"
Lincoln Way Central High School	New Lenox	Illinois	5/28/2019	CORE - 2"
Lincoln Way East High School	Frankfurt	Illinois	5/28/2019	CORE - 2"
Putnam City High School	Oklahoma City	Oklahoma	5/28/2019	Classic HD - 2.25"
St Marys High School Annapolis	Annapolis	Maryland	5/28/2019	Classic HD - 2.5"
Quincy High School	Quincy	Washington	5/28/2019	Vertex - 2.25"
James Madison University Stadium	Harrisonburg	Virginia	5/28/2019	Revolution 360 - 2.5"
James Madison University - Stadium	Harrisonburg	Virginia	5/28/2019	Hockey Gold
E.L. Crossley Secondary School	Pelham	Ontario	5/27/2019	Vertex - 2.25"
University of Michigan - Glick Field House	Ann Arbor	Michigan	5/27/2019	Revolution 360 - 2.5"

University of New Haven	West Haven	Connecticut	5/24/2019	Vertex Prime - 2.5"
Scioto Valley	Piketon	Ohio	5/24/2019	XT - 2.25"
Hartwick College	Oneonta	New York	5/23/2019	Classic HD - 2.5"
Bartlett High School - Stadium	Bartlett	Tennessee	5/22/2019	Revolution 360 - 2.25"
Yale Bowl	New Haven	Connecticut	5/22/2019	Vertex Prime - 2.25"
Grant High School	Portland	Oregon	5/22/2019	XTHD - 2.25"
Mount St Michael Academy	Bronx	New York	5/22/2019	XT - 2.25"
Village of Orland Park Indoor	Orland Park	Illinois	5/22/2019	XTHD - 2"
Antigonish Sandlot	Antigonish	Nova Scotia	5/20/2019	XT - 2"
Leland High School - Field #1	San Jose	California	5/20/2019	Vertex Prime - 2"
Correia Middle School	San Diego	California	5/20/2019	Classic HD - 2.5"
Emory & Henry College Stadium	Emory	Virginia	5/20/2019	Classic HD - 2.5"
Mount Saint Mary College	Newburgh	New York	5/20/2019	Classic HD - 2.5"
Mount St. Mary's University	Emmitsburg	Maryland	5/20/2019	Classic HD - 2.25"
Nazareth Golisano Training Center	Lockport	New York	5/20/2019	Classic HD - 2.5"
Notre Dame de Namur	Belmont	California	5/20/2019	Vertex - 2.25"
Westminster College Burry	New Wilmington	Pennsylvania	5/20/2019	Vertex Prime - 2.5"
Dunbar Park	Chicago	Illinois	5/20/2019	XT - 2.5"
Moreno Valley High School	Moreno Valley	California	5/20/2019	CORE - 2.5"
Bradford High School Stadium Field	Starke	Florida	5/19/2019	XTHD - 2.25"
Carolina Panthers	Charlotte	North Carolina	5/17/2019	Classic HD - 2.5"
McDonough High School Stadium Henry County	McDonough	Georgia	5/17/2019	Revolution 360 - 2.25"
West Point USMA Foley Field	West Point	New York	5/17/2019	Revolution 360 - 2.5"
Hoover Park Redwood City	Redwood City	California	5/16/2019	CORE - 2"
Bozeman Sports Park	Bozeman	Montana	5/16/2019	Vertex Prime - 2"
Tillery - Field #1	Mesquite	Texas	5/16/2019	Vertex Prime - 2"
Centereach High School - Field #1	Centereach	New York	5/15/2019	XTHD - 2.25"
Miller Park	Omaha	Nebraska	5/15/2019	XT - 2"
Mesquite ISD - Copeland Field	Mesquite	Texas	5/15/2019	Vertex Prime - 2"
David Cution Park	Seaside	California	5/14/2019	Vertex Prime - 2"
HHMI Multipurpose Field	Ashburn	Virginia	5/13/2019	Classic HD - 2"
Duchesne County Indoor	Rossvelt	Utah	5/13/2019	Vertex - 2.25"
Shepherd University Stadium	Shepherdstown	West Virginia	5/13/2019	Revolution 360 - 2.25"
Wagner College	Staten Island	New York	5/13/2019	Revolution 360 - 2.5"
Batavia CSD	Batavia	New York	5/10/2019	Vertex - 2.5"
Fair Lawn Center	Fairlawn	New Jersey	5/10/2019	Revolution 360 - 2.25"
Hank Crisp Indoor Facility	Tuscaloosa	Alabama	5/9/2019	Vertex Prime - 2.5"
St. Ignatius High School Soccer	Chicago	Illinois	5/9/2019	CORE - 2.5"
Portland Timbers Stadium	Portland	Oregon	5/8/2019	CORE - 2.5"
St Ignatius High School	Chicago	Illinois	5/7/2019	CORE - 2.5"
St Thomas	St Thomas	Ontario	5/6/2019	XM7 - 2.5"
St. Thomas	St Thomas	Ontario	5/6/2019	XM7 - 2.5"
Benedictine College	Atchison	Kansas	5/6/2019	XM7 - 2"
Biola University - Barbour	La Mirada	California	5/6/2019	Revolution 360 - 2"
Ashwaubenon	Green Bay	Wisconsin	5/6/2019	Classic HD - 2"
Boise State University	Boise	Idaho	5/6/2019	Classic HD - 2.5"
Detroit Lions - Ford Field	Detroit Waune	Michigan	5/6/2019	Classic HD - 2.5"
Southern Illinois University Carbondale	Carbondale	Illinois	5/6/2019	Classic HD - 2.5"
Penn Yan Central School District	Penn YAN	New York	5/6/2019	Vertex Prime - 2.5"
Vista Del Lago High School	Moreno Valley	California	5/6/2019	CORE - 2.5"
John J Burns Park II	Massapequa Park	New York	5/5/2019	XTHD - 2.25"
University of Michigan - Indoor Glick Fieldhouse	Ann Arbor	Michigan	5/3/2019	Revolution 360 - 2.5"
Penn Yan CSD LM	Johnson City	New York	5/3/2019	Vertex Prime - 2.5"
Bartram High School	Philadelphia	Pennsylvania	5/1/2019	Vertex - 2.25"
Old Dominion University - Field #1	NorFolk	Virginia	5/1/2019	Classic HD - 2.25"
Concordia University Seafoam Stadium	St. Paul	Minnesota	5/1/2019	XTHD - 2.5"
Lansing Pathway Football	Lansing	Michigan	4/29/2019	XM7 - 2.25"
Portland Soccer Field	Wilsonville	Oregon	4/29/2019	Revolution 360 - 2.5"
Haverhill High School Athletic Field	Haverhill	Massachusetts	4/27/2019	Vertex - 2"
Diamond in the Pines Coop Dist	Farmingvill	New York	4/26/2019	XTHD - 2.25"
University of Minnesota - Stadium	Minneapolis	Minnesota	4/25/2019	Classic HD - 2.5"
Tiffany Roberts - Field #1	San Ramon	California	4/24/2019	Vertex Prime - 2"
Centenary College	Shreveport	Louisiana	4/23/2019	Classic HD - 2"
RFK Soccer Field #2	Washington	DC	4/23/2019	Vertex - 2"
Benedictine Military School	Savannah	Georgia	4/22/2019	CORE - 2.25"
Country Club Road	Middletown	Connecticut	4/22/2019	Revolution 360 - 2"
Port Royal Park - City of Foster City	Foster City	California	4/22/2019	Revolution 360 - 2"
Sunrise Park	Rohnert Park	California	4/22/2019	XTHD - 2"
Valley Stream North High School	Valley Stream	New York	4/20/2019	XM7 - 2.25"
Texas AM Music Activities Center	College Station	Texas	4/20/2019	XTHD - 2"
Sandleback College Practice Fields	Mission Viejo	California	4/19/2019	Revolution 360 - 2.5"
Suffolk PAL Sports Complex	Suffolk	New York	4/19/2019	XT - 2.25"
Doddridge High School Stadium	West Union	West Virginia	4/18/2019	CORE - 2.5"
IWCC Wellness Center Fieldhouse	Council Bluff	Iowa	4/18/2019	XTHD - 2.5"
Benedictine College	Atchison	Kansas	4/17/2019	Classic HD - 2.25"
Liberty Field	North Caldwell	New Jersey	4/17/2019	Revolution 360 - 2.25"
Shawnee Park - Baseball Field #3 (outfield)	Dunbar	West Virginia	4/16/2019	Classic HD - 2"

Robert F. Kennedy Multi-purpose Field	Washington	DC	4/16/2019	Vertex - 2"
Berner Middle School Multipurpose Field	Massapequa	New York	4/16/2019	XTHD - 2.25"
Center Moriches Field #3	Moriches	New York	4/16/2019	XTHD - 2"
Cabrillo College Stadium	Aptos	California	4/15/2019	CORE - 2"
East Islip High School	Islip Terrace	New York	4/15/2019	Vertex - 2.25"
Anchorage Elementary School 1-2	Anchorage	Alaska	4/15/2019	XT - 2"
Harold Walker Memorial Park	Lakeview	New York	4/15/2019	XTHD - 2"
Salisbury Park	East Meadow	New York	4/15/2019	XTHD - 2"
Galt High School	Galt	California	4/15/2019	Revolution 360 - 2.5"
NFL Draft Nashville	Nashville	Tennessee	4/15/2019	XTHD - 2"
Kushner Academy	Livingston	New Jersey	4/12/2019	XTHD - 2"
Robert F. Kennedy Field #1	Washington	DC	4/11/2019	Vertex - 2"
Phillipsburg Middle School	Phillipsburg	New Jersey	4/11/2019	XT - 2.5"
Turkey Brook Park	Budd Lake	New Jersey	4/10/2019	Classic HD - 2"
Taft High School	Chicago	Illinois	4/10/2019	Vertex - 2"
LCPS High School - Stadium	Ashburn	Virginia	4/8/2019	XM7 - 2.5"
Fort Sill Softball East 1	Lawton	Oklahoma	4/8/2019	Classic HD - 2"
Fort Sill Softball East 2	Lawton	Oklahoma	4/8/2019	Classic HD - 2"
Sam Barlow High School	Gresham	Oregon	4/8/2019	Classic HD - 2.25"
Galt High School	Galt	California	4/8/2019	Revolution 360 - 2.5"
Pahokee Everglades Prep Academy	Pahokee	Florida	4/8/2019	XT - 2.25"
Essex West Side Park	Newark	New Jersey	4/6/2019	XTHD - 2"
Mercedes Benz Falcons - Stadium	Atlanta	Georgia	4/2/2019	CORE - 2.5"
Cullman High School	Cullman City	Alabama	4/2/2019	Vertex - 2"
Jefferson Elementary School	Berwyn	Illinois	4/2/2019	XTHD - 2"
Fort Hood Stadium	Fort Hood	Texas	4/1/2019	Classic HD - 2.25"
Allen Park Phase 2 - Field #2	Farmingdale	New York	4/1/2019	Classic HD - 2.25"
Pulis Field - Franklin Lakes	Franklin Lakes	New Jersey	4/1/2019	Revolution 360 - 2.25"
Linden Park	Brooklyn	New York	4/1/2019	XT - 2"
Robert F. Kennedy Soccer Field #2	Washington	DC	3/31/2019	Vertex - 1.5"
Northwest Regional Park Field 2	Owings Mills	Maryland	3/29/2019	XTHD - 2.5"
Northwest Regional Park Field 3	Owings Mills	Maryland	3/29/2019	XTHD - 2.5"
Perry Hall High School	Perry Hall	Maryland	3/29/2019	XTHD - 2.5"
Walt Whitman High School	Huntington Station	New York	3/29/2019	XTHD - 2.25"
Century High School	Hillsboro	Oregon	3/28/2019	CORE - 2"
Light Ridge High School - Practice Field	Aldie	Virginia	3/28/2019	XM7 - 2.5"
University of Tennessee	Martin	Tennessee	3/28/2019	CORE - 2.25"
East Islip High School	Islip Terrace	New York	3/26/2019	Vertex - 2.25"
Light Ridge High School - Stadium	Aldie	Virginia	3/25/2019	XM7 - 2.5"
Upper Canada College	Toronto	Ontario	3/22/2019	CORE - 2.5"
Oliver Sports Park	Hayward	California	3/18/2019	Vertex Prime - 2"
Montclair - Fortunato Field	Montclair	New Jersey	3/14/2019	Vertex - 2.25"
Fort Sill Softball West 3	Lawton	Oklahoma	3/13/2019	Classic HD - 2"
Fort Sill Softball West 4	Lawton	Oklahoma	3/13/2019	Classic HD - 2"
University of Miami - Hecht Facility	Coral Gables	Florida	3/11/2019	Classic HD - 2"
Brookhaven Firemens Field	Ridge	New York	3/11/2019	XTHD - 2"
Cedar Hills Park	Beaverton	Oregon	3/10/2019	Classic HD - 2"
Pasadena City College	Pasadena	California	3/10/2019	Revolution 360 - 2.5"
New Field High School	Selden	New York	3/9/2019	XTHD - 2"
Lake Oswego High School	Lake Oswego	Oregon	3/8/2019	Classic HD - 2.5"
Seattle Seahawks - VMAC	Renton	Washington	3/7/2019	Classic HD - 2.5"
Garden City Com Park - Field #2	Garden City	New York	3/7/2019	XTHD - 2"
University of Kansas - Indoor	Lawrence	Kansas	3/5/2019	Revolution 360 - 2.5"
Fred Johnson Stadium	Kingsport	Tennessee	3/4/2019	Classic HD - 2"
Mill Creek Sports Park	Mill Creek	Washington	3/1/2019	Vertex - 2"
Pitman High School	Turlock	California	3/1/2019	Vertex Prime - 2.25"
Draper Park - Fairfax Fields	Fairfax	Virginia	2/24/2019	Vertex Prime - 2.5"
University of Miami - Hecht Facility	Coral Gables	Florida	2/21/2019	Classic HD - 2"
La Cueva High School	Albuquerque	New Mexico	2/20/2019	XTHD - 2.25"
Hare - Football Field	Hillsboro	Oregon	2/18/2019	CORE - 2"
Goudy	Langford	British Columbia	2/15/2019	Revolution 360 - 2.5"
High Point University	High Point	North Carolina	2/11/2019	CORE - 2.25"
Babbit Field - Pingry School	Basking Ridge	New Jersey	2/10/2019	MULTI50
Norfolk YMCA Indoor	Norfolk	Nebraska	2/8/2019	XT - 2.25"
Dallas ISD Sprague Complex	Dallas	Texas	2/7/2019	Vertex - 2"
LCPS High School - Practice Field	Ashburn	Virginia	2/7/2019	XM7 - 2.5"
Montclair - Fortunato Field	Montclair	New Jersey	2/6/2019	Vertex - 2.25"
University of Tennessee	Knoxville	Tennessee	2/5/2019	Vertex - 2"
Tigard High School - Softball	Tigard	Oregon	2/5/2019	Vertex - 2"
Weehawken Waterfront Football Field	Weehawken	New Jersey	2/5/2019	Revolution 360 - 2.25"
William Fleming High School	Roanoke	Virginia	2/4/2019	CORE - 2.5"
FT. Leavenworth High School Stadium	Leavenworth	Kansas	2/3/2019	XTHD - 2.25"
Connecticut Indoor Sports	Danielson	Connecticut	2/1/2019	XTHD - 2"
Eagles Landing High School Stadium Field	McDonough	Georgia	1/31/2019	Revolution 360 - 2.25"
High and Alden Street Park	Essex	New Jersey	1/31/2019	Revolution 360 - 2"
High and Alden Street Park	Essex	New Jersey	1/31/2019	Revolution 360 - 2"
Rutgers Club Sports	Piscataway Township	New Jersey	1/31/2019	CORE - 2.25"

Super Bowl Mercedes Benz Stadium	Atlanta	Georgia	1/30/2019	XTHD - 2"
Stony Brook Joe Nathan	Stony Brook	New York	1/25/2019	XTHD - 2"
Weehawken Waterfront	Weehawken	New Jersey	1/25/2019	Classic HD - 2"
Esencia Sports Park	Rancho Mission Viejo	California	1/21/2019	CORE - 2.25"
Marist High School	Atlanta	Georgia	1/19/2019	DA65
Kipp Lanning Square	Camden	New Jersey	1/17/2019	Revolution 360 - 2.25"
The City of Midland - Grande Stadium	Midland	Texas	1/14/2019	Vertex Prime - 2.25"
University of California - Santa Barbara Field #3	Santa Barbara	California	1/11/2019	Revolution 360 - 2.5"
University of California - Santa Barbara Field #4	Santa Barbara	California	1/11/2019	Revolution 360 - 2.5"
Sawyer Ave Baseball Park	West Babylon	New York	1/5/2019	XTHD - 2"
City of Pasadena Robinson Park	Pasadena	California	1/4/2019	XM7 - 2.5"
Cibola High School	Albuquerque	New Mexico	1/2/2019	XTHD - 2.25"
Hobart and William Smith Colleges	Geneva	New York	1/2/2019	Classic HD - 2.5"



FIELDTURF USA, INC. - LIST OF CONTRACTOR LICENSES

STATE	License Number	License Class	Exp.Date DD/MM	Exp. Date YYYY
Alabama	51948	General Contractor	30-Sep	2022
Alabama	S-40652	Sub-Contractor	30-Sep	2022
Alaska	CONE33631	General Contractor	31-Dec	2022
Arizona	314411	Dual KA	31-Aug	2023
Arkansas	172490416	General Contractor	30-Jun	2022
California (Public Works License-DIR)	1000004625	DIR license	30-Jun	2022
California	849044	C61/D12 A C27	31-Oct	2022
Delaware	2008203565	331-Contractor-Resident	31-Dec	2021
Florida	CGC1507328	General Contractor	31-Aug	2022
Georgia	GCCO005138	General Contractor Company	30-Jun	2022
Idaho (PWC)	PWC-C-16674-AAA-4	20790, 02740, 02310	31-Jul	2022
Idaho (Burreau of Occupational Licenses - non-public bids)	RCE-38454		6-Nov	2021
Indiana	20150366	General Contractor	31-Dec	2021
Iowa	C106260	Registered Contractor	1-Apr	2022
Kansas	n/a	n/a	n/a	
Louisiana	CL.0045097	artificial turf, specialty, recreation & sporting facilities & golf courses	20-Jul	2022
Mississippi	16435-SC	Asphalt, Excavating, Grading & Drainage	8-May	2022
Montana	156033	Construction Contractor	4-Jul	2023
Nebraska	44678-18	Contractor Registration	15-Nov	2021
Nevada	68611	C10 Limited to synthetic turf only	31-May	2022
*New Jersey	631021	Public Works Contractor	17-Jun	2023
*New Jersey		School Development Authority Prequal	11-Sep	2022

STATE	License Number	License Class	Exp.Date DD/MM	Exp. Date YYYY
New Mexico	363013	GF05;	30-Sep	2021
New Mexico	2471720120608	Department of Public Works (Workforce Solutions)	7-Jun	2022
North Carolina	66648	General Contracting	31-Dec	2021
North Dakota	49661	Class A Contractor	1-Mar	2022
Oregon	181583	GC - Commercial & Residential	6-May	2022
Rhode Island	40614	Class C Commercial	1-Dec	2022
South Carolina	G116980	BD5 GD5 H15 BT5 MS5 RR5 WL5	31-Oct	2022
Tennessee	57455	S-Athletic & S-Running	31-Jan	2023
Utah	7330453-5501	E100, S310, S500	30-Nov	2021
Virginia	2705106035	Class A Highway & Rec Facility	30-Jun	2022
Washington	CC01 FIELDU1955JH	Construction Contractor	15-May	2023
Wisconsin	n/a	Contractor Certification	4-Feb	2023
West Virginia	WV043760	General Building	5-Jun	2022
Wyoming ****depends on county/city	3564	General	1-Apr	2022
Wyoming ****depends on county/city	3074	Excavation & Grading	13-Nov	2021
	3075	Miscellaenous	13-Nov	2020

STATE	License Number	License Class	Exp.Date DD/MM	Exp. Date YYYY
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# Beynon Sports Surfaces, Inc.

## STATE CONTRACTORS LICENSES

State	License No.	Expiration	Type License
Alabama	#37115	11/30/2021	Recreational areas & running tracks
Alaska	#CONE37908	12/31/2022	Gen Contractor w/o Registered Contractor Endorsement
Arizona	239879	11/30/2021	Class CR-5 Restricted by Registrar
Arkansas	#0168160521	5/31/2022	Floors and Sport & Rec. Surfaces
California	883198	8/31/2022	Class C-15 Flooring and Floor Covering
Delaware (Contractor - Non Resident)	#2002108228	12/31/2022	Contractor-Non-Resident
Florida	CGC1525782	8/31/2022	GC license
Idaho	RCE-16165	5/16/2022	Non public money bids Contracting Business
Idaho (Public Works Contractors License)	PWC-C-16549 -Unlimited - 4	5/31/2022	Jobs bid with public money
Iowa	C101063	6/13/2022	
Louisiana (Specialty Contractors Lic.)	#39893	10/28/2021	Gym Flooring & Running Tracks
Maryland	3414768	4/30/2022	Construction Firm
Massachusetts (Certificate of Eligibility)	#1537	7/25/2022	Floor Covering
Mississippi	#14821-SC	10/12/2021	1. Athletic Fields/Golf Courses 2. Recreation Construction
Montana	155905	7/25/2023	
Nebraska	27310-19	5/1/2022	
Nevada	0068035	3/31/2022	A-22 Running Tracks & Gym floors
New Jersey (Public Works Contractor Reg.)	#624443	6/23/2023	
New Mexico	373521	3/31/2024	Classification #373531
North Dakota (Contractors License)	#37161	3/1/2022	Class A Contractor License
Oregon	#164916	6/20/2023	Specialty Contractor
Tennessee (Contractors License)	#00049508	9/30/2022	
Utah	7605416-5501	11/30/2021	Contractor with LRF
Virginia (Contractors License)	#2705 069637A	6/30/2022	Classification RFC
Washington (Contractors license)	#602 735 618	3/29/2022	Construction Contractor CCO1-General
West. Virginia	#WV037122	5/18/2022	Specialty Contractor

OMNIA

Public Agency Customer	Total Purchase value for the previous fiscal year	Key Contact Name	Key Contact E-mail	
Center Grove Community School Corporation, IN	\$1.5M	Scott Knapp, Athletic Director	KNAPPS@CENTERGROVE.K12.IN.US	OMNIA
City School District of The City of Schednectady, NY	\$700K	Mike Barry, Director of Facilities	barrym@schenectady.k12.ny.us	OMNIA
University of North Florida, FL	\$800K	Richard Elmore, Asst. Director Univ Facility Planning	relmore@unf.edu	OMNIA
Splendor Independent School District, TX	\$1M	Kevin Lynch, Chief Financial Officer	klynch@splendoraisd.org	OMNIA
Fulton County Schools, GA	\$4M	Michael Peek, Director of Maintenance/Operations	peekm@fultonschools.org	OMNIA
Cypress-Fairbanks Independent School District, TX	\$7M	Kevin Krenek, Asst. Varsity Coach/JV Head Coach	kevin.krenek@cfisd.net	Bid or other
Hall County Schools, GA	\$8M	Matt Cox, Executive Director of Facilities & Construction	Matt.Cox@hallco.org	Bid or other
Gwinnett County Board of Education, GA	\$6.5M	Carey Bell, Engineering Review Coordinator	carey.w.bell@gcpsk12.org	Bid or other
Fairfax County Public Schools, VA	\$5M	Angela David, Facilities	acdavid@fcps.edu	Bid or other
Westmont Hilltop School District, PA	\$5M	Thomas Mitchell, Superintendent	trm@whsd.org	Bid or other



# CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)  
07/15/2021

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

**IMPORTANT:** If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

<b>PRODUCER</b> Willis Towers Watson Northeast, Inc. c/o 26 Century Blvd P.O. Box 305191 Nashville, TN 372305191 USA	<b>CONTACT NAME:</b> Willis Towers Watson Certificate Center <b>PHONE (A/C No. Ext):</b> 1-877-945-7378 <b>E-MAIL ADDRESS:</b> certificates@willis.com	<b>FAX (A/C, No):</b> 1-888-467-2378
	<b>INSURER(S) AFFORDING COVERAGE</b>	
<b>INSURED</b> Fieldturf USA, Inc. c/o Sports Division Tarkett Inc. 7445 Cote-de-Liesse Road, Suite 200 Montreal, QC H4T 1G2 CAN	<b>INSURER A:</b> XL Insurance America Inc <span style="float:right">NAIC # 24554</span>	
	<b>INSURER B:</b> Travelers Property Casualty Company of Ame <span style="float:right">25674</span>	
	<b>INSURER C:</b> Travelers Indemnity Company of America <span style="float:right">25666</span>	
	<b>INSURER D:</b> Travelers Indemnity Company <span style="float:right">25658</span>	
	<b>INSURER E:</b>	
	<b>INSURER F:</b>	

**COVERAGES** **CERTIFICATE NUMBER:** W21636966 **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
A	<input checked="" type="checkbox"/> <b>COMMERCIAL GENERAL LIABILITY</b> <input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: <input checked="" type="checkbox"/> POLICY <input type="checkbox"/> PRO-JECT <input type="checkbox"/> LOC OTHER:			US00010327LI21A	05/01/2021	05/01/2022	EACH OCCURRENCE \$ 1,000,000 DAMAGE TO RENTED PREMISES (Ea occurrence) \$ 500,000 MED EXP (Any one person) \$ 10,000 PERSONAL & ADV INJURY \$ 1,000,000 GENERAL AGGREGATE \$ 2,000,000 PRODUCTS - COMP/OP AGG \$ 2,000,000
B	<b>AUTOMOBILE LIABILITY</b> <input checked="" type="checkbox"/> ANY AUTO <input type="checkbox"/> OWNED AUTOS ONLY <input type="checkbox"/> SCHEDULED AUTOS <input type="checkbox"/> HIRED AUTOS ONLY <input type="checkbox"/> NON-OWNED AUTOS ONLY <input type="checkbox"/> OTHER:			TC2JCAP-823K312A	05/01/2021	05/01/2022	COMBINED SINGLE LIMIT (Ea accident) \$ 3,000,000 BODILY INJURY (Per person) \$ BODILY INJURY (Per accident) \$ PROPERTY DAMAGE (Per accident) \$
A	<input checked="" type="checkbox"/> <b>UMBRELLA LIAB</b> <input checked="" type="checkbox"/> OCCUR <input type="checkbox"/> EXCESS LIAB <input type="checkbox"/> CLAIMS-MADE <input type="checkbox"/> DED <input checked="" type="checkbox"/> RETENTION \$ 10,000			US00010615LI21A	05/01/2021	05/01/2022	EACH OCCURRENCE \$ 5,000,000 AGGREGATE \$ 5,000,000
C	<b>WORKERS COMPENSATION AND EMPLOYERS' LIABILITY</b> ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below	Y/N No	N/A	UB-8P793534-21-51-K	05/01/2021	05/01/2022	<input checked="" type="checkbox"/> PER STATUTE <input type="checkbox"/> OTHER E.L. EACH ACCIDENT \$ 1,000,000 E.L. DISEASE - EA EMPLOYEE \$ 1,000,000 E.L. DISEASE - POLICY LIMIT \$ 1,000,000
D	<b>Workers Compensation &amp; Employer's Liability</b> Work Comp - Per Statute			UB-8P760619-21-51-R	05/01/2021	05/01/2022	E.L. Each Accident \$1,000,000 E.L. Disease-Pol Lmt \$1,000,000 E.L. Disease-Each Emp \$1,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

Project - Omnia Supplier Risk Assessment Program.  
  
WC Policies:  
Policy # UB-8P793534-21-51-K - covers all other states.  
Policy # UB-8P760619-21-51-R - covers AZ, MA, OR, WI only.

### CERTIFICATE HOLDER

Omnia Partners  
 c/o Global Risk Management Solutions  
 5371 California Ave, Suite 290  
 Irvine, CA 92617

### CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

## TAB #5-Value ADD

### d) Value Add

#### RESPONSE:

It's no secret that FieldTurf pioneered what is now commonly accepted as "artificial turf." What started with our invention of long pile, infilled artificial turf has continued with numerous industry-changing innovations. Fieldturf has introduced the engineered products that are tailor made for each segment of the business and owns numerous patents that protect the company's product offering for sporting and non-sporting applications.

All of Fieldturf's systems are tested using the latest equipment in the FieldTurf Innovation and Performance Center (FIPC). Located at the company's headquarters the center ensures that any and all of FieldTurf's existing and new systems set superior standards for performance in their respective classes.

The state-of-the art facility is one of, if not the most advanced research laboratories in the industry. FieldTurf's development focuses on delivering safe, durable, and high performance turf systems with great value. The FIPC helps ensure that these objectives are being met.

#### **Penn State Center for Sports Surface Research**

In July 2009, FieldTurf and Penn State joined forces to mark a historic industry-first related to sports surface safety and development- the creation of Penn State's Sport Surface Research Center (SSRC). Today, the SSRC is the longest standing University based research center in America and is regarded as one of the foremost experts in the field of agricultural sciences and has developed a strong reputation for their efforts in synthetic turf research.

#### **WHAT Makes FieldTurf stand apart from the competition:**

1. FieldTurf has a patented infill system for the highest performance that layers silica sand with cryogenic rubber. The rubber and sand particles are a similar size to stay in suspension. Total infill exceeds 9 lbs. per sq. foot on a typical FieldTurf field. The FieldTurf infill allow for optimal safety and playability. Testing proves that all rubber fields like our competitors tend to migrate easily in the rain creating divots and changes in the infill levels. This infill variation that can be

- found in our competitor's all rubber infill fields impacts the safety of the turf system.
2. **PROVEN SAFETY:** FieldTurf's focus on Safety has led to numerous injury reducing innovations and improvements. The main reason FieldTurf continues to outperform all other turf companies in reducing injury is our patented san/rubber layered infill system. The findings of long-term testing programs show that FieldTurf is safer than any other synthetic turf system and equal to – if not better than- natural grass in most critical areas of player safety. No other company can make this claim
  3. FieldTurf fiber innovation also stands out from our competitors. Our fibers are produced at our very own facility in Germany. This state of the art facility was opened in 2010 and as a result has turned FieldTurf into one of the most vertically integrated companies in the world. The quality control process at the facility includes stringent testing of the yarn properties (tensile strength, uniformity, color verification.)
  4. **SURELOCK COATING-** for maximum drainage. FieldTurf's patented backing offers drainage performance unequaled by any artificial turf product in the industry. A FieldTurf field is designed for all weather playability. Unlike the rest of the industry, the innovators at FieldTurf came up with a superior drainage solution for its Elite system. It's call SureLock coating. This patented system coats only the rows of fiber, leaving the rest of the carpet untouched and naturally porous.
  5. **MULTI-SPORT SOLUTIONS** – for all sports and all levels. FieldTurf has long been the #1 choice for all sports and all levels. FieldTurf's safety, performance, and durability levels are far superior to any other system. As the world's largest synthetic turf company, you will find FieldTurf in many major stadiums, colleges, and high schools. Over 7500 fields installed.
  6. **SINGLE SOURCE RESPONSIBILITY-** for customer security and satisfaction. FieldTurf has brought "single source responsibility" and quality to the forefront with its own manufacturing plants and quality control standards. Integrated, vertical manufacturing has paved the road toward true innovative and customer security, with fiber manufacturing, turfing, coating and testing all done in house in FieldTurf plants.

**FieldTurf is the only artificial turf company on the market to meet the most rigorous and comprehensive quality control standards:**

- ISO Certified manufacturing Plants
- In-house fiber manufacturing
- In-house coating of all turf products



- In-house testing of each turf roll and its tuft bind
  - Testing of infill and the verification of its grade
  - Installation by FieldTurf certified installation crews.
7. **INSURED WARRANTY-** for complete peace of mind. FieldTurf was the first company in the industry to offer a third-party insured warranty. And while you'll probably never need to use it, you can rest easy knowing that you are protected by the industry's best warranty. It's peace of mind that sets FieldTurf apart from the competition.
8. **INSTALLATION METHOD –** for a stronger field. FieldTurf does not cut corners when it comes to installation of artificial turf fields. In order to lower their prices, many competing companies will cut corners on important installation procedures. This severely compromises the durability of the entire field.
- FieldTurf has Sewn seams not glued like our competitors.
  - FieldTurf meticulously shears the fiber for inlaid sports markings- competitors cut the turf backing.
  - Precision infill layering = a safe surface
  - Experienced installation crews = quality assurance.
9. **PROVEN DURABILITY-** for a better investment. Since its inception, FieldTurf has proven to be the most durable and longest –lasting synthetic turf system in the marketplace having installed more fields that are currently 8 years or older than all other competitor installations combined.
10. **FIRST-CLASS SERVICE –** for your FieldTurf Experience. FieldTurf does not sever its customer relations once the contract has been signed. We take the time to follow up with each and every one of our customers in order to ensure complete and consistent customer satisfaction. Customer satisfaction remains FieldTurf's number one priority.

### **FieldTurf FINANCIAL – Municipal Financing options.**

FieldTurf Financial offers FieldTurf clients customized financing through TCF Capital Solutions. Our mission is to provide overall fiscal financing solutions to help you achieve your unique budget objectives and meet fiscal requirements. We aim to provide our clients the opportunity to use and own a premium artificial turf system with monthly payment and tailored financing solution to meet your needs. FieldTurf has chosen to work with TCF Capital Solutions, a leader in financing, to provide customized and comprehensive budget and payment solutions for FieldTurf products and projects.

### Construction Site Work

New Construction – Sq. foot/yard pricing is for supply and installation of sports surfacing only. FieldTurf is prepared to offer turn-key solutions for the construction of the base of running tracks, courts, indoor flooring projects and fields through use of RS Means. The best value pricing for base or civil work is obtained through this costing method.

Site work or new construction may include but is not limited to: removal and disposal of existing sports surface, lighting, demolition, excavation, rock base aggregate, top rock, asphalt, concrete, sidewalks, turf shock absorption underlayment such as e-layer or padding, tie in to existing drainage, drainage systems, conduits, fencing, crack repair, asphalt repair, etc. which can be purchased through RS MEANS.

RS MEANS is self-contained and consists of a turn-key solution that includes a complete line-item listing of all the products, supplies, material, equipment, services, accessories and options with their description, specification, terms, conditions and associated pricing for each item, sub-assemblies and/or assemblies. FieldTurf reserves the right to offer a discount or "adjustment down" to the RS MEANS calculation to account for volume discounts or to stay within standard market pricing.

### **Field Maintenance Options:**

Service contract options for the items included in FieldTurf's proposal:

- FieldTurf FieldCare 1:

1 Yr. Contract – 2 Visits per Year (Continental US only, excludes Alaska and Hawaii). FieldCare is a national maintenance program geared towards making FieldTurf synthetic turf field systems perform at their optimal level for even longer. FieldTurf's FieldCare Maintenance Program will support years of consistent, high performance to your field and let you maximize your investment. Consult with your FieldCare Service Manager to find the FieldCare program that's right for you. (Additional charges may apply for alternate infill fields)

- FieldTurf PureCare:

PureCare 1 year- (3 times a year) Field Assessment summary, infill depth measurements, select warranted seam and inlay repairs (not to exceed 8), perimeter debris cleaning, Cork infill replenishment (max 1 supersack of cork at 1500lbs per year across the 3 visits) if necessary for infill topdressing material, field infill decompaction (only if needed), field magnet sweeping for metal debris, surface temperature reading, static brush in multiple directions to redistribute infill, application of Anti-static spray during and after maintenance service (5 bottles per session). G-Max testing: one per year to be performed right after 2nd maintenance visit.

- Beynon:

Beynon service contract options can be customized to fit each individual customers needs. Beynon Sports is committed to providing customers the highest level of workmanship and customer service. Beynon stands behind our products and the experience of working with Beynon Sports. It is our goal that each client that utilizes a sports surface or athletic surfacing component designed and manufactured by Beynon Sports be 100% satisfied. Any deficiencies in providing the highest level of service will be addressed immediately.

Beynon Sports employees are committed to diligently executing each of our duties thoroughly and conscientiously. Our highly skilled professionals design, engineer, manage and service each project, and we carefully ensure that our products meet your unique specifications from beginning to end

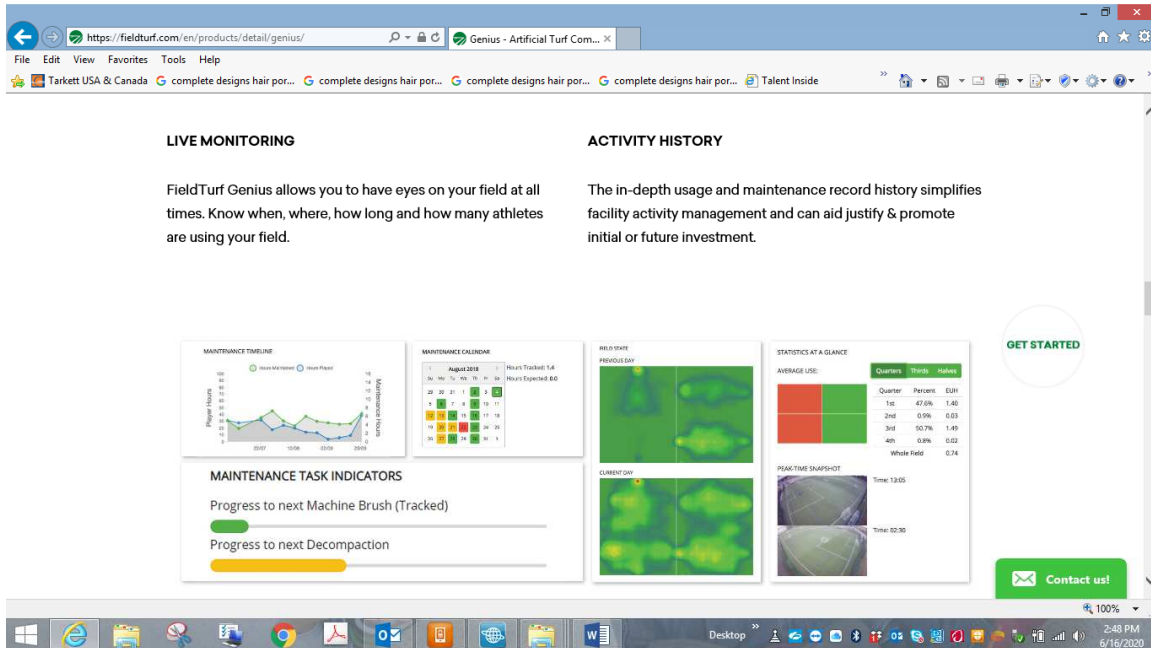
Technology Advancement:

#### GENIUS

The future has arrived! Introducing FieldTurf Genius, powered by Intelligent Play. This game-changing technology is designed to help maximize the longevity, playability, and safety of your sports field. As well as allow you to track maintenance, plan more efficiently and monitor usage.

Imagine a sports field that could automatically track the number of athletes playing, hours of use, and send maintenance alerts when needed. Imagine that it could then deliver in depth reporting on executed maintenance and usage, allowing you to optimize scheduling, utilization, and care.

HOW DOES IT WORK? Two sensors are mounted to the facility lights or stadium press box and automatically process and convert the recordings into anonymous data for analysis. Through advanced computer vision and deep learning algorithms, live field participation is translated into tangible data.



The screenshot displays the FieldTurf Genius web application interface. The browser address bar shows the URL <https://fieldturf.com/en/products/detail/genius/>. The page is divided into two main sections: **LIVE MONITORING** and **ACTIVITY HISTORY**.

**LIVE MONITORING** section includes:

- A line graph titled "MAINTENANCE TIMELINE" showing Player Hours over time.
- A "MAINTENANCE TASK INDICATORS" section with progress bars for "Progress to next Machine Brush (Tracked)" and "Progress to next Decompaction".

**ACTIVITY HISTORY** section includes:

- A "MAINTENANCE CALENDAR" for August 2018, showing Hours Tracked (1.4) and Hours Expected (6.0).
- "FIELD STATE" heatmaps for "PREVIOUS DAY" and "CURRENT DAY".
- "STATISTICS AT A GLANCE" table:

Quarter	Percents	EUH
1st	47.0%	1.40
2nd	0.9%	0.03
3rd	50.7%	1.49
4th	0.8%	0.02
Whole Field		0.74

Additional features include a "REACTIME SHAPSHOT" with time markers (13:05 and 02:30) and a "GET STARTED" button.

## FIELDCLEANSE SANITIZATION PROGRAM

The FieldCleanse Program, part of FieldTurf's multi-pronged service platform, is designed to increase safety measures for our clients and their athletes. FieldTurf, which for over 25 years has been recognized as the leader in artificial turf and player safety is proud to introduce the FieldCleanse program designed to elevate the cleanliness standards of our fields and to meet the new health and safety challenges presented by the current **CORONAVIRUS (COVID-19)** pandemic environment. This multi-faceted approach includes our standard guidance for Brushing, Aerating, Raking and Sweeping along with new options for those who want to sanitize their turf fields.

### EPA APPROVED CORONAVIRUS (COVID-19) SANITIZER

FieldTurf's NEW FieldCleanse program will help deep clean your surface to combat COVID-19. Utilizing an EPA approved coronavirus sanitizer: mPerial™, by MPact™ Environmental Solutions, LLC, which confirms results that demonstrates the ability of the mPact™ technology to prevent and protect against the spread of the COVID-19 Virus.

#### MPERIAL PRODUCT DETAILS:

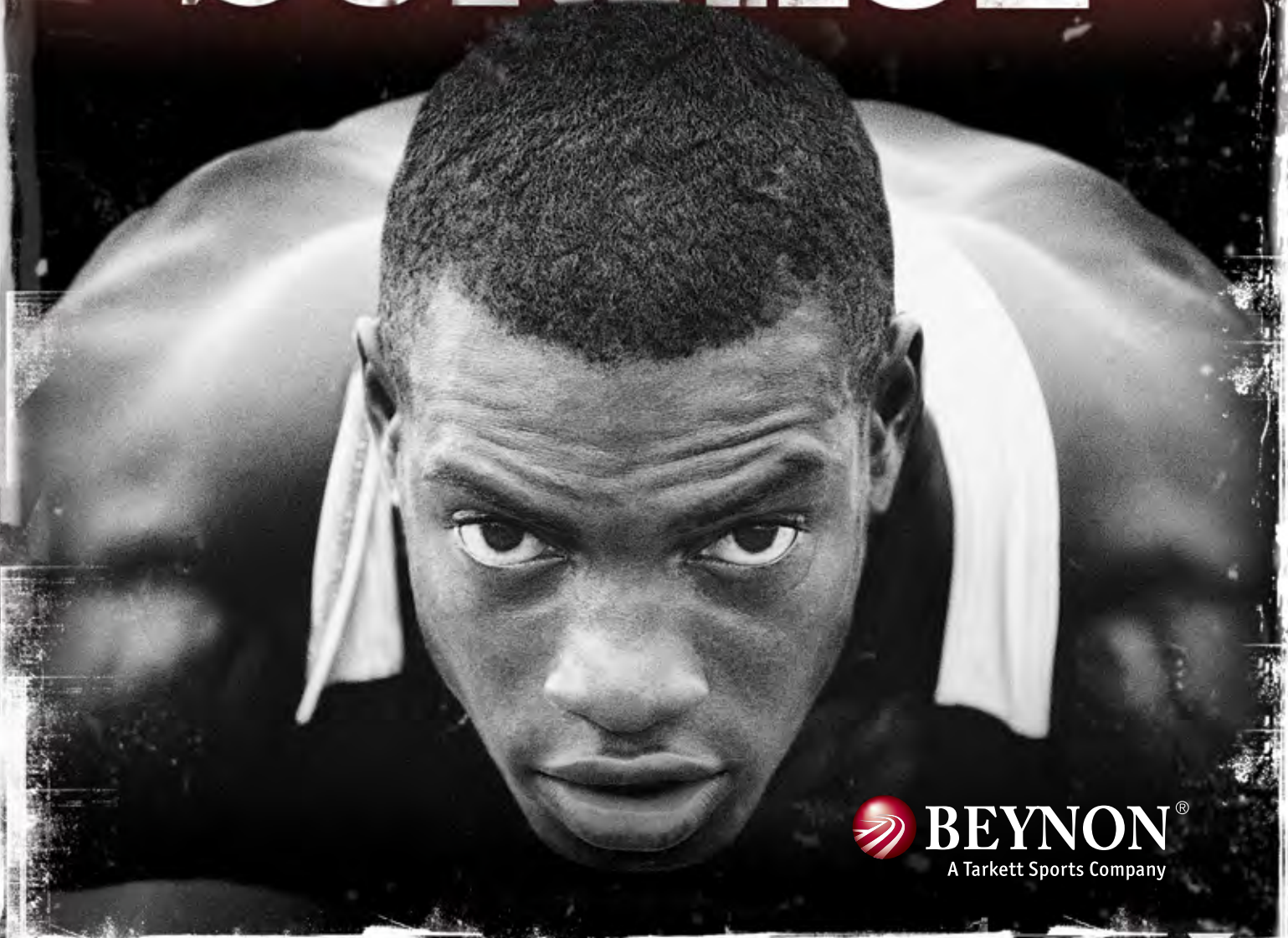
- EPA registered, FDA compliant
- EPA Registration #: 10324-59-83129



THE ULTIMATE  
SURFACE EXPERIENCE

[Exhibit AB: Beynon Track Brochures](#)

# IT ALL STARTS AT THE SURFACE



 **BEYNON**<sup>®</sup>  
A Tarkett Sports Company

# PERFECTION TO ONE-HUNDREDTH OF A SECOND



**W**elcome to the finish line for your training, competition, and high-performance needs for track and field.

Just as no two athletes are alike, the same holds true for our tracks—designed and built specifically to fit your program and budget while safely propelling your athletes to record-breaking times.

Beynon Sports' passion is to position you to win.

How do we do it? Read on. If you want to set yourself apart from competition, then Beynon Sports is the right choice.





# WE'VE BEEN THE **LEADER** IN ATHLETIC SURFACING SINCE 1971

**J**ohn T. Beynon founded Beynon Sports with the vision of creating high-performance athletic surfaces designed for speed and competition, as well as daily training. Our premier track and field surfaces are found in the world's most renowned athletic facilities, carrying some of the world's greatest champions to record-breaking times. At Beynon Sports Surfaces, we take pride in our history and our accomplishments, but we're even prouder of the performance, longevity, and resiliency of our track surfaces.

In the spring of 2008, Beynon Sports joined FieldTurf and the Tarkett Sports

family, combining the most recognized and prestigious name in the artificial turf market with the celebrated Beynon Sports track and field, fieldhouse, and gymnasium sports surfacing systems.

The result is a global firm with unmatched financial strength and a dedication to innovation, customer service, and excellence.

Through this partnership, your track and field program will receive unprecedented service, quality, and support as well as the financial backing to stand behind our products as you move forward with your track and field project.

**“I opted to go with a Beynon track over Mondo because I believe it to be a superior product. Our Beynon track has been in place since the fall of 2005, though if you came out to our track today, you would think it had just been poured yesterday. The Beynon track is easier on the athletes and since our track has been in place, stress fractures have become almost nonexistent.”**

— **Ralph Spry**

HEAD TRACK AND FIELD COACH,  
AUBURN UNIVERSITY

## CONTACT US TO GET YOUR PROJECT STARTED

### Headquarters and Manufacturing Center

Beynon Sports Surfaces, Inc.  
16 Alt Road  
Hunt Valley, MD 21030

PH 888.240.3670  
410.771.9473  
FX 410.771.9479

### Regional Operations Centers



350 CR 255  
Georgetown, TX 78633

PH 866.330.8150  
512.778.6170  
FX 512.778.6180

4263 N. Selland Avenue  
Fresno, CA 93722

PH 559.840.1585  
FX 559.478.4815

19495 SW Teton Avenue  
Tualatin, OR 97062

PH 800.423.5875  
FX 503.692.0491

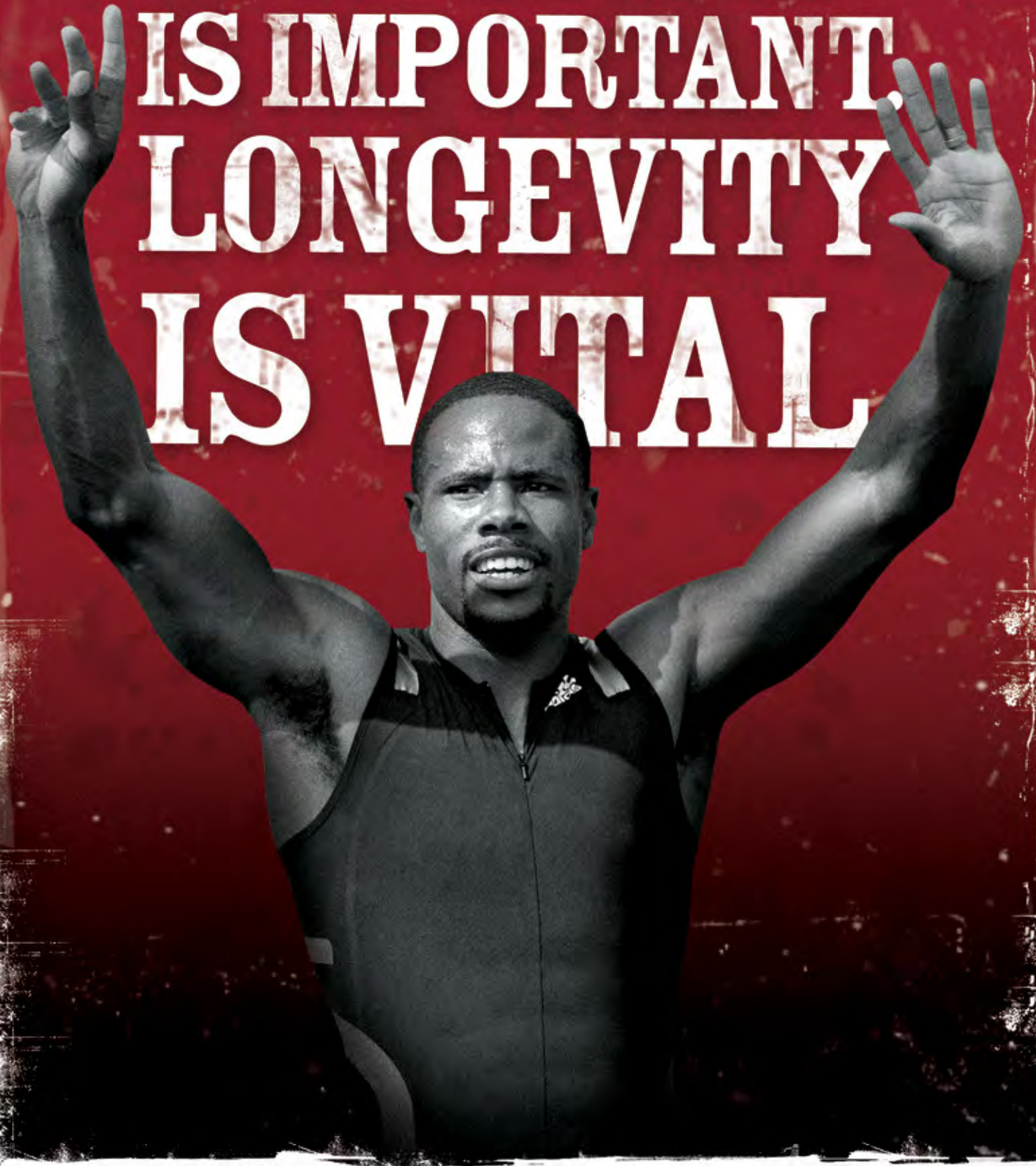
**Beynon Sports has regional sales offices across North America to meet the local needs of every customer.**

**SPEED**

**IS IMPORTANT.**

**LONGEVITY**

**IS VITAL**



# THE SCIENCE BEHIND TRACK AND FIELD



# OUR CHEMISTS **CREATE** THE WORLD'S MOST REFINED SURFACES

**W**hat you see is an incredible track and field facility. What you feel is the premier surface for training and competition. Quality and attention to detail are of the utmost importance. To Beynon Sports, that means overseeing every surface from raw material selection, to manufacturing the system for the specific needs of the coaches and student-athletes, all the way through installation. It also means having our track and field systems tested and certified according to IAAF and DIN standards to ensure that your athletes receive a superior product.

We guarantee only the finest raw materials, tireless research and development, and outstanding workmanship go into each system. Our team is made up of the finest and most experienced in the industry, from world-famous track coaches to the leading polyurethane research chemists and the most experienced installation personnel. With them, and through vigorously researching and developing new environmentally sustainable technologies, we are able to bring your athletes the latest track and field surfacing innovations.

We adhere to the top standards for renewable polyols, and we are the leader in research and development of environmentally conscious products in the polyurethane sports surfacing industry.

From your initial inquiry, our dedicated team gives you undivided attention. We listen to your desires and work with you to get the precise track and field or fieldhouse system that fits your needs. Only Beynon Sports can manufacture your track to your specification, which makes it easier to give you the track surface you want, whether it is ideal for competition or perfect for extended risk-free training. Our 50,000 square foot state-of-the-art manufacturing facility is dedicated solely to the research and development, production, and quality assurance of our outdoor and indoor athletic surfacing systems.

Once the subbase of your track and field system is cured and tested for planarity, only our experienced, trained technicians or accredited applicators install your surface to ensure superior precision, performance, and workmanship.



**“Last weekend on this track, Tyson Gay ran two memorable 100-meter times in two days: an American record of 9.77 seconds and then 9.68.”**

**— Frank Litsky**  
THE NEW YORK TIMES



# TUNED SYSTEMS

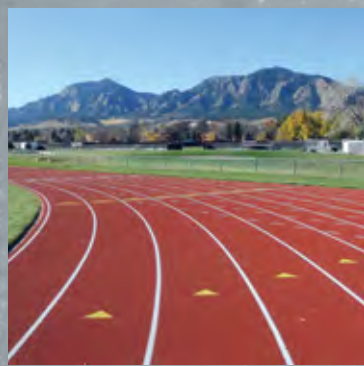
## SURFACES MADE TO FIT

**B**eynon Sports understands that one track does not fit all—that's why Beynon Sports is the only sports surfacing company that offers customized track and field surfaces with our TUNED Systems. Your track can be TUNED to match the desired feel under foot and force reduction range within IAAF parameters.

Customizing your track is the key to your athletes' top performance. Beynon Sports can adjust the durometer of the track and field surface to make it more forgiving for training or more ideal for competition. We can even modify the force reduction in various areas of the track to accommodate the needs of specific events.

**“There was some concern that the new polyurethane track at the University of Oregon’s Hayward Field would be too slow for the sprinters at the U.S. Olympic Trials, that it would favor the distance events—so much for that theory.”**

— Mark Zeigler  
THE SAN DIEGO UNION-TRIBUNE



### UNIVERSITY OF COLORADO

After daily use of its rubber sheet good track, the University of Colorado started seeing a trend of foot and tibia-fibula joint disorders, as well as stress fractures in its athletes. The university required a track and field surface suitable for daily training and capable of providing fast times during competitive meets. The University of Colorado contacted Beynon Sports Surfaces to solve this problem. The solution was Beynon Sports' BSS 2000 Resurfacing System with our embedded texture. The new BSS 2000 Resurfacing System provided a surface ideally suited to the University of Colorado's track and field program. Since installation, the previous joint disorders are no longer experienced.



### GILLIS FIELDHOUSE AT THE U.S. MILITARY ACADEMY AT WEST POINT

The U.S. Military Academy had a problem: Their rolled rubber fieldhouse surface was hard, brittle and fading. Beynon Sports' TUNED BSS 2000 Resurfacing System was the answer. After test patches to determine the correct thickness for the desired force reduction were installed, the only decisions left were color and texture. The Academy chose our Hobart Texture™ for the track oval and our spike resistant smooth surface for the basketball and volleyball courts. The TUNED BSS 2000 Resurfacing System provided the U.S. Military Academy at West Point a fieldhouse surface that is both durable for military drill rehearsals and resilient for everyday athletic training and competition.

# FULL POUR SYSTEMS

## BSS3000

## FOCUSES POWER INTO WINNING

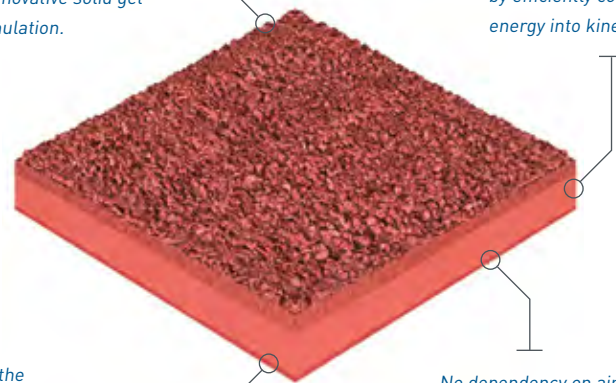
The revolutionary BSS 3000 is IAAF Certified, environmentally friendly, and rapidly improves athletic performance by efficiently converting impact energy into kinetic energy, propelling the athlete forward.

The ultra-soft polyurethane elastomer allows for superior shock absorption for better performance. Additionally, by using only renewable polyol technologies, we reduce the release of carbon dioxide into the atmosphere by 300,000 pounds upon installation.

The BSS 3000 is unlike any sports surface in the market today and unlike other full pour track surfaces, the BSS 3000 contains no SBR. Extensive R&D efforts and rigorous testing have combined to deliver this remarkable advancement in track and field surfacing.

*The force reduction layer provides superior shock absorbing properties controlled by an innovative solid gel polyurethane formulation.*

*Extensive research and development has led to better performance and faster times by efficiently converting impact energy into kinetic energy.*



*More than 40% of the polyurethane material is derived from a renewable source.*

*No dependency on air (foam) for shock absorption. Shock-absorbing properties are controlled by the innovative solid gel polyurethane formulation.*



## BSS2000

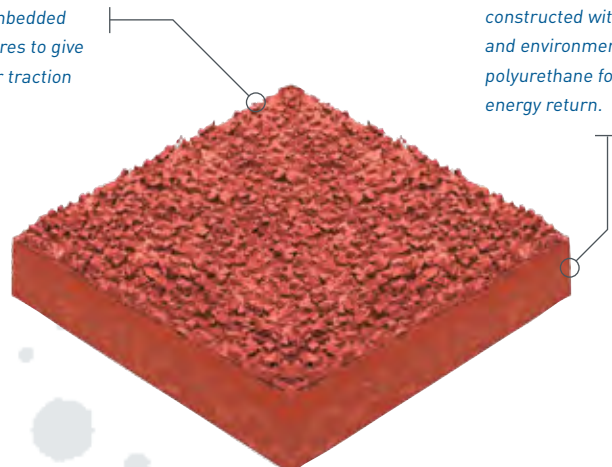
## THE ULTIMATE EDGE IN WORLD-CLASS PERFORMANCE

The Olympic-caliber BSS 2000 is IAAF Certified and offers athletes the top level of control and maximum energy return. It makes training more manageable and allows athletes to compete at the highest levels with the best in the world.

Featuring a force reduction layer of butyl rubber and full-depth color polyurethane, this system is finished with a customized surface engineered to meet the intense demands of competition.

*EPDM granules are mixed throughout the wear layer with your choice of embedded or encapsulated textures to give your athletes superior traction and complete control.*

*The force reduction layer is constructed with butyl rubber and environmentally friendly polyurethane for maximum energy return.*



# FULL POUR SYSTEMS

## BSS1000

### THE SURFACE THAT LETS YOUR ATHLETES PUSH THEIR PERFORMANCE TO THE LIMIT

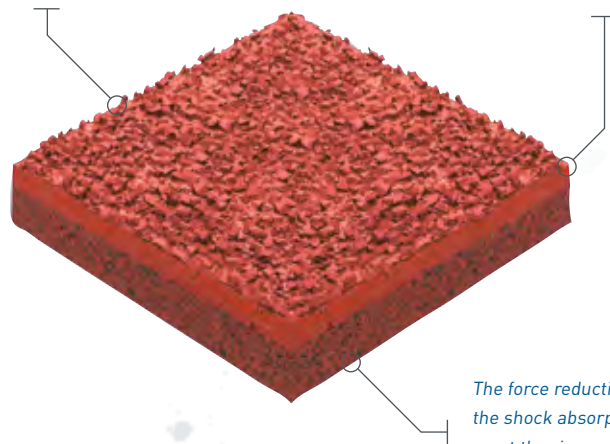
The BSS 1000 is an IAAF Certified surface that allows athletes to give it their all while training or in competition. This surface is durable enough to resist the roughest weather and the toughest competition.

Its bio-engineered force reduction layer integrates very fine SBR rubber granules with environmentally friendly polyurethane to create an impermeable shock-absorbing cushion.



*Sharp, precise markings and a seamless surface make this system ideal for world-class competitions.*

*Choose between embedded, encapsulated, or Beynon's specialized Hobart Texture™.*



*The force reduction layer provides the shock absorption necessary to meet the rigorous demands of the IAAF performance specifications.*

## BSS1000ML

### SURFACES TO DO YOUR BEST BY BEATING YOUR BEST

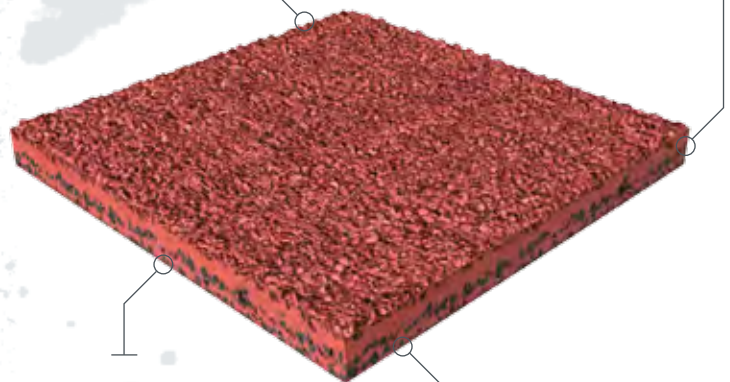
The BSS 1000ML is an IAAF Certified full pour multilayered track and field surface for schools and universities that desire a full pour track surface to meet competitive bidding requirements.

Made of UV stabilized two-component polyurethane, recycled SBR granules, and EPDM, the BSS 1000ML is a three-layer system that exceeds the requirements of IAAF performance standards.



*Choose between embedded, encapsulated, or Beynon's specialized Hobart Texture™.*

*The force reduction layer is composed of two layers of UV stabilized elastomeric polyurethane and SBR rubber.*



*Composed of UV stabilized two-component polyurethane, recycled SBR granules, and EPDM (type of synthetic rubber).*

*IAAF Certified and backed by an industry-leading five-year warranty.*

# PAVED SYSTEMS

## BSS300

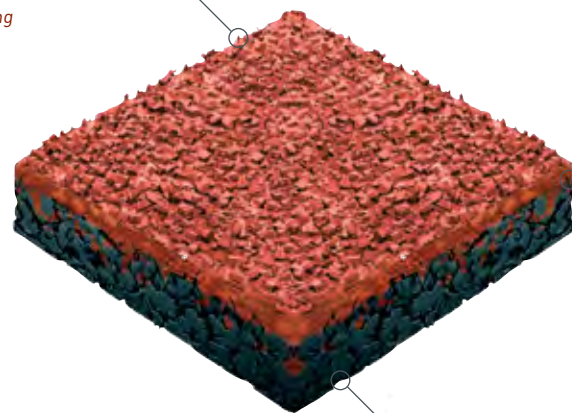
### A TRACK SYSTEM AS TOUGH AND DURABLE AS THOSE WHO RUN ON IT

The IAAF Certified BSS 300 is a durable, all-weather, flood and chip sandwich system with excellent shock absorption and the highest return of energy. It's impermeable, resilient, and fast and can take on anything that comes its way.

The Dual Durometer Sandwich system features paved-in-place polyurethane, topped with a two-component seal coat and finished with a flow-applied layer of two-component polyurethane and your choice of texture. The two-component wear layer provides the ultimate return of energy and ensures the longest life cycle in the industry.



*Your choice of an embedded or encapsulated texture is applied, providing all-weather usage and minimizing granule migration.*



*The paved-in-place installation process creates a uniform monolithic surface.*

*The polyurethane bound, black rubber basemat provides optimum shock absorption.*

## BSS200

### A TRACK SYSTEM THAT STANDS STRONG NO MATTER THE ELEMENTS

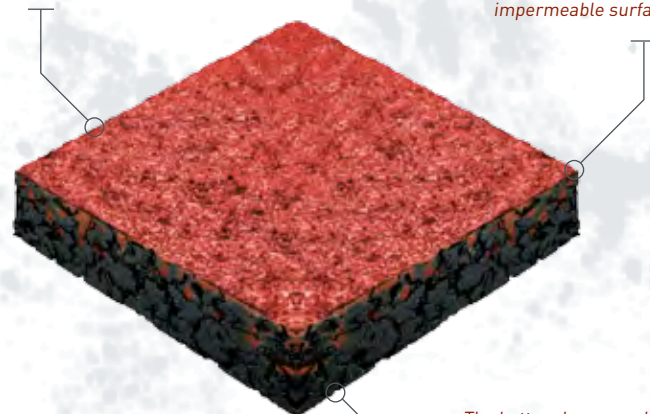
You get the most out of the BSS 200 because it allows for safe, long-term training while providing a premier surface to meet virtually every level of competition. You'll get the optimal performance from your athletes for years to come with its ability to withstand most weather climates and conditions.

We start with a paved-in-place polyurethane basemat, then it's coated with a two-component polyurethane sealer to make the surface impermeable.

This track delivers consistent energy return throughout its lifespan.



*A spray-applied top layer of EPDM granules and single-component polyurethane creates an all-weather surface, free of granule migration.*



*A two-component polyurethane seal coat is applied for an impermeable surface.*

*The bottom layer combines a polyurethane binder and SBR granules to achieve optimal comfort and shock absorption.*



# PAVED SYSTEMS

## BSS100 | THE IAAF CERTIFIED BSS 100 HAS AN EXTENSIVE HISTORY OF LONGEVITY

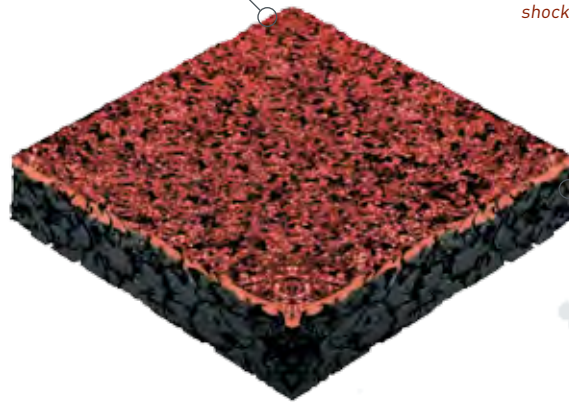
This surface stands up to all weather conditions and satisfies multi-use needs. It delivers consistent energy return throughout its life cycle and is water permeable.

The BSS 100 is a paved-in-place porous track with a single-compound polyurethane binder and SBR rubber granules, finished with multiple sprays of 100% solids, pigment polyurethane, and EPDM granules.



*The surface is sprayed multiple times with pigmented polyurethane and EPDM granules for texture and traction.*

*SBR rubber granules are paved in place with resilient polyurethane to form the shock-absorbing base layer.*



## YOUR CHOICE OF TEXTURE

For an Olympic-caliber track, you can finish your surface with your choice of embedded granules, encapsulated granules, or our state-of-the-art Hobart Texture™. These textures are as unique as they are functional. We listened to your needs and developed unique surface textures that can be found on the finest track and field facilities across the United States and around the globe.

These customized textures can be utilized with our BSS 300, 1000, 1000ML, 2000, and 3000 systems and are strong enough to stand up to the sun, rain, snow, and heavy loads.



*Embedded*



*Encapsulated*



*Hobart*

# BREATHE NEW LIFE INTO YOUR EXISTING SURFACE

**R**esurfacing your track and field system through Beynon Sports can extend the life of your existing track by 10 to 15 years at a fraction of the cost of replacement. Beynon Sports specializes in the resurfacing of existing track and field facilities. Our resurfacing systems make older, worn, hard sheet good and polyurethane systems brand new. We can also adjust the force reduction to make the surface more user-friendly for daily training and competition.

Beynon Sports has developed a formulated polyurethane primer specifically to adhere to all existing track and field surfaces to allow for full chemical adhesion of the new resurfacing system. Due to the complex nature of UV degradation, an existing track and field surface undergoes chemical changes that present a challenge for any other

company to achieve substantial bond, but because of our understanding of the chemistry, and more than 15 years of extensive research and development, we can guarantee that the chemical bond is obtained.

In order to ensure a lasting surface and bond, the adhesion level needs to be at a minimum of 300 psi. Our research shows that the use of our specially formulated polyurethane primer in conjunction with the new polyurethane resurfacing system will achieve levels greater than 400 psi. Tests of our competitors' resurfacing products have shown adhesion levels of less than 50 psi. With our history and research of resurfacing track and field systems, only Beynon Sports can guarantee full and proper adhesion.

## TRACK RESURFACING OPTIONS

We offer the following types of resurfacing systems: 3mm+5mm, 2mm+5mm, and 5mm.

This means we first apply a 2mm or 3mm force reduction layer to improve the feel under foot and correct surface irregularities or minor planarity issues with the existing track and field surface. Once complete, we apply our 5mm resurfacing system with your choice of embedded, encapsulated, or Hobart Texture™.



*Embedded*



*Encapsulated*



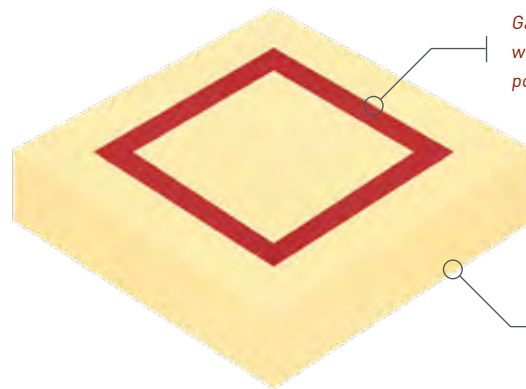
*Hobart*

# INDOOR PRODUCTS

## POLYTURF | KEEPS GOING STRONG SEASON AFTER SEASON

PolyTurf is a two-component, poured-in-place polyurethane system that offers maximum durability with minimal maintenance.

This seamless surface resists UV degradation and stains and endures the daily use from tables, chairs, and rolling loads—all while providing superior athletic performance. You get the best of both worlds: high resiliency and enduring toughness.



Game lines are meticulously applied with chemically bonded pigmented polyurethane marking paint.

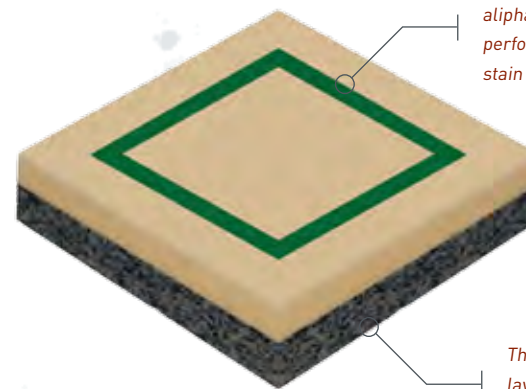
Seamless, self-leveling construction ensures a resilient playing surface.

## POLYTURF PLUS | SURFACES THAT TAKE DUAL-DUROMETER SYSTEM | WINNERS TO THE NEXT LEVEL

PolyTurf Plus features a bio-engineered force reduction layer beneath the PolyTurf wear layer to increase return of energy and shock absorbency—taking your sports surface to the next level of performance.

PolyTurf Plus' resilient wear layer is tough enough to endure the extreme demands of daily training and competition, and withstands the abuse of tables, chairs, and rolling loads.

The combination of outstanding athletic performance and rugged durability make PolyTurf Plus a low maintenance and long lifecycle investment that will go the distance for your team.



A spray-applied, water-based aliphatic coating provides optimal performance characteristics and stain resistance.

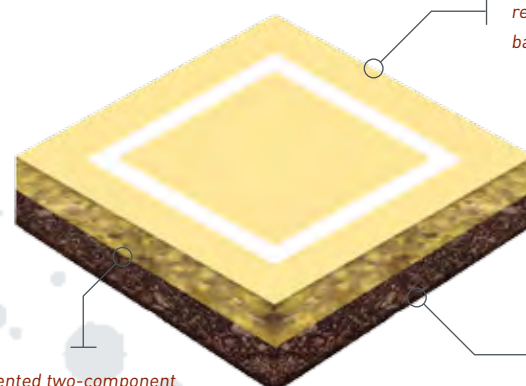
The bioengineered force reduction layer is achieved through seamless self-leveling construction.

## POLYTURF PLUS | CUSTOMIZE TO PERFORM PAD & POUR | UNLIKE ANY OTHER

With the PolyTurf Plus Pad & Pour, you can customize your flooring to fit your facility's needs.

Choose from a variety of shock pad thicknesses to achieve your desired training and competing characteristics. We then top it with our two-component polyurethane choke coat layer and self-leveling polyurethane wear coat layer for long-lasting durability.

Our water-based polyurethane finish—in your choice of colors, textures, and thicknesses—ensures easy maintenance and outstanding physical properties.



Specifically formulated elastomeric resin gives the surface exceptional ball rebound and durability.

A patented two-component choke coat layer seals the shock pad's pores.

Polyurethane adhesive bonds pad to substrate.

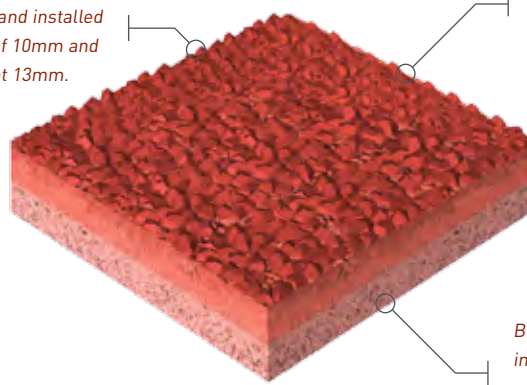
# BSS1000 WITH HOBART TEXTURE™

CREATED BY WINNERS  
BUILT FOR CHAMPIONS

Found in some of today's most prestigious fieldhouses, the BSS 1000 with our Hobart Texture™ is ideal for multi-function arenas. This dual-durometer, IAAF Certified surface is completely spike resistant and provides exceptional shock absorption and return of energy.

Additionally, the stain-resistant coating is durable enough to resist the toughest competition and requires no advanced maintenance.

Can be designed, manufactured, and installed at a thickness of 10mm and IAAF Certified at 13mm.



Tuned to the precise durometer required to meet and exceed the needs of your coaching staff, athletes, and facility managers.

Bioengineered force reduction layer integrates very fine SBR rubber granules with environmentally friendly polyurethane.

# POLYTURF SP

THE SPIKE-RESISTANT SURFACE  
YOUR FACILITY DESERVES

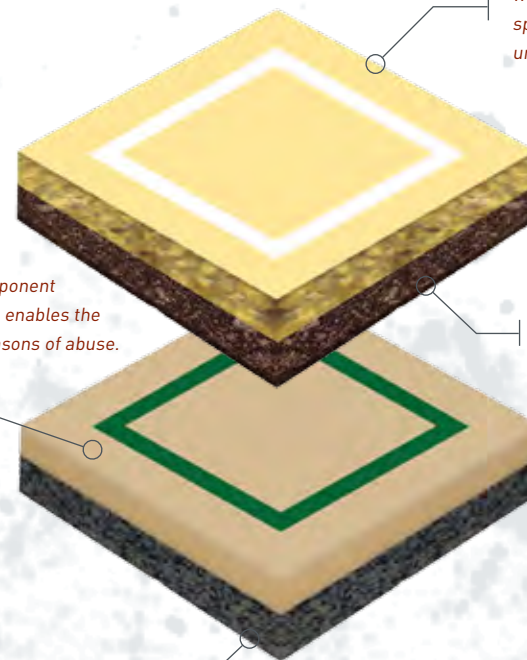
The PolyTurf SP system is a smooth surface that utilizes revolutionary BEYPUR 500 technology to provide a non-textured surface that repels the wear and indentation of spikes.

The PolyTurf SP system can feature a bioengineered force reduction layer or a prefabricated polyurethane-bound pad beneath our proprietary polyurethane wear layer to increase return of energy and shock absorbency.

The BEYPUR 500 polyurethane wear layer provides a seamless spike-resistant surface with unparalleled performance characteristics. PolyTurf SP's resilient wear layers are tough enough to endure the extreme demands of daily training and competition—as well as the abuse of tables, chairs, and rolling loads.

The teaming of superior performance and rugged durability makes the PolyTurf SP a low maintenance, long-lasting investment that will go the distance for your organization.

The BEYPUR 500 polyurethane wear layer provides a seamless spike-resistant surface with unparalleled performance.



A full-depth two-component elastomeric urethane enables the surface to endure seasons of abuse.

The shock pad is pre-manufactured using 100% recycled rubber and polyurethane binder.

Chemical/mechanical bond to the substrate

# WE ARE A **LEADER** IN ENVIRONMENTAL AWARENESS

**B**eynon Sports is committed to exceeding environmental standards, which is why we lead the industry in research and development. We bring our clients the most environmentally friendly products available by using natural-based compounds and renewable resources and utilizing no hazardous materials from our formulations.

Our eco-friendly components and research and development initiatives include:

- **CONCRETE PRIMER** — High Solids, Zero VOC primer utilizing renewable, natural-based raw materials.
- **100% SOLIDS 1-C SPRAY** — Beynon Sports is the only manufacturer to supply a 100% solids single-component structural spray, thus eliminating exposure to solvents.
- **ISOCYANATE-FREE WATERBORNE POLYURETHANE 1-C SPRAY** — Beynon Sports is the only manufacturer to provide a non-isocyanate based polyurethane single-component structural spray.
- **BEYPUR 250** — Two-component polyurethane wear layer material utilizing more than 45% renewable polyols.
- **WATER-BASED ALIPHATIC COATING** — Odorless and solvent-free coatings for gymnasium, fieldhouse, and outdoor track systems.

- **2-C URETHANES** — 100% Solids, zero VOCs and formulated without heavy metals to create an eco-friendly and non-hazardous system.

- **LEED® CERTIFICATION** — Beynon Sports' entire product suite is eligible for LEED Credits. LEED is a rating system developed by the U.S. Green Building Council to set a benchmark for the design, construction, and operation of high-performance green facilities. Our indoor product line was designed specifically for this market.



It is the mission of Beynon Sports to exceed the expectations of our customers through the formulation, production, distribution, and installation of safe, environmentally friendly athletic surfaces designed for speed, resiliency, and daily use in athletic facilities around the world. To increase awareness and maintain our leadership position as innovators in the industry, Beynon Sports is actively involved in green-focused organizations.

## A WARRANTY THAT OUTLASTS ALL OTHERS



Beynon Sports offers the strongest warranty in the industry and we back it up.

Our comprehensive five-year warranty on all track and field surfaces or our all-inclusive 10-year warranty on select BSS 1000ML, BSS 1000, BSS 2000, or BSS 3000 track and field surfaces can also be backed by a third-party insured warranty for a coterminous five-year or eight-year period. Beynon Sports maintains a prepaid zero-deductible product defect insurance policy with no limit per claim, no retention, and no retention period based on our significant capital surplus and reserve funds.

# FEATURED INSTALLATIONS

## UNIVERSITY OF OREGON, HAYWARD FIELD



The University of Oregon's Hayward Field required an Olympic-caliber track and field system to meet the needs of the U.S. Olympic Trials, annual Prefontaine Meet, and the NCAA Championships. To ensure Hayward Field received the best track and field surface available, the U.S. Olympic Committee, Nike®, and USA Track & Field evaluated all track and field surfacing systems and interviewed athletes, coaches, and designers from around the world. Their conclusion was that only Beynon Sports' IAAF Certified Class I, BSS 2000 system with

embedded texture could provide the surface necessary to propel their athletes into the Olympics at record-setting times. As validation of their choice, at the 2012 U.S. Olympic Trials, the American, collegiate, high school, American junior, and world junior records in the 100 meters were all set on their BSS 2000 track surface. The performances at the University of Oregon have proven, once again, that competing on Beynon Sports' polyurethane surfaces is preferred by the world's best athletes.

**“Thank you for your personal attention to the myriad details associated with building the competition venues at Hayward Field. It was a fantastic success and you and your staff played pivotal roles in that outcome. I appreciate your willingness to respond to our specific and unique needs for Hayward Field.”**

— Vin Lananna

ASSOCIATE ATHLETIC DIRECTOR,  
UNIVERSITY OF OREGON



# FEATURED INSTALLATIONS

## SPIRE INSTITUTE, GENEVA, OHIO



The SPIRE Institute is one of the largest indoor and outdoor track and field complexes in the Midwest. It is world renowned for being one of the fastest indoor track and field facilities in the country—records are steadily broken at the high school, collegiate, and professional levels. At any given time, the area can host two long jumps, two pole vaults, two high jumps, and three shot puts while running the gamut of races.

The SPIRE Institute features an eight-lane 300 meter indoor track using Beynon Sports' BSS 1000 surface with Hobart Texture™ as well as various basketball and volleyball courts utilizing Beynon Sports' PolyTurf sports surface. Outdoors the SPIRE Institute boasts Beynon Sports' BSS 2000 surface with embedded texture, providing athletes with multiple high-performance sports surfaces for training and competition.

**“The NAIA is looking forward to having the SPIRE Sports Complex host our Indoor Track & Field National Championships for the next two years. This organization oversees world-class facilities and will offer our student-athletes, coaches, and fans a truly memorable experience. We are excited to nationally showcase the best track and field athletes in Geneva, Ohio.”**

— Jim Carr  
NAIA PRESIDENT AND CEO

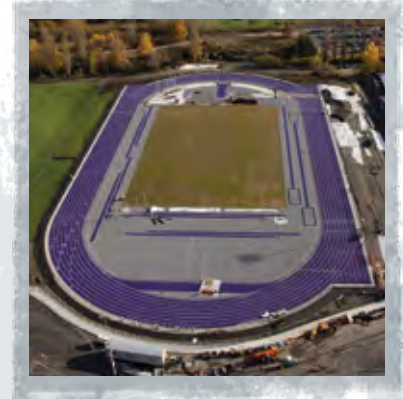
## UNIVERSITY OF WASHINGTON



When the University of Washington chose to build a world-class track and field facility on a concrete subbase supported by dozens of perfectly engineered piers, they needed a sports surfacing manufacturer and installer that could handle the challenges and provide them with a surface of unmatched quality and performance.

After an extensive and comprehensive evaluation process, the Huskies selected Beynon Sports' BSS 2000 track and field surface with the specialized Hobart Texture™.

With more than 160 installations throughout the NCAA Division I, II, and III combined with eight IAAF Certified surfaces to choose from, only Beynon had the expertise and qualifications to provide the Huskies with the surface they needed. Completed in October 2012, the track rewards athletes with the maximum energy return required to shatter records.





# FEATURED INSTALLATIONS

## UNIVERSITY OF ALABAMA, SAM BAILEY TRACK AND FIELD STADIUM



In 2006 the Crimson Tide needed to resurface some of their runways and opted to go with Beynon. A few years later, when the time came to replace Sam Bailey Track and Field Stadium's entire running surface, the choice was clear—Beynon Sports. This was due to our unmatched quality of products and expertise in multicolor polyurethane surfaces, as well as superior

customer care. The University of Alabama selected Beynon Sports' IAAF Certified BSS 2000 track surface with embedded texture with a unique design featuring wider turns that resulted in faster times. Finished in November 2012, the BSS 2000 track and field surface will provide one of the best surfaces in the world for speed as well as distance events.



## UNIVERSITY OF KENTUCKY, SHIVELY TRACK COMPLEX



The track and field surface at the University of Kentucky had become worn and a challenge for hosting competitive NCAA meets. Rather than simply trying to renovate their existing track facility, the University of Kentucky selected Beynon Sports to build a new facility utilizing both our IAAF Certified BSS 2000 and BSS 3000 track and field surfaces. Beynon Sports was the general contractor for the entire project, managing not only the track surfacing but also the

concrete curbs, slot drains, asphalt, and subbase. Handling this larger scope of work was no small task, but with full site contracting capabilities, it is one Beynon Sports was prepared for. With a résumé that includes construction of multiple IAAF Class I facilities in the United States, Beynon Sports' construction expertise and outstanding customer service were the clear choice for the University of Kentucky.



# FEATURED INSTALLATIONS

## LIBERTY UNIVERSITY, MATTHES-HOPKINS TRACK COMPLEX



As of 2013, six of the 15 Big South Men's and Women's Outdoor Track and Field Championships have been held at Liberty University, including the inaugural event in 1994. With an impressive list of championships, Liberty University needed a new track and field facility that could exceed the expectations of their coaches,

athletes, and distinguished alumni. Liberty University chose Beynon Sports to manage the entire reconstruction of the Matthes-Hopkins Track Complex from facility design to site contracting to installation of their new BSS 1000 track and field surface with Hobart Texture™.

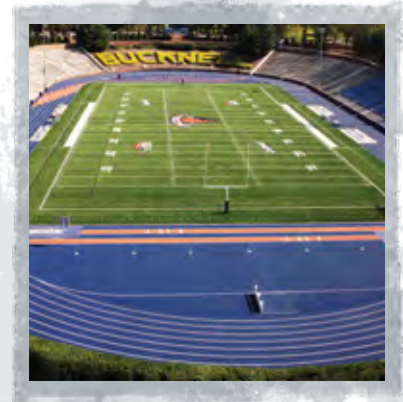


## BUCKNELL UNIVERSITY, CHRISTY MATHEWSON MEMORIAL STADIUM



Bucknell University and Beynon Sports extended their long partnership when the Bison elected to go with Beynon Sports' BSS 2000 with Hobart Texture™ for the renovation of the Christy Mathewson Memorial Stadium. Beynon Sports' history of great customer service and exceptional products made the decision to remain with Beynon an easy choice.

This marks the fifth time that Bucknell University has selected Beynon Sports to design, manufacture, and install their athletic surfaces on campus. With Bucknell University's Gerhard Fieldhouse also utilizing a Beynon surface, the Bison can train and compete on Beynon Sports' surfaces year-round.





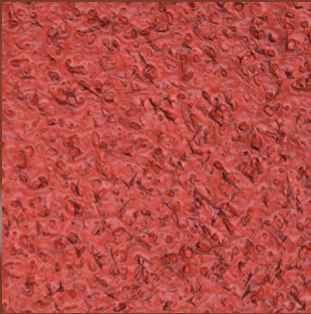
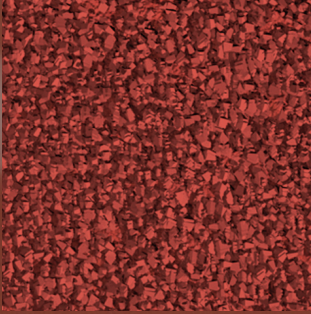
**BEYNON**<sup>®</sup>

A Tarkett Sports Company

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TRACK

BSS 1000



PRODUCT  
COMPARISON

## BSS 1000 VS. Rolled Rubber



Seamless. Forgiving. Long lasting. The BSS 1000 is the optimal surface for training and competition. How does a rolled rubber surface compare? You be the judge:

### BSS 1000

- Seamless polyurethane construction
- Self leveling, poured in place installation eliminates deviations in the substrate
- Chemical bond to receiving surface
- Force reduction can be **TUNED™** to meet the specific needs of the athletes and coaching staff
- Longest lifecycle of any track & field surface on the market
  - Can be resurfaced for a fraction of the cost compared to reapplying a rolled rubber track
  - Track installations in active use today that are more than 30 years old
- Polyurethane surfaces are resilient by formulation and will not harden with age

### Rolled Rubber Surfaces

- Over 5 miles of seams in an 8 lane track
- Mirrors imperfections in the asphalt - requiring unattainable surface tolerances
- Glued to the receiving surface - resulting in delamination once exposed to rain and sun
- Product color will fade
- Cannot be resurfaced - must be torn out & replaced every 10-12 years
- Hardens significantly with age - plasticizers released over time shrink the product resulting in:
  - Delamination
  - Seam separation
  - Potential injury to athletes

### RUBBER SHEET GOODS

**It's Really  
No Contest**





# WHAT THE EXPERTS HAVE TO SAY.

“While SI joint misalignments are common in power speed athletes in a competitive setting, the severity and frequency of said problems magnifies when competing or training on the (rolled rubber) surface.”

– Dan Pfaff, World Class Track & Field Coach



“The (Beynon) surface is substantially more forgiving and since our track has been in place stress fractures have become almost non-existent in our program.”

– Ralph Spry, Head Track & Field Coach,  
Auburn University



“Our athletes have already told me how great the new (Beynon) track feels – they love it! I believe that this surface will significantly decrease the number of stress related injuries. And it looks great – I now look forward to showing off our track to recruits and visiting teams and coaches.”

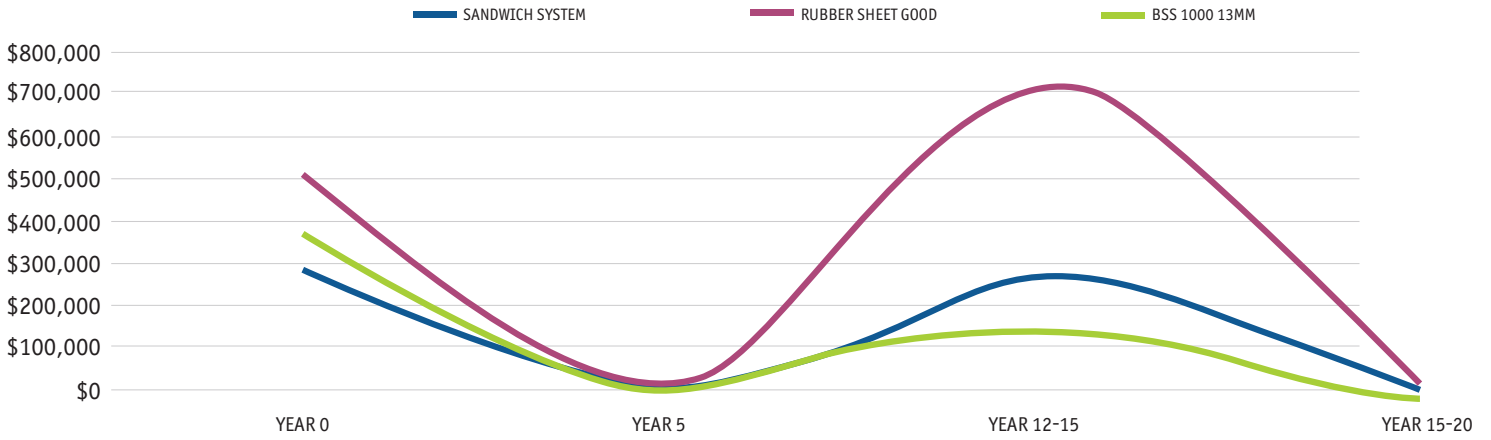
– Dave Cianelli, Virginia Tech’s Director  
of Track & Field and Cross Country

“I’ve found the (rolled rubber) surface to be too hard for daily training. During the second year the seams on the track started to open up. We will have to have them fixed soon.”

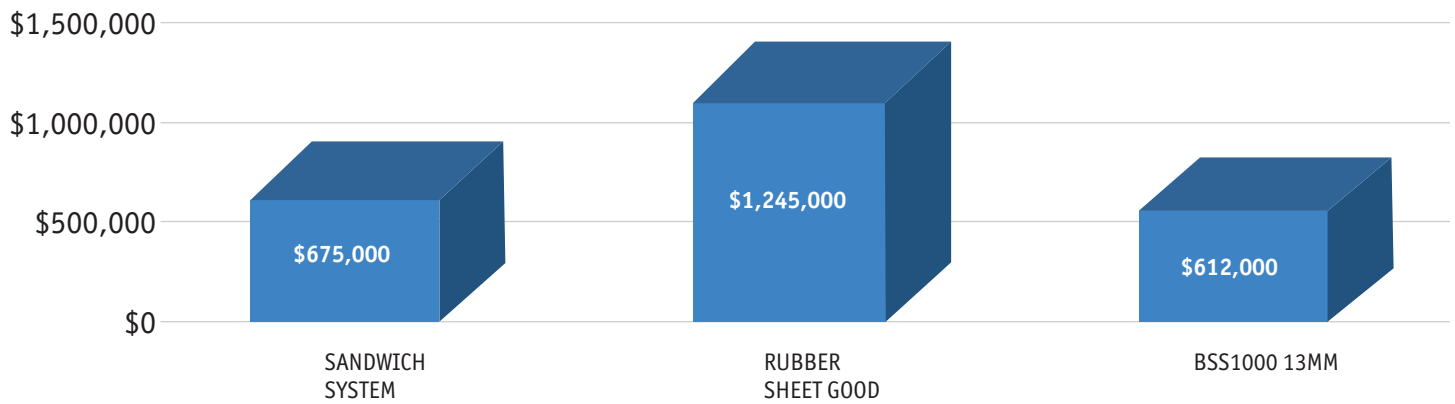
– Lee Evans, Head Track and Cross  
Country Coach, University of  
South Alabama



# Lifecycle Cost Analysis for Outdoor Track and Field Surfaces based on a 6,000 SY Facility\*



## Total Cost over 20 Years\*



\*Data compiled from over 35 years of industry data

	Year 0	Year 5	Year 12-15	Year 16-20	
<b>Surface Type</b>	<b>Initial Installation Cost</b>	<b>Cost to Restripe</b>	<b>Resurface or Remove and Replace</b>	<b>Cost to Restripe</b>	<b>Total</b>
Sandwich System	\$270,000	\$7,500	\$390,000	\$7,500	\$675,000
Rubber Sheet Good	\$510,000	\$7,500	\$720,000	\$7,500	\$1,245,000
BSS 1000 13mm*	\$360,000		\$252,000		\$612,000

\*One (1) Free Restripe is included in the Cost of BSS 1000 13mm by Beynon Sports

### Information

#### Beynon Sports Surfaces

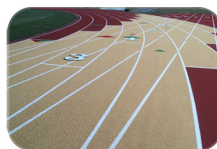
16 Alt Road Hunt Valley, Maryland 21030  
(410) 771-9473 | www.beynonSports.com



THE ULTIMATE  
SURFACE EXPERIENCE



# IF YOU CAN DREAM IT, WE CAN **BUILD** IT.



Let us show you how we can customize your track.



THE ULTIMATE  
SURFACE EXPERIENCE

Twitter @BeynonSports  
Facebook.com/BeynonSports  
LinkedIn.com/BeynonSports  
YouTube.com/BeynonSports

[WWW.BEYNONSPORTS.COM](http://WWW.BEYNONSPORTS.COM)



## About Beynon Sports:

Beynon Sports was founded by John T. Beynon with the vision of creating the highest performing synthetic surfaces designed for speed and competition, as well as daily training. Beynon's premier IAAF-Certified track and field surfaces, GreenGuard-certified indoor fieldhouse and gymnasium surfaces and outdoor tennis courts are found in the world's most renowned athletic facilities.

In the spring of 2008, Beynon Sports joined the Tarkett Sports family, combining the most recognized and prestigious name in the artificial turf market in FieldTurf with the celebrated Beynon Sports' branded track and field, fieldhouse and gymnasium surfacing systems. The result is a global firm with unmatched financial strength and a dedication to innovation, customer service, and excellence. Through this partnership, clients receive unprecedented service, quality, and support as well as the financial backing to stand behind the products manufactured and installed.

Beynon Sports is part of Tarkett Sports, a Division of the Tarkett Group. Tarkett Sports is the largest entity in the sports and landscape surfacing industries. Included within the Tarkett Sports portfolio is the world-renowned FieldTurf brand of artificial turf along with an impressive range of performance sports flooring products. This product range includes: synthetic and hardwood basketball; volleyball and gymnasium flooring; squash and racquetball courts; floor protection and covering systems; weight room flooring; and high performance indoor and outdoor running tracks. All Tarkett Sports surfaces are developed, produced and installed with a concentration on sustainability and a commitment to protecting the environment, providing additional LEED contribution opportunities for customers. The company calls this focus on sustainability and the environment 'Environmental Intelligence' and all company personnel strive to exemplify this philosophy in all aspects of the business.

### Key Talking Points:

- Industry leader in the design, formulation, production and installation of outdoor track and field, and indoor fieldhouse and gymnasium polyurethane surfaces for high schools, universities and international arenas
- Over 1,500 installations worldwide in the past ten (10) years with over 40 years' experience in the renovation and new construction of sports facilities
- Manufacture over thirty-seven (37) unique polyurethane components for the indoor and outdoor sports surfacing market
- Go to market using a direct installation model, where Beynon Sports' own employees physically construct the surface on-site
- Core markets are North America, Caribbean and Southeast Asia with early-stage share development in India, South America and the European Union

### Culture of Beynon Sports:

With the spirit of a start-up and the depth and stability of an industry powerhouse, Beynon Sports provides its employees with the autonomy to execute their objectives in a truly entrepreneurial environment, the resources to master their tasks and the purpose to understand how the effective execution of each individual's responsibilities represents a critical part of the success of the organization.

### At Beynon Sports, our team members are dedicated to four core principles:

- **Commitment to the Customer**, which simply means doing what we say we will do.
- **Focus on Financial Strength** to create long-term sustainability. This requires an ever-vigilant focus on cost control, maintenance or expansion of operating margins and avoidance of unquantifiable risks.
- **An Unwavering Emphasis on Operational Excellence** in all aspects of our business – from product formulation to production from estimating to contract management and from construction to close-out.
- **Dedication to the Employee**, which means diligently executing each of our duties thoroughly and conscientiously and the company, in turn, providing fair compensation and benefits and opportunities for career growth and a promoting a healthy balance between our personal and professional lives.

### Ownership and Structure:

- Founded in 2001 by John T. Beynon
- Acquired by Tarkett in April 2008
- Beynon is a Division of Tarkett Sports

### Approximate Annual Revenues and Number of Employees:

- \$85M USD per year
- 300 employees in the Peak Summer Months

### What is the Address of our Headquarters and ISO-9001 Manufacturing Center?

- 16 Alt Road, Hunt Valley, Maryland 21030 (410) 771-9473  
Main Contact: Mark Scrivano

## Where are Our Operational Centers Located?

- 350 CR 255, Georgetown, Texas 78633  
(512) 778-6170  
Main Contact: Rick Ediger
- 19600 SW 129th Avenue, Tualatin, Oregon 97062  
(503) 563-6396  
Main Contact: Rob Gloeckner
- 4263 N Selland Ave, Fresno, California 93722  
(559) 840-1585  
Main Contact: Mason Farnsworth
- 775 Canosa Ct., Denver, Colorado 80204 (Renner Sports)  
(303) 825-3435  
Main Contact: Greg McKenna

## How Many Installation Teams Do We Have?

- Twenty-four (24) Installation Teams

## How Many Regional Sales Offices Do We Have?

- Fourteen (14) Regional Sales Offices Across the United States

## How Many Tracks and Fieldhouses Do We Build Each Year?

- Between 180 and 225 facilities each Year Across North America at close to 10.0M square feet of surfacing.
- Including our Partners in the Northeast, close to 275 clients select a Beynon surface each year.

## Why Do We Use Distributors in the Northeast?

Due to the increased seasonality in the Northeast, a mature and established market, and the requirement for a Union-designated workforce, Beynon Sports partners with contractors dedicated to the same ideals and levels of workmanship and client satisfaction.

## Key Competitive Advantages of Beynon:

- Manufacturer and Installer – Single Source Provider and Warranty.
- Third-Party Insured Warranty on All Projects (Only Track Manufacturer and Installer who can provide this).
- Bonding Capacity.
  - Ability to bond a single project up to \$20,000,000
  - Aggregate bonding capacity at \$75,000,000
- Seven (7) IAAF Certified Systems – Solution to Meet Any Budget
- Customization.
  - All surfaces are designed, manufactured and installed to the precise durometer and force reduction desired
  - All polyurethane products are made in Hunt Valley, Maryland, USA
- Leading Builder in North America with >50% Market Share.
- Access to SmartBuy Cooperative Purchasing.

## Why is SmartBuy such a Great Tool for the Client?

- Control: Get the Beynon surface you want without leaving anything to chance.
- Speed: No purchasing process is faster from proposal-> contract. Period.
- Simplicity: Single contract, sole-source responsibility, no General Contracting mark-up.
- Value: Secure the team, schedule and terms of your choosing.
- Savings: Time, energy and confusion of the bid process is greatly reduced.

## Information

(410) 771-9473  
info@beynonsports.com  
www.beynonsports.com



THE ULTIMATE  
SURFACE EXPERIENCE



**FAST TRACK**  
Maintenance Program

We make you **look Good.**

FieldTurf USA Inc



## Inspections

Who can you trust to give you the full story? Our team of certified, experienced experts will conduct a full inspection of your track facility to determine its condition.

## Resurfacing

Has your track seen better days? Resurfacing your track surface extends its life span for a fraction of the cost of replacing it.

## Repairs

Does your track have a few problem areas? Our FastTrack team can repair any issues that you are having with your track with efficiency and perfection.

## Restripping

Not sure which lane your running in? It's time to restripe your track. Let our experts bring your lines back to life.

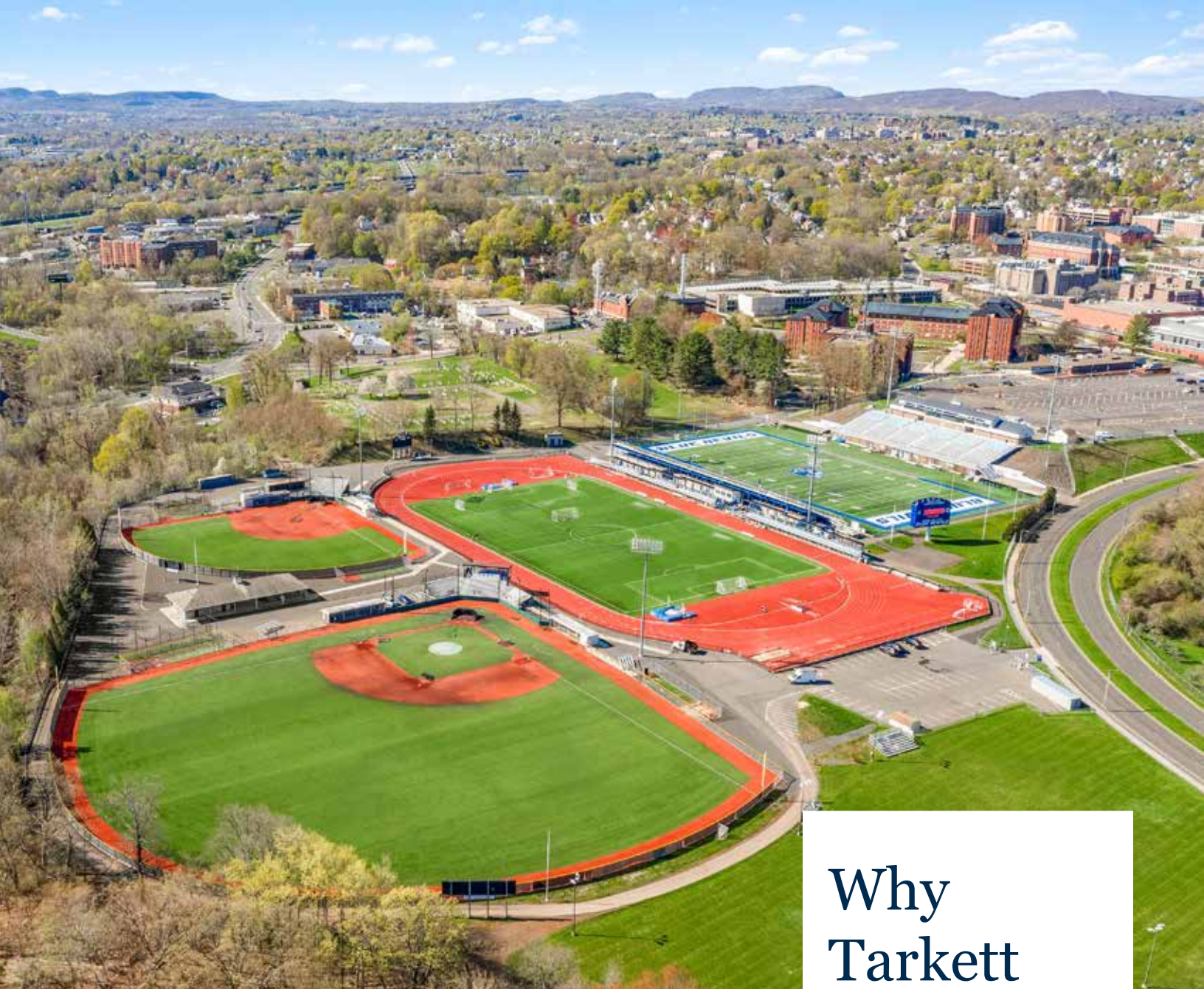


### FIND OUT MORE

**Beynon Sports**  
4263 N. Selland Ave., Fresno, CA 93722  
559-840-1585 | [www.beynonSports.com](http://www.beynonSports.com)

 **BEYNON**<sup>®</sup>  
A Tarkett Sports Company

THE ULTIMATE  
SURFACE EXPERIENCE



# Why Tarkett

One Company,  
Endless Solutions



# TARKETT'S SUCCESS FOCUSES ON SIMPLICITY & CHOICE FOR THEIR CLIENTS

At Tarkett, delivering a simplified customer experience has long been at the core of our values. We're driven to "be the surfacing company customers want to partner with."

In North America, the Tarkett Group offers a comprehensive portfolio of carpet tile, rubber, LVT, sheet vinyl, artificial turf, hybrid grass, running surfaces, tennis courts and sports flooring solutions through its renowned brands: Tarkett, FieldTurf, FieldTurf Landscape, Beynon Sports, Renner Sports, GrassMaster and Tarkett Indoor.



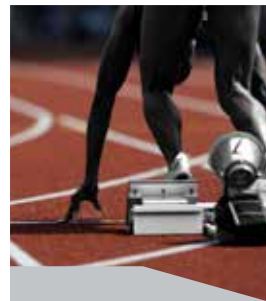
Leading flooring solutions for any commercial space, from carpet to resilient flooring.



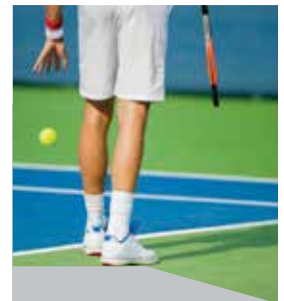
Leading sports flooring solutions for a variety of athletic and multipurpose applications.



Leading artificial turf and hybrid turf systems for a variety of sports and landscape applications.



Leading running track surfacing systems for outdoor, indoor and temporary event applications.



Leading racquet sports surfacing systems and post-tensioned base construction expertise.



*"Offering our clients with a turnkey solution is at the core of our values. These projects are costly, complex, and important purchases for our clients. We pride ourselves on offering innovative products and value to our customers, all while making the entire process easy."*

**Eric Daliere, President – Tarkett North America & Tarkett Sports**







# TARKETT FOCUSES ON DELIVERING A LEADING CUSTOMER EXPERIENCE BY MAKING IT EASY

One company, endless solutions. The Tarkett Group is among the largest commercial and residential flooring manufacturers in the world, backed by 135 years of knowledge, expertise and reputation. The sports division was assembled over 20 years ago and showcases leading brands in their specific markets.

## Why Tarkett

- **COMPREHENSIVE PORTFOLIO OF PRODUCTS**

Tarkett has a surfacing solution for every indoor and outdoor flooring application that your facility requires.

- **SIMPLIFIED PURCHASING EXPERIENCE**

You can work with one company for your entire project. Benefit from simplified communication, planning and warranties. No more finger-pointing between different suppliers.

- **EXPERIENCE, KNOWLEDGE AND REPUTATION**

With decades of experience and specialized expert teams, Tarkett is renowned across the world. Having successfully completed notable projects for leading institutions and programs, you can be confident that you're partnering with a world leader.

- **UNWAVERING DEDICATION TO QUALITY & INNOVATION**

Across all Tarkett teams, what unites us the most is our dedication to quality & innovation. It's showcased through our innovative product offering and advanced technology which deliver leading results.

- **COMMITTED TO SUSTAINABILITY**

Tarkett was awarded a platinum medal from EcoVadis, which is the most prestigious sustainability award a company can earn. Tarkett is now in the top 1% of companies rated in the industry category. This recognition is further validation of Tarkett's unwavering dedication to create a better surface for the user, the athlete and the planet.

Behind our commitment to great design is a belief that interior spaces and athletic surfaces should support, inspire and connect the people who use them and perform on them. We call this philosophy Tarkett Human-Conscious Design, and we use it to guide our decisions every day. From the way our products look to the way they perform, and from material selections to healthier and easier maintenance processes, we're constantly reminded that great design is about supporting people. Not a just a few people. All people.



**One  
Company**  
Endless  
Solutions

TARKETT	TARKETT SPORTS INDOOR	FIELDTURF FIELDTURF LANDSCAPE GRASSMASTER	BEYNON SPORTS	RENNER SPORTS
COMMERCIAL FLOORING	ATHLETIC FLOORING	ARTIFICIAL TURF	RUNNING TRACK	COURT SURFACING
<ul style="list-style-type: none"> <li>• Meeting Rooms</li> <li>• Auditoriums</li> <li>• Dining Services</li> <li>• Res Life Spaces</li> <li>• Libraries</li> <li>• Administration Offices</li> <li>• Locker Rooms</li> </ul>	<ul style="list-style-type: none"> <li>• Gymnasiums</li> <li>• Fitness Center</li> <li>• Dance Studio</li> <li>• Yoga Room</li> <li>• Indoor Jogging Track</li> </ul>	<ul style="list-style-type: none"> <li>• Football</li> <li>• Soccer</li> <li>• Lacrosse</li> <li>• Field Hockey</li> <li>• Baseball</li> <li>• Softball</li> <li>• Rugby</li> <li>• Multi-Purpose</li> <li>• Indoor Training</li> <li>• Playgrounds</li> <li>• Walkways</li> <li>• Entrance Landscaping</li> </ul>	<ul style="list-style-type: none"> <li>• Outdoor Running Track</li> <li>• Indoor Running Track</li> <li>• Hydraulic &amp; Permanent Banked Running Track</li> </ul>	<ul style="list-style-type: none"> <li>• Tennis</li> <li>• Pickleball</li> <li>• Base Construction</li> <li>• Post-tensioned Concrete</li> </ul>



# CCSU GOES ALL-IN ON TARKETT

Read about Central Connecticut State University  
and their experience with the Tarkett Team





Since the first FieldTurf installation over 10 years ago, Tarkett has been the trusted choice for Central Connecticut State University. The university showcases multiple installations featuring a variety of surfacing systems from Tarkett's commercial and sports divisions.

On campus, the soccer field, baseball field, softball field and Arute Field (Football and Women's Lacrosse) were surfaced by FieldTurf and recently, the C.J. Huang Recreation Center was equipped with a variety of Tarkett and Tarkett Sports systems.



## DELIVERING THE ULTIMATE SURFACE EXPERIENCE AT THE C.J. HUANG RECREATION CENTER

For almost 30 years, an air-supported structure with an asphalt floor served as the primary recreation facility on the Central Connecticut State University campus in New Britain, CT.

All that changed with the opening of the \$25 million C.J. Huang Recreation Center in January 2020. At 70,000 square feet, the two-story building more than doubled the size of the dome (which opened in 1991 and was intended to be temporary) and provides students with a three-court gymnasium, a suspended track, fitness areas, a weight room and more.

*"This building is a huge step forward for campus recreation at CCSU and for the university as a whole," says Scott Kazar, CCSU's recreation specialist. "It was something the students really wanted."*

The C.J. Huang Recreation Center serves the campus community of 14,000, including students, athletes, faculty and staff. It also showcases a broad range of systems from Tarkett's commercial flooring and Tarkett Sports Indoor's products. Polyurethane, wood and rubber surfaces are used throughout the recreation center's active and passive spaces.

*"We were familiar with Tarkett, and the facility's architect, Sasaki, helped select the product based on how the building would be used," Kazar says.*

He cites the durability, suitability, safety & sustainability aspects of Tarkett surfaces for helping allow the C.J. Huang Recreation Center be all things to all users.





# HERE IS A BREAKDOWN OF THE FIVE TARKETT PRODUCTS INSTALLED IN THE BUILDING



## **POLYTURF PLUS PAD & POUR**

### **Basketball courts and elevated running track**

A padded seamless flooring option manufactured by Beynon Sports, the polyurethane system is durable with precise game-line markings and a 30-year warranty. It also is GREENGUARD Gold-certified, resulting in a higher standard of indoor air quality.



## **CLUTHCOURT PERFORMANCE**

### **Fitness studio**

Tarkett Sports Indoor's most popular wood floor, this MFMA milled hardwood maple surface incorporates two plywood layers for added stability, and 3/4-inch CoreCushion shock pads provide high-level shock absorption for high-impact aerobic activity.



## **TRIUMPH RUBBER TILE**

### **Weight room**

These 3/8-inch rubber tiles from Tarkett are made from recycled materials, and they absorb noise and resist impact. Their SlideLock format allows for modular, no-glue installation.



## **MESTO RUBBER TILE**

### **Hallways, stairs and general use rooms**

Featuring a hammered textured, Tarkett's Mesto Configurations™ surfaces bring a soft marbled look to spaces and are available in both tiles and planks.



## **RUBBER WALL BASE**

### **Walls**

Tarkett's vinyl wall base molding, designed to resist scuffing, fading and cracking, spans 5,000 linear feet throughout the building.



Having a facility filled with Tarkett's suite of surfaces also keeps the C.J. Huang Recreation Center looking fresh, according to Kazar.

*"The products are durable, and one of the comments we consistently get — especially during the pandemic — is how clean the facility looks."*



# EXPERTS IN SPORTS CONSTRUCTION





# WORLD-CLASS FROM START TO FINISH

.....

## THE BEST PEOPLE, THE BEST PARTNERS, THE BEST PRODUCTS.

At Tarkett Sports, everything we do - and the way we do it - is aimed to make the process easier for you. We focus on ensuring your experience is memorable and hassle free.

We understood long ago that a successful sports surface relies on a quality product that's installed by a quality team. We've built our family by combining the best people and the best partners with the best products. As we offer a comprehensive portfolio of surfacing systems and have established and experienced construction teams and affiliations with renowned partners, we're confident that we have the best offering to lead your project from start to finish.

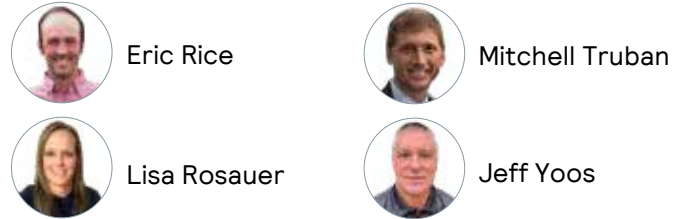
Thousands of programs have trusted the Tarkett Sports family because we treat every project like it's our own.

Let's build something amazing together.

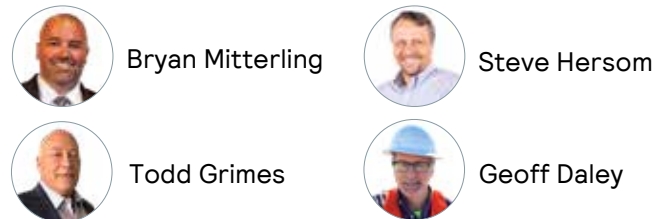


# IT STARTS WITH THE BEST PEOPLE

## ASBA CERTIFIED FIELD BUILDERS



## ASBA CERTIFIED TRACK BUILDERS



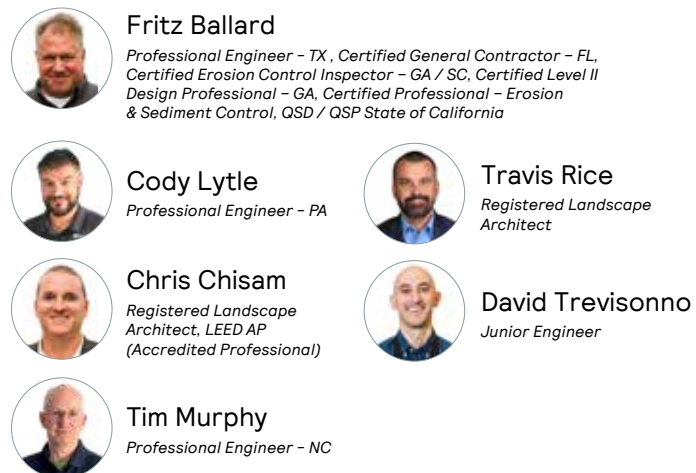
## ASBA CERTIFIED TENNIS COURT BUILDERS



## POST-TENSIONING INSTITUTE



## CONSTRUCTION EXPERTS



# SUPPORTED BY LEADING MANUFACTURING EXCELLENCE

With leading manufacturing, experience, partners, and teams, we're in control of your project from start to finish. Everything is planned and created specifically for your installation.

As we're vertically integrated, we don't need to depend on others and can commit to an unwavering dedication to quality.

ISO 9001 certified for leadership in quality, environment, and safety management systems, Tarkett Sports' facilities in Calhoun (FieldTurf & Tarkett Sports Indoor), Chagrin Falls (Tarkett Sports Indoor), and Hunt Valley (Beynon Sports and Renner Sports) represent three of the most advanced manufacturing operations in the U.S.

With international manufacturing facilities in Auchel, Sedan (France), Narni (Italy), Abtsteinach (Germany), Bačka Palanka (Serbia) and Botany (Australia), Tarkett Sports showcases an extended network of production capabilities.



# +\$650M



IN CIVIL CONSTRUCTION CONTRACT VALUE SINCE 2015

# +16

OFFICE LOCATIONS ACROSS THE COUNTRY

# +10

TARKETT SPORTS CERTIFIED PARTNERS

# +65



TARKETT SPORTS CERTIFIED INSTALLATION CREWS

# +\$20M

IN-HOUSE INSTALLATION CAPABILITIES

# +450,000

TONS OF DYNAMIC STONE BASE ANNUALLY



HEAVIER THAN THE EMPIRE STATE BUILDING

# +40



TARKETT SPORTS CERTIFIED CIVIL PARTNERS

# +120,000

LINEAR FEET OF CONCRETE CURB POURED PER YEAR



5X LONGER THAN THE LAS VEGAS STRIP



Data represents 2021 achievements.

# WE'RE IN CONTROL FROM START TO FINISH



## INSPECTION, DESIGN & PLANNING

A great project starts with great planning. Our design team and partners are experts in helping you maximize your space and ensure your design meets all the local and national sport regulations. From line color to field orientation and bleacher placement, we're here to help.

Before we start your project, our team reviews the site to ensure it meets all the requirements for:

- Soil and environmental requirements
- Stormwater regulations & management
- Geotechnical investigations
- Concrete / area moisture levels for indoor installations

Once we've checked all the boxes, we prepare a detailed project and engineering plan with our design team and trusted partners.

## CIVIL CONSTRUCTION

Once the planning phase is approved, we start on preparing your site for the new surface. Our process:

- **DEMOLITION:** The existing area material is removed following the geotechnical results and a thorough inspection is completed to uncover any plumbing, electrical, or hidden utilities.
- **SUB-BASE:** The sub-base is built back up to the subgrade to lay the foundation for the installation.
- **CURBS:** The adequate curbing is installed across the site.
- **DRAINAGE:** The necessary stormwater drainage and collection systems are installed and connected.
- **LASER GRADING:** Prior to the surface system installation, the base is laser graded to ensure precision and proper site drainage.



## SURFACING

We offer a comprehensive portfolio of sports surfacing solutions through our renowned brands. Installation is our secret sauce though. Don't underestimate the value of an experienced installation crew. Quality materials can only go so far. The success of your installation greatly relies on the installation team's execution.



## ANCILLARY AREAS

Our team can help with more than just the sports surfacing. We can help plan and build walkways, athlete zones, parking areas and more.



## EQUIPMENT & MAINTENANCE

Not only can we offer you a world-class surface, but we can also equip your facility from top to bottom.

**We can help supply:**

- Lighting & fencing
- Smart field & track technology
- Maintenance equipment
- Sports equipment

# THE SOLUTION FOR YOUR ENTIRE PROJECT

From single-facility turf and track projects to colossal multi-application sports complexes, we have a comprehensive portfolio of surfacing systems to answer all your needs. The Tarkett Sports family showcases industry-leading brands specialized in their application.

Meet our family.



*“Offering our clients a turnkey solution is at the core of our values. These projects are costly, complex, and important purchases for our clients. We pride ourselves on offering innovative products and value to our customers, all while making the entire process easy.”*

**Eric Dalieri**, President – Tarkett North America & Tarkett Sports



**APPLICATIONS:** Artificial Turf – Sports

**PROJECTS:** +20,000

**SYSTEMS:** Football, Soccer, Baseball, Softball, Rugby, Lacrosse, Field Hockey and Multi-Use

A leader in artificial turf, FieldTurf is the trusted choice of professional franchises, powerhouse collegiate programs, elite high schools and municipalities. FieldTurf systems have been proven to deliver leading performance and safety for over 20 years.



**APPLICATIONS:** Artificial Turf – Landscape

**PROJECTS:** +50,000

**SYSTEMS:** Residential, Commercial, Playgrounds and Hospitality

Composed of leading residential brands EasyTurf, UltimateGrass & Zerolawn as well as FieldTurf Commercial, our FieldTurf Landscape entity offers renowned systems and expertise for residential and commercial applications. From a local backyard to a hotel rooftop, FieldTurf Landscape has a leading solution to offer.



**APPLICATIONS:** Running Track

**PROJECTS:** +6,500

**SYSTEMS:** Outdoor track, indoor track, hydraulic banked track, permanent banked track and gymnasiums

Beynon Sports is the premier choice for track & field surfacing. With the most World Athletics Certified Class I Facilities in the U.S., Beynon Sports is the trusted choice of Hayward Field, powerhouse collegiate programs, elite high schools and municipalities. Beynon Sports' specialized high-performance synthetic athletic surfaces are designed for speed, competition, and daily training.



**APPLICATIONS:** Running Track, Racquet Court and Base Construction

**PROJECTS:** +6,000

**SYSTEMS:** Running track, tennis court, pickleball court and post-tensioned concrete base construction

Renner Sports has specialized in tennis courts, track surfacing and base construction for over 30 years. Leaders in post-tensioned concrete, Renner's experience and expertise delivers an unmatched quality and experience.



**APPLICATIONS:** Hybrid Turf

**PROJECTS:** +800

**SYSTEMS:** Football, Soccer, Rugby, Field Hockey, and Multi-Use

Inventors & pioneers of hybrid turf, GrassMaster is the most trusted brand in the industry. With over 800 pitches installed worldwide, GrassMaster has been the partner of choice for over 30 years from top clubs to local municipalities, regardless of the sport.



**APPLICATIONS:** Athletic Flooring

**PROJECTS:** +5,000

**SYSTEMS:** Basketball, volleyball, badminton, gymnasiums, fitness and dance

Tarkett Sports Indoor offers leading surfacing systems for athletic flooring. Leaders in vinyl, wood and polyurethane, Tarkett Sports Indoor can help provide the right flooring solution and design. The systems are certified by leading institutions for air quality and sustainability. Designed for performance, safety and easy maintenance, Tarkett Sports Indoor delivers an unmatched surface experience.



**APPLICATIONS:** Education, Commercial & Residential

**SYSTEMS:** Meeting Rooms, Auditoriums, Dining Services, Res Life Spaces, Libraries, Administration, Offices, Locker Rooms, and more

For nearly 140 years, Tarkett has been a leader in innovative flooring and sports surface solutions. From vinyl, linoleum and rubber to carpet and laminate, Tarkett products support safe, durable and inspiring environments where students and faculty can thrive.



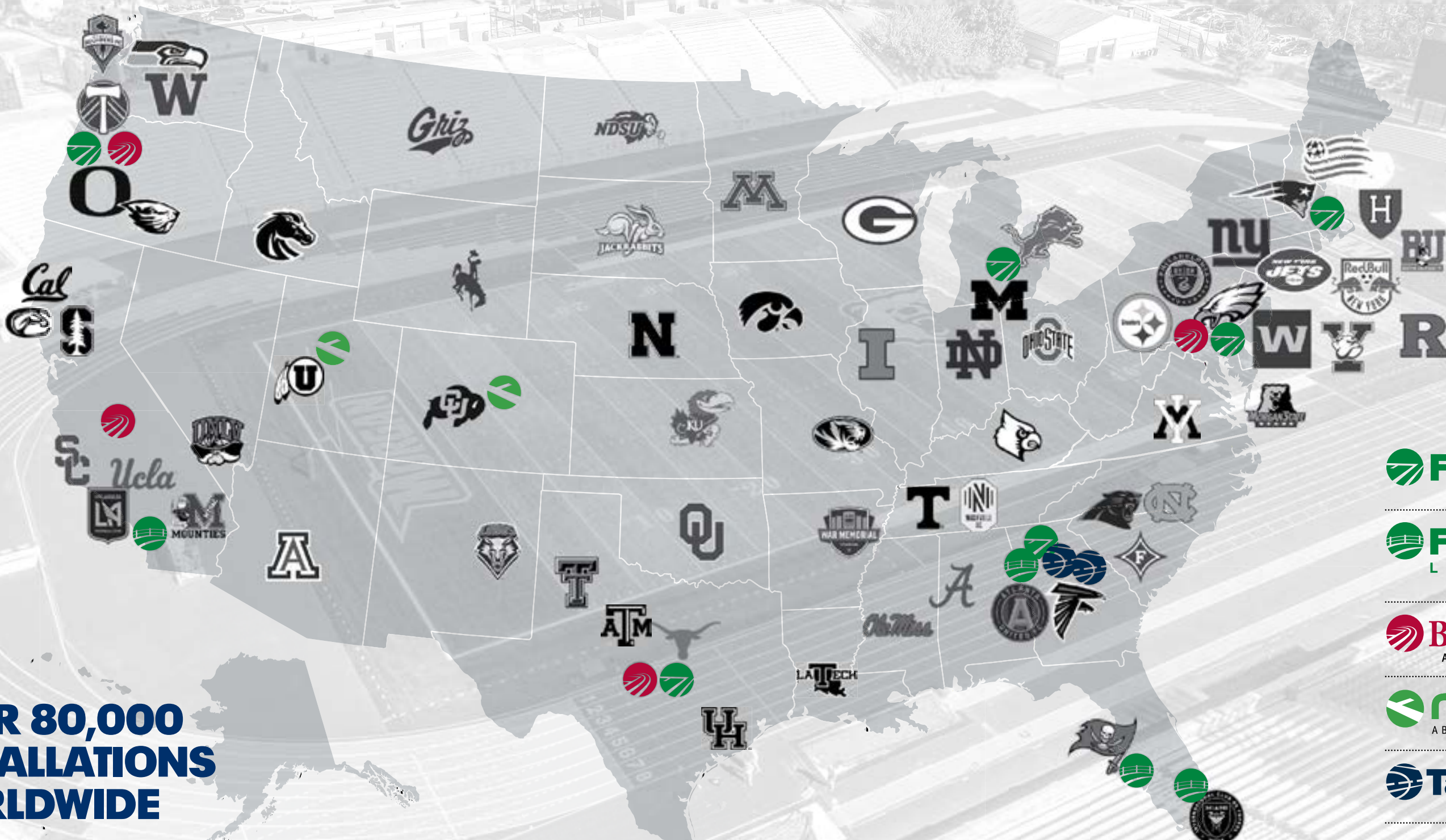
# TRUSTED FROM COAST TO COAST

As a leading choice in the National Football League, Major League Soccer, professional baseball and leading NCAA Division I, II and III programs, Tarkett Sports showcases experience and proven success with a wide variety of project scopes.



*Absolutely amazing effort! These guys worked nights, weekends, holidays, in the rain and in the cold to finish the schedule as they promised. Like our team, they are committed to excellence!"*

**Christopher Crenshaw**  
Associate VP for Facilities, Planning & Management – Southern Mississippi University



**OVER 80,000  
INSTALLATIONS  
WORLDWIDE**

**FieldTurf®**  
A Tarkett Sports Company

**FieldTurf®  
LANDSCAPE**  
A Tarkett Sports Company

**BEYNON®**  
A Tarkett Sports Company

**renner®**  
A Beynon Sports Company

**TarkettSPORTS**  
INDOOR

**AT THE  
SURFACE  
OF THE  
COUNTRY'S  
LARGEST  
SPORTS  
VENUES**



**FEATURED PROJECT**



“As far as Tarkett, we felt like they provided numerous years of experience. They have several projects that were very similar to ours that didn't have issues with them, and we felt like the variety and selection of the flooring they could provide, not only on the Omnisports™, but also in the FieldTurf realm, as well as the rubber sheet goods that we used in our fitness center, the multitude of color choices, selections, and product choices they have were a tremendous fit for our facility. I would encourage anybody to strongly consider using the Smart Buy program as well as Tarkett.”

**Dennis Dovel**  
PARKS AND RECREATION DIRECTOR

## BLUE SPRINGS FIELD HOUSE

**Location:** Blue Springs, Missouri  
**Year:** 2015  
**Company:** Tarkett Sports Indoor, FieldTurf  
**Value:** +\$400,000  
**Products:**

- Basketball court: Tarkett Indoor Omnisports™
- Aerobics area: Tarkett Indoor Clutchcourt Performance System
- Weight room: Tarkett Indoor Dropzone Comfort
- Indoor soccer field: FieldTurf Prestige XT



**FEATURED PROJECT**



## SADDLEBACK COLLEGE

**Location:** Mission Viejo, California  
**Year:** 2020  
**Company:** Beynon Sports, FieldTurf  
**Value:** +2,500,000  
**Products:**

- Project: Design-Assist
- Outdoor track facility: Beynon BSS 2000 system
- Stadium: FieldTurf Revolution 360
- Soccer field: FieldTurf Revolution 360
- (2) Practice fields: FieldTurf Revolution 360



**FEATURED PROJECT**



“  
I would like to thank Beynon Sports Surfaces for the design, building, and installation of this world-class facility. This is one of the greatest facilities in the world and far exceeds our expectations. The craftsmanship and finished product is in a class of its own, resulting in a facility that will benefit present and future Michigan student-athletes for many years to come.”  
**Jerry Clayton**  
HEAD COACH, MEN'S TRACK & FIELD  
UNIVERSITY OF MICHIGAN

## UNIVERSITY OF MICHIGAN

**Location:** Ann Arbor, Michigan

**Year:** 2019

**Company:** Beynon Sports, FieldTurf

**Products:**

- Indoor Track facility: Beynon Rise-N-Run hydraulic banked & BSS 1000 system
- Outdoor track facility: Design-Assist
- Outdoor track facility: Beynon BSS 1000 system
- Football stadium: FieldTurf Revolution 360
- Lacrosse facility: FieldTurf Revolution
- Indoor fieldhouse: FieldTurf Revolution 360
- Recreation Field: FieldTurf FieldTurf Prestige XT



**FEATURED PROJECT**



## GREEN VALLEY RECREATION PICKLEBALL CENTER

**Location:** Green Valley, AZ

**Year:** 2020

**Awards:** 2020 ASBA - Distinguished Facilities Outdoor Pickleball Courts

**Company:** Renner

**Value:** +\$540,000

**Products:**

- (24) pickleball courts: Renner Classic Pickleball
- Base: Renner post-tensioned concrete
- Court fencing
- Facility accessories





FEATURED PROJECT



### CITY OF BILLINGS PARK & REC – AMEND PARK

Location: City of Billings, Montana  
Year: 2020  
Company: FieldTurf  
Value: +\$1,500,000

- Products:
- Soccer field: FieldTurf Vertex Prime
  - Base construction
  - Lighting
  - Walkways



FEATURED PROJECT



### ABILENE INDEPENDENT SCHOOL DISTRICT

Location: Abilene, Texas  
Year: 2019  
Company: Beynon Sports, FieldTurf  
Value: +12,000,000

- Products:
- Shotwell Stadium: FieldTurf Prestige Vertex
  - Abilene High School: Prestige Vertex (football), FieldTurf XT (Baseball & Softball Infields)
  - Cooper High School: Prestige Vertex (football), FieldTurf XT (Baseball & Softball Infields)
  - Track facility: Beynon BSS 300 system
  - Grandstands
  - Restrooms, Concession Stands, Lighting



# START BUILDING YOUR DREAM

THE TARKETT SPORTS FAMILY - LEADERS IN SPORTS SURFACING



800-724-2969

# THE WORLD'S FIRST SMART SPORTS FIELD



# Genius

Imagine a sports field that could automatically track the number of athletes playing, hours of use and send maintenance alerts when needed. Imagine that it could then deliver in-depth reporting on executed maintenance and usage, allowing you to optimize scheduling, utilization and care.

**THE FUTURE HAS ARRIVED. INTRODUCING FIELDTURF GENIUS, POWERED BY INTELLIGENT PLAY.**

The world's first smart sports field.

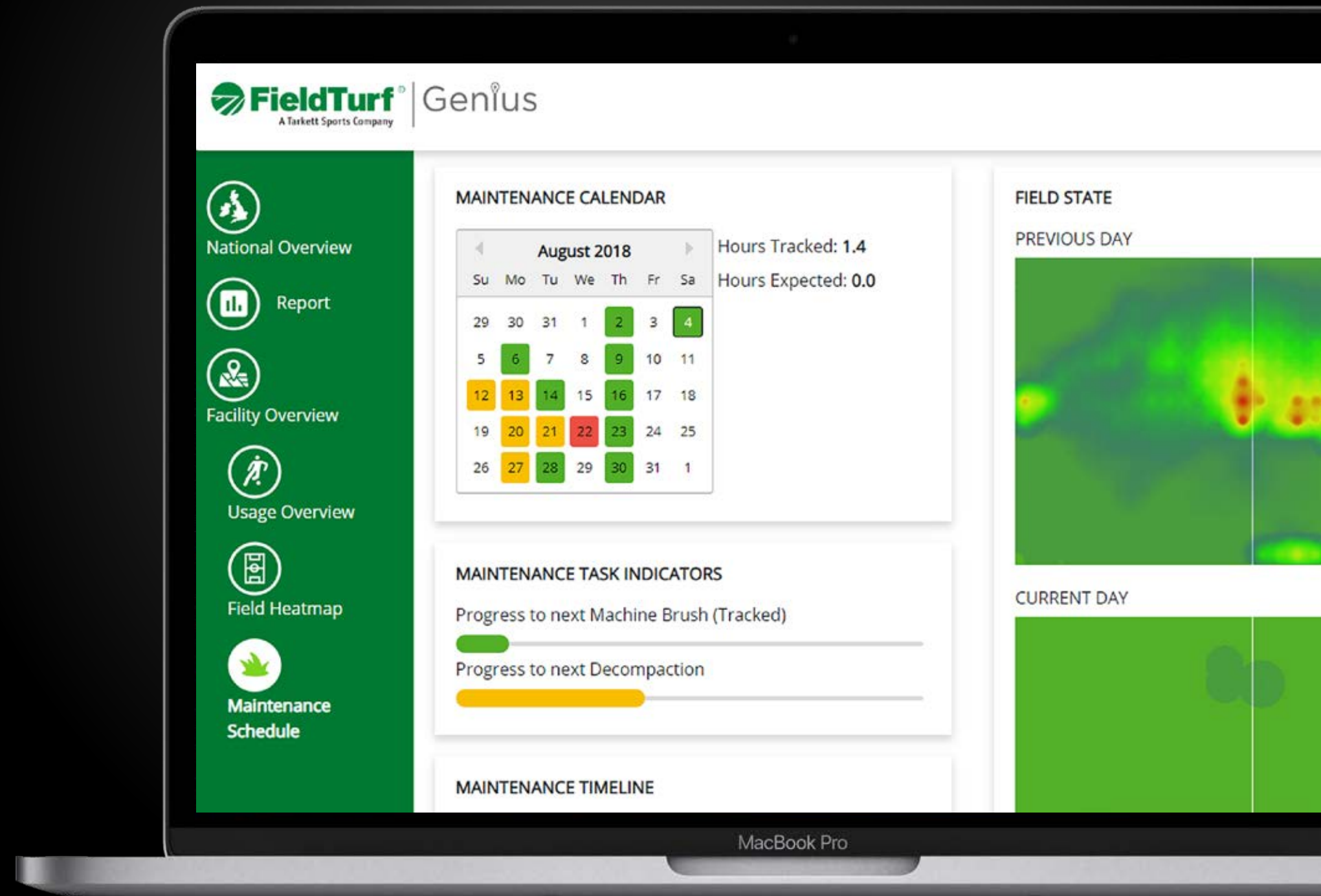
▶ **EASY MAINTENANCE MANAGEMENT & SCHEDULING**

▶ **OPTIMIZED FACILITY USAGE**

▶ **HELPS IMPROVE PERFORMANCE, SAFETY & LONGEVITY**

▶ **IN-DEPTH RECORD MANAGEMENT**

# YOUR FIELD IS ONE TOUCH AWAY



# GAME-CHANGING TECHNOLOGY TO CONNECT WITH YOUR FIELD



## FIELD LONGEVITY

An intelligently maintained surface can significantly contribute to extended product life. Prolonged usage allows for a greater return on investment.



## SAFETY & PERFORMANCE

A properly maintained surface allows for more consistent planarity and proper infill levels, which can contribute to improved player safety and performance.



## EASY MAINTENANCE

The automated maintenance alerts and live dashboard eliminate forms and human input. The system does the planning and enables you to track and monitor service, all from your desk.



## INCREASED REVENUE

The advanced reporting allows you to track usage, optimize field scheduling, increase the possibility of rentals and improves facility management.

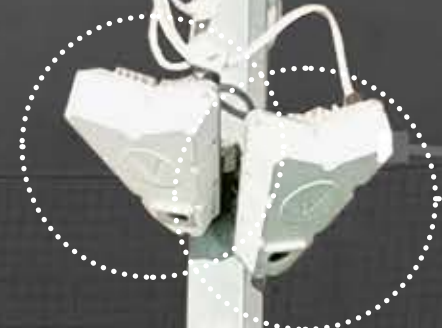


## LIVE MONITORING

FieldTurf Genius allows you to have eyes on your field at all times. Know when, where, how long and how many athletes are using your field.



# POWERING THE MISSING LINK



**2** INTELLIGENT SENSORS PER FIELD

# HOW DOES IT WORK?



## THE SENSORS

Two sensors are mounted to the facility lights or stadium press box and automatically process and convert the recordings into anonymous data for analysis. Through advanced computer vision and deep learning algorithms, live field participation is translated into tangible data.

## THE MONITORING

The system monitors all on-field activity and translates it into Equivalent Usage Hours (EUH)

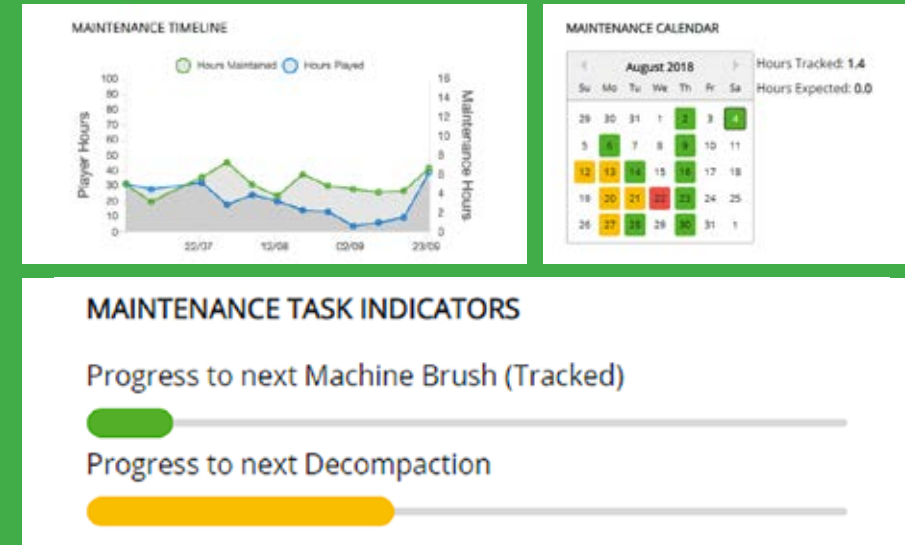
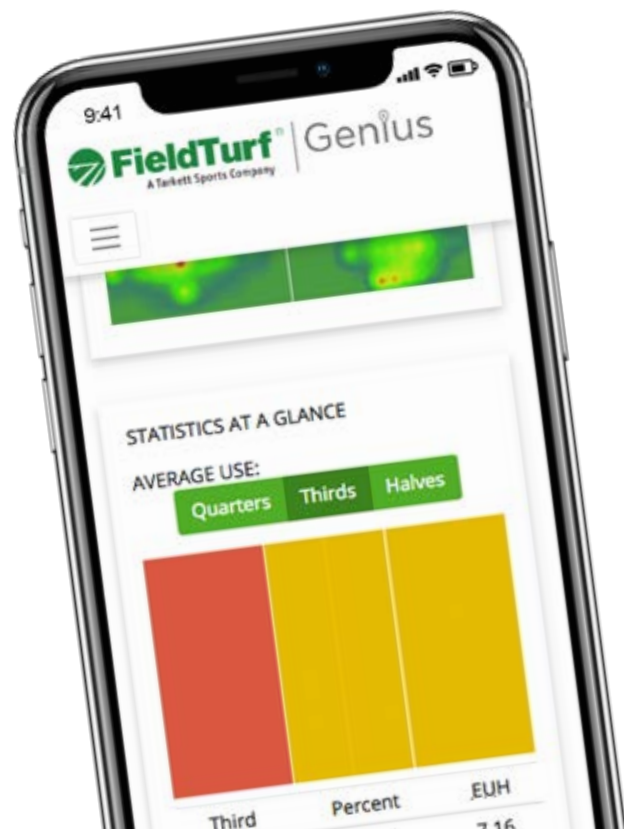
22 PLAYERS PLAYING FOR 1 HOUR = 1 EUH  
 11 PLAYERS PLAYING FOR 1 HOUR = 0.5 EUH

By determining a quantifiable usage amount, proper maintenance and usage recommendations can be made. Live monitoring allows for accurate recommendations.

## THE MAINTENANCE ALERTS

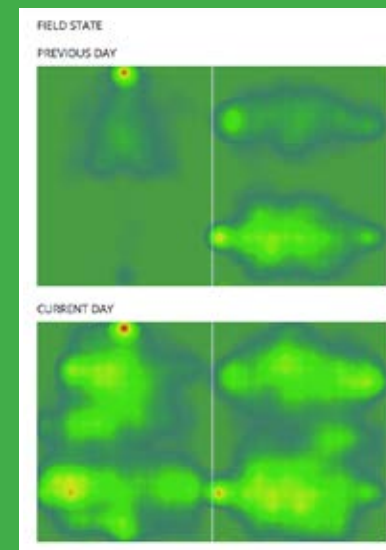
When your field reaches certain milestones, a maintenance alert is issued indicating the needed service: brushing, aerating, raking or sweeping. After the maintenance is completed, an updated heatmap allows you to track the efficiency of the session. A calendar and tracker help your team plan and ensure your field receives the proper care based on its true usage.

**NO MORE FORMS.  
 NO HUMAN INPUT.**



## THE DASHBOARD

Using the online dashboard, advanced facility reporting is at your fingertips. Easily access field usage history, trends, planned and executed maintenance sessions and detailed heatmaps. Manage and compare multiple facilities using one platform from any device, from any location.



## MAINTENANCE HUB

Using the live heatmap, you can easily identify areas of high use to help properly maintain and care for your surface.

## USAGE HUB

Quickly access and sort field usage by quarters, thirds or halves to help balance utilization.



## ADVANCED FACILITY REPORTING

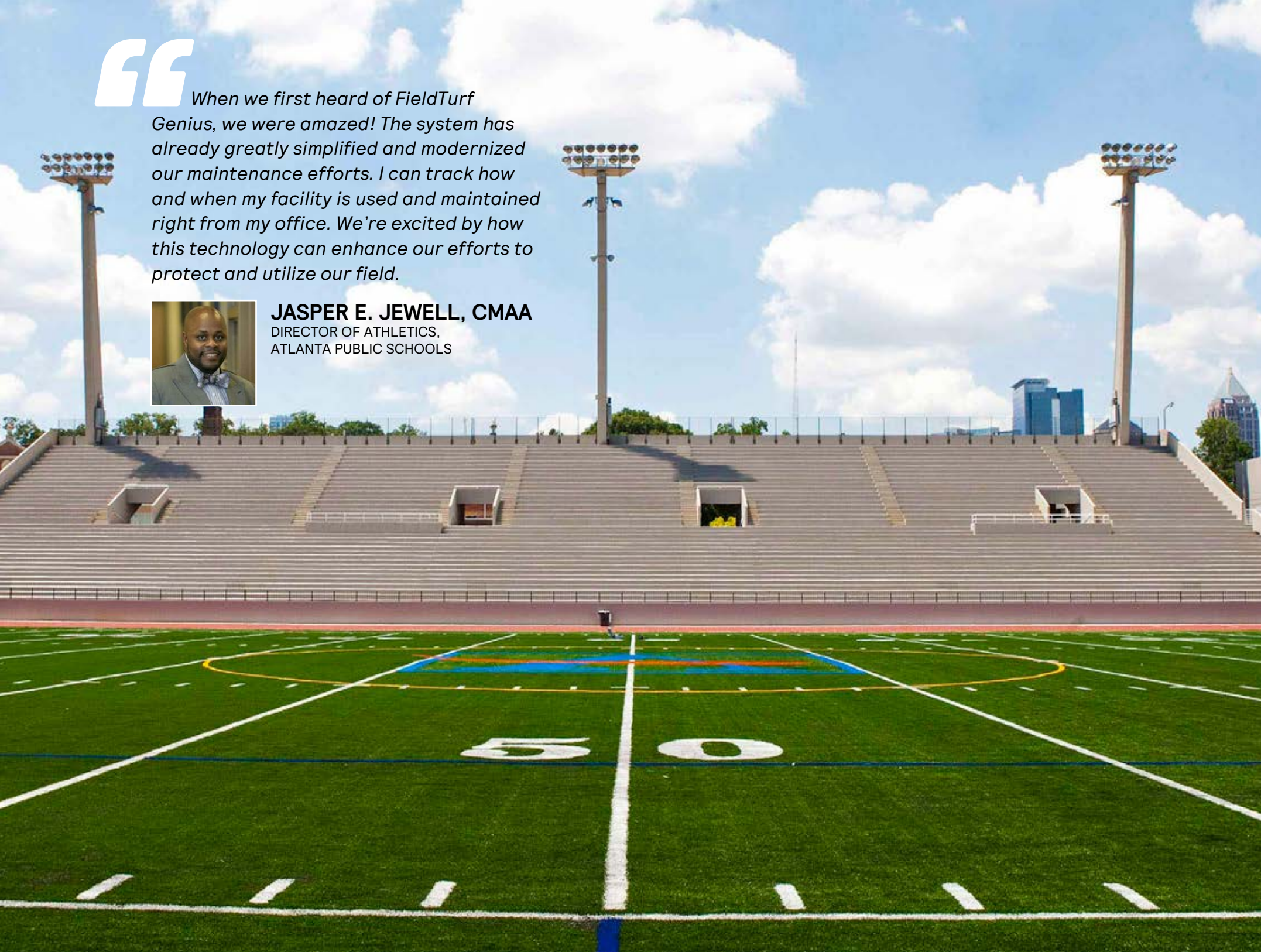
Generate advanced reports integrating weekly or monthly averages and custom date ranges to gain in-depth knowledge on your facility. The tool can help identify areas for additional rental and aid justify investment.

“

When we first heard of FieldTurf Genius, we were amazed! The system has already greatly simplified and modernized our maintenance efforts. I can track how and when my facility is used and maintained right from my office. We're excited by how this technology can enhance our efforts to protect and utilize our field.



**JASPER E. JEWELL, CMAA**  
DIRECTOR OF ATHLETICS,  
ATLANTA PUBLIC SCHOOLS



## LET'S GET STARTED WITH OUR MOST FREQUENT QUESTIONS

▶ **DOES FIELDTURF GENIUS USE FACIAL RECOGNITION TECHNOLOGY?**

**NO.** Our sensors record in low-resolution from far and elevated positions making facial recognition impossible. The recordings are automatically processed and converted into anonymous data, then discarded.

▶ **CAN I USE FIELDTURF GENIUS AS A SECURITY CAMERA?**

**NO. BUT IT CAN ALERT YOU.** Our sensors record in low-resolution from far and elevated positions, making facial recognition impossible. An alert can be programmed to advise you of off-hour usage to help protect from unauthorized use and vandalism.

▶ **CAN FIELDTURF GENIUS BE INSTALLED ON EVERY FIELD?**

**YES.** Pending the approval of the site suitability assessment, the system is easily installed. FieldTurf Genius requires only a low voltage power supply and two mount points (one per sensor), typically on the facility lights or stadium press box. Installation is normally completed in less than a day.

▶ **HOW IS THE DATA TRANSFERRED / COMMUNICATED?**

The system is connected to the network via a 3G/4G connection, which updates remotely for the life of the unit. In cases where 3G/4G connectivity is an issue, a WIFI connection can be established to run the unit.

Intelligent Play. Installed at:





POWERED BY



Intelligent Play.

THE TARKETT SPORTS FAMILY - LEADERS IN SPORTS SURFACING



800-724-2969 | [info@fieldturf.com](mailto:info@fieldturf.com) | [fieldturf.com](http://fieldturf.com)

# MADE IN AMERICA

WITH LOCAL AND GLOBAL MATERIALS



MANUFACTURED IN

**GEORGIA**

500,000 SQ.FT  
FACILITY IN  
CALHOUN, GA



**+ 500** FULL-TIME  
U.S. EMPLOYEES

**+ 700** TOTAL U.S. EMPLOYEES  
DURING PEAK SEASON



  
**U.S.**  
OFFICES



OVER **5000** FIELDS

★ INSTALLED IN THE  
**UNITED STATES** ★

SUPPORTED BY

**AMERICAN  
INVESTORS**

# TOP 10

**REASONS  
WHY FIELDTURF IS  
THE RIGHT CHOICE**



# TOP 10 REASONS

Since the very beginning, we have developed a reputation for setting quality and innovation standards that continue to revolutionize the artificial turf industry. Our competitors will try to convince you that their products are better with features that are not proven to yield the same long-term performance results that are associated with the FieldTurf system.

Here are the Top 10 Reasons why FieldTurf continues to be the #1 choice at all levels of sport.

## 1

### PATENTED INFILL – for the highest performance

On natural grass, athletes cut, plant and release in the earth. Not on the blades of grass. On FieldTurf's artificial turf it's exactly the same. Our infill is the "artificial" earth, with the same bio-mechanical properties as natural grass. Just like on natural grass, athletes cut, plant and release in our infill. Not on the turf fibers. That's why FieldTurf performs like natural grass and lasts so long.

A typical 2.5" elite full-size FieldTurf field contains 736,000 lbs of infill. That is 496,000 lbs more infill mass than a typical all-rubber field. Testing proves that, unlike FieldTurf's infill system, particles in lightweight infill systems tend to easily migrate in the rain, creating divots and changes in the infill levels. This infill variation significantly impacts the safety of the turf system.

#### The FieldTurf Patented Infill System:

- The bottom layer is comprised of clean, washed silica sand to stabilize and support the entire system.
- Numerous passes of a mix of similarly sized rubber and silica sand are then layered into the system. The rubber and sand particles are a similar size to stay in suspension.
- Larger-sized cryogenic rubber top layer ensures that the rubber remains on top, providing a safe, forgiving surface.
- Total infill exceeds 9 pounds per square foot on a typical sports field. The FieldTurf infill mix allows for optimal safety and playability.



Silica Sand



Cryogenic Rubber

## 2

### PROVEN SAFETY – for the health of your athletes

Our focus on safety has led to numerous injury reducing innovations and improvements. The main reason that FieldTurf continues to outperform all other turf systems in reducing injury, is our patented sand/rubber layered infill system.

The findings of long-term testing programs show that FieldTurf is safer than any other synthetic turf system and equal to – if not better than – natural grass in most critical areas of player safety. No other company can make this claim.

A three-year study of competitive high school football found that as the artificial infill surface weight decreased, the incidence of game-related high school football trauma significantly increased across numerous playing conditions.

#### College Football Safety Study Results:

##### Incidence, Mechanisms, and Severity of Game-Related College Football Injuries on FieldTurf Versus Natural Grass (A 3-Year Prospective Study)

Michael C. Meyers, PhD, FACSM  
From the Department of Health and Human Development,  
Montana State University, Bozeman, Montana.

- 11% Fewer Concussions
- 40% Fewer ACL Injuries
- 21% Fewer Severe Injuries
- 31% Fewer Ligament Tears

Source: The American Journal of Sports Medicine, Vol. 38, No. 4, 2010

#### High School Football Safety Study Results

##### Incidence, Causes, and Severity of High School Football Injuries on FieldTurf Versus Natural Grass (A 5-Year Prospective Study)

Michael C. Meyers, PhD, FACSM, and Bill S. Barnhill, MD  
From the Human Performance Research Center, West Texas A&M University, Canyon, Texas, and  
Panhandle Sports Medicine Associates, Amarillo, Texas.

- 44% Fewer Concussions
- 43% Fewer ACL Injuries
- 27% Fewer Severe Injuries
- 34% Fewer Ligament Tears

Source: The American Journal of Sports Medicine, Vol. 32, No. 7, 2004

#### Women's College Soccer Study Results:

##### Incidence, Mechanisms, and Severity of Match-Related Collegiate Women's Soccer Injuries on FieldTurf and Natural Grass Surfaces (A 5-Year Prospective Study)

Michael C. Meyers, PhD, FACSM

- 22% Fewer Total Injuries
- 7% Fewer Substantial Injuries
- 2% Fewer Severe Injuries
- 12% Fewer Concussions
- 18% Lower ACL and Associated Tissue Trauma Combined

Source: The American Journal of Sports Medicine, Vol 41, No. 10, 2013

Some of the key differences found are as follows (p/sq.ft = pounds per square foot):

#### Concussion Injuries Combined

- 8.3% lower incidence of injury between FieldTurf >9 p/sq.ft and 3-5.9 p/sq.ft of infill weight

#### Total Injuries

- 20.5% lower incidence of injury between FieldTurf >9 p/sq.ft and 3-5.9 p/sq.ft of infill weight

#### Severe Injuries

- 16.8% lower incidence of injury between FieldTurf >9 p/sq.ft and 3-5.9 p/sq.ft of infill weight



THE WORLD LEADER IN **ARTIFICIAL TURF**

THE WORLD LEADER IN **ARTIFICIAL TURF**

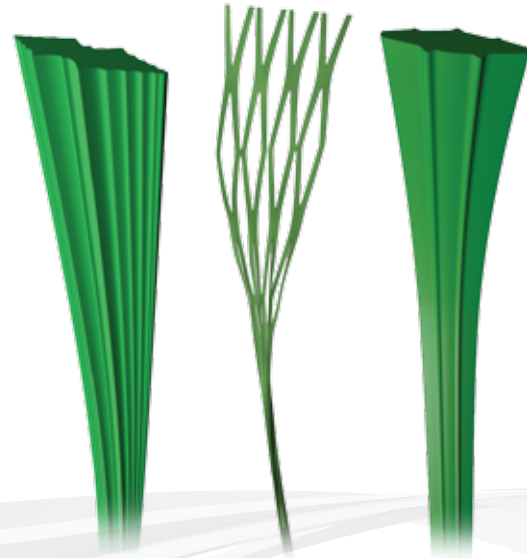
**3**

**FIBER INNOVATION**  
– for optimal playability

Our fibers are produced at our very own facility in Germany. This state-of-the-art facility was opened in 2010 and as a result, has turned FieldTurf into one of the most vertically integrated companies in the world. The quality control process at the facility includes stringent testing of the yarn properties (tensile strength, uniformity, color verification).

Our sports turf systems are constructed with meticulous fiber design, aiming to serve the needs of different customers.

**No matter which fiber system you choose, FieldTurf's products are all high quality and can serve any preference.**



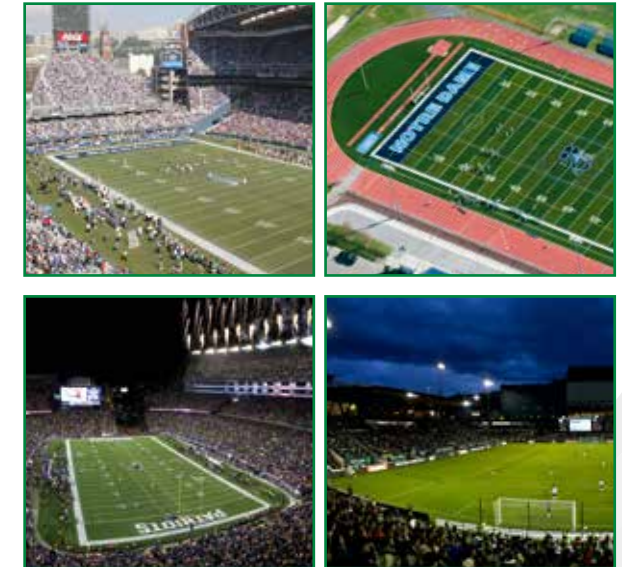
**5**

**MULTI-SPORT SOLUTIONS**  
– for all sports and all levels

FieldTurf has long been the #1 choice for all sports and all levels. FieldTurf's safety, performance and durability levels are far superior to any other system. As the world's largest synthetic turf company, you will find FieldTurf in many major stadiums. There are no differences between a field installed at a high profile venue and one installed in a small town. For every professional or college field we build, we install the same quality field at 150 high schools and municipalities.

**FieldTurf is extremely proud of the following accomplishments in the world of sports:**

- 22 of 32 NFL teams play / practice on FieldTurf
- 100+ NCAA football programs have FieldTurf
- 30+ NCAA baseball programs choose FieldTurf
- 30+ NCAA soccer programs have opted for FieldTurf
- 15 Pro soccer teams play / practice on FieldTurf
- 1000s of high school and municipal sports installations
- Over 7500 fields installed



**4**

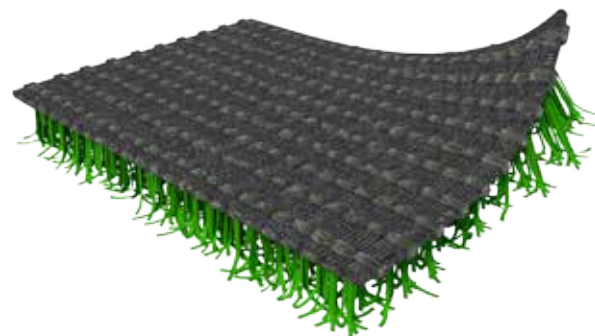
**SURELOCK COATING**  
– for maximum drainage

FieldTurf's patented backing offers drainage performance unequalled by any artificial turf product in the industry. A FieldTurf field is designed for all-weather playability.

Unlike the rest of the industry, the innovators at FieldTurf came up with a superior drainage solution for its Elite system. It's called SureLock coating. This patented system coats only the rows of fiber, leaving the rest of the carpet untouched and naturally porous.

**Strong Fiber + SureLock Coating = Solid Tuft Bind**

Our patented SureLock coating system leaves the backing 40% porous for unmatched drainage and contributes to the highest performing tuft bind in the industry. Other products can randomly achieve good tuft bind but no one else can do it with the same level of consistency as FieldTurf.



**6**

**SINGLE SOURCE RESPONSIBILITY**  
– for customer security and satisfaction

FieldTurf has brought "single source responsibility" and quality to the forefront with its own manufacturing plants and quality control standards. Integrated, vertical manufacturing has paved the road toward true innovation and customer security, with fiber manufacturing, tufting, coating and testing all done in-house in FieldTurf plants. Installation is done by trained and certified FieldTurf installers.

**FieldTurf is the only artificial turf company on the market to meet the most rigorous and comprehensive quality control standards:**

- ISO certified manufacturing plants
- In-house fiber manufacturing
- In-house coating of all turf products
- In-house testing of each turf roll and its tuft bind
- Testing of infill and the verification of its grade
- Installation by FieldTurf certified installation crews



THE WORLD LEADER IN **ARTIFICIAL TURF**

THE WORLD LEADER IN **ARTIFICIAL TURF**

# 7

## INSURED WARRANTY – for complete peace of mind

FieldTurf was the first company in the industry to offer a third-party insured warranty. And while you'll probably never need to use it, you can rest easy knowing that you're protected by the industry's best warranty in the unlikely event something goes wrong with your artificial turf system.

### It's peace of mind that sets FieldTurf apart.

- Per Claim Limit of \$33,000,000
- All fields are automatically covered upon issuance of the Warranty Certificate
- No deductible
- Prepaid for 8 Years

Through Tarkett, in operation since 1872, FieldTurf enjoys the strongest equity base in the entire industry. FieldTurf's Bonding Capacity of over \$75,000,000 is proof of the financial strength of a company with over 130 years of experience in the surfacing business.



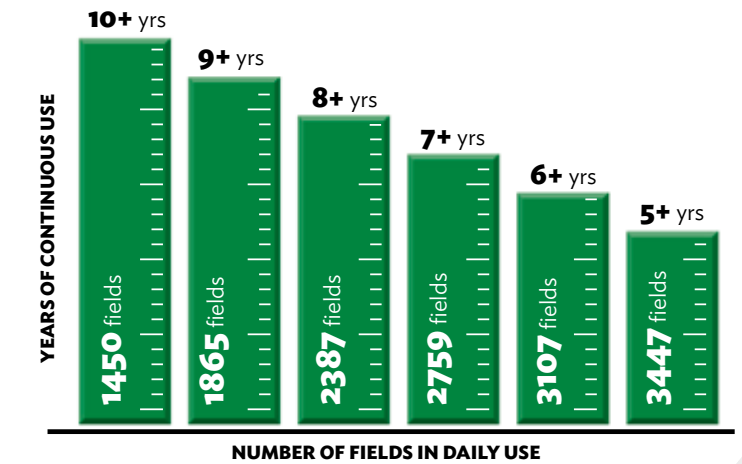
# 9

## PROVEN DURABILITY – for a better investment

Since its inception, FieldTurf has proven to be the most durable and longest-lasting synthetic turf system in the marketplace having installed more fields that are currently 8 years or older than all other competitor installations combined.

The FieldTurf system is not just marketing spin. It has been carefully engineered by athletes, for athletes to not only perform at the highest of levels but to do so for longer than any other turf product.

FieldTurf Fields Perform - Year After Year



# 8

## INSTALLATION METHOD – for a stronger field

FieldTurf does not cut corners when it comes to the installation of artificial turf fields.

In order to lower their prices, many competing companies will cut corners on important installation procedures. This severely compromises the durability of the entire field.

### It is critical to demand proper installation standards:

- Sewn Seams = No Trip Hazards
- Meticulous Fiber Shearing = No Cuts
- Precision Infill Layering = A Safe Surface
- Experienced Installation Crews = Quality Assurance



# 10

## FIRST-CLASS SERVICE – for your FieldTurf experience

FieldTurf does not sever its customer relations once the contract has been signed. We take the time to follow up with each and every one of our customers in order to ensure complete and consistent customer satisfaction. Our professional customer service agents are always ready to assist with any issues relating to your FieldTurf field. Whether your request is placed by phone or through email, our customer service department guarantees fast and effective solutions for all your field care needs.

### Customer satisfaction remains FieldTurf's number one priority.

Every FieldTurf employee is graded on his/her performance in relation to our customers and it is a central point of focus for the development of FieldTurf as a company. We have implemented company-wide measures to guarantee complete customer satisfaction.



# TOP 10 REASONS WHY FIELDTURF IS THE RIGHT CHOICE

## Information

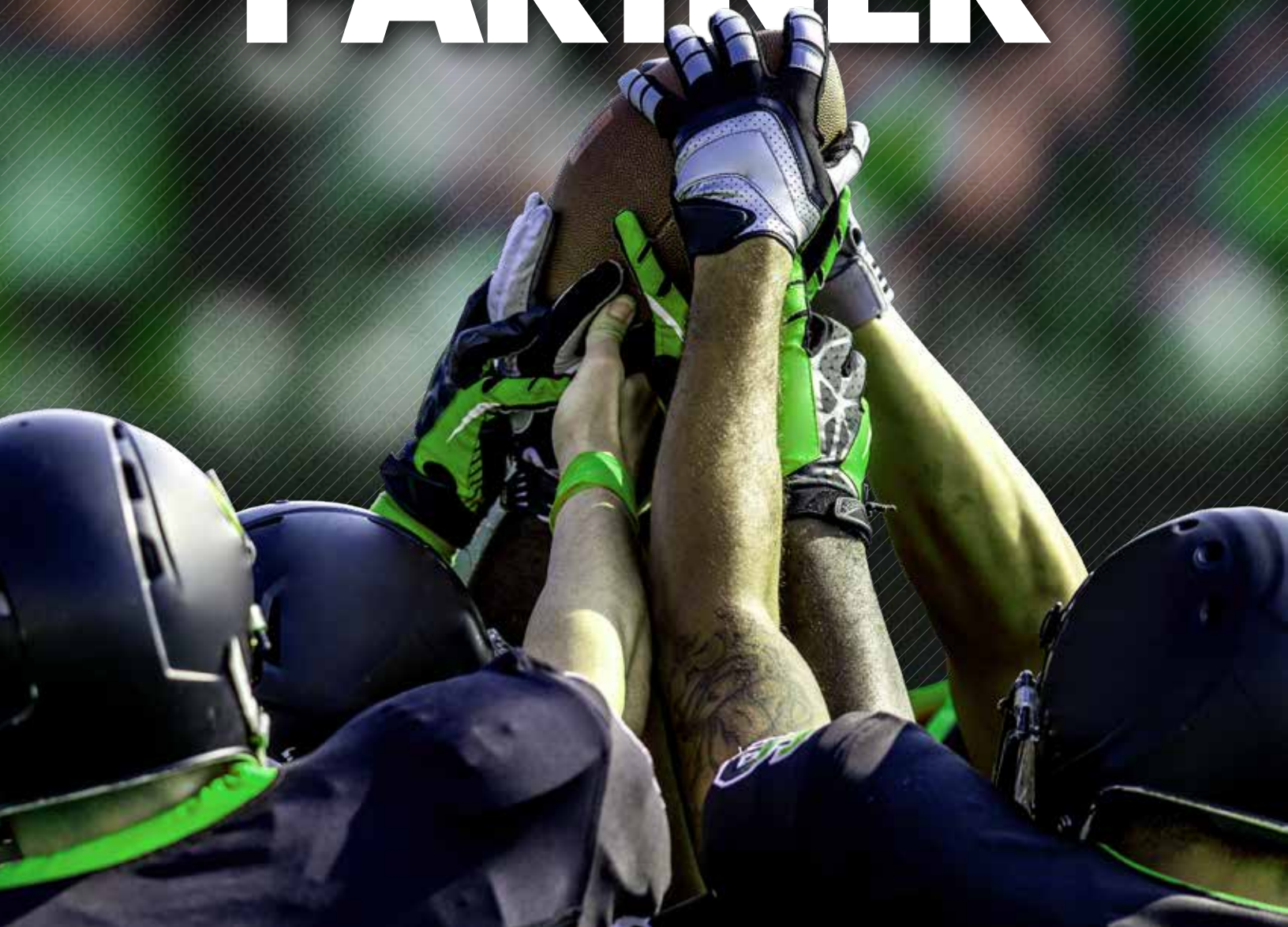
(800) 724-2969  
info@fieldturf.com  
www.fieldturf.com



THE ULTIMATE  
SURFACE EXPERIENCE



# YOUR TRUSTED PARTNER





# TOGETHER, WE CAN HELP PROTECT YOUR INVESTMENT

.....

We've always done things differently: from our industry-leading innovations to our groundbreaking science on athlete safety and performance. Not all turf is created equal. You can see and feel the difference FieldTurf makes.

Long-term value is indispensable when investing in a new field. From surface performance to safety and long-term durability – your choice of system and supplier will have a major impact on your program.

## YOUR ROADMAP TO A GREAT FIELD:

.....

### FOCUS ON TRUST AS YOU PARTNER FOR THE LONG-TERM

You'll be relying on your supplier for nearly a decade. Select one that you can trust and that will be reliable throughout the life of your field. Playing the long game always wins.

### THE DETAILS YOU CAN'T SEE MATTER JUST AS MUCH

Go beyond first appearances and truly research your system and supplier. The design, manufacturing and installation of your field is an art. Don't settle.

### SUCCESS LIES IN THE QUALITY OF THE INSTALLATION

Don't underestimate the value of an experienced installation crew. The success of your field greatly relies on their skill in execution.

### ASK & VISIT

Do your homework! Ask for independent testing reports, speak to field owners and visit fields. You want to ensure that your supplier of choice has strong references.

# DON'T JUST TAKE OUR WORD FOR IT

.....

## ASK A FIELDTURF OWNER ABOUT THE EXPERIENCE

“

*It was absolutely the best customer service I think I've ever had. And that's what sold me from the very beginning. We met with several companies but when I met FieldTurf, it was evident that these guys were ahead of the game. Their research, their customer service and everyone I spoke to, they all said their experience on the front end was outstanding, but it was even better on the back end.*



**Scott Berry**

HEAD COACH  
UNIVERSITY OF SOUTHERN MISSISSIPPI

“

*When we researched suppliers, it was important that we partnered with a company that we could trust, and trust for the long-term. A new field is a significant investment for our district so we wanted to assure we were covered. We quickly realized the support and assurance that FieldTurf could offer.*

**Jasper E. Jewell, CMAA**

DIRECTOR OF ATHLETICS  
ATLANTA PUBLIC SCHOOLS



“

*IUSD has been a FieldTurf customer for 17 years. Their Customer Service before and after the sales process has always been Excellent. And our latest field installations with their newest product innovations are Fantastic.*

**Joe Hoffman**

DIRECTOR OF MAINTENANCE,  
OPERATIONS & TRANSPORTATION  
IRVINE UNIFIED SCHOOL DISTRICT



“

*FieldTurf has been a great partner for years and continues to set the standard in turf technology. It is imperative that we continue to provide the best playing surface for both the Seahawks and Sounders FC and we are proud to work with FieldTurf once again.*

**David Young**

SENIOR VICE PRESIDENT OF BUSINESS  
OPERATIONS AND GENERAL MANAGER  
CENTURYLINK FIELD



“

*Their reputation speaks loudly and their performance after the installation was even more impressive. They were on time, they performed, they took care of it, no questions asked. I'd use them again any day, they do what they say they're going to do.*

**Eric Wasinger**

DIRECTOR OF FACILITIES  
CAMPBELL UNION HIGH SCHOOL DISTRICT



“

*We've trusted FieldTurf for over 20 years now and have installed numerous fields, all with the same excellent experience. We can confidently say that this investment has paid dividends throughout our entire organization both immediately in the short-term and each and every year thereafter.*

**Jaime Sherwood**

DIRECTOR OF ATHLETICS  
WAYZATA HIGH SCHOOL



“

*FieldTurf are the most knowledgeable and professional group in the turf industry. The products are outstanding. Their work is meticulous, and they strive for customer satisfaction. I recommend FieldTurf without reservation.*

**Kevin Ringus**

MUNICIPAL COURT JUDGE  
CITY OF FIFE



# WE'RE NOT GOING ANYWHERE

.....

If you need us, we'll be here. As part of the Tarkett Group, a global leader in flooring solutions, FieldTurf has unmatched financial support and stability. With over 140 years of history, Tarkett has proved its strength having successfully weathered the toughest economic, social and commercial challenges.

You can be confident that we'll be around if you need us. We're not only with you for this field, but for the next one, the one after, and beyond.



## FINANCIALLY STRONG



**TARKETT SA**  
EPA: TKTT

TARKETT GROUP NET SALES

**\$3B USD**

TARKETT GROUP ADJUSTED EBITDA

**\$300M USD**

## SUPPORTED BY GLOBAL STRENGTH & HISTORY



**12,500**  
EMPLOYEES



**140 YEARS**  
COMPANY HISTORY

# AND FOR ADDED SECURITY, YOUR FIELD COMES WITH THE BEST WARRANTY

.....

We're not scared to back up what we preach. You'll probably never need to use our premier warranty, but if you do, you can rest easy knowing you're protected.

We were the first company in the industry to offer a third-party insured warranty, and we continue to lead the way.

Don't jeopardize your energy, time, and investment; protect it.

### PREPAID FOR 8-YEARS

You should never have to pay for a warranty. Make sure yours doesn't have a buy-in cost.

### NO DEDUCTIBLE, \$0 OUT OF YOUR POCKET

Because if there is an issue, you shouldn't have to pay.

### PER CLAIM & AGGREGATE LIMIT OF \$33,000,000

What's a warranty good for if there are no funds remaining when you need it. Make sure you're actually covered.

### EXCLUSIVE 10-YEAR WARRANTY ON OUR CORE SYSTEM

# WE CONTROL QUALITY

## WE CONTROL THE ENTIRE PROCESS

We're in control of your field from start to finish. We manage all aspects of the manufacturing value chain, which allows us to deliver products with proven leading quality.

A supplier that doesn't have full control over manufacturing has to purchase elements or outsource aspects of the process, increasing the chance of issues or finger-pointing and potentially leaving you out in the cold.

Ask the right questions to ensure your supplier has full control.

## MANUFACTURING



**+660M**

SQ.FT. MANUFACTURED SINCE 2009

## WORKFORCE



**+500**

FULL-TIME U.S. EMPLOYEES



**+700**

TOTAL U.S. EMPLOYEES DURING PEAK SEASON

FIBER



TUFTING



COATING



LOGOS



INSTALLATION



# WE DON'T CUT CORNERS BECAUSE WE UNDERSTAND WHAT'S ON THE LINE

When you choose FieldTurf, you're choosing quality. That's why we invest in quality materials, manufacturing and teams.

Our Calhoun manufacturing facility is one of the most advanced in North America, and one of the only to be ISO 9001, ISO 14001, and ISO 45001-2018 certified for leadership in quality, environmental and safety management systems.



## MADE IN AMERICA

WITH LOCAL AND GLOBAL MATERIALS





**TRUSTED ACROSS THE COUNTRY**



# OUR PROOF IS IN THE GROUND

With over 20,000 installations worldwide, FieldTurf has been the surface of choice for over 20 years. We're trusted - at every level. From professional franchises (NFL, MLS, CFL, MLB, and more); NCAA Division I, II and III programs; to schools & municipalities.

## EXPERIENCE

 **+15,000,000**  
HOURS OF EXPERIENCE

 THAT'S ENOUGH TIME TO FLY AROUND THE WORLD  
**+4,500** TIMES

PRO



COLLEGIATE



## INSTALLATION IS OUR SECRET SAUCE

Don't underestimate the value of an experienced installation crew. Quality materials can only go so far. The success of your field greatly relies on their execution.

You will get one of the most experienced and knowledgeable teams in the industry. You'll access ASBA Certified Installers, in-house architects, expert project managers, and a team with thousands of years' experience in artificial turf.



*Absolutely amazing effort! These guys worked nights, weekends, holidays, in the rain and in the cold to finish the schedule as they promised. Like our team, they are committed to excellence!*

**Christopher Crenshaw**

ASSOCIATE VP FOR FACILITIES  
PLANNING & MANAGEMENT  
SOUTHERN MISSISSIPPI UNIVERSITY

**+5**

ASBA CERTIFIED BUILDERS

**+65**

FIELDTURF CERTIFIED INSTALLATION CREWS

**+10**

FIELDTURF CERTIFIED TURF PARTNERS

**+40**

FIELDTURF CERTIFIED CIVIL PARTNERS

**WE'RE PROUD  
OF EVERY  
ONE OF OUR  
PROJECTS**





# WE MAKE IT EASY TO GET WHAT YOU WANT

Buying a new field can be a complex endeavor. Managing the bid process, fundraising, negotiating with contractors, committee meetings... a potential burden. That's why our SmartBuy Cooperative Purchasing Program is the leading solution to get the system you want at the best price. And it's easy!



## DID YOU KNOW WE COULD EVEN FINANCE YOUR FIELD WITH FIELDTURF FINANCIAL?



**+10 YEARS**  
EXPERIENCE



**+1000**  
SUCCESSFULLY  
COMPLETED PROJECTS



PRE-NEGOTIATED PRICING -  
YOU KNOW YOU'RE GETTING  
**BEST PRICE**



**4 STEPS**  
SIMPLE 4 STEP PROCESS  
VS TRADITIONAL 13 STEP

## IT'S NOT JUST SERVICE, IT'S A PARTNERSHIP

From the moment you purchase your field, we're partners, and our focus is your success. Our renowned Service team and FieldCare program are equipped with certified crews and leading experts. For repairs or maintenance, we're here to help. For us service isn't only about repairs, it's about arming you with the right tools to make you successful.



*I truly believe Genius will help with performance and safety. One of the biggest things is making sure we're consistent across the entire surface from one corner to the other, from one sideline to the other. I would definitely recommend Genius for anyone that wants to take field management to the next level. It's exactly what you need.*

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SMART FIELD TECHNOLOGY



LEADING FIELD SWEEPING UNIT



LEADING MAINTENANCE PROGRAM

**Nick Pappas**

HEAD GROUNDSKEEPER  
MERCEDES-BENZ STADIUM



# CHANGE THE GAME

THE TARKETT SPORTS FAMILY - LEADERS IN SPORTS SURFACING



800-724-2969 | [info@fieldturf.com](mailto:info@fieldturf.com) | [fieldturf.com](http://fieldturf.com)



THE ULTIMATE  
SURFACE EXPERIENCE

[Exhibit X: Maintenance Guideline Brochure](#)



# **MAINTENANCE GUIDELINES**

**YOU BOUGHT THE BEST  
NOW GIVE IT THE CARE IT DESERVES**

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## WELCOME TO FIELDTURF!

It is my great pleasure to count you as part of the ever growing FieldTurf family. We're honored that you've chosen us to surface your facility with our world-class leading systems.

Proper maintenance will not only keep your field looking and playing at its best, but first and foremost it will provide your athletes with a playing surface that will assist them to perform at the peak of their abilities. At this time we invite you to read through our Maintenance Guidelines and keep them as a reference, when needed.

Have a question? Our dedicated team is here to help.

Phone: 1-877-725-TURF (8873)

E-Mail: [customerservice@fieldturf.com](mailto:customerservice@fieldturf.com)

Again, thank you for being part of the family!

Sincerely,



**Eric Dalieri**

President

### CONNECT WITH YOUR FIELD

Join our exclusive customer program

CUSTOMER  CONNECT

Please visit [fieldturf.com/en/customer-connect/](http://fieldturf.com/en/customer-connect/)  
to sign up for this exclusive online aid for tips  
and information on overall care of your FieldTurf field.

# GETTING STARTED - THE ESSENTIALS MAINTENANCE GUIDELINES ACCEPTANCE FORM

Ensure that the Maintenance Guidelines are read and understood by the proper maintenance personnel and that a copy of the Acceptance Form is signed and sent back to FieldTurf within 30 days of completed installation.

## FieldTurf Owner's Manual Acceptance Form



**Field Name:** \_\_\_\_\_ **Field Location:** \_\_\_\_\_

**Owner Representatives Present:** (Name & Title)

- 1. \_\_\_\_\_
- 2. \_\_\_\_\_
- 3. \_\_\_\_\_
- 4. \_\_\_\_\_

**Training Session:**

Date provided: \_\_\_\_\_ Duration: \_\_\_\_\_

**The following were reviewed during the session:**

- FieldTurf Maintenance Guidelines
- BARS
- Infill Replenishment Practices (High Traffic Areas)
- FieldCare – New Field Program Offer

**Description of Equipment Provided:** \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

- Maintenance equipment assembled by installation crew
- Equipment demonstration set up on utility vehicle provided by field owner
- Field maintenance training provided by installer with "Field Demo"

	Quantity Stock
Field rolls - quantity:	_____
Sand - quantity (tons):	_____
Rubber - quantity (tons):	_____
Colored turf:	_____
Colored turf:	_____
Colored turf:	_____
Colored turf:	_____
Other:	_____
Date received maintenance equipment:	_____

I, the undersigned, acknowledge having received the FieldTurf Owner's Manual for the product purchased by the Owner. By signing this document the Owner confirms that the above listed items have been provided/completed in conformance with the project requirements and delivered/accepted by the Owner.

Please give original copy to FieldTurf Representative and keep a photocopy for your records. **Read, Agreed and Accepted**

Authorized Personnel Name: \_\_\_\_\_ Authorized Signature: \_\_\_\_\_  
 Organization: \_\_\_\_\_ Date Submitted: \_\_\_\_\_  
 Installation Foreman: \_\_\_\_\_ Foreman Signature: \_\_\_\_\_  
 Certified Installer's Company: \_\_\_\_\_

# MAINTENANCE LOG

Make sure all maintenance is done on a timely basis, and use our maintenance log chart to keep an up-to-date reference of all work done on your field. This will help you keep a record of all maintenance procedures performed.

## Official FieldTurf Maintenance Log



Date Form Submitted (M/D/Y): \_\_\_\_\_ Organization: \_\_\_\_\_


Name of Field: \_\_\_\_\_ Name of Maintainer: \_\_\_\_\_

STAGES	DATE	NAME	SIGNATURE
<b>Surface Brushing</b> Recommended Frequency: Every 4-6 weeks	M/D/Y		
	M/D/Y		
	M/D/Y		
	M/D/Y		
<b>Surface Aerating</b> Recommended Frequency: Maximum 2-3 times/year (beginning in 2nd year)	M/D/Y		
	M/D/Y		
	M/D/Y		
	M/D/Y		
<b>Surface Raking</b> Recommended Frequency: Every 4-6 weeks	M/D/Y		
	M/D/Y		
	M/D/Y		
	M/D/Y		
<b>Surface Sweeping</b> Recommended Frequency: As needed	M/D/Y		
	M/D/Y		
	M/D/Y		
	M/D/Y		
<b>Additional Maintenance Activities</b> (specify) Recommended Frequency: As needed	M/D/Y		
	M/D/Y		
	M/D/Y		
	M/D/Y		
<b>Complete Inspection of Line Markings, Seams and High Traffic Areas</b> Recommended Frequency: As needed	M/D/Y		
	M/D/Y		
	M/D/Y		
	M/D/Y		
<b>Infill Top Dressing</b> (high-traffic areas) Recommended Frequency: As needed	M/D/Y		
	M/D/Y		
	M/D/Y		
	M/D/Y		
<b>Snow Removal</b> (if applicable) Recommended Frequency: As needed	M/D/Y		
	M/D/Y		
	M/D/Y		
	M/D/Y		

**There are three ways to submit this completed form:**

- Fax:** 514-340-9374
- Email:** [customerservice@fieldturf.com](mailto:customerservice@fieldturf.com)
- Physical Mail:** 7445 Côte-de-Liesse Road Suite 200, Montreal Quebec H4T 1G2 Canada

An editable copy of the FieldTurf Maintenance log can be downloaded at: [customerconnect.fieldturf.com](http://customerconnect.fieldturf.com)





# BARS

BRUSHING AERATING RAKING SWEEPING

**THERE ARE 4 BASIC MAINTENANCE OPERATIONS THAT ALL FIELDTURF FIELDS REQUIRE ACCORDING TO OUR RECOMMENDED MAINTENANCE SCHEDULE.**

**WE SIMPLY CALL IT BARS  
BRUSHING, AERATING, RAKING AND SWEEPING.**

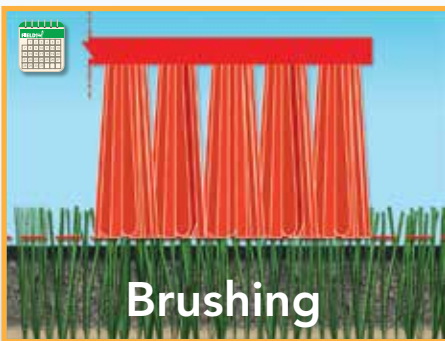
**TOW VEHICLES:** The minimum requirement to pull groomers and sweepers should be vehicles that have at least 20HP and be equipped with Turf tires. Vehicles should not exceed 70 PSI / 10,080 PSF of pressure on the Turf/Base system. Hydraulic capabilities are not necessary with any of FieldTurf's current Groomers or Sweepers as all are mechanically driven.

**SETTING SWEEPERS:** When setting Sweepers for use, make sure that the brushes never penetrate the infill. Proper removal of debris will only require the brushes to penetrate the top of the fibers.

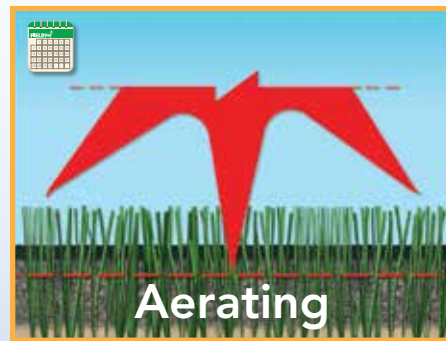
**SETTING GROOMERS:** When setting the Groomer components for use, the rotating tines should penetrate the infill by 3/4". The rakes should penetrate the infill by 1/2". The brushes should not penetrate the infill.

**N.B.** If you are subscribed to a Field Care Program, please consult your Field Care Manager for recommended grooming frequencies. Grooming systems equipped with internal/external rotary brushes should be limited to frequencies of 2-3 times per year.

## A SUMMARY OF THE STEPS TO FOLLOW FOR LONG-LASTING PERFORMANCE



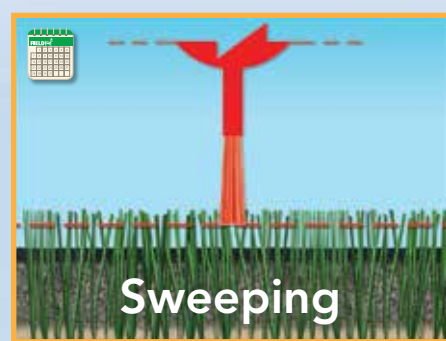
**BRUSHING**  
Rejuvenates the matted fibers and levels the top portion of the infill.  
**EVERY 4-6 WEEKS**



**AERATING**  
Rotating tines are designed to penetrate and loosen the infill to avoid minor compaction.  
**MAXIMUM 3 TIMES/ YEAR (BEGINNING 2ND YEAR)**



**RAKING**  
Prevents fibers from matting down and ensures that the infill is loosened.  
**EVERY 4-6 WEEKS**



**SWEEPING**  
A clean field ensures that foreign material or debris does not get into the infill.  
**AS NEEDED**

**OTHER NECESSARY MAINTENANCE PROCEDURES SHOULD BE DONE PERIODICALLY AND ACCORDING TO USAGE.**

## INSPECT LINES & MARKINGS

It is important to notify our Customer Service department if any line markings or seams come apart.



as needed



## INFILL TOPDRESSING

Adding rubber to the top layer of infill may be necessary in high traffic areas.



as needed



## SNOW REMOVAL

If you need to remove snow from your field, adhering to proper guidelines is vital. (See page 38)



as needed



## FIELD COVERING

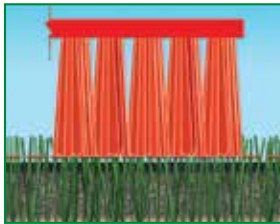
Use FieldTurf Armour protection systems for any events that require field covering and vehicle access. (See page 23-28)



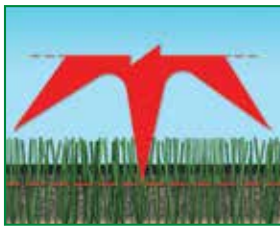


# Maintenance Guidelines

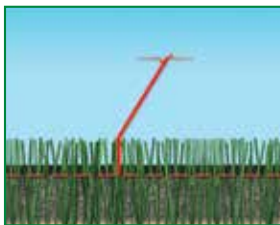
## PureFill



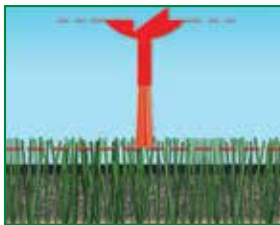
Brushing



Aerating



Raking



Sweeping

### Surface Anti-Static Treatment using Boom sprayers

#### RECOMMENDED FREQUENCY:

On an as-needed basis for the initial break-in period of the field. Dilute the FieldTurf Static conditioner in water at the recommended rates and apply the solution to your field. N.B.: Given the porous nature of the PureFill infill, drying times could be longer than other infills. This also applies following rainfall.

### Surface Brushing

#### RECOMMENDED FREQUENCY:

Every 2-3 weeks or more frequently during heavy use periods. Serves to keep the infill level consistent throughout the field of play. Infill levelling might also be required following a heavy rainfall.

### Surface Aerating

#### RECOMMENDED FREQUENCY:

Maximum 3 times/year. This serves to raise the infill level and avoid over-settling. Timing would be ideally in the spring and after heavy use, such as after a full sport season. (Beginning in the 2nd year of use).

### Surface Raking

#### RECOMMENDED FREQUENCY:

Every 3-4 weeks or more frequently during heavy use periods and/or heavy rainfalls. This can be done in tandem with Surface Brushing.

### Surface Sweeping

#### RECOMMENDED FREQUENCY:

As needed. The presence of foreign debris must be controlled and is recommended as often as required.

### Complete Inspection (Line markings, seams and high-traffic areas)

#### RECOMMENDED FREQUENCY:

As needed. A weekly walk-through inspection is recommended to monitor the need for minor repairs, infill touch ups in high traffic areas and potential sweeping up of debris.

### Infill Top Dressing

#### RECOMMENDED FREQUENCY:

As needed to maintain the specified infill depth. In high-traffic areas this could be as often as once a week, given the lightweight nature of the PureFill infill.



# What to Expect

## PureFill



Surfactant & Anti-Static Application



Aeration Activity



Groom Right

FieldTurf PureFill systems feature an infill mix made up of sand with a layer of cork granules. There are many real benefits associated with PureFill systems such as proven top surface level heat reduction, fire-resistance, and a very natural aesthetic – due primarily to the layer of granulated cork infill used in the PureFill system.

It should also be noted that due to its porous nature, the Purefill infill might need a bit longer drying time following anti-static application or rainfall than other types of infill.

The settling process of natural infill material is different than that of traditional infill materials. The three points below outline what to expect with the PureFill system material.

### 1. Additional Installation Procedures that FieldTurf will Undertake on PureFill Fields

FieldTurf will ensure that the infill material is well aerated prior to applying the final cork top layer. A surfactant and anti-static liquid will also be applied to the infill layer to combat naturally-occurring static and surface tension that could, under certain outdoor conditions, contribute to infill displacement and prevent water flow through. This is a preventative measure.

### 2. A Prolonged Natural Settling Process

Due to the lighter weight of the natural cork granule, some cork infill displacement is expected to occur after the first couple of heavy rainfalls and/or in temperatures that could create temporary static charge of the infill. This is expected and part of the infill's natural progression to a more settled state. Any displaced infill can be brushed back into the body of the field, some infill addition might be needed in certain areas.

### 3. Regular Brushing & Anti-Static Application

There are a few additional maintenance items associated with the PureFill system. The field might need to be brushed every 2-3 weeks and after each heavy rainfall. An application of FieldTurf Anti-Static might be necessary in the first few months of the life of your field. This is an environmentally friendly product that is diluted in water. Hopefully the benefits of this system will far outweigh the tasks of additional maintenance steps required and the system will provide the ultimate playing surface for your athletes for years to come.

# Maintenance Guidelines

## PureGeo



**Water Treatment using: Irrigation systems, Kifco Water reels or Boom sprayers**

**RECOMMENDED FREQUENCY:**

Watering for a typical 80,000 sq. ft. field would be as follows:  
 If the ambient humidity is > 50%-6,500 gallons (10oz./sq. ft.)  
 If the ambient humidity is < 50%-8,000 gallons (12oz./sq. ft.)  
 Moisture readings should be taken once a week if no precipitation has occurred. Ideal readings should be between 30%-50% moisture content.

**Surface Brushing**

**RECOMMENDED FREQUENCY:**

Every 3-4 weeks or more frequently during heavy use periods. Serves to keep the infill level consistent throughout the field of play. Infill levelling might also be required following a heavy rainfall.

**Surface Aerating**

**RECOMMENDED FREQUENCY:**

Maximum 3 times/year. This serves to raise the infill level and avoid over-settling. Timing would be ideally in the spring and after heavy use, such as after a full sport season. (Beginning in the 2nd year of use)

**Surface Raking**

**RECOMMENDED FREQUENCY:**

Every 3-4 weeks or more frequently during heavy use periods and/or heavy rainfalls. This can be done in tandem with Surface Brushing.

**Surface Sweeping**

**RECOMMENDED FREQUENCY:**

As needed. The presence of foreign debris must be controlled and is recommended as often as required.

**Complete Inspection (Line markings, seams and high-traffic areas)**

**RECOMMENDED FREQUENCY:**

As needed. A weekly walk-through inspection is recommended to monitor the need for minor repairs, infill touch ups in high traffic areas and potential sweeping up of debris.

**Infill Top Dressing**

**RECOMMENDED FREQUENCY:**

As needed to maintain the specified infill depth. In high-traffic areas this could be as often as once a week. An entire field top dressing would be done once/twice per year requiring 4-5 1,500 lb bags (3-5% of the total infill found in a field) of attic stock per application. **Given the nature of the Infill composition, this step will be mandatory to maintain designated infill levels and ensure the ultimate performance qualities of the playing surface.**



Brushing



Aerating



Raking



Sweeping



Water Reel



Moisture Thermometer



Brushing



# What to Expect

## PureGeo

FieldTurf PureGeo systems feature an infill mix made up of organic coconut peat, cork and a bottom layer of sand. There are many real benefits associated with PureGeo systems, such as proven top surface level heat reduction and a natural aesthetic quality.

PureGeo infill has varying levels of moisture content depending on the climate in which it is installed. As indicated in the Maintenance Guidelines it will be required to maintain this moisture level throughout the life cycle of the field.

The following are what to expect with the PureGeo system.

### 1. Color Change

The infill might reflect a change in color throughout its lifespan. However, this change will not affect PureGeo's benefits.

### 2. Staining

The natural properties of PureGeo infill might lead to clothing stains. Either soaking the stained areas or simply applying conventional stain removing spray agents is recommended.

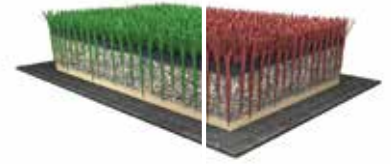
### 3. Freezing

Depending on the climate, the high moisture content could lend itself to being vulnerable to freezing due to ambient temperature changes.

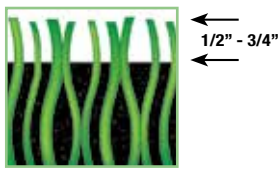
### 4. The Need for Infill Addition

High-traffic areas will need to be monitored for infill addition as needed. An entire field top dressing would likely be needed once/twice per year in order to maintain the designated infill levels and ensure the ultimate performance qualities of the playing surface.

# Maintenance Guidelines for FieldTurf DoublePlay Baseball Fields

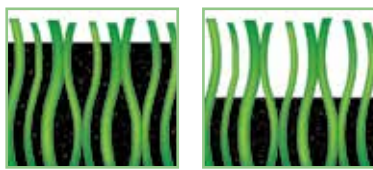


## DOUBLEPLAY



Proper Infill Level

In addition to our standard maintenance guidelines, we recommend that you pay close attention to the following DoublePlay specific items:

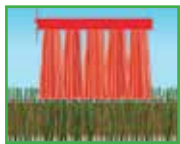


Over Filled

Under Filled

### Proper Infill Depth

At all times, there must be no less than 1/2" and no more than 3/4" fiber showing above infill. Maintaining the infill level is critical to fiber performance and player safety. Specific attention must be given to the home plate and first base areas (if covered by FieldTurf). We recommend that the infill levels be measured and remediated at these areas after every game and practice.



Brushing



Aerating

### Surface Brushing

**RECOMMENDED FREQUENCY:** Every 2 weeks or as needed to maintain proper infill depth and fiber appearance.

### Surface Aerating

**RECOMMENDED FREQUENCY:** Maximum 3 times/year, ideally after every sport season and after snow clearing, if applicable (beginning in 2nd year).



Raking



Sweeping

### Surface Raking

**RECOMMENDED FREQUENCY:** Every 4-6 weeks or as needed to maintain proper infill planarity and infill depth.

### Surface Sweeping

**RECOMMENDED FREQUENCY:** As needed.

### Complete inspection (of line markings, seams and high-traffic areas)

**RECOMMENDED FREQUENCY:** As needed.

### Infill top dressing

**RECOMMENDED FREQUENCY:** As needed to keep proper infill depth. This will be a necessary periodic maintenance item given the nature of athletic activity on most baseball fields, especially in the high-traffic areas – home plate, first base, second base, third base.

### Home Plate Area

**We recommend that the home plate area, when covered with FieldTurf, be protected with an alternative turf surface during practices.**





## FieldTurf DoublePlay Infill Depth Maintenance

In order to properly maintain the infill depth on FieldTurf baseball fields, it is essential to have the following simple tools available at all times.

### Essential Infill Depth Maintenance Tools

- Plastic Handheld Rake
- Plastic Handheld Infill Scooper
- Infill Depth Gauge

With a few simple steps using your essential infill depth maintenance tools, infill can easily be added and leveled out for areas on the field that are low on infill. These areas are typically high- traffic spots such as the home plate area, first base, second base, and third base.

### Step 1

Using the infill depth gauge, loosen the black screw at the bottom of the depth gauge, place the flat circular part flush with the top of the infill, and move the top lever down until the needle penetrates the infill to the turf backing. Verify and record that the depth level is within specification. The infill depth should always be such that 0.5" to 0.75" of fiber is showing above the infill. That translates to an infill depth of 1.25" for any of FieldTurf's standard baseball products featuring turf fiber heights of 2" or 1.75".



**\*Note:** When inserting the needle into the infill, do not press too hard or you might damage the depth gauge. Ensure that the needle is not bending in order to get an accurate depth measurement.

### Step 2

Identify the areas with low infill using your infill depth gauge, and brush or lightly rake the fibers in the given area to an upright position.



### Step 3

Add required amount of SBR cryogenic rubber infill to get the low infill area to its proper specified depth using the plastic handheld infill scooper.



### Step 4

Rake the infill into the turf with the plastic handheld rake. Minimal force is required to work the added infill into the turf. Once complete, ensure that the infill is evenly placed in the given area using your infill depth gauge.



When Areas are Clay: (Home Plate, Pitcher's Mound, and Base Areas)

It will be imperative to brush the clay that has migrated from the areas mentioned above back from the turf areas. Daily monitoring is recommended. If the clay has been accumulating in the grass border for quite some time, the "clean-up" will require substantially more time and effort to restore to its original state.

The tools required will be: Stiff-bristled push brooms, rakes or "Power" brooms.

Following this step, Infill will likely need to be replenished in the grass area border. This procedure is identical to the steps shown previously where the aforementioned areas are turf.



# Maintenance Guidelines EasyField



The most important factors to keep the EasyField product functioning at its best will be Sweeping or vacuuming to keep the surface clean. Brushing might be required to re-dress the fibers and blend the seams back in when re-installing, however a sweeper will generally accomplish the same function.



### Sweeping Equipment

Since no Infill appears in EasyField system, the “Filter” feature in our conventional sweepers is not required, but of course the SweepRight model can still be used. If space is limited and pull behind units are not practical, any traditional walk-behind “Push” model available in hardware stores are adequate.

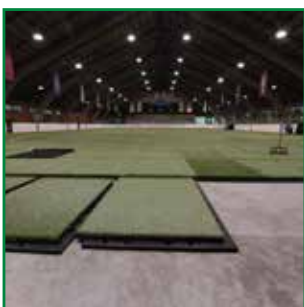


### Vacuuming

Due the lack of Infill in the system, any Vacuum system can be used to pick up debris.

### Brushing

If a Drag brush is used, a 4’ model will be sufficient, however, a wider unit (7’ model) can be used if space restrictions and turning radius are not an issue.



### Tow Vehicle

A Golf Cart or small Gator can be used to tow either the Sweeper or Groomer.

### Painting & Removal

There are 2 options for Temporary paint application on the EasyField panels. Either applying Chalk paint in Aerosol Cans with an applicator or liquid paint with an Airless sprayer.

Reasonably priced walk-behind Removal units are also available. Please contact your Customer Service Co-Coordinator for more Information.

# Maintenance Guidelines

## Field Hockey

The most obvious cleaning needed by FieldTurf Field Hockey Series Products is the removal of litter left behind by field users and spectators. Encourage good housekeeping by making sure that enough containers are provided for trash. Try to route the field access traffic in such a way as to minimize the tracking-on of mud or dirt. Be sure that litter and loose dirt are picked up promptly before they accumulate and pack. Failure to do so can spoil the appearance of the field and affect playing quality.

Light trash and airborne dust can be removed by electrically-powered vacuum sweepers. However, the most efficient practice for more thorough cleaning is to periodically wash the field with plenty of clean water.



**WATER QUALITY** - Some fire protection systems use raw rather than treated water. Raw or polluted water is not recommended. Untreated water in some areas contains large quantities of dissolved hard water solids. Such water may cause a noticeable film to appear on the turf after evaporation and leave a deposit behind that is difficult to remove.

**CLEANING MACHINES, DRY TYPES** - Experience has shown that although vacuum-type machines are satisfactory for lifting paper scraps, food debris and loose trash from a FieldTurf Field Hockey Series Product surface, a combination vacuum/brush type of sweeper is the best equipment for picking up dirt, dust and fine foreign particles. Listed below are a number of factors to keep in mind when buying or operating vacuum/brush type sweepers on FieldTurf Field Hockey Series Products.

**BRUSH COMPOSITION** - FieldTurf sweepers, such as the SweepRight or similar lawn sweepers are ideal for picking up surface litter. The selected sweeper should have nylon or polypropylene bristles. The brush should contain NO metal fibers. Settings will depend on the model and type of sweeper selected, but traditionally the brushes should be set so that they just touch the top of the surface. Should you have questions regarding brush settings for various FieldTurf Sweeper units please contact FieldTurf Customer Service.

**TURF LOADING** - Because of the nature of the sweeping operation, vacuum-brush cleaning may require several passes over the surface to complete the job. It is recommended that any sweeper or piece of equipment used be equipped with white or grey pneumatic tires at a maximum tire pressure of 35 psi. Black tires can, at times, mark the white lines on the field. All equipment should be equipped with pneumatic, non-treaded tires and should not be left or parked on wet turf for long periods.

**EXHAUST FUMES** - If the sweeper has an internal combustion engine, make certain that the hot engine exhaust is not discharged down toward the playing surface. Hot objects can damage a FieldTurf Field Hockey Series Product and engine exhaust may soil it. Check to make sure that the sweeper is designed in such a way that a hot muffler or exhaust pipe cannot drop onto the FieldTurf surface.

**OIL SPILLS** - Should oil spills occur, they should be wiped up promptly with a clean white rag moistened with FieldTurf Scrub (4:1 ratio) specifically designed to cut through grease, oil, hydraulic fluids etc., contact FieldTurf for detailed instructions and advice.

**CAUTION:** Because electrically-powered vacuum cleaners may not be properly grounded, do not use them on wet or damp surfaces.

**FREQUENCY OF CLEANING** - The removal of loose rubbish and surface dust should be done as needed, usually about once a week on most fields. A thorough wet cleaning should be done at least once or twice a year. NOTE: The excessive use of heavy-duty power-brushing equipment can damage both the playing surface and its underpad system.

**WASHING AND USE OF WET CLEANERS** - FieldTurf Scrub is very effective for removing most of the soil likely to occur on FieldTurf Field Hockey Series Product surfaces, especially when the detergents are applied with mechanical wet-type carpet cleaning machines. Either a vacuum or rotary-scrubber type cleaning machines may be used, provided the manufacturer's directions for cleaning water-based hockey carpets are followed.

1) When heavily soiled, use an industrial-type carpet scrubber and a FieldScrub (1:4 solution) in warm water.

2) For light soiling, a (1:8) solution can be used.

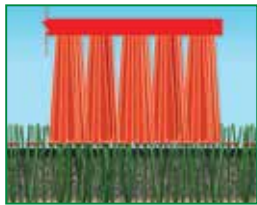
Always rinse the surface thoroughly following cleaning. The use of a fire hose to flood the field can be effective for both dirt removal and rinsing.

**ANNUAL CLEANING** - A good, hard spring or fall rain is an excellent cleaner for a FieldTurf Field Hockey Series Product surface and will provide an assist to the annual cleaning routine as described in the foregoing. However, an annual cleaning routine for heavy soiling should not be omitted.

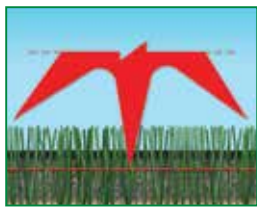
**REMOVING STAINS GENERAL INSTRUCTIONS** - The first rule in spot removal is promptness. It is always easier to clean up a fresh spill than one that has dried and hardened. Remove any solid or paste-like deposit with a spatula or table knife. Depending on the nature of the "Debris", FieldScrub or FieldTurf Gum Remover can be used. Dry absorbents can then be swept or vacuumed up. FieldTurf Field Hockey Series Product surfaces have good resistance to staining. However, it is important to realize they are only one part of a sophisticated system of various components designed for overall field performance. Some cleaning agents safe for hockey grade fibers can be harmful to other components of the system.

Please contact your FieldTurf Customer Service coordinator for approval of Alternative Products, if needed. FieldTurf's Gum Remover is very effective for the removal of not only gum, but also tree sap, tar, adhesives etc.

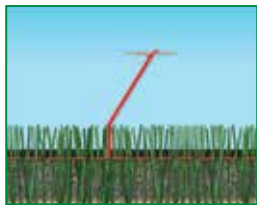
# Maintenance Guidelines for FieldTurf Indoor Fields



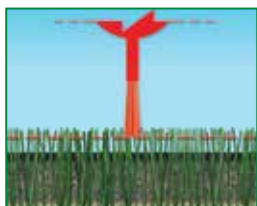
Brushing



Aerating



Raking



Sweeping

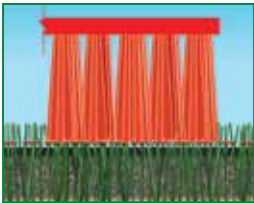


FieldTurf Scrub Detergent  
FieldTurf Static Conditioner

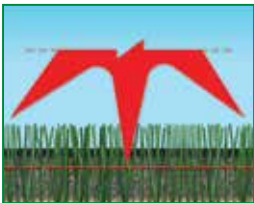
<b>Surface Brushing</b>	Every 2 to 3 weeks. Maximum.
<b>Surface Aerating</b>	Max 3 times per year, beginning in 2nd year.
<b>Surface Raking</b>	As needed.
<b>Surface Sweeping</b>	As needed.
<b>Infill Replenishment</b>	Weekly in high traffic areas. As needed elsewhere to maintain proper infill depth with 3/4" of fiber exposed.
<b>Infill Re-Distribution</b>	A leaf blower may be required to clear infill from perimeter/board/wall areas.
<b>Complete Inspection</b>	Inspection of line markings, seams and high-traffic areas as needed.
<b>Cleaning / Sanitizing</b>	Use FieldScrub minimum once per year.
<b>Anti-Static Conditioning</b>	As needed.

**PLEASE NOTE:** All entrance areas should be covered to avoid premature wear.

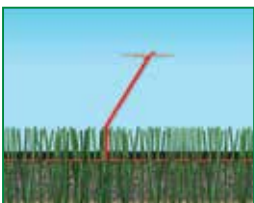
# Maintenance Guidelines for FieldTurf Lacrosse Fields



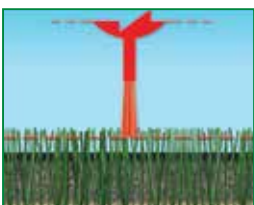
Brushing



Aerating













Raking

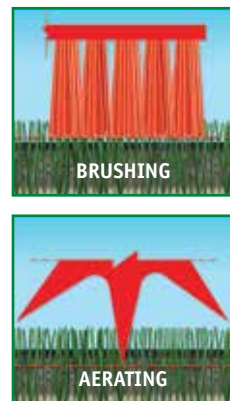
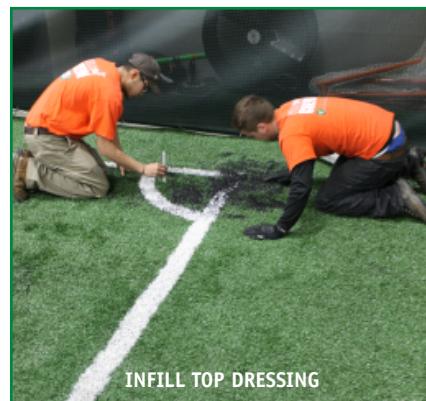


Sweeping

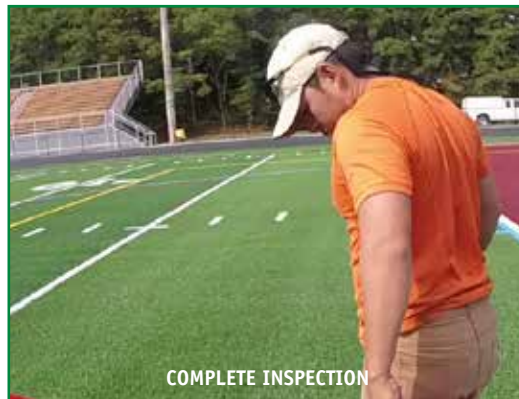
<b>Surface Brushing</b>	Every 4 weeks. Maximum.
<b>Surface Aerating</b>	Twice per year, for entire field.
<b>Surface Raking</b>	Every 6 weeks. Maximum.
<b>Surface Sweeping</b>	As needed.
<b>Infill Replenishment</b>	Weekly or as needed in high-traffic areas to maintain proper infill depth with 3/4" of fiber exposed.
<b>Complete Inspection</b>	Inspection of line markings, seams and high-traffic areas as needed.
<b>Weekly:</b>	<ul style="list-style-type: none"> <li>• Verify inlaid markings at crease areas, fans, and center face-off for infill levels and fiber layover.</li> <li>• Practice and "Drill" areas, in and around the goal also need to be checked more regularly to make sure infill depth is within the normal range.</li> <li>• Add infill to all key critical field areas.</li> </ul>
<b>Annually:</b>	Field inspection by trained FieldTurf "FieldCare" personnel is recommended. If needed, yearly or bi-annual additional inspection and grooming can be discussed with our trained personnel, depending on field usage.

# Maintenance Guidelines per infill

Infill	Description	Anti Static Conditioning	Water Treatment	Infill Replenishment	Surface Brushing
<b>CRYOGENIC &amp; AMBIENT RUBBER</b> 	High grade rubber granules	As needed	N/A	N/A	4-6 weeks
<b>COOLPLAY</b> 	Extruded composite made from polymer & mineral materials	As needed	N/A	N/A	4-6 weeks
<b>PUREFILL</b> 	100% organic cork infill	See specific guidelines Page 8	N/A	N/A	2-3 weeks
<b>PUREGEO</b> 	Primarily coconut peat and/or cork	As needed	See specific guidelines Page 10	See specific guidelines Page 10	3-4 weeks
<b>PURESELECT</b> 	Granulated olive cores. U.S. made	As needed	N/A	N/A	4-6 weeks
<b>ECOSENSE EPDM</b> 	Copolymer of ethylene & propylene having diene linkages that can be cross-linked with peroxides or sulfur	As needed	N/A	N/A	4-6 weeks
<b>ECOGRIND</b> 	Rubber mixture primarily from running shoes	As needed	N/A	N/A	4-6 weeks
<b>ECOMAX</b> 	High quality TPE	As needed	N/A	N/A	4-6 weeks
<b>ECOGREEN</b> 	High quality TPE	As needed	N/A	N/A	4-6 weeks
<b>COATED ENVIROSAND</b> 	Acrylic coated sand	As needed	N/A	N/A	4-6 weeks



Surface Aerating	Surface Raking	Surface Sweeping	Complete Inspection	Infill Top Dressing (High-Traffic Areas)	Cleaning/Sanitizing
2-3 times/year (max)	4-6 weeks	As Needed	Weekly	As Needed	Once/ Twice per year
2-3 times/year (max)	4-6 weeks	As Needed	Weekly	As Needed	Once/ Twice per year
2-3 times/year (max)	3-4 weeks	As Needed	Weekly	As Needed	Once/ Twice per year
2-3 times/year (max)	3-4 weeks	As Needed	Weekly	As Needed	Once/ Twice per year
2-3 times/year (max)	4-6 weeks	As Needed	Weekly	As Needed	Once/ Twice per year
2-3 times/year (max)	4-6 weeks	As Needed	Weekly	As Needed	Once/ Twice per year
2-3 times/year (max)	4-6 weeks	As Needed	Weekly	As Needed	Once/ Twice per year
2-3 times/year (max)	4-6 weeks	As Needed	Weekly	As Needed	Once/ Twice per year
2-3 times/year (max)	4-6 weeks	As Needed	Weekly	As Needed	Once/ Twice per year
2-3 times/year (max)	4-6 weeks	As Needed	Weekly	As Needed	Once/ Twice per year



## DIRECTION OF OPERATION

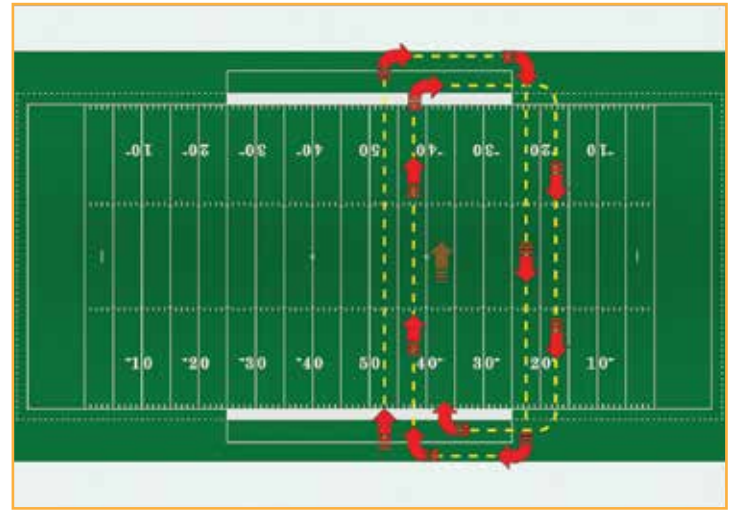
This diagram indicates the ideal method of operation for all FieldTurf machines and BARS procedures. Starting on the sidelines at the edge of the center of the field, cross the field from one side to the other in a straight line. Then go down the sidelines 25 yards and cross the field again to the other side. Next, go up the field 20 yards and cross the field again. Repeat this procedure from the center to both ends of the field until the grooming is complete. Rotating start position and end direction is recommended. The last passes should be end to end on the side panels.

## KEY FACTS ABOUT FIELDTURF MAINTENANCE EQUIPMENT

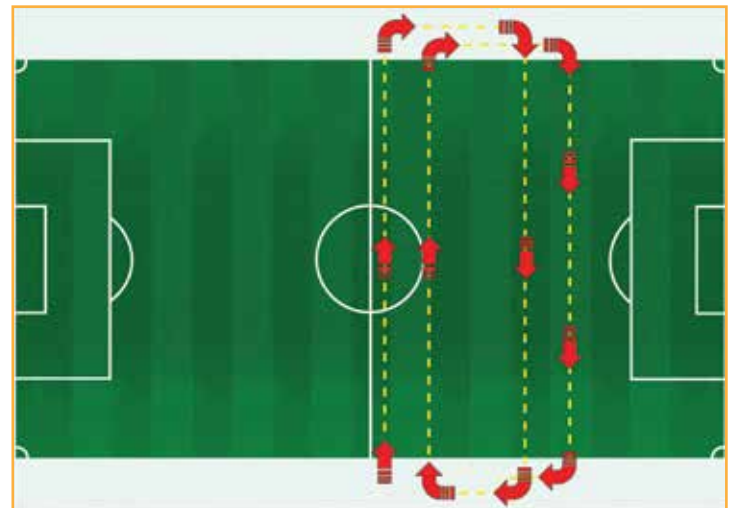


**IMPROPER USE CAN DAMAGE YOUR EQUIPMENT AND YOUR FIELD. PLEASE TAKE NOTE OF THE FOLLOWING KEY FACTS:**

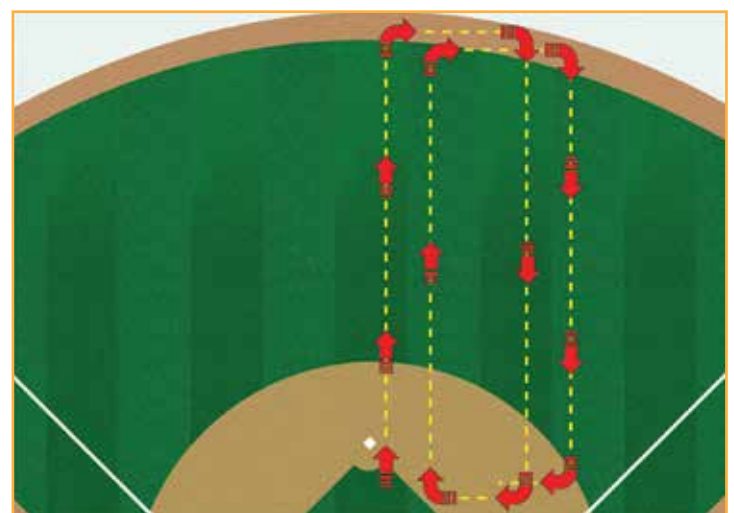
- Make sure all equipment is clean before entering the field
- Do not operate any equipment until it is on the field
- Do not operate any equipment while in a stationary position
- Always turn off equipment just before stopping
- When sweeping, check your collector basket immediately after starting and do so often
- Collecting too much rubber while sweeping will indicate improper settings
- Pay special attention to high traffic areas, where the fibers and infill levels may be different from other parts of the field, and adjust your settings accordingly. As with any equipment, always read the manual before operating.



FOOTBALL



SOCCER



BASEBALL

## APPROVED ACTIVITIES

OUR FIELDTURF SURFACE HAS BEEN DESIGNED FOR THE FOLLOWING APPROVED AND PERMITTED ACTIVITIES, IN ADDITION TO A WIDE RANGE OF NON-SPORTING ACTIVITIES:

Athletics such as shot put, hammer throw, discus and even javelin (fitted with a rubber tip), can be occasionally performed on FieldTurf. Ideally, the landing area should be outside the playing area but if unavoidable the field should be covered with alternative covering to prevent damage to the FieldTurf surface.

To insure optimum performance of your FieldTurf field we recommend that repetitive training drills and activities be rotated to prevent continuous wear at a single location.

- Football
- Field Hockey
- Baseball/Softball
- Lacrosse
- Soccer
- Rugby
- Physical Education
- Pedestrian traffic
- Graduation
- Concerts
- Events
- Outdoor Ice Hockey Games



## PROHIBITIONS

Your FieldTurf field should be kept free from food, gum, sunflower seeds, glass, cigarettes, fireworks, driving stakes and any sharp objects that will risk damage to the field and injury to players. Your field should also be kept free from debris, leaves, paper and windblown material. It is imperative that your FieldTurf field be a designated non-smoking area. Unauthorized maintenance equipment and personnel are prohibited.

**FIELDTURF SUPPLIES ITS CLIENTS WITH 2 COMPLIMENTARY SIGNS TO HANG AT THE ENTRANCE OF THE FIELD AND AROUND THE PERIMETER IN ORDER TO CLEARLY DEMONSTRATE THE MAJOR PROHIBITIONS ON FIELDTURF.**





## GRADUATION GUIDELINES

FieldTurf has developed ideal covering systems that are suitable for all types of events, including Graduation ceremonies, called the FieldTurf Armour systems (Pages 23-28). A request for Information/ Pricing can be obtained by visiting [www.fieldturf.com/maintenance](http://www.fieldturf.com/maintenance)

Though it is always preferable to cover the Surface as shown in the Guidelines, budgets permitting, many have held this event without covering the main area of the field itself.

If the field is new, less than 6 months old, conditions might be different than with a mature field. Since Graduation events are traditionally held in the spring, depending on climactic conditions, the field might get a chance to "weather" through the winter months, so it will be important to test the chairs on the surface, as indicated below, if it is chosen not to cover that area of the field.

Though post chairs will generally not damage the surface, they do tend to sink a bit; a quick test will show you the end result. If post chairs are used without a Field covering however, those equipped with rubber stoppers are a must. The chairs should only create small "Divot" holes that should generally disappear when the field is groomed after the event. Again, testing the end results off the main field of play is always recommended.



Depending on the final set-up, ladies will find heels very difficult to walk in. Many have recommended that the ladies either wear/or bring "Flats" for their own comfort. Another option to full covering would be to cover the aisles with recommended covering or plywood, then conventional carpeting over the top.

It will be imperative, however, to cover the area under the staging. Either a recommended covering (i.e. FieldTurf Armour), the Equivalent protection using similar systems or 4' X 8' (3/4") plywood sheets which can be doubled or tripled, as required, under the stage footings. The thickness used will depend on the PSI that exceeds the allowable 70 PSI / 10,080 PSF (as indicated in the "Vehicle Circulation" guidelines (Page 39). A tarp or plastic covering underneath should be used to avoid splinters getting into the grass.

It should be noted that your FieldTurf warranty covers the components and Installation of your FieldTurf product. Though all efforts are made to provide appropriate directives for the staging of events other than the sporting activities set out in the warranty, the responsibility remains on the owner for any mishaps or damages that might occur; however no breach in warranty exists with the staging of such events.

A thorough grooming is recommended after the event. (See pages 40-41 if assistance is needed.)

Here are two examples:



Chairs with "Full contact to the surface" are ideal, if available. Here is an example:



# FieldTurf ARMOUR

FieldTurf Armour turf protection systems are in use worldwide at prestigious arenas and stadiums and have proven themselves through extensive use. Whether you are having a large concert or a small on-field gathering, FieldTurf Armour will protect your turf against damage and keep your visitors safe and comfortable.

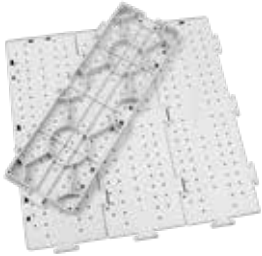
Increase revenue and flexibility and open your building to trade shows, concerts, corporate events, graduations and anything else you can conceive of. We have the experience, the expertise and the range of products to satisfy nearly any flooring requirement.

You can install chairs, staging and other equipment without damage. Drive forklifts, move carts and place equipment easily on artificial turf, running tracks and other sensitive surfaces.

All of our systems are interlocking, modular, expandable, and allow for unique configurations and customized layouts. FieldTurf Armour is easy to install, dismantle and store. Sections can be installed quickly and are designed for regular and repeated use.



# FieldTurf ARMOUR



## FIELDTURF ARMOUR GP

General Purpose Turf Protection

- Tile size: 4" x 12" x 3/4"
- Module Size: 36" x 48" x 3/4"
- Weight: 0.81 lbs per sq ft
- Supports: 8,000 lbs per sq ft
- Suitable for guest areas, chairs and light equipment
- Does not require tools - snap connection system
- Expansion joint modules to control expansion issues outdoors
- Transition edging



## FIELDTURF ARMOUR MD

Medium-Duty Turf Protection

- Tile Size: 12" x 24" x 1-1/8"
- Module Size: 36" x 48" x 1-1/8"
- Weight; 1.44 lbs per sq ft
- Supports: 20,000 lbs per sq ft
- Suitable for guest areas, chairs, equipment and staging areas
- Does not require tools - snap connection system
- Expansion joint modules to control expansion issues outdoors
- Transition edging



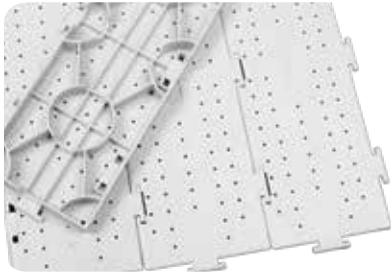
## FIELDTURF ARMOUR HU

Heavy-Use Turf Protection & Portable Roadway

- Module size: 42" x 42" x 2"
- Weight: 2.45 lbs per sq ft
- Supports: 25,000 lbs per sq ft
- Suitable for guest areas, chairs, equipment, staging, trailers, vehicles and trucks
- Integrated self-aligning hook-and-loop connection system
- Secondary camlock system adds ballast
- Transition edging



# FIELDTURF ARMOUR GP



FieldTurf Armour GP was designed specifically for all types of synthetic turf and offers a greater level of protection against debris, liquids and dirt.

Designed to minimize wear and damage to your turf, FieldTurf Armour GP protects against surface abrasion, surface and base compaction and contamination of the turf and the infill as a result of attendee traffic.

Underside channels are contoured to eliminate sharp edges and prevent shifting of infill and of the flooring. After your event is over, simply brush your synthetic grass back into shape. Unlike older systems, it will be nearly impossible to see any distinguishable pattern in the turf.

## FIELDTURF ARMOUR GP DEPLOYS RAPIDLY IN ANY STADIUM

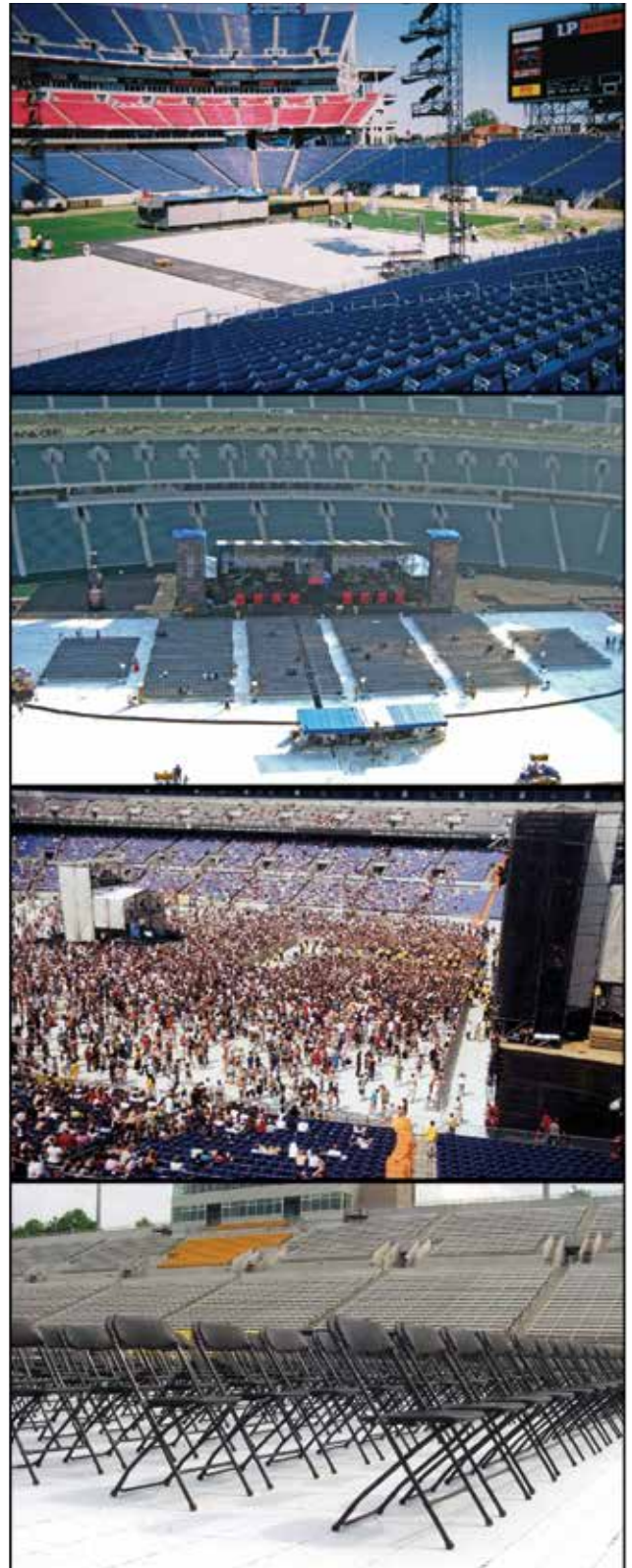
- Designed to be easily deployed without tools
- Completely expandable and configurable as required on-site
- Pre-assembled sections are packed efficiently for easy transport and storage
- Unique inter-module connection system enables tiles to snap into place in both directions
- System contours to the field as needed to accommodate surface imperfections
- An 80,000 sq/ft (7,432 sqm) stadium can be deployed in 5-6 hours with about 20 people
- Expansion joints make installation even easier

## FIELDTURF ARMOUR GP IS MADE USING THE HIGHEST QUALITY MATERIALS

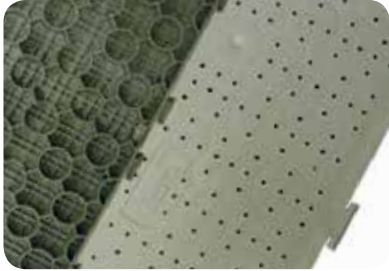
- High-quality co-polymer plastic has izod impact value
- Specific no-break characteristics
- 5-year UV package prevents brittleness
- High ethylene content provides flexure and prevents cracking
- Connector tabs are designed with flexure to prevent breakage

As a result of our quality material formulation, FieldTurf Armour GP is able to resist the rigors of regular use and will not break, crack, fade or become brittle. It has proven itself worldwide in all climates and conditions.

## FieldTurf ARMOUR GENERAL PURPOSE PROTECTION



# FIELDTURF ARMOUR MD



Designed to offer a greater level of protection, rigidity and weight-loading capability than our GP system, FieldTurf Armour MD is perfect for large areas that require additional support for vehicles, staging and equipment.

Designed to minimize wear and damage to your turf, FieldTurf Armour MD protects against surface abrasion, surface and base compaction and contamination of the turf and the infill as a result of attendee traffic.

Underside channels are contoured to eliminate sharp edges and prevent shifting of infill and of the flooring. After your event is over, simply brush your synthetic grass back into shape. Unlike older systems, it will be nearly impossible to see any distinguishable pattern in the turf.

## FIELDTURF ARMOUR MD DEPLOYS RAPIDLY IN ANY STADIUM

- An 80,000 sq/ft (7,432 sqm) stadium field surface can be deployed in 6 hours with about 15 people
- Quick turnarounds minimize the impact to the grass surface
- Pre-assembled 3' x 4' panels make storage and installation efficient
- Designed to be easily installed without the use of tools
- Completely expandable and may be configured as required on-site
- Transported and stored on standard shipping pallets for efficiency
- Robust connection system enables tiles to snap together in both directions
- System contours to the field as needed to accommodate "crowned" fields and other surface imperfections
- Robust enough to handle heavy weights, equipment, and traffic
- Flexible joints prevent breakage
- Integrated bi-directional cable

## FIELDTURF ARMOUR MD IS MADE USING THE HIGHEST QUALITY MATERIALS

- High-quality co-polymer plastic has high izod impact value
- Specific no-break characteristics
- Built-in 5 year UV package prevents brittleness
- High ethylene content provides flexure and prevents cracking
- Connector tabs are specially designed with flexure to prevent breakage

## FieldTurf ARMOUR MEDIUM-DUTY PROTECTION



# FIELDTURF ARMOUR HU

## FieldTurf ARMOUR HEAVY USE PROTECTION



Our premium turf protection system is designed to handle heavy loads and to provide the ultimate in stability and ground protection. It is the most advanced engineered stadium flooring system on the market today and offers superior protection for all types of surfaces and infills.

FieldTurf Armour HU is a large panel system that features an integrated connection system, a durable aluminum cam lock system and unsurpassed liquid spill protection. Each section has a useable surface area of 42" x 42" and is 2 inches thick, thus providing maximum rigidity and surface protection. Sections connect more quickly than other stadium flooring systems - thus minimizing labor and installation time.

FieldTurf Armour HU tile overlap incorporates a liquid capture channel which prevents unwanted liquids from flowing through the seam to the protected surface.

FieldTurf Armour HU offers greater protection against moisture and debris. All underside ribbing features a radius edge that eliminates any sharp edges and provides additional peace of mind when transporting heavier payloads over the floor.

### FIELDTURF ARMOUR HU IS DESIGNED TO HANDLE HEAVY WEIGHTS

- Handles heavy weights from vehicles, forklifts, and other moving loads
- Ideal choice for both front-of-house and backstage areas
- Aluminum cam lock system is stronger than any other cam lock systems
- Provides superior life span and long-term durability
- FieldTurf Armour HU's integrated hook and loop system provides additional torsional stability and strength



# FieldTurf **ARMOUR**



**FIELDTURF ARMOUR HU IS MANUFACTURED USING THE HIGHEST QUALITY MATERIALS.**

- Made from the finest High Density Plastic (HDPE)
- Reinforced with additives for added strength, flex modulus, and izod impact value.
- Built in 5-year UV package prevents degradation and brittleness.
- Our cam locks are manufactured in aluminum (others are made of plastic), providing considerable increased strength.

**FIELDTURF ARMOUR HU IS THE MOST COMPREHENSIVELY ENGINEERED SYSTEM, DESIGNED TO HANDLE THE RIGORS OF CONCERT AND STADIUM USE.**

- FieldTurf Armour HU is the lowest maintenance heavy duty system available.
- Attractive anti-slip sandblast finish is easy to clean.
- No unsightly patterns to catch dirt.
- No submerged channels to trap food or debris.



# EMERGENCY REPAIR KIT INSTRUCTIONS

## FieldTurf is very proud to introduce you to its “Emergency Repair Kit”

The FieldTurf Emergency Repair Kit contains the following: Brush, Putty Knife, Rags, Depth Gauge, Caulking Gun, Turf Bond Adhesive, Seaming Tape, Scoring Knife and Angle Irons. Other items you will need are: a leaf rake and/or a stiff-bristled broom or brush and a clean Shop Vac. You might also need: a small quantity of Rubber Infill and/or Silica Sand and possibly a Leaf Blower, if conditions are not perfectly dry, and a shovel.

1. Make sure that the area is reasonably dry. If the area is damp, you can use the reverse function on the Shop Vac, or aim a Leaf Blower approximately 2' from the area and in a back-and-forth motion to dry the area as much as possible or you can peel back the area and let mother nature help if the sun comes out.
2. With the aid of a Shop Vac, making sure that it is clean, as you will re-use the infill, lift the affected area and pull on the turf a bit further in order to insure that the rest of the area is secure. Vacuum the infill from the carpet backing, as well as a bit of infill from each side.
3. Use the angle irons provided to hold back the turf of both sides of the inlay being repaired.
4. Apply the “Turf Bond” adhesive to the area to be re-glued. The Putty Knife provided can be used to help even out the adhesive. A spray mist of water will help the bonding process.
5. Replace the turf onto the glued area by using a rolling method, additional adhesive can be added to this step, if required. Check the area in about 15 minutes to ensure the bonding process has begun. The longer you can wait before re-infilling the better (1 hour minimum).
6. Replace the infill mix that has been removed during the gluing process by layering the infill in small quantities, while making sure no fibers get trapped during the process.
7. If pure rubber is available to you, you can touch up the top layer, if needed, to bring the infill depth back to the specified level.
8. Void from the top of the infill to the top of the fibers should be  $\frac{3}{4}$ " – 1" (this can be verified by using the Depth Gauge included in the kit).

**The repaired area should take about 24 hours to dry completely; however, the area can usually be played on in approximately 2 hours.**

Please make sure that you have reported the repairs to us, by phone 1-800-724-2969 or by email [customerservice@fieldturf.com](mailto:customerservice@fieldturf.com) indicating exact locations and photographs, if possible, so that we can record and track your field performance over your field's longevity. Your Customer Service Representative will schedule a field visit from a repair technician as soon as they are available to be in your area.

You can also watch our repair video at [www.fieldturf.com/repair](http://www.fieldturf.com/repair)

**If you have any questions, please contact our Customer Service team at 1-877-725-TURF (8873)**



## ROUTINE MAINTENANCE

### REMOVAL OF WEEDS AND MOSS

FieldTurf's superior artificial grass surfaces may look like grass, feel like grass and play like grass; however, if not properly maintained, much like its natural grass cousin, it may still become susceptible to some of grass lovers' natural foes: weeds and moss. It is important to prevent weeds and moss from growing on FieldTurf as it can affect the playability of the surface. Although routine maintenance will prevent this from happening, weeds and/or moss may occur at the interface between the synthetic grass and the perimeter curb.

Should this occur, treat the area with a biodegradable weed killer such as Round Up®, which leaves no residue and more importantly, won't negatively affect the fibers or the coloring of your field. If problems should arise, a 3-prong tool can be used to remove weeds and moss from the affected areas. This should be done carefully so as not to tear the backing and damage the fabric.

Moss could grow on the field surface if the following conditions are present:

- The field surface has not been maintained or groomed over a long period of time.
- If there is an unusual amount of shade on the field and the field has been neglected.
- If the field surface has been left covered with vinyl tarps over a long period of time.
- If there is sufficient moisture and any/all other conditions for growth are met.



## SHOE CLEANING

Cleaning mud and dirt from cleated shoes with the use of brushes or cleat cleaners placed near the field will prevent soiling and staining of the field surface.

- Cleaning tools should not be placed directly on the FieldTurf surface.
- Various models are available online or in most sports stores.



## MAINTENANCE CARE PRODUCTS



Depth Gauge



FieldTurf Adhesive  
29oz Tube



Emergency Repair Kit

## EQUIPMENT

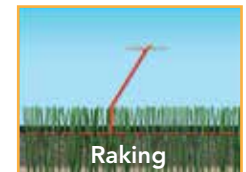
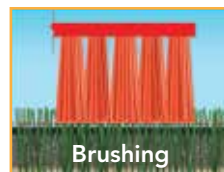
FieldTurf has a complete lineup of custom equipment engineered to facilitate all your maintenance requirements. All equipment or vehicles used on FieldTurf must be equipped with turf tires. Equipment must be stored indoors or outdoors with proper covering, such as a tarp.

The list of approved maintenance equipment includes the FieldTurf GroomRight, the FieldTurf GroomRight Wings, the FieldTurf SweepRight, the FieldTurf SweepRight Pro and the FieldTurf Tow Behind Magnet.

Please be aware that “off the shelf” maintenance equipment can damage your field. If you are unsure if your maintenance equipment is allowable or prohibited, please contact the FieldTurf Customer Service Department.



**NOTE:** Sweeping of the field must be done right after any other maintenance procedure to prevent any foreign material from settling into the infill before usage.



## FIELDTURF GROOMRIGHT

The FieldTurf GroomRight is the turf industry’s most efficient piece of maintenance equipment. It consists of multiple brushes, rakes and rotating tines. Each of these components can be used individually or all together.

The aerating component features rotating tines located at the center of the unit, to loosen the infill without damage to the fibers.

The brushing and raking components are designed to level the infill while at the same time rejuvenating fibers.



### SETTING:

When setting the FieldTurf GroomRight for use, the rotating tines should penetrate the infill by  $\frac{3}{4}$ ". The rakes should penetrate the infill by  $\frac{1}{2}$ ". The brushes should not penetrate the infill.

- **FREQUENCY:**
  - Raking: 4 - 6 weeks
  - Brushing: 4 - 6 weeks
  - Aerating: Maximum of 3 times / year, ideally after every sport season and after snow clearing, if applicable (beginning in 2nd year)
- **RECOMMENDED VEHICLE:** Small garden tractor, gator or larger vehicle, minimum 20HP, equipped with Turf Tires
- **SPEED: 3 MPH** – always make wide turns

# BARs

BRUSHING AERATING RAKING SWEEPING



## FIELDTURF SWEEPRIGHT

FieldTurf SweepRight is a mechanically driven unit designed to remove larger fallen debris from the FieldTurf surface, and it is the most economical and efficient machine for sweeping. Debris should always be removed as soon as possible. The system also features a mesh plate to facilitate debris pick-up.



### SETTING:

When setting the SweepRight for use, make sure that the brushes never penetrate the infill. Proper removal of debris will only require the brushes to penetrate the top of the fibers.

- Frequency: As needed
- Recommended Vehicle: Small garden tractor, gator or larger vehicle, minimum 20HP, equipped with Turf Tires
- Speed: 3 mph – always make wide turns
- Same setting for the SweepRight and SweepRight Pro.



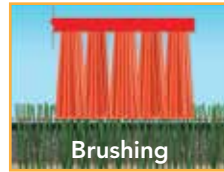
## FIELDTURF SWEEPRIGHT PRO

FieldTurf SweepRight Pro is a gear-driven sweeping system with 6' brush and vibrating debris hopper to sift infill material.



# BARs

BRUSHING AERATING RAKING SWEEPING



## FIELDTURF STATIC BRUSH

FieldTurf Static Brush has a 7' static drag brush and spring tine system. Designed to lift synthetic fibers and level infill material. Brush height and spring tines are independently adjustable.

### SETTING:

When setting the Static Brush for use, the brushes should not penetrate the infill. The rakes should penetrate the infill by 1/2".

- Frequency:
  - Raking: 4 - 6 weeks
  - Brushing: 4 - 6 weeks
- Recommended Vehicle: Small garden tractor, gator or larger vehicle, minimum 20HP, equipped with Turf Tires
- Speed: 3 mph – always make wide turns



## ACCESSORIES

### FIELDTURF GROOMRIGHT WINGS

Removable and adjustable brush extensions extend the unit to 14 feet in order to level off infill and raise fibers for better field playability.



### FIELDTURF TOW BEHIND MAGNET

- 7' tow behind magnet
- Detachable tow hitch
- Works independently or as an attachment for the SweepRight Pro or GroomRight.
- Quick release pull handle for debris removal



**THE FOLLOWING FIELDTURF PRODUCTS HAVE BEEN TESTED AND ARE ENVIRONMENTALLY SAFE TO USE ON FIELDTURF FIELDS.**

## FIELDTURF SCRUB DETERGENT

**FieldTurf Scrub** is a powerful turf optimized cleaner, conditioner and sanitizer, which can be used for removal of grease and oil, and is chemically formulated to be compatible with other FieldTurf treatment products, such as liquid static conditioners. Its proprietary surfactant system will also assist in keeping surface drainage at optimum levels. FieldScrub can also be used in an emergency situation to help clean up bodily fluids. It may also be used to clean and decontaminate surrounding surfaces, such as benches, equipment, and other items. FieldScrub's Alkali-free formula is user friendly and rinses freely, leaving no harsh residues. Regular cleaning with FieldScrub alleviates the normal buildup of atmospheric residues and revitalizes the turf fibers.

### HOW TO USE:

Dilute Fieldturf Scrub as follows in warm or cold water, and apply by brushing or spraying for spot cleaning and Industrial sprayer for entire field application. RINSE well with clean water before using the field.

Suggested application rate of 1:40 will require 4 liters (1 US Gallon) to cover 10,000 square feet.

- Heavy dirt, grease, equipment fluids and oil – pure to 1:4
- Light dirt, grease and oil – 1:8
- General purpose cleaning – 1:40 to 1:80

### RECOMMENDED USE:

Yearly for Outdoor fields. Once/ Twice per year for Indoor facilities (with adequate drainage).



1L

## FIELDTURF STATIC CONDITIONER

**FieldTurf Static Control** is specifically formulated for the effective control of electrical static buildup on artificial grass systems. The product is safe for application on FieldTurf surfaces without affecting the color and appearance of your FieldTurf field.

### HOW TO USE:

Apply diluted as required to the surface to be treated by spray mist and allow it to dry. The suggested application rate is 850 to 1000 square feet per gallon. Reapply as necessary to maintain desired level of protection.

1 liter will make 22 US Gallons and will cover approximately 20,000 square feet. To minimize aerosol generation application pressure should be kept below 40 psi.



1L

## FIELDTURF GUM REMOVER

**FieldTurf Gum Remover** is an effective all natural biodegradable solvent formulated for removing gum, tar, and adhesives from FieldTurf surfaces. It can also be used as a spot degreaser and deodorizer.

### HOW TO USE:

#### STEP 1:

Using a 1.5-2 inch wide Metal putty knife, isolate the gum with the attached turf fibers by placing the end of the knife at the base of the affected fiber at a 45 degree angle. Push the fibers with the attached gum onto the knife.

#### STEP 2:

Saturate a small area of a clean white terry rag with **FGR** and apply to the gum resting on the knife surface. Let the solvent penetrate for 1 to 2 minutes to soften the gum, leaving the rag in place. **DO NOT POUR FGR DIRECTLY ON THE GUM, AS THIS MAY DAMAGE THE INFILL AND AFFECT THE BACKING.**

#### STEP 3:

Holding the knife firmly (taking care not to cut the fibers), gently rub the gum up the putty knife surface toward the handle. This will remove the gum from the FieldTurf surface.



1L

## CUSTOMER CONNECT



**Customer Connect**, FieldTurf's exclusive, customer only area to help connect you with your field. **Join Now** to gain access to a multitude of maintenance videos, brochures, articles and online store where you can now order all your maintenance supplies.

- > Go to: [fieldturf.com/en/customer-connect/](https://fieldturf.com/en/customer-connect/)
- > Register
- > You'll receive an email confirmation
- > Log in
- > Go to "Education"
- > Go to "Learn"
- > Pick a topic

## PAINTING

### PAINTING ON FIELDTURF'S FIBERS

Before beginning to paint on your field, it is imperative that you contact FieldTurf's Customer Service Department for guidance on specific types of paint to use, recommended suppliers, machines, and proper PSI machine settings.

It should be noted that paint buildup over time will affect paint adhesion, aesthetics and possibly drainage in those areas. It is recommended that paint removal be done approximately after every 5 applications before paint re-application is done. It will be equally important to verify the infill below the surface for paint contamination. This area should be flushed through if necessary. In severe cases, where the infill is totally covered in paint, the infill might have to be removed and replaced.

BELOW IS A LIST OF PAINTING SPECIFICATIONS

#### TYPE OF MACHINE: AIRLESS SPRAYER

- 800-1000 psi for end zones, logos: tip must be handheld 18" above the surface.
- 700 psi for 4" lines: tip must be held 4" above the surface.

It is important to note that the pressure should be adjusted accordingly so that only the fibers are being painted and NOT the infill. Spray angle should be between 45 and 60 degrees.

SPRAY TIP	
415/417	For painting logos and large end zone areas with handheld wand
315/317	For painting 4" lines with airless sprayer lining equipment

#### ANGLE TO SPRAY: 45 TO 60 DEGREES

Recommended Application Temperature: above 50°F ambient (temperature should not fall below 50°F within 24 hours after the application).

**NUMBER OF COATS:** Apply in 2 directions to cover both sides of each blade. Fibers have to be dry before recoating (depending on the climatic conditions). End zones and/or logos may need more than 2 applications. Applying a white primer coat is recommended for logos only.

**TIME TO DRY:** Preferably overnight; otherwise 6 to 8 hours at 70°F and 50% humidity.

**PAINT COVERAGE:** For two medium coats each way: approximately 200 square feet or 600-700 linear feet per gallon based on a 4" wide line.

**REMOVER COVERAGE:** Approximately 500 square feet per gallon or 1500 linear feet based on a 4" wide line.



LIFE EXPECTANCY	OPEN	UNOPENED
Paint	Up to 6 months with lid properly replaced	At least 6 months
Remover	Up to 6 months with lid properly replaced	At least 12 months

## DIRECTIVES FOR THE REMOVAL OF LOGOS, END ZONES AND ALL FIELD MARKINGS

1. First and foremost, the surface should be brushed in both directions to allow the fibers to stand up.
2. Apply removing solution, either pure or diluted, depending on what type of paint you are using (only approved removers should be used based on the paint manufacturer’s recommendations – contact FieldTurf Customer Service if you are unsure). Brush in both directions, this will ensure full saturation of the grass fibers. Apply the remover a second time and let stand 10 minutes, depending on the climatic conditions. Remover will dry almost on contact in extremely hot conditions. If this is the case, removal should be attempted in short segments.
3. Use of a broom, brush or any grooming or removing equipment approved for the FieldTurf surface might be necessary.
4. Rinse the surface with clean water to remove any extra paint residue. For best results, use hot water.
5. Leave sufficient time for the surface to dry completely before allowing any activity to resume on your field.
6. The rate of removal may vary due to conditions beyond your control (type of paint, number of coats, exposure, etc). It may be necessary for a second application; if so, repeat the process in the opposite direction.
7. Some infill may be displaced. To avoid this, make sure the brushes used do not penetrate too deep into the infill.
8. Any excess paint will likely be deposited into the infill. Buildup over time will cause the infilled surface to harden. FLUSHING THE SYSTEM WITH WATER (PREFERABLY HOT) IS IMPERATIVE.
9. The use of a paint extracting unit is also very effective to prevent buildup over time. It should be noted that if the above steps are followed your FieldTurf system can be painted multiple times over its life.
10. FieldTurf cannot be responsible for any consequences due to non-compliance of the above directives.



**ANY SUBSEQUENT MEASURES NECESSARY TO RESTORE THE INFILLED SYSTEM BACK TO ITS ORIGINAL STATE IS NOT COVERED UNDER OUR WARRANTY AND WOULD BE AT THE OWNER’S EXPENSE.**



## SNOW REMOVAL

Generally, the components themselves that make up the FieldTurf system don't freeze, but of course the moisture that seeps into the Infill does. This creates good conditions that allow you to plow it without moving, or removing much Infill. A snow blower may also be used. One of the most important factors in Snow Removal is the temperature; the ideal climactic conditions for plowing are always below freezing (25F/-5C).

Hopefully the temperature will rise above freezing during the day, and the rest of the remaining snow will melt through, especially if the sun comes out.

Once the snow is removed, if there is only a small crust of ice remaining on the top of the surface, many have successfully used the Rotating Tines on the GroomRight to break up the ice, although some extra weight might be required on the unit. A "Rotary Brush" (nylon bristles only) such as found on the Lay-Mor can be used for the final touches, but this is a delicate operation, so as to not move or remove too much infill.



Plowing periodically during the winter months is recommended to avoid a large buildup which makes removal more tedious.

Page 18 shows the Direction of Operation for Field Grooming, which would also apply to snow removal. If restrictions prevent you from accumulation on the sidelines, then a "north/south" direction is acceptable, since in any case, a small layer of snow will be left behind.

If chosen, even recommended de-icers should always be tested off the main field of play, to ensure the safety of the surface and the lack of residue left behind. Calcium Chloride is preferred over Sodium Chloride, Magnesium Chloride is also acceptable. If you have "Attic Stock", a thin layer of crumb rubber also works.

From experience, there are some things we do know; that a "warm brine" of Calcium Chloride solution is an effective melting solution, but that it does leave a residue, which affects ball handling in football and ball reaction, such as in soccer. Footing can also be slippery, again testing all of the "factors" off the field of play before full field application is recommended.

Aside from any issues with potential corrosion of any exposed metal, Magnesium Chloride should not be harmful to the turf. Also, any residues will pick up moisture, which will reduce the abrasive effect; (i.e. regular salt dries to hard abrasive crystals that can scuff the fibers ... magnesium chloride will pick up moisture from the air and will produce less abrasion).

Keep in mind that we do not know the long-term effect to the backing/coating/tuft bind etc., but we do know that no harm comes to the fibers and infill. Our testing is ongoing.

One final thought is that Mother Nature should provide plenty of rain in the spring to flush these chemicals through the system. It might be a good idea though, when the temperatures remain above freezing for 4-5 days, to water the surface to insure that no residue is left behind.

Typically, the load bearing capacity of the FieldTurf system and sub-base (this should be verified with the Base Contractor) can withstand pressure up to 70 PSI / 10,080 PSF (see page 39). Factors to always consider are that if the weather temperature rises above freezing, and both the FieldTurf and base begin to thaw and are wet, then the PSI is affected by these changes in atmospheric conditions, which is no different than with a natural grass surface.

It is always recommended to test the equipment first on the FieldTurf surface but off the main field of play itself. For example, test the equipment at the bench areas or D zones where the panels run parallel to the field and usually leave no markings. You will also be going in the direction of the seams, so this should give you a comfort level for adjustments etc.

Your Customer Service Coordinator can be contacted for assistance with snow removal via our FieldCare program (see page 40), if you choose not to do it yourself. They can also assist you with recommended snow removal attachments, if needed.

## VEHICLE CIRCULATION

YOUR FIELDTURF FIELD IS DESIGNED TO ACCOMMODATE VEHICLE LOADS WITHOUT CAUSING DAMAGE TO THE FIELD SURFACE, PROVIDED THE FOLLOWING CONDITIONS AND RECOMMENDATIONS ARE FOLLOWED:

- Do not leave vehicles idling or unattended. Heat generated by the exhaust could singe fibers.
- Ensure that the machines being used on the field are not leaking.
- Typically, bases supporting your FieldTurf field are designed for a maximum load-bearing capacity of 70 pounds per square inch (70 PSI / 10,080 PSF). Vehicles circulating on your field should conform to this load-bearing capacity limit, unless your base has been specially designed to support heavier loads. Please refer to your internal design criteria to verify the maximum acceptable load your field can accommodate.
- Only vehicles equipped with pneumatic rubber turf tires should be allowed to circulate directly on the field surface.
- Turning of the vehicle on the surface should be done in a wide radius.
- Turning of the vehicle should only be done when the vehicle is in forward motion.
- All vehicles should circulate at slow speeds at all times.
- Abrupt and sudden braking must be avoided.
- Sudden acceleration and spinning of wheels must be avoided.
- Vehicle wheels should be clean at all times to prevent mud or dirt from being deposited on the field surface.
- All vehicles in direct contact with FieldTurf surfaces should be inspected for possible leakage of oil or hydraulic fluids prior to accessing the field.
- In order to avoid rutting of the infill and of the underlying base, circulation of vehicles on outdoor saturated fields must be avoided.
- To protect against heavy and larger sized vehicle circulation, a layer of ¾" thick plywood must be placed over a vinyl tarp covering the field to a minimum distance of 40' to 60' (12 to 20m) and should be installed at all entrance and exit points to the field.
- Please note: The FieldTurf surface should be groomed and swept following heavy traffic.

## HELP

In addition to these guidelines, there are three ways to get answers to any FieldTurf questions you may have:

- 1 – Contact our Customer Service Department at 1-877-725-TURF (8873)
- 2 – Consult our Maintenance Video
- 3 – Visit [www.fieldturf.com/maintenance](http://www.fieldturf.com/maintenance)
- 4 – Please contact customer service for any hard copies needed.

# FieldTurf® MAINTENANCE PROGRAM

## FIELD CARE

**FieldTurf's FieldCare Maintenance Program will help you maintain performance, enhance the longevity of your field and increase the return on your investment.**

At each visit, certified technicians execute these 5 procedures:

1. Take multiple infill depth measurements to verify surface planarity.
2. Make minor warranted seam and inlay repairs, not to exceed eight (8) repairs.
3. Add light infill to high-traffic areas.
4. Power clean field perimeter.
5. Provide a written Pre and Post-Session field report.

### Advanced Care

Advanced Care is ideal for aged surfaces and/or fields with heavy use. It provides deep grooming and fiber rejuvenation in these 5 steps:

- Deep field decompaction.
- Magnet sweep for metal debris.
- Rotary brushing to raise turf fibers and to deposit any contaminated infill into vibrating screen for debris collection.
- Cleaned infill is then redistributed back into the field using a weighted power brush and vacuum.
- Vacuuming to remove fine dust and debris from field surface.

### Standard Care

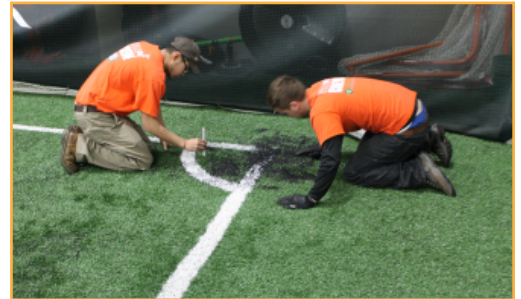
Standard Care provides the 4 basic services for debris removal, field decompaction and infill redistribution:

- Sweep field for large debris.
- Decompact field at appropriate depth for age of fiber and current field conditions.
- Brush in multi-directions with static brush to redistribute infill.
- Re-sweep the field for fine debris.

### Custom Care

Custom Care is designed by the FieldCare Service Team to fit your specific maintenance needs. This includes 1 to 6 visits per year with a combination of Standard Care and Advanced Care maintenance, along with other custom services, which include:

- Field line striping
- GMAX testing
- Anti-microbial spray
- Anti-static spray
- Infill top dressing and replenishment
- Removal of clay migration
- Snow plowing



# Maintenance Summary Report



**NAME OF FIELD/SITE:** \_\_\_\_\_

Time of Arrival: \_\_\_\_\_ Time of Departure: \_\_\_\_\_ Service Visit Date: \_\_\_\_\_

Contact Name: \_\_\_\_\_ Classification of Service: \_\_\_\_\_

Phone #: \_\_\_\_\_ Site Address: \_\_\_\_\_

Billing Address: \_\_\_\_\_ Field Square Footage: \_\_\_\_\_

GMAX: Y \_\_\_\_\_ N \_\_\_\_\_ Primary Sports: \_\_\_\_\_

Service Provider/Technicians: \_\_\_\_\_ Field Fiber Type: \_\_\_\_\_

Fiber Height: \_\_\_\_\_ Install Date: \_\_\_\_\_

Report Submitted by: \_\_\_\_\_ Date of Last FC Service Session: \_\_\_\_\_  
(If no date: Please write "NEW FC Customer")

**PRE-FIELD INSPECTION NOTES BY TECHNICIAN (FROM WALKTHROUGH):**

**MAINTENANCE SERVICES PROVIDED:**     **STANDARD CARE**     **ADVANCED CARE**     **OTHER** \_\_\_\_\_

<input type="checkbox"/> Aggressive Brushing / Leveling	<input type="checkbox"/> General Field Sweeping	<input type="checkbox"/> Anti-Microbial Spray	<input type="checkbox"/> Standard Infill Decompaction <small>(Not to exceed 1 inch depth)</small>
<input type="checkbox"/> Static Brush	<input type="checkbox"/> Field Metal Magnet Sweep	<input type="checkbox"/> Anti-Static Spray	
<input type="checkbox"/> Power Static Brushing	<input type="checkbox"/> Static Drag Mat	<input type="checkbox"/> Refill Infill in High-Traffic Areas <small>((Rubber/Sand Infill Mix &gt; 250lbs = Additional Charge for Material/Labor).</small>	<input type="checkbox"/> Tier 2 Decompaction <small>(Deep-Tine Decompaction)</small>
<input type="checkbox"/> Power Brush & Vac	<input type="checkbox"/> Gmax Testing	<input type="checkbox"/> Total Vegetation Control <small>(Perimeter edge only)</small>	<input type="checkbox"/> Infill Cleaning / Sifting / Fiber Rejuvenation
<input type="checkbox"/> 3-Step Deep Power Grooming <small>(Only advanced care)</small>	<input type="checkbox"/> Power Broom <small>(Perimeter edges &amp; specialty areas)</small>		

**Post Maintenance Field Inspection: Inlays/Seams/Field Markings**

Number of minor repairs: Pre-Service Inspection : \_\_\_\_\_

Number of minor repairs: Post-Service Inspection : \_\_\_\_\_

Qty: # of total repairs: \_\_\_\_\_ Estimated # of linear feet repaired: \_\_\_\_\_

Picture Submission:

	<b>Warranty</b>	<b>Billable</b>
Minor inlay and/or seam repairs conducted:	<input type="checkbox"/>	<input type="checkbox"/>
Turf Replacement:	<input type="checkbox"/>	<input type="checkbox"/>

**FIELD INSPECTION:**

<input type="checkbox"/> 1. Logo Analysis	<input type="checkbox"/> 4. Infill - Consistency in Depth
<input type="checkbox"/> 2. Seam Separation Analysis	<input type="checkbox"/> 5. Infill - Migration Analysis
<input type="checkbox"/> 3. Perimeter Anchoring	<input type="checkbox"/> 6. Inlaid Line Analysis

**POST MAINTENANCE TECHNICIAN NOTES:**

**INFILL LEVELS CHECKED PRE MAINTENANCE:**

<b>Description</b>	1	2	3	4	5	6	7	8	9	10	AVERAGE
Primary:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text" value="0"/>
Additional:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Time of Day: _____						

**INFILL LEVELS CHECKED POST MAINTENANCE:**

<b>Description</b>	1	2	3	4	5	6	7	8	9	10	AVERAGE
Primary:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text" value="0"/>
Additional:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Time of Day: _____						

Primary: The selection of test point locations will be determined by the primary sport.  
 Additional: Locations determined by the secondary sport.

Reviewed by FieldTurf Personnel: \_\_\_\_\_ Date: \_\_\_\_\_

## FREQUENTLY ASKED QUESTIONS

### WHAT IS CUSTOMER CONNECT?

This exclusive online aid contains news, useful tips and information which will hopefully assist you with overall Maintenance and care of your fields for years to come.

- [fieldturf.com/en/customer-connect/](https://fieldturf.com/en/customer-connect/)

### WHAT ARE THE BEST TYPES OF SHOES TO WEAR ON FIELDTURF?

The superior playing characteristics of your FieldTurf surface are directly associated with correct footwear and include: torque release, surface friction and traction. The best types of shoes are molded cleats or screw-ins (maximum recommended is ½"). The footwear designated for natural grass is easily transferable to use on FieldTurf.

- While use of long steel jagged cleats on FieldTurf will not void the warranty, they are not recommended. Limited use is allowable.
- It is important to note that flat-soled shoes and steel cleats do not result in ultimate athlete performance.
- Metal and aluminum rounded molded cleats are acceptable.
- A complete traction study of footwear on FieldTurf is available upon request.

### WE HAVE HAD SOME VANDALISM ON OUR FIELD - WHAT DO WE DO?

In all cases, photographs should be taken immediately of any vandalism that has taken place. These will be needed for insurance purposes and should also be sent to the FieldTurf Customer Service Department in order to evaluate the scope of the required repairs.

Burn or singe marks should be evaluated immediately. In some cases, a qualified crew might be able to repair these without replacing sections of the turf. In the case of paint vandalism, it will be imperative to remove the paint as soon as possible, as the longer it stays on the surface, especially in the hot sun, the more difficult it becomes to remove.

#### Two commercially available removers are safe for use with the FieldTurf system:

- 1) Graffiti remover by Goof-Off
- 2) Zep Heavy Duty Citrus Degreaser

Both of these are most effective when used in conjunction with warm/hot water.

#### A PRESSURE WASHER IS IDEAL WHEN AVAILABLE; A FEW GUIDELINES TO FOLLOW:

- 1) Apply approved remover first.
- 2) Work it in with a brush, first one way against the fibers, then the other. Hot/warm water can be used on the brush to further activate the remover.
- 3) The pressure washer nozzle should be held no closer than 2' from the grass and at no less than a 45-degree angle.
- 4) Again, going in one direction of the fibers, then back the other way.
- 5) All steps should be repeated if necessary.

It should be noted that in most cases it is not known what kind of paint we are dealing with. The above mentioned removers might not give the results needed. Please contact the FieldTurf Customer Service Department, as several paint suppliers also manufacture various removers that are safe on our surface. They are also very helpful and knowledgeable with removal methods and will be a good phone or on-site resource, if needed.

### WHAT EQUIPMENT CAN BE USED TO PAINT AND REMOVE PAINT?

A list of recommended painting and paint removal equipment, as well as painting and removal tips and guidelines, can be obtained by contacting your FieldTurf Customer Service Department.

## **WE HAVE A SPORTING EVENT ON OUR FIELD WITH NO TIME TO CONFIGURE THE FIELD PROPERLY. CAN WE USE LIME, CHALK, OR TAPE FOR TEMPORARY LINES?**

The use of pulverized lime stone such as used on a natural grass field for baseball is not ideal as it tends not to stick to fibers, but simply settle into the infill. Their prolonged use tends to “gum” up the infill and could eventually affect drainage in those areas.

One-time use, if time is a constraint and there are no other options, might be permitted. Please contact FieldTurf Customer Service before proceeding.

Testing the chalk off the field of play is ideal, as it helps adjust your flow rates and allows you to apply as little as possible while still allowing the players and officials to see the lines. Unfortunately, all the tests and attempts that have been done with “tapes” to line fields have not been successful. They are either too tacky, risk pulling out fibers and also risk leaving a residue that has to be taken off with a gum remover or are too flimsy and risk being a tripping hazard.

A chalk paint is ideal for short-term use. Please contact the FieldTurf Customer Service Department for a list of recommended suppliers.

## **WE USED TO HAVE FIREWORKS ON THE 4TH OF JULY - CAN WE STILL HAVE THEM WITH OUR NEW FIELD?**

Whenever possible, direct contact of fireworks should be avoided near our synthetic grass system. However, though some polyethylene fibers could be singed when in contact with live ambers or fireworks, water will immediately alleviate any damage. A fire extinguisher can be used, but water is preferable since it leaves no residue to penetrate the infill; however, either one is fine.

Watering the field will certainly help reduce potential damage; however, whenever possible, the field should be covered by a “fire resistant” covering. Contact the Customer Service Department for a list of recommended suppliers.

## **CAN A LEAF BLOWER BE USED ON THE FIELD?**

Yes, this is an effective method of getting rid of leaves, pine needles, dried sunflower seeds, etc. The blower should be held no closer than 2' from the surface and at a 45 degree angle to avoid displacing any of the infill from the field.

## **HOW DOES CLIMATE AFFECT THE FIELDTURF SURFACE I.E. SNOW, RAIN, AND SALT WATER?**

Your FieldTurf surface is designed to withstand a wide range of climatic and atmospheric conditions, such as ultraviolet rays (UV), snow, ice, salt water and sea climates without damage. However, it is essential that the field is washed periodically to remove any salt water deposits on the field surface.

## **WE SEEM TO HAVE A LOT OF GEESE LANDING ON OUR FIELD WHILE THEY MIGRATE BACK AND FORTH IN THE FALL AND SPRING. WHAT CAN WE DO TO KEEP THEM AWAY?**

Several remedies are safe for humans and unpleasant for our feathered friends. Contact our FieldTurf Customer Service Department for further details.

## **CAN TRACK AND FIELD EVENTS SUCH AS DISCUS, JAVELIN, SHOTPUT BE HELD ON MY FIELD?**

In general, the unprotected Turf system and base will tolerate some degree of Track activities, but protective covering in the landing area is recommended. Several suppliers offer “Discus” that are designed specifically for synthetic surfaces. The Javelin must be equipped with a Rubber tip to avoid damage to your FieldTurf system. The Turf system will obviously withstand use of the Hammer and Shot-Put on a Concrete base more so than Crushed stone, as noted previously, protective covering is recommended. Since Infill will be displaced, grooming frequencies might have to be added.

The FieldTurf Warranty covers the components and Installation of the FieldTurf product. The holding of Track events, as noted, will not impact the warranty. However, though all efforts are made to provide appropriate directives for the staging of events other than the sporting activities set out in the warranty; the responsibility remains on the owner for any mishaps or damages that might occur.

## **CAN BLEACHING AGENTS BE USED ON FIELDTURF FIELDS?**

Oxidizing agents such as bleaching agents should NOT be used on FieldTurf fields.

## **WHAT DO I DO IF WE SPILL GATORADE ON THE FIELD?**

We recommend that the areas with Gatorade or other drinks/fluids be cleaned as soon as possible with water in order to avoid bugs being attracted to the surface or jerseys becoming stained as a result of the spilled liquid.

## CAN WE USE TRAINING EQUIPMENT, SUCH AS BLOCKING SLEDS, ON THE FIELD?

Training devices should be used with caution. Though their use does not constitute a breach of your warranty, FieldTurf cannot be responsible for any damage caused by the use of any such training equipment.

Since many manufacturers have developed or modified their Equipment specifically for synthetic systems, it is suggested that they be consulted for their recommendations and guidelines before use.

Our research has yielded some recommended guidelines which include:

- To make use of sleds and various training devices off the main field of play, such as D zones, end zones (if no Inlaid logos appear) and areas away from the main boundaries of play where the panels run parallel to the field and no inlaid markings appear.
- If used on the field of play, it is suggested that it be across the field in the directions that the panels were installed, as opposed to end to end against them.
- It is always recommended to remove the Equipment from the Field after each use.

The same recommendations would apply to the use of "Tire Flipping" as a training aid. Moreover a few specific recommendations would be:

- To make sure that the tires are clean, any dirt will likely get transferred to the turf and Infill.

It is not recommended to use the tires as a "Resistance" tool by dragging them across the turf. Preliminary research has shown that the friction could possibly damage or even pull out some of the polyethylene fibers.

As in other higher use areas on the field, grooming frequencies might have to be augmented to Groom both the Infill and the fibers.

## I SEEM TO HAVE BASE DEPRESSIONS OR DIPS ON MY FIELD - WHAT DO I DO?

Base depressions or "dips" that form on a field are not unlike potholes on our roads. The sub-base construction is similar in some aspects to road work. It usually consists of 6" to 10" of crushed stone over the existing soil that was graded and compacted. Over time and especially if the soil is of poor quality or unstable, areas may depress.

The unevenness or depression that has formed is a result of the shifting of the base soil below it. Obviously this then causes the turf system to sink. It should be noted that this is not part of the turf system warranty; however, it should be addressed. Contact your base contractor with any sub-base related issues.

## WHY DOES MY FIELD APPEAR TO BE SLOW IN DRAINING?

Slow/insufficient drainage can be caused by a wide variety of factors which include, but are not limited to:

- Poor drain base design
- Utilization of incorrect drain base materials
- Improper drain base construction techniques
- Inadequate infrastructure
- Other outside factors

If these factors have been ruled out or do not seem to be a likely contributing factor, it is possible that the slow drainage is a result of surface tension – a natural phenomenon common in the fabric, carpet and outdoor flooring industry. Surface tension is especially common on recently completed fields. In most cases, the problem resolves itself naturally over the 6 week break-in period as the field is played on. In rare cases, the field could be treated with a surfactant and/or degreasing agent to enhance water penetration and eliminate surface tension.

IT SHOULD ALSO BE NOTED THAT SOME "PUDDLING" OR "PONDING" IS PERFECTLY NORMAL IN CERTAIN CIRCUMSTANCES. IN ALMOST ALL CASES, HOWEVER, THE FIELD SHOULD BE FREE AND CLEAR OF ANY STANDING WATER ONCE THE PRECIPITATION HAS STOPPED FOR APPROXIMATELY 30 MINUTES.

## FIELDTURF FIELD SETTLING

**FIELDTURF HAS PROVEN TO BE THE HIGHEST PERFORMING AND THE MOST DURABLE BRAND OF ARTIFICIAL TURF IN THE WORLD. THE FIELDTURF SYSTEM IS AN ENGINEERED PRODUCT CONSISTING OF SPECIALIZED COMPONENTS ALL GEARED TOWARDS MAXIMIZING ATHLETE SAFETY AND FIELD PERFORMANCE.**

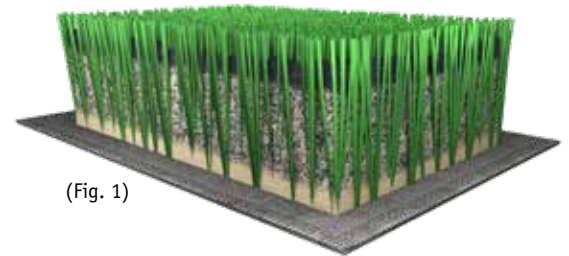
In addition to industry-leading manufacturing and service standards, what sets FieldTurf apart is the patented 9 lb / square foot sand and rubber infill system, along with the world's most durable fiber that is exclusive to FieldTurf.

It is important for field owners to understand what constitutes normal behavior of these vital components over time. Below are the three major stages that a field will go through in order to achieve its optimal level of performance. These three stages are not only normal but a necessary progression in the life of an artificial turf field.

### INITIAL

The field has just been installed. Fibers are upright and infill is slightly higher and looser.

Approximate duration for this stage depending on use and proper maintenance: years 0-1 (Fig. 1)



(Fig. 1)

### SETTLED

Fibers are not as upright and are beginning to layover in order to encapsulate the infill and provide for a more grass-like appearance. The infill height has been lowered and has settled to its ideal level of 3/4" below the tip of the fiber held in an upright position.

Approximate duration for this stage depending on use and proper maintenance: years 2-5 (Fig. 2)

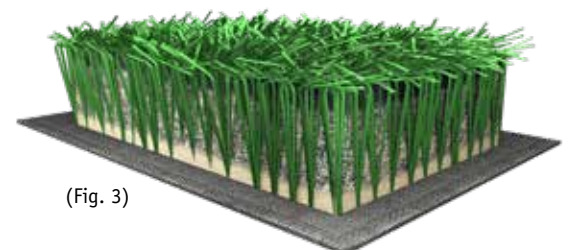


(Fig. 2)

### MATURED

The fibers have laid over and the infill height remains at its ideal level. During these years, the consistency and durability of the FieldTurf system is brought to the forefront as the product continues to exude ideal levels of safety and performance after heavy use.

Approximate duration for this stage depending on use and proper maintenance: years 6-8+ (Fig. 3)

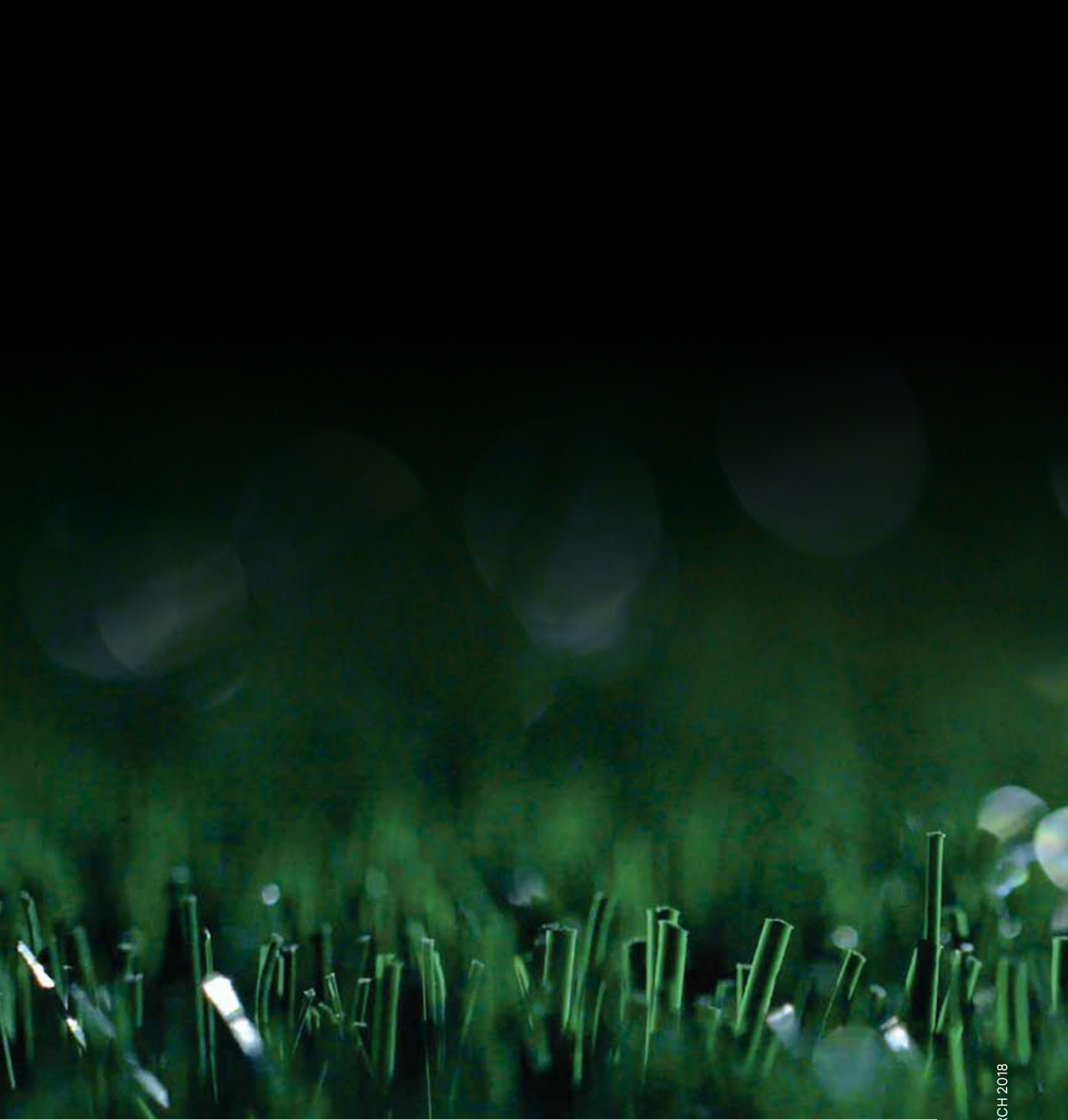


(Fig. 3)









THE TARKETT SPORTS FAMILY - LEADERS IN SPORTS SURFACING



UPDATED MARCH 2018



800-724-2969 | [info@fieldturf.com](mailto:info@fieldturf.com) | [fieldturf.com](http://fieldturf.com)

# SGS

Certificate US13/841585

The management system of

## FieldTurf USA, Inc.

175 North Industrial Blvd. NE  
Calhoun, GA 30701, United States

has been assessed and certified as meeting the requirements of

## ISO 14001:2015



For the following activities:

### Manufacturing of artificial turf for athletic performance and commercial / residential landscaping.

Further clarifications regarding the scope of this certificate and the applicability of ISO 14001:2015 requirements may be obtained by consulting the organization

This certificate is valid from 18 December 2019 until 18 December 2022  
and remains valid subject to satisfactory surveillance audits.  
Recertification audit due a minimum of 60 days before the expiration date.  
Issue 5 . Certified since December 2010.

The audit leading to this certificate commenced on 28/10/2019.  
Previous issue certificate validity date was until 18/12/2019.

Additional site details are listed on subsequent pages.

Authorized by:

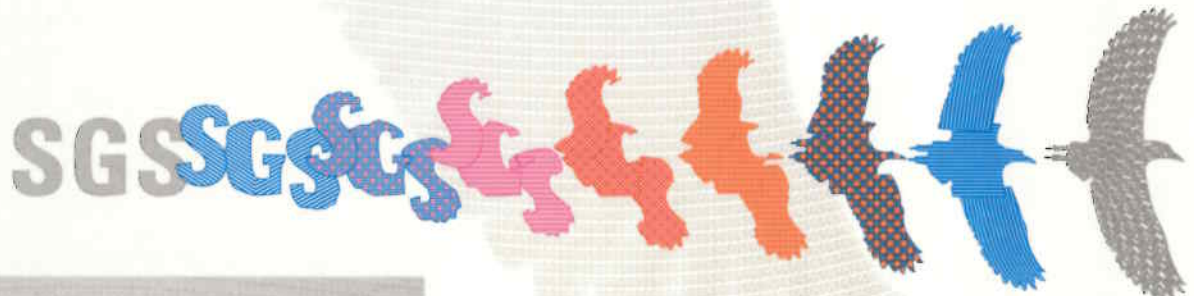
*Dan Seal*  
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Page 1 of 2



Certificate US13/841585, continued

**SGS**

**FieldTurf USA, Inc.**

**ISO 14001:2015**



Issue 5

Additional facilities:

250 C. Johnson Lake Road, Adairsville, GA 30103, United States  
Scope: Warehouse (Finished Goods Warehouse)



Page 2 of 2

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PROJECT NAME	COUNTRY	CERTIFICATE
Portland Timbers Providence Park	United States	FIFA Quality PRO
Colgate University	United States	FIFA Quality
UTEP University of Texas El Paso Soccer	United States	FIFA Quality
CenturyLink Field	United States	FIFA Quality
Monmouth University Soccer	United States	FIFA Quality
Gillette Stadium	United States	FIFA Quality PRO
Seattle Seahawks - Century Link Field 2016	United States	FIFA Quality PRO
Mercedes-Benz Stadium	United States	FIFA Quality PRO
Rochester Rhinos Stadium	United States	FIFA Quality
Northwestern University Soccer	United States	FIFA Quality
Northwestern University Football	United States	FIFA Quality
Algonquin College Soccer	Canada	FIFA Quality
Queen's University - Richardson Stadium	Canada	FIFA Quality
Moncton Stadium	Canada	FIFA Quality
Lausanne Laval	Canada	FIFA Quality
CESM	Canada	FIFA Quality
TD PLACE	Canada	FIFA Quality
Harrison Trimble HS	Canada	FIFA Quality
Concordia University	Canada	FIFA Quality
Cégep de Rivière du Loup	Canada	FIFA Quality
Complexe Multi-Sports Laval	Canada	FIFA Quality
Bernice MacNaughton	Canada	FIFA Quality
Concordia University-Soccer	Canada	FIFA Quality
Clarke Stadium	Canada	FIFA Quality PRO
Parc Pasquale Gattuso	Canada	FIFA Quality
Mont Alison University	Canada	FIFA Quality
Investors Group Field	Canada	FIFA Quality
West Ottawa Soccer Complex	Canada	FIFA Quality
Parc Saint Laurent	Canada	FIFA Quality
Parc Elie Saab ( Boucherville)	Canada	FIFA Quality
Tim Hortons Field	Canada	FIFA Quality
Shell Place	Canada	FIFA Quality
Stade Mohamed Iguer	Algeria	FIFA Quality
Melwood Oval, Australia	Australia	FIFA Quality
Bernie Mullane Field 1	Australia	FIFA Quality
Bicentennial Park	Australia	FIFA Quality
Cammeray Oval	Australia	FIFA Quality
Randwick Heffron Australia	Australia	FIFA Quality
Woollahara Oval No 1	Australia	FIFA Quality
Oval No 3 Pennant Hills Australia	Australia	FIFA Quality

PROJECT NAME	COUNTRY	CERTIFICATE
ELS Hall Oval	Australia	FIFA Quality
Cardinia Shire Australia	Australia	FIFA Quality
Melwood Oval 2, Australia	Australia	FIFA Quality
Christie Park #2	Australia	FIFA Quality
Latrobe University	Australia	FIFA Quality
Club Italia	Australia	FIFA Quality
Christie Park	Australia	FIFA Quality
Bernie Mullane Field 2	Australia	FIFA Quality
Northbridge Oval	Australia	FIFA Quality
Cromer Park	Australia	FIFA Quality
Dhaka Stadium, Bangladesh	Bangladesh	FIFA Quality
Sporting Houthalen - terrein A	Belgium	FIFA Quality
Kraainem FC	Belgium	FIFA Quality
Sport Vlaanderen Blankenberge	Belgium	FIFA Quality
RFC Sart-Lez-Spa	Belgium	FIFA Quality
Tempelhof	Belgium	FIFA Quality
Sportcentrum Nieuwenhove	Belgium	FIFA Quality
Sportcomplex Molenhoek	Belgium	FIFA Quality
Sportcomplex Molenhoek	Belgium	FIFA Quality
VK Valaarfhof	Belgium	FIFA Quality
FC Helson	Belgium	FIFA Quality
Stade Verbist	Belgium	FIFA Quality
AGB Vrije tijd	Belgium	FIFA Quality
Sportpark de Schorre	Belgium	FIFA Quality
Sportpark De Krekel	Belgium	FIFA Quality PRO
Sportcentrum Nieuwenhove	Belgium	FIFA Quality
KSV Diksmuide	Belgium	FIFA Quality
A3	Belgium	FIFA Quality
Site Lausprelles	Belgium	FIFA Quality
sportcomplex De Schorre terrein 8	Belgium	FIFA Quality
Groendomeinen - regio Antwerpen	Belgium	FIFA Quality
Gemeentelijk kunstgrasveld Denderleeuw	Belgium	FIFA Quality
Voetbalstadion ter Muncken - KVK Avelgem	Belgium	FIFA Quality
Sportcentrum Peerdsbos	Belgium	FIFA Quality
CEJU Field 1	Brazil	FIFA Quality
CEJU Field 2	Brazil	FIFA Quality
CEJU Field 3	Brazil	FIFA Quality
Estádio Municipal Adérito Sena - field 2	Cape Verde	FIFA Quality
Estádio municipal Adérito Sena - Field 1	Cape Verde	FIFA Quality
Caiman International School - Camana Bay Sports complex	Cayman Islands	FIFA Quality

PROJECT NAME	COUNTRY	CERTIFICATE
Estadio Municipal de Coihueco	Chile	FIFA Quality PRO
Complejo Deportivo Municipal Ormpello	Chile	FIFA Quality
Estadio Municipal de Paillaco	Chile	FIFA Quality PRO
Cancha Robert Kennedy	Chile	FIFA Quality
Chile La Pintana Field	Chile	FIFA Quality
St Joan of Arc	England	FIFA Quality
Leatherhead Youth Football Club	England	FIFA Quality
QUEEN ETHELBURGA'S COLLEGIATE / PITCH 2	England	FIFA Quality
Enfield Grammar School	England	FIFA Quality
Cambourne Sports Centre	England	FIFA Quality
St. George's Park	England	FIFA Quality
Sutton United Football Club	England	FIFA Quality
Arbour Park Community Sports Stadium	England	FIFA Quality
Market Road Football Facility / PITCH 2	England	FIFA Quality
MMU Platt Lane	England	FIFA Quality
Applemore Technology College	England	FIFA Quality
Weetwood Sports Park	England	FIFA Quality
William Perkin C of E High School	England	FIFA Quality
Selhurst Sports Arena	England	FIFA Quality
Elmbridge Xcel Sports Hub stadium pitch	England	FIFA Quality
Castle Vale Stadium	England	FIFA Quality
In2itive Park - Yaxley Football Club	England	FIFA Quality
Tamworth FC	England	FIFA Quality PRO
University of Kent	England	FIFA Quality
Sir Herbert Leon Academy	England	FIFA Quality
Elmbridge Xcel Sports Hub training pitch	England	FIFA Quality
Kettlethorpe High School	England	FIFA Quality
Gallagher Stadium	England	FIFA Quality PRO
Haringey Borough FC	England	FIFA Quality
South Bromsgrove High School	England	FIFA Quality
QUEEN ETHELBURGA'S COLLEGIATE	England	FIFA Quality
Eastbourne Borough FC	England	FIFA Quality PRO
The CNG Stadium	England	FIFA Quality
Cobdown Sports Grounds	England	FIFA Quality PRO
Castleford Academy	England	FIFA Quality
Stade Louis Blériot - Stade de Reims	France	FIFA Quality
Sportzentrum Kleeblatt	Germany	FIFA Quality
Ghanaman Soccer Center of excellence (GSCE)	Ghana	FIFA Quality
Redhill Academy	Great Britain	FIFA Quality
SWANMORE COLLEGE	Great Britain	FIFA Quality



PROJECT NAME	COUNTRY	CERTIFICATE
Bedfont Sports Club	Great Britain	FIFA Quality
Dungiven Sports Centre	Great Britain	FIFA Quality
Hart Leisure Centre	Great Britain	FIFA Quality
Llantwit Major Comprehensive School	Great Britain	FIFA Quality
South of the City School Aberdeen	Great Britain	FIFA Quality
Newcastle United Football Club - Academy Pitch	Great Britain	FIFA Quality
Letham FC	Great Britain	FIFA Quality
Murroe Parish Field	Great Britain	FIFA Quality
Stanway School	Great Britain	FIFA Quality
WHITE HART LANE COMMUNITY SPORTS	Great Britain	FIFA Quality
Salesian college Sports ground	Great Britain	FIFA Quality
The University of Wolverhampton	Great Britain	FIFA Quality
St Paul's	Great Britain	FIFA Quality
Keith Harrison Sports Park	Great Britain	FIFA Quality
Olympic Legacy Park	Great Britain	FIFA Quality
College of Haringey, Enfield and North East London	Great Britain	FIFA Quality
ROYAL HOLLOWAY UNIVERSITY	Great Britain	FIFA Quality
MARKET ROAD FOOTBALL FACILITY	Great Britain	FIFA Quality
RYEISH GREEN SPORTS HUB	Great Britain	FIFA Quality
Area 117 Tin Shui Wai	Hong Kong	FIFA Quality
KA FOOTBALL CLUB	Iceland	FIFA Quality
Stjörnuvöllur	Iceland	FIFA Quality PRO
STJARNAN FOOTBALL CLUB	Iceland	FIFA Quality
Grotta Football Club	Iceland	FIFA Quality
Valur Football Club	Iceland	FIFA Quality PRO
INS Shivaji, Lonavla, Maharashtra	India	FIFA Quality
FSV Arena	India	FIFA Quality
Sports Complex at Village Kair - Nazafgarh - New Delhi	India	FIFA Quality
Oriel Park	Ireland	FIFA Quality
Brickfields Park	Ireland	FIFA Quality
Terenure RFC	Ireland	FIFA Quality
Rehovot Field #1	Israel	FIFA Quality
Rehovot Field #2	Israel	FIFA Quality
Astana-Arena	Kazakhstan	FIFA Quality PRO
PAAET Stadium	Kuwait	FIFA Quality
Alsulaibayia Field	Kuwait	FIFA Quality
Alshamyia Youth Center	Kuwait	FIFA Quality
Barikadimy Stadium	Madagascar	FIFA Quality
PADANG RAHANG	Malaysia	FIFA Quality
Stadium Tun Abdul Razak	Malaysia	FIFA Quality PRO

PROJECT NAME	COUNTRY	CERTIFICATE
Mini Stadium Majlis Perbandaran Kemaman	Malaysia	FIFA Quality
Bandar Penawar Field	Malaysia	FIFA Quality
Hithadtoo	Maldives	FIFA Quality
VICTOR TEDESCO STADIUM	Malta	FIFA Quality
CHEIKHA OULD BOIDIYA field 2	Mauritania	FIFA Quality
CHEIKHA OULD BOIDIYA field 1	Mauritania	FIFA Quality
Estadio Caliente Baja California (Xolos)	Mexico	FIFA Quality
Terrain Municipal à Essaouira	Morocco	FIFA Quality
TERRAIN UNIVERSITE DE FES	Morocco	FIFA Quality
STADE D'HONNEUR OUJDA	Morocco	FIFA Quality
Terrain Nkhila	Morocco	FIFA Quality
Terrain Sidi Kacem	Morocco	FIFA Quality
Stade Azrou	Morocco	FIFA Quality
COMPLEXE SPORTIF DE FES	Morocco	FIFA Quality
Stade Municipal Club Oujda	Morocco	FIFA Quality
Terrain municipal de Taza	Morocco	FIFA Quality
TERRAIN DU CENTRE DE FORMATION OUJDA	Morocco	FIFA Quality
Renaissance Sportive de Settat	Morocco	FIFA Quality
Stade Municipale Husaine Moudanib	Morocco	FIFA Quality
Stade Meknes - CODM	Morocco	FIFA Quality
Sportpark Diepput - Kon HC&VV field 2	Netherlands	FIFA Quality
Sportpark Bakkeveen	Netherlands	FIFA Quality
Sportpark Vossenpels - DVOL Lent - field 3	Netherlands	FIFA Quality
Sportpark Rijkerswoerd	Netherlands	FIFA Quality
Sportpark Zegenwerp	Netherlands	FIFA Quality
Sportpark Panhuis veld 3	Netherlands	FIFA Quality
Sportpark De Pas	Netherlands	FIFA Quality
Sportpark De Hofakkers	Netherlands	FIFA Quality
Oostersportpark Field 1	Netherlands	FIFA Quality
De Swadde	Netherlands	FIFA Quality
Oostersportpark Field 2	Netherlands	FIFA Quality
Sportpark Panhuis veld 4	Netherlands	FIFA Quality
V.V. A.P.W.C.	Netherlands	FIFA Quality
Sportpark Dorrestein - veld 4	Netherlands	FIFA Quality
Sportpark de Raaij	Netherlands	FIFA Quality
De Bosk	Netherlands	FIFA Quality
Olympia Stadium - SV Wondelgem	Netherlands	FIFA Quality
Sportpark 'De Bijlen'	Netherlands	FIFA Quality
Sportpark Oude Landen	Netherlands	FIFA Quality
Sportpark Zwammerdam - VV Zwammerdam	Netherlands	FIFA Quality

PROJECT NAME	COUNTRY	CERTIFICATE
SC de Toekomst - AFC Ajax	Netherlands	FIFA Quality
Sportpark Varkenoord - veld 1	Netherlands	FIFA Quality
Sportpark Diepput - Kon. HC&VV field 3	Netherlands	FIFA Quality
Sportpark Zuidhorn, veld 2	Netherlands	FIFA Quality
Sportpark Jan van Baal	Netherlands	FIFA Quality
Sportpark Bretagne	Netherlands	FIFA Quality
Sportpark de Roskamp	Netherlands	FIFA Quality
Sportpark Elden	Netherlands	FIFA Quality
Sportpark JHR	Netherlands	FIFA Quality
VV Rolderboys	Netherlands	FIFA Quality
Sportpark 'Brakkenstein	Netherlands	FIFA Quality
Sportpark Heidelberg	Netherlands	FIFA Quality
De Ketting	Netherlands	FIFA Quality
Sportpark 'De Rijpel'	Netherlands	FIFA Quality
Sportpark de Kiefthoek	Netherlands	FIFA Quality
SV Gouda	Netherlands	FIFA Quality
Sportpark de Kievit	Netherlands	FIFA Quality
Sportpark 't Cranevelt	Netherlands	FIFA Quality
Sportpark De Molenesch	Netherlands	FIFA Quality
Sportpark s.v. Besiktas	Netherlands	FIFA Quality
Sportpark Vossenpels - DVOL Lent - field 2	Netherlands	FIFA Quality
Sportpark Zuidhorn, veld 4	Netherlands	FIFA Quality
Sportpark 'Meerendonk	Netherlands	FIFA Quality
Sportpark Schravenhorst	Netherlands	FIFA Quality
Soccerboys	Netherlands	FIFA Quality
Sportpark Soetendaal	Netherlands	FIFA Quality
Sportpark Bergweg	Netherlands	FIFA Quality
Sportcomplex It Fliet - SV Mullier	Netherlands	FIFA Quality
Gemeentelijk Sportpark Alkmaar	Netherlands	FIFA Quality
Sportpark Zwaluwen	Netherlands	FIFA Quality
CVV Berkel	Netherlands	FIFA Quality
Sportpark Crayenhout - HBS	Netherlands	FIFA Quality
Sportpark De Polderhoek	Netherlands	FIFA Quality
Sportpark Den Hoorn	Netherlands	FIFA Quality
C.J.V.V.	Netherlands	FIFA Quality
Sportpark de Leeuwenkuil - VV Acht	Netherlands	FIFA Quality
Sportpark RSKV Driel	Netherlands	FIFA Quality
Sportpark de Treffer - veld E	Netherlands	FIFA Quality
Sportpark de Zoom - SKV Wageningen	Netherlands	FIFA Quality
Sportpark Duinwetering	Netherlands	FIFA Quality

PROJECT NAME	COUNTRY	CERTIFICATE
Sportpark De Bent	Netherlands	FIFA Quality
Sportpark Panhuis trainingshoek	Netherlands	FIFA Quality
Sportpark corpus den hoorn Field 7	Netherlands	FIFA Quality
Sportpark corpus den hoorn Field 6	Netherlands	FIFA Quality
Sportpark Parkzicht - RKSU Udi'19	Netherlands	FIFA Quality
Sportpark Suestra - SC Susteren	Netherlands	FIFA Quality
Sportpark Den Eimert	Netherlands	FIFA Quality
Sportpark Schutlanden	Netherlands	FIFA Quality
Sportpark Roggewoning	Netherlands	FIFA Quality
Katholieke Voetbal Vereniging Amersfoort	Netherlands	FIFA Quality
Sportpark Dorrestein - veld 5	Netherlands	FIFA Quality
Sportpark de Treffer - veld E	Netherlands	FIFA Quality
Sportpark s.v. JHR	Netherlands	FIFA Quality
Sportpark de Groene Velden II	Netherlands	FIFA Quality
Sportpark corpus den hoorn Field 8	Netherlands	FIFA Quality
VV Hooglanderveen	Netherlands	FIFA Quality
Sportpark den Hogen Blok	Netherlands	FIFA Quality
SC CAMBUUR	Netherlands	FIFA Quality PRO
Sportpark Eikendonk	Netherlands	FIFA Quality
Sportpark de Pol - VVG'25	Netherlands	FIFA Quality
Sportpark de Broeklanden - SV Juliana'31	Netherlands	FIFA Quality
Sportpark Eikendonk	Netherlands	FIFA Quality
Sportpark het Doesgoor	Netherlands	FIFA Quality
Sportpark Kralingse Veer	Netherlands	FIFA Quality
Sportpark De Balk	Netherlands	FIFA Quality
Sportpark Coendersborg	Netherlands	FIFA Quality
Sportpark Sportlaan	Netherlands	FIFA Quality
SEACON Stadion de Koel	Netherlands	FIFA Quality
Vierkantsdijk	Netherlands	FIFA Quality
Sportpark V.O.C.	Netherlands	FIFA Quality
Sportpark Varkenoord - veld 2	Netherlands	FIFA Quality
Sportpark Thurlede - veld 5d	Netherlands	FIFA Quality
Sportpark Bergweg	Netherlands	FIFA Quality
Complexe de la Roche	New Caledonia	FIFA Quality
Christchurch Football Academy 2	New Zealand	FIFA Quality
Christchurch Football Academy 1	New Zealand	FIFA Quality
Westlake Soccer New Zealand-4977	New Zealand	FIFA Quality
Allen Park - Pitch 3	Northern Ireland	FIFA Quality
CRAIGAVON FC	Northern Ireland	FIFA Quality
Girdwood Community Hub	Northern Ireland	FIFA Quality

PROJECT NAME	COUNTRY	CERTIFICATE
Bangor FC	Northern Ireland	FIFA Quality
Armagh City Football Club	Northern Ireland	FIFA Quality
Valley Park - field 1	Northern Ireland	FIFA Quality PRO
Valley Park - field 2	Northern Ireland	FIFA Quality PRO
AQUINAS GRAMMAR SCHOOL	Northern Ireland	FIFA Quality
TANDRAGEE RECREATION CENTRE	Northern Ireland	FIFA Quality
Allen Park - Pitch 2	Northern Ireland	FIFA Quality
Alfheim Stadion	Norway	FIFA Quality PRO
Stadion Jarocin Sport Sp. z o.o. w Jarocinie	Poland	FIFA Quality PRO
Młodzieżowe Centrum Sportu Wrocław - Stadion Piłkarski "Sztabowa"	Poland	FIFA Quality
Stadion im. Edwarda Hodury	Poland	FIFA Quality
Stadion Miejski w Jaworznie	Poland	FIFA Quality
Osir Bemowo Boisko A	Poland	FIFA Quality
Stadion Miejski	Poland	FIFA Quality
MOSIR Torun Przy Skarpie	Poland	FIFA Quality
Miejski Ośrodek Sportu i Rekreacji w MLawie	Poland	FIFA Quality
LKS "Sparta" Lubliniec	Poland	FIFA Quality
TARGOWEK	Poland	FIFA Quality
Boisko Treningowe przy stadionie Szombierki Bytom	Poland	FIFA Quality
Estádio Municipal de Arcos de Valdevez	Portugal	FIFA Quality
BANDRABOUA	Réunion	FIFA Quality
Ohod Club	Saudi Arabia	FIFA Quality
Al Taawoun FC	Saudi Arabia	FIFA Quality
Hajer FC	Saudi Arabia	FIFA Quality
Al Anwar FC	Saudi Arabia	FIFA Quality
LOCHABER HIGH SCHOOL	Scotland	FIFA Quality
DALZIEL PARK / PITCH 2	Scotland	FIFA Quality
Dalgety Bay Sports Centre	Scotland	FIFA Quality
Balwearie HS	Scotland	FIFA Quality
DALZIEL PARK / PITCH 1	Scotland	FIFA Quality
Forfar Community Campus	Scotland	FIFA Quality
Jubilee Park	Scotland	FIFA Quality
STENHOUSEMUIR FC	Scotland	FIFA Quality
Springburn Football Centre	Scotland	FIFA Quality
NORTH BERWICK - RECREATION PARK	Scotland	FIFA Quality
Bent Road Recreation Park	Scotland	FIFA Quality
Prestonpans - Middleshot Square	Scotland	FIFA Quality
Waid Academy	Scotland	FIFA Quality
Hallhill Sports Centre	Scotland	FIFA Quality
Brandywell Stadium	Scotland	FIFA Quality PRO

PROJECT NAME	COUNTRY	CERTIFICATE
Rugby Park	Scotland	FIFA Quality
ST JOHNSTONE FC	Scotland	FIFA Quality
Brechin Community Campus	Scotland	FIFA Quality
St. Mary's Park	Scotland	FIFA Quality
Doon Academy	Scotland	FIFA Quality
ST LUKES HIGH SCHOOL	Scotland	FIFA Quality
Ayr Academy	Scotland	FIFA Quality
CAMPO DE FÚTBOL DE CHAN DO MONTE, CERPONZÓNS	Spain	FIFA Quality
FIFA Training Center Sri Lanka	Sri Lanka	FIFA Quality
Skytteholms IP	Sweden	FIFA Quality PRO
Vikingavallen - Täby	Sweden	FIFA Quality PRO
Limhamn IP	Sweden	FIFA Quality PRO
Stadion Bergholz	Switzerland	FIFA Quality PRO
Sportanlage Rütli	Switzerland	FIFA Quality
LIPO Park Schaffhausen	Switzerland	FIFA Quality PRO
Stade de la Maladiere	Switzerland	FIFA Quality PRO
Centre sportif de la Tuillière terrain No 1	Switzerland	FIFA Quality
North London Collegiate School (UAE)	United Arab Emirates	FIFA Quality
Al Dhaid cultural and sport club	United Arab Emirates	FIFA Quality
Landore Training Centre	Wales	FIFA Quality PRO
Parc Derwen 3G	Wales	FIFA Quality
Abercynon Sports Centre 3G	Wales	FIFA Quality
Connah's Quay High School	Wales	FIFA Quality
Cardiff International Sports Stadium	Wales	FIFA Quality
Richmond Park	Wales	FIFA Quality
Maritime Park	Wales	FIFA Quality
Newtown AFC	Wales	FIFA Quality
Eastern High - Eastern Community Campus	Wales	FIFA Quality



## PREFERRED PRODUCER FOR FOOTBALL TURF

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# CERTIFICATE

FIFA is pleased to confirm that

**FIELDTURF INC.**

is classed as a **PREFERRED PRODUCER** for Football Turf

valid

**from 01/01/2019 to 31/12/2020**

Total Quality Service is guaranteed by

- Additional expertise in civil engineering (subbase) and project management (general contractor)
- Full responsibility for the production, installation and maintenance from inception to completion
- High level of service and continuous development of football turf products
- Experience as a FIFA Quality Concept licensee with FIFA RECOMMENDED fields

A handwritten signature in blue ink, appearing to read 'Gianni Infantino'.

Gianni Infantino

Presidente de la Fédération Internationale de Football Association

[www.FIFA.com/footballturf](http://www.FIFA.com/footballturf)



# FIFA LABORATORY TEST REPORT

Test manual 2015  
01.01.2015

Product	FTVTCORE-1
FIFA Licensee	FieldTurf Inc.
Test Institute	Sports Labs Ltd.
Test Number	44538
External Test Number	18627/7910
Date of Test	07.03.2018
Test Result	Passed
Quality Level	FIFA Quality & Quality PRO
Test Type	Initial





## Licensee

### Main Address

<b>Name</b>	FieldTurf Inc.
<b>Address</b>	7445 Cote-de-Liesse Rd, Suite 200
<b>ZIP / City</b>	H4T 1G2 / MONTREAL, QUEBEC
<b>Website</b>	<a href="http://www.fieldturf.com">www.fieldturf.com</a>
<b>Contact Email</b>	
<b>Contact Phone</b>	


## Test institute


### Main Address

<b>Name</b>	Sports Labs Ltd.
<b>Address</b>	1 Adam Square Brucefield Industrial Park
<b>ZIP / City</b>	EH54 9DE / LIVINGSTON
<b>Website</b>	
<b>Contact Email</b>	
<b>Contact Phone</b>	



Approval

Test Institute Director	Sean Ramsay
Signature	
Date	06.03.2018

Test Institute Engineer	Craig Melrose
Signature	
Date	06.03.2018



## 1 – Test Results

Name	Comment	Result
<b>1 - Summary</b>		
Vertical ball rebound FIFA Quality		Passed
Vertical ball rebound FIFA Quality Pro		Passed
Angeled ball rebound FIFA Quality		Passed
Angeled ball rebound FIFA Quality Pro		Passed
Reduced ball roll FIFA Quality		Passed
Reduced ball roll FIFA Quality Pro		Passed
Shock absorption FIFA Quality		Passed
Shock absorption FIFA Quality Pro		Passed
Deformation FIFA Quality		Passed
Deformation FIFA Quality Pro		Passed
Rotational resistance FIFA Quality		Passed
Rotational resistance FIFA Quality Pro		Passed
Skin / surface friction		Passed
Skin abrasion		Passed
<b>1 - Test Details   Object</b>		
Product Name		FTVTCORE-1
Product ID		FTVTCORE-1
Synthetic Turf System		FTVTCORE-1
Performance infill		Cryogenic Rubber
Stabilising infill		Sand
Shock-pad or elastic layer		-
Sub-base composition		Concrete
<b>2 - Test Details   Test Institute</b>		
Date(s) of test		07.03.2018
Report created by		Craig Melrose
Other Test Engineer on site		
Laboratory Test report number		18627/7910
Test Institute Project number		18627
<b>3 – Product Declaration (Manufacturer)</b>		
Manufacturer		FieldTurf
Tuft pattern		Straight
Yarn manufacturer   yarn 1		FieldTurf
Product name, code   yarn 1		CORE
Pile yarn profile   yarn 1		Diamond
Pile thickness (µ m)   yarn 1		380.0
Pile colour (RAL)   value 1   yarn 1		6025
Pile colour (RAL)   value 2   yarn 1		



Name	Comment	Result
Pile colour (RAL)   value 3   yarn 1		
Pile width (mm)   yarn 1		1.30
Number of tufts/m <sup>2</sup>   yarn 1	ISO1773	6014.00
Pile length (mm)   yarn 1	ISO 2549	63.50
Pile weight (g/m <sup>2</sup> )   yarn 1	ISO 8543	1797.00
Pile yarn characterization   yarn 1		PE
Pile yarn dtex   yarn 1		15500
Yarn manufacturer   yarn 2		FieldTurf
Product name, code   yarn 2		F51
Pile yarn profile   yarn 2		Fibrillated
Pile thickness (μ m)   yarn 2		130.0
Pile colour (RAL)   value 1   yarn 2		6025
Pile colour (RAL)   value 2   yarn 2		
Pile colour (RAL)   value 3   yarn 2		
Pile width (mm)   yarn 2		5.60
Number of tufts/m <sup>2</sup>   yarn 2	ISO1773	6014.00
Pile length (mm)   yarn 2	ISO 2549	63.50
Pile weight (g/m <sup>2</sup> )   yarn 2	ISO 8543	
Pile yarn characterization   yarn 2		PE
Pile yarn dtex   yarn 2		5500.0
Yarn manufacturer   yarn 3		
Product name, code   yarn 3		
Pile yarn profile   yarn 3		
Pile thickness (μ m)   yarn 3		
Pile colour (RAL)   value 1   yarn 3		
Pile colour (RAL)   value 2   yarn 3		
Pile colour (RAL)   value 3   yarn 3		
Pile width (mm)   yarn 3		
Number of tufts/m <sup>2</sup>   yarn 3	ISO1773	
Pile length (mm)   yarn 3	ISO 2549	
Pile weight (g/m <sup>2</sup> )   yarn 3	ISO 8543	
Pile yarn characterization   yarn 3		
Pile yarn dtex   yarn 3		
Primary backing   Product name, code		PP
Primary backing   Manufacturer		Various
Re-enforcement scrim   Product name, code		
Re-enforcement scrim   Manufacturer		
Secondary backing   Product name, code		PU



Name	Comment	Result
Secondary backing   Manufacturer		FieldTurf
Secondary backing   Dry application rate (g/m <sup>2</sup> )		474.0
Carpet   Minimum tuft withdrawel force (N)		30
Carpet   Carpet mass per unit area (g/m <sup>2</sup> )		2475.0
Method of jointing		Stitched
Bonded joints   Adhesive brand name		
Bonded joints   Adhesive manufacturer		
Bonded joints   Application rate (g/m)		
Bonded joints   Jointing film brand name		
Bonded joints   Jointing film manufacturer		
Stitched seams   Tread brand name/product code		Ultra Dee Polyester
Stitched seams   Tread manufacturer		Coats of America
Stitched seams   Stitch rate (stitch per 1m)		110.000
Performance Infill   Product name, code		SBR Cryo Rubber
Performance Infill   Manufacturer		CRM
Performance Infill   Material type		SBR Cryo Rubber
Performance Infill   Material grading		Cryo A - 0.63 - 1.4 mm, Cryo B - 1.25 - 2.0 mm
Performance Infill   Particle shape	prEN 14955	Angular - A2
Performance Infill   Particle size range	EN 933-Part 1	Cryo A - 0.63 - 1.4 mm, Cryo B - 1.25 - 2.0 mm
Performance Infill   Bulk density (g/cm <sup>3</sup> )	EN 1097-3	0.500
Performance Infill   Application rate (kg/m <sup>2</sup> )		16.6
Stabilising Infill   Product name, code		Sand
Stabilising Infill   Manufacturer		Whibco
Stabilising Infill   Material type		Sand
Stabilising Infill   Material grading		0.315 - 1.25 mm
Stabilising Infill   Particle shape	prEN 14955	Irregular



Name	Comment	Result
Stabilising Infill   Particle size range	EN 933-Part 1	0.315 - 1.25 mm
Stabilising Infill   Bulk density (g/cm <sup>3</sup> )	EN 1097-3	1.40
Stabilising Infill   Application rate (kg/m <sup>2</sup> )		5.4
Shockpad, E-layer   Product name, code		
Shockpad, E-layer   Manufacturer		
Shockpad, E-layer   Type		
Shockpad, E-layer   Composition		
Shockpad, E-layer   Bulk density (g/cm <sup>3</sup> )		
Shockpad, E-layer   Thickness	EN 1979	
Shockpad, E-layer   Shock absorption (%)	FIFA 4a	
Shockpad, E-layer   Deformation	FIFA 5a	
Shockpad, E-layer   Tensile strength (N)		
Shockpad, E-layer   Mass per unit area (kg/m <sup>2</sup> )		
Other, detail		Performance Infill Application Rate - Cryo B 3.91 – Cryo A 12.69 + Sand 29.3(mixed)  Stabilising Infill Application Rate - 5.4
<b>4 – Product Identification</b>		
Artificial Turf   Carpet mass per unit area [g/m <sup>2</sup> ]		2726
Artificial Turf   Tufts per unit area [m <sup>2</sup> ]		6021
Artificial Turf   Pile length above backing [mm]		66.0
Artificial Turf   Pile weight [g/m <sup>2</sup> ]		1738
Artificial Turf   Water permeability of carpet [mm/h]		5513
Artificial Turf   Free pile height		14
Performance infill   Particle size range [mm]		0.63 - 1.6 mm / 1.25 - 2.5 mm
Performance infill   Particle shape		A2



Name	Comment	Result
Performance infill   Bulk density [g/cm <sup>3</sup> ]		0.433
Performance infill   Infill depth [mm]		33
Performance infill   Thermographic analysis   organic [%]		64
Performance infill   Thermographic analysis   inorganic [%]		36
Stabilising infill   Particle size range [mm]		0.5 - 1.0 mm
Stabilising infill   Particle shape		B2
Stabilising infill   Bulk density [g/cm <sup>3</sup> ]		1.54
Shock pad / E-layer   Shock absorption [%]	if part of supplied system	
Shock pad / E-layer   Deformation	if part of supplied system	
Shock pad / E-layer   Thickness	if part of supplied system	
Other, detail		
<b>5 – Test Results   Ball / Surface interaction</b>		
Vertical Ball Rebound   Initial   Dry (Quality)	0.6 - 1m	0.85
Vertical Ball Rebound   Initial   Dry (Pro)	0.6 - 0.85m	0.85
Vertical Ball Rebound   Initial   Wet (Quality)	0.6 - 1m	0.83
Vertical Ball Rebound   Initial   Wet (Pro)	0.6 - 0.85m	0.83
Vertical Ball Rebound   after simulated wear   3'000 cycles (5*)	0.6 - 0.85m	0.85
Vertical Ball Rebound   after simulated wear   6'000 cycles (5*)	0.6 - 1m	0.88
Vertical Ball Rebound   after simulated wear   3'000 cycles (20*)	0.6 - 0.85m	
Vertical Ball Rebound   after simulated wear   6'000 cycles (20*)	0.6 - 1m	
Angeled Ball Rebound   Dry	45 - 80 %	50
Angeled Ball Rebound   Wet	45 - 80 %	64
Reduced Ball Roll   Initial   Dry (Quality)	4 - 10 m	7.0
Reduced Ball Roll   Initial   Dry (Pro)	4 - 8 m	7.0



Name	Comment	Result
Reduced Ball Roll   after simulated wear   3'000 cycles (5*)   Dry	4 - 8 m	6.8
Reduced Ball Roll   after simulated wear   3'000 cycles (5*)   Wet	4 - 8 m	7.4
Reduced Ball Roll   after simulated wear   3'000 cycles (20*)   Dry	4 - 8 m	
Reduced Ball Roll   after simulated wear   3'000 cycles (20*)   Wet	4 - 8 m	
Reduced Ball Roll   after simulated wear   6'000 cycles (5*)   Dry	4 - 12 m	6.0
Reduced Ball Roll   after simulated wear   6'000 cycles (5*)   Wet	4 - 12 m	6.3
Reduced Ball Roll   after simulated wear   6'000 cycles (20*)   Dry	4 - 12 m	
Reduced Ball Roll   after simulated wear   6'000 cycles (20*)   Wet	4 - 12 m	
Shock absorption   Initial   Dry (Quality)	57 - 68 %	65.0
Shock absorption   Initial   Dry (Pro)	62 - 68 %	65.0
Shock absorption   Initial   Wet (Quality)	57 - 68 %	65.0
Shock absorption   Initial   Wet (Pro)	62 - 68 %	65.0
Shock absorption   after simulated wear   3'000 cycles (5*)	62 - 68 %	62.0
Shock absorption   after simulated wear   3'000 cycles (20*)	62 - 68 %	
Shock absorption   after simulated wear   6'000 cycles (5*)	57 - 68 %	62.0
Shock absorption   after simulated wear   6'000 cycles (20*)	57 - 68 %	
Shock absorption   50°C	57 - 68 %	68.00
Shock absorption   -5°C	57 - 68 %	62.00
Deformation   Initial   Dry (Quality)	6 - 11 m	9.2
Deformation   Initial   Dry (Pro)	6 - 10 m	9.2
Deformation   Initial   Wet (Quality)	6 - 11 m	9.4
Deformation   Initial   Wet (Pro)	6 - 10 m	9.4





Name	Comment	Result
Deformation   after simulated wear   3'000 cycles (5*)	6 - 10 m	8.5
Deformation   after simulated wear   3'000 cycles (20*)	6 - 10 m	
Deformation   after simulated wear   6'000 cycles (5*)	6 - 11 m	8.4
Deformation   after simulated wear   6'000 cycles (20*)	6 - 11 m	
Rotational Resistance   Initial   Dry (Quality)	27 - 48 Nm	33
Rotational Resistance   Initial   Dry (Pro)	32 - 43 Nm	33
Deformation   Initial   Wet (Quality)	27 - 48 Nm	
Deformation   Initial   Wet (Pro)	32 - 43 Nm	
Rotational Resistance   after simulated wear   3'000 cycles (5*)	32 - 43 Nm	38
Rotational Resistance   after simulated wear   3'000 cycles (20*)	32 - 43 Nm	
Rotational Resistance   after simulated wear   6'000 cycles (5*)	27 - 48 Nm	39
Rotational Resistance   after simulated wear   6'000 cycles (20*)	27 - 48 Nm	
Skin / surface friction   Dry	0.35 - 0.75 $\mu$	0.73
Skin abrasion   Dry	$\pm$ 30 %	22
Other, detail		Wet Rotational Resistance = 32 Nm
<b>6 – Environmental impact (artificial, light, water)</b>		
Pile yarn 1   Colour change   after artificial weathering	$\geq$ Grey scale 3	3 - 4
Pile yarn 2   Colour change   after artificial weathering	$\geq$ Grey scale 3	3 - 4
Pile yarn 3   Colour change   after artificial weathering	$\geq$ Grey scale 3	
Pile yarn 1   Yarn tensile strength   after artificial weathering	Change $\leq$ 50 %	0 %
Pile yarn 2   Yarn tensile strength   after artificial weathering	Change $\leq$ 50 %	+ 4 %
Pile yarn 3   Yarn tensile strength   after artificial weathering	Change $\leq$ 50 %	
Polymeric infill   Colour change   after artificial weathering	$\geq$ Grey scale 3	4 - 5



Name	Comment	Result
Polymeric infill   Visual change in composition   after artificial weathering	No change	No Change
Complete system   Water permeability	> 180 mm/h	1929
Stitched joints   Strength   un-aged	≥ 1000N/100mm	2139
Stitched joints   Strength   water aged	≥ 1000N/100mm	1573
Bonded joints   Strength   un-aged	≥ 75/100mm	
Bonded joints   Strength   water aged	≥ 75/100mm	
Carpet tuft   Withdrawal force   un-aged	≥ 30N	78
Carpet tuft   Withdrawal force   water aged	≥ 30N	77
Heat   Category	for information	Category 2 - 3
Splash   Characteristics	for information	> 1.5 %
<b>7 - Miscellaneous (shock pad, sub-base - if part of the system)</b>		
Shock Pad / E-layer   tensile strength   un-aged	≥ 0.15 MPa	
Sub-base   Composition		
Sub-base   Particle size range		
Sub-base   Particle shape		
Sub-base   Thickness		
Sub-base   Compaction & test method		
Other, detail		



FieldTurf Financial offers FieldTurf clients customized financing through TCF Capital Solutions. Our mission is to provide overall fiscal financing solutions to help you achieve your unique budget objectives and meet fiscal requirements. We aim to provide our clients the opportunity to use and own a premium artificial turf system with monthly payments and tailored financing solutions to meet your needs.

FieldTurf has chosen to work with TCF Capital Solutions, a leader in financing, to provide customized and comprehensive budget and payment solutions for FieldTurf products and projects. TCF Capital Solutions has over \$5.8 billion in assets under management and 20 years of experience in crafting efficient, tailored financing.

FieldTurf Financial Solutions offers exclusive financing for FieldTurf customers, including public, private, and non-profit organizations.

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## FIELDTURF FINANCIAL SOLUTIONS

Make the most of your budget with total project solutions, including complete field design, construction and integration costs

Ease the costs of your turf project with monthly, quarterly or annual payments that match the timing of fiscal budgets

Costs are aligned to FieldTurf's useful life, allowing the playing surface to pay for itself over time

Generally compatible with municipal financing annual budget appropriation requirements

Helps hedge inflation by budgeting today's costs to current revenues and tomorrow's costs to future revenues

Efficient payment solution allocated over multiple budget periods

**OPTIMIZE YOUR BUDGET**

With FieldTurf Financing, you begin saving from day one. Our financing allows you to retain your cash while your FieldTurf field generates savings to help cover the monthly, quarterly or annual payment.

**PRESERVE BANK CREDIT LINES**

Payment solutions generally don't affect your current borrowing limits with your bank. You can still utilize credit lines for other needs, such as working capital.

**PAYMENT SOLUTIONS INCLUDE ALL ANCILLARY COSTS**

You can finance the turf, sub-base, and other additional items.

**IMPROVED CASH FLOW**

Not only can you improve cash flow right from the start by keeping your cash reserves, but after your final payment you own the field and may continue to benefit from ongoing revenue generation.

**RENTAL REVENUES COULD PAY YOUR MONTHLY PAYMENT**

Let the FieldTurf system pay for itself on a real-time basis to help cover your monthly payments.

**MUNICIPALITIES & EDUCATION:**

FieldTurf's Municipal & Education Payment Program is tailored to meet the needs and requirements of municipalities, public and private school systems, allowing flexible and efficient operations.

**KEY BENEFITS INCLUDE:**

100% financing

Fast, easy application process

24 to 96-month terms

Superior systems and support for efficient billing and collecting

Ability to cancel in the event of non-appropriation of budget funds\*

Interest may be exempt from federal and state income tax\*

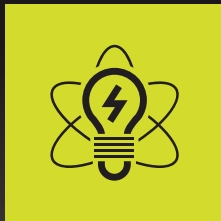
Generally not subject to state bid laws\*

*\*Not applicable for private school systems*

*All pricing, terms and requests are subject to credit approval and subject to change without notice. This is not a commitment or offer to lend by TCF Capital Solutions. The information contained in this marketing piece is provided as general education material, and does not constitute the recommendation of, or advice with respect to, any particular transaction, financing or issuance of municipal securities. Neither TCF nor Fieldturf is the agent of the other.*

**LET'S GET STARTED ON YOUR PROJECT. TO DISCUSS FINANCING YOUR PROEJCT, CONTACT YOUR FIELDTURF EXPERT OR TCF CAPITAL SOLUTIONS.**

Ryan Brucker • National Relationship Manager TCF Capital Solutions  
412-720-2060 • rbrucker@tcfbank.com



**FIELDTURF  
INNOVATION+  
PERFORMANCE  
CENTER**

**THE SCIENCE BEHIND  
FIELDTURF'S  
BASEBALL  
DEVELOPMENT**



# THE SCIENCE BEHIND FIELDTURF'S BASEBALL DEVELOPMENT

Our journey had us push the boundaries of testing and product innovation like never before. We used a scientific approach to analyze ball-surface interaction on a variety of systems. Through the use of advanced high tech motion video cameras, we were able to translate what we found into real-life data. Never before has there been a way to build your FieldTurf baseball field with such precision.

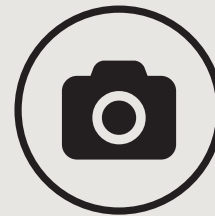
## TECHNOLOGY FUELED OUR PURSUIT OF EXCELLENCE



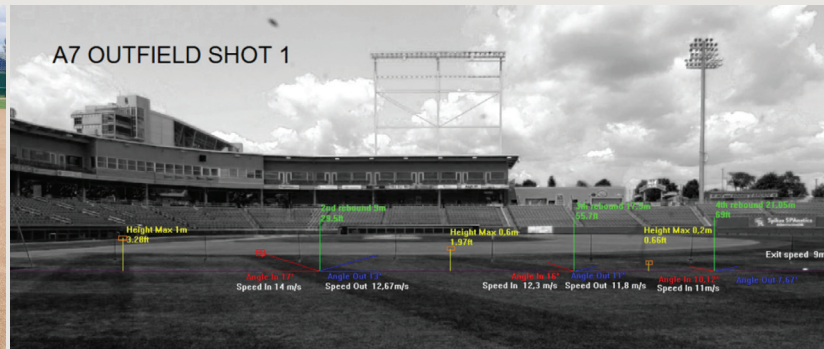
300 MAN HOURS



300 VIDEOS



70,000 PICTURES



USING OUR THREE CRITICAL PERFORMANCE CRITERIA - SPEED, LINE & BOUNCE - YOU CAN BUILD YOUR FIELD TO PLAY FAST OR TO PLAY LIKE A NATURAL SURFACE.

### 1. SPEED

Speed is a total average of the ball speed-in and ball speed-out at the bounce points. Measured in feet per second.



#### WHY IT'S IMPORTANT

The **SPEED** score allows you to select a system that either plays fast or plays like a natural surface.

### 2. LINE

Line is a total average of the ball bounce straightness variation. Measured in degrees.



#### WHY IT'S IMPORTANT

The **LINE** score indicates if the hop plays true.

### 3. BOUNCE

Bounce height is a total average of the max height obtained at the bounce points. Measured in feet.



#### WHY IT'S IMPORTANT

The **BOUNCE** score indicates if the ball plays like a natural surface.



## THE COMPETITION IS STILL LIGHT YEARS BEHIND...

How can they deliver the optimal baseball systems if they don't know how to test for it? The reality is they can't, and it shows in how they currently test their baseball systems.

### SHAW SPORTS TURF

Shaw Sports Turf has burst on to the scene with 3 deeply discounted MLB installations and "new" products. How do they test? They are still using COR (cannon into a net), Gmax and the FIFA Advanced Artificial Athlete (AAA). The result is a system with extreme infill flyout – which is undesirable in any sport.

#### THE TESTING ▼



Source: <https://twitter.com/PhilipeAldahir/status/1088208738522025984>

#### THE RESULT ▼



### ASTROTURF

AstroTurf stakes claim to a false leadership position in baseball – professing that “80% of Division I programs with artificial surfaces play on AstroTurf”. That couldn't be further from the truth as FieldTurf's number of NCAA D1 references is greater than AstroTurf's (52 vs. 40). Moreover, AstroTurf's baseball testing is antiquated, as it consists simply of a cannon, a tape measure, stakes, and a notepad.

#### THE TESTING ▼



Source: <https://www.youtube.com/watch?v=RIWKK8rpo5k>

## TRUST THE REAL SCIENCE

# UNDERSTANDING RS MEANS

.....

## WHAT IS RS MEANS?

### A PLATFORM TO HELP ESTIMATE CONSTRUCTION COSTS

RS MEANS, a division of Reed Business Information, is a construction cost estimating tool that has been in place for over 74 years.

RS MEANS provides current, regionally-customizable data that reflects cost information to the construction industry so contractors can provide accurate estimates and projections for project costs. There are over 20 specialized cost data titles for various construction categories.

RS MEANS has become a data standard for government work in terms of pricing and is widely used by the construction industry as a whole.

RS MEANS pricing books are updated annually and have over 50,000 material and labor unit line items associated with various types of construction. The unit prices are adjusted for location/labor rates using a "City Index."

#### HOW DOES FIELDTURF USE RS MEANS?

FieldTurf is required to use RS MEANS on cooperative purchasing projects for any items that are not specifically line item priced through our cooperative purchasing agencies. This includes a majority of the site work and ancillary items outside of artificial turf, track or tennis surfacing.

The standardized cost data book title that is best suited to price FieldTurf site work related line items is: Facilities Construction Cost Data.

Many of the cooperative purchasing agencies in the SmartBuy portfolio require an RS MEANS summary estimate report to meet cooperative purchasing compliance for items that are not specifically listed in the FieldTurf bid response. Cooperative purchasing contracts incorporate RS MEANS language into their bid documents to meet governmental audit compliance standards and use it as a system of checks and balances for construction and site related pricing.





# MOST ASKED QUESTIONS

## Q: WHAT IS RS MEANS DATA?

**A:** RS MEANS data from Gordian is the leading construction cost database. A dynamic collection of data points actively monitored by experienced Cost Engineers, RS MEANS data is used by construction professionals to create budgets, estimate projects, validate their own cost data and plan for ongoing facilities maintenance. Localized, accurate and complete, RS MEANS data is the construction industry standard.

## Q: WHY DOES FIELDTURF USE RS MEANS FOR COOPERATIVE PURCHASING PROJECTS?

**A:** Cooperative purchasing agencies require RS MEANS estimates so municipalities meet procurement compliance for items that are not specifically listed in the FieldTurf bid response. Cooperative purchasing contracts incorporate RS MEANS language into their bid documents to meet governmental audit compliance standards and use it as a system of checks and balances for construction and site related pricing.

## Q: WHAT CAN BE PURCHASED THROUGH RS MEANS?

**A:** The list of items municipalities can purchase through RS MEANS is extensive and includes but is not limited to: cut and fill, excavation, asphalt, lighting, fencing, sidewalks, concrete work, drainage systems, tie in to existing drainage, windscreens, aggregate base, top rock, conduits, crack repair, demolition or any other project necessary site work.

## Q: HOW ARE REGIONALLY SPECIFIC LABOR COSTS ACCOUNTED FOR IN RS MEANS?

**A:** RS MEANS unit prices are adjusted for location/labor rates using regionally specific “City Index Coefficient.”

**ACKNOWLEDGMENT AND ACCEPTANCE**  
**OF REGION 4 ESC's OPEN RECORDS POLICY**

**OPEN RECORDS POLICY**

All proposals, information and documents submitted are subject to the Public Information Act requirements governed by the State of Texas once a Contract(s) is executed. If an Offeror believes its response, or parts of its response, may be exempted from disclosure, the Offeror must specify page-by-page and line-by-line the parts of the response, which it believes, are exempt and include detailed reasons to substantiate the exemption. Price is not confidential and will not be withheld. Any unmarked information will be considered public information and released, if requested under the Public Information Act.

The determination of whether information is confidential and not subject to disclosure is the duty of the Office of Attorney General (OAG). Region 4 ESC must provide the OAG sufficient information to render an opinion and therefore, vague and general claims to confidentiality by the Offeror are not acceptable. Region 4 ESC must comply with the opinions of the OAG. Region 4 ESC assumes no responsibility for asserting legal arguments on behalf of any Offeror. Offeror is advised to consult with their legal counsel concerning disclosure issues resulting from this procurement process and to take precautions to safeguard trade secrets and other proprietary information.

*Signature below certifies complete acceptance of Region 4 ESC's Open Records Policy, except as noted below (additional pages may be attached, if necessary).*

Check one of the following responses to the Acknowledgment and Acceptance of Region 4 ESC's Open Records Policy below:

- We acknowledge Region 4 ESC's Open Records Policy and declare that no information submitted with this proposal, or any part of our proposal, is exempt from disclosure under the Public Information Act.
- We declare the following information to be a trade secret or proprietary and exempt from disclosure under the Public Information Act.

*(Note: Offeror must specify page-by-page and line-by-line the parts of the response, which it believes, are exempt. In addition, Offeror must include detailed reasons to substantiate the exemption(s). Price is not confidential and will not be withheld. All information believed to be a trade secret or proprietary must be listed. It is further understood that failure to identify such information, in strict accordance with the instructions, will result in that information being considered public information and released, if requested under the Public Information Act.)*

September 16, 2021  
Date

  
Authorized Signature & Title  
Eric Dalhère  
President

**ANTITRUST CERTIFICATION STATEMENTS**  
**(Tex. Government Code § 2155.005)**  
Attorney General Form

I affirm under penalty of perjury of the laws of the State of Texas that:

1. I am duly authorized to execute this Contract on my own behalf or on behalf of the company, corporation, firm, partnership or individual (Company) listed below;
2. In connection with this proposal, neither I nor any representative of the Company has violated any provision of the Texas Free Enterprise and Antitrust Act, Tex. Bus. & Comm. Code Chapter 15;
3. In connection with this proposal, neither I nor any representative of the Company has violated any federal antitrust law; and
4. Neither I nor any representative of the Company has directly or indirectly communicated any of the contents of this proposal to a competitor of the Company or any other company, corporation, firm, partnership or individual engaged in the same line of business as the Company.

Company Fieldturf USA Inc. Contact

Sarah Morehead  
Signature

Sarah Morehead  
Printed Name

Address 175 N. Industrial Blvd  
NE  
Calhoun, GA  
30701

Dir. of Operations - SmartBuy  
Position with Company

Official  
Authorizing  
Proposal

Eric Dalliere  
Signature

Eric Dalliere  
Printed Name

Phone (503) 563-6390

President  
Position with Company

Fax (514) 340-9374

## Implementation of House Bill 1295

### Certificate of Interested Parties (Form 1295):

In 2015, the Texas Legislature adopted House Bill 1295, which added section 2252.908 of the Government Code. The law states that a governmental entity or state agency may not enter into certain contracts with a business entity unless the business entity submits a disclosure of interested parties to the governmental entity or state agency at the time the business entity submits the signed contract to the governmental entity or state agency. The law applies only to a contract of a governmental entity or state agency that either (1) requires an action or vote by the governing body of the entity or agency before the contract may be signed or (2) has a value of at least \$1 million. The disclosure requirement applies to a contract entered into on or after January 1, 2016.

The Texas Ethics Commission was required to adopt rules necessary to implement that law, prescribe the disclosure of interested parties form, and post a copy of the form on the commission's website. The commission adopted the Certificate of Interested Parties form (Form 1295) on October 5, 2015. The commission also adopted new rules (Chapter 46) on November 30, 2015, to implement the law. The commission does not have any additional authority to enforce or interpret House Bill 1295.

#### Filing Process:

Starting on January 1, 2016, the commission made available on its website a new filing application that must be used to file Form 1295. A business entity must use the application to enter the required information on Form 1295 and print a copy of the completed form, which will include a certification of filing that will contain a unique certification number. An authorized agent of the business entity must sign the printed copy of the form. The completed Form 1295 with the certification of filing must be filed with the governmental body or state agency with which the business entity is entering into the contract.

The governmental entity or state agency must notify the commission, using the commission's filing application, of the receipt of the filed Form 1295 with the certification of filing not later than the 30th day after the date the contract binds all parties to the contract. This process is known as acknowledging the certificate. The commission will post the acknowledged Form 1295 to its website within seven business days after receiving notice from the governmental entity or state agency. The posted acknowledged form does not contain the declaration of signature information provided by the business.

A certificate will stay in the pending state until it is acknowledged by the governmental agency. Only acknowledged certificates are posted to the commission's website.

#### Electronic Filing Application:

[https://www.ethics.state.tx.us/whatsnew/elf\\_info\\_form1295.htm](https://www.ethics.state.tx.us/whatsnew/elf_info_form1295.htm)

#### Frequently Asked Questions:

[https://www.ethics.state.tx.us/resources/FAQs/FAQ\\_Form1295.php](https://www.ethics.state.tx.us/resources/FAQs/FAQ_Form1295.php)

**Changes to Form 1295:** <https://www.ethics.state.tx.us/data/filinginfo/1295Changes.pdf>

# CERTIFICATE OF INTERESTED PARTIES

FORM 1295

1 of 1

Complete Nos. 1 - 4 and 6 if there are interested parties.  
Complete Nos. 1, 2, 3, 5, and 6 if there are no interested parties.

## OFFICE USE ONLY CERTIFICATION OF FILING

1 Name of business entity filing form, and the city, state and country of the business entity's place of business.  
FieldTurf USA Inc.  
Calhoun, GA United States

Certificate Number:  
2021-801615

Date Filed:  
09/14/2021

2 Name of governmental entity or state agency that is a party to the contract for which the form is being filed.  
Region 4 Education Service Center

Date Acknowledged:

3 Provide the identification number used by the governmental entity or state agency to track or identify the contract, and provide a description of the services, goods, or other property to be provided under the contract.  
Solicitation No. 22-05  
Request for Proposal for Sport Surfaces, Installation and related material

4	Name of Interested Party	City, State, Country (place of business)	Nature of interest (check applicable)	
			Controlling	Intermediary
	FieldTurf Tarkett USA Holdings, Inc.	Wilmington, DE United States	X	

5 Check only if there is NO Interested Party.


### 6 UNSWORN DECLARATION

My name is Eric Dalhère, and my date of birth is March 2, 1967

My address is 685 Putnam Forest Drive, Stowe, VT 05672 USA  
(street) (city) (state) (zip code) (country)

I declare under penalty of perjury that the foregoing is true and correct.

Executed in Montreal Province Quebec, on the 16<sup>th</sup> day of Sept, 2021  
(month) (year)

  
\_\_\_\_\_  
Signature of authorized agent of contracting business entity  
(Declarant)

**Texas Government Code 2270 Verification Form**

House Bill 89 (85R Legislative Session), which adds Chapter 2270 to the Texas Government Code, provides that a governmental entity may not enter into a contract with a company without verification that the contracting vendor does not and will not boycott Israel during the term of the contract.

Furthermore, Senate Bill 252 (85R Legislative Session), which amends Chapter 2252 of the Texas Government Code to add Subchapter F, prohibits contracting with a company engaged in business with Iran, Sudan or a foreign terrorist organization identified on a list prepared by the Texas Comptroller.

I, Eric Dalvere, as an authorized representative of

Fieldurf USA, Inc., a contractor engaged by


Insert Name of Company

Region 4 Education Service Center, 7145 West Tidwell Road, Houston, TX 77092, verify by this writing that the above-named company affirms that it (1) does not boycott Israel; and (2) will not boycott Israel during the term of this contract, or any contract with the above-named Texas governmental entity in the future.

Also, our company is not listed on and we do not do business with companies that are on the Texas Comptroller of Public Accounts list of Designated Foreign Terrorists Organizations found at <https://comptroller.texas.gov/purchasing/docs/foreign-terrorist.pdf>.

I further affirm that if our company's position on this issue is reversed and this affirmation is no longer valid, that the above-named Texas governmental entity will be notified in writing within one (1) business day and we understand that our company's failure to affirm and comply with the requirements of Texas Government Code 2270 et seq. shall be grounds for immediate contract termination without penalty to the above-named Texas governmental entity.

I swear and affirm that the above is true and correct.

  
Signature of Named Authorized Company Representative

September 16, 2021  
Date

### **FELONY CONVICTION NOTIFICATION**

Section 44.034, Texas Education Code, Notification of Criminal History, Subsection (a), states "A person or business entity that enters into a contract with a school district must give advance notice to the district if the person or an owner or operator of the business entity has been convicted of a felony. The notice must include a general description of the conduct resulting in the conviction of a felony."

Subsection (b) states "A school district may terminate a contract with a person or business entity if the district determines that the person or business entity failed to give notice as required by Subsection (a) or misrepresented the conduct resulting in the conviction. The district must compensate the person or business entity for services performed before the termination of the contract."

This Notice is Not Required of a Publicly-Held Corporation

### **CRIMINAL HISTORY REVIEW OF CONTRACTOR EMPLOYEES**

Offeror shall review §22.0834, Texas Education Code and 19 Texas Administrative Code §§153.1101 and 153.1117 regarding criminal history checks of school contractor employees. The rules define continuing duties related to contracted services, direct contact with students, covered contract employee and other relevant terms within the statute.

Except as otherwise provided herein, Offeror will obtain and certify in writing, before work begins, that the Offeror has received all criminal history record information that relates to an employee, applicant, agent or Subcontractor of the Offeror/Contractor or Subcontractor, if the person has or will have continuing duties related to the contracted services, and the duties are or will be performed on Region 4 ESC's, or Participating Public Agency as applicable to the Texas Education Code, property where students are regularly present or at another location where students are regularly present. Awarded Offer(s) shall assume all expenses associated with the background checks and shall immediately remove any employee or agency who was convicted of, receive probation for, or received deferred adjudication for any felony as outlined below or any misdemeanor involving moral turpitude, from Region 4 ESC's property or other location where students are regularly present.

Offeror/Contractor or sub-contractors may not work on Region 4 ESC's, or Participating Public Agency where the Texas Education Code may be applicable, property where students are present when they have been convicted, received probation, or deferred adjudication for the following felony offenses:

1. Any offense against a person who was, at the time the offense occurred, under 18 years of age or enrolled at a public school;
2. Any sex offense;
3. Any crimes against persons involving:

- a. Controlled substances; or
  - b. Property; or
4. Any other offense Region 4 ESC, or Participating Public Agency where the Texas Education Code may be applicable, believes might compromise the safety of students, employees or property.

I, Eric Daltore, as an authorized representative of FieldTurf USA, Inc., the Offeror verify that:

A. My company **is not** owned nor operated by anyone who has been convicted of a felony.

Signature of Company Official:  Date: Sept 16, 2021

B. My company **is owned** or operated by the following individual(s) who has/have been convicted of a felony:

Name of Felon(s): \_\_\_\_\_

Details of Conviction(s) : \_\_\_\_\_

Date: \_\_\_\_\_

C. My company is a **publicly held** corporate, therefore, this reporting requirement is not applicable.

Signature of Company Official: \_\_\_\_\_ Date: \_\_\_\_\_



**SECTION 09 64 66**  
**ARCHITECTURAL SPECIFICATIONS FOR INDOOR WOOD ATHLETIC**  
**FLOORING**

**PART 1 – GENERAL**

- 1.1 *SECTION INCLUDES*
- A. Supply and installation of MFMA Maple Wood Flooring System
  - B. Application of the game lines
  - C. References for the correct construction and preparation of concrete slabs to receive flooring.
- 1.2 *SUBMITTALS*
- A. Product Data:  
Manufacturer's promotional brochures, specifications and installation instructions
  - B. Samples:
    - 1. Submit for selection and approval three (3) sets of brochures, samples or sample boards.
    - 2. Submit color samples of all the available game line paint colors for selection and approval.
  - C. Closeout Submittals:
    - 1. Submit three (3) copies of manufacturer's maintenance instructions.
    - 2. Submit three (3) copies of the material and installation warranties as specified.
- 1.3 *QUALITY ASSURANCE*
- A. Qualifications:
    - 1. The indoor surfacing shall have been actively marketed for a minimum of five (5) years.
    - 2. The MFMA Maple shall be produced by an FSC Certified Mill.
    - 3. The MFMA Maple shall be produced by a US manufacturer.
    - 4. The surfacing supplier shall be an established firm experienced in the field and appointed as a distributor by the manufacturer.
  - B. Certifications:
    - 1. Installer to submit manufacturer's or distributor's certification attesting that they are an approved installer.
  - C. Testing:  
Tests shall be relative for athletic use with certificates from independent testing resources to be made available upon request. Test results shall be no more than 5 years old and performed according to ASTM and/or EN standard testing procedures.
- 1.4 *DELIVERY, STORAGE AND HANDLING*
- A. Delivery:  
Material shall not be delivered until all related work is in place and finished and/or proper storage facilities and conditions can be provided and guaranteed stable according to FieldTurf USA, Inc. recommendations.
  - B. Storage:

**SECTION 09 64 66**  
**ARCHITECTURAL SPECIFICATIONS FOR INDOOR WOOD ATHLETIC**  
**FLOORING**

Store the material in a secure, clean and dry location. A temperature range of 55° to 78° and a relative humidity of between 35% to 50% should be maintained.

1.5 *PROJECT/SITE CONDITIONS*

- A. It is the responsibility of the general contractor/construction manager to maintain project/site conditions acceptable for the installation.
- B. The area in which the surfacing will be installed shall be dry and weather tight. Permanent heat, light and ventilation shall be installed and operable. All other trades shall have completed their work prior to installation. All overhead work which includes the installation of mechanical work, lighting, backstops, scoreboards, etc., are installed. The general contractor or Construction Manager shall maintain a secure and clean working environment before, during and after the installation.
- C. An effective low-permeance vapor barrier is placed directly beneath the concrete subfloor. For “on” or “below grade” installations, it is recommended to provide a permanent vapor barrier resistant to long term hydrostatic pressure/moisture emissions. Protrusions should be sealed to prevent moisture migration into the slab. Moisture should not be allowed to enter the slab after the completed construction.
- D. Concrete substrate to be constructed and finished in accordance with MFMA recommendations. Slab’s finish shall be no more than 1/8” deflection within a 10ft radius.
- E. Concrete subfloor must be clean and free of all foreign materials or objects.
- F. Concrete slab shall be fortified with continual steel reinforcement. Fiber reinforcement alone shall not be considered adequate fortification.

1.6 *WARRANTY*

- A. Materials:  
The maple flooring shall be covered by the manufacturer against product defects for 10 years.
- B. Installation:  
The installation shall be covered against poor workmanship and faulty installation by a two (2) year written, limited warranty provided by the contractor performing/overseeing the installation.

1.7 *ADDITIONAL MATERIALS*

Furnish to the owner additional materials containing a total of at least 1%.

**PART 2 - PRODUCTS**

2.1 *MANUFACTURERS*

The basis of the design for the surfacing is Clutch Court-FlexLock Panel as supplied by Tarkett Sports. All other installation accessories and related components must be either made or approved by the supplier. Other products may be approved as equal if deemed qualified and submitted in accordance with the General Conditions. Test reports confirming compliance from an

**SECTION 09 64 66**  
**ARCHITECTURAL SPECIFICATIONS FOR INDOOR WOOD ATHLETIC**  
**FLOORING**

Independent Sports Laboratory must be provided along with samples, technical data, installation, maintenance, and warranty prior to acceptance as an alternative product.

2.2 **MATERIALS**

Clutch Court- FlexLock Panel

A prefabricated cross air ventilated lattice system incorporating an interlocking profile for ease of installation. Floating panels are 4' x 8' double layer of 1" x 6" pine strips spaced 3" and aligned at a 45° angle. All intersecting joints of panel are double screwed at the time of construction for greater dimensional stability.

Cushion underlayment shall be a densified ½" foam cushion as provided by FieldTurf USA, Inc.

1. Physical properties of the flooring system shall conform to the following minimums:

MFMA Maple Width	.....	2 ¼"
MFMA Maple Length	.....	Random
MFMA Maple Grade	.....	2 <sup>nd</sup> or Better Northern Hard Maple
Maple Thickness	.....	25/32"
Total Thickness	.....	2 ½"
Subfloor Construction	.....	Prefabricated FlexLock Panels as provided by Tarkett Sports
Force Reduction Shock Pad	.....	½" densified premium foam cushion
Force Reduction	.....	ASTM F2772 Category 4
Ball Bounce	.....	ASTM F2772 > 90%
Vapor Barrier	.....	Minimum 6 mil-overlapped 6"-12" and taped

2. Game Line Paint:

As approved by the finish manufacturer. Colors are to be selected from the manufacturer's standard range.

**PART 3 - EXECUTION**

3.1 **EXAMINATION**

- A. It is the responsibility of the general contractor/construction manager to ensure that project/site conditions are acceptable for the installation.
- B. Verify that the area is dry and weather tight. Verify that permanent heat, light, and ventilation are installed and operable.
- C. Verify that all other work that could cause damage, dirt and dust, or interrupt the normal pace of the indoor resilient athletic flooring installation is completed.
- D. Verify that temperature and humidity are within tolerances.

**SECTION 09 64 66**  
**ARCHITECTURAL SPECIFICATIONS FOR INDOOR WOOD ATHLETIC**  
**FLOORING**

- E. Verify that there are no foreign materials or objects on the subfloor and that the subfloor is clean and ready for installation.
- F. Document the results indicating the slab is within manufacturer's tolerances for slab deviations and moisture emissions.

3.2 *PREPARATION OF SURFACES*

- A. Sweep the concrete slab so as to remove all dirt and dust.
- B. Remove debris or other contaminants that may affect installation.

3.3 *INSTALLATION*

- A. The installation area shall be closed to all traffic and activity for a period to be set by the installer. The installation shall not begin until the installer is familiar with the existing conditions.
- B. All necessary precautions should be taken to minimize noise, smell, dust, the use of hazardous materials and any other items that may inconvenience others.
- C. Install in strict accordance with the manufacturer's written instructions.
- D. Paint game lines using approved game line paint in strict accordance with the game line paint manufacturer's instructions.
- E. Apply seal and finish coats according to manufacturer's instructions. Use only MFMA approved sealers and finishes.
- F. Install appropriate threshold plates or transition strips where necessary.
- G. Vented base is required. Install molded vented cove base along all vertical abutments. Pre-molded or field mitered outside corners are acceptable. Inside corners are to be field mitered. Corners and seams are to be installed flush with no gaps. Treat door casings or other vertical abutments not to receive vented cove according to manufacturer's recommendations.

3.4 *CLEANING*

- A. Remove all unused materials, tools, and equipment and dispose of any debris properly.

3.5 *PROTECTION*

If required, protect the indoor resilient athletic surfacing from damage using coverings approved by the manufacturer until acceptance of work by the customer or their authorized representative.

3.5 *RELATED STANDARDS AND GUIDELINES*

- A. ASTM F1869 "Standard Test Method for Measuring Moisture Evaporation Rate of Concrete Subfloor Using Anhydrous Calcium Chloride"
- B. ACI 302.2R-06 "Guideline for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials"
- C. MFMA – Maple Flooring Manufacturer's Association

**END OF SECTION**

**SECTION 09 64 66**  
**ARCHITECTURAL SPECIFICATIONS FOR INDOOR WOOD ATHLETIC**  
**FLOORING**

**PART 1 – GENERAL**

- 1.1 *SECTION INCLUDES*
- A. Supply and installation of MFMA Maple Wood Flooring System
  - B. Application of the game lines
  - C. References for the correct construction and preparation of concrete slabs to receive flooring.
- 1.2 *SUBMITTALS*
- A. Product Data:  
Manufacturer's promotional brochures, specifications and installation instructions
  - B. Samples:
    - 1. Submit for selection and approval three (3) sets of brochures, samples or sample boards.
    - 2. Submit color samples of all the available game line paint colors for selection and approval.
  - C. Closeout Submittals:
    - 1. Submit three (3) copies of manufacturer's maintenance instructions.
    - 2. Submit three (3) copies of the material and installation warranties as specified.
- 1.3 *QUALITY ASSURANCE*
- A. Qualifications:
    - 1. The indoor surfacing shall have been actively marketed for a minimum of five (5) years.
    - 2. The MFMA Maple shall be produced by an FSC Certified Mill.
    - 3. The MFMA Maple shall be produced by a US manufacturer.
    - 4. The surfacing supplier shall be an established firm experienced in the field and appointed as a distributor by the manufacturer.
  - B. Certifications:
    - 1. Installer to submit manufacturer's or distributor's certification attesting that they are an approved installer.
  - C. Testing:  
Tests shall be relative for athletic use with certificates from independent testing resources to be made available upon request. Test results shall be no more than 5 years old and performed according to ASTM and/or EN standard testing procedures.
- 1.4 *DELIVERY, STORAGE AND HANDLING*
- A. Delivery:  
Material shall not be delivered until all related work is in place and finished and/or proper storage facilities and conditions can be provided and guaranteed stable according to FieldTurf USA, Inc. recommendations.
  - B. Storage:

**SECTION 09 64 66**  
**ARCHITECTURAL SPECIFICATIONS FOR INDOOR WOOD ATHLETIC**  
**FLOORING**

Store the material in a secure, clean and dry location. A temperature range of 55° to 78° and a relative humidity of between 35% to 50% should be maintained.

1.5 *PROJECT/SITE CONDITIONS*

- A. It is the responsibility of the general contractor/construction manager to maintain project/site conditions acceptable for the installation.
- B. The area in which the surfacing will be installed shall be dry and weather tight. Permanent heat, light and ventilation shall be installed and operable. All other trades shall have completed their work prior to installation. All overhead work which includes the installation of mechanical work, lighting, backstops, scoreboards, etc., are installed. The general contractor or Construction Manager shall maintain a secure and clean working environment before, during and after the installation.
- C. An effective low-permeance vapor barrier is placed directly beneath the concrete subfloor. For “on” or “below grade” installations, it is recommended to provide a permanent vapor barrier resistant to long term hydrostatic pressure/moisture emissions. Protrusions should be sealed to prevent moisture migration into the slab. Moisture should not be allowed to enter the slab after the completed construction.
- D. Concrete substrate to be constructed and finished in accordance with MFMA recommendations. Slab’s finish shall be no more than 1/8” deflection within a 10ft radius.
- E. Concrete subfloor must be clean and free of all foreign materials or objects.
- F. Concrete slab shall be fortified with continual steel reinforcement. Fiber reinforcement alone shall not be considered adequate fortification.

1.6 *WARRANTY*

- A. Materials:  
The maple flooring shall be covered by the manufacturer against product defects for 10 years.
- B. Installation:  
The installation shall be covered against poor workmanship and faulty installation by a two (2) year written, limited warranty provided by the contractor performing/overseeing the installation.

1.7 *ADDITIONAL MATERIALS*

Furnish to the owner additional materials containing a total of at least 1%.

**PART 2 - PRODUCTS**

2.1 *MANUFACTURERS*

The basis of the design for the surfacing is Clutch Court-Performance Anchor as supplied by FieldTurf USA, Inc. All other installation accessories and related components must be either made or approved by the supplier. Other products may be approved as equal if deemed qualified and submitted in accordance with the General Conditions. Test reports confirming compliance from an

**SECTION 09 64 66**  
**ARCHITECTURAL SPECIFICATIONS FOR INDOOR WOOD ATHLETIC**  
**FLOORING**

Independent Sports Laboratory must be provided along with samples, technical data, installation, maintenance, and warranty prior to acceptance as an alternative product.

2.2 **MATERIALS**

Clutch Court- Performance Anchor System

1. Physical properties of the flooring system shall conform to the following minimums:

MFMA Maple Width	.....	2 ¼"
MFMA Maple Length	.....	Random
Maple Thickness	.....	25/32"
Total System Thickness	.....	2 1/2"
Subfloor Construction	.....	Tarkett Sports engineered 4ft x 8ft panels.
Force Reduction Shock Pad	.....	¾" TPR Shock Pad supplied by Tarkett Sports
MFMA Maple Grade	.....	2 <sup>nd</sup> or Better Northern Hard Maple
Vapor Barrier	.....	Minimum 6 mil-overlapped 6"-12" and taped
ASTM F2772 Classification	.....	Category 4

2. Game Line Paint:

As approved by the finish manufacturer. Colors are to be selected from the manufacturer's standard range.

**PART 3 - EXECUTION**

3.1 **EXAMINATION**

- A. It is the responsibility of the general contractor/construction manager to ensure that project/site conditions are acceptable for the installation.
- B. Verify that the area is dry and weather tight. Verify that permanent heat, light, and ventilation are installed and operable.
- C. Verify that all other work that could cause damage, dirt and dust, or interrupt the normal pace of the indoor resilient athletic flooring installation is completed.
- D. Verify that temperature and humidity are within tolerances.
- E. Verify that there are no foreign materials or objects on the subfloor and that the subfloor is clean and ready for installation.
- F. Document the results indicating the slab is within manufacturer's tolerances for slab deviations and moisture emissions.

3.2 **PREPARATION OF SURFACES**

- A. Sweep the concrete slab so as to remove all dirt and dust.
- B. Remove debris or other contaminants that may affect installation.

**SECTION 09 64 66**  
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3.3 *INSTALLATION*

- A. The installation area shall be closed to all traffic and activity for a period to be set by the installer. The installation shall not begin until the installer is familiar with the existing conditions.
- B. All necessary precautions should be taken to minimize noise, smell, dust, the use of hazardous materials and any other items that may inconvenience others.
- C. Install in strict accordance with the manufacturer's written instructions.
- D. Paint game lines using approved game line paint in strict accordance with the game line paint manufacturer's instructions.
- E. Apply seal and finish coats according to manufacturer's instructions. Use only MFMA approved sealers and finishes.
- F. Install appropriate threshold plates or transition strips where necessary.
- G. Vented base is required. Install molded vented cove base along all vertical abutments. Pre-molded or field mitered outside corners are acceptable. Inside corners are to be field mitered. Corners and seams are to be installed flush with no gaps. Treat door casings or other vertical abutments not to receive vented cove according to manufacturer's recommendations.

3.4 *CLEANING*

- A. Remove all unused materials, tools, and equipment and dispose of any debris properly.

3.5 *PROTECTION*

If required, protect the indoor resilient athletic surfacing from damage using coverings approved by the manufacturer until acceptance of work by the customer or their authorized representative.

3.5 RELATED STANDARDS AND GUIDELINES

- A. ASTM F1869 "Standard Test Method for Measuring Moisture Evaporation Rate of Concrete Subfloor Using Anhydrous Calcium Chloride"
- B. ACI 302.2R-06 "Guideline for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials"
- C. MFMA – Maple Flooring Manufacturer's Association

**END OF SECTION**



**SECTION 09 64 66**  
**ARCHITECTURAL SPECIFICATIONS FOR INDOOR WOOD ATHLETIC**  
**FLOORING**

**PART 1 – GENERAL**

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    - 3. The MFMA Maple shall be produced by a US manufacturer.
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- 1.4 *DELIVERY, STORAGE AND HANDLING*
- A. Delivery:  
Material shall not be delivered until all related work is in place and finished and/or proper storage facilities and conditions can be provided and guaranteed stable according to FieldTurf USA, Inc. recommendations.
  - B. Storage:

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**FLOORING**

Store the material in a secure, clean and dry location. A temperature range of 55° to 78° and a relative humidity of between 35% to 50% should be maintained.

1.5 *PROJECT/SITE CONDITIONS*

- A. It is the responsibility of the general contractor/construction manager to maintain project/site conditions acceptable for the installation.
- B. The area in which the surfacing will be installed shall be dry and weather tight. Permanent heat, light and ventilation shall be installed and operable. All other trades shall have completed their work prior to installation. All overhead work which includes the installation of mechanical work, lighting, backstops, scoreboards, etc., are installed. The general contractor or Construction Manager shall maintain a secure and clean working environment before, during and after the installation.
- C. An effective low-permeance vapor barrier is placed directly beneath the concrete subfloor. For “on” or “below grade” installations, it is recommended to provide a permanent vapor barrier resistant to long term hydrostatic pressure/moisture emissions. Protrusions should be sealed to prevent moisture migration into the slab. Moisture should not be allowed to enter the slab after the completed construction.
- D. Concrete substrate to be constructed and finished in accordance with MFMA recommendations. Slab’s finish shall be no more than 1/8” deflection within a 10ft radius.
- E. Concrete subfloor must be clean and free of all foreign materials or objects.
- F. Concrete slab shall be fortified with continual steel reinforcement. Fiber reinforcement alone shall not be considered adequate fortification.

1.6 *WARRANTY*

- A. Materials:  
The maple flooring shall be covered by the manufacturer against product defects for 10 years.
- B. Installation:  
The installation shall be covered against poor workmanship and faulty installation by a two (2) year written, limited warranty provided by the contractor performing/overseeing the installation.

1.7 *ADDITIONAL MATERIALS*

Furnish to the owner additional materials containing a total of at least 1%.

**PART 2 - PRODUCTS**

2.1 *MANUFACTURERS*

The basis of the design for the surfacing is Clutch Court-Performance as supplied by FieldTurf USA, Inc. All other installation accessories and related components must be either made or approved by the supplier. Other products may be approved as equal if deemed qualified and submitted in accordance with the General Conditions. Test reports confirming compliance from an

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**FLOORING**

Independent Sports Laboratory must be provided along with samples, technical data, installation, maintenance, and warranty prior to acceptance as an alternative product.

2.2 *MATERIALS*

Clutch Court- Performance System

1. Physical properties of the flooring system shall conform to the following minimums:

MFMA Maple Width	.....	2 ¼"
MFMA Maple Length	.....	Random
Maple Thickness	.....	25/32"
Total Thickness		2 ½"
Subfloor Construction	.....	2 layers of 15/32" APA rated plywood minimum of 4 ply per panel
Force Reduction Shock Pad	.....	¾" TPR Shock Pad supplied by Tarkett Sports
MFMA Maple Grade	.....	2 <sup>nd</sup> or Better Northern Hard Maple
Vapor Barrier	.....	Minimum 6 mil-overlapped 6"-12" and taped
ASTM F2772 Classification	.....	Class 5

2. Game Line Paint:

As approved by the finish manufacturer. Colors are to be selected from the manufacturer's standard range.

**PART 3 - EXECUTION**

3.1 *EXAMINATION*

- A. It is the responsibility of the general contractor/construction manager to ensure that project/site conditions are acceptable for the installation.
- B. Verify that the area is dry and weather tight. Verify that permanent heat, light, and ventilation are installed and operable.
- C. Verify that all other work that could cause damage, dirt and dust, or interrupt the normal pace of the indoor resilient athletic flooring installation is completed.
- D. Verify that temperature and humidity are within tolerances.
- E. Verify that there are no foreign materials or objects on the subfloor and that the subfloor is clean and ready for installation.
- F. Document the results indicating the slab is within manufacturer's tolerances for slab deviations and moisture emissions.

3.2 *PREPARATION OF SURFACES*

- A. Sweep the concrete slab so as to remove all dirt and dust.
- B. Remove debris or other contaminants that may affect installation.

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3.3 *INSTALLATION*

- A. The installation area shall be closed to all traffic and activity for a period to be set by the installer. The installation shall not begin until the installer is familiar with the existing conditions.
- B. All necessary precautions should be taken to minimize noise, smell, dust, the use of hazardous materials and any other items that may inconvenience others.
- C. Install in strict accordance with the manufacturer's written instructions.
- D. Paint game lines using approved game line paint in strict accordance with the game line paint manufacturer's instructions.
- E. Apply seal and finish coats according to manufacturer's instructions. Use only MFMA approved sealers and finishes.
- F. Install appropriate threshold plates or transition strips where necessary.
- G. Vented base is required. Install molded vented cove base along all vertical abutments. Pre-molded or field mitered outside corners are acceptable. Inside corners are to be field mitered. Corners and seams are to be installed flush with no gaps. Treat door casings or other vertical abutments not to receive vented cove according to manufacturer's recommendations.

3.4 *CLEANING*

- A. Remove all unused materials, tools, and equipment and dispose of any debris properly.

3.5 *PROTECTION*

If required, protect the indoor resilient athletic surfacing from damage using coverings approved by the manufacturer until acceptance of work by the customer or their authorized representative.

3.5 RELATED STANDARDS AND GUIDELINES

- A. ASTM F1869 "Standard Test Method for Measuring Moisture Evaporation Rate of Concrete Subfloor Using Anhydrous Calcium Chloride"
- B. ACI 302.2R-06 "Guideline for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials"
- C. MFMA – Maple Flooring Manufacturer's Association

**END OF SECTION**

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**FLOORING**

**PART 1 – GENERAL**

- 1.1 *SECTION INCLUDES*
- A. Supply and installation of MFMA Maple Wood Flooring System
  - B. Application of the game lines
  - C. References for the correct construction and preparation of concrete slabs to receive flooring.
- 1.2 *SUBMITTALS*
- A. Product Data:  
Manufacturer's promotional brochures, specifications and installation instructions
  - B. Samples:
    - 1. Submit for selection and approval three (3) sets of brochures, samples or sample boards.
    - 2. Submit color samples of all the available game line paint colors for selection and approval.
  - C. Closeout Submittals:
    - 1. Submit three (3) copies of manufacturer's maintenance instructions.
    - 2. Submit three (3) copies of the material and installation warranties as specified.
- 1.3 *QUALITY ASSURANCE*
- A. Qualifications:
    - 1. The indoor surfacing shall have been actively marketed for a minimum of five (5) years.
    - 2. The MFMA Maple shall be produced by an FSC Certified Mill.
    - 3. The MFMA Maple shall be produced by a US manufacturer.
    - 4. The surfacing supplier shall be an established firm experienced in the field and appointed as a distributor by the manufacturer.
  - B. Certifications:
    - 1. Installer to submit manufacturer's or distributor's certification attesting that they are an approved installer.
  - C. Testing:  
Tests shall be relative for athletic use with certificates from independent testing resources to be made available upon request. Test results shall be no more than 5 years old and performed according to ASTM and/or EN standard testing procedures.
- 1.4 *DELIVERY, STORAGE AND HANDLING*
- A. Delivery:  
Material shall not be delivered until all related work is in place and finished and/or proper storage facilities and conditions can be provided and guaranteed stable according to FieldTurf USA, Inc. recommendations.
  - B. Storage:

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**FLOORING**

Store the material in a secure, clean and dry location. A temperature range of 55° to 78° and a relative humidity of between 35% to 50% should be maintained.

1.5 *PROJECT/SITE CONDITIONS*

- A. It is the responsibility of the general contractor/construction manager to maintain project/site conditions acceptable for the installation.
- B. The area in which the surfacing will be installed shall be dry and weather tight. Permanent heat, light and ventilation shall be installed and operable. All other trades shall have completed their work prior to installation. All overhead work which includes the installation of mechanical work, lighting, backstops, scoreboards, etc., are installed. The general contractor or Construction Manager shall maintain a secure and clean working environment before, during and after the installation.
- C. An effective low-permeance vapor barrier is placed directly beneath the concrete subfloor. For “on” or “below grade” installations, it is recommended to provide a permanent vapor barrier resistant to long term hydrostatic pressure/moisture emissions. Protrusions should be sealed to prevent moisture migration into the slab. Moisture should not be allowed to enter the slab after the completed construction.
- D. Concrete substrate to be constructed and finished in accordance with MFMA recommendations. Slab’s finish shall be no more than 1/8” deflection within a 10ft radius.
- E. Concrete subfloor must be clean and free of all foreign materials or objects.
- F. Concrete slab shall be fortified with continual steel reinforcement. Fiber reinforcement alone shall not be considered adequate fortification.

1.6 *WARRANTY*

- A. Materials:  
The maple flooring shall be covered by the manufacturer against product defects for 10 years.
- B. Installation:  
The installation shall be covered against poor workmanship and faulty installation by a two (2) year written, limited warranty provided by the contractor performing/overseeing the installation.

1.7 *ADDITIONAL MATERIALS*

Furnish to the owner additional materials containing a total of at least 1%.

**PART 2 - PRODUCTS**

2.1 *MANUFACTURERS*

The basis of the design for the surfacing is Clutch Court-Trainer 1 as supplied by FieldTurf USA, Inc. All other installation accessories and related components must be either made or approved by the supplier. Other products may be approved as equal if deemed qualified and submitted in accordance with the General Conditions. Test reports confirming compliance from an Independent

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Sports Laboratory must be provided along with samples, technical data, installation, maintenance, and warranty prior to acceptance as an alternative product.

2.2 *MATERIALS*

Clutch Court- Trainer 1

1. Physical properties of the flooring system shall conform to the following minimums:

MFMA Maple Width	.....	2 1/8"
MFMA Maple Length	.....	Random
Maple Thickness	.....	25/32"
MFMA Maple Grade	.....	2 <sup>nd</sup> or Better Northern Hard Maple
Total Thickness		2 5/8"
Subfloor Construction	.....	2" x 3" Pine Sleepers 4' or 8' length. Spaced 12" OC. over 3/8" Synthetic Trainer Cushion spaced 9" along length.
Force Reduction	.....	ASTM F2772 Category 2
Ball Bounce		ASTM F2772 > 90%
Vapor Barrier	.....	Minimum 6 mil-overlapped 6"-12" and taped
Finish	.....	As selected from MFMA Certified finish providers.

2. Game Line Paint:

As approved by the finish manufacturer. Colors are to be selected from the manufacturer's standard range.

**PART 3 - EXECUTION**

3.1 *EXAMINATION*

- A. It is the responsibility of the general contractor/construction manager to ensure that project/site conditions are acceptable for the installation.
- B. Verify that the area is dry and weather tight. Verify that permanent heat, light, and ventilation are installed and operable.
- C. Verify that all other work that could cause damage, dirt and dust, or interrupt the normal pace of the indoor resilient athletic flooring installation is completed.
- D. Verify that temperature and humidity are within tolerances.
- E. Verify that there are no foreign materials or objects on the subfloor and that the subfloor is clean and ready for installation.
- F. Document the results indicating the slab is within manufacturer's tolerances for slab deviations and moisture emissions.

3.2 *PREPARATION OF SURFACES*

- A. Sweep the concrete slab so as to remove all dirt and dust.
- B. Remove debris or other contaminants that may affect installation.

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3.3 *INSTALLATION*

- A. The installation area shall be closed to all traffic and activity for a period to be set by the installer. The installation shall not begin until the installer is familiar with the existing conditions.
- B. All necessary precautions should be taken to minimize noise, smell, dust, the use of hazardous materials and any other items that may inconvenience others.
- C. Install in strict accordance with the manufacturer's written instructions.
- D. Paint game lines using approved game line paint in strict accordance with the game line paint manufacturer's instructions.
- E. Apply seal and finish coats according to manufacturer's instructions. Use only MFMA approved sealers and finishes.
- F. Install appropriate threshold plates or transition strips where necessary.
- G. Vented base is required. Install molded vented cove base along all vertical abutments. Pre-molded or field mitered outside corners are acceptable. Inside corners are to be field mitered. Corners and seams are to be installed flush with no gaps. Treat door casings or other vertical abutments not to receive vented cove according to manufacturer's recommendations.

3.4 *CLEANING*

- A. Remove all unused materials, tools, and equipment and dispose of any debris properly.

3.5 *PROTECTION*

If required, protect the indoor resilient athletic surfacing from damage using coverings approved by the manufacturer until acceptance of work by the customer or their authorized representative.

3.5 RELATED STANDARDS AND GUIDELINES

- A. ASTM F1869 "Standard Test Method for Measuring Moisture Evaporation Rate of Concrete Subfloor Using Anhydrous Calcium Chloride"
- B. ACI 302.2R-06 "Guideline for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials"
- C. MFMA – Maple Flooring Manufacturer's Association

**END OF SECTION**



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**FLOORING**

**PART 1 – GENERAL**

- 1.1 *SECTION INCLUDES*
- A. Supply and installation of MFMA Maple Wood Flooring System
  - B. Application of the game lines
  - C. References for the correct construction and preparation of concrete slabs to receive flooring.
- 1.2 *SUBMITTALS*
- A. Product Data:  
Manufacturer's promotional brochures, specifications and installation instructions
  - B. Samples:
    - 1. Submit for selection and approval three (3) sets of brochures, samples or sample boards.
    - 2. Submit color samples of all the available game line paint colors for selection and approval.
  - C. Closeout Submittals:
    - 1. Submit three (3) copies of manufacturer's maintenance instructions.
    - 2. Submit three (3) copies of the material and installation warranties as specified.
- 1.3 *QUALITY ASSURANCE*
- A. Qualifications:
    - 1. The indoor surfacing shall have been actively marketed for a minimum of five (5) years.
    - 2. The MFMA Maple shall be produced by an FSC Certified Mill.
    - 3. The MFMA Maple shall be produced by a US manufacturer.
    - 4. The surfacing supplier shall be an established firm experienced in the field and appointed as a distributor by the manufacturer.
  - B. Certifications:
    - 1. Installer to submit manufacturer's or distributor's certification attesting that they are an approved installer.
  - C. Testing:  
Tests shall be relative for athletic use with certificates from independent testing resources to be made available upon request. Test results shall be no more than 5 years old and performed according to ASTM and/or EN standard testing procedures.
- 1.4 *DELIVERY, STORAGE AND HANDLING*
- A. Delivery:  
Material shall not be delivered until all related work is in place and finished and/or proper storage facilities and conditions can be provided and guaranteed stable according to FieldTurf USA, Inc. recommendations.
  - B. Storage:

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Store the material in a secure, clean and dry location. A temperature range of 55° to 78° and a relative humidity of between 35% to 50% should be maintained.

1.5 *PROJECT/SITE CONDITIONS*

- A. It is the responsibility of the general contractor/construction manager to maintain project/site conditions acceptable for the installation.
- B. The area in which the surfacing will be installed shall be dry and weather tight. Permanent heat, light and ventilation shall be installed and operable. All other trades shall have completed their work prior to installation. All overhead work which includes the installation of mechanical work, lighting, backstops, scoreboards, etc., are installed. The general contractor or Construction Manager shall maintain a secure and clean working environment before, during and after the installation.
- C. An effective low-permeance vapor barrier is placed directly beneath the concrete subfloor. For “on” or “below grade” installations, it is recommended to provide a permanent vapor barrier resistant to long term hydrostatic pressure/moisture emissions. Protrusions should be sealed to prevent moisture migration into the slab. Moisture should not be allowed to enter the slab after the completed construction.
- D. Concrete substrate to be constructed and finished in accordance with MFMA recommendations. Slab’s finish shall be no more than 1/8” deflection within a 10ft radius.
- E. Concrete subfloor must be clean and free of all foreign materials or objects.
- F. Concrete slab shall be fortified with continual steel reinforcement. Fiber reinforcement alone shall not be considered adequate fortification.

1.6 *WARRANTY*

- A. Materials:  
The maple flooring shall be covered by the manufacturer against product defects for 10 years.
- B. Installation:  
The installation shall be covered against poor workmanship and faulty installation by a two (2) year written, limited warranty provided by the contractor performing/overseeing the installation.

1.7 *ADDITIONAL MATERIALS*

Furnish to the owner additional materials containing a total of at least 1%.

**PART 2 - PRODUCTS**

2.1 *MANUFACTURERS*

The basis of the design for the surfacing is Clutch Court-Trainer 2 as supplied by FieldTurf USA, Inc. All other installation accessories and related components must be either made or approved by the supplier. Other products may be approved as equal if deemed qualified and submitted in accordance with the General Conditions. Test reports confirming compliance from an Independent

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Sports Laboratory must be provided along with samples, technical data, installation, maintenance, and warranty prior to acceptance as an alternative product.

2.2 **MATERIALS**

Clutch Court- Trainer 2

1. Physical properties of the flooring system shall conform to the following minimums:

MFMA Maple Width	.....	2 ¼"
MFMA Maple Length	.....	Random
Maple Thickness	.....	25/32"
MFMA Maple Grade	.....	2 <sup>nd</sup> or Better Northern Hard Maple
Total Thickness		3 1/8"
Subfloor Construction	.....	1 layer of 15/32" APA rated 4 ply plywood over 2" x 3" Pine Sleepers 4' or 8' in length. Spaced 12" OC over 3/8" Synthetic Trainer Cushion spaced 12" along length.
Force Reduction	.....	ASTM F2772 Category 2
Ball Bounce		ASTM F2772 > 90%
Vapor Barrier	.....	Minimum 6 mil-overlapped 6"-12" and taped
Finish	.....	As selected from MFMA Certified finish providers.

2. Game Line Paint:

As approved by the finish manufacturer. Colors are to be selected from the manufacturer's standard range.

**PART 3 - EXECUTION**

3.1 **EXAMINATION**

- A. It is the responsibility of the general contractor/construction manager to ensure that project/site conditions are acceptable for the installation.
- B. Verify that the area is dry and weather tight. Verify that permanent heat, light, and ventilation are installed and operable.
- C. Verify that all other work that could cause damage, dirt and dust, or interrupt the normal pace of the indoor resilient athletic flooring installation is completed.
- D. Verify that temperature and humidity are within tolerances.
- E. Verify that there are no foreign materials or objects on the subfloor and that the subfloor is clean and ready for installation.
- F. Document the results indicating the slab is within manufacturer's tolerances for slab deviations and moisture emissions.

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3.2 *PREPARATION OF SURFACES*

- A. Sweep the concrete slab so as to remove all dirt and dust.
- B. Remove debris or other contaminants that may affect installation.

3.3 *INSTALLATION*

- A. The installation area shall be closed to all traffic and activity for a period to be set by the installer. The installation shall not begin until the installer is familiar with the existing conditions.
- B. All necessary precautions should be taken to minimize noise, smell, dust, the use of hazardous materials and any other items that may inconvenience others.
- C. Install in strict accordance with the manufacturer's written instructions.
- D. Paint game lines using approved game line paint in strict accordance with the game line paint manufacturer's instructions.
- E. Apply seal and finish coats according to manufacturer's instructions. Use only MFMA approved sealers and finishes.
- F. Install appropriate threshold plates or transition strips where necessary.
- G. Vented base is required. Install molded vented cove base along all vertical abutments. Pre-molded or field mitered outside corners are acceptable. Inside corners are to be field mitered. Corners and seams are to be installed flush with no gaps. Treat door casings or other vertical abutments not to receive vented cove according to manufacturer's recommendations.

3.4 *CLEANING*

- A. Remove all unused materials, tools, and equipment and dispose of any debris properly.

3.5 *PROTECTION*

If required, protect the indoor resilient athletic surfacing from damage using coverings approved by the manufacturer until acceptance of work by the customer or their authorized representative.

3.5 RELATED STANDARDS AND GUIDELINES

- A. ASTM F1869 "Standard Test Method for Measuring Moisture Evaporation Rate of Concrete Subfloor Using Anhydrous Calcium Chloride"
- B. ACI 302.2R-06 "Guideline for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials"
- C. MFMA – Maple Flooring Manufacturer's Association

**END OF SECTION**

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**FLOORING**

**PART 1 – GENERAL**

- 1.1 *SECTION INCLUDES*
- A. Supply and installation of MFMA Maple Wood Flooring System
  - B. Application of the game lines
  - C. References for the correct construction and preparation of concrete slabs to receive flooring.
- 1.2 *SUBMITTALS*
- A. Product Data:  
Manufacturer's promotional brochures, specifications and installation instructions
  - B. Samples:
    - 1. Submit for selection and approval three (3) sets of brochures, samples or sample boards.
    - 2. Submit color samples of all the available game line paint colors for selection and approval.
  - C. Closeout Submittals:
    - 1. Submit three (3) copies of manufacturer's maintenance instructions.
    - 2. Submit three (3) copies of the material and installation warranties as specified.
- 1.3 *QUALITY ASSURANCE*
- A. Qualifications:
    - 1. The indoor surfacing shall have been actively marketed for a minimum of five (5) years.
    - 2. The MFMA Maple shall be produced by an FSC Certified Mill.
    - 3. The MFMA Maple shall be produced by a US manufacturer.
    - 4. The surfacing supplier shall be an established firm experienced in the field and appointed as a distributor by the manufacturer.
  - B. Certifications:
    - 1. Installer to submit manufacturer's or distributor's certification attesting that they are an approved installer.
  - C. Testing:  
Tests shall be relative for athletic use with certificates from independent testing resources to be made available upon request. Test results shall be no more than 5 years old and performed according to ASTM and/or EN standard testing procedures.
- 1.4 *DELIVERY, STORAGE AND HANDLING*
- A. Delivery:  
Material shall not be delivered until all related work is in place and finished and/or proper storage facilities and conditions can be provided and guaranteed stable according to FieldTurf USA, Inc. recommendations.
  - B. Storage:

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Store the material in a secure, clean and dry location. A temperature range of 55° to 78° and a relative humidity of between 35% to 50% should be maintained.

1.5 *PROJECT/SITE CONDITIONS*

- A. It is the responsibility of the general contractor/construction manager to maintain project/site conditions acceptable for the installation.
- B. The area in which the surfacing will be installed shall be dry and weather tight. Permanent heat, light and ventilation shall be installed and operable. All other trades shall have completed their work prior to installation. All overhead work which includes the installation of mechanical work, lighting, backstops, scoreboards, etc., are installed. The general contractor or Construction Manager shall maintain a secure and clean working environment before, during and after the installation.
- C. An effective low-permeance vapor barrier is placed directly beneath the concrete subfloor. For “on” or “below grade” installations, it is recommended to provide a permanent vapor barrier resistant to long term hydrostatic pressure/moisture emissions. Protrusions should be sealed to prevent moisture migration into the slab. Moisture should not be allowed to enter the slab after the completed construction.
- D. Concrete substrate to be constructed and finished in accordance with MFMA recommendations. Slab’s finish shall be no more than 1/8” deflection within a 10ft radius.
- E. Concrete subfloor must be clean and free of all foreign materials or objects.
- F. Concrete slab shall be fortified with continual steel reinforcement. Fiber reinforcement alone shall not be considered adequate fortification.

1.6 *WARRANTY*

- A. Materials:  
The maple flooring shall be covered by the manufacturer against product defects for 10 years.
- B. Installation:  
The installation shall be covered against poor workmanship and faulty installation by a two (2) year written, limited warranty provided by the contractor performing/overseeing the installation.

1.7 *ADDITIONAL MATERIALS*

Furnish to the owner additional materials containing a total of at least 1%.

**PART 2 - PRODUCTS**

2.1 *MANUFACTURERS*

The basis of the design for the surfacing is Clutch Court-Trainer 3 as supplied by FieldTurf USA, Inc. All other installation accessories and related components must be either made or approved by the supplier. Other products may be approved as equal if deemed qualified and submitted in accordance with the General Conditions. Test reports confirming compliance from an Independent

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Sports Laboratory must be provided along with samples, technical data, installation, maintenance, and warranty prior to acceptance as an alternative product.

**2.2 MATERIALS**

Clutch Court- Trainer 3

1. Physical properties of the flooring system shall conform to the following minimums:

MFMA Maple Width	.....	2 ¼"
MFMA Maple Length	.....	Random
Maple Thickness	.....	25/32"
Total Thickness		2 ½"
Subfloor Construction	.....	2 layers of 15/32" APA rated plywood minimum of 4 ply per panel
Force Reduction Shock Pad	.....	3/8" Resilient Shock Pad supplied by Tarkett Sports
MFMA Maple Grade	.....	2 <sup>nd</sup> or Better Northern Hard Maple
Vapor Barrier	.....	Minimum 6 mil-overlapped 6"-12" and taped

2. Game Line Paint:

As approved by the finish manufacturer. Colors are to be selected from the manufacturer's standard range.

**PART 3 - EXECUTION**

**3.1 EXAMINATION**

- A. It is the responsibility of the general contractor/construction manager to ensure that project/site conditions are acceptable for the installation.
- B. Verify that the area is dry and weather tight. Verify that permanent heat, light, and ventilation are installed and operable.
- C. Verify that all other work that could cause damage, dirt and dust, or interrupt the normal pace of the indoor resilient athletic flooring installation is completed.
- D. Verify that temperature and humidity are within tolerances.
- E. Verify that there are no foreign materials or objects on the subfloor and that the subfloor is clean and ready for installation.
- F. Document the results indicating the slab is within manufacturer's tolerances for slab deviations and moisture emissions.

**3.2 PREPARATION OF SURFACES**

- A. Sweep the concrete slab so as to remove all dirt and dust.
- B. Remove debris or other contaminants that may affect installation.

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3.3 *INSTALLATION*

- A. The installation area shall be closed to all traffic and activity for a period to be set by the installer. The installation shall not begin until the installer is familiar with the existing conditions.
- B. All necessary precautions should be taken to minimize noise, smell, dust, the use of hazardous materials and any other items that may inconvenience others.
- C. Install in strict accordance with the manufacturer's written instructions.
- D. Paint game lines using approved game line paint in strict accordance with the game line paint manufacturer's instructions.
- E. Apply seal and finish coats according to manufacturer's instructions. Use only MFMA approved sealers and finishes.
- F. Install appropriate threshold plates or transition strips where necessary.
- G. Vented base is required. Install molded vented cove base along all vertical abutments. Pre-molded or field mitered outside corners are acceptable. Inside corners are to be field mitered. Corners and seams are to be installed flush with no gaps. Treat door casings or other vertical abutments not to receive vented cove according to manufacturer's recommendations.

3.4 *CLEANING*

- A. Remove all unused materials, tools, and equipment and dispose of any debris properly.

3.5 *PROTECTION*

If required, protect the indoor resilient athletic surfacing from damage using coverings approved by the manufacturer until acceptance of work by the customer or their authorized representative.

3.5 RELATED STANDARDS AND GUIDELINES

- A. ASTM F1869 "Standard Test Method for Measuring Moisture Evaporation Rate of Concrete Subfloor Using Anhydrous Calcium Chloride"
- B. ACI 302.2R-06 "Guideline for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials"
- C. MFMA – Maple Flooring Manufacturer's Association

**END OF SECTION**



**SECTION 09 65 66**  
**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

***PART 1 – GENERAL***

1.1 *SECTION INCLUDES*

- A. Supply and installation of the indoor resilient multipurpose surfacing
- B. Application of the game lines
- C. References for the correct construction and preparation of concrete slabs to receive resilient flooring.

1.2 *SUBMITTALS*

- A. Product Data:
  - 1. Manufacturer's promotional brochures, specifications and installation instructions
- B. Manufacturer Certifications:
  - 1. Provide certification that accurately identifies the Original Equipment Manufacturer (OEM) of flooring furnished for this project including manufacturer's name, address and factory location.
  - 2. Suppliers of private label flooring for this project must identify themselves as such and fully disclose the OEM information listed above.
  - 3. All "manufacturer" requirements in these specifications must be complied with by the OEM, including warranties, certifications, qualifications, product data, test results, environmental requirements, performance data, etc.
- C. Samples:
  - 1. Submit for selection and approval three (3) sets of the indoor resilient multipurpose surfacing, manufacturer's brochures, samples or sample boards of all of the available colors, textures and styles.
  - 2. Submit color samples of all the available game line paint colors for selection and approval.
- D. Closeout Submittals:
  - 1. Submit three (3) copies of the indoor resilient multipurpose surfacing and manufacturer's maintenance instructions.
  - 2. Submit three (3) copies of the material and installation warranties as specified.

1.3 *QUALITY ASSURANCE*

- A. Qualifications:
  - 1. The indoor resilient multipurpose surfacing shall have been actively marketed for a minimum of ten (10) years.
  - 2. The indoor resilient multipurpose surfacing shall be manufactured in an ISO 9001 certified plant.
  - 3. The indoor resilient multipurpose surfacing shall be manufactured in an ISO 14001 certified plant.
  - 4. The indoor resilient multipurpose surfacing supplier shall be an established firm, experienced in the field, and competent in the techniques required by the manufacturer.
  - 5. The installer of the indoor resilient multipurpose surfacing shall have a minimum of five (5) years of experience in the field installing indoor resilient multipurpose surfacing and have worked on at least five (5) projects of similar size, type and complexity.

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

- B. Certifications:
  - 1. Installer to submit the indoor resilient athletic surfacing manufacturer's or distributor's certification attesting that they are an approved installer of the indoor resilient multipurpose surfacing.
  - 2. The indoor resilient multipurpose surfacing manufacturer to submit official ISO 9001 certification for the facility in which the indoor resilient multipurpose surfacing is manufactured.
- C. Testing:

Tests shall be relative for multi-purpose use with certificates from independent testing resources to be made available upon request. Test results shall be performed according to ASTM standard testing procedures including ASTM F2772 "Standard Specification for Athletic Performance Properties of Indoor Sports Floor Systems".

1.4 *DELIVERY, STORAGE AND HANDLING*

- A. Delivery:

Material shall not be delivered until all related work is in place and finished and/or proper storage facilities and conditions can be provided and guaranteed stable according to FieldTurf USA, Inc. recommendations.
- B. Storage:
  - 1. Store the material in a secure, clean and dry location.
  - 2. Maintain temperature between 55° and 85° Fahrenheit.
  - 3. Store the indoor resilient athletic surfacing rolls in an upright position on a smooth flat surface immediately upon delivery to jobsite.
  - 4. Rolls shipped in rigid protective cardboard containers can be laid horizontally prior to unpacking and installation.

1.5 *PROJECT/SITE CONDITIONS*

- A. It is the responsibility of the general contractor/construction manager to maintain project/site conditions acceptable for the installation of the indoor resilient multipurpose flooring.
- B. The area in which the indoor resilient multipurpose surfacing will be installed shall be dry and weather tight. Permanent heat, light and ventilation shall be installed and operable.
- C. All other trades shall have completed their work prior to the installation of the resilient athletic flooring. The general contractor or construction manager shall maintain a secure and clean working environment before, during and after the installation.
- D. Maintain a stable room temperature of at least 65°F for a minimum of one (1) week prior to, during and thereafter installation.
- E. An effective low-permeance vapor barrier is placed directly beneath the concrete subfloor. For "on" or "below grade" installations, it is recommended to provide a permanent vapor barrier resistant to long term hydrostatic pressure/moisture exposure. Protrusions should be sealed to prevent moisture migration into the slab. Moisture should not be allowed to enter the slab after the completed construction.
- F. Concrete subfloor surface pH level within the 7 to 11 range dependent upon installation type.
- G. Concrete subfloor should be no greater than 1/8" within a 10 ft diameter. This tolerance can be measured in accordance with ASTM E1155. A specified (F<sub>F</sub>) of 50 and an (F<sub>L</sub>) of 30 should reach this degree of floor flatness and floor level. There is no numerical correlation between F numbers and the deviation from the straight

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

edge. However, the above specified numbers should achieve a flat floor with minimal deviation in the slab. Reference ACI 117 and ACI 302.1R. The general contractor should provide a certificate of compliance with the above recommendations.

- H. Concrete subfloor must be clean and free of all foreign materials or objects including, but not limited to, curing compounds and sealers.
- I. Fill cracks, grooves, voids, depressions, and other minor imperfections. Follow the manufacturer's directions. Moveable joints must be treated utilizing specific transitioning joint devices depending upon the architect's recommendations. Follow current ASTM F710 guidelines for the preparation of concrete slabs to receive resilient flooring.
- J. Refer to ACI 302.2R "Guidelines for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials" for concrete design and construction.
- K. Concrete slab shall be fortified with continual steel reinforcement. Fiber reinforcement alone shall not be considered adequate fortification.

1.6 *WARRANTY*

- A. Special Limited Warranty:
  - 1. Manufacturer's standard form in which manufacturer agrees to repair or replace sports flooring including labor that fails within specified warranty period.
- B. Material warranty must be direct from the product manufacturer.
  - 1. Material warranties must come from original manufacturer or division thereof. Private label warranties from distributors or brokers are not valid. Supply original point of manufacturing upon request.
- C. Failures include, but are not limited to, the following:
  - 1. Material manufacturing defects.
  - 2. Surface wear and deterioration to the point of wear-through of wear layer per ASTM F410/ASTM F1303.
  - 3. Failure due to substrate moisture exposure exceeding 98 percent relative humidity when tested according to ASTM F2170.
- D. Warranty Period:
  - 1. For material defects and surface wear-through: **25** years from date of substantial completion.
  - 2. For moisture vapor tolerance: **25** years from date of substantial completion.
- E. Installer's Limited Warranty:
  - 1. Installer's standard form in which installer agrees to repair or replace sports flooring that fails due to poor workmanship or faulty installation within the specified warranty period.
  - 2. Warranty Period: 2 years from date of substantial completion.

1.7 *ADDITIONAL MATERIALS*

- A. Furnish to the owner additional materials containing a total of at least 1% of each different color or design of the indoor resilient athletic surfacing used on the project.

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

1.8 *LEED™ CERTIFICATION*

- A. The indoor resilient athletic surfacing should be able to help this facility to achieve points towards *LEED™ certification*. Flooring system must be certified by FloorScore.
- B. LEED categories positively affected by the indoor resilient athletic surfacing:

<b>LEED™ V4 Credit</b>		Contribution
Materials & Resources: Building Product Disclosure & Optimization (BPDO)		
MRC3: Sourcing of Raw Materials	Options 1 & 2	2 Points
MRC4: Material Ingredients	Option 1	1 Point
MRC5: Construction and Demolition Management	Reclamation and Recycling	ReStart® Program
Indoor Environmental Quality		
EQc2: Low-Emitting Materials	TVOC: 0.5 mg/m <sup>3</sup> or less	FloorScore®

***PART 2 - PRODUCTS***

2.1 *MANUFACTURERS*

- A. The basis of the design for the indoor resilient multipurpose surfacing is Omnisports 2.0 mm as manufactured by Tarkett.
- B. All other installation accessories and related components must be either made or approved by the indoor resilient athletic surfacing manufacturer.
- C. Other products may be approved as equal if deemed qualified and submitted in accordance with the General Conditions.
- D. Test reports confirming compliance from an independent sports laboratory must be provided along with samples, technical data, installation, maintenance, and warranty prior to acceptance as an alternative product.

2.2 *MATERIALS*

- A. Omnisports 2.0 mm - Prefabricated sport surface 2.0 mm (0.08") with wood flooring design and slightly textured embossed surface as supplied by Tarkett.
  - 1. Embossing of wood design and solid colors must be the same; varying embossing or surface textures will not be allowed.
  - 2. Printing of wood design shall closely resemble standard wood strip flooring in size, color, board length, and grain appearance.
  - 3. The wood design shall be protected by a clear layer of pure PVC (Polyvinyl Chloride) and TopClean xp, a factory-applied UV cured urethane treatment.
  - 4. Intermediate layers shall be fortified with a non-woven fiberglass grid for increased dimensional stability.
  - 5. Field constructed products will not be accepted.

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

B. Physical properties of the indoor resilient athletic surfacing shall conform to the following minimums:

Width	—	6' 6" (2 m)
Length	—	85' (25.9m) approx.
Wear Layer	—	2 mm
Total Thickness	—	2.0 mm
Wear Layer	Type 1– Grade 1	ASTM F1303/F410
Rolling Load	PASSED	0.30 (EN 1569 {11/1999})
Surface Finish Effect	PASSED	ASTM F2772 (80 – 110)
Chemical Resistance	Excellent	ASTM F925
Impact Resistance	PASSED	EN 1717
Abrasion Resistance	PASSED	0.10 (EN ISO 5470-1 {06/1999})
Static Load Limit	PASSED	ASTM F970- Load 175 Lbs
Ball Rebound	PASSED	ASTM F2772 > 90%
Fire Rating	PASSED	ASTM E648 Class 1
Phthalate-free technology	—	YES
REACH Compliant	—	YES
Heavy Metals	—	NO
ISO 9001	—	YES
ISO 14001	—	YES

1. Color: As available from the indoor resilient athletic surfacing manufacturer's standard range.
  2. Hardwood Design Series: High definition printing for a realistic wood surface appearance as available from the indoor resilient athletic surfacing manufacturer's standard range.
  3. Texture: Texture to remain consistent between solid colors and wood design when blending colors.
- C. Welding Rod: As supplied by the indoor resilient athletic surfacing manufacturer or supplier.
1. Color to blend with the indoor resilient athletic surfacing color or design.
  2. All seams shall be welded to create a monolithic and impermeable surface.
- D. Adhesive: As approved by the indoor resilient athletic surfacing manufacturer.
- E. Game Line Paint and Primer: As approved by the indoor resilient athletic surfacing manufacturer.

**SECTION 09 65 66**  
**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

***PART 3 - EXECUTION***

**3.1 EXAMINATION**

- A. It is the responsibility of the general contractor/construction manager to ensure that project/site conditions are acceptable for the installation of the indoor resilient athletic flooring.
- B. Verify that the area in which the indoor resilient athletic surfacing will be installed is dry and weather tight. Verify that permanent heat, light and ventilation are installed and operable.
- C. Verify that all other work that could cause damage, dirt and dust or interrupt the normal pace of the indoor resilient athletic flooring installation is completed or suspended.
- D. Verify that there is a stable room temperature of at least 65°F.
- E. Verify that there are no foreign materials or objects on the subfloor and that the subfloor is clean and ready for installation.
- F. Direct Full Spread Adhering to Concrete Subfloor Multi-Set : moisture content less than 83% RH when tested per ASTM F2170.
- G. Follow Fieldturf USA, Inc. installation recommendations.
- H. Do not average the results of the tests. Report all field test results in writing to the General Contractor, Architect, and End User prior to installation.
- I. Verify that the concrete subfloor surface pH level is within the 7 - 11 range.
- J. Document the results confirming the slab is within manufacturer's tolerances for slab deviation.

**3.2 PREPARATION OF SURFACES**

- A. Sand the entire surface of the concrete slab.
- B. Sweep the concrete slab so as to remove all dirt and dust. If a sweeping compound is to be used it must be a sweeping compound that does not contain oil or other items that may inhibit the adhesive bond.
- C. Slab must be dust free. In the event that dust impairs adhesive bond, priming the slab prior to application of adhesive may be necessary. Follow installation guidelines.
- D. Follow OSHA guidelines.

**3.3 INSTALLATION**

- A. The installation area shall be closed to all traffic and activity for a period to be set by the indoor resilient athletic surfacing installer. The indoor resilient athletic surfacing installation shall not begin until the installer is familiar with the existing conditions.
- B. All necessary precautions should be taken to minimize noise, smell, dust, the use of hazardous materials and any other items that may inconvenience others.
- C. Install the indoor resilient athletic surfacing in strict accordance with the indoor resilient athletic surfacing manufacturer's written instructions.
- D. Install the indoor resilient athletic surfacing minimizing cross seams. Provide a seam diagram during the submittal process for approval prior to installation. Vinyl Sheet Flooring Seams: Comply with ASTM F 1516. Rout joints and heat weld to permanently and seamlessly fuse sections together.
- E. Paint game lines using approved game line paint primer and game line paint in strict accordance with the game line paint manufacturer's instructions.
- F. Install appropriate threshold plates or transition strips where necessary.

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

2.0 *CLEANING*

- A. Remove all unused materials, tools, and equipment and dispose of any debris properly. Clean the indoor resilient athletic surfacing in accordance with the manufacturer's instructions.

3.6 *PROTECTION*

- A. If required, protect the indoor resilient athletic surfacing from damage using coverings approved by the manufacturer until acceptance of work by the customer or their authorized representative.

3.7 *RELATED STANDARDS AND GUIDELINES*

- A. ASTM F2170 "Standard Test Method for Determining Relative Humidity In Concrete Floor Slabs Using In-Situ Probes"
- B. ASTM F710 "Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring"
- C. ACI 302.2R-06 "Guideline for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials"
- D. ASTM F2772-11 "Standard Specification for Athletic Performance Properties of Indoor Sports Floor Systems"

**END OF SECTION**

**SECTION 09 65 66**  
**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

***PART 1 – GENERAL***

1.1 *SECTION INCLUDES*

- A. Supply and installation of the indoor resilient multipurpose surfacing
- B. Application of the game lines
- C. References for the correct construction and preparation of concrete slabs to receive resilient flooring.

1.2 *SUBMITTALS*

- A. Product Data:
  - 1. Manufacturer's promotional brochures, specifications and installation instructions
- B. Manufacturer Certifications:
  - 1. Provide certification that accurately identifies the Original Equipment Manufacturer (OEM) of flooring furnished for this project including manufacturer's name, address and factory location.
  - 2. Suppliers of private label flooring for this project must identify themselves as such and fully disclose the OEM information listed above.
  - 3. All "manufacturer" requirements in these specifications must be complied with by the OEM, including warranties, certifications, qualifications, product data, test results, environmental requirements, performance data, etc.
- C. Samples:
  - 1. Submit for selection and approval three (3) sets of the indoor resilient multipurpose surfacing, manufacturer's brochures, samples or sample boards of all of the available colors, textures and styles.
  - 2. Submit color samples of all the available game line paint colors for selection and approval.
- D. Closeout Submittals:
  - 1. Submit three (3) copies of the indoor resilient multipurpose surfacing and manufacturer's maintenance instructions.
  - 2. Submit three (3) copies of the material and installation warranties as specified.

1.3 *QUALITY ASSURANCE*

- A. Qualifications:
  - 1. The indoor resilient multipurpose surfacing shall have been actively marketed for a minimum of ten (10) years.
  - 2. The indoor resilient multipurpose surfacing shall be manufactured in an ISO 9001 certified plant.
  - 3. The indoor resilient multipurpose surfacing shall be manufactured in an ISO 14001 certified plant.
  - 4. The indoor resilient multipurpose surfacing supplier shall be an established firm, experienced in the field, and competent in the techniques required by the manufacturer.
  - 5. The installer of the indoor resilient multipurpose surfacing shall have a minimum of five (5) years of experience in the field installing indoor resilient multipurpose surfacing and have worked on at least five (5) projects of similar size, type and complexity.



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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

- B. Certifications:
  - 1. Installer to submit the indoor resilient dance floor surfacing manufacturer's certification attesting that they are a trained installer of the indoor resilient multipurpose surfacing.
  - 2. The indoor resilient multipurpose surfacing manufacturer to submit official ISO 9001 certification for the facility in which the indoor resilient multipurpose surfacing is manufactured.
- C. Testing:
  - 1. Tests shall be relative for multi-purpose use with certificates from independent testing resources to be made available upon request.
  - 2. Test results shall be no more than 5 years old and performed according to ASTM standard testing procedures.

1.4 *DELIVERY, STORAGE AND HANDLING*

- A. Delivery:

Material shall not be delivered until all related work is in place and finished and/or proper storage facilities and conditions can be provided and guaranteed stable according to Tarkett Sports / FieldTurf USA, Inc. recommendations.
- B. Storage:
  - 1. Store the material in a secure, clean and dry location.
  - 2. Maintain temperature between 55° and 85° Fahrenheit.
  - 3. Store the indoor resilient dance floor surfacing rolls in an upright position on a smooth flat surface immediately upon delivery to jobsite.
  - 4. Rolls shipped in rigid protective cardboard containers can be laid horizontally prior to unpacking and installation.

1.5 *PROJECT/SITE CONDITIONS*

- A. It is the responsibility of the general contractor/construction manager to maintain project/site conditions acceptable for the installation of the indoor resilient multipurpose flooring.
- B. The area in which the indoor resilient multipurpose surfacing will be installed shall be dry and weather tight. Permanent heat, light and ventilation shall be installed and operable.
- C. All other trades shall have completed their work prior to the installation of the resilient dance floor flooring. The general contractor or construction manager shall maintain a secure and clean working environment before, during and after the installation.
- D. Maintain a stable room temperature of at least 65°F for a minimum of one (1) week prior to, during and thereafter installation.
- E. An effective low-permeance vapor barrier is placed directly beneath the concrete subfloor. For "on" or "below grade" installations, it is recommended to provide a permanent vapor barrier resistant to long term hydrostatic pressure/moisture exposure. Protrusions should be sealed to prevent moisture migration into the slab. Moisture should not be allowed to enter the slab after the completed construction.
- F. Concrete subfloor surface pH level within the 7 to 9 range dependent upon installation type.
- G. Concrete subfloor should be no greater than 1/8" within a 10 ft diameter. This tolerance can be measured in accordance with ASTM E1155. A specified ( $F_F$ ) of 50 and an ( $F_L$ ) of 30 should reach this degree of floor flatness and floor level. There is no numerical correlation between F numbers and the deviation from the straight

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

edge. However, the above specified numbers should achieve a flat floor with minimal deviation in the slab. Reference ACI 117 and ACI 302.1R. The general contractor should provide a certificate of compliance with the above recommendations.

- H. Concrete subfloor must be clean and free of all foreign materials or objects including, but not limited to, curing compounds and sealers.
- I. Fill cracks, grooves, voids, depressions, and other minor imperfections. Follow the manufacturer's directions. Moveable joints must be treated utilizing specific transitioning joint devices depending upon the architect's recommendations. Follow current ASTM F710 guidelines for the preparation of concrete slabs to receive resilient flooring.
- J. Refer to ACI 302.2R "Guidelines for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials" for concrete design and construction.
- K. Concrete slab shall be fortified with continual steel reinforcement. Fiber reinforcement alone shall not be considered adequate fortification.

1.6 *WARRANTY*

- A. Special Limited Warranty:
  - 1. Manufacturer's standard form in which manufacturer agrees to repair or replace sports flooring including labor that fails within specified warranty period.
- B. Material warranty must be direct from the product manufacturer.
  - 1. Material warranties from separate or third party insurance providers are not valid.
  - 2. Material warranties must come from original manufacturer or division thereof. Private label warranties from distributors or brokers are not valid. Supply original point of manufacturing upon request.
- C. Failures include, but are not limited to, the following:
  - 1. Material manufacturing defects.
  - 2. Surface wear and deterioration to the point of wear-through of wear layer per ASTM F410/ASTM F1303.
  - 3. Failure due to substrate moisture exposure exceeding 90 percent relative humidity when tested according to ASTM F2170.
- D. Warranty Period:
  - 1. For material defects and surface wear-through: **10** years from date of substantial completion.
  - 2. For moisture vapor tolerance: **10** years from date of substantial completion.
- E. Installer's Limited Warranty:
  - 1. Installer's standard form in which installer agrees to repair or replace sports flooring that fails due to poor workmanship or faulty installation within the specified warranty period.
  - 2. Warranty Period: 2 years from date of substantial completion.

1.7 *ADDITIONAL MATERIALS*

- A. Furnish to the owner additional materials containing a total of at least 1% of each different color or design of the indoor resilient dance floor surfacing used on the project.

**SECTION 09 65 66**  
**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

***PART 2 - PRODUCTS***

2.1 ***MATERIALS***

- A. Prefabricated dance floor surfacing 3.5 mm with slightly textured embossed surface.
  - 1. Intermediate layers shall be fortified with a non-woven fiberglass grid for increased dimensional stability.
  - 2. The foam force reduction layer shall be high-density closed cell PVC foam with honeycomb embossing, and is applied in one continuous manufacturing process.
  - 3. Laminated or adhered foam layers will not be allowed.
  - 4. Field constructed products will not be accepted.
- B. Adhesive moisture mitigation combination. Provide non-solvent reactive topically applied moisture mitigation/adhesive according to manufacturer's recommendations.
- C. Physical properties of the indoor resilient dance floor surfacing shall conform to the following minimums:

Width	—	6' 6" (2 m)
Length	—	49' (15 m) approx.
Wear Layer	—	2 mm
Total Thickness	—	3.5 mm
Wear Layer	Type 1– Grade 1	ASTM F1303/F410
Force Reduction	PASSED	ASTM F2772 Class 1
Slip Resistance	P3	AS 4586
Surface Finish Effect	PASSED	ASTM F2772 (80 – 110)
Abrasion Volume Loss	Group T: ≤2.0 mm <sup>3</sup>	EN 660: Part 2
Chemical Resistance	Excellent	ASTM F925
Impact Resistance	PASSED	EN 1717
Abrasion Resistance	PASSED	0.10 (EN ISO 5470-1 {06/1999})
Static Load Limit	PASSED	ASTM F970- Load 175 Lbs
Sound Insulation	Excellent	+/- 19 dB (ISO 717/2)
In-Room Sound Insulation	Excellent	61dB (NF S31-074)
Fire Rating	PASSED	ASTM E648 Class 1
Phthalate-free technology	—	YES
REACH Compliant	—	YES
Heavy Metals	—	NO
ISO 9001	—	YES
ISO 14001	—	YES

- 1. Color: As available from the indoor resilient dance floor surfacing manufacturer's standard range.
- C. Welding Rod: As supplied by the indoor resilient dance floor surfacing manufacturer or supplier.
  - 1. Color to blend with the indoor resilient dance floor surfacing color or design.
  - 2. All seams shall be welded to create a monolithic and impermeable surface.
- D. Adhesive: As approved by the indoor resilient dance floor surfacing manufacturer.

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

***PART 3 - EXECUTION***

**3.1**     ***EXAMINATION***

- A. It is the responsibility of the general contractor/construction manager to ensure that project/site conditions are acceptable for the installation of the indoor resilient dance floor surfacing.
- B. Verify that the area in which the indoor resilient dance floor surfacing will be installed is dry and weather tight. Verify that permanent heat, light and ventilation are installed and operable.
- C. Verify that all other work that could cause damage, dirt and dust or interrupt the normal pace of the indoor resilient dance flooring installation is completed or suspended.
- D. Verify that there is a stable room temperature of at least 65°F.
- E. Verify that there are no foreign materials or objects on the subfloor and that the subfloor is clean and ready for installation.
- F. *Direct Full Spread Adhering to Concrete Subfloor: moisture content less than 83% RH when tested per ASTM F2170.*
- G. Follow Tarkett Sports / FieldTurf USA, Inc. installation recommendations.
- H. Do not average the results of the tests. Report all field test results in writing to the General Contractor, Architect, and End User prior to installation.
- I. Verify that the concrete subfloor surface pH level is within the 7 - 10 range.
- J. Document the results confirming the slab is within manufacturer's tolerances for slab deviation.

**3.2**     ***PREPARATION OF SURFACES***

- A. Sand the entire surface of the concrete slab.
- B. Sweep the concrete slab so as to remove all dirt and dust. If a sweeping compound is to be used it must be a sweeping compound that does not contain oil or other items that may inhibit the adhesive bond.
- C. Slab must be dust free. In the event that dust impairs adhesive bond, priming the slab prior to application of adhesive may be necessary. Follow installation guidelines.
- D. Follow OSHA guidelines.

**3.3**     ***INSTALLATION***

- A. The installation area shall be closed to all traffic and activity for a period to be set by the indoor resilient dance floor surfacing installer. The indoor resilient dance floor surfacing installation shall not begin until the installer is familiar with the existing conditions.
- B. All necessary precautions should be taken to minimize noise, smell, dust, the use of hazardous materials and any other items that may inconvenience others.
- C. Install the indoor resilient dance floor surfacing in strict accordance with the indoor resilient dance floor surfacing manufacturer's written instructions.
- D. Install the indoor resilient dance floor surfacing minimizing cross seams. Provide a seam diagram during the submittal process for approval prior to installation. Vinyl Sheet Flooring Seams: Comply with ASTM F 1516. Rout joints and heat weld to permanently and seamlessly fuse sections together.
- E. Install appropriate threshold plates or transition strips where necessary.

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

3.5 *CLEANING*

- A. Remove all unused materials, tools, and equipment and dispose of any debris properly. Clean the indoor resilient dance floor surfacing in accordance with the manufacturer's instructions.

3.6 *PROTECTION*

- A. If required, protect the indoor resilient dance floor surfacing from damage using coverings approved by the manufacturer until acceptance of work by the customer or their authorized representative.

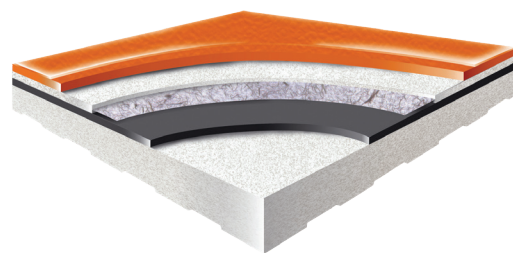
3.7 *RELATED STANDARDS AND GUIDELINES*

- A. ASTM F2170 "Standard Test Method for Determining Relative Humidity In Concrete Floor Slabs Using In-Situ Probes"
- B. ASTM F710 "Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring"
- C. ACI 302.2R-06 "Guideline for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials"
- D. ASTM F2772-11 "Standard Specification for Athletic Performance Properties of Indoor Sports Floor Systems"

**END OF SECTION**

## Description

MultiFlex is a versatile synthetic flooring ideal for multi-purpose applications. This system is designed to accommodate a wide variety sports, events and activities. MultiFlex delivers leading durability and smooth surface texture for easy maintenance.



PROPERTY	STANDARD	VALUE
<b>PHYSICAL DESCRIPTION</b>		
Material	N/A	PVC/Vinyl - Synthetic
Surface treatment	N/A	Pure Rock™ PU protection
Thickness	EN 428 / En 429	6.5 mm (0.256")
Wear layer thickness	N/A	2.0 mm (0.078")
Roll length	EN 426/EN 427	20.5 m (67.25')
Roll width	EN 426/EN 427	2 m (6.5')
Weight	EN 430	9.46 lb/m <sup>2</sup> (0.88 lb/ft <sup>2</sup> )
Available colours	N/A	2 Woodgrain + 11 solid colours
<b>SPORTS CHARACTERISTICS</b>		
System category	N/A	Point-Elastic
Force Reduction (shock absorption)	ASTM F2772-11	Class 2
Vertical Deformation	ASTM F2772-11	Passed
Ball Rebound	ASTM F2772-11	Passed
Surface Finish Effect	ASTM F2772-11	Passed
<b>TECHNICAL CHARACTERISTICS</b>		
Rolling load	EN 1569	≤ 0.5 mm (no degradation)
Impact resistance	EN 1517	No degradation
Sound insulation (below room)	ISO 717/02	≥ 20 dB
TVOC after 28 days	ISO 1600	≤ 100 µg/m <sup>3</sup>
Impact sound insulation	ISO 140-8 / ISO 717-2	> 20
Dimensional stability (exposure to heat)	EN ISO 23999	≤ 0.4%
Curling (exposure to heat)	EN ISO 23999	≤ 8mm
Light resistance	ISO 105-B02	≥ 6
Floor heating possibility	N/A	27°C
Microbial resistance	ASTM G21 (backing)	No growth
Reaction to fire	CAN/ULC S102.2	FSC 135/SDV 348
Phthalate-free technology	N/A	Yes
ISO Factory	N/A	ISO factory 9001, 14001 and OSHAS 18001
Warranty	N/A	25-year wear layer & product defect coverage

Note: Technical information is subject to change without notice. The data is for information purposes only. For more detail, please contact us.

## Warranty Protection

25-year wear layer and product defect coverage plus 25-year moisture tolerance coverage. Refer to sample warranty document for complete coverage.

## Environmental Facts and LEED

For environmental facts and LEED credits, visit: <https://www.tarkettsportsindoor.com/wp-content/uploads/2020/02/Booklets-OMNISPORTS-LEED-TS-Indoor-FEB2020.pdf>

## Maintenance Instructions

For a complete maintenance guide, visit: <https://www.tarkettsportsindoor.com/wp-content/uploads/2021/03/Omnisports-Care-and-Maintenance-DEC2020.pdf>

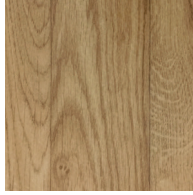
## Installation Methods

- GreenLay™: perimeter glue installation requiring only 2% of the surface area to be glued with Tarkett's solvent-free Multi-Poxy adhesive (moisture tolerance: 92% RH per ASTM F2170)
- Full Adhesive: installation using Tarkett's Multi-Poxy adhesive, HS Sports Spray, or Multi-Set acrylic adhesive over the entire area (moisture tolerance: 98% RH using Multi-Poxy, 98% RH using HS Sports Spray, 83% using Multi-Set per ASTM F2170)
- Tarkolay: installation over moisture barrier using Multi-Poxy adhesive (no moisture testing required)

Available Colors



Pure Maple



Pure Oak\*



Sapphire



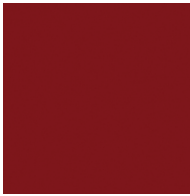
Topaz



Turquoise



Graphite



Garnet



Amber



Coral



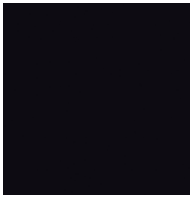
Citrine



Jade



Emerald



Onyx

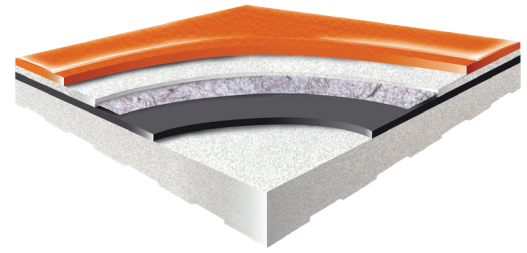
\*This pattern has a 3" wide plank. Maple patterns have a width of 2 1/4".

The colors presented here are representations only. An actual sample is recommended for exact color evaluation and matching. Other Custom Colors available. Contact your Regional Sales Manager.

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tarkettsportsindoor.com

## Description

MultiFlex est un revêtement sportif polyvalent, idéal pour plusieurs applications. Ce système est conçu pour accueillir une grande variété de sports, d'événements et d'activités. MultiFlex offre une durabilité de premier ordre et une texture de surface lisse pour un entretien facile.



PROPRIÉTÉ	NORME	VALEUR
-----------	-------	--------

DESCRIPTION PHYSIQUE		
Matériel	N/A	PVC/vinyle - Synthétique
Surface treatment	N/A	Protection PU Pure Rock™
Épaisseur	EN 428 / En 429	6,5 mm (0,256 po)
Épaisseur de la couche d'usure	N/A	2,0 mm (0,078 po)
Longueur du rouleau	EN 426/EN 427	20,5 m (67,25 pi)
Largeur du rouleau	EN 426/EN 427	2 m (6,5 pi)
Poids	EN 430	9,46 lbs/m <sup>2</sup> (0,88 lbs/pi <sup>2</sup> )
Couleurs disponibles	N/A	2 Woodgrain + 11 couleurs solides

CARACTÉRISTIQUES SPORT		
Catégorie de système	N/A	Point-Elastic
Réduction des forces	ASTM F2772-11	Classe 2
Déformation verticale	ASTM F2772-11	Réussi
Rebond du ballon	ASTM F2772-11	Réussi
Effet du fini de surface	ASTM F2772-11	Réussi

CARACTÉRISTIQUES TECHNIQUES		
Charge roulante	EN 1569	≤ 0,5 mm (aucune dégradation)
Résistance aux impacts	EN 1517	Aucune dégradation
Isolation sonore sous la pièce	ISO 717/02	≥ 20 dB
TVOC après 28 jours	ISO 1600	≤ 100 µg/m <sup>3</sup>
Isolation aux bruits d'impact	ISO 140-8 / ISO 717-2	> 20
Stabilité dimensionnelle (exposition à la chaleur)	EN ISO 23999	≤ 0,4%
Curling (exposure to heat)	EN ISO 23999	≤ 8 mm
Light resistance	ISO 105-B02	≥ 6
Floor heating possibility	N/A	27°C
Résistance microbienne	ASTM G21 (backing)	Aucun étirement
Réaction au feu	CAN/ULC S102.2	FSC 135/SDV 348
Technologie sans phtalate	N/A	Oui
Usine ISO	N/A	Usine ISO 9001, 14001 et OSHAS 18001
Garantie	N/A	25 ans pour la couche d'usure et toute défaut du produit

Note: Les informations techniques peuvent être modifiées sans préavis. Les données sont à titre informatif uniquement. Pour plus de détails, veuillez nous contacter.

## Garantie

25 ans pour la couche d'usure et tout défaut du produit, ainsi que 25 ans de protection pour la tolérance à l'humidité. Se reporter au document de garantie type pour la garantie complète.

## Faits environnementaux et normes LEED

Pour plus de détails sur les faits environnementaux et les normes LEED, consultez :

<https://www.tarkettsportsindoor.com/wp-content/uploads/2020/02/Booklets-OMNISPORTS-LEED-TS-Indoor-FEB2020.pdf>

## Instructions d'entretien

Pour le guide d'entretien complet, consultez :

<https://www.tarkettsportsindoor.com/wp-content/uploads/2021/03/Omnisports-Care-and-Maintenance-DEC2020.pdf>

## Méthodes de pose

- GreenLay™ : la méthode de pose GreenLay™ avec adhésif périmétrique permet de ne coller que 2 % de la surface avec la colle Multi-Poxy sans solvant de Tarkett (tolérance à l'humidité : humidité relative de 92 % conformément à la norme ASTM F2170).
- Entièrement collée : pose avec colle Multi-Poxy, HS Sport Spray ou acrylique Multi-Set de Tarkett sur toute la surface (tolérance à l'humidité : 98 % de HR avec la colle Multi-Poxy, 90 % de HR avec la colle HS Sport Spray, 83 % avec la colle acrylique Multi-Set conformément à la norme ASTM F2170).
- Tarkolay : installation avec membrane étanche et colle acrylique Multi-Poxy (aucun essai d'humidité requis).



### Couleurs disponibles



Pure Maple



Pure Oak\*



Sapphire



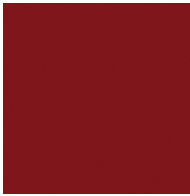
Topaz



Turquoise



Graphite



Garnet



Amber



Coral



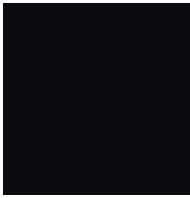
Citrine



Jade



Emerald



Onyx

\*Ce modèle comprend des planches de 3 po de largeur. Les autres modèles de bois ont une largeur de 2 1/4 po.

Couleurs présentées à des fins de représentation seulement. L'utilisation d'un véritable échantillon est recommandée pour évaluer la couleur réelle et effectuer l'agencement.

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**SECTION 09 65 66**  
**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC**  
**SURFACING**

**PART 1 – GENERAL**

- 1.1 *SECTION INCLUDES*
- A. Supply and installation of the indoor resilient multipurpose surfacing
  - B. Application of the game lines
  - C. References for the correct construction and preparation of concrete slabs to receive resilient flooring.
- 1.2 *SUBMITTALS*
- A. Product Data:  
Manufacturer's promotional brochures, specifications and installation instructions
  - B. Samples:
    - 1. Submit for selection and approval three (3) sets of the indoor resilient multipurpose surfacing, manufacturer's brochures, samples or sample boards of all of the available colors, textures and styles.
    - 2. Submit color samples of all the available game line paint colors for selection and approval.
  - C. Closeout Submittals:
    - 1. Submit three (3) copies of the indoor resilient multipurpose surfacing and manufacturer's maintenance instructions.
    - 2. Submit three (3) copies of the material and installation warranties as specified.
- 1.3 *QUALITY ASSURANCE*
- A. Qualifications:
    - 1. The indoor resilient multipurpose surfacing shall have been actively marketed for a minimum of five (5) years.
    - 2. The indoor resilient multipurpose surfacing shall be manufactured in an ISO 9001 certified plant.
    - 3. The indoor resilient multipurpose surfacing supplier shall be an established firm experienced in the field and appointed as a distributor by the manufacturer of the indoor resilient multipurpose surfacing.
    - 4. The installer of the indoor resilient multipurpose surfacing shall have a minimum of five (5) years experience in the field installing indoor resilient multipurpose surfacing and have worked on at least five (5) projects of similar size, type and complexity.
  - B. Certifications:
    - 1. Installer to submit the indoor resilient athletic surfacing manufacturer's or distributor's certification attesting that they are an approved installer of the indoor resilient multipurpose surfacing.
  - C. Testing:  
Tests shall be relative for multi-purpose use with certificates from independent testing resources to be made available upon request. Test results shall be no more than 5 years old and performed according to ASTM and/or EN standard testing procedures.

**SECTION 09 65 66**  
**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC**  
**SURFACING**

1.4 *DELIVERY, STORAGE AND HANDLING*

A. Delivery:

Material shall not be delivered until all related work is in place and finished and/or proper storage facilities and conditions can be provided and guaranteed stable according to FieldTurf USA, Inc. recommendations.

B. Storage:

Store the material in a secure, clean and dry location. Maintain temperature between 55° and 85° Fahrenheit. Store the indoor resilient athletic surfacing on a clean flat surface. Do not stack rolls.

1.5 *PROJECT/SITE CONDITIONS*

A. It is the responsibility of the general contractor/construction manager to maintain project/site conditions acceptable for the installation of the indoor resilient multipurpose flooring.

B. The area in which the indoor resilient multipurpose surfacing will be installed shall be dry and weather tight. Permanent heat, light and ventilation shall be installed and operable.

C. All other trades shall have completed their work prior to the installation of the resilient athletic flooring. The general contractor or Construction Manager shall maintain a secure and clean working environment before, during and after the installation. Suspension of other trades' work may be authorized providing their work will not damage the new flooring.

D. Maintain a stable room temperature of at least 65°F for a minimum of one (1) week prior to, during and thereafter installation.

E. An effective low-permeance vapor barrier is placed directly beneath the concrete subfloor. For "on" or "below grade" installations, it is recommended to provide a permanent vapor barrier resistant to long term hydrostatic pressure/moisture exposure. Protrusions should be sealed to prevent moisture migration into the slab. Moisture should not be allowed to enter the slab after the completed construction.

F. Concrete subfloor surface pH level within the 7 to 9 range dependent upon installation type.

G. Concrete subfloor should be no greater than 1/8" within a 10 ft diameter. This tolerance can be measured in accordance with ASTM E1155. A specified ( $F_F$ ) of 50 and an ( $F_L$ ) of 30 should reach this degree of floor flatness and floor level. There is no numerical correlation between  $F$  numbers and the deviation from the straight edge, however the above specified numbers should achieve a flat floor with minimal deviation in the slab. Reference ACI 117 and ACI 302.1R. The general contractor should provide a certificate of compliance with the above recommendations.

H. Concrete subfloor must be clean and free of all foreign materials or objects including, but not limited to, curing compounds and sealers.

I. Fill cracks, grooves, voids, depressions, and other minor imperfections with Ardex (or equal) cement-based patching/leveling compounds. Follow the manufacturer's directions. Moveable joints must be treated utilizing specific transitioning joint devices depending upon the architect's recommendations.

**SECTION 09 65 66**  
**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

Follow current ASTM F710 guidelines for the preparation of concrete slabs to receive resilient flooring.

- J. Refer to ACI 302.2R “Guidelines for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials” for concrete design and construction.
- K. Concrete slab shall be fortified with continual steel reinforcement. Fiber reinforcement alone shall not be considered adequate fortification.

1.6 **WARRANTY**

A. Materials:

The indoor resilient athletic surfacing shall be covered by the manufacturer against product defects for 5 years.

B. Installation:

The installation of the indoor resilient multipurpose surfacing shall be covered against poor workmanship and faulty installation by a two (2) year written, limited warranty provided by the contractor performing/overseeing the installation.

1.7 **ADDITIONAL MATERIALS**

Furnish to the owner additional materials containing a total of at least 1% of each different color or design of the indoor resilient athletic surfacing used on the project.

1.8 **LEED™ CERTIFICATION**

The indoor resilient athletic surfacing should be able to help this facility to achieve points towards *LEED™ certification*.

LEED categories positively affected by the indoor resilient athletic surfacing:

Product Type			Rubber
<b>Building Reuse Maintain Interior Nonstructural Elements</b>	<b>MR 1.2</b>	Renovation	1
<b>Construction Waste Management</b>	<b>MR 2</b>	Renovation	2
<b>Construction Waste Management Materials Reuse</b>	<b>MR 3</b>	Renovation	2
	<b>5 % - 1 point</b>		
	<b>10% - 2 points</b>		
<b>Recycled Content</b>	<b>MR 4</b>	New/Renovation	2
	<b>20% - 2 points</b>		
<b>Regional Materials</b>	<b>MR5</b>	New/Renovation	2
<b>Indoor Environmental Air Quality Low VOC Adhesives/Sealants</b>	<b>IEQ 4.1</b>	New/Renovation	1
<b>Low-emitting Materials Paints and Coatings</b>	<b>IEQ 4.2</b>	New/Renovation	1

**PART 2 - PRODUCTS**

**SECTION 09 65 66**  
**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC**  
**SURFACING**

2.1 **MANUFACTURERS**

The basis of the design for the indoor resilient multipurpose surfacing is Dropzone: Droptile as provided by FieldTurf USA, Inc. All other installation accessories and related components must be either made or approved by the indoor resilient athletic surfacing manufacturer. Other products may be approved as equal if deemed qualified and submitted in accordance with the General Conditions. Test reports confirming compliance from an Independent Sports Laboratory must be provided along with samples, technical data, installation, maintenance, and warranty prior to acceptance as an alternative product.

2.2 **MATERIALS.**

Dropzone: Droptile 1" thick configuration consists of a high density, wear surface; cylindrical support feet that allow underside cable routing, maximum resiliency, and water drainage, as well as twelve molded perimeter dowel holes that accept specially designed barbed dowel pins to promote ease of installation.

1. Physical properties of the indoor resilient athletic surfacing shall conform to the following minimums:

Tile Dimension	.....	24" x 24"
Total Thickness	.....	2.5"
Weight	.....	4.0 lbs/sq.ft.
Tensile Strength	ASTM D412	200 minimum
Static Load	ASTM F970	400 p.s.i (modified test)
Coefficient of Friction	ASTM 2047	>.9
Chemical Resistance	ASTM F925	Excellent
Ambient Noise Reduction	ASTM C423	.10
Impact Sound Insulation	ASTM E492	.45 minimum
Thermal Conductivity	ASTM C518	Approximate .406
Sound Transmission	ASTM E413	51

1. Color: As available from the indoor resilient athletic surfacing manufacturer's standard range.

**PART 3 - EXECUTION**

3.1 **EXAMINATION**

- A. It is the responsibility of the general contractor/construction manager to ensure that project/site conditions are acceptable for the installation of the indoor resilient athletic flooring.
- B. Verify that the area in which the indoor resilient athletic surfacing will be installed is dry and weather tight. Verify that permanent heat, light and ventilation is installed and operable.
- C. Verify that all other work that could cause damage, dirt and dust or interrupt the normal pace of the indoor resilient athletic flooring installation is completed or suspended.
- D. Verify that there is a stable room temperature of at least 65°F.

**SECTION 09 65 66**  
**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC**  
**SURFACING**

- E. Verify that there are no foreign materials or objects on the subfloor and that the subfloor is clean and ready for installation.
- F. Document the results indicating the slab is within manufacturer's tolerances for slab deviation.

3.2 *PREPARATION OF SURFACES*

- A. Sand the entire surface of the concrete slab.
- B. Sweep the concrete slab so as to remove all dirt and dust. If a sweeping compound is to be used it must be a sweeping compound that does not contain oil or other items that may inhibit the adhesive bond.
- C. Slab must be dust free. In the event that dust impairs adhesive bond, priming the slab prior to application of adhesive may be necessary. Follow installation guidelines.

3.3 *INSTALLATION*

- A. The installation area shall be closed to all traffic and activity for a period to be set by the indoor resilient athletic surfacing installer. The indoor resilient athletic surfacing installation shall not begin until the installer is familiar with the existing conditions.
- B. All necessary precautions should be taken to minimize noise, smell, dust, the use of hazardous materials and any other items that may inconvenience others.
- C. Install the indoor resilient athletic surfacing in strict accordance with the indoor resilient athletic surfacing manufacturer's written instructions.
- D. Install the indoor resilient athletic surfacing minimizing cross seams. Provide a seam diagram during the submittal process for approval prior to installation.
- E. Install appropriate threshold plates or transition strips where necessary.

3.5 *CLEANING*

- A. Remove all unused materials, tools, and equipment and dispose of any debris properly. Clean the indoor resilient athletic surfacing in accordance with the manufacturer's instructions.

3.6 *PROTECTION*

If required, protect the indoor resilient athletic surfacing from damage using coverings approved by the manufacturer until acceptance of work by the customer or their authorized representative.

3.6 RELATED STANDARDS AND GUIDELINES

- A. ASTM F710 "Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring"
- B. ACI 302.2R-06 "Guideline for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials"

**END OF SECTION**

**SECTION 09 65 66**  
**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC**  
**SURFACING**

**PART 1 – GENERAL**

- 1.1 *SECTION INCLUDES*
- A. Supply and installation of the indoor resilient multipurpose surfacing
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  - C. References for the correct construction and preparation of concrete slabs to receive resilient flooring.
- 1.2 *SUBMITTALS*
- A. Product Data:  
Manufacturer's promotional brochures, specifications and installation instructions
  - B. Samples:
    - 1. Submit for selection and approval three (3) sets of the indoor resilient multipurpose surfacing, manufacturer's brochures, samples or sample boards of all of the available colors, textures and styles.
    - 2. Submit color samples of all the available game line paint colors for selection and approval.
  - C. Closeout Submittals:
    - 1. Submit three (3) copies of the indoor resilient multipurpose surfacing and manufacturer's maintenance instructions.
    - 2. Submit three (3) copies of the material and installation warranties as specified.
- 1.3 *QUALITY ASSURANCE*
- A. Qualifications:
    - 1. The indoor resilient multipurpose surfacing shall have been actively marketed for a minimum of five (5) years.
    - 2. The indoor resilient multipurpose surfacing shall be manufactured in an ISO 9001 certified plant.
    - 3. The indoor resilient multipurpose surfacing supplier shall be an established firm experienced in the field and appointed as a distributor by the manufacturer of the indoor resilient multipurpose surfacing.
    - 4. The installer of the indoor resilient multipurpose surfacing shall have a minimum of five (5) years experience in the field installing indoor resilient multipurpose surfacing and have worked on at least five (5) projects of similar size, type and complexity.
  - B. Certifications:
    - 1. Installer to submit the indoor resilient athletic surfacing manufacturer's or distributor's certification attesting that they are an approved installer of the indoor resilient multipurpose surfacing.
  - C. Testing:  
Tests shall be relative for multi-purpose use with certificates from independent testing resources to be made available upon request. Test results shall be no more than 5 years old and performed according to ASTM and/or EN standard testing procedures.

**SECTION 09 65 66**  
**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC**  
**SURFACING**

1.4 *DELIVERY, STORAGE AND HANDLING*

A. Delivery:

Material shall not be delivered until all related work is in place and finished and/or proper storage facilities and conditions can be provided and guaranteed stable according to FieldTurf USA, Inc. recommendations.

B. Storage:

Store the material in a secure, clean and dry location. Maintain temperature between 55° and 85° Fahrenheit. Store the indoor resilient athletic surfacing on a clean flat surface. Do not stack rolls.

1.5 *PROJECT/SITE CONDITIONS*

A. It is the responsibility of the general contractor/construction manager to maintain project/site conditions acceptable for the installation of the indoor resilient multipurpose flooring.

B. The area in which the indoor resilient multipurpose surfacing will be installed shall be dry and weather tight. Permanent heat, light and ventilation shall be installed and operable.

C. All other trades shall have completed their work prior to the installation of the resilient athletic flooring. The general contractor or Construction Manager shall maintain a secure and clean working environment before, during and after the installation. Suspension of other trades' work may be authorized providing their work will not damage the new flooring.

D. Maintain a stable room temperature of at least 65°F for a minimum of one (1) week prior to, during and thereafter installation.

E. An effective low-permeance vapor barrier is placed directly beneath the concrete subfloor. For "on" or "below grade" installations, it is recommended to provide a permanent vapor barrier resistant to long term hydrostatic pressure/moisture exposure. Protrusions should be sealed to prevent moisture migration into the slab. Moisture should not be allowed to enter the slab after the completed construction.

F. Concrete subfloor surface pH level within the 7 to 9 range dependent upon installation type.

G. Concrete subfloor should be no greater than 1/8" within a 10 ft diameter. This tolerance can be measured in accordance with ASTM E1155. A specified ( $F_F$ ) of 50 and an ( $F_L$ ) of 30 should reach this degree of floor flatness and floor level. There is no numerical correlation between  $F$  numbers and the deviation from the straight edge, however the above specified numbers should achieve a flat floor with minimal deviation in the slab. Reference ACI 117 and ACI 302.1R. The general contractor should provide a certificate of compliance with the above recommendations.

H. Concrete subfloor must be clean and free of all foreign materials or objects including, but not limited to, curing compounds and sealers.

I. Fill cracks, grooves, voids, depressions, and other minor imperfections with Ardex (or equal) cement-based patching/leveling compounds. Follow the manufacturer's directions. Moveable joints must be treated utilizing specific transitioning joint devices depending upon the architect's recommendations.



**SECTION 09 65 66**  
**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

Follow current ASTM F710 guidelines for the preparation of concrete slabs to receive resilient flooring.

- J. Refer to ACI 302.2R “Guidelines for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials” for concrete design and construction.
- K. Concrete slab shall be fortified with continual steel reinforcement. Fiber reinforcement alone shall not be considered adequate fortification.

1.6 **WARRANTY**

A. Materials:

The indoor resilient athletic surfacing shall be covered by the manufacturer against product defects for 15 years.

B. Installation:

The installation of the indoor resilient multipurpose surfacing shall be covered against poor workmanship and faulty installation by a two (2) year written, limited warranty provided by the contractor performing/overseeing the installation.

1.7 **ADDITIONAL MATERIALS**

Furnish to the owner additional materials containing a total of at least 1% of each different color or design of the indoor resilient athletic surfacing used on the project.

1.8 **LEED™ CERTIFICATION**

The indoor resilient athletic surfacing should be able to help this facility to achieve points towards *LEED™ certification*.

LEED categories positively affected by the indoor resilient athletic surfacing:

Product Type			Rubber
<b>Building Reuse Maintain Interior Nonstructural Elements</b>	<b>MR 1.2</b>	Renovation	1
<b>Construction Waste Management</b>	<b>MR 2</b>	Renovation	2
<b>Construction Waste Management Materials Reuse</b>	<b>MR 3</b>	Renovation	2
	<b>5 % - 1 point</b>		
	<b>10% - 2 points</b>		
<b>Recycled Content</b>	<b>MR 4</b>	New/Renovation	2
	<b>20% - 2 points</b>		
<b>Regional Materials</b>	<b>MR5</b>	New/Renovation	2
<b>Indoor Environmental Air Quality Low VOC Adhesives/Sealants</b>	<b>IEQ 4.1</b>	New/Renovation	1
<b>Low-emitting Materials Paints and Coatings</b>	<b>IEQ 4.2</b>	New/Renovation	1

**PART 2 - PRODUCTS**

**SECTION 09 65 66**  
**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC**  
**SURFACING**

2.1 **MANUFACTURERS**

The basis of the design for the indoor resilient multipurpose surfacing is Dropzone: Droptile as provided by FieldTurf USA, Inc. All other installation accessories and related components must be either made or approved by the indoor resilient athletic surfacing manufacturer. Other products may be approved as equal if deemed qualified and submitted in accordance with the General Conditions. Test reports confirming compliance from an Independent Sports Laboratory must be provided along with samples, technical data, installation, maintenance, and warranty prior to acceptance as an alternative product.

2.2 **MATERIALS.**

Dropzone: Droptile 1” thick configuration consists of a high density, wear surface; cylindrical support feet that allow underside cable routing, maximum resiliency, and water drainage, as well as twelve molded perimeter dowel holes that accept specially designed barbed dowel pins to promote ease of installation.

1. Physical properties of the indoor resilient athletic surfacing shall conform to the following minimums:

Tile Dimension	.....	24” x 24”
Total Thickness	.....	1”
Weight	.....	4.0 lbs/sq.ft.
Tensile Strength	ASTM D412	200 minimum
Static Load	ASTM F970	400 p.s.i (modified test)
Coefficient of Friction	ASTM 2047	>.9
Chemical Resistance	ASTM F925	Excellent
Ambient Noise Reduction	ASTM C423	.10
Impact Sound Insulation	ASTM E492	.45 minimum
Thermal Conductivity	ASTM C518	Approximate .406
Sound Transmission	ASTM E413	51

1. Color: As available from the indoor resilient athletic surfacing manufacturer’s standard range.

**PART 3 - EXECUTION**

3.1 **EXAMINATION**

- A. It is the responsibility of the general contractor/construction manager to ensure that project/site conditions are acceptable for the installation of the indoor resilient athletic flooring.
- B. Verify that the area in which the indoor resilient athletic surfacing will be installed is dry and weather tight. Verify that permanent heat, light and ventilation is installed and operable.
- C. Verify that all other work that could cause damage, dirt and dust or interrupt the normal pace of the indoor resilient athletic flooring installation is completed or suspended.
- D. Verify that there is a stable room temperature of at least 65°F.

**SECTION 09 65 66**  
**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC**  
**SURFACING**

- E. Verify that there are no foreign materials or objects on the subfloor and that the subfloor is clean and ready for installation.
- F. Document the results indicating the slab is within manufacturer's tolerances for slab deviation.

3.2 *PREPARATION OF SURFACES*

- A. Sand the entire surface of the concrete slab.
- B. Sweep the concrete slab so as to remove all dirt and dust. If a sweeping compound is to be used it must be a sweeping compound that does not contain oil or other items that may inhibit the adhesive bond.
- C. Slab must be dust free. In the event that dust impairs adhesive bond, priming the slab prior to application of adhesive may be necessary. Follow installation guidelines.

3.3 *INSTALLATION*

- A. The installation area shall be closed to all traffic and activity for a period to be set by the indoor resilient athletic surfacing installer. The indoor resilient athletic surfacing installation shall not begin until the installer is familiar with the existing conditions.
- B. All necessary precautions should be taken to minimize noise, smell, dust, the use of hazardous materials and any other items that may inconvenience others.
- C. Install the indoor resilient athletic surfacing in strict accordance with the indoor resilient athletic surfacing manufacturer's written instructions.
- D. Install the indoor resilient athletic surfacing minimizing cross seams. Provide a seam diagram during the submittal process for approval prior to installation.
- E. Install appropriate threshold plates or transition strips where necessary.

3.5 *CLEANING*

- A. Remove all unused materials, tools, and equipment and dispose of any debris properly. Clean the indoor resilient athletic surfacing in accordance with the manufacturer's instructions.

3.6 *PROTECTION*

If required, protect the indoor resilient athletic surfacing from damage using coverings approved by the manufacturer until acceptance of work by the customer or their authorized representative.

3.6 RELATED STANDARDS AND GUIDELINES

- A. ASTM F710 "Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring"
- B. ACI 302.2R-06 "Guideline for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials"

**END OF SECTION**

**SECTION 09 65 66**  
**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

***PART 1 – GENERAL***

1.1 *SECTION INCLUDES*

- A. Supply and installation of the indoor multipurpose surfacing
- B. References for the correct construction and preparation of concrete slabs to receive resilient flooring.

1.2 *SUBMITTALS*

- A. Product Data:
  - 1. Manufacturer's promotional brochures, specifications and installation instructions
- B. Manufacturer Certifications:
  - 1. Provide certification that accurately identifies the Original Equipment Manufacturer (OEM) of flooring furnished for this project including manufacturer's name, address and factory location.
  - 2. Suppliers of private label flooring for this project must identify themselves as such and fully disclose the OEM information listed above.
  - 3. All "manufacturer" requirements in these specifications must be complied with by the OEM, including warranties, certifications, qualifications, product data, test results, environmental requirements, performance data, etc.
- C. Samples:
  - 1. Submit for selection and approval three (3) sets of the indoor resilient multipurpose surfacing, manufacturer's brochures, samples or sample boards of all of the available colors, textures and styles.
  - 2. Submit color samples of all the available game line paint colors for selection and approval.
- D. Closeout Submittals:
  - 1. Submit three (3) copies of the indoor resilient multipurpose surfacing and manufacturer's maintenance instructions.
  - 2. Submit three (3) copies of the material and installation warranties as specified.

1.3 *QUALITY ASSURANCE*

- A. Qualifications:
  - 1. The indoor multipurpose surfacing supplier shall be an established firm, experienced in the field, and competent in the techniques required by the manufacturer.
  - 2. The installer of the indoor resilient multipurpose surfacing shall have a minimum of five (5) years of experience in the field installing indoor resilient multipurpose surfacing and have worked on at least five (5) projects of similar size, type and complexity.

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

- B. Certifications:
  - 1. Installer to submit the manufacturer's certification attesting that they are a trained installer of the indoor resilient multipurpose surfacing.
- C. Testing:
  - 1. Tests shall be relative for multi-purpose use with certificates from independent testing resources to be made available upon request.
  - 2. Test results shall be no more than 5 years old and performed according to ASTM standard testing procedures.

1.4 *DELIVERY, STORAGE AND HANDLING*

- A. Delivery:

Material shall not be delivered until all related work is in place and finished and/or proper storage facilities and conditions can be provided and guaranteed stable according to FieldTurf USA, Inc. recommendations.
- B. Storage:
  - 1. Store the material in a secure, clean and dry location.
  - 2. Maintain temperature between 55° and 85° Fahrenheit.

1.5 *PROJECT/SITE CONDITIONS*

- A. It is the responsibility of the general contractor/construction manager to maintain project/site conditions acceptable for the installation of the indoor multipurpose flooring.
- B. The area in which the surfacing will be installed shall be dry and weather tight. Permanent heat, light and ventilation shall be installed and operable.
- C. All other trades shall have completed their work prior to the installation of the resilient athletic flooring. The general contractor or construction manager shall maintain a secure and clean working environment before, during and after the installation.
- D. Maintain a stable room temperature of at least 65°F for a minimum of one (1) week prior to, during and thereafter installation.
- E. An effective low-permeance vapor barrier is placed directly beneath the concrete subfloor. For "on" or "below grade" installations, it is recommended to provide a permanent vapor barrier resistant to long term hydrostatic pressure/moisture exposure. Protrusions should be sealed to prevent moisture migration into the slab. Moisture should not be allowed to enter the slab after the completed construction.
- F. Concrete subfloor surface pH level within the 7 to 10 range dependent upon installation type.
- G. Concrete subfloor should be no greater than 1/8" within a 10 ft diameter. This tolerance can be measured in accordance with ASTM E1155. A specified ( $F_F$ ) of 50 and an ( $F_L$ ) of 30 should reach this degree of floor flatness and floor level. There is no numerical correlation between F numbers and the deviation from the straight edge. However, the above specified numbers should achieve a flat floor with minimal deviation in the slab. Reference ACI 117 and ACI 302.1R. The general contractor should provide a certificate of compliance with the above recommendations.
- H. Concrete subfloor must be clean and free of all foreign materials or objects including, but not limited to, curing compounds and sealers.
- I. Fill cracks, grooves, voids, depressions, and other minor imperfections. Follow the manufacturer's directions. Moveable joints must be treated utilizing specific transition joint devices depending upon the architect's recommendations. Follow

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

current ASTM F710 guidelines for the preparation of concrete slabs to receive resilient flooring.

- J. Refer to ACI 302.2R "Guidelines for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials" for concrete design and construction.
- K. Concrete slab shall be fortified with continual steel reinforcement. Fiber reinforcement alone shall not be considered adequate fortification.

1.6 *WARRANTY*

- A. Prorated Warranty: Product defects are warranted for 5 years.

1.7 *ADDITIONAL MATERIALS*

- A. Furnish to the owner additional materials containing a total of at least 1% of each different color or design of the indoor surfacing used on the project.

PART 2 - PRODUCTS

2.1 *MANUFACTURERS*

- A. The basis of the design for the indoor resilient multipurpose surfacing is Dropturf provided by Tarkett Sports.
- B. All other installation accessories and related components must be either made or approved by the manufacturer.
- C. Other products may be approved as equal if deemed qualified and submitted in accordance with the General Conditions.

2.2 *MATERIALS*

- A. Dropturf and provided by Tarkett Sports. Dropturf is a synthetic cushioned non-fill turf system that is fully adhered.
- B. Physical properties of the surfacing shall conform to the following minimums:

<b>Property</b>	<b>Value</b>	<b>Units</b>	<b>Description</b>
Pile Yarn Type	UV-resistant polyethylene		n/a
Yarn Structure	Slit-Film/Thatch		n/a
Yarn Denier	10000/5000	Denier	D1577
Pile Height	0.75	inches	D5823
Pile Weight	40	oz/yd <sup>2</sup>	D5848
Primary Backing Weight	8+	oz/yd <sup>2</sup>	D5848
Secondary Backing Weight (Perforated)	20+	oz/yd <sup>2</sup>	D5848
5mm Attached Foam Pad	61	oz/yd <sup>2</sup>	
Total Carpet & Pad Weight	129	oz/yd <sup>2</sup>	D5848
Stitch Gauge	3/16 inch centers		D5793
Tuft Bind	8+	lbs/force	D1335
Pill Burn Test	Pass		D2859

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Attached Pad	5	mm	
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1. Color: As available from the manufacturer's standard range.
2. Texture: Texture to remain consistent when blending colors.
- C. Adhesive: As approved by the manufacturer.

**PART 3 - EXECUTION**

**3.1 EXAMINATION**

- A. It is the responsibility of the general contractor/construction manager to ensure that project/site conditions are acceptable for the installation.
- B. Verify that the area in which the surfacing will be installed is dry and weather tight. Verify that permanent heat, light and ventilation are installed and operable.
- C. Verify that all other work that could cause damage, dirt and dust or interrupt the normal pace of the indoor resilient athletic flooring installation is completed or suspended.
- D. Verify that there is a stable room temperature of at least 65°F.
- E. Verify that there are no foreign materials or objects on the subfloor and that the subfloor is clean and ready for installation.
- F. Adhesive moisture tolerances are dependent upon the adhesive type used.
- G. Follow Fieldturf USA, Inc. installation recommendations.
- H. Do not average the results of the tests. Report all field test results in writing to the General Contractor, Architect, and End User prior to installation.
- I. Verify that the concrete subfloor surface pH level is within the 7 - 10 range.
- J. Document the results confirming the slab is within manufacturer's tolerances for slab deviation.

**3.2 PREPARATION OF SURFACES**

- A. Sand the entire surface of the concrete slab.
- B. Sweep the concrete slab so as to remove all dirt and dust. If a sweeping compound is to be used it must be a sweeping compound that does not contain oil or other items that may inhibit the adhesive bond.
- C. Slab must be dust free. In the event that dust impairs adhesive bond, priming the slab prior to application of adhesive may be necessary. Follow installation guidelines.
- D. Follow OSHA guidelines.

**3.3 INSTALLATION**

- A. The installation area shall be closed to all traffic and activity for a period to be set by the indoor resilient athletic surfacing installer. The surfacing installation shall not begin until the installer is familiar with the existing conditions.
- B. All necessary precautions should be taken to minimize noise, smell, dust, the use of hazardous materials and any other items that may inconvenience others.
- C. Install the surfacing in strict accordance with the manufacturer's written instructions.
- D. Install the surfacing minimizing cross seams. Provide a seam diagram during the submittal process for approval prior to installation.
- E. Install appropriate threshold plates or transition strips where necessary.

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

2.0 *CLEANING*

- A. Remove all unused materials, tools, and equipment and dispose of any debris properly.

3.6 *PROTECTION*

- A. If required, protect the surfacing from damage using coverings approved by the manufacturer until acceptance of work by the customer or their authorized representative.

3.7 *RELATED STANDARDS AND GUIDELINES*

- A. ASTM F2170 "Standard Test Method for Determining Relative Humidity In Concrete Floor Slabs Using In-Situ Probes"
- B. ASTM F710 "Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring"
- C. ACI 302.2R-06 "Guideline for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials"
- D. ASTM F2772-11 "Standard Specification for Athletic Performance Properties of Indoor Sports Floor Systems"

**END OF SECTION**



**SECTION 09 65 66**  
**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC**  
**SURFACING**

**PART 1 – GENERAL**

1.1 *SECTION INCLUDES*

- A. Supply and installation of the indoor resilient multipurpose surfacing
- B. Application of the game lines
- C. References for the correct construction and preparation of concrete slabs to receive resilient flooring.

1.2 *SUBMITTALS*

A. Product Data:

Manufacturer's promotional brochures, specifications and installation instructions

B. Samples:

- 1. Submit for selection and approval three (3) sets of the indoor resilient multipurpose surfacing, manufacturer's brochures, samples or sample boards of all of the available colors, textures and styles.
- 2. Submit color samples of all the available game line paint colors for selection and approval.

C. Closeout Submittals:

- 1. Submit three (3) copies of the indoor resilient multipurpose surfacing and manufacturer's maintenance instructions.
- 2. Submit three (3) copies of the material and installation warranties as specified.

1.3 *QUALITY ASSURANCE*

A. Qualifications:

- 1. The indoor resilient multipurpose surfacing shall have been actively marketed for a minimum of five (5) years.
- 2. The indoor resilient multipurpose surfacing shall be manufactured in an ISO 9001 certified plant.
- 3. The indoor resilient multipurpose surfacing supplier shall be an established firm experienced in the field and appointed as a distributor by the manufacturer of the indoor resilient multipurpose surfacing.
- 4. The installer of the indoor resilient multipurpose surfacing shall have a minimum of five (5) years experience in the field installing

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC**  
**SURFACING**

indoor resilient multipurpose surfacing and have worked on at least five (5) projects of similar size, type and complexity.

B. Certifications:

Installer to submit the indoor resilient athletic surfacing manufacturer's or distributor's certification attesting that they are an approved installer of the indoor resilient multipurpose surfacing.

C. Testing:

Tests shall be relative for multi-purpose use with certificates from independent testing resources to be made available upon request. Test results shall be no more than 5 years old and performed according to ASTM and/or EN standard testing procedures.

1.4 *DELIVERY, STORAGE AND HANDLING*

A. Delivery:

Material shall not be delivered until all related work is in place and finished and/or proper storage facilities and conditions can be provided and guaranteed stable according to Tarkett Sports' recommendations.

B. Storage:

Store the material in a secure, clean and dry location. Maintain temperature between 65° and 85° Fahrenheit. Store the indoor resilient athletic surfacing on a clean flat surface.

1.5 *PROJECT/SITE CONDITIONS*

- A. It is the responsibility of the general contractor/construction manager to maintain project/site conditions acceptable for the installation of the indoor resilient multipurpose flooring.
- B. The area in which the indoor resilient multipurpose surfacing will be installed shall be dry and weather tight. Permanent heat, light and ventilation shall be installed and operable.
- C. All other trades shall have completed their work prior to the installation of the resilient athletic flooring. The general contractor or Construction Manager shall maintain a secure and clean working environment before, during and after the installation. Suspension of other trades' work may be authorized providing their work will not damage the new flooring.

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- D. Maintain a stable room temperature of at least 65°F for a minimum of one (1) week prior to, during and thereafter installation.
- E. An effective low-permeance vapor barrier is placed directly beneath the concrete subfloor. For "on" or "below grade" installations, it is recommended to provide a permanent vapor barrier resistant to long term hydrostatic pressure/moisture exposure. Protrusions should be sealed to prevent moisture migration into the slab. Moisture should not be allowed to enter the slab after the completed construction.
- F. Concrete subfloor surface pH level within the 7 to 9 range dependent upon installation type.
- G. Concrete subfloor should be no greater than 1/8" within a 10 ft diameter. This tolerance can be measured in accordance with ASTM E1155.  
A specified ( $F_F$ ) of 50 and an ( $F_L$ ) of 30 should reach this degree of floor flatness and floor level. There is no numerical correlation between F numbers and the deviation from the straight edge, however the above specified numbers should achieve a flat floor with minimal deviation in the slab. Reference ACI 117 and ACI 302.1R. The general contractor should provide a certificate of compliance with the above recommendations.
- H. Concrete subfloor must be clean and free of all foreign materials or objects including, but not limited to, curing compounds and sealers.
- I. Fill cracks, grooves, voids, depressions, and other minor imperfections with Ardex (or equal) cement-based patching/leveling compounds. Follow the manufacturer's directions. Moveable joints must be treated utilizing specific transitioning joint devices depending upon the architect's recommendations. Follow current ASTM F710 guidelines for the preparation of concrete slabs to receive resilient flooring.
- J. Refer to ACI 302.2R "Guidelines for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials" for concrete design and construction.
- K. Concrete slab shall be fortified with continual steel reinforcement. Fiber reinforcement alone shall not be considered adequate fortification.

1.6 *WARRANTY*

A. Materials:

The indoor resilient athletic surfacing shall be covered by the manufacturer against product defects for 3 years.

B. Installation:

The installation of the indoor resilient multipurpose surfacing shall be covered against poor workmanship and faulty installation by a two (2)

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC**  
**SURFACING**

year written, limited warranty provided by the contractor performing/overseeing the installation.

1.7 *ADDITIONAL MATERIALS*

Furnish to the owner additional materials containing a total of at least 1% of each different color or design of the indoor resilient athletic surfacing used on the project.

1.8 *LEED™ CERTIFICATION*

The indoor resilient athletic surfacing should be able to help this facility to achieve points towards *LEED™ certification*.

LEED categories positively affected by the indoor resilient athletic surfacing:

Product Type			Rubber
<b>Total Potential Credits</b>			12
<b>Building Reuse Maintain Interior Nonstructural Elements</b>	<b>MR 1.2</b>	Renovation	1
<b>Construction Waste Management</b>	<b>MR 2</b>	Renovation	2
<b>Construction Waste Management Materials Reuse</b>	<b>MR 3</b>	Renovation	2
	<b>5 % - 1 point</b>		
	<b>10% - 2 points</b>		
<b>Recycled Content</b>	<b>MR 4</b>	New/Renovation	2
	<b>20% - 2 points</b>		
<b>Regional Materials</b>	<b>MR5</b>	New/Renovation	2
<b>Indoor Environmental Air Quality Low VOC Adhesives/Sealants</b>	<b>IEQ 4.1</b>	New/Renovation	1
<b>Low-emitting Materials Paints and Coatings</b>	<b>IEQ 4.2</b>	New/Renovation	1
<b>Low-Emitting Materials Composite Wood and Agrifiber Products</b>	<b>IEQ 4.4</b>	New/Renovation	1
	<b>Plywood Substructures</b>		
	<b>Wood and Combi-Systems</b>		

**PART 2 - PRODUCTS**

2.1 *MANUFACTURERS*

The basis of the design for the indoor resilient multipurpose surfacing is **Dropzone Comfort 10.5 mm** as provided by Tarkett Sports. All other installation accessories and related components must be either made or approved by the indoor resilient athletic surfacing manufacturer. Other products may be approved as equal if deemed qualified and submitted in accordance with the General Conditions.

2.2 *MATERIALS*

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**SURFACING**

Dropzone Comfort

1. Physical properties of the indoor resilient athletic surfacing shall conform to the following minimums:

Width	—	4 ft.
Total Thickness	—	10.5 mm
Wear Layer Thickness	—	2.5 mm
Weight	—	2.34 lbs./sq.ft.
Coefficient of Friction	ASTM D2047	>.9
Static Load	ASTM F970	.004"
CA Section 01350 Compliance	ASTM D5116	Passed
Noise Reduction	ASTM D3389	<0.1g, 100 cycles
Abrasion Resistance	ASTM E492-04	54
Chemical Resistance	ASTM F925	Good
Force Reduction	ASTM F2772	Class 1
Vertical Deformation	ASTM F2772	.5mm
Thermal Conductivity	ASTM C518	>0.4

1. Color: As available from the indoor resilient athletic surfacing manufacturer's standard range.
2. Adhesive: As approved by the indoor resilient athletic surfacing manufacturer.

**PART 3 - EXECUTION**

3.1 *EXAMINATION*

- A. It is the responsibility of the general contractor/construction manager to ensure that project/site conditions are acceptable for the installation of the indoor resilient athletic flooring.
- B. Verify that the area in which the indoor resilient athletic surfacing will be installed is dry and weather tight. Verify that permanent heat, light and ventilation is installed and operable.
- C. Verify that all other work that could cause damage, dirt and dust or interrupt the normal pace of the indoor resilient athletic flooring installation is completed or suspended.
- D. Verify that there is a stable room temperature of at least 65°F.
- E. Verify that there are no foreign materials or objects on the subfloor and that the subfloor is clean and ready for installation.
- F. *Direct Full Spread Adhering to Concrete Subfloor with Multi-Poxy*: No higher than 98 % RH when tested per ASTM F2170. ASTM F1869 is not approved.

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- G. Do not average the results of the tests. Report all field test results in writing to the General Contractor, Architect, and End User prior to installation.
- H. Verify that the concrete subfloor surface pH level is within the 7 - 10 range.
- I. Document the results indicating the slab is within manufacturer's tolerances for slab deviation.

3.2 *PREPARATION OF SURFACES*

- A. Sand the entire surface of the concrete slab.
- B. Sweep the concrete slab so as to remove all dirt and dust. If a sweeping compound is to be used it must be a sweeping compound that does not contain oils or other items that may inhibit the adhesive bond. (See ASTM F710).
- C. Slab must be dust free. In the event that dust impairs adhesive bond, priming the slab prior to application of adhesive may be necessary. Follow installation guidelines.

3.3 *INSTALLATION*

- A. The installation area shall be closed to all traffic and activity for a period to be set by the indoor resilient athletic surfacing installer. The indoor resilient athletic surfacing installation shall not begin until the installer is familiar with the existing conditions.
- B. All necessary precautions should be taken to minimize noise, smell, dust, the use of hazardous materials and any other items that may inconvenience others.
- C. Install the indoor resilient athletic surfacing in strict accordance with the indoor resilient athletic surfacing manufacturer's written instructions.
- D. Install the indoor resilient athletic surfacing minimizing cross seams. Provide a seam diagram during the submittal process for approval prior to installation.
- E. Install appropriate threshold plates or transition strips where necessary.

3.4 *CLEANING*

- A. Remove all unused materials, tools, and equipment and dispose of any debris properly. Clean the indoor resilient athletic surfacing in accordance with the manufacturer's instructions.

3.5 *PROTECTION*

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If required, protect the indoor resilient athletic surfacing from damage using coverings approved by the manufacturer until acceptance of work by the customer or their authorized representative.

3.6 *RELATED STANDARDS AND GUIDELINES*

- A. ASTM F1869 "Standard Test Method for Measuring Moisture Evaporation Rate of Concrete Subfloor Using Anhydrous Calcium Chloride"
- B. ASTM F2170 "Standard Test Method for Determining Relative Humidity In Concrete Floor Slabs Using In-Situ Probes"
- C. ASTM F710 "Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring"
- D. ACI 302.2R-06 "Guideline for Concrete Slabs that Receive Moisture Sensitive Flooring Materials"

**END OF SECTION**

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC**  
**SURFACING**

**PART 1 – GENERAL**

*1.1 SECTION INCLUDES*

- A. Supply and installation of the indoor resilient multipurpose surfacing
- B. Application of the game lines
- C. References for the correct construction and preparation of concrete slabs to receive resilient flooring.

*1.2 SUBMITTALS*

A. Product Data:

Manufacturer's promotional brochures, specifications and installation instructions

B. Samples:

- 1. Submit for selection and approval three (3) sets of the indoor resilient multipurpose surfacing, manufacturer's brochures, samples or sample boards of all of the available colors, textures and styles.
- 2. Submit color samples of all the available game line paint colors for selection and approval.

C. Closeout Submittals:

- 1. Submit three (3) copies of the indoor resilient multipurpose surfacing and manufacturer's maintenance instructions.
- 2. Submit three (3) copies of the material and installation warranties as specified.

*1.3 QUALITY ASSURANCE*

A. Qualifications:

- 1. The indoor resilient multipurpose surfacing shall have been actively marketed for a minimum of five (5) years.
- 2. The indoor resilient multipurpose surfacing shall be manufactured in an ISO 9001 certified plant.
- 3. The indoor resilient multipurpose surfacing supplier shall be an established firm experienced in the field and appointed as a distributor by the manufacturer of the indoor resilient multipurpose surfacing.
- 4. The installer of the indoor resilient multipurpose surfacing shall have a minimum of five (5) years experience in the field installing



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indoor resilient multipurpose surfacing and have worked on at least five (5) projects of similar size, type and complexity.

B. Certifications:

Installer to submit the indoor resilient athletic surfacing manufacturer's or distributor's certification attesting that they are an approved installer of the indoor resilient multipurpose surfacing.

C. Testing:

Tests shall be relative for multi-purpose use with certificates from independent testing resources to be made available upon request. Test results shall be no more than 5 years old and performed according to ASTM and/or EN standard testing procedures.

1.4 *DELIVERY, STORAGE AND HANDLING*

A. Delivery:

Material shall not be delivered until all related work is in place and finished and/or proper storage facilities and conditions can be provided and guaranteed stable according to Tarkett Sports' recommendations.

B. Storage:

Store the material in a secure, clean and dry location. Maintain temperature between 65° and 85° Fahrenheit. Store the indoor resilient athletic surfacing on a clean flat surface.

1.5 *PROJECT/SITE CONDITIONS*

- A. It is the responsibility of the general contractor/construction manager to maintain project/site conditions acceptable for the installation of the indoor resilient multipurpose flooring.
- B. The area in which the indoor resilient multipurpose surfacing will be installed shall be dry and weather tight. Permanent heat, light and ventilation shall be installed and operable.
- C. All other trades shall have completed their work prior to the installation of the resilient athletic flooring. The general contractor or Construction Manager shall maintain a secure and clean working environment before, during and after the installation. Suspension of other trades' work may be authorized providing their work will not damage the new flooring.

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- D. Maintain a stable room temperature of at least 65°F for a minimum of one (1) week prior to, during and thereafter installation.
- E. An effective low-permeance vapor barrier is placed directly beneath the concrete subfloor. For "on" or "below grade" installations, it is recommended to provide a permanent vapor barrier resistant to long term hydrostatic pressure/moisture exposure. Protrusions should be sealed to prevent moisture migration into the slab. Moisture should not be allowed to enter the slab after the completed construction.
- F. Concrete subfloor surface pH level within the 7 to 9 range dependent upon installation type.
- G. Concrete subfloor should be no greater than 1/8" within a 10 ft diameter. This tolerance can be measured in accordance with ASTM E1155.  
A specified ( $F_F$ ) of 50 and an ( $F_L$ ) of 30 should reach this degree of floor flatness and floor level. There is no numerical correlation between F numbers and the deviation from the straight edge, however the above specified numbers should achieve a flat floor with minimal deviation in the slab. Reference ACI 117 and ACI 302.1R. The general contractor should provide a certificate of compliance with the above recommendations.
- H. Concrete subfloor must be clean and free of all foreign materials or objects including, but not limited to, curing compounds and sealers.
- I. Fill cracks, grooves, voids, depressions, and other minor imperfections with Ardex (or equal) cement-based patching/leveling compounds. Follow the manufacturer's directions. Moveable joints must be treated utilizing specific transitioning joint devices depending upon the architect's recommendations. Follow current ASTM F710 guidelines for the preparation of concrete slabs to receive resilient flooring.
- J. Refer to ACI 302.2R "Guidelines for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials" for concrete design and construction.
- K. Concrete slab shall be fortified with continual steel reinforcement. Fiber reinforcement alone shall not be considered adequate fortification.

1.6 *WARRANTY*

A. Materials:

The indoor resilient athletic surfacing shall be covered by the manufacturer against product defects for 3 years.

B. Installation:

The installation of the indoor resilient multipurpose surfacing shall be covered against poor workmanship and faulty installation by a two (2)

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year written, limited warranty provided by the contractor performing/overseeing the installation.

1.7 *ADDITIONAL MATERIALS*

Furnish to the owner additional materials containing a total of at least 1% of each different color or design of the indoor resilient athletic surfacing used on the project.

1.8 *LEED™ CERTIFICATION*

The indoor resilient athletic surfacing should be able to help this facility to achieve points towards *LEED™ certification*.

LEED categories positively affected by the indoor resilient athletic surfacing:

Product Type			Rubber
<b>Total Potential Credits</b>			12
<b>Building Reuse Maintain Interior Nonstructural Elements</b>	<b>MR 1.2</b>	Renovation	1
<b>Construction Waste Management</b>	<b>MR 2</b>	Renovation	2
<b>Construction Waste Management Materials Reuse</b>	<b>MR 3</b>	Renovation	2
	<b>5 % - 1 point</b>		
	<b>10% - 2 points</b>		
<b>Recycled Content</b>	<b>MR 4</b>	New/Renovation	2
	<b>20% - 2 points</b>		
<b>Regional Materials</b>	<b>MR5</b>	New/Renovation	2
<b>Indoor Environmental Air Quality Low VOC Adhesives/Sealants</b>	<b>IEQ 4.1</b>	New/Renovation	1
<b>Low-emitting Materials Paints and Coatings</b>	<b>IEQ 4.2</b>	New/Renovation	1
<b>Low-Emitting Materials Composite Wood and Agrifiber Products</b>	<b>IEQ 4.4</b>	New/Renovation	1
	<b>Plywood Substructures</b>		
	<b>Wood and Combi-Systems</b>		

**PART 2 - PRODUCTS**

2.1 *MANUFACTURERS*

The basis of the design for the indoor resilient multipurpose surfacing is **Dropzone Comfort 14.5 mm** as provided by Tarkett Sports. All other installation accessories and related components must be either made or approved by the indoor resilient athletic surfacing manufacturer. Other products may be approved as equal if deemed qualified and submitted in accordance with the General Conditions.

2.2 *MATERIALS*

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Dropzone Comfort

Physical properties of the indoor resilient athletic surfacing shall conform to the following minimums:

	Width	.....	4 ft.
	Total Thickness	.....	14.5 mm
Thickness	Wear Layer	.....	2.5 mm
Weight		.....	2.34 lbs/sq.ft.
	Coefficient of Friction	ASTM F2772	Passed
	Static Load	ASTM F970	.009"
	CA Section 01350 Compliance	ASTM D5116	Passed
	Noise Reduction	ASTM D3389	<0.1g, 100 cycles
	Abrasion Resistance	ASTM E492-04	54
	Chemical Resistance	ASTM F925	Good
	Force Reduction	ASTM F2772	Class 3
	Vertical Deformation	ASTM F2772	2.66mm
	Thermal Conductivity	ASTM C518	>0.4

1. Color: As available from the indoor resilient athletic surfacing manufacturer's standard range.
2. Adhesive: As approved by the indoor resilient athletic surfacing manufacturer.

**PART 3 - EXECUTION**

3.1 *EXAMINATION*

- A. It is the responsibility of the general contractor/construction manager to ensure that project/site conditions are acceptable for the installation of the indoor resilient athletic flooring.
- B. Verify that the area in which the indoor resilient athletic surfacing will be installed is dry and weather tight. Verify that permanent heat, light and ventilation is installed and operable.
- C. Verify that all other work that could cause damage, dirt and dust or interrupt the normal pace of the indoor resilient athletic flooring installation is completed or suspended.
- D. Verify that there is a stable room temperature of at least 65°F.
- E. Verify that there are no foreign materials or objects on the subfloor and that the subfloor is clean and ready for installation.

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- F. Direct Full Spread Adhering to Concrete Subfloor with Multi-Poxy: No higher than 98% RH when tested per ASTM F2170. ASTM F1869 is not approved.
- G. Do not average the results of the tests. Report all field test results in writing to the General Contractor, Architect, and End User prior to installation.
- H. Verify that the concrete subfloor surface pH level is within the 7 - 10 range.
- I. Document the results indicating the slab is within manufacturer's tolerances for slab deviation.

3.2 *PREPARATION OF SURFACES*

- A. Sand the entire surface of the concrete slab.
- B. Sweep the concrete slab so as to remove all dirt and dust. If a sweeping compound is to be used it must be a sweeping compound that does not contain oils or other items that may inhibit the adhesive bond. (See ASTM F710).
- C. Slab must be dust free. In the event that dust impairs adhesive bond, priming the slab prior to application of adhesive may be necessary. Follow installation guidelines.

3.3 *INSTALLATION*

- A. The installation area shall be closed to all traffic and activity for a period to be set by the indoor resilient athletic surfacing installer. The indoor resilient athletic surfacing installation shall not begin until the installer is familiar with the existing conditions.
- B. All necessary precautions should be taken to minimize noise, smell, dust, the use of hazardous materials and any other items that may inconvenience others.
- C. Install the indoor resilient athletic surfacing in strict accordance with the indoor resilient athletic surfacing manufacturer's written instructions.
- D. Install the indoor resilient athletic surfacing minimizing cross seams. Provide a seam diagram during the submittal process for approval prior to installation.
- E. Install appropriate threshold plates or transition strips where necessary.

3.4 *CLEANING*

Remove all unused materials, tools, and equipment and dispose of any debris properly. Clean the indoor resilient athletic surfacing in accordance with the manufacturer's instructions.

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC**  
**SURFACING**

3.5 *PROTECTION*

If required, protect the indoor resilient athletic surfacing from damage using coverings approved by the manufacturer until acceptance of work by the customer or their authorized representative.

3.6 *RELATED STANDARDS AND GUIDELINES*

- A. ASTM F1869 "Standard Test Method for Measuring Moisture Evaporation Rate of Concrete Subfloor Using Anhydrous Calcium Chloride"
- B. ASTM F2170 "Standard Test Method for Determining Relative Humidity In Concrete Floor Slabs Using In-Situ Probes"
- C. ASTM F710 "Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring"
- D. ACI 302.2R-06 "Guideline for Concrete Slabs that Receive Moisture Sensitive Flooring Materials"

**END OF SECTION**

**SECTION 09645**  
**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC**  
**SURFACING**

**PART 1 – GENERAL**

- 1.1 *SECTION INCLUDES*
- A. Supply and installation of the indoor resilient multipurpose surfacing
  - B. Application of the game lines
  - C. References for the correct construction and preparation of concrete slabs to receive resilient flooring.
- 1.2 *SUBMITTALS*
- A. Product Data:  
Manufacturer's promotional brochures, specifications and installation instructions
  - B. Samples:
    - 1. Submit for selection and approval three (3) sets of the indoor resilient multipurpose surfacing, manufacturer's brochures, samples or sample boards of all of the available colors, textures and styles.
    - 2. Submit color samples of all the available game line paint colors for selection and approval.
  - C. Closeout Submittals:
    - 1. Submit three (3) copies of the indoor resilient multipurpose surfacing and manufacturer's maintenance instructions.
    - 2. Submit three (3) copies of the material and installation warranties as specified.
- 1.3 *QUALITY ASSURANCE*
- A. Qualifications:
    - 1. The indoor resilient multipurpose surfacing shall have been actively marketed for a minimum of five (5) years.
    - 2. The indoor resilient multipurpose surfacing shall be manufactured in an ISO 9001 certified plant.
    - 3. The indoor resilient multipurpose surfacing supplier shall be an established firm experienced in the field and appointed as a distributor by the manufacturer of the indoor resilient multipurpose surfacing.
    - 4. The installer of the indoor resilient multipurpose surfacing shall have a minimum of five (5) years experience in the field installing indoor resilient multipurpose surfacing and have worked on at least five (5) projects of similar size, type and complexity.
  - B. Certifications:
    - 1. Installer to submit the indoor resilient athletic surfacing manufacturer's or distributor's certification attesting that they are an approved installer of the indoor resilient multipurpose surfacing.
  - C. Testing:  
Tests shall be relative for multi-purpose use with certificates from independent testing resources to be made available upon request. Test results shall be no more than 5 years old and performed according to ASTM and/or EN standard testing procedures.

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**SURFACING**

1.4 *DELIVERY, STORAGE AND HANDLING*

A. Delivery:

Material shall not be delivered until all related work is in place and finished and/or proper storage facilities and conditions can be provided and guaranteed stable according to FieldTurf USA, Inc. recommendations.

B. Storage:

Store the material in a secure, clean and dry location. Maintain temperature between 55° and 85° Fahrenheit. Store the indoor resilient athletic surfacing on a clean flat surface. Do not stack rolls.

1.5 *PROJECT/SITE CONDITIONS*

A. It is the responsibility of the general contractor/construction manager to maintain project/site conditions acceptable for the installation of the indoor resilient multipurpose flooring.

B. The area in which the indoor resilient multipurpose surfacing will be installed shall be dry and weather tight. Permanent heat, light and ventilation shall be installed and operable.

C. All other trades shall have completed their work prior to the installation of the resilient athletic flooring. The general contractor or Construction Manager shall maintain a secure and clean working environment before, during and after the installation. Suspension of other trades' work may be authorized providing their work will not damage the new flooring.

D. Maintain a stable room temperature of at least 65°F for a minimum of one (1) week prior to, during and thereafter installation.

E. An effective low-permeance vapor barrier is placed directly beneath the concrete subfloor. For "on" or "below grade" installations, it is recommended to provide a permanent vapor barrier resistant to long term hydrostatic pressure/moisture exposure. Protrusions should be sealed to prevent moisture migration into the slab. Moisture should not be allowed to enter the slab after the completed construction.

F. Concrete subfloor surface pH level within the 7 to 9 range dependent upon installation type.

G. Concrete subfloor should be no greater than 1/8" within a 10 ft diameter. This tolerance can be measured in accordance with ASTM E1155. A specified ( $F_F$ ) of 50 and an ( $F_L$ ) of 30 should reach this degree of floor flatness and floor level. There is no numerical correlation between  $F$  numbers and the deviation from the straight edge, however the above specified numbers should achieve a flat floor with minimal deviation in the slab. Reference ACI 117 and ACI 302.1R. The general contractor should provide a certificate of compliance with the above recommendations.

H. Concrete subfloor must be clean and free of all foreign materials or objects including, but not limited to, curing compounds and sealers.

I. Fill cracks, grooves, voids, depressions, and other minor imperfections with Ardex (or equal) cement-based patching/leveling compounds. Follow the manufacturer's directions. Moveable joints must be treated utilizing specific transitioning joint devices depending upon the architect's recommendations.



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Follow current ASTM F710 guidelines for the preparation of concrete slabs to receive resilient flooring.

- J. Refer to ACI 302.2R “Guidelines for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials” for concrete design and construction.
- K. Concrete slab shall be fortified with continual steel reinforcement. Fiber reinforcement alone shall not be considered adequate fortification.

1.6 **WARRANTY**

A. Materials:

The indoor resilient athletic surfacing shall be covered by the manufacturer against product defects for 3 years.

B. Installation:

The installation of the indoor resilient multipurpose surfacing shall be covered against poor workmanship and faulty installation by a two (2) year written, limited warranty provided by the contractor performing/overseeing the installation.

1.7 **ADDITIONAL MATERIALS**

Furnish to the owner additional materials containing a total of at least 1% of each different color or design of the indoor resilient athletic surfacing used on the project.

1.8 **LEED™ CERTIFICATION**

The indoor resilient athletic surfacing should be able to help this facility to achieve points towards *LEED™ certification*.

LEED categories positively affected by the indoor resilient athletic surfacing:

Product Type			Rubber
<b>Building Reuse Maintain Interior Nonstructural Elements</b>	<b>MR 1.2</b>	Renovation	1
<b>Construction Waste Management</b>	<b>MR 2</b>	Renovation	2
<b>Construction Waste Management Materials Reuse</b>	<b>MR 3</b>	Renovation	2
	<b>5 % - 1 point</b>		
	<b>10% - 2 points</b>		
<b>Recycled Content</b>	<b>MR 4</b>	New/Renovation	2
	<b>20% - 2 points</b>		
<b>Regional Materials</b>	<b>MR5</b>	New/Renovation	2
<b>Indoor Environmental Air Quality Low VOC Adhesives/Sealants</b>	<b>IEQ 4.1</b>	New/Renovation	1
<b>Low-emitting Materials Paints and Coatings</b>	<b>IEQ 4.2</b>	New/Renovation	1

**SECTION 09645**  
**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

**PART 2 - PRODUCTS**

2.1 **MANUFACTURERS**

The basis of the design for the indoor resilient multipurpose surfacing is Dropzone Elite 22.5mm as provided by Tarkett Sports. All other installation accessories and related components must be either made or approved by the indoor resilient athletic surfacing manufacturer. Other products may be approved as equal if deemed qualified and submitted in accordance with the General Conditions. Test reports confirming compliance from an Independent Sports Laboratory must be provided along with samples, technical data, installation, maintenance, and warranty prior to acceptance as an alternative product.

2.2 **MATERIALS.**

Dropzone Elite 22.5mm multi-layer flooring.

1. Physical properties of the indoor resilient athletic surfacing shall conform to the following minimums:

Property	Standard	Value
Elongation	ASTM D412	250%
Tensile Strength	ASTM D412	>200 PSI
Shore Hardness (Shore A)	ASTM D2240	70±5 (Wear Layer)
Flexibility	ASTM F137	Pass (1/4" mandrel)
Thermal Conductivity	ASTM C518	1.3 BTU/(hr - ft -°F)
Coefficient of Friction	ASTM D2047	0.8
Abrasion Resistance	(H-18 Wheels, 500g, 1000 cycles)ASTM D3389	< 1 G
Impact	EN 1517	0.00 mm
Indentation	EN 1516	0.1 mm
Rolling Load	EN 1569	Passed
VOC Compliance	ASTM 5116 (CA Section 1350)	Passed
Surface Texture	—	Slight
Total Thickness	—	22.5 mm (0.886")
Surface Thickness	—	10.5 mm
Base Layer Thickness	—	12 mm
Wear Surface Material	—	Rubber Blend
Base Layer Material	—	Blended Rubber
Roll Lengths	—	25-100 lin. ft.
Roll Width	—	4 ft.
Weight	—	4.2 lbs. per sq.ft.

1. Color: As available from the indoor resilient athletic surfacing manufacturer's standard range.
2. Adhesive: As approved by the indoor resilient athletic surfacing manufacturer.

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC**  
**SURFACING**

**PART 3 - EXECUTION**

3.1 *EXAMINATION*

- A. It is the responsibility of the general contractor/construction manager to ensure that project/site conditions are acceptable for the installation of the indoor resilient athletic flooring.
- B. Verify that the area in which the indoor resilient athletic surfacing will be installed is dry and weather tight. Verify that permanent heat, light and ventilation is installed and operable.
- C. Verify that all other work that could cause damage, dirt and dust or interrupt the normal pace of the indoor resilient athletic flooring installation is completed or suspended.
- D. Verify that there is a stable room temperature of at least 65°F.
- E. Verify that there are no foreign materials or objects on the subfloor and that the subfloor is clean and ready for installation.
- F. *Direct Full Spread Adhering to Concrete Subfloor*: moisture content less than 98 % RH when tested per ASTM F2170. Use only manufacturer recommended Multi-Poxy adhesive.
- G. If both tests are performed, use the highest value. Do not average the results of the tests. Report all field test results in writing to the General Contractor, Architect, and End User prior to installation.
- H. Verify that the concrete subfloor surface pH level is within the 7 - 11 range.
- I. Document the results indicating the slab is within manufacturer's tolerances for slab deviation.

3.2 *PREPARATION OF SURFACES*

- A. Sand the entire surface of the concrete slab.
- B. Sweep the concrete slab so as to remove all dirt and dust. If a sweeping compound is to be used it must be a sweeping compound that does not contain oil or other items that may inhibit the adhesive bond.
- C. Slab must be dust free. In the event that dust impairs adhesive bond, priming the slab prior to application of adhesive may be necessary. Follow installation guidelines.

3.3 *OPTIONS FOR MOISTURE MITIGATION*

- A. For projects with moisture conditions higher than the specified tolerances, **TARKOLAY** may be used for conditions that do not 100% per ASTM F2170. Use only approved adhesive as directed by the manufacturer. Tarkolay is available for roll goods only.

3.4 *INSTALLATION*

- A. The installation area shall be closed to all traffic and activity for a period to be set by the indoor resilient athletic surfacing installer. The indoor resilient athletic surfacing installation shall not begin until the installer is familiar with the existing conditions.

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- B. All necessary precautions should be taken to minimize noise, smell, dust, the use of hazardous materials and any other items that may inconvenience others.
- C. Install the indoor resilient athletic surfacing in strict accordance with the indoor resilient athletic surfacing manufacturer's written instructions.
- D. Install the indoor resilient athletic surfacing minimizing cross seams. Provide a seam diagram during the submittal process for approval prior to installation.
- E. Install appropriate threshold plates or transition strips where necessary.

3.5 *CLEANING*

- A. Remove all unused materials, tools, and equipment and dispose of any debris properly. Clean the indoor resilient athletic surfacing in accordance with the manufacturer's instructions.

3.6 *PROTECTION*

If required, protect the indoor resilient athletic surfacing from damage using coverings approved by the manufacturer until acceptance of work by the customer or their authorized representative.

3.6 RELATED STANDARDS AND GUIDELINES

- A. ASTM F2170 "Standard Test Method for Determining Relative Humidity In Concrete Floor Slabs Using In-Situ Probes"
- B. ASTM F710 "Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring"
- C. ACI 302.2R-06 "Guideline for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials"

**END OF SECTION**

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC**  
**SURFACING**

**PART 1 – GENERAL**

1.1 *SECTION INCLUDES*

- A. Supply and installation of the indoor resilient multipurpose surfacing
- B. Application of the game lines
- C. References for the correct construction and preparation of concrete slabs to receive resilient flooring.

1.2 *SUBMITTALS*

A. Product Data:

Manufacturer's promotional brochures, specifications and installation instructions

B. Samples:

- 1. Submit for selection and approval three (3) sets of the indoor resilient multipurpose surfacing, manufacturer's brochures, samples or sample boards of all of the available colors, textures and styles.
- 2. Submit color samples of all the available game line paint colors for selection and approval.

C. Closeout Submittals:

- 1. Submit three (3) copies of the indoor resilient multipurpose surfacing and manufacturer's maintenance instructions.
- 2. Submit three (3) copies of the material and installation warranties as specified.

1.3 *QUALITY ASSURANCE*

A. Qualifications:

- 1. The indoor resilient multipurpose surfacing shall have been actively marketed for a minimum of five (5) years.
- 2. The indoor resilient multipurpose surfacing shall be manufactured in an ISO 9001 certified plant.
- 3. The indoor resilient multipurpose surfacing supplier shall be an established firm experienced in the field and appointed as a distributor by the manufacturer of the indoor resilient multipurpose surfacing.
- 4. The installer of the indoor resilient multipurpose surfacing shall have a minimum of five (5) years experience in the field installing

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indoor resilient multipurpose surfacing and have worked on at least five (5) projects of similar size, type and complexity.

B. Certifications:

Installer to submit the indoor resilient athletic surfacing manufacturer's or distributor's certification attesting that they are an approved installer of the indoor resilient multipurpose surfacing.

C. Testing:

Tests shall be relative for multi-purpose use with certificates from independent testing resources to be made available upon request. Test results shall be no more than 5 years old and performed according to ASTM and/or EN standard testing procedures.

1.4 *DELIVERY, STORAGE AND HANDLING*

A. Delivery:

Material shall not be delivered until all related work is in place and finished and/or proper storage facilities and conditions can be provided and guaranteed stable according to Tarkett Sports' recommendations.

B. Storage:

Store the material in a secure, clean and dry location. Maintain temperature between 65° and 85° Fahrenheit. Store the indoor resilient athletic surfacing on a clean flat surface.

1.5 *PROJECT/SITE CONDITIONS*

- A. It is the responsibility of the general contractor/construction manager to maintain project/site conditions acceptable for the installation of the indoor resilient multipurpose flooring.
- B. The area in which the indoor resilient multipurpose surfacing will be installed shall be dry and weather tight. Permanent heat, light and ventilation shall be installed and operable.
- C. All other trades shall have completed their work prior to the installation of the resilient athletic flooring. The general contractor or Construction Manager shall maintain a secure and clean working environment before, during and after the installation. Suspension of other trades' work may be authorized providing their work will not damage the new flooring.

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- D. Maintain a stable room temperature of at least 65°F for a minimum of one (1) week prior to, during and thereafter installation.
- E. An effective low-permeance vapor barrier is placed directly beneath the concrete subfloor. For "on" or "below grade" installations, it is recommended to provide a permanent vapor barrier resistant to long term hydrostatic pressure/moisture exposure. Protrusions should be sealed to prevent moisture migration into the slab. Moisture should not be allowed to enter the slab after the completed construction.
- F. Concrete subfloor surface pH level within the 7 to 9 range dependent upon installation type.
- G. Concrete subfloor should be no greater than 1/8" within a 10 ft diameter. This tolerance can be measured in accordance with ASTM E1155.  
A specified ( $F_F$ ) of 50 and an ( $F_L$ ) of 30 should reach this degree of floor flatness and floor level. There is no numerical correlation between F numbers and the deviation from the straight edge, however the above specified numbers should achieve a flat floor with minimal deviation in the slab. Reference ACI 117 and ACI 302.1R. The general contractor should provide a certificate of compliance with the above recommendations.
- H. Concrete subfloor must be clean and free of all foreign materials or objects including, but not limited to, curing compounds and sealers.
- I. Fill cracks, grooves, voids, depressions, and other minor imperfections with Ardex (or equal) cement-based patching/leveling compounds. Follow the manufacturer's directions. Moveable joints must be treated utilizing specific transitioning joint devices depending upon the architect's recommendations. Follow current ASTM F710 guidelines for the preparation of concrete slabs to receive resilient flooring.
- J. Refer to ACI 302.2R "Guidelines for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials" for concrete design and construction.
- K. Concrete slab shall be fortified with continual steel reinforcement. Fiber reinforcement alone shall not be considered adequate fortification.

1.6 *WARRANTY*

A. Materials:

The indoor resilient athletic surfacing shall be covered by the manufacturer against product defects for 3 years.

B. Installation:

The installation of the indoor resilient multipurpose surfacing shall be covered against poor workmanship and faulty installation by a two (2)

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year written, limited warranty provided by the contractor performing/overseeing the installation.

1.7 *ADDITIONAL MATERIALS*

Furnish to the owner additional materials containing a total of at least 1% of each different color or design of the indoor resilient athletic surfacing used on the project.

1.8 *LEED™ CERTIFICATION*

The indoor resilient athletic surface contributes to achieve points towards *LEED™ certification*.

**PART 2 - PRODUCTS**

2.1 *MANUFACTURERS*

The basis of the design for the indoor resilient multipurpose surfacing is Dropzone Impact as provided by Tarkett Sports. All other installation accessories and related components must be either made or approved by the indoor resilient athletic surfacing manufacturer. Other products may be approved as equal if deemed qualified and submitted in accordance with the General Conditions.

2.2 *MATERIALS*

Dropzone Impact

1. Physical properties of the indoor resilient athletic surfacing shall conform to the following minimums.
2. Color: Standard colors from the manufacturer's range.
3. Adhesive: As approved by the manufacturer.



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<b>Property</b>	<b>Standard</b>	<b>Value</b>
Elongation	ASTM D412	250%
Tensile Strength	ASTM D412	493 psi
Shore Hardness (Shore A)	ASTM D2240	70±5 (Wear Layer)
Reaction to Fire	ASTM E648	Class 1
Smoke Density (Non-Flaming)	ASTM E662	Passed
Coefficient of Friction	ASTM D1894	0.99
Abrasion Resistance	(H-18 Wheels, 500g, 1000 cycles)ASTM D3389	0.37g
Chemical Resistance	ASTM F925	Compliant
Static Load Limit	ASTM F970	≤0.003 (250 psi/ 24 hours)
Tear Resistance	ASTM D624	Passed
Tear Abrasion	ASTM D501	Passed
Resistance to Heat	ASTM F1514	Compliant
Thickness	ASTM F386	9.5 mm (0.374")
Thickness of Wear Layer	ASTM F410	2.3mm
Weight	—	12.6 lbs per tile
Wear Surface Material	—	Virgin Rubber
Base Layer Material	—	Blended Rubber
Tile Formats Options	—	Square-Edge, Interlocking
Tile Dimensions	—	1 m x 1 m (3.28' x 3.28')

**PART 3 - EXECUTION**

3.1 *EXAMINATION*

- A. It is the responsibility of the general contractor/construction manager to ensure that project/site conditions are acceptable for the installation of the indoor resilient athletic flooring.

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- B. Verify that the area in which the indoor resilient athletic surfacing will be installed is dry and weather tight. Verify that permanent heat, light and ventilation is installed and operable.
- C. Verify that all other work that could cause damage, dirt and dust or interrupt the normal pace of the indoor resilient athletic flooring installation is completed or suspended.
- D. Verify that there is a stable room temperature of at least 65°F.
- E. Verify that there are no foreign materials or objects on the subfloor and that the subfloor is clean and ready for installation.
- F. Direct Full Spread Adhering to Concrete Subfloor with TNA 965 Acrylic Adhesive: No higher than 85 % RH when tested per ASTM F2170.  
Direct Full Spread Adhering to Concrete Subfloor with TNA 975 Two Part Urethane Adhesive: No higher than 90 % RH when tested per ASTM F2170.
- G. Do not average the results of the tests. Report all field test results in writing to the General Contractor, Architect, and End User prior to installation.
- H. Verify that the concrete subfloor surface pH level is within the 7 - 10 range.
- I. Document the results indicating the slab is within manufacturer's tolerances for slab deviation.

3.2 *PREPARATION OF SURFACES*

- A. Sand the entire surface of the concrete slab.
- B. Sweep the concrete slab so as to remove all dirt and dust. If a sweeping compound is to be used it must be a sweeping compound that does not contain oils or other items that may inhibit the adhesive bond. (See ASTM F710).
- C. Slab must be dust free. In the event that dust impairs adhesive bond, priming the slab prior to application of adhesive may be necessary. Follow installation guidelines.

3.3 *INSTALLATION*

- A. The installation area shall be closed to all traffic and activity for a period to be set by the indoor resilient athletic surfacing installer. The indoor resilient athletic surfacing installation shall not begin until the installer is familiar with the existing conditions.
- B. All necessary precautions should be taken to minimize noise, smell, dust, the use of hazardous materials and any other items that may inconvenience others.
- C. Install the indoor resilient athletic surfacing in strict accordance with the indoor resilient athletic surfacing manufacturer's written instructions.

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- D. Install the indoor resilient athletic surfacing minimizing cross seams. Provide a seam diagram during the submittal process for approval prior to installation.
- E. Install appropriate threshold plates or transition strips where necessary.

3.4 *CLEANING*

- A. Remove all unused materials, tools, and equipment and dispose of any debris properly. Clean the indoor resilient athletic surfacing in accordance with the manufacturer's instructions.

3.5 *PROTECTION*

If required, protect the indoor resilient athletic surfacing from damage using coverings approved by the manufacturer until acceptance of work by the customer or their authorized representative.

3.6 *RELATED STANDARDS AND GUIDELINES*

- A. ASTM F2170 "Standard Test Method for Determining Relative Humidity In Concrete Floor Slabs Using In-Situ Probes"
- B. ASTM F710 "Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring"
- C. ACI 302.2R-06 "Guideline for Concrete Slabs that Receive Moisture Sensitive Flooring Materials"

**END OF SECTION**

**SECTION 09 65 66**  
**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC**  
**SURFACING**

**PART 1 – GENERAL**

1.1 *SECTION INCLUDES*

- A. Supply and installation of the indoor resilient multipurpose surfacing
- B. Application of the game lines
- C. References for the correct construction and preparation of concrete slabs to receive resilient flooring.

1.2 *SUBMITTALS*

A. Product Data:

Manufacturer's promotional brochures, specifications and installation instructions

B. Samples:

- 1. Submit for selection and approval three (3) sets of the indoor resilient multipurpose surfacing, manufacturer's brochures, samples or sample boards of all of the available colors, textures and styles.
- 2. Submit color samples of all the available game line paint colors for selection and approval.

C. Closeout Submittals:

- 1. Submit three (3) copies of the indoor resilient multipurpose surfacing and manufacturer's maintenance instructions.
- 2. Submit three (3) copies of the material and installation warranties as specified.

1.3 *QUALITY ASSURANCE*

A. Qualifications:

- 1. The indoor resilient multipurpose surfacing shall have been actively marketed for a minimum of five (5) years.
- 2. The indoor resilient multipurpose surfacing shall be manufactured in an ISO 9001 certified plant.
- 3. The indoor resilient multipurpose surfacing supplier shall be an established firm experienced in the field and appointed as a distributor by the manufacturer of the indoor resilient multipurpose surfacing.
- 4. The installer of the indoor resilient multipurpose surfacing shall have a minimum of five (5) years experience in the field installing

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**SURFACING**

indoor resilient multipurpose surfacing and have worked on at least five (5) projects of similar size, type and complexity.

B. Certifications:

Installer to submit the indoor resilient athletic surfacing manufacturer's or distributor's certification attesting that they are an approved installer of the indoor resilient multipurpose surfacing.

C. Testing:

Tests shall be relative for multi-purpose use with certificates from independent testing resources to be made available upon request. Test results shall be no more than 5 years old and performed according to ASTM and/or EN standard testing procedures.

1.4 *DELIVERY, STORAGE AND HANDLING*

A. Delivery:

Material shall not be delivered until all related work is in place and finished and/or proper storage facilities and conditions can be provided and guaranteed stable according to Tarkett Sports' recommendations.

B. Storage:

Store the material in a secure, clean and dry location. Maintain temperature between 65° and 85° Fahrenheit. Store the indoor resilient athletic surfacing on a clean flat surface.

1.5 *PROJECT/SITE CONDITIONS*

- A. It is the responsibility of the general contractor/construction manager to maintain project/site conditions acceptable for the installation of the indoor resilient multipurpose flooring.
- B. The area in which the indoor resilient multipurpose surfacing will be installed shall be dry and weather tight. Permanent heat, light and ventilation shall be installed and operable.
- C. All other trades shall have completed their work prior to the installation of the resilient athletic flooring. The general contractor or Construction Manager shall maintain a secure and clean working environment before, during and after the installation. Suspension of other trades' work may be authorized providing their work will not damage the new flooring.

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- D. Maintain a stable room temperature of at least 65°F for a minimum of one (1) week prior to, during and thereafter installation.
- E. An effective low-permeance vapor barrier is placed directly beneath the concrete subfloor. For "on" or "below grade" installations, it is recommended to provide a permanent vapor barrier resistant to long term hydrostatic pressure/moisture exposure. Protrusions should be sealed to prevent moisture migration into the slab. Moisture should not be allowed to enter the slab after the completed construction.
- F. Concrete subfloor surface pH level within the 7 to 9 range dependent upon installation type.
- G. Concrete subfloor should be no greater than 1/8" within a 10 ft diameter. This tolerance can be measured in accordance with ASTM E1155.  
A specified ( $F_F$ ) of 50 and an ( $F_L$ ) of 30 should reach this degree of floor flatness and floor level. There is no numerical correlation between F numbers and the deviation from the straight edge, however the above specified numbers should achieve a flat floor with minimal deviation in the slab. Reference ACI 117 and ACI 302.1R. The general contractor should provide a certificate of compliance with the above recommendations.
- H. Concrete subfloor must be clean and free of all foreign materials or objects including, but not limited to, curing compounds and sealers.
- I. Fill cracks, grooves, voids, depressions, and other minor imperfections with Ardex (or equal) cement-based patching/leveling compounds. Follow the manufacturer's directions. Moveable joints must be treated utilizing specific transitioning joint devices depending upon the architect's recommendations. Follow current ASTM F710 guidelines for the preparation of concrete slabs to receive resilient flooring.
- J. Refer to ACI 302.2R "Guidelines for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials" for concrete design and construction.
- K. Concrete slab shall be fortified with continual steel reinforcement. Fiber reinforcement alone shall not be considered adequate fortification.

1.6 *WARRANTY*

A. Materials:

The indoor resilient athletic surfacing shall be covered by the manufacturer against product defects for 3 years.

B. Installation:

The installation of the indoor resilient multipurpose surfacing shall be covered against poor workmanship and faulty installation by a two (2)

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year written, limited warranty provided by the contractor performing/overseeing the installation.

1.7 *ADDITIONAL MATERIALS*

Furnish to the owner additional materials containing a total of at least 1% of each different color or design of the indoor resilient athletic surfacing used on the project.

1.8 *LEED™ CERTIFICATION*

The indoor resilient athletic surface contributes to achieve points towards *LEED™ certification*.

**PART 2 - PRODUCTS**

2.1 *MANUFACTURERS*

The basis of the design for the indoor resilient multipurpose surfacing is Dropzone Impact as provided by Tarkett Sports. All other installation accessories and related components must be either made or approved by the indoor resilient athletic surfacing manufacturer. Other products may be approved as equal if deemed qualified and submitted in accordance with the General Conditions.

2.2 *MATERIALS*

Dropzone Impact

1. Physical properties of the indoor resilient athletic surfacing shall conform to the following minimums.
2. Color: Standard colors from the manufacturer's range.
3. Adhesive: As approved by the manufacturer.

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<b>Property</b>	<b>Standard</b>	<b>Value</b>
Elongation	ASTM D412	250%
Tensile Strength	ASTM D412	493 psi
Shore Hardness (Shore A)	ASTM D2240	70±5 (Wear Layer)
Reaction to Fire	ASTM E648	Class 1
Smoke Density (Non-Flaming)	ASTM E662	Passed
Coefficient of Friction	ASTM D1894	0.99
Abrasion Resistance	(H-18 Wheels, 500g, 1000 cycles)ASTM D3389	0.37g
Chemical Resistance	ASTM F925	Compliant
Static Load Limit	ASTM F970	≤0.003 (250 psi/ 24 hours)
Tear Resistance	ASTM D624	Passed
Tear Abrasion	ASTM D501	Passed
Resistance to Heat	ASTM F1514	Compliant
Thickness	ASTM F386	9.5 mm (0.374")
Thickness of Wear Layer	ASTM F410	2.3mm
Weight	—	12.6 lbs per tile
Wear Surface Material	—	Virgin Rubber
Base Layer Material	—	Blended Rubber
Tile Formats Options	—	Square-Edge, Interlocking
Tile Dimensions	—	1 m x 1 m (3.28' x 3.28')

**PART 3 - EXECUTION**

3.1 *EXAMINATION*

- A. It is the responsibility of the general contractor/construction manager to ensure that project/site conditions are acceptable for the installation of the indoor resilient athletic flooring.



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- B. Verify that the area in which the indoor resilient athletic surfacing will be installed is dry and weather tight. Verify that permanent heat, light and ventilation is installed and operable.
- C. Verify that all other work that could cause damage, dirt and dust or interrupt the normal pace of the indoor resilient athletic flooring installation is completed or suspended.
- D. Verify that there is a stable room temperature of at least 65°F.
- E. Verify that there are no foreign materials or objects on the subfloor and that the subfloor is clean and ready for installation.
- F. Direct Full Spread Adhering to Concrete Subfloor with TNA 965 Acrylic Adhesive: No higher than 85 % RH when tested per ASTM F2170.  
Direct Full Spread Adhering to Concrete Subfloor with TNA 975 Two Part Urethane Adhesive: No higher than 90 % RH when tested per ASTM F2170.
- G. Do not average the results of the tests. Report all field test results in writing to the General Contractor, Architect, and End User prior to installation.
- H. Verify that the concrete subfloor surface pH level is within the 7 - 10 range.
- I. Document the results indicating the slab is within manufacturer's tolerances for slab deviation.

**3.2**     *PREPARATION OF SURFACES*

- A. Sand the entire surface of the concrete slab.
- B. Sweep the concrete slab so as to remove all dirt and dust. If a sweeping compound is to be used it must be a sweeping compound that does not contain oils or other items that may inhibit the adhesive bond. (See ASTM F710).
- C. Slab must be dust free. In the event that dust impairs adhesive bond, priming the slab prior to application of adhesive may be necessary. Follow installation guidelines.

**3.3**     *INSTALLATION*

- A. The installation area shall be closed to all traffic and activity for a period to be set by the indoor resilient athletic surfacing installer. The indoor resilient athletic surfacing installation shall not begin until the installer is familiar with the existing conditions.
- B. All necessary precautions should be taken to minimize noise, smell, dust, the use of hazardous materials and any other items that may inconvenience others.
- C. Install the indoor resilient athletic surfacing in strict accordance with the indoor resilient athletic surfacing manufacturer's written instructions.

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- D. Install the indoor resilient athletic surfacing minimizing cross seams. Provide a seam diagram during the submittal process for approval prior to installation.
- E. Install appropriate threshold plates or transition strips where necessary.

3.4 *CLEANING*

- A. Remove all unused materials, tools, and equipment and dispose of any debris properly. Clean the indoor resilient athletic surfacing in accordance with the manufacturer's instructions.

3.5 *PROTECTION*

If required, protect the indoor resilient athletic surfacing from damage using coverings approved by the manufacturer until acceptance of work by the customer or their authorized representative.

3.6 *RELATED STANDARDS AND GUIDELINES*

- A. ASTM F2170 "Standard Test Method for Determining Relative Humidity In Concrete Floor Slabs Using In-Situ Probes"
- B. ASTM F710 "Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring"
- C. ACI 302.2R-06 "Guideline for Concrete Slabs that Receive Moisture Sensitive Flooring Materials"

**END OF SECTION**

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC**  
**SURFACING**

**PART 1 – GENERAL**

- 1.1 *SECTION INCLUDES*
- A. Supply and installation of the indoor resilient multipurpose surfacing
  - B. Application of the game lines
  - C. References for the correct construction and preparation of concrete slabs to receive resilient flooring.
- 1.2 *SUBMITTALS*
- A. Product Data:  
Manufacturer's promotional brochures, specifications and installation instructions
  - B. Samples:
    - 1. Submit for selection and approval three (3) sets of the indoor resilient multipurpose surfacing, manufacturer's brochures, samples or sample boards of all of the available colors, textures and styles.
    - 2. Submit color samples of all the available game line paint colors for selection and approval.
  - C. Closeout Submittals:
    - 1. Submit three (3) copies of the indoor resilient multipurpose surfacing and manufacturer's maintenance instructions.
    - 2. Submit three (3) copies of the material and installation warranties as specified.
- 1.3 *QUALITY ASSURANCE*
- A. Qualifications:
    - 1. The indoor resilient multipurpose surfacing shall have been actively marketed for a minimum of five (5) years.
    - 3. The indoor resilient multipurpose surfacing supplier shall be an established firm experienced in the field and appointed as a distributor by the manufacturer of the indoor resilient multipurpose surfacing.
    - 4. The installer of the indoor resilient multipurpose surfacing shall have a minimum of five (5) years experience in the field installing indoor resilient multipurpose surfacing and have worked on at least five (5) projects of similar size, type and complexity.
  - B. Certifications:
    - 1. Installer to submit the indoor resilient athletic surfacing manufacturer's or distributor's certification attesting that they are an approved installer of the indoor resilient multipurpose surfacing.
  - C. Testing:  
Tests shall be relative for multi-purpose use with certificates from independent testing resources to be made available upon request. Test results shall be no more than 5 years old and performed according to ASTM and/or EN standard testing procedures.
- 1.4 *DELIVERY, STORAGE AND HANDLING*

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- A. Delivery:  
Material shall not be delivered until all related work is in place and finished and/or proper storage facilities and conditions can be provided and guaranteed stable according to FieldTurf USA, Inc. recommendations.
- B. Storage:  
Store the material in a secure, clean and dry location. Maintain temperature between 55° and 85° Fahrenheit. Store the indoor resilient athletic surfacing on a clean flat surface. Do not stack rolls.

1.5 *PROJECT/SITE CONDITIONS*

- A. It is the responsibility of the general contractor/construction manager to maintain project/site conditions acceptable for the installation of the indoor resilient multipurpose flooring.
- B. The area in which the indoor resilient multipurpose surfacing will be installed shall be dry and weather tight. Permanent heat, light and ventilation shall be installed and operable.
- C. All other trades shall have completed their work prior to the installation of the resilient athletic flooring. The general contractor or Construction Manager shall maintain a secure and clean working environment before, during and after the installation. Suspension of other trades' work may be authorized providing their work will not damage the new flooring.
- D. Maintain a stable room temperature of at least 65°F for a minimum of one (1) week prior to, during and thereafter installation.
- E. An effective low-permeance vapor barrier is placed directly beneath the concrete subfloor. For "on" or "below grade" installations, it is recommended to provide a permanent vapor barrier resistant to long term hydrostatic pressure/moisture exposure. Protrusions should be sealed to prevent moisture migration into the slab. Moisture should not be allowed to enter the slab after the completed construction.
- F. Concrete subfloor surface pH level within the 7 to 9 range dependent upon installation type.
- G. Concrete subfloor should be no greater than 1/8" within a 10 ft diameter. This tolerance can be measured in accordance with ASTM E1155. A specified ( $F_F$ ) of 50 and an ( $F_L$ ) of 30 should reach this degree of floor flatness and floor level. There is no numerical correlation between  $F$  numbers and the deviation from the straight edge, however the above specified numbers should achieve a flat floor with minimal deviation in the slab. Reference ACI 117 and ACI 302.1R. The general contractor should provide a certificate of compliance with the above recommendations.
- H. Concrete subfloor must be clean and free of all foreign materials or objects including, but not limited to, curing compounds and sealers.
- I. Fill cracks, grooves, voids, depressions, and other minor imperfections with Ardex (or equal) cement-based patching/leveling compounds. Follow the manufacturer's directions. Moveable joints must be treated utilizing specific transition joint devices depending upon the architect's recommendations. Follow current ASTM F710 guidelines for the preparation of concrete slabs to receive resilient flooring.

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- J. Refer to ACI 302.2R “Guidelines for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials” for concrete design and construction.
- K. Concrete slab shall be fortified with continual steel reinforcement. Fiber reinforcement alone shall not be considered adequate fortification.

1.6 *WARRANTY*

A. Materials:

The indoor resilient athletic surfacing shall be covered by the manufacturer against product defects for 25 years.

B. Installation:

The installation of the indoor resilient multipurpose surfacing shall be covered against poor workmanship and faulty installation by a two (2) year written, limited warranty provided by the contractor performing/overseeing the installation.

1.7 *ADDITIONAL MATERIALS*

Furnish to the owner additional materials containing a total of at least 1% of each different color or design of the indoor resilient athletic surfacing used on the project.

1.8 *LEED™ CERTIFICATION*

The indoor resilient athletic surfacing should be able to help this facility to achieve points towards *LEED™ certification*.

LEED categories positively affected by the indoor resilient athletic surfacing:

Product Type			Rubber
Building Reuse Maintain Interior Nonstructural Elements	MR 1.2	Renovation	1
Construction Waste Management	MR 2	Renovation	2
Construction Waste Management Materials Reuse	MR 3	Renovation	2
	5 % - 1 point		
	10% - 2 points		
Recycled Content	MR 4	New/Renovation	2
	20% - 2 points		
Regional Materials	MR5	New/Renovation	2
Indoor Environmental Air Quality Low VOC Adhesives/Sealants	IEQ 4.1	New/Renovation	1
Low-emitting Materials Paints and Coatings	IEQ 4.2	New/Renovation	1

**PART 2 - PRODUCTS**

2.1 *MANUFACTURERS*

The basis of the design for the indoor resilient multipurpose surfacing is Dropzone Power as provided by Tarkett Sports. All other installation accessories and related components must be either made or approved by the indoor resilient athletic surfacing manufacturer. Other products may be approved as equal if deemed qualified and submitted in accordance with the General Conditions. Test reports confirming compliance from an Independent Sports Laboratory must be

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provided along with samples, technical data, installation, maintenance, and warranty prior to acceptance as an alternative product.

2.2 *MATERIALS.*

Dropzone Power is a single layer flooring system.

1. Physical properties of the indoor resilient athletic surfacing shall conform to the following minimums:

Property	Standard	Value
Slip Resistance	ASTM D2047	>0.8
Tensile Strength	ASTM D412	>265 PSI
Abrasion Resistance	ASTM D3389 / EN 649	< 35 g (2,000 cycles)
Density	ASTM D3676	68.3 lbs./cubic foot
Flammability	-	Pass
Tear Resistance	-	Elongation at break 1.52
VOC Compliance	ASTM D5116	Passed (CA Section 1350)
Surface Texture	—	Slight
Total Thickness	—	18 mm (0.709")
Roll Length	—	15 ft.
Roll Width	—	4 ft. (± 0.75")
Weight	—	3.75 lbs. per sq.ft.

1. Color: EPDM chips found throughout the material. Colors are as available from the indoor resilient athletic surfacing manufacturer's standard range. Custom 85% colors are available upon request.
2. Adhesive: As approved by the indoor resilient athletic surfacing manufacturer.

**PART 3 - EXECUTION**

3.1 *EXAMINATION*

- A. It is the responsibility of the general contractor/construction manager to ensure that project/site conditions are acceptable for the installation of the indoor resilient athletic flooring.
- B. Verify that the area in which the indoor resilient athletic surfacing will be installed is dry and weather tight. Verify that permanent heat, light and ventilation is installed and operable.
- C. Verify that all other work that could cause damage, dirt and dust or interrupt the normal pace of the indoor resilient athletic flooring installation is completed or suspended.
- D. Verify that there is a stable room temperature of at least 65°F.
- E. Verify that there are no foreign materials or objects on the subfloor and that the subfloor is clean and ready for installation.
- F. *Direct Full Spread Adhering to Concrete Subfloor:* moisture content less than 98 % RH when tested per ASTM F2170. Use only manufacturer recommended Multi-Poxy adhesive.

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- G. If both tests are performed, use the highest value. Do not average the results of the tests. Report all field test results in writing to the General Contractor, Architect, and End User prior to installation.
- H. Verify that the concrete subfloor surface pH level is within the 7 - 11 range.
- I. Document the results indicating the slab is within manufacturer's tolerances for slab deviation.

3.2 *PREPARATION OF SURFACES*

- A. Sand the entire surface of the concrete slab.
- B. Sweep the concrete slab so as to remove all dirt and dust. If a sweeping compound is to be used it must be a sweeping compound that does not contain oil or other items that may inhibit the adhesive bond.
- C. Slab must be dust free. In the event that dust impairs adhesive bond, priming the slab prior to application of adhesive may be necessary. Follow installation guidelines.

3.3 *OPTIONS FOR MOISTURE MITIGATION*

For projects with moisture conditions higher than the specified tolerances, TARKOLAY may be used for conditions that do not 100% per ASTM F2170. Use only approved adhesive as directed by the manufacturer. Tarkolay is available for roll goods only.

3.4 *INSTALLATION*

- A. The installation area shall be closed to all traffic and activity for a period to be set by the indoor resilient athletic surfacing installer. The indoor resilient athletic surfacing installation shall not begin until the installer is familiar with the existing conditions.
- B. All necessary precautions should be taken to minimize noise, smell, dust, the use of hazardous materials and any other items that may inconvenience others.
- C. Install the indoor resilient athletic surfacing in strict accordance with the indoor resilient athletic surfacing manufacturer's written instructions.
- D. Install the indoor resilient athletic surfacing minimizing cross seams. Provide a seam diagram during the submittal process for approval prior to installation.
- E. Install appropriate threshold plates or transition strips where necessary.

3.5 *CLEANING*

Remove all unused materials, tools, and equipment and dispose of any debris properly. Clean the indoor resilient athletic surfacing in accordance with the manufacturer's instructions.

3.6 *PROTECTION*

If required, protect the indoor resilient athletic surfacing from damage using coverings approved by the manufacturer until acceptance of work by the customer or their authorized representative.

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- 3.7 RELATED STANDARDS AND GUIDELINES
- A. ASTM F2170 “Standard Test Method for Determining Relative Humidity In Concrete Floor Slabs Using In-Situ Probes”
  - B. ASTM F710 “Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring”
  - C. ACI 302.2R-06 “Guideline for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials”

**END OF SECTION**



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**SURFACING**

**PART 1 – GENERAL**

- 1.1 *SECTION INCLUDES*
- A. Supply and installation of the indoor resilient multipurpose surfacing
  - B. Application of the game lines
  - C. References for the correct construction and preparation of concrete slabs to receive resilient flooring.
- 1.2 *SUBMITTALS*
- A. Product Data:  
Manufacturer's promotional brochures, specifications and installation instructions
  - B. Samples:
    - 1. Submit for selection and approval three (3) sets of the indoor resilient multipurpose surfacing, manufacturer's brochures, samples or sample boards of all of the available colors, textures and styles.
    - 2. Submit color samples of all the available game line paint colors for selection and approval.
  - C. Closeout Submittals:
    - 1. Submit three (3) copies of the indoor resilient multipurpose surfacing and manufacturer's maintenance instructions.
    - 2. Submit three (3) copies of the material and installation warranties as specified.
- 1.3 *QUALITY ASSURANCE*
- A. Qualifications:
    - 1. The indoor resilient multipurpose surfacing shall have been actively marketed for a minimum of five (5) years.
    - 2. The indoor resilient multipurpose surfacing shall be manufactured in an ISO 9001 certified plant.
    - 3. The indoor resilient multipurpose surfacing supplier shall be an established firm experienced in the field and appointed as a distributor by the manufacturer of the indoor resilient multipurpose surfacing.
    - 4. The installer of the indoor resilient multipurpose surfacing shall have a minimum of five (5) years experience in the field installing indoor resilient multipurpose surfacing and have worked on at least five (5) projects of similar size, type and complexity.
  - B. Certifications:
    - 1. Installer to submit the indoor resilient athletic surfacing manufacturer's or distributor's certification attesting that they are an approved installer of the indoor resilient multipurpose surfacing.
  - C. Testing:  
Tests shall be relative for multi-purpose use with certificates from independent testing resources to be made available upon request. Test results shall be no more than 5 years old and performed according to ASTM and/or EN standard testing procedures.

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1.4 *DELIVERY, STORAGE AND HANDLING*

A. Delivery:

Material shall not be delivered until all related work is in place and finished and/or proper storage facilities and conditions can be provided and guaranteed stable according to FieldTurf USA, Inc. recommendations.

B. Storage:

Store the material in a secure, clean and dry location. Maintain temperature between 55° and 85° Fahrenheit. Store the indoor resilient athletic surfacing on a clean flat surface. Do not stack rolls.

1.5 *PROJECT/SITE CONDITIONS*

A. It is the responsibility of the general contractor/construction manager to maintain project/site conditions acceptable for the installation of the indoor resilient multipurpose flooring.

B. The area in which the indoor resilient multipurpose surfacing will be installed shall be dry and weather tight. Permanent heat, light and ventilation shall be installed and operable.

C. All other trades shall have completed their work prior to the installation of the resilient athletic flooring. The general contractor or Construction Manager shall maintain a secure and clean working environment before, during and after the installation. Suspension of other trades' work may be authorized providing their work will not damage the new flooring.

D. Maintain a stable room temperature of at least 65°F for a minimum of one (1) week prior to, during and thereafter installation.

E. An effective low-permeance vapor barrier is placed directly beneath the concrete subfloor. For "on" or "below grade" installations, it is recommended to provide a permanent vapor barrier resistant to long term hydrostatic pressure/moisture exposure. Protrusions should be sealed to prevent moisture migration into the slab. Moisture should not be allowed to enter the slab after the completed construction.

F. Concrete subfloor surface pH level within the 7 to 9 range dependent upon installation type.

G. Concrete subfloor should be no greater than 1/8" within a 10 ft diameter. This tolerance can be measured in accordance with ASTM E1155. A specified ( $F_F$ ) of 50 and an ( $F_L$ ) of 30 should reach this degree of floor flatness and floor level. There is no numerical correlation between  $F$  numbers and the deviation from the straight edge, however the above specified numbers should achieve a flat floor with minimal deviation in the slab. Reference ACI 117 and ACI 302.1R. The general contractor should provide a certificate of compliance with the above recommendations.

H. Concrete subfloor must be clean and free of all foreign materials or objects including, but not limited to, curing compounds and sealers.

I. Fill cracks, grooves, voids, depressions, and other minor imperfections with Ardex (or equal) cement-based patching/leveling compounds. Follow the manufacturer's directions. Moveable joints must be treated utilizing specific transitioning joint devices depending upon the architect's recommendations.

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Follow current ASTM F710 guidelines for the preparation of concrete slabs to receive resilient flooring.

- J. Refer to ACI 302.2R “Guidelines for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials” for concrete design and construction.
- K. Concrete slab shall be fortified with continual steel reinforcement. Fiber reinforcement alone shall not be considered adequate fortification.

1.6 **WARRANTY**

A. Materials:

The indoor resilient athletic surfacing shall be covered by the manufacturer against product defects for 3 years.

B. Installation:

The installation of the indoor resilient multipurpose surfacing shall be covered against poor workmanship and faulty installation by a two (2) year written, limited warranty provided by the contractor performing/overseeing the installation.

1.7 **ADDITIONAL MATERIALS**

Furnish to the owner additional materials containing a total of at least 1% of each different color or design of the indoor resilient athletic surfacing used on the project.

1.8 **LEED™ CERTIFICATION**

The indoor resilient athletic surfacing should be able to help this facility to achieve points towards *LEED™ certification*.

LEED categories positively affected by the indoor resilient athletic surfacing:

Product Type			Rubber
<b>Building Reuse Maintain Interior Nonstructural Elements</b>	<b>MR 1.2</b>	Renovation	1
<b>Construction Waste Management</b>	<b>MR 2</b>	Renovation	2
<b>Construction Waste Management Materials Reuse</b>	<b>MR 3</b>	Renovation	2
	<b>5 % - 1 point</b>		
	<b>10% - 2 points</b>		
<b>Recycled Content</b>	<b>MR 4</b>	New/Renovation	2
	<b>20% - 2 points</b>		
<b>Regional Materials</b>	<b>MR5</b>	New/Renovation	2
<b>Indoor Environmental Air Quality Low VOC Adhesives/Sealants</b>	<b>IEQ 4.1</b>	New/Renovation	1
<b>Low-emitting Materials Paints and Coatings</b>	<b>IEQ 4.2</b>	New/Renovation	1

**SECTION 09645**  
**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC**  
**SURFACING**

**PART 2 - PRODUCTS**

2.1 *MANUFACTURERS*

The basis of the design for the indoor resilient multipurpose surfacing is **Dropzone, Dropzone Speckle, and/or Dropzone Interlocking** as provided by FieldTurf USA, Inc. All other installation accessories and related components must be either made or approved by the indoor resilient athletic surfacing manufacturer. Other products may be approved as equal if deemed qualified and submitted in accordance with the General Conditions. Test reports confirming compliance from an Independent Sports Laboratory must be provided along with samples, technical data, installation, maintenance, and warranty prior to acceptance as an alternative product.

2.2 *MATERIALS.*

Dropzone, Dropzone Speckle, and/or Dropzone Interlocking 8mm recycled non-laminated rubber flooring.

1. Physical properties of the indoor resilient athletic surfacing shall conform to the following minimums:

Width	.....	Roll Width 4ft – Tile 2ft x 2ft
Length	.....	Specify length (min. 15 ft)
Total Thickness	.....	8 mm
Weight	.....	1.92 lbs/sq.ft.
Tensile Strength	ASTM D412	200 minimum
Static Load	ASTM F970	1000 p.s.i (modified test)
Coefficient of Friction	ASTM 2047	>.9
Chemical Resistance	ASTM F925	Excellent
Ambient Noise Reduction	ASTM C423	.10
Impact Sound Insulation	ASTM E492	.45 minimum
Thermal Conductivity	ASTM C518	Approximate .406
Sound Transmission	ASTM 413	.45 minimum

1. Color: As available from the indoor resilient athletic surfacing manufacturer's standard range.
2. Adhesive: As approved by the indoor resilient athletic surfacing manufacturer.

**PART 3 - EXECUTION**

3.1 *EXAMINATION*

- A. It is the responsibility of the general contractor/construction manager to ensure that project/site conditions are acceptable for the installation of the indoor resilient athletic flooring.
- B. Verify that the area in which the indoor resilient athletic surfacing will be installed is dry and weather tight. Verify that permanent heat, light and ventilation is installed and operable.

**SECTION 09645**  
**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC**  
**SURFACING**

- C. Verify that all other work that could cause damage, dirt and dust or interrupt the normal pace of the indoor resilient athletic flooring installation is completed or suspended.
- D. Verify that there is a stable room temperature of at least 65°F.
- E. Verify that there are no foreign materials or objects on the subfloor and that the subfloor is clean and ready for installation.
- F. *Direct Full Spread Adhering to Concrete Subfloor* : moisture content less than 98 % RH when tested per ASTM F2170. Use only manufacturer recommended Multi-Poxy adhesive.
- G. If both tests are performed, use the highest value. Do not average the results of the tests. Report all field test results in writing to the General Contractor, Architect, and End User prior to installation.
- H. Verify that the concrete subfloor surface pH level is within the 7 - 9 range.
- I. Document the results indicating the slab is within manufacturer's tolerances for slab deviation.

3.2 *PREPARATION OF SURFACES*

- A. Sand the entire surface of the concrete slab.
- B. Sweep the concrete slab so as to remove all dirt and dust. If a sweeping compound is to be used it must be a sweeping compound that does not contain oil or other items that may inhibit the adhesive bond.
- C. Slab must be dust free. In the event that dust impairs adhesive bond, priming the slab prior to application of adhesive may be necessary. Follow installation guidelines.

3.3 *OPTIONS FOR MOISTURE MITIGATION*

- A. For projects with moisture conditions higher than the specified tolerances, **TARKOLAY** may be used for conditions that do not 98% per ASTM F2170. Use only approved adhesive as directed by the manufacturer. Tarkolay is available for roll goods only.

3.4 *INSTALLATION*

- A. The installation area shall be closed to all traffic and activity for a period to be set by the indoor resilient athletic surfacing installer. The indoor resilient athletic surfacing installation shall not begin until the installer is familiar with the existing conditions.
- B. All necessary precautions should be taken to minimize noise, smell, dust, the use of hazardous materials and any other items that may inconvenience others.
- C. Install the indoor resilient athletic surfacing in strict accordance with the indoor resilient athletic surfacing manufacturer's written instructions.
- D. Install the indoor resilient athletic surfacing minimizing cross seams. Provide a seam diagram during the submittal process for approval prior to installation.
- E. Install appropriate threshold plates or transition strips where necessary.

**SECTION 09645**  
**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC**  
**SURFACING**

3.5 *CLEANING*

A. Remove all unused materials, tools, and equipment and dispose of any debris properly. Clean the indoor resilient athletic surfacing in accordance with the manufacturer's instructions.

3.6 *PROTECTION*

If required, protect the indoor resilient athletic surfacing from damage using coverings approved by the manufacturer until acceptance of work by the customer or their authorized representative.

3.6 RELATED STANDARDS AND GUIDELINES

- A. ASTM F2170 "Standard Test Method for Determining Relative Humidity In Concrete Floor Slabs Using In-Situ Probes"
- B. ASTM F710 "Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring"
- C. ACI 302.2R-06 "Guideline for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials"

**END OF SECTION**

**SECTION 09 65 66**  
**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT PORTABLE**  
**SURFACING**

**PART 1 – GENERAL**

1.1 *SECTION INCLUDES*

- A. Supply and installation of the indoor resilient portable multipurpose surfacing
- B. Application of the game lines
- C. References for the correct construction and preparation of concrete slabs to receive resilient flooring.

1.2 *SUBMITTALS*

- A. Product Data:  
Manufacturer's promotional brochures, specifications and installation instructions
- B. Manufacturer Certifications:
  - 1. Provide certification that accurately identifies the Original Equipment Manufacturer (OEM) of flooring furnished for this project including manufacturer's name, address and factory location.
  - 2. Suppliers of private label flooring for this project must identify themselves as such and fully disclose the OEM information listed above.
- C. Samples:
  - 1. Submit for selection and approval three (3) sets of the indoor resilient portable multipurpose surfacing, manufacturer's brochures, samples or sample boards.
- D. Closeout Submittals:
  - 1. Submit three (3) copies of the indoor resilient portable multipurpose surfacing and manufacturer's maintenance instructions.
  - 2. Submit three (3) copies of the material warranties as specified.

1.3 *QUALITY ASSURANCE*

- A. Qualifications:
  - 1. The indoor resilient portable multipurpose surfacing supplier shall be an established firm, experienced in the field, and appointed as a distributor by the manufacturer of the indoor resilient multipurpose surfacing.
  - 2. The installer of the indoor resilient multipurpose surfacing shall have a minimum of five (5) years of experience in the field installing indoor resilient multipurpose surfacing.

1.4 *DELIVERY, STORAGE AND HANDLING*

- A. Delivery:  
Material shall not be delivered until all related work is in place and finished and/or proper storage facilities and conditions can be provided and guaranteed stable according to Tarkett Sports' recommendations.

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT PORTABLE**  
**SURFACING**

- B. Storage:  
Store the material in a secure, clean and dry location. Maintain temperature between 55° and 85° Fahrenheit. Store resilient portable athletic flooring on flat surfaces.

1.5 *PROJECT/SITE CONDITIONS*

- A. It is the responsibility of the general contractor/construction manager to maintain project/site conditions acceptable for the installation of the indoor resilient portable flooring.
- B. The area in which the indoor resilient portable multipurpose surfacing will be installed shall be dry and weather tight. Permanent heat, light and ventilation shall be installed and operable.
- C. All other trades shall have completed their work prior to the installation of the portable resilient athletic flooring. The general contractor or Construction Manager shall maintain a secure and clean working environment before, during and after the installation. Maintain a stable room temperature of at least 65°F for a minimum of one (1) week prior to, during and thereafter installation.
- D. An effective low-permeance vapor barrier is placed directly beneath the concrete subfloor. For “on” or “below grade” installations, it is recommended to provide a permanent vapor barrier resistant to long term hydrostatic pressure/moisture exposure. Protrusions should be sealed to prevent moisture migration into the slab. Moisture should not be allowed to enter the slab after the completed construction.
- E. Concrete subfloor should be no greater than 1/8" within a 10 ft. diameter.
- F. Concrete subfloor must be clean and free of all foreign materials or objects.

1.6 *WARRANTY*

- A. Materials:  
The indoor resilient portable surfacing shall be covered by the manufacturer against product defect for 1 year.

1.7 *ADDITIONAL MATERIALS*

Furnish to the owner additional materials containing a total of at least 2% of each different color or design of the indoor resilient athletic surfacing used on the project.

**PART 2 - PRODUCTS**

2.1 *MANUFACTURERS*

The basis of the design for the indoor resilient portable surfacing shall be Omnisports EasyCourt as provided by Tarkett Sports.

2.2 *MATERIALS*

Omnisports Easy Court Golden Maple is a prefabricated portable court system compromised of a patent pending process of construction, design,



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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT PORTABLE**  
**SURFACING**

and materials. This light weight, easy to install, and durable system provides quick installations with high performance characteristics.

A.) Physical properties of the indoor resilient portable surfacing shall conform to the following minimums:

Surface and Performance Properties:

Surface Thickness	.....	2mm
Color Option	.....	Golden Maple
Vertical Deformation	PASSED	ASTM F2772
Surface Finish Effect	PASSED	ASTM F2772 (80 – 110)
Ball Rebound	PASSED	ASTM F2772 > 90%
Shock Absorption	PASSED	ASTM F2772 Average 60%

Base Structure Properties:

Density	ASTM D375	2.8 lb./ft3
Dimensions	.....	3.44ft x 5.17ft
Weight Base and Surface	.....	21 lb. per tile (approx.)
Thickness	ASTM D375	45mm (1.77")
Total Thickness	.....	47mm (1.85")

B). Game Line Paint Primer:

As approved by the indoor resilient athletic surfacing manufacturer.

C). Game Line Paint:

As approved by the indoor resilient athletic surfacing manufacturer. Colors are to be selected from the manufacturer’s standard range.

**PART 3 - EXECUTION**

3.1 *EXAMINATION*

- A. It is the responsibility of the general contractor/construction manager to ensure that project/site conditions are acceptable for the installation of the indoor resilient portable athletic flooring.
- B. Verify that the area in which the indoor resilient portable surfacing will be installed is dry and weather tight. Verify that permanent heat, light and ventilation is installed and operable.
- C. Verify that all other work that could cause damage, dirt and dust or interrupt the normal pace of the indoor resilient portable athletic flooring installation is completed or suspended.
- D. Verify that there is a stable room temperature of at least 65°F.
- E. Verify that there are no foreign materials or objects on the subfloor and that the subfloor is clean and ready for installation.

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT PORTABLE**  
**SURFACING**

3.2 *PREPARATION OF SURFACES*

- A. Sand the entire surface of the concrete slab.
- B. Sweep the concrete slab so as to remove all dirt and dust.

3.3 *INSTALLATION*

- A. The installation area shall be closed to all traffic and activity for a period to be set by the indoor resilient portable surfacing installer.
- B. Install the indoor resilient portable surfacing in strict accordance with the indoor resilient athletic surfacing manufacturer's written instructions.
- C. Paint game lines using approved game line paint primer and game line paint in strict accordance with the game line paint manufacturer's instructions.
- D. Install appropriate threshold plates or transition strips where necessary.

3.4 *CLEANING*

- A. Remove all unused materials, tools, and equipment and dispose of any debris properly. Clean the indoor resilient athletic portable surfacing in accordance with the manufacturer's instructions.

3.5 *PROTECTION*

If required, protect the indoor resilient portable athletic surfacing from damage using coverings approved by the manufacturer until acceptance of work by the customer or their authorized representative.

3.6 *RELATED STANDARDS AND GUIDELINES*

- A. ASTM F2170 "Standard Test Method for Determining Relative Humidity In Concrete Floor Slabs Using In-Situ Probes"
- B. ASTM F710 "Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring"

**END OF SECTION**

ARTIFICIAL GRASS FIELDTURF  
EASYFIELD

**PART 1 - GENERAL**

**1.1 SUMMARY**

- A. Furnish all materials and documentation necessary to install modular artificial grass FieldTurf EasyField as indicated on the plans and as specified herein; including components and accessories required for a complete installation.

**1.2 REFERENCE STANDARDS**

- A. ASTM – American Society for Testing and Materials.
1. EN 12235 – Vertical Ball Rebound
  2. EN 1177 (2008) – Critical Fall Height / HIC
  3. EN 12234 – Ball Roll
  4. AAA FIFA Method 04A – Shock Absorption
  5. AAA Method – Energy Restitution
  6. ASTM F355 - Gmax
  7. ASTM D2859-06: 2011 – Pill Flammability

**1.3 SUBMITTALS**

- A. Substitutions: Other products are acceptable if in compliance with all requirements of these specifications. Submit alternate products to Architect for approval prior to bidding in accordance Section 01 25 13, Product Substitution Procedures.
1. Provide substantiation that proposed system does not violate any other manufacturer's patents, patents allowed or patents pending.
  2. Provide a sample copy of insured, non-prorated warranty and insurance policy information.
- B. Shop Drawings:
1. Indicate field layout; field marking plan and details for the specified sports
- C. Product Data:
1. Submit data in sufficient detail to indicate compliance with the contract documents.
  2. Submit manufacturer's instructions for installation.
  3. Submit manufacturer's instructions for maintenance for the proper care and preventative maintenance of the synthetic turf system, including painting and markings.
- D. Samples: Submit samples, minimum 12 x 12 inches, illustrating details of finished product in amounts as required by General Requirements, or as requested by Architect.
- E. Product Certification:
1. Submit manufacturer's certification that products and materials comply with requirements of the specifications.
  2. Submit test results indicating compliance with Reference Standards.
- F. List of existing installations: Submit list including respective Owner's representative and

telephone number.

- G. Warranties: Submit warranty and ensure that forms have been completed in Owner's name and registered with approved manufacturer.

#### **1.4 QUALITY ASSURANCE**

- A. Comply with Section 01 43 00, Quality Assurance.
- B. Manufacturer Qualifications: Company specializing in manufacturing products specified in this section. The turf contractor and/or the turf manufacturer:
  - 1. Shall have a minimum of 10 installations of the specified product in North America
  - 2. Shall have a minimum of 3000 artificial turf fields of any style installed in North America. Fields must be a minimum of 65000 square feet.
  - 3. Shall have installed a minimum of X fields in State.
  - 4. Shall have a minimum of 5 NFL game and/or practice fields in play for the previous year
  - 5. Shall have minimum 25 NCAA Division 1 game and/or practice fields installed.
- C. Installer: Company shall specialize in performing the work of this section. The Contractor shall provide competent workmen skilled in this specific type of modular synthetic grass installation.
  - 1. The designated Supervisory Personnel on the project shall be certified, in writing by the turf manufacturer, as competent in the installation of turf material.
  - 2. Installer shall be certified by the manufacturer and licensed.
  - 3. The installer supervisor shall have a minimum of 5 years of experience as either a construction manager or a supervisor of synthetic turf installations.
- D. Pre-Installation Conference: Conduct conference at project site at time to be determined by Architect. Review methods and procedures related to installation including, but not limited to, the following:
  - 1. Inspect and discuss existing conditions and preparatory work performed under other contracts.
  - 2. In addition to the Contractor and the installer, arrange for the attendance of installers affected by the Work, The Owner's representative, and the Architect.
- E. The Contractor shall verify special conditions required for the installation of the system.
- F. The Contractor shall notify the Architect of any discrepancies.

#### **1.5 DELIVERY, STORAGE, AND HANDLING**

- A. Comply with Section 01 60 00, Product Requirements.
- B. Prevent contact with materials that may cause dysfunction.
- C. Deliver and store components with labels intact and legible.
- D. Store materials/components in a safe place, under cover, and elevated above grade.
- E. Protect from damage during delivery, storage, handling and installation. Protect from damage by other trades.

- F. Inspect all delivered materials and products to ensure they are undamaged and in good condition.
- G. Comply with manufacturer's recommendations.

### **1.6 SEQUENCING AND SCHEDULING**

- A. Coordinate the Work with installation of work of related trades as the Work proceeds.
- B. Sequence the Work in order to prevent deterioration of installed system.

### **1.7 WARRANTY AND GUARANTEE**

- A. See Section 01780 - Closeout Submittals, For Additional Warranty Requirements.
  - The Contractor shall provide a warranty to the Owner that covers defects in materials and workmanship of the turf for a period of one (1) year from the date of substantial completion. The turf manufacturer must verify that their representative has inspected the installation and that the work conforms to the manufacturer's requirements. The manufacturer's warranty shall include general wear and damage caused from UV degradation. The warranty shall specifically exclude vandalism, and acts of God beyond the control of the Owner or the manufacturer. The warranty shall be non-prorated. The Contractor shall provide a warranty to the Owner that covers defects in the installation workmanship, and further warrant that the installation was done in accordance with both the manufacturer's recommendations and any written directives of the manufacturer's representative.
  - 1-year warranty.
  - Must cover full 100% replacement value of total square footage installed
  - Policies that include self-insurance or self-retention clauses shall not be considered.
  - Policy cannot include any form of deductible amount.
  - Sample policy must be provided at time of bid to prove that policy is in force. A letter from an agent or a sample Certificate of Insurance will not be acceptable.
- B. The artificial grass system must maintain a G-max of less than 200 for the life of the Warranty as per ASTM F1936.

### **1.8 MAINTENANCE SERVICE**

- A. Contractor shall train the Owner's facility maintenance staff in the use of the turf manufacturer's recommended maintenance equipment.

## PART 2 - PRODUCTS

### 2.1 ACCEPTABLE SUPPLIER

A. Approved suppliers are as follows:

1. FieldTurf USA Inc.  
175 N. Industrial Blvd  
Calhoun, GA 30701  
P: 800-724-2969

Model: FieldTurf EasyField

### 2.2 MATERIALS AND PRODUCTS

A. Artificial grass FieldTurf system materials shall consist of the following:

1. Carpet made of slit-film polyethylene fibers with thatch fiber tufted into a polypropylene backing.
2. Glue, paint, seaming fabric and other materials used to install and mark the artificial grass FieldTurf.

B. The installed artificial grass slit-film FieldTurf shall have the following properties:

<u>Standard</u>	<u>Property</u>	<u>Specification</u>
ASTM D1577	Slit-Film Denier	10,000+
ASTM D1577	Thatch Denier	5,000
ASTM D5823	Pile Height	1.125"
ASTM D5793	Stitch Gauge	3/16"-1/4"
ASTM D5848	Pile Weight	72oz/square yard
ASTM D5848	Primary Backing	7oz/square yard
ASTM D5848	Secondary Backing	20oz/square yard
ASTM D5848	Total Weight	99oz/square yard
ASTM D1335	Tuft Bind (Without Infill)	8+ lbs
ASTM D5034	Grab Tear (Width)	200 lbs/force
ASTM D5034	Grab Tear (Length)	200 lbs/force
ASTM F355/F1936	Impact Attenuation (Gmax)	<200
	Modular Interlocking Shockpad	45mm
	Approximate Weight of Finished Panel	21 lbs

*\*Variation of +/- 5% of above listed properties is within normal manufacturing tolerances\**

C. Carpet shall consist of slit-film fibers and thatch fibers tufted into a primary backing with a secondary backing.

1. Turf pieces shall be adhered to the pad underlayment
2. The finished turf panels shall be vertically interlocked with one another and loose laid onto the base.
3. Turf panels shall be cut to fit any curved or irregular edge areas based on the agreed upon drawings and layout.

D. Backing:

1. Primary backing shall be a polypropylene fabric
2. Secondary backing shall consist of an application of urethane to lock the fiber tufts in place.

- E. Each panel turf area shall be 17.78 square feet or 3.44ft X 5.17ft.
  - 1. Panels will be shipped on pallets. Pallets are not to be stacked on top of one another.
- F. Lines, if needed, shall be painted with paint approved by the synthetic turf manufacturer.
- G. Velcro is not an acceptable way of fastening the main body of turf carpet and/or turf panels to one another.
- H. Edging options for panels (if relevant) must be taken into consideration prior to the order confirmation.

## **PART 3 - EXECUTION**

### **3.1 EXAMINATION**

- A. Verify that all sub-base leveling is complete prior to installation.
- B. Installer shall examine the surface to receive the synthetic turf and accept the sub-base planarity in writing prior to the beginning of installation.
  - 1. Acceptance is dependent upon the Owner's test results indicating base is in compliance with manufacturer's specifications.
  - 2. The surface shall be accepted by Installer as "clean" as installation commences and shall be maintained in that condition throughout the process.
- C. Correct conditions detrimental to timely and proper completion of Work.
- D. Do not proceed until unsatisfactory conditions are corrected.
- E. Beginning of installation means acceptance of existing conditions.

### **3.2 PREPARATION**

- A. Prior to the beginning of installation, inspect the sub-base for tolerance to grade.
- B. Sub-base acceptance shall be subject to receipt of test results (by others) for compaction and planarity that sub-base is in compliance with manufacturer's specifications and recommendations.
- C. Dimensions of the field and locations for markings shall be measured by a registered surveyor to verify conformity to the specifications and applicable standards. A record of the finished field as-built measurements shall be made.

### **3.3 INSTALLATION - GENERAL**

- A. The installation shall be performed in full compliance with approved Shop Drawings.
- B. The designated Supervisory personnel on the project must be certified, in writing by the turf manufacturer, as competent in the installation of this material.

### **3.4 INSTALLATION**

- A. Install at location(s) indicated, to comply with final shop drawings, manufacturers'/installer's instructions.
- B. The Contractor shall strictly adhere to specified procedures. Any variance from these

requirements shall be provided in writing, by the manufacturer's on-site representative, and submitted to the Architect and/or Owner, verifying that the changes do not in any way affect the Warranty.

- C. Turf shall be installed directly over the properly prepared base. Extreme care shall be taken to avoid disturbing the base.
- D. Markings shall be painted in accordance with turf and paint manufacturers' recommendations. Number of applications will be dependent upon installation and field conditions.
- E. Upon completion of installation, the finished field shall be inspected by the installation crew and an installation supervisor.

### **3.5 FIELD MARKINGS**

- A. Any field markings shall be applied in accordance with approved shop drawings.

### **3.6 ADJUSTMENT AND CLEANING**

- A. Do not permit traffic over unprotected surface.
- B. All usable remnants of new material shall become the property of the Owner.
- C. The Contractor shall keep the area clean throughout the project and clear of debris.
- D. Surfaces, recesses, enclosures, and related spaces shall be cleaned as necessary to leave the work area in a clean, immaculate condition ready for immediate occupancy and use by the Owner.

### **3.7 PROTECTION**

- A. Protect installation throughout construction process until date of final completion.



# HEALTHIER CHOICE®

## 100% HIGH DENSITY MEMORY FOAM CARPET CUSHION

### DESCRIPTION

Premium 100% high density memory foam cushion for use under all carpet styles.

### STYLE / SKU / ROLL SPECS

WHT180 – 6' x 30' roll, 180 sq. ft., 20 sq. yd. (75.5 lbs.)

WHT270 – 6' x 45' roll, 270 sq. ft., 30 sq. yd. (110 lbs.)

### MATERIAL

Frothed polyurethane – a visco-elastic “memory foam” material.

### THICKNESS

0.5" (1/2")

### DENSITY

10lbs/ft<sup>3</sup> (48.82kg/m<sup>3</sup>)

### SOUND RATING

Impact Insulation Class (ASTM E492-90) ..... 90 IIC

### WATER RESISTANCE

British Spill Test Method E ..... Pass

Breathable Integral Skin Barrier, allows vapor to pass while blocking liquid spills, making clean-up easier and more effective.

### INSULATION RATING

R-Factor (ASTM C518-10) ..... 1.60

Excellent for radiant heated floors.

### FIRE RATING

NBS Smoke Chamber ..... <100 max

Pill Test (FF 1-70) ..... Pass

### DURABILITY

Compression Set ..... 7% max

Indentation Load Deflection (25%) ..... 4.20 lbs/ft<sup>2</sup>

Indentation Load Deflection (65%) ..... 20.00 lbs/ft<sup>2</sup>

### INSTALLATION

Engineered for stretch-in installation. Install foam side up.

### WARRANTY

Warranted for a lifetime to the original purchaser.

### RENEWABLE CONTENT

IMade in part with eco-friendly soybean oil, lessening dependence on petrochemicals. This reduces global warming emissions and the need for foreign oil while supporting local farmers and local producers.

Applicable towards LEED Credit MR 6 – Rapidly Renewable Resources.

### INDOOR AIR QUALITY

CRI Green Label certified. The only carpet cushion GREENGUARD Indoor Air Quality Certified® as a low emitting interior building material.

Applicable towards LEED Credit EQ 4.3 – Low Emitting Product.

### ANTIMICROBIAL

Ultra-Fresh® Antimicrobial prevents mold, mildew, and bacterial growth while controlling dust mites for life-long odor free installation.

### RECYCLABLE

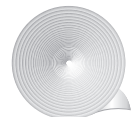
Zero-Landfill Manufacturing waste, all materials are reused in products with recycled content. Post consumer recyclable, a valued commodity as recycled foam in the manufacturing of rebond padding.

**NOTE: Specification values subject to a 7% manufacturing tolerance.**

## HC WHITE



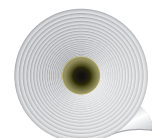
6' X 30'  
ROLL



14"  
ROLL  
DIAMETER



6' X 45'  
ROLL



18.5"  
ROLL  
DIAMETER  
CORE SIZE: 3.625"



**SECTION 09 65 66**  
**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

***PART 1 – GENERAL***

1.1 *SECTION INCLUDES*

- A. Supply and installation of the indoor resilient multipurpose surfacing
- B. Application of the game lines
- C. References for the correct construction and preparation of concrete slabs to receive resilient flooring.

1.2 *SUBMITTALS*

- A. Product Data:
  - 1. Manufacturer's promotional brochures, specifications and installation instructions
- B. Manufacturer Certifications:
  - 1. Provide certification that accurately identifies the Original Equipment Manufacturer (OEM) of flooring furnished for this project including manufacturer's name, address and factory location.
  - 2. Suppliers of private label flooring for this project must identify themselves as such and fully disclose the OEM information listed above.
  - 3. All "manufacturer" requirements in these specifications must be complied with by the OEM, including warranties, certifications, qualifications, product data, test results, environmental requirements, performance data, etc.
- C. Samples:
  - 1. Submit for selection and approval three (3) sets of the indoor resilient multipurpose surfacing, manufacturer's brochures, samples or sample boards of all of the available colors, textures and styles.
  - 2. Submit color samples of all the available game line paint colors for selection and approval.
- D. Closeout Submittals:
  - 1. Submit three (3) copies of the indoor resilient multipurpose surfacing and manufacturer's maintenance instructions.
  - 2. Submit three (3) copies of the material and installation warranties as specified.

1.3 *QUALITY ASSURANCE*

- A. Qualifications:
  - 1. The indoor resilient multipurpose surfacing shall have been actively marketed for a minimum of ten (10) years.
  - 2. The indoor resilient multipurpose surfacing shall be manufactured in an ISO 9001 certified plant.
  - 3. The indoor resilient multipurpose surfacing shall be manufactured in an ISO 14001 certified plant.
  - 4. The indoor resilient multipurpose surfacing supplier shall be an established firm, experienced in the field, and competent in the techniques required by the manufacturer.
  - 5. The installer of the indoor resilient multipurpose surfacing shall have a minimum of five (5) years of experience in the field installing indoor resilient multipurpose surfacing and have worked on at least five (5) projects of similar size, type and complexity.

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- B. Certifications:
  - 1. Installer to submit the indoor resilient athletic surfacing manufacturer's certification attesting that they are a trained installer of the indoor resilient multipurpose surfacing.
  - 2. The indoor resilient multipurpose surfacing manufacturer to submit official ISO 9001 certification for the facility in which the indoor resilient multipurpose surfacing is manufactured.
- C. Testing:
  - 1. Tests shall be relative for multi-purpose use with certificates from independent testing resources to be made available upon request.
  - 2. Test results shall be no more than 5 years old and performed according to ASTM standard testing procedures.

1.4 *DELIVERY, STORAGE AND HANDLING*

- A. Delivery:

Material shall not be delivered until all related work is in place and finished and/or proper storage facilities and conditions can be provided and guaranteed stable according to FieldTurf USA, Inc. recommendations.
- B. Storage:
  - 1. Store the material in a secure, clean and dry location.
  - 2. Maintain temperature between 55° and 85° Fahrenheit.
  - 3. Store the indoor resilient athletic surfacing rolls in an upright position on a smooth flat surface immediately upon delivery to jobsite.
  - 4. Rolls shipped in rigid protective cardboard containers can be laid horizontally prior to unpacking and installation.

1.5 *PROJECT/SITE CONDITIONS*

- A. It is the responsibility of the general contractor/construction manager to maintain project/site conditions acceptable for the installation of the indoor resilient multipurpose flooring.
- B. The area in which the indoor resilient multipurpose surfacing will be installed shall be dry and weather tight. Permanent heat, light and ventilation shall be installed and operable.
- C. All other trades shall have completed their work prior to the installation of the resilient athletic flooring. The general contractor or construction manager shall maintain a secure and clean working environment before, during and after the installation.
- D. Maintain a stable room temperature of at least 65°F for a minimum of one (1) week prior to, during and thereafter installation.
- E. An effective low-permeance vapor barrier is placed directly beneath the concrete subfloor. For "on" or "below grade" installations, it is recommended to provide a permanent vapor barrier resistant to long term hydrostatic pressure/moisture exposure. Protrusions should be sealed to prevent moisture migration into the slab. Moisture should not be allowed to enter the slab after the completed construction.
- F. Concrete subfloor surface pH level within the 7 to 11 range dependent upon installation type.
- G. Concrete subfloor should be no greater than 1/8" within a 10 ft diameter. This tolerance can be measured in accordance with ASTM E1155. A specified ( $F_F$ ) of 50 and an ( $F_L$ ) of 30 should reach this degree of floor flatness and floor level. There is no numerical correlation between F numbers and the deviation from the straight

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edge. However, the above specified numbers should achieve a flat floor with minimal deviation in the slab. Reference ACI 117 and ACI 302.1R. The general contractor should provide a certificate of compliance with the above recommendations.

- H. Concrete subfloor must be clean and free of all foreign materials or objects including, but not limited to, curing compounds and sealers.
- I. Fill cracks, grooves, voids, depressions, and other minor imperfections. Follow the manufacturer's directions. Moveable joints must be treated utilizing specific transitioning joint devices depending upon the architect's recommendations. Follow current ASTM F710 guidelines for the preparation of concrete slabs to receive resilient flooring.
- J. Refer to ACI 302.2R "Guidelines for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials" for concrete design and construction.
- K. Concrete slab shall be fortified with continual steel reinforcement. Fiber reinforcement alone shall not be considered adequate fortification.

1.6 *WARRANTY*

- A. Special Limited Warranty:
  - 1. Manufacturer's standard form in which manufacturer agrees to repair or replace sports flooring including labor that fails within specified warranty period.
- B. Material warranty must be direct from the product manufacturer.
  - 1. Material warranties from separate or third party insurance providers are not valid.
  - 2. Material warranties must come from original manufacturer or division thereof. Private label warranties from distributors or brokers are not valid. Supply original point of manufacturing upon request.
- C. Failures include, but are not limited to, the following:
  - 1. Material manufacturing defects.
  - 2. Surface wear and deterioration to the point of wear-through of wear layer per ASTM F410/ASTM F1303.
  - 3. Failure due to substrate moisture exposure exceeding 80 percent relative humidity when tested according to ASTM F2170.
- D. Warranty Period:
  - 1. For material defects and surface wear-through: 10 years from date of substantial completion.
- E. Installer's Limited Warranty:
  - 1. Installer's standard form in which installer agrees to repair or replace sports flooring that fails due to poor workmanship or faulty installation within the specified warranty period.
  - 2. Warranty Period: 2 years from date of substantial completion.

1.7 *ADDITIONAL MATERIALS*

- A. Furnish to the owner additional materials containing a total of at least 1% of each different color or design of the indoor resilient athletic surfacing used on the project.

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

1.8 *LEED™ CERTIFICATION*

- A. The indoor resilient athletic surfacing should be able to help this facility to achieve points towards *LEED™ certification*. Flooring system must be certified by FloorScore.
- B. LEED categories positively affected by the indoor resilient athletic surfacing:

<b>LEED™ V4 Credit</b>		Contribution
Materials & Resources: Building Product Disclosure & Optimization (BPDO)		
MRC3: Sourcing of Raw Materials	Options 1 & 2	2 Points
MRC4: Material Ingredients	Option 1	1 Point
MRC5: Construction and Demolition Management	Reclamation and Recycling	ReStart® Program
Indoor Environmental Quality		
EQc2: Low-Emitting Materials	TVOC: 0.5 mg/m <sup>3</sup> or less	FloorScore®

***PART 2 - PRODUCTS***

2.1 *MANUFACTURERS*

- A. The basis of the design for the indoor resilient multipurpose surfacing is Dancefloor and Inspiration Pro system as manufactured by Tarkett.
- B. All other installation accessories and related components must be either made or approved by the indoor resilient athletic surfacing manufacturer.
- C. Other products may be approved as equal if deemed qualified and submitted in accordance with the General Conditions.
- D. Test reports confirming compliance from an independent sports laboratory must be provided along with samples, technical data, installation, maintenance, and warranty prior to acceptance as an alternative product.

2.2 *MATERIALS*

- A. Dancefloor - Prefabricated sport surface 3.5 mm with solid color design and slightly textured embossed surface as supplied by Tarkett.
  - 1. Surface shall be a satin/matte finish.
  - 2. The Inspiration Pro System shall incorporate Inspiration Pro double tongue and grooved multi-ply engineered panels, force reduction cushion, and appropriate vapor retarder.

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

- B. Physical properties of the indoor resilient athletic surfacing shall conform to the following minimums:

Width	—	6' 6" (2 m)
Length	—	75' (23m)) approx.
Wear Layer	EN 429	0.65 mm
Total Thickness	EN 428/EN 429	3.5 mm
Total Combined Thickness		47 mm (1.85")
Wear Layer	Type 1- Grade 1	ASTM F1303/F410
Weight	EN 430	3.3kg/m <sup>2</sup> (0.72 lbs./sq. ft.)
Force Reduction	ASTM F2772	74% +/-
Slip Resistance	AS 4586	P3
Reaction to Fire	ISO AS 9239-1	8.6 kW/m <sup>2</sup>
Chemical Resistance	ISO 26987/EN 423	High
Dimensional Stability	ISO 23999/EN 434	≤0.10%
Abrasion Resistance	EN 660: Part 2	Group T: ≤ 2.0mm <sup>3</sup>
Static Load Limit	PASSED	ASTM F970- Load 175 Lbs.
Phthalate-free technology	—	YES
REACH Compliant	—	YES
Heavy Metals	—	NO
ISO 9001	—	YES
ISO 14001	—	YES

1. Color: As available from the indoor resilient athletic surfacing manufacturer's standard range.
  - a. Colors available: Solid Black or Solid Gray
- C. Welding Rod: As supplied by the indoor resilient athletic surfacing manufacturer or supplier.
  1. Color to blend with the indoor resilient athletic surfacing color or design.
  2. All seams shall be welded to create a monolithic and impermeable surface.
- D. Adhesive: As approved by the indoor resilient athletic surfacing manufacturer.

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

***PART 3 - EXECUTION***

3.1 *EXAMINATION*

- A. It is the responsibility of the general contractor/construction manager to ensure that project/site conditions are acceptable for the installation of the indoor resilient athletic flooring.
- B. Verify that the area in which the indoor resilient athletic surfacing will be installed is dry and weather tight. Verify that permanent heat, light and ventilation are installed and operable.
- C. Verify that all other work that could cause damage, dirt and dust or interrupt the normal pace of the indoor resilient athletic flooring installation is completed or suspended.
- D. Verify that there is a stable room temperature of at least 65°F.
- E. Verify that there are no foreign materials or objects on the subfloor and that the subfloor is clean and ready for installation.
- F. Concrete Subfloor: moisture content less than 85% RH when tested per ASTM F2170.
- G. Follow Fieldturf USA, Inc. installation recommendations.
- H. Do not average the results of the tests. Report all field test results in writing to the General Contractor, Architect, and End User prior to installation.
- I. Verify that the concrete subfloor surface pH level is within the 7 - 11 range.
- J. Document the results confirming the slab is within manufacturer's tolerances for slab deviation.

3.2 *PREPARATION OF SURFACES*

- A. Sand the entire surface of the concrete slab.
- B. Sweep the concrete slab so as to remove all dirt and dust. If a sweeping compound is to be used it must be a sweeping compound that does not contain oil or other items that may inhibit the adhesive bond.
- C. Slab must be dust free. In the event that dust impairs adhesive bond, priming the slab prior to application of adhesive may be necessary. Follow installation guidelines.
- D. Follow OSHA guidelines.

3.3 *INSTALLATION*

- A. The installation area shall be closed to all traffic and activity for a period to be set by the indoor resilient athletic surfacing installer. The indoor resilient athletic surfacing installation shall not begin until the installer is familiar with the existing conditions.
- B. All necessary precautions should be taken to minimize noise, smell, dust, the use of hazardous materials and any other items that may inconvenience others.
- C. Install the indoor resilient athletic surfacing in strict accordance with the indoor resilient athletic surfacing manufacturer's written instructions.
- D. Install the indoor resilient athletic surfacing minimizing cross seams. Provide a seam diagram during the submittal process for approval prior to installation. Vinyl Sheet Flooring Seams: Comply with ASTM F 1516. Rout joints and heat weld to permanently and seamlessly fuse sections together.
- E. Paint game lines using approved game line paint primer and game line paint in strict accordance with the game line paint manufacturer's instructions.
- F. Install appropriate threshold plates or transition strips where necessary.

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

2.0 *CLEANING*

- A. Remove all unused materials, tools, and equipment and dispose of any debris properly. Clean the indoor resilient athletic surfacing in accordance with the manufacturer's instructions.

3.6 *PROTECTION*

- A. If required, protect the indoor resilient athletic surfacing from damage using coverings approved by the manufacturer until acceptance of work by the customer or their authorized representative.

3.7 *RELATED STANDARDS AND GUIDELINES*

- A. ASTM F2170 "Standard Test Method for Determining Relative Humidity In Concrete Floor Slabs Using In-Situ Probes"
- B. ASTM F710 "Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring"
- C. ACI 302.2R-06 "Guideline for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials"
- D. ASTM F2772-11 "Standard Specification for Athletic Performance Properties of Indoor Sports Floor Systems"

**END OF SECTION**



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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

***PART 1 – GENERAL***

1.1 *SECTION INCLUDES*

- A. Supply and installation of the indoor resilient multipurpose surfacing
- B. Application of the game lines
- C. References for the correct construction and preparation of concrete slabs to receive resilient flooring.

1.2 *SUBMITTALS*

- A. Product Data:
  - 1. Manufacturer's promotional brochures, specifications and installation instructions
- B. Manufacturer Certifications:
  - 1. Provide certification that accurately identifies the Original Equipment Manufacturer (OEM) of flooring furnished for this project including manufacturer's name, address and factory location.
  - 2. Suppliers of private label flooring for this project must identify themselves as such and fully disclose the OEM information listed above.
  - 3. All "manufacturer" requirements in these specifications must be complied with by the OEM, including warranties, certifications, qualifications, product data, test results, environmental requirements, performance data, etc.
- C. Samples:
  - 1. Submit for selection and approval three (3) sets of the indoor resilient multipurpose surfacing, manufacturer's brochures, samples or sample boards of all of the available colors, textures and styles.
  - 2. Submit color samples of all the available game line paint colors for selection and approval.
- D. Closeout Submittals:
  - 1. Submit three (3) copies of the indoor resilient multipurpose surfacing and manufacturer's maintenance instructions.
  - 2. Submit three (3) copies of the material and installation warranties as specified.

1.3 *QUALITY ASSURANCE*

- A. Qualifications:
  - 1. The indoor resilient multipurpose surfacing shall have been actively marketed for a minimum of ten (10) years.
  - 2. The indoor resilient multipurpose surfacing shall be manufactured in an ISO 9001 certified plant.
  - 3. The indoor resilient multipurpose surfacing shall be manufactured in an ISO 14001 certified plant.
  - 4. The indoor resilient multipurpose surfacing supplier shall be an established firm, experienced in the field, and competent in the techniques required by the manufacturer.
  - 5. The installer of the indoor resilient multipurpose surfacing shall have a minimum of five (5) years of experience in the field installing indoor resilient multipurpose surfacing and have worked on at least five (5) projects of similar size, type and complexity.

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

- B. Certifications:
  - 1. Installer to submit the indoor resilient athletic surfacing manufacturer's certification attesting that they are a trained installer of the indoor resilient multipurpose surfacing.
  - 2. The indoor resilient multipurpose surfacing manufacturer to submit official ISO 9001 certification for the facility in which the indoor resilient multipurpose surfacing is manufactured.
- C. Testing:
  - 1. Tests shall be relative for multi-purpose use with certificates from independent testing resources to be made available upon request.
  - 2. Test results shall be no more than 5 years old and performed according to ASTM standard testing procedures.

1.4 *DELIVERY, STORAGE AND HANDLING*

- A. Delivery:

Material shall not be delivered until all related work is in place and finished and/or proper storage facilities and conditions can be provided and guaranteed stable according to FieldTurf USA, Inc. recommendations.
- B. Storage:
  - 1. Store the material in a secure, clean and dry location.
  - 2. Maintain temperature between 55° and 85° Fahrenheit.
  - 3. Store the indoor resilient athletic surfacing rolls in an upright position on a smooth flat surface immediately upon delivery to jobsite.
  - 4. Rolls shipped in rigid protective cardboard containers can be laid horizontally prior to unpacking and installation.

1.5 *PROJECT/SITE CONDITIONS*

- A. It is the responsibility of the general contractor/construction manager to maintain project/site conditions acceptable for the installation of the indoor resilient multipurpose flooring.
- B. The area in which the indoor resilient multipurpose surfacing will be installed shall be dry and weather tight. Permanent heat, light and ventilation shall be installed and operable.
- C. All other trades shall have completed their work prior to the installation of the resilient athletic flooring. The general contractor or construction manager shall maintain a secure and clean working environment before, during and after the installation.
- D. Maintain a stable room temperature of at least 65°F for a minimum of one (1) week prior to, during and thereafter installation.
- E. An effective low-permeance vapor barrier is placed directly beneath the concrete subfloor. For "on" or "below grade" installations, it is recommended to provide a permanent vapor barrier resistant to long term hydrostatic pressure/moisture exposure. Protrusions should be sealed to prevent moisture migration into the slab. Moisture should not be allowed to enter the slab after the completed construction.
- F. Concrete subfloor surface pH level within the 7 to 11 range dependent upon installation type.
- G. Concrete subfloor should be no greater than 1/8" within a 10 ft diameter. This tolerance can be measured in accordance with ASTM E1155. A specified ( $F_F$ ) of 50 and an ( $F_L$ ) of 30 should reach this degree of floor flatness and floor level. There is no numerical correlation between F numbers and the deviation from the straight

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edge. However, the above specified numbers should achieve a flat floor with minimal deviation in the slab. Reference ACI 117 and ACI 302.1R. The general contractor should provide a certificate of compliance with the above recommendations.

- H. Concrete subfloor must be clean and free of all foreign materials or objects including, but not limited to, curing compounds and sealers.
- I. Fill cracks, grooves, voids, depressions, and other minor imperfections. Follow the manufacturer's directions. Moveable joints must be treated utilizing specific transitioning joint devices depending upon the architect's recommendations. Follow current ASTM F710 guidelines for the preparation of concrete slabs to receive resilient flooring.
- J. Refer to ACI 302.2R "Guidelines for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials" for concrete design and construction.
- K. Concrete slab shall be fortified with continual steel reinforcement. Fiber reinforcement alone shall not be considered adequate fortification.

1.6 *WARRANTY*

- A. Special Limited Warranty:
  - 1. Manufacturer's standard form in which manufacturer agrees to repair or replace sports flooring including labor that fails within specified warranty period.
- B. Material warranty must be direct from the product manufacturer.
  - 1. Material warranties from separate or third party insurance providers are not valid.
  - 2. Material warranties must come from original manufacturer or division thereof. Private label warranties from distributors or brokers are not valid. Supply original point of manufacturing upon request.
- C. Failures include, but are not limited to, the following:
  - 1. Material manufacturing defects.
  - 2. Surface wear and deterioration to the point of wear-through of wear layer per ASTM F410/ASTM F1303.
  - 3. Failure due to substrate moisture exposure exceeding 80 percent relative humidity when tested according to ASTM F2170.
- D. Warranty Period:
  - 1. For material defects and surface wear-through: 10 years from date of substantial completion.
- E. Installer's Limited Warranty:
  - 1. Installer's standard form in which installer agrees to repair or replace sports flooring that fails due to poor workmanship or faulty installation within the specified warranty period.
  - 2. Warranty Period: 2 years from date of substantial completion.

1.7 *ADDITIONAL MATERIALS*

- A. Furnish to the owner additional materials containing a total of at least 1% of each different color or design of the indoor resilient athletic surfacing used on the project.

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1.8 *LEED™ CERTIFICATION*

- A. The indoor resilient athletic surfacing should be able to help this facility to achieve points towards *LEED™ certification*. Flooring system must be certified by FloorScore.
- B. LEED categories positively affected by the indoor resilient athletic surfacing:

<b>LEED™ V4 Credit</b>		Contribution
Materials & Resources: Building Product Disclosure & Optimization (BPDO)		
MRC3: Sourcing of Raw Materials	Options 1 & 2	2 Points
MRC4: Material Ingredients	Option 1	1 Point
MRC5: Construction and Demolition Management	Reclamation and Recycling	ReStart® Program
Indoor Environmental Quality		
EQc2: Low-Emitting Materials	TVOC: 0.5 mg/m <sup>3</sup> or less	FloorScore®

***PART 2 - PRODUCTS***

2.1 *MANUFACTURERS*

- A. The basis of the design for the indoor resilient multipurpose surfacing is Dancefloor and Inspiration Pro system as manufactured by Tarkett.
- B. All other installation accessories and related components must be either made or approved by the indoor resilient athletic surfacing manufacturer.
- C. Other products may be approved as equal if deemed qualified and submitted in accordance with the General Conditions.
- D. Test reports confirming compliance from an independent sports laboratory must be provided along with samples, technical data, installation, maintenance, and warranty prior to acceptance as an alternative product.

2.2 *MATERIALS*

- A. Dancefloor - Prefabricated sport surface 3.5 mm with solid color design and slightly textured embossed surface as supplied by Tarkett.
  - 1. Surface shall be a satin/matte finish.
  - 2. The Inspiration Pro System shall incorporate Inspiration Pro double tongue and grooved multi-ply engineered panels, force reduction cushion, and appropriate vapor retarder.

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

- B. Physical properties of the indoor resilient athletic surfacing shall conform to the following minimums:

Width	—	6' 6" (2 m)
Length	—	75' (23m)) approx.
Wear Layer	EN 429	0.65 mm
Total Thickness	EN 428/EN 429	3.5 mm
Total Combined Thickness		1 3/8" (34.2 mm approx.)
Wear Layer	Type 1– Grade 1	ASTM F1303/F410
Weight	EN 430	3.3kg/m <sup>2</sup> (0.72 lbs./sq. ft.)
Force Reduction	ASTM F2772	52% +/-
Slip Resistance	AS 4586	P3
Reaction to Fire	ISO AS 9239-1	8.6 kW/m <sup>2</sup>
Chemical Resistance	ISO 26987/EN 423	High
Dimensional Stability	ISO 23999/EN 434	≤0.10%
Abrasion Resistance	EN 660: Part 2	Group T: ≤ 2.0mm <sup>3</sup>
Static Load Limit	PASSED	ASTM F970- Load 175 Lbs.
Phthalate-free technology	—	YES
REACH Compliant	—	YES
Heavy Metals	—	NO
ISO 9001	—	YES
ISO 14001	—	YES

1. Color: As available from the indoor resilient athletic surfacing manufacturer's standard range.
  - a. Colors available: Solid Black or Solid Gray
- C. Welding Rod: As supplied by the indoor resilient athletic surfacing manufacturer or supplier.
  1. Color to blend with the indoor resilient athletic surfacing color or design.
  2. All seams shall be welded to create a monolithic and impermeable surface.
- D. Adhesive: As approved by the indoor resilient athletic surfacing manufacturer.

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

***PART 3 - EXECUTION***

3.1 *EXAMINATION*

- A. It is the responsibility of the general contractor/construction manager to ensure that project/site conditions are acceptable for the installation of the indoor resilient athletic flooring.
- B. Verify that the area in which the indoor resilient athletic surfacing will be installed is dry and weather tight. Verify that permanent heat, light and ventilation are installed and operable.
- C. Verify that all other work that could cause damage, dirt and dust or interrupt the normal pace of the indoor resilient athletic flooring installation is completed or suspended.
- D. Verify that there is a stable room temperature of at least 65°F.
- E. Verify that there are no foreign materials or objects on the subfloor and that the subfloor is clean and ready for installation.
- F. Concrete Subfloor: moisture content less than 85% RH when tested per ASTM F2170.
- G. Follow Fieldturf USA, Inc. installation recommendations.
- H. Do not average the results of the tests. Report all field test results in writing to the General Contractor, Architect, and End User prior to installation.
- I. Verify that the concrete subfloor surface pH level is within the 7 - 11 range.
- J. Document the results confirming the slab is within manufacturer's tolerances for slab deviation.

3.2 *PREPARATION OF SURFACES*

- A. Sand the entire surface of the concrete slab.
- B. Sweep the concrete slab so as to remove all dirt and dust. If a sweeping compound is to be used it must be a sweeping compound that does not contain oil or other items that may inhibit the adhesive bond.
- C. Slab must be dust free. In the event that dust impairs adhesive bond, priming the slab prior to application of adhesive may be necessary. Follow installation guidelines.
- D. Follow OSHA guidelines.

3.3 *INSTALLATION*

- A. The installation area shall be closed to all traffic and activity for a period to be set by the indoor resilient athletic surfacing installer. The indoor resilient athletic surfacing installation shall not begin until the installer is familiar with the existing conditions.
- B. All necessary precautions should be taken to minimize noise, smell, dust, the use of hazardous materials and any other items that may inconvenience others.
- C. Install the indoor resilient athletic surfacing in strict accordance with the indoor resilient athletic surfacing manufacturer's written instructions.
- D. Install the indoor resilient athletic surfacing minimizing cross seams. Provide a seam diagram during the submittal process for approval prior to installation. Vinyl Sheet Flooring Seams: Comply with ASTM F 1516. Rout joints and heat weld to permanently and seamlessly fuse sections together.
- E. Paint game lines using approved game line paint primer and game line paint in strict accordance with the game line paint manufacturer's instructions.
- F. Install appropriate threshold plates or transition strips where necessary.

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2.0 *CLEANING*

- A. Remove all unused materials, tools, and equipment and dispose of any debris properly. Clean the indoor resilient athletic surfacing in accordance with the manufacturer's instructions.

3.6 *PROTECTION*

- A. If required, protect the indoor resilient athletic surfacing from damage using coverings approved by the manufacturer until acceptance of work by the customer or their authorized representative.

3.7 *RELATED STANDARDS AND GUIDELINES*

- A. ASTM F2170 "Standard Test Method for Determining Relative Humidity In Concrete Floor Slabs Using In-Situ Probes"
- B. ASTM F710 "Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring"
- C. ACI 302.2R-06 "Guideline for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials"
- D. ASTM F2772-11 "Standard Specification for Athletic Performance Properties of Indoor Sports Floor Systems"

**END OF SECTION**

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC**  
**SURFACING**

**PART 1 – GENERAL**

- 1.1 *SECTION INCLUDES*
- A. Supply and installation of the indoor resilient multipurpose surfacing
  - B. Application of the game lines
  - C. References for the correct construction and preparation of concrete slabs to receive resilient flooring.
- 1.2 *SUBMITTALS*
- A. Product Data:  
Manufacturer's promotional brochures, specifications and installation instructions
  - B. Manufacturer Certifications:
    - 1. Provide certification that accurately identifies the Original Equipment Manufacturer (OEM) of flooring furnished for this project including manufacturer's name, address and factory location.
    - 2. Suppliers of private label flooring for this project must identify themselves as such and fully disclose the OEM information listed above.
    - 3. All "manufacturer" requirements in these specifications must be complied with by the OEM, including warranties, certifications, qualifications, product data, test results, environmental requirements, performance data, etc.
  - B. Samples:
    - 1. Submit for selection and approval three (3) sets of the indoor resilient multipurpose surfacing, manufacturer's brochures, samples or sample boards of all of the available colors, textures and styles.
    - 2. Submit color samples of all the available game line paint colors for selection and approval.
  - C. Closeout Submittals:
    - 1. Submit three (3) copies of the indoor resilient multipurpose surfacing and manufacturer's maintenance instructions.
    - 2. Submit three (3) copies of the material and installation warranties as specified.
- 1.3 *QUALITY ASSURANCE*
- A. Qualifications:
    - 1. The indoor resilient multipurpose surfacing shall have been actively marketed for a minimum of ten (10) years.
    - 2. The indoor resilient multipurpose surfacing shall be manufactured in an ISO 9001 certified plant.



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**SURFACING**

3. The indoor resilient multipurpose surfacing shall be manufactured in an ISO 14001 certified plant.
  4. The indoor resilient multipurpose surfacing supplier shall be an established firm, experienced in the field, and appointed as a distributor by the manufacturer of the indoor resilient multipurpose surfacing.
  5. The installer of the indoor resilient multipurpose surfacing shall have a minimum of five (5) years' experience in the field installing indoor resilient multipurpose surfacing and have worked on at least five (5) projects of similar size, type and complexity.
- B. Certifications:
1. Installer to submit the indoor resilient athletic surfacing manufacturer's certification attesting that they are an approved installer of the indoor resilient multipurpose surfacing.
  2. The indoor resilient multipurpose surfacing manufacturer to submit official ISO 9001 certification for the facility in which the indoor resilient multipurpose surfacing is manufactured.
  3. The indoor resilient multipurpose surfacing manufacturer to submit official ISO 14001 certification for the facility in which the indoor resilient multipurpose surfacing is manufactured.
- C. Testing:
- Tests shall be relative for multi-purpose use with certificates from independent testing resources to be made available upon request. Test results shall be no more than 5 years old and performed according to ASTM standard testing procedures.

1.4 *DELIVERY, STORAGE AND HANDLING*

- A. Delivery:
- Material shall not be delivered until all related work is in place and finished and/or proper storage facilities and conditions can be provided and guaranteed stable according to FieldTurf USA, Inc. recommendations.
- B. Storage:
- Store the material in a secure, clean and dry location. Maintain temperature between 55° and 85° Fahrenheit. Store the indoor resilient athletic surfacing rolls in an upright position on a smooth flat surface immediately upon delivery to jobsite. Rolls shipped in rigid protective cardboard containers can be laid horizontally prior to unpacking and installation.

1.5 *PROJECT/SITE CONDITIONS*

- A. It is the responsibility of the general contractor/construction manager to maintain project/site conditions acceptable for the installation of the indoor resilient multipurpose flooring.

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- B. The area in which the indoor resilient multipurpose surfacing will be installed shall be dry and weather tight. Permanent heat, light and ventilation shall be installed and operable.
- C. All other trades shall have completed their work prior to the installation of the resilient athletic flooring. The general contractor or Construction Manager shall maintain a secure and clean working environment before, during and after the installation. Suspension of other trades' work may be authorized providing their work will not damage the new flooring.
- D. Maintain a stable room temperature of at least 65°F for a minimum of one (1) week prior to, during and thereafter installation.
- E. An effective low-permeance vapor barrier is placed directly beneath the concrete subfloor. For "on" or "below grade" installations, it is recommended to provide a permanent vapor barrier resistant to long term hydrostatic pressure/moisture exposure. Protrusions should be sealed to prevent moisture migration into the slab. Moisture should not be allowed to enter the slab after the completed construction.
- F. Concrete subfloor surface pH level within the 7 to 10 range dependent upon installation type.
- G. Concrete subfloor should be no greater than 1/8" within a 10 ft diameter. This tolerance can be measured in accordance with ASTM E1155.  
A specified ( $F_F$ ) of 50 and an ( $F_L$ ) of 30 should reach this degree of floor flatness and floor level. There is no numerical correlation between F numbers and the deviation from the straight edge; however the above specified numbers should achieve a flat floor with minimal deviation in the slab. Reference ACI 117 and ACI 302.1R. The general contractor should provide a certificate of compliance with the above recommendations.
- H. Concrete subfloor must be clean and free of all foreign materials or objects including, but not limited to, curing compounds and sealers.
- I. Fill cracks, grooves, voids, depressions, and other minor imperfections. Follow the manufacturer's directions. Moveable joints must be treated utilizing specific liquid treatments designed for use with expansion/contraction joints. Standard cementitious floor patching compounds shall not be used for treating moving joints. (see ASTM F710)
- J. Refer to ACI 302.2R "Guidelines for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials" for concrete design and construction.
- K. Concrete slab shall be fortified with continual steel reinforcement. Fiber reinforcement alone shall not be considered adequate fortification.

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1.6 *WARRANTY*

A. Materials:

The indoor resilient multipurpose surfacing shall be covered by the manufacturer against product defects for 10 years. The manufacturer of the indoor resilient multipurpose surfacing must provide this warranty upon request. Warranties shall not be prorated during the life of the warranty period.

1.7 *ADDITIONAL MATERIALS*

Furnish to the owner additional materials containing a total of at least 1% of each different color or design of the indoor resilient athletic surfacing used on the project.

1.8 *LEED™ CERTIFICATION*

The indoor resilient athletic surfacing should be able to help this facility to achieve points towards *LEED™ certification*. Flooring system must be certified by Floor Score.

LEED categories positively affected by the indoor resilient athletic surfacing:

Product Type			Vinyl
<b>Building Reuse Maintain Interior Nonstructural Elements</b>	<b>MR 1.2</b>	Renovation	1
<b>Construction Waste Management</b>	<b>MR 2</b>	Renovation	2
<b>Construction Waste Management Materials Reuse</b>	<b>MR 3</b>	Renovation	2
	<b>5 % - 1 point</b>		
	<b>10% - 2 points</b>		
<b>Recycled Content</b>	<b>MR 4</b>	New/Renovation	2
	<b>20% - 2 points</b>		
<b>Indoor Environmental Air Quality Low VOC Adhesives/Sealants</b>	<b>IEQ 4.1</b>	New/Renovation	1
<b>Low-emitting Materials Paints and Coatings</b>	<b>IEQ 4.2</b>	New/Renovation	1
<b>Low-Emitting Materials Flooring Systems</b>	<b>IEQ 4.3</b>	New/Renovation	1

**PART 2 - PRODUCTS**

2.1 *MANUFACTURERS*

The basis of the design for the indoor resilient multipurpose surfacing is Omnisports Compact and Lumaflex System as manufactured by FieldTurf USA, Inc. All other installation accessories and related components must be either made or approved by the indoor resilient athletic surfacing

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manufacturer. Other products may be approved as equal if deemed qualified and submitted in accordance with the General Conditions. Test reports confirming compliance from an Independent Sports Laboratory must be provided along with samples, technical data, installation, maintenance, and warranty prior to acceptance as an alternative product.

**2.2 MATERIALS.**

LinoSport - Prefabricated 2.5 mm linoleum surfacing with marbled design and slightly textured surface as supplied by FieldTurf USA, Inc. Product to be naturally bacteriostatic and will not contribute to the proliferation of bacteria or fungus. The material's surface shall be protected with XF® X-treme performance finish or equivalent for ease of maintenance. Floor covering requiring waxes or other restorative treatments shall not be considered. Welding rod shall also incorporate the XF® X-treme finish or equivalent.

The Lumaflex System shall incorporate Lumaflex double tongue and grooved multi-ply engineered panels, force reduction cushion, and appropriate vapor retarder. Physical properties of the indoor athletic system shall conform to the following minimums:

LinoSport Width	.....	6'6" (2 m)
Length	.....	Varies
LinoSport Thickness	.....	2.5 mm
Total Combination Thickness	.....	1.063" (27 mm approx.)
LinoSport Environmental	.....	Floor Score Certified
Ball Rebound	PASSED	ASTM F2772 > 90%
Surface Finish Effect	PASSED	ASTM F2772
Vertical Deformation	PASSED	ASTM F2772
Shock Absorption	PASSED	ASTM F2772 Class 4
LinoSport Fire Rating	PASSED	Class 1 (ASTM E648)

1. Color: As available from the indoor resilient athletic surfacing manufacturer's standard range.
- B. Welding Rod:  
As supplied by the indoor resilient athletic surfacing manufacturer or supplier. Color to blend with the indoor resilient athletic surfacing color or design. All seams shall be welded to create a monolithic and impermeable surface.
- C. Adhesive:  
As approved by the indoor resilient athletic surfacing manufacturer.
- D. Game Line Paint Primer:  
As approved by the indoor resilient athletic surfacing manufacturer.

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- E. Game Line Paint:  
As approved by the indoor resilient athletic surfacing manufacturer.  
Colors are to be selected from the manufacturer's standard range.

**PART 3 - EXECUTION**

3.1 *EXAMINATION*

- A. It is the responsibility of the general contractor/construction manager to ensure that project/site conditions are acceptable for the installation of the indoor resilient athletic flooring.
- B. Verify that the area in which the indoor resilient athletic surfacing will be installed is dry and weather tight. Verify that permanent heat, light and ventilation is installed and operable.
- C. Verify that all other work that could cause damage, dirt and dust or interrupt the normal pace of the indoor resilient athletic flooring installation is completed or suspended.
- D. Verify that there is a stable room temperature of at least 65°F.
- E. Verify that there are no foreign materials or objects on the subfloor and that the subfloor is clean and ready for installation.
- F. Concrete moisture content less than 85 % RH when tested per ASTM F2170.
- G. Document the results indicating the slab is within manufacturer's tolerances for slab deviation.

3.2 *PREPARATION OF SURFACES*

- A. Sand the entire surface of the concrete slab.
- B. Sweep the concrete slab so as to remove all dirt and dust. If a sweeping compound is to be used it must be a sweeping compound that does not contain oil or other items that may inhibit the adhesive bond.
- C. Slab must be dust free. In the event that dust impairs adhesive bond, priming the slab prior to application of adhesive may be necessary. Follow installation guidelines.

3.3 *INSTALLATION*

- A. The installation area shall be closed to all traffic and activity for a period to be set by the indoor resilient athletic surfacing installer. The indoor resilient athletic surfacing installation shall not begin until the installer is familiar with the existing conditions.
- B. All necessary precautions should be taken to minimize noise, smell, dust, the use of hazardous materials and any other items that may inconvenience others.

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- C. Install the indoor resilient athletic surfacing in strict accordance with the indoor resilient athletic surfacing manufacturer's written instructions.
- D. Install the indoor resilient athletic surfacing minimizing cross seams. Provide a seam diagram during the submittal process for approval prior to installation.
- E. Paint game lines using approved game line paint primer and game line paint in strict accordance with the game line paint manufacturer's instructions.
- F. Install appropriate threshold plates or transition strips where necessary.

3.4 *CLEANING*

- A. Remove all unused materials, tools, and equipment and dispose of any debris properly. Clean the indoor resilient athletic surfacing in accordance with the manufacturer's instructions.

3.5 *PROTECTION*

If required, protect the indoor resilient athletic surfacing from damage using coverings approved by the manufacturer until acceptance of work by the customer or their authorized representative.

3.7 *RELATED STANDARDS AND GUIDELINES*

- A. ASTM F2170 "Standard Test Method for Determining Relative Humidity In Concrete Floor Slabs Using In-Situ Probes"
- B. ASTM F710 "Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring"
- C. ACI 302.2R-06 "Guideline for Concrete Slabs that Receive Moisture-Flooring Materials"

Sensitive

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**END OF SECTION**

**SECTION 09645**  
**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT**  
**SURFACING**

**PART 1 – GENERAL**

- 1.1 *SECTION INCLUDES*
- A. Supply and installation of the indoor resilient multipurpose surfacing
  - B. Application of the game lines
  - C. References for the correct construction and preparation of concrete slabs to receive resilient flooring.
- 1.2 *SUBMITTALS*
- A. Product Data:  
Manufacturer's promotional brochures, specifications and installation instructions
  - B. Manufacturer Certifications:
    - 1. Provide certification that accurately identifies the Original Equipment Manufacturer (OEM) of flooring furnished for this project including manufacturer's name, address and factory location.
    - 2. Suppliers of private label flooring for this project must identify themselves as such and fully disclose the OEM information listed above.
    - 3. All "manufacturer" requirements in these specifications must be complied with by the OEM, including warranties, certifications, qualifications, product data, test results, environmental requirements, performance data, etc.
  - B. Samples:
    - 1. Submit for selection and approval three (3) sets of the indoor resilient multipurpose surfacing, manufacturer's brochures, samples or sample boards of all of the available colors, textures and styles.
    - 2. Submit color samples of all the available game line paint colors for selection and approval.
  - C. Closeout Submittals:
    - 1. Submit three (3) copies of the indoor resilient multipurpose surfacing and manufacturer's maintenance instructions.
    - 2. Submit three (3) copies of the material and installation warranties as specified.
- 1.3 *QUALITY ASSURANCE*
- A. Qualifications:
    - 1. The indoor resilient multipurpose surfacing shall be manufactured in an ISO 9001 certified plant.
    - 2. The indoor resilient multipurpose surfacing shall be manufactured in an ISO 14001 certified plant.
    - 3. The indoor resilient multipurpose surfacing supplier shall be an established firm experienced in the field and appointed as a distributor by the manufacturer of the indoor resilient multipurpose surfacing.



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4. The installer of the indoor resilient multipurpose surfacing shall have a minimum of five (5) years experience in the field installing indoor resilient multipurpose surfacing and have worked on at least five (5) projects of similar size and complexity.
- B. Certifications:
1. Installer to submit the indoor resilient surfacing manufacturer's or distributor's certification attesting that they are an approved installer of the indoor resilient multipurpose surfacing.
  2. The indoor resilient multipurpose surfacing manufacturer to submit official ISO 9001 certification for the facility in which the indoor resilient multipurpose surfacing is manufactured.
  3. The indoor resilient multipurpose surfacing manufacturer to submit official ISO 14001 certification for the facility in which the indoor resilient multipurpose surfacing is manufactured.
- C. Testing:
- Tests shall be relative for multi-purpose use with certificates from independent testing resources to be made available upon request. Test results shall be no more than 5 years old and performed according to ASTM and/or EN standard testing procedures.
- 1.4 *DELIVERY, STORAGE AND HANDLING*
- A. Delivery:
- Material shall not be delivered until all related work is in place and finished and/or proper storage facilities and conditions can be provided and guaranteed stable according to the manufacturer's recommendations.
- 1.5 *PROJECT/SITE CONDITIONS*
- A. It is the responsibility of the general contractor/construction manager to maintain project/site conditions acceptable for the installation of the indoor resilient multipurpose flooring.
  - B. The area in which the indoor resilient multipurpose surfacing will be installed shall be dry and weather tight. Permanent heat, light and ventilation shall be installed and operable.
  - C. All other trades shall have completed their work prior to the installation of the resilient multipurpose flooring. The general contractor or Construction Manager shall maintain a secure and clean working environment before, during and after the installation. Suspension of other trades' work may be authorized providing their work will not damage the new flooring.
  - D. Maintain a stable room temperature of at least 65°F for a minimum of one (1) week prior to, during, and thereafter installation.
  - E. An effective low-permeance vapor barrier is placed directly beneath the concrete subfloor. For "on" or "below grade" installations, it is recommended to provide a permanent vapor barrier resistant to long term hydrostatic pressure/moisture exposure. Protrusions should be sealed to prevent moisture migration into the slab. Moisture should not be allowed to enter the slab after the completed construction.

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- F. Concrete subfloor surface pH level within the 7 to 10 range dependent upon installation type.
- G. Concrete subfloor should be no greater than 1/8" within a 10 ft diameter. This tolerance can be measured in accordance with ASTM E1155. A specified ( $F_F$ ) of 50 and an ( $F_L$ ) of 30 should reach this degree of floor flatness and floor level. There is no numerical correlation between  $F$  numbers and the deviation from the straight edge; however the above specified numbers should achieve a flat floor with minimal deviation in the slab. Reference ACI 117 and ACI 302.1R. The general contractor should provide a certificate of compliance with the above recommendations.
- H. Concrete subfloor must be clean and free of all foreign materials or objects including, but not limited to, curing compounds and sealers.
- I. Fill cracks, grooves, voids, depressions, and other minor imperfections with Ardex (or equal) cement-based patching/leveling compounds. Follow the manufacturer's directions. Moveable joints must be treated utilizing specific transitioning joint devices depending upon the architect's recommendations. Follow current ASTM F710 guidelines for the preparation of concrete slabs to receive resilient flooring.
- J. Refer to ACI 302.2R "Guidelines for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials" for concrete design and construction.
- K. Concrete slab shall be fortified with continual steel reinforcement. Fiber reinforcement alone shall not be considered adequate fortification.

1.6 *WARRANTY*

A. Materials:

The indoor resilient multipurpose surfacing shall be covered by the manufacturer against product defects for 10 years. The manufacturer of the indoor resilient multipurpose surfacing must provide this warranty upon request.

B. Installation:

The installation of the indoor resilient multipurpose surfacing shall be covered against poor workmanship and faulty installation by a two (2) year written, limited warranty provided by the contractor performing/overseeing the installation.

1.7 *ADDITIONAL MATERIALS*

Furnish to the owner additional materials containing a total of at least 1% of each different color or design of the indoor resilient multipurpose surfacing used on the project.

1.8 *LEED™ CERTIFICATION*

The indoor resilient athletic surfacing should be able to help this facility to achieve points towards *LEED™* certification. Flooring system must be certified by FloorScore.

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<b>Product Type</b>			Linoleum Flooring
<b>Building Reuse Maintain Interior Nonstructural Elements</b>	<b>MR 1.2</b>	Renovation	1
<b>Construction Waste Management</b>	<b>MR 2</b>	Renovation	2
<b>Recycled Content</b>	<b>MR 4</b>	New/Renovation	2
	<b>20% - 2 points</b>		
<b>Materials and Resources Rapidly Renewable Materials</b>	<b>MR 6</b>	New/Renovation	1
<b>Indoor Environmental Air Quality Low VOC Adhesives/Sealants</b>	<b>IEQ 4.1</b>	New/Renovation	1
<b>Low-emitting Materials Paints and Coatings</b>	<b>IEQ 4.2</b>	New/Renovation	1
<b>Low-Emitting Materials Flooring Systems</b>	<b>IEQ 4.3</b>	New/Renovation	1

**PART 2 - PRODUCTS**

2.1 *MANUFACTURERS*

The basis of the design for the indoor resilient multipurpose surfacing is LinoSport as manufactured by FieldTurf, USA, Inc. All other installation accessories and related components must be either made or approved by the indoor resilient surfacing manufacturer. Other products may be approved as equal if deemed qualified and submitted in accordance with the General Conditions..

2.2 *MATERIALS.*

LinoSport - Prefabricated 2.5 mm linoleum surfacing with marbled design and slightly textured surface as supplied by FieldTurf USA, Inc. Product to be naturally bacteriostatic and will not contribute to the proliferation of bacteria or fungus. The material’s surface shall be protected with XF® X-treme performance finish or equivalent for ease of maintenance. Floor covering requiring waxes or other restorative treatments shall not be considered. Welding rod shall also incorporate the XF® X-treme finish or equivalent.

- Physical properties of the indoor resilient surfacing shall conform to the following minimums:

Width	.....	6’6” (2 m)
Length	.....	85’ (25.9m) approx.
Total Thickness	.....	2.5 mm
Vertical Deformation	PASSED	0.6 (EN 14809)
Rolling Load	PASSED	0.30 (EN 1569 {11/1999})
Friction	PASSED	83 (EN 13036-4)
Sanitization	Excellent	Naturally Bacteriostatic
Sound Insulation	Excellent	+/- 9 dB (ISO 717/2)
Recycled Content	.....	22%

A. Welding Rod:

As supplied by the indoor resilient surfacing manufacturer or supplier. Color to blend with the indoor resilient surfacing color or design. All seams

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shall be heat welded. Welding rod shall also incorporate the XF® X-treme finish or equivalent.

- B. Adhesive:  
Multi-Poxy adhesive. Follow adhesive manufacturer's recommendations.
- C. Game Line Paint Primer:  
As approved by the indoor resilient surfacing manufacturer.
- D. Color: As available from the indoor resilient surfacing manufacturer's standard range.

**PART 3 - EXECUTION**

3.1 *EXAMINATION*

- A. It is the responsibility of the general contractor/construction manager to ensure that project/site conditions are acceptable for the installation of the indoor resilient flooring.
- B. Verify that the area in which the indoor resilient surfacing will be installed is dry and weather tight. Verify that permanent heat, light and ventilation is installed and operable.
- C. Verify that all other work that could cause damage, dirt and dust or interrupt the normal pace of the indoor resilient flooring installation is completed or suspended.
- D. Verify that there is a stable room temperature of at least 65°F.
- E. Verify that there are no foreign materials or objects on the subfloor and that the subfloor is clean and ready for installation.
- F. Direct Full Spread Adhering to Concrete Subfloor Multi-Poxy Adhesive: moisture content less 92 % RH when tested per ASTM F2170.
- G. Do not average the results of the tests. Report all field test results in writing to the General Contractor, Architect, and End User prior to installation.
- H. Verify that the concrete subfloor surface pH level is within the 7 - 10 range.
- I. Document the results indicating the slab is within manufacturer's tolerances for slab deviation.

3.2 *PREPARATION OF SURFACES*

- A. Sand the entire surface of the concrete slab.
- B. Sweep the concrete slab so as to remove all dirt and dust. If a sweeping compound is to be used it must be a sweeping compound that does not contain oil or other items that may inhibit the adhesive bond.
- C. Slab must be dust free. In the event that dust impairs adhesive bond, priming the slab prior to application of adhesive may be necessary. Follow installation guidelines.

3.3 *INSTALLATION*

- A. The installation area shall be closed to all traffic and activity for a period to be set by the indoor resilient surfacing installer. The indoor resilient

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surfacing installation shall not begin until the installer is familiar with the existing conditions.

- B. All necessary precautions should be taken to minimize noise, smell, dust, the use of hazardous materials and any other items that may inconvenience others.
- C. Install the indoor resilient surfacing in strict accordance with the indoor resilient surfacing manufacturer's written instructions.
- D. Install the indoor resilient surfacing minimizing cross seams. Provide a seam diagram during the submittal process for approval prior to installation.
- E. Paint game lines using approved game line paint primer and game line paint in strict accordance with the game line paint manufacturer's instructions.
- F. Install appropriate threshold plates or transition strips where necessary.

3.5 *CLEANING*

- A. Remove all unused materials, tools, and equipment and dispose of any debris properly. Clean the indoor resilient surfacing in accordance with the manufacturer's instructions.

3.6 *PROTECTION*

If required, protect the indoor resilient surfacing from damage using coverings approved by the manufacturer until acceptance of work by the customer or their authorized representative.

3.7 *RELATED STANDARDS AND GUIDELINES*

- A. ASTM F2170 "Standard Test Method for Determining Relative Humidity In Concrete Floor Slabs Using In-Situ Probes"
- B. ASTM F710 "Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring"
- C. ACI 302.2R-06 "Guideline for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials"

**END OF SECTION**

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**SURFACING**

**PART 1 – GENERAL**

- 1.1 *SECTION INCLUDES*
- A. Supply and installation of the indoor resilient multipurpose surfacing
  - B. Application of the game lines
  - C. References for the correct construction and preparation of concrete slabs to receive resilient flooring.
- 1.2 *SUBMITTALS*
- A. Product Data:  
Manufacturer's promotional brochures, specifications and installation instructions
  - B. Manufacturer Certifications:
    - 1. Provide certification that accurately identifies the Original Equipment Manufacturer (OEM) of flooring furnished for this project including manufacturer's name, address and factory location.
    - 2. Suppliers of private label flooring for this project must identify themselves as such and fully disclose the OEM information listed above.
    - 3. All "manufacturer" requirements in these specifications must be complied with by the OEM, including warranties, certifications, qualifications, product data, test results, environmental requirements, performance data, etc.
  - B. Samples:
    - 1. Submit for selection and approval three (3) sets of the indoor resilient multipurpose surfacing, manufacturer's brochures, samples or sample boards of all of the available colors, textures and styles.
    - 2. Submit color samples of all the available game line paint colors for selection and approval.
  - C. Closeout Submittals:
    - 1. Submit three (3) copies of the indoor resilient multipurpose surfacing and manufacturer's maintenance instructions.
    - 2. Submit three (3) copies of the material and installation warranties as specified.
- 1.3 *QUALITY ASSURANCE*
- A. Qualifications:
    - 1. The indoor resilient multipurpose surfacing shall have been actively marketed for a minimum of ten (10) years.
    - 2. The indoor resilient multipurpose surfacing shall be manufactured in an ISO 9001 certified plant.

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3. The indoor resilient multipurpose surfacing shall be manufactured in an ISO 14001 certified plant.
  4. The indoor resilient multipurpose surfacing supplier shall be an established firm, experienced in the field, and appointed as a distributor by the manufacturer of the indoor resilient multipurpose surfacing.
  5. The installer of the indoor resilient multipurpose surfacing shall have a minimum of five (5) years' experience in the field installing indoor resilient multipurpose surfacing and have worked on at least five (5) projects of similar size, type and complexity.
- B. Certifications:
1. Installer to submit the indoor resilient athletic surfacing manufacturer's certification attesting that they are an approved installer of the indoor resilient multipurpose surfacing.
  2. The indoor resilient multipurpose surfacing manufacturer to submit official ISO 9001 certification for the facility in which the indoor resilient multipurpose surfacing is manufactured.
  3. The indoor resilient multipurpose surfacing manufacturer to submit official ISO 14001 certification for the facility in which the indoor resilient multipurpose surfacing is manufactured.
- C. Testing:
- Tests shall be relative for multi-purpose use with certificates from independent testing resources to be made available upon request. Test results shall be no more than 5 years old and performed according to ASTM standard testing procedures.

1.4 *DELIVERY, STORAGE AND HANDLING*

- A. Delivery:
- Material shall not be delivered until all related work is in place and finished and/or proper storage facilities and conditions can be provided and guaranteed stable according to FieldTurf USA, Inc. recommendations.
- B. Storage:
- Store the material in a secure, clean and dry location. Maintain temperature between 55° and 85° Fahrenheit. Store the indoor resilient athletic surfacing rolls in an upright position on a smooth flat surface immediately upon delivery to jobsite. Rolls shipped in rigid protective cardboard containers can be laid horizontally prior to unpacking and installation.

1.5 *PROJECT/SITE CONDITIONS*

- A. It is the responsibility of the general contractor/construction manager to maintain project/site conditions acceptable for the installation of the indoor resilient multipurpose flooring.

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- B. The area in which the indoor resilient multipurpose surfacing will be installed shall be dry and weather tight. Permanent heat, light and ventilation shall be installed and operable.
- C. All other trades shall have completed their work prior to the installation of the resilient athletic flooring. The general contractor or Construction Manager shall maintain a secure and clean working environment before, during and after the installation. Suspension of other trades' work may be authorized providing their work will not damage the new flooring.
- D. Maintain a stable room temperature of at least 65°F for a minimum of one (1) week prior to, during and thereafter installation.
- E. An effective low-permeance vapor barrier is placed directly beneath the concrete subfloor. For "on" or "below grade" installations, it is recommended to provide a permanent vapor barrier resistant to long term hydrostatic pressure/moisture exposure. Protrusions should be sealed to prevent moisture migration into the slab. Moisture should not be allowed to enter the slab after the completed construction.
- F. Concrete subfloor surface pH level within the 7 to 10 range dependent upon installation type.
- G. Concrete subfloor should be no greater than 1/8" within a 10 ft diameter. This tolerance can be measured in accordance with ASTM E1155.  
A specified ( $F_F$ ) of 50 and an ( $F_L$ ) of 30 should reach this degree of floor flatness and floor level. There is no numerical correlation between F numbers and the deviation from the straight edge; however the above specified numbers should achieve a flat floor with minimal deviation in the slab. Reference ACI 117 and ACI 302.1R. The general contractor should provide a certificate of compliance with the above recommendations.
- H. Concrete subfloor must be clean and free of all foreign materials or objects including, but not limited to, curing compounds and sealers.
- I. Fill cracks, grooves, voids, depressions, and other minor imperfections. Follow the manufacturer's directions. Moveable joints must be treated utilizing specific liquid treatments designed for use with expansion/contraction joints. Standard cementitious floor patching compounds shall not be used for treating moving joints. (see ASTM F710)
- J. Refer to ACI 302.2R "Guidelines for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials" for concrete design and construction.
- K. Concrete slab shall be fortified with continual steel reinforcement. Fiber reinforcement alone shall not be considered adequate fortification.



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- 1.6 *WARRANTY*  
 A. Materials:  
 B. The indoor resilient multipurpose surfacing shall be covered by the manufacturer against product defects for 10 years. The manufacturer of the indoor resilient multipurpose surfacing must provide this warranty upon request. Warranties shall not be prorated during the life of the warranty period.
- 1.7 *ADDITIONAL MATERIALS*  
 Furnish to the owner additional materials containing a total of at least 1% of each different color or design of the indoor resilient athletic surfacing used on the project.
- 1.8 *LEED™ CERTIFICATION*  
 The indoor resilient athletic surfacing should be able to help this facility to achieve points towards *LEED™ certification*. Flooring system must be certified by Floor Score.

LEED categories positively affected by the indoor resilient athletic surfacing:

Product Type			Vinyl
Building Reuse Maintain Interior Nonstructural Elements	MR 1.2	Renovation	1
Construction Waste Management	MR 2	Renovation	2
Construction Waste Management Materials Reuse	MR 3	Renovation	2
	5% - 1 point		
	10% - 2 points		
Recycled Content	MR 4	New/Renovation	2
	20% - 2 points		
Indoor Environmental Air Quality Low VOC Adhesives/Sealants	IEQ 4.1	New/Renovation	1
Low-emitting Materials Paints and Coatings	IEQ 4.2	New/Renovation	1
Low-Emitting Materials Flooring Systems	IEQ 4.3	New/Renovation	1

**PART 2 - PRODUCTS**

- 2.1 *MANUFACTURERS*  
 The basis of the design for the indoor resilient multipurpose surfacing is Omnisports Compact and Lumaflex Elite System as manufactured by FieldTurf USA, Inc. All other installation accessories and related components must be either made or approved by the indoor resilient

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athletic surfacing manufacturer. Other products may be approved as equal if deemed qualified and submitted in accordance with the General Conditions. Test reports confirming compliance from an Independent Sports Laboratory must be provided along with samples, technical data, installation, maintenance, and warranty prior to acceptance as an alternative product.

**2.2 MATERIALS.**

LinoSport- Prefabricated 2.5 mm linoleum surfacing with marbled design and slightly textured surface as supplied by FieldTurf USA, Inc. Product to be naturally bacteriostatic and will not contribute to the proliferation of bacteria or fungus. The material’s surface shall be protected with XF® X-treme performance finish or equivalent for ease of maintenance. Floor covering requiring waxes or other restorative treatments shall not be considered. Welding rod shall also incorporate the XF® X-treme finish or equivalent. The Lumaflex Elite System shall incorporate Lumaflex Elite double tongue and grooved multi-ply engineered panels, force reduction cushion, and appropriate vapor retarder. Physical properties of the indoor athletic system shall conform to the following minimums:

LinoSport Width	.....	6’6” (2 m)
Length	.....	Varies
LinoSport Thickness	.....	2.5 mm
Total Combination Thickness	.....	1.063” (27mm approx.)
LinoSport Environmental	.....	Floor Score Certified
Ball Rebound	PASSED	ASTM F2772 > 90%
Surface Finish Effect	PASSED	ASTM F2772
Vertical Deformation	PASSED	ASTM F2772
Shock Absorption	PASSED	ASTM F2772 Class 5
LinoSport Fire Rating	PASSED	Class 1 (ASTM E648)

1. Color: As available from the indoor resilient athletic surfacing manufacturer’s standard range.
- B. Welding Rod:  
As supplied by the indoor resilient athletic surfacing manufacturer or supplier. Color to blend with the indoor resilient athletic surfacing color or design. All seams shall be welded to create a monolithic and impermeable surface.
- C. Adhesive:  
As approved by the indoor resilient athletic surfacing manufacturer.
- D. Game Line Paint Primer:

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- As approved by the indoor resilient athletic surfacing manufacturer.
- E. Game Line Paint:  
As approved by the indoor resilient athletic surfacing manufacturer.  
Colors are to be selected from the manufacturer's standard range.

**PART 3 - EXECUTION**

- 3.1 *EXAMINATION*
- A. It is the responsibility of the general contractor/construction manager to ensure that project/site conditions are acceptable for the installation of the indoor resilient athletic flooring.
  - B. Verify that the area in which the indoor resilient athletic surfacing will be installed is dry and weather tight. Verify that permanent heat, light and ventilation is installed and operable.
  - C. Verify that all other work that could cause damage, dirt and dust or interrupt the normal pace of the indoor resilient athletic flooring installation is completed or suspended.
  - D. Verify that there is a stable room temperature of at least 65°F.
  - E. Verify that there are no foreign materials or objects on the subfloor and that the subfloor is clean and ready for installation.
  - F. Concrete moisture content less than 85 % RH when tested per ASTM F2170.
  - G. Document the results indicating the slab is within manufacturer's tolerances for slab deviation.
- 3.2 *PREPARATION OF SURFACES*
- A. Sand the entire surface of the concrete slab.
  - B. Sweep the concrete slab so as to remove all dirt and dust. If a sweeping compound is to be used it must be a sweeping compound that does not contain oil or other items that may inhibit the adhesive bond.
  - C. Slab must be dust free. In the event that dust impairs adhesive bond, priming the slab prior to application of adhesive may be necessary. Follow installation guidelines.
- 3.3 *INSTALLATION*
- A. The installation area shall be closed to all traffic and activity for a period to be set by the indoor resilient athletic surfacing installer. The indoor resilient athletic surfacing installation shall not begin until the installer is familiar with the existing conditions.
  - B. All necessary precautions should be taken to minimize noise, smell, dust, the use of hazardous materials and any other items that may inconvenience others.

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- C. Install the indoor resilient athletic surfacing in strict accordance with the indoor resilient athletic surfacing manufacturer's written instructions.
- D. Install the indoor resilient athletic surfacing minimizing cross seams. Provide a seam diagram during the submittal process for approval prior to installation.
- E. Paint game lines using approved game line paint primer and game line paint in strict accordance with the game line paint manufacturer's instructions.
- F. Install appropriate threshold plates or transition strips where necessary.

3.4 *CLEANING*

- A. Remove all unused materials, tools, and equipment and dispose of any debris properly. Clean the indoor resilient athletic surfacing in accordance with the manufacturer's instructions.

3.5 *PROTECTION*

If required, protect the indoor resilient athletic surfacing from damage using coverings approved by the manufacturer until acceptance of work by the customer or their authorized representative.

3.7 *RELATED STANDARDS AND GUIDELINES*

- A. ASTM F2170 "Standard Test Method for Determining Relative Humidity In Concrete Floor Slabs Using In-Situ Probes"
- B. ASTM F710 "Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring"
- C. ACI 302.2R-06 "Guideline for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials"

Sensitive

**END OF SECTION**

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT**  
**SURFACING**

**PART 1 – GENERAL**

- 1.1 *SECTION INCLUDES*
- A. Supply and installation of the indoor resilient multipurpose surfacing
  - B. Application of the game lines
  - C. References for the correct construction and preparation of concrete slabs to receive resilient flooring.
- 1.2 *SUBMITTALS*
- A. Product Data:  
Manufacturer's promotional brochures, specifications and installation instructions
  - B. Manufacturer Certifications:
    - 1. Provide certification that accurately identifies the Original Equipment Manufacturer (OEM) of flooring furnished for this project including manufacturer's name, address and factory location.
    - 2. Suppliers of private label flooring for this project must identify themselves as such and fully disclose the OEM information listed above.
    - 3. All "manufacturer" requirements in these specifications must be complied with by the OEM, including warranties, certifications, qualifications, product data, test results, environmental requirements, performance data, etc.
  - B. Samples:
    - 1. Submit for selection and approval three (3) sets of the indoor resilient multipurpose surfacing, manufacturer's brochures, samples or sample boards of all of the available colors, textures and styles.
    - 2. Submit color samples of all the available game line paint colors for selection and approval.
  - C. Closeout Submittals:
    - 1. Submit three (3) copies of the indoor resilient multipurpose surfacing and manufacturer's maintenance instructions.
    - 2. Submit three (3) copies of the material and installation warranties as specified.
- 1.3 *QUALITY ASSURANCE*
- A. Qualifications:
    - 1. The indoor resilient multipurpose surfacing shall be manufactured in an ISO 9001 certified plant.
    - 2. The indoor resilient multipurpose surfacing shall be manufactured in an ISO 14001 certified plant.
    - 3. The indoor resilient multipurpose surfacing supplier shall be an established firm experienced in the field and appointed as a distributor by the manufacturer of the indoor resilient multipurpose surfacing.
    - 4. The installer of the indoor resilient multipurpose surfacing shall have a minimum of five (5) years experience in the field installing indoor

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resilient multipurpose surfacing and have worked on at least five (5) projects of similar size and complexity.

**B. Certifications:**

1. Installer to submit the indoor resilient surfacing manufacturer's or distributor's certification attesting that they are an approved installer of the indoor resilient multipurpose surfacing.
2. The indoor resilient multipurpose surfacing manufacturer to submit official ISO 9001 certification for the facility in which the indoor resilient multipurpose surfacing is manufactured.
3. The indoor resilient multipurpose surfacing manufacturer to submit official ISO 14001 certification for the facility in which the indoor resilient multipurpose surfacing is manufactured.

**C. Testing:**

Tests shall be relative for multi-purpose use with certificates from independent testing resources to be made available upon request. Test results shall be no more than 5 years old and performed according to ASTM and/or EN standard testing procedures.

**1.4**     *DELIVERY, STORAGE AND HANDLING*

**A. Delivery:**

Material shall not be delivered until all related work is in place and finished and/or proper storage facilities and conditions can be provided and guaranteed stable according to the manufacturer's recommendations.

**1.5**     *PROJECT/SITE CONDITIONS*

- A.** It is the responsibility of the general contractor/construction manager to maintain project/site conditions acceptable for the installation of the indoor resilient multipurpose flooring.
- B.** The area in which the indoor resilient multipurpose surfacing will be installed shall be dry and weather tight. Permanent heat, light and ventilation shall be installed and operable.
- C.** All other trades shall have completed their work prior to the installation of the resilient multipurpose flooring. The general contractor or Construction Manager shall maintain a secure and clean working environment before, during and after the installation. Suspension of other trades' work may be authorized providing their work will not damage the new flooring.
- D.** Maintain a stable room temperature of at least 65°F for a minimum of one (1) week prior to, during, and thereafter installation.
- E.** An effective low-permeance vapor barrier is placed directly beneath the concrete subfloor. For "on" or "below grade" installations, it is recommended to provide a permanent vapor barrier resistant to long term hydrostatic pressure/moisture exposure. Protrusions should be sealed to prevent moisture migration into the slab. Moisture should not be allowed to enter the slab after the completed construction.
- F.** Concrete subfloor surface pH level within the 7 to 10 range dependent upon installation type.
- G.** Concrete subfloor should be no greater than 1/8" within a 10 ft diameter. This tolerance can be measured in accordance with ASTM E1155.

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A specified ( $F_F$ ) of 50 and an ( $F_L$ ) of 30 should reach this degree of floor flatness and floor level. There is no numerical correlation between F numbers and the deviation from the straight edge; however the above specified numbers should achieve a flat floor with minimal deviation in the slab. Reference ACI 117 and ACI 302.1R. The general contractor should provide a certificate of compliance with the above recommendations.

- H. Concrete subfloor must be clean and free of all foreign materials or objects including, but not limited to, curing compounds and sealers.
- I. Fill cracks, grooves, voids, depressions, and other minor imperfections with Ardex (or equal) cement-based patching/leveling compounds. Follow the manufacturer's directions. Moveable joints must be treated utilizing specific transition joint devices depending upon the architect's recommendations. Follow current ASTM F710 guidelines for the preparation of concrete slabs to receive resilient flooring.
- J. Refer to ACI 302.2R "Guidelines for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials" for concrete design and construction.
- K. Concrete slab shall be fortified with continual steel reinforcement. Fiber reinforcement alone shall not be considered adequate fortification.

1.6 *WARRANTY*

A. Materials:

The indoor resilient multipurpose surfacing shall be covered by the manufacturer against product defects for 10 years. The manufacturer of the indoor resilient multipurpose surfacing must provide this warranty upon request.

B. Installation:

The installation of the indoor resilient multipurpose surfacing shall be covered against poor workmanship and faulty installation by a two (2) year written, limited warranty provided by the contractor performing/overseeing the installation.

1.7 *ADDITIONAL MATERIALS*

Furnish to the owner additional materials containing a total of at least 1% of each different color or design of the indoor resilient multipurpose surfacing used on the project.

1.8 *LEED™ CERTIFICATION*

The indoor resilient athletic surfacing should be able to help this facility to achieve points towards *LEED™* certification. Flooring system must be certified by FloorScore.

Product Type			Linoleum Flooring
Building Reuse Maintain Interior Nonstructural Elements	MR 1.2	Renovation	1
Construction Waste Management	MR 2	Renovation	2
Recycled Content	MR 4	New/Renovation	2
	20% - 2 points		
Materials and Resources Rapidly Renewable Materials	MR 6	New/Renovation	1

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<b>Indoor Environmental Air Quality Low VOC Adhesives/Sealants</b>	<b>IEQ 4.1</b>	New/Renovation	1
<b>Low-emitting Materials Paints and Coatings</b>	<b>IEQ 4.2</b>	New/Renovation	1
<b>Low-Emitting Materials Flooring Systems</b>	<b>IEQ 4.3</b>	New/Renovation	1

**PART 2 - PRODUCTS**

2.1 *MANUFACTURERS*

The basis of the design for the indoor resilient multipurpose surfacing is LinoSport as manufactured by FieldTurf, USA, Inc. All other installation accessories and related components must be either made or approved by the indoor resilient surfacing manufacturer. Other products may be approved as equal if deemed qualified and submitted in accordance with the General Conditions..

2.2 *MATERIALS.*

LinoSport - Prefabricated 4.6 mm foam backed linoleum sports surfacing with marbled design and slightly textured surface as supplied by FieldTurf USA, Inc. Product to be naturally bacteriostatic and will not contribute to the proliferation of bacteria or fungus. The material's surface shall be protected with XF® X-treme performance finish or equivalent for ease of maintenance. Floor covering requiring waxes or other restorative treatments shall not be considered. Welding rod shall also incorporate the XF® X-treme finish or equivalent.

1. Physical properties of the indoor resilient athletic surfacing shall conform to the following minimums:

Width	.....	6'6" (2 m)
Length	.....	85' (25.9m) approx.
Total Thickness	.....	4.6 mm
Vertical Deformation	PASSED	0.6 (EN 14809)
Rolling Load	PASSED	0.30 (EN 1569 {11/1999})
Friction	PASSED	83 (EN 13036-4)
Sanitization	Excellent	Naturally Bacteriostatic
Sound Insulation	Excellent	+/- 19 dB (ISO 717/2)
Recycled Content	.....	22%
Surface Finish Effect	PASSED	ASTM F2772 (80 – 110)
Vertical Deformation	PASSED	ASTM F2772
Ball Rebound	PASSED	ASTM F2772 > 90%
Shock Absorption	PASSED	ASTM F2772 Category 1

A. *Welding Rod:*

As supplied by the indoor resilient surfacing manufacturer or supplier. Color to blend with the indoor resilient surfacing color or design. All seams shall be heat welded. Welding rod shall also incorporate the XF® X-treme finish or equivalent.



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- B. Adhesive:  
Multi-Poxy adhesive. Follow adhesive manufacturer's recommendations.
- C. Game Line Paint Primer:  
As approved by the indoor resilient surfacing manufacturer.
- D. Color: As available from the indoor resilient surfacing manufacturer's standard range.

**PART 3 - EXECUTION**

3.1 *EXAMINATION*

- A. It is the responsibility of the general contractor/construction manager to ensure that project/site conditions are acceptable for the installation of the indoor resilient flooring.
- B. Verify that the area in which the indoor resilient surfacing will be installed is dry and weather tight. Verify that permanent heat, light and ventilation is installed and operable.
- C. Verify that all other work that could cause damage, dirt and dust or interrupt the normal pace of the indoor resilient flooring installation is completed or suspended.
- D. Verify that there is a stable room temperature of at least 65°F.
- E. Verify that there are no foreign materials or objects on the subfloor and that the subfloor is clean and ready for installation.
- F. Direct Full Spread Adhering to Concrete Subfloor Multi-Poxy Adhesive: moisture content less 92% RH when tested per ASTM F2170.
- G. Do not average the results of the tests. Report all field test results in writing to the General Contractor, Architect, and End User prior to installation.
- H. Verify that the concrete subfloor surface pH level is within the 7 - 10 range.
- I. Document the results indicating the slab is within manufacturer's tolerances for slab deviation.

3.2 *PREPARATION OF SURFACES*

- A. Sand the entire surface of the concrete slab.
- B. Sweep the concrete slab so as to remove all dirt and dust. If a sweeping compound is to be used it must be a sweeping compound that does not contain oil or other items that may inhibit the adhesive bond.
- C. Slab must be dust free. In the event that dust impairs adhesive bond, priming the slab prior to application of adhesive may be necessary. Follow installation guidelines.

3.3 *INSTALLATION*

- A. The installation area shall be closed to all traffic and activity for a period to be set by the indoor resilient surfacing installer. The indoor resilient surfacing installation shall not begin until the installer is familiar with the existing conditions.

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- B. All necessary precautions should be taken to minimize noise, smell, dust, the use of hazardous materials and any other items that may inconvenience others.
- C. Install the indoor resilient surfacing in strict accordance with the indoor resilient surfacing manufacturer's written instructions.
- D. Install the indoor resilient surfacing minimizing cross seams. Provide a seam diagram during the submittal process for approval prior to installation.
- E. Paint game lines using approved game line paint primer and game line paint in strict accordance with the game line paint manufacturer's instructions.
- F. Install appropriate threshold plates or transition strips where necessary.

3.5 *CLEANING*

- A. Remove all unused materials, tools, and equipment and dispose of any debris properly. Clean the indoor resilient surfacing in accordance with the manufacturer's instructions.

3.6 *PROTECTION*

If required, protect the indoor resilient surfacing from damage using coverings approved by the manufacturer until acceptance of work by the customer or their authorized representative.

3.7 *RELATED STANDARDS AND GUIDELINES*

- A. ASTM F2170 "Standard Test Method for Determining Relative Humidity In Concrete Floor Slabs Using In-Situ Probes"
- B. ASTM F710 "Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring"
- C. ACI 302.2R-06 "Guideline for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials"

**END OF SECTION**

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

***PART 1 – GENERAL***

1.1 *SECTION INCLUDES*

- A. Supply and installation of the indoor resilient multipurpose surfacing
- B. Application of the game lines
- C. References for the correct construction and preparation of concrete slabs to receive resilient flooring.

1.2 *SUBMITTALS*

- A. Product Data:
  - 1. Manufacturer's promotional brochures, specifications and installation instructions
- B. Manufacturer Certifications:
  - 1. Provide certification that accurately identifies the Original Equipment Manufacturer (OEM) of flooring furnished for this project including manufacturer's name, address and factory location.
  - 2. Suppliers of private label flooring for this project must identify themselves as such and fully disclose the OEM information listed above.
  - 3. All "manufacturer" requirements in these specifications must be complied with by the OEM, including warranties, certifications, qualifications, product data, test results, environmental requirements, performance data, etc.
- C. Samples:
  - 1. Submit for selection and approval three (3) sets of the indoor resilient multipurpose surfacing, manufacturer's brochures, samples or sample boards of all of the available colors, textures and styles.
  - 2. Submit color samples of all the available game line paint colors for selection and approval.
- D. Closeout Submittals:
  - 1. Submit three (3) copies of the indoor resilient multipurpose surfacing and manufacturer's maintenance instructions.
  - 2. Submit three (3) copies of the material and installation warranties as specified.

1.3 *QUALITY ASSURANCE*

- A. Qualifications:
  - 1. The indoor resilient multipurpose surfacing shall have been actively marketed for a minimum of ten (10) years.
  - 2. The indoor resilient multipurpose surfacing shall be manufactured in an ISO 9001 certified plant.
  - 3. The indoor resilient multipurpose surfacing shall be manufactured in an ISO 14001 certified plant.
  - 4. The indoor resilient multipurpose surfacing supplier shall be an established firm, experienced in the field, and competent in the techniques required by the manufacturer.
  - 5. The installer of the indoor resilient multipurpose surfacing shall have a minimum of five (5) years of experience in the field installing indoor resilient multipurpose surfacing and have worked on at least five (5) projects of similar size, type and complexity.

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- B. Certifications:
  - 1. Installer to submit the indoor resilient athletic surfacing manufacturer's certification attesting that they are a trained installer of the indoor resilient multipurpose surfacing.
  - 2. The indoor resilient multipurpose surfacing manufacturer to submit official ISO 9001 certification for the facility in which the indoor resilient multipurpose surfacing is manufactured.
- C. Testing:
  - 1. Tests shall be relative for multi-purpose use with certificates from independent testing resources to be made available upon request.
  - 2. Test results shall be no more than 5 years old and performed according to ASTM standard testing procedures.

1.4 *DELIVERY, STORAGE AND HANDLING*

- A. Delivery:

Material shall not be delivered until all related work is in place and finished and/or proper storage facilities and conditions can be provided and guaranteed stable according to FieldTurf USA, Inc. recommendations.
- B. Storage:
  - 1. Store the material in a secure, clean and dry location.
  - 2. Maintain temperature between 55° and 85° Fahrenheit.
  - 3. Store the indoor resilient athletic surfacing rolls in an upright position on a smooth flat surface immediately upon delivery to jobsite.
  - 4. Rolls shipped in rigid protective cardboard containers can be laid horizontally prior to unpacking and installation.

1.5 *PROJECT/SITE CONDITIONS*

- A. It is the responsibility of the general contractor/construction manager to maintain project/site conditions acceptable for the installation of the indoor resilient multipurpose flooring.
- B. The area in which the indoor resilient multipurpose surfacing will be installed shall be dry and weather tight. Permanent heat, light and ventilation shall be installed and operable.
- C. All other trades shall have completed their work prior to the installation of the resilient athletic flooring. The general contractor or construction manager shall maintain a secure and clean working environment before, during and after the installation.
- D. Maintain a stable room temperature of at least 65°F for a minimum of one (1) week prior to, during and thereafter installation.
- E. An effective low-permeance vapor barrier is placed directly beneath the concrete subfloor. For "on" or "below grade" installations, it is recommended to provide a permanent vapor barrier resistant to long term hydrostatic pressure/moisture exposure. Protrusions should be sealed to prevent moisture migration into the slab. Moisture should not be allowed to enter the slab after the completed construction.
- F. Concrete subfloor surface pH level within the 7 to 11 range dependent upon installation type.
- G. Concrete subfloor should be no greater than 1/8" within a 10 ft diameter. This tolerance can be measured in accordance with ASTM E1155. A specified (F<sub>F</sub>) of 50 and an (F<sub>L</sub>) of 30 should reach this degree of floor flatness and floor level. There is no numerical correlation between F numbers and the deviation from the straight

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edge. However, the above specified numbers should achieve a flat floor with minimal deviation in the slab. Reference ACI 117 and ACI 302.1R. The general contractor should provide a certificate of compliance with the above recommendations.

- H. Concrete subfloor must be clean and free of all foreign materials or objects including, but not limited to, curing compounds and sealers.
- I. Fill cracks, grooves, voids, depressions, and other minor imperfections. Follow the manufacturer's directions. Moveable joints must be treated utilizing specific transitioning joint devices depending upon the architect's recommendations. Follow current ASTM F710 guidelines for the preparation of concrete slabs to receive resilient flooring.
- J. Refer to ACI 302.2R "Guidelines for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials" for concrete design and construction.
- K. Concrete slab shall be fortified with continual steel reinforcement. Fiber reinforcement alone shall not be considered adequate fortification.

1.6 *WARRANTY*

- A. Special Limited Warranty:
  - 1. Manufacturer's standard form in which manufacturer agrees to repair or replace sports flooring including labor that fails within specified warranty period.
- B. Material warranty must be direct from the product manufacturer.
  - 1. Material warranties from separate or third party insurance providers are not valid.
  - 2. Material warranties must come from original manufacturer or division thereof. Private label warranties from distributors or brokers are not valid. Supply original point of manufacturing upon request.
- C. Failures include, but are not limited to, the following:
  - 1. Material manufacturing defects.
  - 2. Surface wear and deterioration to the point of wear-through of wear layer per ASTM F410/ASTM F1303.
  - 3. Failure due to substrate moisture exposure exceeding 80 percent relative humidity when tested according to ASTM F2170.
- D. Warranty Period:
  - 1. For material defects and surface wear-through: 15 years from date of substantial completion.
- E. Installer's Limited Warranty:
  - 1. Installer's standard form in which installer agrees to repair or replace sports flooring that fails due to poor workmanship or faulty installation within the specified warranty period.
  - 2. Warranty Period: 2 years from date of substantial completion.

1.7 *ADDITIONAL MATERIALS*

- A. Furnish to the owner additional materials containing a total of at least 1% of each different color or design of the indoor resilient athletic surfacing used on the project.

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1.8 *LEED™ CERTIFICATION*

- A. The indoor resilient athletic surfacing should be able to help this facility to achieve points towards *LEED™ certification*. Flooring system must be certified by FloorScore.
- B. LEED categories positively affected by the indoor resilient athletic surfacing:

<b>LEED™ V4 Credit</b>		Contribution
Materials & Resources: Building Product Disclosure & Optimization (BPDO)		
MRC3: Sourcing of Raw Materials	Options 1 & 2	2 Points
MRC4: Material Ingredients	Option 1	1 Point
MRC5: Construction and Demolition Management	Reclamation and Recycling	ReStart® Program
Indoor Environmental Quality		
EQc2: Low-Emitting Materials	TVOC: 0.5 mg/m <sup>3</sup> or less	FloorScore®

***PART 2 - PRODUCTS***

2.1 *MANUFACTURERS*

- A. The basis of the design for the indoor resilient multipurpose surfacing is Omnisports 3.5 mm and Lumaflex Elite system as manufactured by Tarkett.
- B. All other installation accessories and related components must be either made or approved by the indoor resilient athletic surfacing manufacturer.
- C. Other products may be approved as equal if deemed qualified and submitted in accordance with the General Conditions.
- D. Test reports confirming compliance from an independent sports laboratory must be provided along with samples, technical data, installation, maintenance, and warranty prior to acceptance as an alternative product.

2.2 *MATERIALS*

- A. Omnisports 3.5 mm - Prefabricated sport surface 2.0 mm (0.08") with wood flooring design and slightly textured embossed surface as supplied by Tarkett.
  - 1. Embossing of wood design and solid colors must be the same; varying embossing or surface textures will not be allowed.
  - 2. Printing of wood design shall closely resemble standard wood strip flooring in size, color, board length, and grain appearance.
  - 3. The wood design shall be protected by a clear layer of pure PVC (Polyvinyl Chloride) and TopClean xp, a factory-applied UV cured urethane treatment.
  - 4. Intermediate layers shall be fortified with a non-woven fiberglass grid for increased dimensional stability.
  - 5. The Lumaflex Elite System shall incorporate Lumaflex Elite double tongue and grooved multi-ply engineered panels, force reduction cushion, and appropriate vapor retarder.

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B. Physical properties of the indoor resilient athletic surfacing shall conform to the following minimums:

Width	—	6' 6" (2 m)
Length	—	85' (25.9m) approx.
Wear Layer	—	2 mm
Total Thickness	—	3.5 mm
Total Combined Thickness		1 3/8" (34.2 mm approx.)
Wear Layer	Type 1– Grade 1	ASTM F1303/F410
Rolling Load	PASSED	0.30 (EN 1569 {11/1999})
Force Reduction	PASSED	ASTM F2772 Class 5
Surface Finish Effect	PASSED	ASTM F2772 (80 – 110)
Vertical Deformation	PASSED	ASTM F2772
Ball Rebound	PASSED	ASTM F2772 > 90%
Chemical Resistance	Excellent	ASTM F925
Impact Resistance	PASSED	EN 1717
Abrasion Resistance	PASSED	0.10 (EN ISO 5470-1 {06/1999})
Static Load Limit	PASSED	ASTM F970- Load 175 Lbs
Phthalate-free technology	—	YES
REACH Compliant	—	YES
Heavy Metals	—	NO
ISO 9001	—	YES
ISO 14001	—	YES

1. Color: As available from the indoor resilient athletic surfacing manufacturer's standard range.
  2. Hardwood Design Series: A wood look design as available from the indoor resilient athletic surfacing manufacturer's standard range.
  3. Texture: Texture to remain consistent between solid colors and wood design when blending colors.
- C. Welding Rod: As supplied by the indoor resilient athletic surfacing manufacturer or supplier.
1. Color to blend with the indoor resilient athletic surfacing color or design.
  2. All seams shall be welded to create a monolithic and impermeable surface.
- D. Adhesive: As approved by the indoor resilient athletic surfacing manufacturer.
- E. Game Line Paint and Primer: As approved by the indoor resilient athletic surfacing manufacturer.

**SECTION 09 65 66**  
**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

***PART 3 - EXECUTION***

3.1 *EXAMINATION*

- A. It is the responsibility of the general contractor/construction manager to ensure that project/site conditions are acceptable for the installation of the indoor resilient athletic flooring.
- B. Verify that the area in which the indoor resilient athletic surfacing will be installed is dry and weather tight. Verify that permanent heat, light and ventilation are installed and operable.
- C. Verify that all other work that could cause damage, dirt and dust or interrupt the normal pace of the indoor resilient athletic flooring installation is completed or suspended.
- D. Verify that there is a stable room temperature of at least 65°F.
- E. Verify that there are no foreign materials or objects on the subfloor and that the subfloor is clean and ready for installation.
- F. Concrete Subfloor: moisture content less than 85% RH when tested per ASTM F2170.
- G. Follow Fieldturf USA, Inc. installation recommendations.
- H. Do not average the results of the tests. Report all field test results in writing to the General Contractor, Architect, and End User prior to installation.
- I. Verify that the concrete subfloor surface pH level is within the 7 - 11 range.
- J. Document the results confirming the slab is within manufacturer's tolerances for slab deviation.

3.2 *PREPARATION OF SURFACES*

- A. Sand the entire surface of the concrete slab.
- B. Sweep the concrete slab so as to remove all dirt and dust. If a sweeping compound is to be used it must be a sweeping compound that does not contain oil or other items that may inhibit the adhesive bond.
- C. Slab must be dust free. In the event that dust impairs adhesive bond, priming the slab prior to application of adhesive may be necessary. Follow installation guidelines.
- D. Follow OSHA guidelines.

3.3 *INSTALLATION*

- A. The installation area shall be closed to all traffic and activity for a period to be set by the indoor resilient athletic surfacing installer. The indoor resilient athletic surfacing installation shall not begin until the installer is familiar with the existing conditions.
- B. All necessary precautions should be taken to minimize noise, smell, dust, the use of hazardous materials and any other items that may inconvenience others.
- C. Install the indoor resilient athletic surfacing in strict accordance with the indoor resilient athletic surfacing manufacturer's written instructions.
- D. Install the indoor resilient athletic surfacing minimizing cross seams. Provide a seam diagram during the submittal process for approval prior to installation. Vinyl Sheet Flooring Seams: Comply with ASTM F 1516. Rout joints and heat weld to permanently and seamlessly fuse sections together.
- E. Paint game lines using approved game line paint primer and game line paint in strict accordance with the game line paint manufacturer's instructions.
- F. Install appropriate threshold plates or transition strips where necessary.



**SECTION 09 65 66**  
**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

2.0 *CLEANING*

- A. Remove all unused materials, tools, and equipment and dispose of any debris properly. Clean the indoor resilient athletic surfacing in accordance with the manufacturer's instructions.

3.6 *PROTECTION*

- A. If required, protect the indoor resilient athletic surfacing from damage using coverings approved by the manufacturer until acceptance of work by the customer or their authorized representative.

3.7 *RELATED STANDARDS AND GUIDELINES*

- A. ASTM F2170 "Standard Test Method for Determining Relative Humidity In Concrete Floor Slabs Using In-Situ Probes"
- B. ASTM F710 "Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring"
- C. ACI 302.2R-06 "Guideline for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials"
- D. ASTM F2772-11 "Standard Specification for Athletic Performance Properties of Indoor Sports Floor Systems"

**END OF SECTION**

**SECTION 09 65 66**  
**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

***PART 1 – GENERAL***

1.1 *SECTION INCLUDES*

- A. Supply and installation of the indoor resilient multipurpose surfacing
- B. Application of the game lines
- C. References for the correct construction and preparation of concrete slabs to receive resilient flooring.

1.2 *SUBMITTALS*

- A. Product Data:
  - 1. Manufacturer's promotional brochures, specifications and installation instructions
- B. Manufacturer Certifications:
  - 1. Provide certification that accurately identifies the Original Equipment Manufacturer (OEM) of flooring furnished for this project including manufacturer's name, address and factory location.
  - 2. Suppliers of private label flooring for this project must identify themselves as such and fully disclose the OEM information listed above.
  - 3. All "manufacturer" requirements in these specifications must be complied with by the OEM, including warranties, certifications, qualifications, product data, test results, environmental requirements, performance data, etc.
- C. Samples:
  - 1. Submit for selection and approval three (3) sets of the indoor resilient multipurpose surfacing, manufacturer's brochures, samples or sample boards of all of the available colors, textures and styles.
  - 2. Submit color samples of all the available game line paint colors for selection and approval.
- D. Closeout Submittals:
  - 1. Submit three (3) copies of the indoor resilient multipurpose surfacing and manufacturer's maintenance instructions.
  - 2. Submit three (3) copies of the material and installation warranties as specified.

1.3 *QUALITY ASSURANCE*

- A. Qualifications:
  - 1. The indoor resilient multipurpose surfacing shall have been actively marketed for a minimum of ten (10) years.
  - 2. The indoor resilient multipurpose surfacing shall be manufactured in an ISO 9001 certified plant.
  - 3. The indoor resilient multipurpose surfacing shall be manufactured in an ISO 14001 certified plant.
  - 4. The indoor resilient multipurpose surfacing supplier shall be an established firm, experienced in the field, and competent in the techniques required by the manufacturer.
  - 5. The installer of the indoor resilient multipurpose surfacing shall have a minimum of five (5) years of experience in the field installing indoor resilient multipurpose surfacing and have worked on at least five (5) projects of similar size, type and complexity.

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

- B. Certifications:
  - 1. Installer to submit the indoor resilient athletic surfacing manufacturer's certification attesting that they are a trained installer of the indoor resilient multipurpose surfacing.
  - 2. The indoor resilient multipurpose surfacing manufacturer to submit official ISO 9001 certification for the facility in which the indoor resilient multipurpose surfacing is manufactured.
- C. Testing:
  - 1. Tests shall be relative for multi-purpose use with certificates from independent testing resources to be made available upon request.
  - 2. Test results shall be no more than 5 years old and performed according to ASTM standard testing procedures.

1.4 *DELIVERY, STORAGE AND HANDLING*

- A. Delivery:

Material shall not be delivered until all related work is in place and finished and/or proper storage facilities and conditions can be provided and guaranteed stable according to FieldTurf USA, Inc. recommendations.
- B. Storage:
  - 1. Store the material in a secure, clean and dry location.
  - 2. Maintain temperature between 55° and 85° Fahrenheit.
  - 3. Store the indoor resilient athletic surfacing rolls in an upright position on a smooth flat surface immediately upon delivery to jobsite.
  - 4. Rolls shipped in rigid protective cardboard containers can be laid horizontally prior to unpacking and installation.

1.5 *PROJECT/SITE CONDITIONS*

- A. It is the responsibility of the general contractor/construction manager to maintain project/site conditions acceptable for the installation of the indoor resilient multipurpose flooring.
- B. The area in which the indoor resilient multipurpose surfacing will be installed shall be dry and weather tight. Permanent heat, light and ventilation shall be installed and operable.
- C. All other trades shall have completed their work prior to the installation of the resilient athletic flooring. The general contractor or construction manager shall maintain a secure and clean working environment before, during and after the installation.
- D. Maintain a stable room temperature of at least 65°F for a minimum of one (1) week prior to, during and thereafter installation.
- E. An effective low-permeance vapor barrier is placed directly beneath the concrete subfloor. For "on" or "below grade" installations, it is recommended to provide a permanent vapor barrier resistant to long term hydrostatic pressure/moisture exposure. Protrusions should be sealed to prevent moisture migration into the slab. Moisture should not be allowed to enter the slab after the completed construction.
- F. Concrete subfloor surface pH level within the 7 to 11 range dependent upon installation type.
- G. Concrete subfloor should be no greater than 1/8" within a 10 ft diameter. This tolerance can be measured in accordance with ASTM E1155. A specified (F<sub>F</sub>) of 50 and an (F<sub>L</sub>) of 30 should reach this degree of floor flatness and floor level. There is no numerical correlation between F numbers and the deviation from the straight

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

edge. However, the above specified numbers should achieve a flat floor with minimal deviation in the slab. Reference ACI 117 and ACI 302.1R. The general contractor should provide a certificate of compliance with the above recommendations.

- H. Concrete subfloor must be clean and free of all foreign materials or objects including, but not limited to, curing compounds and sealers.
- I. Fill cracks, grooves, voids, depressions, and other minor imperfections. Follow the manufacturer's directions. Moveable joints must be treated utilizing specific transitioning joint devices depending upon the architect's recommendations. Follow current ASTM F710 guidelines for the preparation of concrete slabs to receive resilient flooring.
- J. Refer to ACI 302.2R "Guidelines for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials" for concrete design and construction.
- K. Concrete slab shall be fortified with continual steel reinforcement. Fiber reinforcement alone shall not be considered adequate fortification.

1.6 *WARRANTY*

- A. Special Limited Warranty:
  - 1. Manufacturer's standard form in which manufacturer agrees to repair or replace sports flooring including labor that fails within specified warranty period.
- B. Material warranty must be direct from the product manufacturer.
  - 1. Material warranties from separate or third party insurance providers are not valid.
  - 2. Material warranties must come from original manufacturer or division thereof. Private label warranties from distributors or brokers are not valid. Supply original point of manufacturing upon request.
- C. Failures include, but are not limited to, the following:
  - 1. Material manufacturing defects.
  - 2. Surface wear and deterioration to the point of wear-through of wear layer per ASTM F410/ASTM F1303.
  - 3. Failure due to substrate moisture exposure exceeding 80 percent relative humidity when tested according to ASTM F2170.
- D. Warranty Period:
  - 1. For material defects and surface wear-through: 15 years from date of substantial completion.
- E. Installer's Limited Warranty:
  - 1. Installer's standard form in which installer agrees to repair or replace sports flooring that fails due to poor workmanship or faulty installation within the specified warranty period.
  - 2. Warranty Period: 2 years from date of substantial completion.

1.7 *ADDITIONAL MATERIALS*

- A. Furnish to the owner additional materials containing a total of at least 1% of each different color or design of the indoor resilient athletic surfacing used on the project.

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

1.8 *LEED™ CERTIFICATION*

- A. The indoor resilient athletic surfacing should be able to help this facility to achieve points towards *LEED™ certification*. Flooring system must be certified by FloorScore.
- B. LEED categories positively affected by the indoor resilient athletic surfacing:

<b>LEED™ V4 Credit</b>		Contribution
Materials & Resources: Building Product Disclosure & Optimization (BPDO)		
MRC3: Sourcing of Raw Materials	Options 1 & 2	2 Points
MRC4: Material Ingredients	Option 1	1 Point
MRC5: Construction and Demolition Management	Reclamation and Recycling	ReStart® Program
Indoor Environmental Quality		
EQc2: Low-Emitting Materials	TVOC: 0.5 mg/m <sup>3</sup> or less	FloorScore®

**PART 2 - PRODUCTS**

2.1 *MANUFACTURERS*

- A. The basis of the design for the indoor resilient multipurpose surfacing is Omnisports 3.5 mm and Lumaflex Fit system as manufactured by Tarkett.
- B. All other installation accessories and related components must be either made or approved by the indoor resilient athletic surfacing manufacturer.
- C. Other products may be approved as equal if deemed qualified and submitted in accordance with the General Conditions.
- D. Test reports confirming compliance from an independent sports laboratory must be provided along with samples, technical data, installation, maintenance, and warranty prior to acceptance as an alternative product.

2.2 *MATERIALS*

- A. Omnisports 3.5 mm - Prefabricated sport surface 2.0 mm (0.08") with wood flooring design and slightly textured embossed surface as supplied by Tarkett.
  - 1. Embossing of wood design and solid colors must be the same; varying embossing or surface textures will not be allowed.
  - 2. Printing of wood design shall closely resemble standard wood strip flooring in size, color, board length, and grain appearance.
  - 3. The wood design shall be protected by a clear layer of pure PVC (Polyvinyl Chloride) and TopClean xp, a factory-applied UV cured urethane treatment.
  - 4. Intermediate layers shall be fortified with a non-woven fiberglass grid for increased dimensional stability.
  - 5. The Lumaflex Fit System shall incorporate Lumaflex Fit double tongue and grooved multi-ply engineered panels, force reduction cushion, and appropriate vapor retarder.

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

B. Physical properties of the indoor resilient athletic surfacing shall conform to the following minimums:

Width	—	6' 6" (2 m)
Length	—	85' (25.9m) approx.
Wear Layer	—	2 mm
Total Thickness	—	3.5 mm
Total Combined Thickness		47 mm (1.85")
Wear Layer	Type 1– Grade 1	ASTM F1303/F410
Rolling Load	PASSED	0.30 (EN 1569 {11/1999})
Force Reduction	PASSED	ASTM F2772 Class 5
Surface Finish Effect	PASSED	ASTM F2772 (80 – 110)
Ball Rebound	PASSED	ASTM F2772 > 90%
Chemical Resistance	Excellent	ASTM F925
Impact Resistance	PASSED	EN 1717
Abrasion Resistance	PASSED	0.10 (EN ISO 5470-1 {06/1999})
Static Load Limit	PASSED	ASTM F970- Load 175 Lbs
Phthalate-free technology	—	YES
REACH Compliant	—	YES
Heavy Metals	—	NO
ISO 9001	—	YES
ISO 14001	—	YES

1. Color: As available from the indoor resilient athletic surfacing manufacturer's standard range.
  2. Hardwood Design Series: A wood look design as available from the indoor resilient athletic surfacing manufacturer's standard range.
  3. Texture: Texture to remain consistent between solid colors and wood design when blending colors.
- C. Welding Rod: As supplied by the indoor resilient athletic surfacing manufacturer or supplier.
1. Color to blend with the indoor resilient athletic surfacing color or design.
  2. All seams shall be welded to create a monolithic and impermeable surface.
- D. Adhesive: As approved by the indoor resilient athletic surfacing manufacturer.
- E. Game Line Paint and Primer: As approved by the indoor resilient athletic surfacing manufacturer.

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

***PART 3 - EXECUTION***

**3.1**     *EXAMINATION*

- A. It is the responsibility of the general contractor/construction manager to ensure that project/site conditions are acceptable for the installation of the indoor resilient athletic flooring.
- B. Verify that the area in which the indoor resilient athletic surfacing will be installed is dry and weather tight. Verify that permanent heat, light and ventilation are installed and operable.
- C. Verify that all other work that could cause damage, dirt and dust or interrupt the normal pace of the indoor resilient athletic flooring installation is completed or suspended.
- D. Verify that there is a stable room temperature of at least 65°F.
- E. Verify that there are no foreign materials or objects on the subfloor and that the subfloor is clean and ready for installation.
- F. Concrete Subfloor: moisture content less than 85% RH when tested per ASTM F2170.
- G. Follow Fieldturf USA, Inc. installation recommendations.
- H. Do not average the results of the tests. Report all field test results in writing to the General Contractor, Architect, and End User prior to installation.
- I. Verify that the concrete subfloor surface pH level is within the 7 - 11 range.
- J. Document the results confirming the slab is within manufacturer's tolerances for slab deviation.

**3.2**     *PREPARATION OF SURFACES*

- A. Sand the entire surface of the concrete slab.
- B. Sweep the concrete slab so as to remove all dirt and dust. If a sweeping compound is to be used it must be a sweeping compound that does not contain oil or other items that may inhibit the adhesive bond.
- C. Slab must be dust free. In the event that dust impairs adhesive bond, priming the slab prior to application of adhesive may be necessary. Follow installation guidelines.
- D. Follow OSHA guidelines.

**3.3**     *INSTALLATION*

- A. The installation area shall be closed to all traffic and activity for a period to be set by the indoor resilient athletic surfacing installer. The indoor resilient athletic surfacing installation shall not begin until the installer is familiar with the existing conditions.
- B. All necessary precautions should be taken to minimize noise, smell, dust, the use of hazardous materials and any other items that may inconvenience others.
- C. Install the indoor resilient athletic surfacing in strict accordance with the indoor resilient athletic surfacing manufacturer's written instructions.
- D. Install the indoor resilient athletic surfacing minimizing cross seams. Provide a seam diagram during the submittal process for approval prior to installation. Vinyl Sheet Flooring Seams: Comply with ASTM F 1516. Rout joints and heat weld to permanently and seamlessly fuse sections together.
- E. Paint game lines using approved game line paint primer and game line paint in strict accordance with the game line paint manufacturer's instructions.
- F. Install appropriate threshold plates or transition strips where necessary.

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

2.0 *CLEANING*

- A. Remove all unused materials, tools, and equipment and dispose of any debris properly. Clean the indoor resilient athletic surfacing in accordance with the manufacturer's instructions.

3.6 *PROTECTION*

- A. If required, protect the indoor resilient athletic surfacing from damage using coverings approved by the manufacturer until acceptance of work by the customer or their authorized representative.

3.7 *RELATED STANDARDS AND GUIDELINES*

- A. ASTM F2170 "Standard Test Method for Determining Relative Humidity In Concrete Floor Slabs Using In-Situ Probes"
- B. ASTM F710 "Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring"
- C. ACI 302.2R-06 "Guideline for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials"
- D. ASTM F2772-11 "Standard Specification for Athletic Performance Properties of Indoor Sports Floor Systems"

**END OF SECTION**



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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

***PART 1 – GENERAL***

1.1 *SECTION INCLUDES*

- A. Supply and installation of the indoor resilient multipurpose surfacing
- B. Application of the game lines
- C. References for the correct construction and preparation of concrete slabs to receive resilient flooring.

1.2 *SUBMITTALS*

- A. Product Data:
  - 1. Manufacturer's promotional brochures, specifications and installation instructions
- B. Manufacturer Certifications:
  - 1. Provide certification that accurately identifies the Original Equipment Manufacturer (OEM) of flooring furnished for this project including manufacturer's name, address and factory location.
  - 2. Suppliers of private label flooring for this project must identify themselves as such and fully disclose the OEM information listed above.
  - 3. All "manufacturer" requirements in these specifications must be complied with by the OEM, including warranties, certifications, qualifications, product data, test results, environmental requirements, performance data, etc.
- C. Samples:
  - 1. Submit for selection and approval three (3) sets of the indoor resilient multipurpose surfacing, manufacturer's brochures, samples or sample boards of all of the available colors, textures and styles.
  - 2. Submit color samples of all the available game line paint colors for selection and approval.
- D. Closeout Submittals:
  - 1. Submit three (3) copies of the indoor resilient multipurpose surfacing and manufacturer's maintenance instructions.
  - 2. Submit three (3) copies of the material and installation warranties as specified.

1.3 *QUALITY ASSURANCE*

- A. Qualifications:
  - 1. The indoor resilient multipurpose surfacing shall have been actively marketed for a minimum of ten (10) years.
  - 2. The indoor resilient multipurpose surfacing shall be manufactured in an ISO 9001 certified plant.
  - 3. The indoor resilient multipurpose surfacing shall be manufactured in an ISO 14001 certified plant.
  - 4. The indoor resilient multipurpose surfacing supplier shall be an established firm, experienced in the field, and competent in the techniques required by the manufacturer.
  - 5. The installer of the indoor resilient multipurpose surfacing shall have a minimum of five (5) years of experience in the field installing indoor resilient multipurpose surfacing and have worked on at least five (5) projects of similar size, type and complexity.

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

- B. Certifications:
  - 1. Installer to submit the indoor resilient athletic surfacing manufacturer's certification attesting that they are a trained installer of the indoor resilient multipurpose surfacing.
  - 2. The indoor resilient multipurpose surfacing manufacturer to submit official ISO 9001 certification for the facility in which the indoor resilient multipurpose surfacing is manufactured.
- C. Testing:
  - 1. Tests shall be relative for multi-purpose use with certificates from independent testing resources to be made available upon request.
  - 2. Test results shall be no more than 5 years old and performed according to ASTM standard testing procedures.

1.4 *DELIVERY, STORAGE AND HANDLING*

- A. Delivery:

Material shall not be delivered until all related work is in place and finished and/or proper storage facilities and conditions can be provided and guaranteed stable according to FieldTurf USA, Inc. recommendations.
- B. Storage:
  - 1. Store the material in a secure, clean and dry location.
  - 2. Maintain temperature between 55° and 85° Fahrenheit.
  - 3. Store the indoor resilient athletic surfacing rolls in an upright position on a smooth flat surface immediately upon delivery to jobsite.
  - 4. Rolls shipped in rigid protective cardboard containers can be laid horizontally prior to unpacking and installation.

1.5 *PROJECT/SITE CONDITIONS*

- A. It is the responsibility of the general contractor/construction manager to maintain project/site conditions acceptable for the installation of the indoor resilient multipurpose flooring.
- B. The area in which the indoor resilient multipurpose surfacing will be installed shall be dry and weather tight. Permanent heat, light and ventilation shall be installed and operable.
- C. All other trades shall have completed their work prior to the installation of the resilient athletic flooring. The general contractor or construction manager shall maintain a secure and clean working environment before, during and after the installation.
- D. Maintain a stable room temperature of at least 65°F for a minimum of one (1) week prior to, during and thereafter installation.
- E. An effective low-permeance vapor barrier is placed directly beneath the concrete subfloor. For "on" or "below grade" installations, it is recommended to provide a permanent vapor barrier resistant to long term hydrostatic pressure/moisture exposure. Protrusions should be sealed to prevent moisture migration into the slab. Moisture should not be allowed to enter the slab after the completed construction.
- F. Concrete subfloor surface pH level within the 7 to 11 range dependent upon installation type.
- G. Concrete subfloor should be no greater than 1/8" within a 10 ft diameter. This tolerance can be measured in accordance with ASTM E1155. A specified ( $F_F$ ) of 50 and an ( $F_L$ ) of 30 should reach this degree of floor flatness and floor level. There is no numerical correlation between F numbers and the deviation from the straight

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edge. However, the above specified numbers should achieve a flat floor with minimal deviation in the slab. Reference ACI 117 and ACI 302.1R. The general contractor should provide a certificate of compliance with the above recommendations.

- H. Concrete subfloor must be clean and free of all foreign materials or objects including, but not limited to, curing compounds and sealers.
- I. Fill cracks, grooves, voids, depressions, and other minor imperfections. Follow the manufacturer's directions. Moveable joints must be treated utilizing specific transitioning joint devices depending upon the architect's recommendations. Follow current ASTM F710 guidelines for the preparation of concrete slabs to receive resilient flooring.
- J. Refer to ACI 302.2R "Guidelines for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials" for concrete design and construction.
- K. Concrete slab shall be fortified with continual steel reinforcement. Fiber reinforcement alone shall not be considered adequate fortification.

1.6 *WARRANTY*

- A. Special Limited Warranty:
  - 1. Manufacturer's standard form in which manufacturer agrees to repair or replace sports flooring including labor that fails within specified warranty period.
- B. Material warranty must be direct from the product manufacturer.
  - 1. Material warranties from separate or third party insurance providers are not valid.
  - 2. Material warranties must come from original manufacturer or division thereof. Private label warranties from distributors or brokers are not valid. Supply original point of manufacturing upon request.
- C. Failures include, but are not limited to, the following:
  - 1. Material manufacturing defects.
  - 2. Surface wear and deterioration to the point of wear-through of wear layer per ASTM F410/ASTM F1303.
  - 3. Failure due to substrate moisture exposure exceeding 80 percent relative humidity when tested according to ASTM F2170.
- D. Warranty Period:
  - 1. For material defects and surface wear-through: 15 years from date of substantial completion.
- E. Installer's Limited Warranty:
  - 1. Installer's standard form in which installer agrees to repair or replace sports flooring that fails due to poor workmanship or faulty installation within the specified warranty period.
  - 2. Warranty Period: 2 years from date of substantial completion.

1.7 *ADDITIONAL MATERIALS*

- A. Furnish to the owner additional materials containing a total of at least 1% of each different color or design of the indoor resilient athletic surfacing used on the project.

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

1.8 *LEED™ CERTIFICATION*

- A. The indoor resilient athletic surfacing should be able to help this facility to achieve points towards *LEED™ certification*. Flooring system must be certified by FloorScore.
- B. LEED categories positively affected by the indoor resilient athletic surfacing:

<b>LEED™ V4 Credit</b>		Contribution
Materials & Resources: Building Product Disclosure & Optimization (BPDO)		
MRC3: Sourcing of Raw Materials	Options 1 & 2	2 Points
MRC4: Material Ingredients	Option 1	1 Point
MRC5: Construction and Demolition Management	Reclamation and Recycling	ReStart® Program
Indoor Environmental Quality		
EQc2: Low-Emitting Materials	TVOC: 0.5 mg/m <sup>3</sup> or less	FloorScore®

***PART 2 - PRODUCTS***

2.1 *MANUFACTURERS*

- A. The basis of the design for the indoor resilient multipurpose surfacing is Omnisports 3.5 mm and Lumaflex system as manufactured by Tarkett.
- B. All other installation accessories and related components must be either made or approved by the indoor resilient athletic surfacing manufacturer.
- C. Other products may be approved as equal if deemed qualified and submitted in accordance with the General Conditions.
- D. Test reports confirming compliance from an independent sports laboratory must be provided along with samples, technical data, installation, maintenance, and warranty prior to acceptance as an alternative product.

2.2 *MATERIALS*

- A. Omnisports 3.5 mm - Prefabricated sport surface 2.0 mm (0.08") with wood flooring design and slightly textured embossed surface as supplied by Tarkett.
  - 1. Embossing of wood design and solid colors must be the same; varying embossing or surface textures will not be allowed.
  - 2. Printing of wood design shall closely resemble standard wood strip flooring in size, color, board length, and grain appearance.
  - 3. The wood design shall be protected by a clear layer of pure PVC (Polyvinyl Chloride) and TopClean xp, a factory-applied UV cured urethane treatment.
  - 4. Intermediate layers shall be fortified with a non-woven fiberglass grid for increased dimensional stability.
  - 5. The Lumaflex System shall incorporate Lumaflex double tongue and grooved multi-ply engineered panels, force reduction cushion, and appropriate vapor retarder.

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B. Physical properties of the indoor resilient athletic surfacing shall conform to the following minimums:

Width	—	6' 6" (2 m)
Length	—	85' (25.9m) approx.
Wear Layer	—	2 mm
Total Thickness	—	3.5 mm
Total Combined Thickness		1 3/8" (34.2 mm approx.)
Wear Layer	Type 1– Grade 1	ASTM F1303/F410
Rolling Load	PASSED	0.30 (EN 1569 {11/1999})
Force Reduction	PASSED	ASTM F2772 Class 4
Surface Finish Effect	PASSED	ASTM F2772 (80 – 110)
Vertical Deformation	PASSED	ASTM F2772
Ball Rebound	PASSED	ASTM F2772 > 90%
Chemical Resistance	Excellent	ASTM F925
Impact Resistance	PASSED	EN 1717
Abrasion Resistance	PASSED	0.10 (EN ISO 5470-1 {06/1999})
Static Load Limit	PASSED	ASTM F970- Load 175 Lbs
Fire Rating	PASSED	ASTM E648 Class 1
Phthalate-free technology	—	YES
REACH Compliant	—	YES
Heavy Metals	—	NO
ISO 9001	—	YES
ISO 14001	—	YES

1. Color: As available from the indoor resilient athletic surfacing manufacturer's standard range.
  2. Hardwood Design Series: A wood look design as available from the indoor resilient athletic surfacing manufacturer's standard range.
  3. Texture: Texture to remain consistent between solid colors and wood design when blending colors.
- C. Welding Rod: As supplied by the indoor resilient athletic surfacing manufacturer or supplier.
1. Color to blend with the indoor resilient athletic surfacing color or design.
  2. All seams shall be welded to create a monolithic and impermeable surface.
- D. Adhesive: As approved by the indoor resilient athletic surfacing manufacturer.
- E. Game Line Paint and Primer: As approved by the indoor resilient athletic surfacing manufacturer.

**SECTION 09 65 66**  
**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

***PART 3 - EXECUTION***

**3.1**     *EXAMINATION*

- A. It is the responsibility of the general contractor/construction manager to ensure that project/site conditions are acceptable for the installation of the indoor resilient athletic flooring.
- B. Verify that the area in which the indoor resilient athletic surfacing will be installed is dry and weather tight. Verify that permanent heat, light and ventilation are installed and operable.
- C. Verify that all other work that could cause damage, dirt and dust or interrupt the normal pace of the indoor resilient athletic flooring installation is completed or suspended.
- D. Verify that there is a stable room temperature of at least 65°F.
- E. Verify that there are no foreign materials or objects on the subfloor and that the subfloor is clean and ready for installation.
- F. Concrete Subfloor: moisture content less than 85% RH when tested per ASTM F2170.
- G. Follow Fieldturf USA, Inc. installation recommendations.
- H. Do not average the results of the tests. Report all field test results in writing to the General Contractor, Architect, and End User prior to installation.
- I. Verify that the concrete subfloor surface pH level is within the 7 - 11 range.
- J. Document the results confirming the slab is within manufacturer's tolerances for slab deviation.

**3.2**     *PREPARATION OF SURFACES*

- A. Sand the entire surface of the concrete slab.
- B. Sweep the concrete slab so as to remove all dirt and dust. If a sweeping compound is to be used it must be a sweeping compound that does not contain oil or other items that may inhibit the adhesive bond.
- C. Slab must be dust free. In the event that dust impairs adhesive bond, priming the slab prior to application of adhesive may be necessary. Follow installation guidelines.
- D. Follow OSHA guidelines.

**3.3**     *INSTALLATION*

- A. The installation area shall be closed to all traffic and activity for a period to be set by the indoor resilient athletic surfacing installer. The indoor resilient athletic surfacing installation shall not begin until the installer is familiar with the existing conditions.
- B. All necessary precautions should be taken to minimize noise, smell, dust, the use of hazardous materials and any other items that may inconvenience others.
- C. Install the indoor resilient athletic surfacing in strict accordance with the indoor resilient athletic surfacing manufacturer's written instructions.
- D. Install the indoor resilient athletic surfacing minimizing cross seams. Provide a seam diagram during the submittal process for approval prior to installation. Vinyl Sheet Flooring Seams: Comply with ASTM F 1516. Rout joints and heat weld to permanently and seamlessly fuse sections together.
- E. Paint game lines using approved game line paint primer and game line paint in strict accordance with the game line paint manufacturer's instructions.
- F. Install appropriate threshold plates or transition strips where necessary.

**SECTION 09 65 66**  
**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

2.0 *CLEANING*

- A. Remove all unused materials, tools, and equipment and dispose of any debris properly. Clean the indoor resilient athletic surfacing in accordance with the manufacturer's instructions.

3.6 *PROTECTION*

- A. If required, protect the indoor resilient athletic surfacing from damage using coverings approved by the manufacturer until acceptance of work by the customer or their authorized representative.

3.7 *RELATED STANDARDS AND GUIDELINES*

- A. ASTM F2170 "Standard Test Method for Determining Relative Humidity In Concrete Floor Slabs Using In-Situ Probes"
- B. ASTM F710 "Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring"
- C. ACI 302.2R-06 "Guideline for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials"
- D. ASTM F2772-11 "Standard Specification for Athletic Performance Properties of Indoor Sports Floor Systems"

**END OF SECTION**

**SECTION 09 65 66**  
**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

***PART 1 – GENERAL***

1.1 *SECTION INCLUDES*

- A. Supply and installation of the indoor resilient multipurpose surfacing
- B. Application of the game lines
- C. References for the correct construction and preparation of concrete slabs to receive resilient flooring.

1.2 *SUBMITTALS*

- A. Product Data:
  - 1. Manufacturer's promotional brochures, specifications and installation instructions
- B. Manufacturer Certifications:
  - 1. Provide certification that accurately identifies the Original Equipment Manufacturer (OEM) of flooring furnished for this project including manufacturer's name, address and factory location.
  - 2. Suppliers of private label flooring for this project must identify themselves as such and fully disclose the OEM information listed above.
  - 3. All "manufacturer" requirements in these specifications must be complied with by the OEM, including warranties, certifications, qualifications, product data, test results, environmental requirements, performance data, etc.
- C. Samples:
  - 1. Submit for selection and approval three (3) sets of the indoor resilient multipurpose surfacing, manufacturer's brochures, samples or sample boards of all of the available colors, textures and styles.
  - 2. Submit color samples of all the available game line paint colors for selection and approval.
- D. Closeout Submittals:
  - 1. Submit three (3) copies of the indoor resilient multipurpose surfacing and manufacturer's maintenance instructions.
  - 2. Submit three (3) copies of the material and installation warranties as specified.

1.3 *QUALITY ASSURANCE*

- A. Qualifications:
  - 1. The indoor resilient multipurpose surfacing shall have been actively marketed for a minimum of ten (10) years.
  - 2. The indoor resilient multipurpose surfacing shall be manufactured in an ISO 9001 certified plant.
  - 3. The indoor resilient multipurpose surfacing shall be manufactured in an ISO 14001 certified plant.
  - 4. The indoor resilient multipurpose surfacing supplier shall be an established firm, experienced in the field, and competent in the techniques required by the manufacturer.
  - 5. The installer of the indoor resilient multipurpose surfacing shall have a minimum of five (5) years of experience in the field installing indoor resilient multipurpose surfacing and have worked on at least five (5) projects of similar size, type and complexity.



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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

- B. Certifications:
  - 1. Installer to submit the indoor resilient athletic surfacing manufacturer's certification attesting that they are a trained installer of the indoor resilient multipurpose surfacing.
  - 2. The indoor resilient multipurpose surfacing manufacturer to submit official ISO 9001 certification for the facility in which the indoor resilient multipurpose surfacing is manufactured.
- C. Testing:
  - 1. Tests shall be relative for multi-purpose use with certificates from independent testing resources to be made available upon request.
  - 2. Test results shall be no more than 5 years old and performed according to ASTM standard testing procedures.

1.4 *DELIVERY, STORAGE AND HANDLING*

- A. Delivery:

Material shall not be delivered until all related work is in place and finished and/or proper storage facilities and conditions can be provided and guaranteed stable according to FieldTurf USA, Inc. recommendations.
- B. Storage:
  - 1. Store the material in a secure, clean and dry location.
  - 2. Maintain temperature between 55° and 85° Fahrenheit.
  - 3. Store the indoor resilient athletic surfacing rolls in an upright position on a smooth flat surface immediately upon delivery to jobsite.
  - 4. Rolls shipped in rigid protective cardboard containers can be laid horizontally prior to unpacking and installation.

1.5 *PROJECT/SITE CONDITIONS*

- A. It is the responsibility of the general contractor/construction manager to maintain project/site conditions acceptable for the installation of the indoor resilient multipurpose flooring.
- B. The area in which the indoor resilient multipurpose surfacing will be installed shall be dry and weather tight. Permanent heat, light and ventilation shall be installed and operable.
- C. All other trades shall have completed their work prior to the installation of the resilient athletic flooring. The general contractor or construction manager shall maintain a secure and clean working environment before, during and after the installation.
- D. Maintain a stable room temperature of at least 65°F for a minimum of one (1) week prior to, during and thereafter installation.
- E. An effective low-permeance vapor barrier is placed directly beneath the concrete subfloor. For "on" or "below grade" installations, it is recommended to provide a permanent vapor barrier resistant to long term hydrostatic pressure/moisture exposure. Protrusions should be sealed to prevent moisture migration into the slab. Moisture should not be allowed to enter the slab after the completed construction.
- F. Concrete subfloor surface pH level within the 7 to 11 range dependent upon installation type.
- G. Concrete subfloor should be no greater than 1/8" within a 10 ft diameter. This tolerance can be measured in accordance with ASTM E1155. A specified (F<sub>F</sub>) of 50 and an (F<sub>L</sub>) of 30 should reach this degree of floor flatness and floor level. There is no numerical correlation between F numbers and the deviation from the straight

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

edge. However, the above specified numbers should achieve a flat floor with minimal deviation in the slab. Reference ACI 117 and ACI 302.1R. The general contractor should provide a certificate of compliance with the above recommendations.

- H. Concrete subfloor must be clean and free of all foreign materials or objects including, but not limited to, curing compounds and sealers.
- I. Fill cracks, grooves, voids, depressions, and other minor imperfections. Follow the manufacturer's directions. Moveable joints must be treated utilizing specific transitioning joint devices depending upon the architect's recommendations. Follow current ASTM F710 guidelines for the preparation of concrete slabs to receive resilient flooring.
- J. Refer to ACI 302.2R "Guidelines for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials" for concrete design and construction.
- K. Concrete slab shall be fortified with continual steel reinforcement. Fiber reinforcement alone shall not be considered adequate fortification.

1.6 *WARRANTY*

- A. Special Limited Warranty:
  - 1. Manufacturer's standard form in which manufacturer agrees to repair or replace sports flooring including labor that fails within specified warranty period.
- B. Material warranty must be direct from the product manufacturer.
  - 1. Material warranties from separate or third party insurance providers are not valid.
  - 2. Material warranties must come from original manufacturer or division thereof. Private label warranties from distributors or brokers are not valid. Supply original point of manufacturing upon request.
- C. Failures include, but are not limited to, the following:
  - 1. Material manufacturing defects.
  - 2. Surface wear and deterioration to the point of wear-through of wear layer per ASTM F410/ASTM F1303.
  - 3. Failure due to substrate moisture exposure exceeding 80 percent relative humidity when tested according to ASTM F2170.
- D. Warranty Period:
  - 1. For material defects and surface wear-through: 15 years from date of substantial completion.
- E. Installer's Limited Warranty:
  - 1. Installer's standard form in which installer agrees to repair or replace sports flooring that fails due to poor workmanship or faulty installation within the specified warranty period.
  - 2. Warranty Period: 2 years from date of substantial completion.

1.7 *ADDITIONAL MATERIALS*

- A. Furnish to the owner additional materials containing a total of at least 1% of each different color or design of the indoor resilient athletic surfacing used on the project.

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

1.8 *LEED™ CERTIFICATION*

- A. The indoor resilient athletic surfacing should be able to help this facility to achieve points towards *LEED™ certification*. Flooring system must be certified by FloorScore.
- B. LEED categories positively affected by the indoor resilient athletic surfacing:

<b>LEED™ V4 Credit</b>		Contribution
Materials & Resources: Building Product Disclosure & Optimization (BPDO)		
MRC3: Sourcing of Raw Materials	Options 1 & 2	2 Points
MRC4: Material Ingredients	Option 1	1 Point
MRC5: Construction and Demolition Management	Reclamation and Recycling	ReStart® Program
Indoor Environmental Quality		
EQc2: Low-Emitting Materials	TVOC: 0.5 mg/m <sup>3</sup> or less	FloorScore®

**PART 2 - PRODUCTS**

2.1 *MANUFACTURERS*

- A. The basis of the design for the indoor resilient multipurpose surfacing is Omnisports 5.5 mm and Lumaflex Elite system as manufactured by Tarkett.
- B. All other installation accessories and related components must be either made or approved by the indoor resilient athletic surfacing manufacturer.
- C. Other products may be approved as equal if deemed qualified and submitted in accordance with the General Conditions.
- D. Test reports confirming compliance from an independent sports laboratory must be provided along with samples, technical data, installation, maintenance, and warranty prior to acceptance as an alternative product.

2.2 *MATERIALS*

- A. Omnisports 5.5 mm - Prefabricated sport surface 2.0 mm (0.08") with wood flooring design and slightly textured embossed surface as supplied by Tarkett.
  - 1. Embossing of wood design and solid colors must be the same; varying embossing or surface textures will not be allowed.
  - 2. Printing of wood design shall closely resemble standard wood strip flooring in size, color, board length, and grain appearance.
  - 3. The wood design shall be protected by a clear layer of pure PVC (Polyvinyl Chloride) and TopClean xp, a factory-applied UV cured urethane treatment.
  - 4. Intermediate layers shall be fortified with a non-woven fiberglass grid for increased dimensional stability.
  - 5. The Lumaflex Elite System shall incorporate Lumaflex Elite double tongue and grooved multi-ply engineered panels, force reduction cushion, and appropriate vapor retarder.

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

B. Physical properties of the indoor resilient athletic surfacing shall conform to the following minimums:

Width	—	6' 6" (2 m)
Length	—	85' (25.9m) approx.
Wear Layer	—	2 mm
Total Thickness	—	5.5 mm
Total Combined Thickness		1 7/16" (35.7 mm approx.)
Wear Layer	Type 1– Grade 1	ASTM F1303/F410
Rolling Load	PASSED	0.30 (EN 1569 {11/1999})
Force Reduction	PASSED	ASTM F2772 Class 5
Surface Finish Effect	PASSED	ASTM F2772 (80 – 110)
Vertical Deformation	PASSED	ASTM F2772
Ball Rebound	PASSED	ASTM F2772 > 90%
Chemical Resistance	Excellent	ASTM F925
Impact Resistance	PASSED	EN 1717
Abrasion Resistance	PASSED	0.10 (EN ISO 5470-1 {06/1999})
Static Load Limit	PASSED	ASTM F970- Load 175 Lbs
Phthalate-free technology	—	YES
REACH Compliant	—	YES
Heavy Metals	—	NO
ISO 9001	—	YES
ISO 14001	—	YES

1. Color: As available from the indoor resilient athletic surfacing manufacturer's standard range.
  2. Hardwood Design Series: A wood look design as available from the indoor resilient athletic surfacing manufacturer's standard range.
  3. Texture: Texture to remain consistent between solid colors and wood design when blending colors.
- C. Welding Rod: As supplied by the indoor resilient athletic surfacing manufacturer or supplier.
1. Color to blend with the indoor resilient athletic surfacing color or design.
  2. All seams shall be welded to create a monolithic and impermeable surface.
- D. Adhesive: As approved by the indoor resilient athletic surfacing manufacturer.
- E. Game Line Paint and Primer: As approved by the indoor resilient athletic surfacing manufacturer.

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

***PART 3 - EXECUTION***

3.1 *EXAMINATION*

- A. It is the responsibility of the general contractor/construction manager to ensure that project/site conditions are acceptable for the installation of the indoor resilient athletic flooring.
- B. Verify that the area in which the indoor resilient athletic surfacing will be installed is dry and weather tight. Verify that permanent heat, light and ventilation are installed and operable.
- C. Verify that all other work that could cause damage, dirt and dust or interrupt the normal pace of the indoor resilient athletic flooring installation is completed or suspended.
- D. Verify that there is a stable room temperature of at least 65°F.
- E. Verify that there are no foreign materials or objects on the subfloor and that the subfloor is clean and ready for installation.
- F. Concrete Subfloor: moisture content less than 85% RH when tested per ASTM F2170.
- G. Follow Fieldturf USA, Inc. installation recommendations.
- H. Do not average the results of the tests. Report all field test results in writing to the General Contractor, Architect, and End User prior to installation.
- I. Verify that the concrete subfloor surface pH level is within the 7 - 11 range.
- J. Document the results confirming the slab is within manufacturer's tolerances for slab deviation.

3.2 *PREPARATION OF SURFACES*

- A. Sand the entire surface of the concrete slab.
- B. Sweep the concrete slab so as to remove all dirt and dust. If a sweeping compound is to be used it must be a sweeping compound that does not contain oil or other items that may inhibit the adhesive bond.
- C. Slab must be dust free. In the event that dust impairs adhesive bond, priming the slab prior to application of adhesive may be necessary. Follow installation guidelines.
- D. Follow OSHA guidelines.

3.3 *INSTALLATION*

- A. The installation area shall be closed to all traffic and activity for a period to be set by the indoor resilient athletic surfacing installer. The indoor resilient athletic surfacing installation shall not begin until the installer is familiar with the existing conditions.
- B. All necessary precautions should be taken to minimize noise, smell, dust, the use of hazardous materials and any other items that may inconvenience others.
- C. Install the indoor resilient athletic surfacing in strict accordance with the indoor resilient athletic surfacing manufacturer's written instructions.
- D. Install the indoor resilient athletic surfacing minimizing cross seams. Provide a seam diagram during the submittal process for approval prior to installation. Vinyl Sheet Flooring Seams: Comply with ASTM F 1516. Rout joints and heat weld to permanently and seamlessly fuse sections together.
- E. Paint game lines using approved game line paint primer and game line paint in strict accordance with the game line paint manufacturer's instructions.
- F. Install appropriate threshold plates or transition strips where necessary.

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

2.0 *CLEANING*

- A. Remove all unused materials, tools, and equipment and dispose of any debris properly. Clean the indoor resilient athletic surfacing in accordance with the manufacturer's instructions.

3.6 *PROTECTION*

- A. If required, protect the indoor resilient athletic surfacing from damage using coverings approved by the manufacturer until acceptance of work by the customer or their authorized representative.

3.7 *RELATED STANDARDS AND GUIDELINES*

- A. ASTM F2170 "Standard Test Method for Determining Relative Humidity In Concrete Floor Slabs Using In-Situ Probes"
- B. ASTM F710 "Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring"
- C. ACI 302.2R-06 "Guideline for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials"
- D. ASTM F2772-11 "Standard Specification for Athletic Performance Properties of Indoor Sports Floor Systems"

**END OF SECTION**

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

***PART 1 – GENERAL***

1.1 *SECTION INCLUDES*

- A. Supply and installation of the indoor resilient multipurpose surfacing
- B. Application of the game lines
- C. References for the correct construction and preparation of concrete slabs to receive resilient flooring.

1.2 *SUBMITTALS*

- A. Product Data:
  - 1. Manufacturer's promotional brochures, specifications and installation instructions
- B. Manufacturer Certifications:
  - 1. Provide certification that accurately identifies the Original Equipment Manufacturer (OEM) of flooring furnished for this project including manufacturer's name, address and factory location.
  - 2. Suppliers of private label flooring for this project must identify themselves as such and fully disclose the OEM information listed above.
  - 3. All "manufacturer" requirements in these specifications must be complied with by the OEM, including warranties, certifications, qualifications, product data, test results, environmental requirements, performance data, etc.
- C. Samples:
  - 1. Submit for selection and approval three (3) sets of the indoor resilient multipurpose surfacing, manufacturer's brochures, samples or sample boards of all of the available colors, textures and styles.
  - 2. Submit color samples of all the available game line paint colors for selection and approval.
- D. Closeout Submittals:
  - 1. Submit three (3) copies of the indoor resilient multipurpose surfacing and manufacturer's maintenance instructions.
  - 2. Submit three (3) copies of the material and installation warranties as specified.

1.3 *QUALITY ASSURANCE*

- A. Qualifications:
  - 1. The indoor resilient multipurpose surfacing shall have been actively marketed for a minimum of ten (10) years.
  - 2. The indoor resilient multipurpose surfacing shall be manufactured in an ISO 9001 certified plant.
  - 3. The indoor resilient multipurpose surfacing shall be manufactured in an ISO 14001 certified plant.
  - 4. The indoor resilient multipurpose surfacing supplier shall be an established firm, experienced in the field, and competent in the techniques required by the manufacturer.
  - 5. The installer of the indoor resilient multipurpose surfacing shall have a minimum of five (5) years of experience in the field installing indoor resilient multipurpose surfacing and have worked on at least five (5) projects of similar size, type and complexity.

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

- B. Certifications:
  - 1. Installer to submit the indoor resilient athletic surfacing manufacturer's certification attesting that they are a trained installer of the indoor resilient multipurpose surfacing.
  - 2. The indoor resilient multipurpose surfacing manufacturer to submit official ISO 9001 certification for the facility in which the indoor resilient multipurpose surfacing is manufactured.
- C. Testing:
  - 1. Tests shall be relative for multi-purpose use with certificates from independent testing resources to be made available upon request.
  - 2. Test results shall be no more than 5 years old and performed according to ASTM standard testing procedures.

1.4 *DELIVERY, STORAGE AND HANDLING*

- A. Delivery:

Material shall not be delivered until all related work is in place and finished and/or proper storage facilities and conditions can be provided and guaranteed stable according to FieldTurf USA, Inc. recommendations.
- B. Storage:
  - 1. Store the material in a secure, clean and dry location.
  - 2. Maintain temperature between 55° and 85° Fahrenheit.
  - 3. Store the indoor resilient athletic surfacing rolls in an upright position on a smooth flat surface immediately upon delivery to jobsite.
  - 4. Rolls shipped in rigid protective cardboard containers can be laid horizontally prior to unpacking and installation.

1.5 *PROJECT/SITE CONDITIONS*

- A. It is the responsibility of the general contractor/construction manager to maintain project/site conditions acceptable for the installation of the indoor resilient multipurpose flooring.
- B. The area in which the indoor resilient multipurpose surfacing will be installed shall be dry and weather tight. Permanent heat, light and ventilation shall be installed and operable.
- C. All other trades shall have completed their work prior to the installation of the resilient athletic flooring. The general contractor or construction manager shall maintain a secure and clean working environment before, during and after the installation.
- D. Maintain a stable room temperature of at least 65°F for a minimum of one (1) week prior to, during and thereafter installation.
- E. An effective low-permeance vapor barrier is placed directly beneath the concrete subfloor. For "on" or "below grade" installations, it is recommended to provide a permanent vapor barrier resistant to long term hydrostatic pressure/moisture exposure. Protrusions should be sealed to prevent moisture migration into the slab. Moisture should not be allowed to enter the slab after the completed construction.
- F. Concrete subfloor surface pH level within the 7 to 11 range dependent upon installation type.
- G. Concrete subfloor should be no greater than 1/8" within a 10 ft diameter. This tolerance can be measured in accordance with ASTM E1155. A specified ( $F_F$ ) of 50 and an ( $F_L$ ) of 30 should reach this degree of floor flatness and floor level. There is no numerical correlation between F numbers and the deviation from the straight



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edge. However, the above specified numbers should achieve a flat floor with minimal deviation in the slab. Reference ACI 117 and ACI 302.1R. The general contractor should provide a certificate of compliance with the above recommendations.

- H. Concrete subfloor must be clean and free of all foreign materials or objects including, but not limited to, curing compounds and sealers.
- I. Fill cracks, grooves, voids, depressions, and other minor imperfections. Follow the manufacturer's directions. Moveable joints must be treated utilizing specific transitioning joint devices depending upon the architect's recommendations. Follow current ASTM F710 guidelines for the preparation of concrete slabs to receive resilient flooring.
- J. Refer to ACI 302.2R "Guidelines for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials" for concrete design and construction.
- K. Concrete slab shall be fortified with continual steel reinforcement. Fiber reinforcement alone shall not be considered adequate fortification.

1.6 *WARRANTY*

- A. Special Limited Warranty:
  - 1. Manufacturer's standard form in which manufacturer agrees to repair or replace sports flooring including labor that fails within specified warranty period.
- B. Material warranty must be direct from the product manufacturer.
  - 1. Material warranties from separate or third party insurance providers are not valid.
  - 2. Material warranties must come from original manufacturer or division thereof. Private label warranties from distributors or brokers are not valid. Supply original point of manufacturing upon request.
- C. Failures include, but are not limited to, the following:
  - 1. Material manufacturing defects.
  - 2. Surface wear and deterioration to the point of wear-through of wear layer per ASTM F410/ASTM F1303.
  - 3. Failure due to substrate moisture exposure exceeding 80 percent relative humidity when tested according to ASTM F2170.
- D. Warranty Period:
  - 1. For material defects and surface wear-through: 15 years from date of substantial completion.
- E. Installer's Limited Warranty:
  - 1. Installer's standard form in which installer agrees to repair or replace sports flooring that fails due to poor workmanship or faulty installation within the specified warranty period.
  - 2. Warranty Period: 2 years from date of substantial completion.

1.7 *ADDITIONAL MATERIALS*

- A. Furnish to the owner additional materials containing a total of at least 1% of each different color or design of the indoor resilient athletic surfacing used on the project.

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

1.8 *LEED™ CERTIFICATION*

- A. The indoor resilient athletic surfacing should be able to help this facility to achieve points towards *LEED™ certification*. Flooring system must be certified by FloorScore.
- B. LEED categories positively affected by the indoor resilient athletic surfacing:

<b>LEED™ V4 Credit</b>		Contribution
Materials & Resources: Building Product Disclosure & Optimization (BPDO)		
MRC3: Sourcing of Raw Materials	Options 1 & 2	2 Points
MRC4: Material Ingredients	Option 1	1 Point
MRC5: Construction and Demolition Management	Reclamation and Recycling	ReStart® Program
Indoor Environmental Quality		
EQc2: Low-Emitting Materials	TVOC: 0.5 mg/m <sup>3</sup> or less	FloorScore®

**PART 2 - PRODUCTS**

2.1 *MANUFACTURERS*

- A. The basis of the design for the indoor resilient multipurpose surfacing is Omnisports 5.5 mm and Lumaflex Fit system as manufactured by Tarkett.
- B. All other installation accessories and related components must be either made or approved by the indoor resilient athletic surfacing manufacturer.
- C. Other products may be approved as equal if deemed qualified and submitted in accordance with the General Conditions.
- D. Test reports confirming compliance from an independent sports laboratory must be provided along with samples, technical data, installation, maintenance, and warranty prior to acceptance as an alternative product.

2.2 *MATERIALS*

- A. Omnisports 5.5 mm - Prefabricated sport surface 2.0 mm (0.08") with wood flooring design and slightly textured embossed surface as supplied by Tarkett.
  - 1. Embossing of wood design and solid colors must be the same; varying embossing or surface textures will not be allowed.
  - 2. Printing of wood design shall closely resemble standard wood strip flooring in size, color, board length, and grain appearance.
  - 3. The wood design shall be protected by a clear layer of pure PVC (Polyvinyl Chloride) and TopClean xp, a factory-applied UV cured urethane treatment.
  - 4. Intermediate layers shall be fortified with a non-woven fiberglass grid for increased dimensional stability.
  - 5. The Lumaflex Fit System shall incorporate Lumaflex Fit double tongue and grooved multi-ply engineered panels, force reduction cushion, and appropriate vapor retarder.

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

B. Physical properties of the indoor resilient athletic surfacing shall conform to the following minimums:

Width	—	6' 6" (2 m)
Length	—	85' (25.9m) approx.
Wear Layer	—	2 mm
Total Thickness	—	5.5 mm
Total Combined Thickness		48 mm (1.93")
Wear Layer	Type 1- Grade 1	ASTM F1303/F410
Rolling Load	PASSED	0.30 (EN 1569 {11/1999})
Force Reduction	PASSED	ASTM F2772 Class 5
Surface Finish Effect	PASSED	ASTM F2772 (80 – 110)
Vertical Deformation	PASSED	ASTM F2772
Ball Rebound	PASSED	ASTM F2772 > 90%
Chemical Resistance	Excellent	ASTM F925
Impact Resistance	PASSED	EN 1717
Abrasion Resistance	PASSED	0.10 (EN ISO 5470-1 {06/1999})
Static Load Limit	PASSED	ASTM F970- Load 175 Lbs
Phthalate-free technology	—	YES
REACH Compliant	—	YES
Heavy Metals	—	NO
ISO 9001	—	YES
ISO 14001	—	YES

1. Color: As available from the indoor resilient athletic surfacing manufacturer's standard range.
  2. Hardwood Design Series: A wood look design as available from the indoor resilient athletic surfacing manufacturer's standard range.
  3. Texture: Texture to remain consistent between solid colors and wood design when blending colors.
- C. Welding Rod: As supplied by the indoor resilient athletic surfacing manufacturer or supplier.
1. Color to blend with the indoor resilient athletic surfacing color or design.
  2. All seams shall be welded to create a monolithic and impermeable surface.
- D. Adhesive: As approved by the indoor resilient athletic surfacing manufacturer.
- E. Game Line Paint and Primer: As approved by the indoor resilient athletic surfacing manufacturer.

**SECTION 09 65 66**  
**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

***PART 3 - EXECUTION***

3.1 *EXAMINATION*

- A. It is the responsibility of the general contractor/construction manager to ensure that project/site conditions are acceptable for the installation of the indoor resilient athletic flooring.
- B. Verify that the area in which the indoor resilient athletic surfacing will be installed is dry and weather tight. Verify that permanent heat, light and ventilation are installed and operable.
- C. Verify that all other work that could cause damage, dirt and dust or interrupt the normal pace of the indoor resilient athletic flooring installation is completed or suspended.
- D. Verify that there is a stable room temperature of at least 65°F.
- E. Verify that there are no foreign materials or objects on the subfloor and that the subfloor is clean and ready for installation.
- F. Concrete Subfloor: moisture content less than 85% RH when tested per ASTM F2170.
- G. Follow Fieldturf USA, Inc. installation recommendations.
- H. Do not average the results of the tests. Report all field test results in writing to the General Contractor, Architect, and End User prior to installation.
- I. Verify that the concrete subfloor surface pH level is within the 7 - 11 range.
- J. Document the results confirming the slab is within manufacturer's tolerances for slab deviation.

3.2 *PREPARATION OF SURFACES*

- A. Sand the entire surface of the concrete slab.
- B. Sweep the concrete slab so as to remove all dirt and dust. If a sweeping compound is to be used it must be a sweeping compound that does not contain oil or other items that may inhibit the adhesive bond.
- C. Slab must be dust free. In the event that dust impairs adhesive bond, priming the slab prior to application of adhesive may be necessary. Follow installation guidelines.
- D. Follow OSHA guidelines.

3.3 *INSTALLATION*

- A. The installation area shall be closed to all traffic and activity for a period to be set by the indoor resilient athletic surfacing installer. The indoor resilient athletic surfacing installation shall not begin until the installer is familiar with the existing conditions.
- B. All necessary precautions should be taken to minimize noise, smell, dust, the use of hazardous materials and any other items that may inconvenience others.
- C. Install the indoor resilient athletic surfacing in strict accordance with the indoor resilient athletic surfacing manufacturer's written instructions.
- D. Install the indoor resilient athletic surfacing minimizing cross seams. Provide a seam diagram during the submittal process for approval prior to installation. Vinyl Sheet Flooring Seams: Comply with ASTM F 1516. Rout joints and heat weld to permanently and seamlessly fuse sections together.
- E. Paint game lines using approved game line paint primer and game line paint in strict accordance with the game line paint manufacturer's instructions.
- F. Install appropriate threshold plates or transition strips where necessary.

**SECTION 09 65 66**  
**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

2.0 *CLEANING*

- A. Remove all unused materials, tools, and equipment and dispose of any debris properly. Clean the indoor resilient athletic surfacing in accordance with the manufacturer's instructions.

3.6 *PROTECTION*

- A. If required, protect the indoor resilient athletic surfacing from damage using coverings approved by the manufacturer until acceptance of work by the customer or their authorized representative.

3.7 *RELATED STANDARDS AND GUIDELINES*

- A. ASTM F2170 "Standard Test Method for Determining Relative Humidity In Concrete Floor Slabs Using In-Situ Probes"
- B. ASTM F710 "Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring"
- C. ACI 302.2R-06 "Guideline for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials"
- D. ASTM F2772-11 "Standard Specification for Athletic Performance Properties of Indoor Sports Floor Systems"

**END OF SECTION**

**SECTION 09 65 66**  
**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

***PART 1 – GENERAL***

1.1 *SECTION INCLUDES*

- A. Supply and installation of the indoor resilient multipurpose surfacing
- B. Application of the game lines
- C. References for the correct construction and preparation of concrete slabs to receive resilient flooring.

1.2 *SUBMITTALS*

- A. Product Data:
  - 1. Manufacturer's promotional brochures, specifications and installation instructions
- B. Manufacturer Certifications:
  - 1. Provide certification that accurately identifies the Original Equipment Manufacturer (OEM) of flooring furnished for this project including manufacturer's name, address and factory location.
  - 2. Suppliers of private label flooring for this project must identify themselves as such and fully disclose the OEM information listed above.
  - 3. All "manufacturer" requirements in these specifications must be complied with by the OEM, including warranties, certifications, qualifications, product data, test results, environmental requirements, performance data, etc.
- C. Samples:
  - 1. Submit for selection and approval three (3) sets of the indoor resilient multipurpose surfacing, manufacturer's brochures, samples or sample boards of all of the available colors, textures and styles.
  - 2. Submit color samples of all the available game line paint colors for selection and approval.
- D. Closeout Submittals:
  - 1. Submit three (3) copies of the indoor resilient multipurpose surfacing and manufacturer's maintenance instructions.
  - 2. Submit three (3) copies of the material and installation warranties as specified.

1.3 *QUALITY ASSURANCE*

- A. Qualifications:
  - 1. The indoor resilient multipurpose surfacing shall have been actively marketed for a minimum of ten (10) years.
  - 2. The indoor resilient multipurpose surfacing shall be manufactured in an ISO 9001 certified plant.
  - 3. The indoor resilient multipurpose surfacing shall be manufactured in an ISO 14001 certified plant.
  - 4. The indoor resilient multipurpose surfacing supplier shall be an established firm, experienced in the field, and competent in the techniques required by the manufacturer.
  - 5. The installer of the indoor resilient multipurpose surfacing shall have a minimum of five (5) years of experience in the field installing indoor resilient multipurpose surfacing and have worked on at least five (5) projects of similar size, type and complexity.

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

- B. Certifications:
  - 1. Installer to submit the indoor resilient athletic surfacing manufacturer's certification attesting that they are a trained installer of the indoor resilient multipurpose surfacing.
  - 2. The indoor resilient multipurpose surfacing manufacturer to submit official ISO 9001 certification for the facility in which the indoor resilient multipurpose surfacing is manufactured.
- C. Testing:
  - 1. Tests shall be relative for multi-purpose use with certificates from independent testing resources to be made available upon request.
  - 2. Test results shall be no more than 5 years old and performed according to ASTM standard testing procedures.

1.4 *DELIVERY, STORAGE AND HANDLING*

- A. Delivery:

Material shall not be delivered until all related work is in place and finished and/or proper storage facilities and conditions can be provided and guaranteed stable according to FieldTurf USA, Inc. recommendations.
- B. Storage:
  - 1. Store the material in a secure, clean and dry location.
  - 2. Maintain temperature between 55° and 85° Fahrenheit.
  - 3. Store the indoor resilient athletic surfacing rolls in an upright position on a smooth flat surface immediately upon delivery to jobsite.
  - 4. Rolls shipped in rigid protective cardboard containers can be laid horizontally prior to unpacking and installation.

1.5 *PROJECT/SITE CONDITIONS*

- A. It is the responsibility of the general contractor/construction manager to maintain project/site conditions acceptable for the installation of the indoor resilient multipurpose flooring.
- B. The area in which the indoor resilient multipurpose surfacing will be installed shall be dry and weather tight. Permanent heat, light and ventilation shall be installed and operable.
- C. All other trades shall have completed their work prior to the installation of the resilient athletic flooring. The general contractor or construction manager shall maintain a secure and clean working environment before, during and after the installation.
- D. Maintain a stable room temperature of at least 65°F for a minimum of one (1) week prior to, during and thereafter installation.
- E. An effective low-permeance vapor barrier is placed directly beneath the concrete subfloor. For "on" or "below grade" installations, it is recommended to provide a permanent vapor barrier resistant to long term hydrostatic pressure/moisture exposure. Protrusions should be sealed to prevent moisture migration into the slab. Moisture should not be allowed to enter the slab after the completed construction.
- F. Concrete subfloor surface pH level within the 7 to 11 range dependent upon installation type.
- G. Concrete subfloor should be no greater than 1/8" within a 10 ft diameter. This tolerance can be measured in accordance with ASTM E1155. A specified (F<sub>F</sub>) of 50 and an (F<sub>L</sub>) of 30 should reach this degree of floor flatness and floor level. There is no numerical correlation between F numbers and the deviation from the straight

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

edge. However, the above specified numbers should achieve a flat floor with minimal deviation in the slab. Reference ACI 117 and ACI 302.1R. The general contractor should provide a certificate of compliance with the above recommendations.

- H. Concrete subfloor must be clean and free of all foreign materials or objects including, but not limited to, curing compounds and sealers.
- I. Fill cracks, grooves, voids, depressions, and other minor imperfections. Follow the manufacturer's directions. Moveable joints must be treated utilizing specific transitioning joint devices depending upon the architect's recommendations. Follow current ASTM F710 guidelines for the preparation of concrete slabs to receive resilient flooring.
- J. Refer to ACI 302.2R "Guidelines for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials" for concrete design and construction.
- K. Concrete slab shall be fortified with continual steel reinforcement. Fiber reinforcement alone shall not be considered adequate fortification.

1.6 *WARRANTY*

- A. Special Limited Warranty:
  - 1. Manufacturer's standard form in which manufacturer agrees to repair or replace sports flooring including labor that fails within specified warranty period.
- B. Material warranty must be direct from the product manufacturer.
  - 1. Material warranties from separate or third party insurance providers are not valid.
  - 2. Material warranties must come from original manufacturer or division thereof. Private label warranties from distributors or brokers are not valid. Supply original point of manufacturing upon request.
- C. Failures include, but are not limited to, the following:
  - 1. Material manufacturing defects.
  - 2. Surface wear and deterioration to the point of wear-through of wear layer per ASTM F410/ASTM F1303.
  - 3. Failure due to substrate moisture exposure exceeding 80 percent relative humidity when tested according to ASTM F2170.
- D. Warranty Period:
  - 1. For material defects and surface wear-through: 15 years from date of substantial completion.
- E. Installer's Limited Warranty:
  - 1. Installer's standard form in which installer agrees to repair or replace sports flooring that fails due to poor workmanship or faulty installation within the specified warranty period.
  - 2. Warranty Period: 2 years from date of substantial completion.

1.7 *ADDITIONAL MATERIALS*

- A. Furnish to the owner additional materials containing a total of at least 1% of each different color or design of the indoor resilient athletic surfacing used on the project.



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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

1.8 *LEED™ CERTIFICATION*

- A. The indoor resilient athletic surfacing should be able to help this facility to achieve points towards *LEED™ certification*. Flooring system must be certified by FloorScore.
- B. LEED categories positively affected by the indoor resilient athletic surfacing:

<b>LEED™ V4 Credit</b>		Contribution
Materials & Resources: Building Product Disclosure & Optimization (BPDO)		
MRC3: Sourcing of Raw Materials	Options 1 & 2	2 Points
MRC4: Material Ingredients	Option 1	1 Point
MRC5: Construction and Demolition Management	Reclamation and Recycling	ReStart® Program
Indoor Environmental Quality		
EQc2: Low-Emitting Materials	TVOC: 0.5 mg/m <sup>3</sup> or less	FloorScore®

**PART 2 - PRODUCTS**

2.1 *MANUFACTURERS*

- A. The basis of the design for the indoor resilient multipurpose surfacing is Omnisports 5.5 mm and Lumaflex system as manufactured by Tarkett.
- B. All other installation accessories and related components must be either made or approved by the indoor resilient athletic surfacing manufacturer.
- C. Other products may be approved as equal if deemed qualified and submitted in accordance with the General Conditions.
- D. Test reports confirming compliance from an independent sports laboratory must be provided along with samples, technical data, installation, maintenance, and warranty prior to acceptance as an alternative product.

2.2 *MATERIALS*

- A. Omnisports 5.5 mm - Prefabricated sport surface 2.0 mm (0.08") with wood flooring design and slightly textured embossed surface as supplied by Tarkett.
  - 1. Embossing of wood design and solid colors must be the same; varying embossing or surface textures will not be allowed.
  - 2. Printing of wood design shall closely resemble standard wood strip flooring in size, color, board length, and grain appearance.
  - 3. The wood design shall be protected by a clear layer of pure PVC (Polyvinyl Chloride) and TopClean xp, a factory-applied UV cured urethane treatment.
  - 4. Intermediate layers shall be fortified with a non-woven fiberglass grid for increased dimensional stability.
  - 5. The Lumaflex System shall incorporate Lumaflex double tongue and grooved multi-ply engineered panels, force reduction cushion, and appropriate vapor retarder.

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

B. Physical properties of the indoor resilient athletic surfacing shall conform to the following minimums:

Width	—	6' 6" (2 m)
Length	—	85' (25.9m) approx.
Wear Layer	—	2 mm
Total Thickness	—	5.5 mm
Total Combined Thickness		1 7/16" (35.7 mm approx.)
Wear Layer	Type 1- Grade 1	ASTM F1303/F410
Rolling Load	PASSED	0.30 (EN 1569 {11/1999})
Force Reduction	PASSED	ASTM F2772 Class 4
Surface Finish Effect	PASSED	ASTM F2772 (80 – 110)
Vertical Deformation	PASSED	ASTM F2772
Ball Rebound	PASSED	ASTM F2772 > 90%
Chemical Resistance	Excellent	ASTM F925
Impact Resistance	PASSED	EN 1717
Abrasion Resistance	PASSED	0.10 (EN ISO 5470-1 {06/1999})
Static Load Limit	PASSED	ASTM F970- Load 175 Lbs
Fire Rating	PASSED	ASTM E648 Class 1
Phthalate-free technology	—	YES
REACH Compliant	—	YES
Lumaflex Foam		GreenGuard Certified
Heavy Metals	—	NO
ISO 9001	—	YES
ISO 14001	—	YES

1. Color: As available from the indoor resilient athletic surfacing manufacturer's standard range.
  2. Hardwood Design Series: A wood look design as available from the indoor resilient athletic surfacing manufacturer's standard range.
  3. Texture: Texture to remain consistent between solid colors and wood design when blending colors.
- C. Welding Rod: As supplied by the indoor resilient athletic surfacing manufacturer or supplier.
1. Color to blend with the indoor resilient athletic surfacing color or design.
  2. All seams shall be welded to create a monolithic and impermeable surface.
- D. Adhesive: As approved by the indoor resilient athletic surfacing manufacturer.
- E. Game Line Paint and Primer: As approved by the indoor resilient athletic surfacing manufacturer.

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

***PART 3 - EXECUTION***

3.1 *EXAMINATION*

- A. It is the responsibility of the general contractor/construction manager to ensure that project/site conditions are acceptable for the installation of the indoor resilient athletic flooring.
- B. Verify that the area in which the indoor resilient athletic surfacing will be installed is dry and weather tight. Verify that permanent heat, light and ventilation are installed and operable.
- C. Verify that all other work that could cause damage, dirt and dust or interrupt the normal pace of the indoor resilient athletic flooring installation is completed or suspended.
- D. Verify that there is a stable room temperature of at least 65°F.
- E. Verify that there are no foreign materials or objects on the subfloor and that the subfloor is clean and ready for installation.
- F. Concrete Subfloor: moisture content less than 85% RH when tested per ASTM F2170.
- G. Follow Fieldturf USA, Inc. installation recommendations.
- H. Do not average the results of the tests. Report all field test results in writing to the General Contractor, Architect, and End User prior to installation.
- I. Verify that the concrete subfloor surface pH level is within the 7 - 11 range.
- J. Document the results confirming the slab is within manufacturer's tolerances for slab deviation.

3.2 *PREPARATION OF SURFACES*

- A. Sand the entire surface of the concrete slab.
- B. Sweep the concrete slab so as to remove all dirt and dust. If a sweeping compound is to be used it must be a sweeping compound that does not contain oil or other items that may inhibit the adhesive bond.
- C. Slab must be dust free. In the event that dust impairs adhesive bond, priming the slab prior to application of adhesive may be necessary. Follow installation guidelines.
- D. Follow OSHA guidelines.

3.3 *INSTALLATION*

- A. The installation area shall be closed to all traffic and activity for a period to be set by the indoor resilient athletic surfacing installer. The indoor resilient athletic surfacing installation shall not begin until the installer is familiar with the existing conditions.
- B. All necessary precautions should be taken to minimize noise, smell, dust, the use of hazardous materials and any other items that may inconvenience others.
- C. Install the indoor resilient athletic surfacing in strict accordance with the indoor resilient athletic surfacing manufacturer's written instructions.
- D. Install the indoor resilient athletic surfacing minimizing cross seams. Provide a seam diagram during the submittal process for approval prior to installation. Vinyl Sheet Flooring Seams: Comply with ASTM F 1516. Rout joints and heat weld to permanently and seamlessly fuse sections together.
- E. Paint game lines using approved game line paint primer and game line paint in strict accordance with the game line paint manufacturer's instructions.
- F. Install appropriate threshold plates or transition strips where necessary.

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

2.0 *CLEANING*

- A. Remove all unused materials, tools, and equipment and dispose of any debris properly. Clean the indoor resilient athletic surfacing in accordance with the manufacturer's instructions.

3.6 *PROTECTION*

- A. If required, protect the indoor resilient athletic surfacing from damage using coverings approved by the manufacturer until acceptance of work by the customer or their authorized representative.

3.7 *RELATED STANDARDS AND GUIDELINES*

- A. ASTM F2170 "Standard Test Method for Determining Relative Humidity In Concrete Floor Slabs Using In-Situ Probes"
- B. ASTM F710 "Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring"
- C. ACI 302.2R-06 "Guideline for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials"
- D. ASTM F2772-11 "Standard Specification for Athletic Performance Properties of Indoor Sports Floor Systems"

**END OF SECTION**

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

***PART 1 – GENERAL***

1.1 *SECTION INCLUDES*

- A. Supply and installation of the indoor resilient multipurpose surfacing
- B. Application of the game lines
- C. References for the correct construction and preparation of concrete slabs to receive resilient flooring.

1.2 *SUBMITTALS*

- A. Product Data:
  - 1. Manufacturer's promotional brochures, specifications and installation instructions
- B. Manufacturer Certifications:
  - 1. Provide certification that accurately identifies the Original Equipment Manufacturer (OEM) of flooring furnished for this project including manufacturer's name, address and factory location.
  - 2. Suppliers of private label flooring for this project must identify themselves as such and fully disclose the OEM information listed above.
  - 3. All "manufacturer" requirements in these specifications must be complied with by the OEM, including warranties, certifications, qualifications, product data, test results, environmental requirements, performance data, etc.
- C. Samples:
  - 1. Submit for selection and approval three (3) sets of the indoor resilient multipurpose surfacing, manufacturer's brochures, samples or sample boards of all of the available colors, textures and styles.
  - 2. Submit color samples of all the available game line paint colors for selection and approval.
- D. Closeout Submittals:
  - 1. Submit three (3) copies of the indoor resilient multipurpose surfacing and manufacturer's maintenance instructions.
  - 2. Submit three (3) copies of the material and installation warranties as specified.

1.3 *QUALITY ASSURANCE*

- A. Qualifications:
  - 1. The indoor resilient multipurpose surfacing shall have been actively marketed for a minimum of ten (10) years.
  - 2. The indoor resilient multipurpose surfacing shall be manufactured in an ISO 9001 certified plant.
  - 3. The indoor resilient multipurpose surfacing shall be manufactured in an ISO 14001 certified plant.
  - 4. The indoor resilient multipurpose surfacing supplier shall be an established firm, experienced in the field, and competent in the techniques required by the manufacturer.
  - 5. The installer of the indoor resilient multipurpose surfacing shall have a minimum of five (5) years of experience in the field installing indoor resilient multipurpose surfacing and have worked on at least five (5) projects of similar size, type and complexity.

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- B. Certifications:
  - 1. Installer to submit the indoor resilient athletic surfacing manufacturer's certification attesting that they are a trained installer of the indoor resilient multipurpose surfacing.
  - 2. The indoor resilient multipurpose surfacing manufacturer to submit official ISO 9001 certification for the facility in which the indoor resilient multipurpose surfacing is manufactured.
- C. Testing:
  - 1. Tests shall be relative for multi-purpose use with certificates from independent testing resources to be made available upon request.
  - 2. Test results shall be no more than 5 years old and performed according to ASTM standard testing procedures.

1.4 *DELIVERY, STORAGE AND HANDLING*

- A. Delivery:

Material shall not be delivered until all related work is in place and finished and/or proper storage facilities and conditions can be provided and guaranteed stable according to FieldTurf USA, Inc. recommendations.
- B. Storage:
  - 1. Store the material in a secure, clean and dry location.
  - 2. Maintain temperature between 55° and 85° Fahrenheit.
  - 3. Store the indoor resilient athletic surfacing rolls in an upright position on a smooth flat surface immediately upon delivery to jobsite.
  - 4. Rolls shipped in rigid protective cardboard containers can be laid horizontally prior to unpacking and installation.

1.5 *PROJECT/SITE CONDITIONS*

- A. It is the responsibility of the general contractor/construction manager to maintain project/site conditions acceptable for the installation of the indoor resilient multipurpose flooring.
- B. The area in which the indoor resilient multipurpose surfacing will be installed shall be dry and weather tight. Permanent heat, light and ventilation shall be installed and operable.
- C. All other trades shall have completed their work prior to the installation of the resilient athletic flooring. The general contractor or construction manager shall maintain a secure and clean working environment before, during and after the installation.
- D. Maintain a stable room temperature of at least 65°F for a minimum of one (1) week prior to, during and thereafter installation.
- E. An effective low-permeance vapor barrier is placed directly beneath the concrete subfloor. For "on" or "below grade" installations, it is recommended to provide a permanent vapor barrier resistant to long term hydrostatic pressure/moisture exposure. Protrusions should be sealed to prevent moisture migration into the slab. Moisture should not be allowed to enter the slab after the completed construction.
- F. Concrete subfloor surface pH level within the 7 to 11 range dependent upon installation type.
- G. Concrete subfloor should be no greater than 1/8" within a 10 ft diameter. This tolerance can be measured in accordance with ASTM E1155. A specified (F<sub>F</sub>) of 50 and an (F<sub>L</sub>) of 30 should reach this degree of floor flatness and floor level. There is no numerical correlation between F numbers and the deviation from the straight

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edge. However, the above specified numbers should achieve a flat floor with minimal deviation in the slab. Reference ACI 117 and ACI 302.1R. The general contractor should provide a certificate of compliance with the above recommendations.

- H. Concrete subfloor must be clean and free of all foreign materials or objects including, but not limited to, curing compounds and sealers.
- I. Fill cracks, grooves, voids, depressions, and other minor imperfections. Follow the manufacturer's directions. Moveable joints must be treated utilizing specific transitioning joint devices depending upon the architect's recommendations. Follow current ASTM F710 guidelines for the preparation of concrete slabs to receive resilient flooring.
- J. Refer to ACI 302.2R "Guidelines for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials" for concrete design and construction.
- K. Concrete slab shall be fortified with continual steel reinforcement. Fiber reinforcement alone shall not be considered adequate fortification.

1.6 *WARRANTY*

- A. Special Limited Warranty:
  - 1. Manufacturer's standard form in which manufacturer agrees to repair or replace sports flooring including labor that fails within specified warranty period.
- B. Material warranty must be direct from the product manufacturer.
  - 1. Material warranties from separate or third party insurance providers are not valid.
  - 2. Material warranties must come from original manufacturer or division thereof. Private label warranties from distributors or brokers are not valid. Supply original point of manufacturing upon request.
- C. Failures include, but are not limited to, the following:
  - 1. Material manufacturing defects.
  - 2. Surface wear and deterioration to the point of wear-through of wear layer per ASTM F410/ASTM F1303.
  - 3. Failure due to substrate moisture exposure exceeding 80 percent relative humidity when tested according to ASTM F2170.
- D. Warranty Period:
  - 1. For material defects and surface wear-through: 15 years from date of substantial completion.
- E. Installer's Limited Warranty:
  - 1. Installer's standard form in which installer agrees to repair or replace sports flooring that fails due to poor workmanship or faulty installation within the specified warranty period.
  - 2. Warranty Period: 2 years from date of substantial completion.

1.7 *ADDITIONAL MATERIALS*

- A. Furnish to the owner additional materials containing a total of at least 1% of each different color or design of the indoor resilient athletic surfacing used on the project.

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1.8 *LEED™ CERTIFICATION*

- A. The indoor resilient athletic surfacing should be able to help this facility to achieve points towards *LEED™ certification*. Flooring system must be certified by FloorScore.
- B. LEED categories positively affected by the indoor resilient athletic surfacing:

<b>LEED™ V4 Credit</b>		Contribution
Materials & Resources: Building Product Disclosure & Optimization (BPDO)		
MRC3: Sourcing of Raw Materials	Options 1 & 2	2 Points
MRC4: Material Ingredients	Option 1	1 Point
MRC5: Construction and Demolition Management	Reclamation and Recycling	ReStart® Program
Indoor Environmental Quality		
EQc2: Low-Emitting Materials	TVOC: 0.5 mg/m <sup>3</sup> or less	FloorScore®

***PART 2 - PRODUCTS***

2.1 *MANUFACTURERS*

- A. The basis of the design for the indoor resilient multipurpose surfacing is Omnisports 7.1 mm and Lumaflex Elite system as manufactured by Tarkett.
- B. All other installation accessories and related components must be either made or approved by the indoor resilient athletic surfacing manufacturer.
- C. Other products may be approved as equal if deemed qualified and submitted in accordance with the General Conditions.
- D. Test reports confirming compliance from an independent sports laboratory must be provided along with samples, technical data, installation, maintenance, and warranty prior to acceptance as an alternative product.

2.2 *MATERIALS*

- A. Omnisports 7.1 mm - Prefabricated sport surface 2.0 mm (0.08") with wood flooring design and slightly textured embossed surface as supplied by Tarkett.
  - 1. Embossing of wood design and solid colors must be the same; varying embossing or surface textures will not be allowed.
  - 2. Printing of wood design shall closely resemble standard wood strip flooring in size, color, board length, and grain appearance.
  - 3. The wood design shall be protected by a clear layer of pure PVC (Polyvinyl Chloride) and TopClean xp, a factory-applied UV cured urethane treatment.
  - 4. Intermediate layers shall be fortified with a non-woven fiberglass grid for increased dimensional stability.
  - 5. The Lumaflex Elite System shall incorporate Lumaflex Elite double tongue and grooved multi-ply engineered panels, force reduction cushion, and appropriate vapor retarder.



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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

B. Physical properties of the indoor resilient athletic surfacing shall conform to the following minimums:

Width	—	6' 6" (2 m)
Length	—	85' (25.9m) approx.
Wear Layer	—	2 mm
Total Thickness	—	7.1 mm
Total Combined Thickness		1 1/2" (37.1 mm approx.)
Wear Layer	Type 1- Grade 1	ASTM F1303/F410
Rolling Load	PASSED	0.30 (EN 1569 {11/1999})
Force Reduction	PASSED	ASTM F2772 Class 5
Surface Finish Effect	PASSED	ASTM F2772 (80 – 110)
Vertical Deformation	PASSED	ASTM F2772
Ball Rebound	PASSED	ASTM F2772 > 90%
Chemical Resistance	Excellent	ASTM F925
Impact Resistance	PASSED	EN 1717
Abrasion Resistance	PASSED	0.10 (EN ISO 5470-1 {06/1999})
Static Load Limit	PASSED	ASTM F970- Load 175 Lbs
Phthalate-free technology	—	YES
REACH Compliant	—	YES
Heavy Metals	—	NO
ISO 9001	—	YES
ISO 14001	—	YES

1. Color: As available from the indoor resilient athletic surfacing manufacturer's standard range.
  2. Hardwood Design Series: A wood look design as available from the indoor resilient athletic surfacing manufacturer's standard range.
  3. Texture: Texture to remain consistent between solid colors and wood design when blending colors.
- C. Welding Rod: As supplied by the indoor resilient athletic surfacing manufacturer or supplier.
1. Color to blend with the indoor resilient athletic surfacing color or design.
  2. All seams shall be welded to create a monolithic and impermeable surface.
- D. Adhesive: As approved by the indoor resilient athletic surfacing manufacturer.
- E. Game Line Paint and Primer: As approved by the indoor resilient athletic surfacing manufacturer.

**SECTION 09 65 66**  
**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

***PART 3 - EXECUTION***

**3.1**     *EXAMINATION*

- A. It is the responsibility of the general contractor/construction manager to ensure that project/site conditions are acceptable for the installation of the indoor resilient athletic flooring.
- B. Verify that the area in which the indoor resilient athletic surfacing will be installed is dry and weather tight. Verify that permanent heat, light and ventilation are installed and operable.
- C. Verify that all other work that could cause damage, dirt and dust or interrupt the normal pace of the indoor resilient athletic flooring installation is completed or suspended.
- D. Verify that there is a stable room temperature of at least 65°F.
- E. Verify that there are no foreign materials or objects on the subfloor and that the subfloor is clean and ready for installation.
- F. Concrete Subfloor: moisture content less than 85% RH when tested per ASTM F2170.
- G. Follow Fieldturf USA, Inc. installation recommendations.
- H. Do not average the results of the tests. Report all field test results in writing to the General Contractor, Architect, and End User prior to installation.
- I. Verify that the concrete subfloor surface pH level is within the 7 - 11 range.
- J. Document the results confirming the slab is within manufacturer's tolerances for slab deviation.

**3.2**     *PREPARATION OF SURFACES*

- A. Sand the entire surface of the concrete slab.
- B. Sweep the concrete slab so as to remove all dirt and dust. If a sweeping compound is to be used it must be a sweeping compound that does not contain oil or other items that may inhibit the adhesive bond.
- C. Slab must be dust free. In the event that dust impairs adhesive bond, priming the slab prior to application of adhesive may be necessary. Follow installation guidelines.
- D. Follow OSHA guidelines.

**3.3**     *INSTALLATION*

- A. The installation area shall be closed to all traffic and activity for a period to be set by the indoor resilient athletic surfacing installer. The indoor resilient athletic surfacing installation shall not begin until the installer is familiar with the existing conditions.
- B. All necessary precautions should be taken to minimize noise, smell, dust, the use of hazardous materials and any other items that may inconvenience others.
- C. Install the indoor resilient athletic surfacing in strict accordance with the indoor resilient athletic surfacing manufacturer's written instructions.
- D. Install the indoor resilient athletic surfacing minimizing cross seams. Provide a seam diagram during the submittal process for approval prior to installation. Vinyl Sheet Flooring Seams: Comply with ASTM F 1516. Rout joints and heat weld to permanently and seamlessly fuse sections together.
- E. Paint game lines using approved game line paint primer and game line paint in strict accordance with the game line paint manufacturer's instructions.
- F. Install appropriate threshold plates or transition strips where necessary.

**SECTION 09 65 66**  
**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

2.0 *CLEANING*

- A. Remove all unused materials, tools, and equipment and dispose of any debris properly. Clean the indoor resilient athletic surfacing in accordance with the manufacturer's instructions.

3.6 *PROTECTION*

- A. If required, protect the indoor resilient athletic surfacing from damage using coverings approved by the manufacturer until acceptance of work by the customer or their authorized representative.

3.7 *RELATED STANDARDS AND GUIDELINES*

- A. ASTM F2170 "Standard Test Method for Determining Relative Humidity In Concrete Floor Slabs Using In-Situ Probes"
- B. ASTM F710 "Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring"
- C. ACI 302.2R-06 "Guideline for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials"
- D. ASTM F2772-11 "Standard Specification for Athletic Performance Properties of Indoor Sports Floor Systems"

**END OF SECTION**

**SECTION 09 65 66**  
**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

***PART 1 – GENERAL***

1.1 *SECTION INCLUDES*

- A. Supply and installation of the indoor resilient multipurpose surfacing
- B. Application of the game lines
- C. References for the correct construction and preparation of concrete slabs to receive resilient flooring.

1.2 *SUBMITTALS*

- A. Product Data:
  - 1. Manufacturer's promotional brochures, specifications and installation instructions
- B. Manufacturer Certifications:
  - 1. Provide certification that accurately identifies the Original Equipment Manufacturer (OEM) of flooring furnished for this project including manufacturer's name, address and factory location.
  - 2. Suppliers of private label flooring for this project must identify themselves as such and fully disclose the OEM information listed above.
  - 3. All "manufacturer" requirements in these specifications must be complied with by the OEM, including warranties, certifications, qualifications, product data, test results, environmental requirements, performance data, etc.
- C. Samples:
  - 1. Submit for selection and approval three (3) sets of the indoor resilient multipurpose surfacing, manufacturer's brochures, samples or sample boards of all of the available colors, textures and styles.
  - 2. Submit color samples of all the available game line paint colors for selection and approval.
- D. Closeout Submittals:
  - 1. Submit three (3) copies of the indoor resilient multipurpose surfacing and manufacturer's maintenance instructions.
  - 2. Submit three (3) copies of the material and installation warranties as specified.

1.3 *QUALITY ASSURANCE*

- A. Qualifications:
  - 1. The indoor resilient multipurpose surfacing shall have been actively marketed for a minimum of ten (10) years.
  - 2. The indoor resilient multipurpose surfacing shall be manufactured in an ISO 9001 certified plant.
  - 3. The indoor resilient multipurpose surfacing shall be manufactured in an ISO 14001 certified plant.
  - 4. The indoor resilient multipurpose surfacing supplier shall be an established firm, experienced in the field, and competent in the techniques required by the manufacturer.
  - 5. The installer of the indoor resilient multipurpose surfacing shall have a minimum of five (5) years of experience in the field installing indoor resilient multipurpose surfacing and have worked on at least five (5) projects of similar size, type and complexity.

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

- B. Certifications:
  - 1. Installer to submit the indoor resilient athletic surfacing manufacturer's certification attesting that they are a trained installer of the indoor resilient multipurpose surfacing.
  - 2. The indoor resilient multipurpose surfacing manufacturer to submit official ISO 9001 certification for the facility in which the indoor resilient multipurpose surfacing is manufactured.
- C. Testing:
  - 1. Tests shall be relative for multi-purpose use with certificates from independent testing resources to be made available upon request.
  - 2. Test results shall be no more than 5 years old and performed according to ASTM standard testing procedures.

1.4 *DELIVERY, STORAGE AND HANDLING*

- A. Delivery:

Material shall not be delivered until all related work is in place and finished and/or proper storage facilities and conditions can be provided and guaranteed stable according to FieldTurf USA, Inc. recommendations.
- B. Storage:
  - 1. Store the material in a secure, clean and dry location.
  - 2. Maintain temperature between 55° and 85° Fahrenheit.
  - 3. Store the indoor resilient athletic surfacing rolls in an upright position on a smooth flat surface immediately upon delivery to jobsite.
  - 4. Rolls shipped in rigid protective cardboard containers can be laid horizontally prior to unpacking and installation.

1.5 *PROJECT/SITE CONDITIONS*

- A. It is the responsibility of the general contractor/construction manager to maintain project/site conditions acceptable for the installation of the indoor resilient multipurpose flooring.
- B. The area in which the indoor resilient multipurpose surfacing will be installed shall be dry and weather tight. Permanent heat, light and ventilation shall be installed and operable.
- C. All other trades shall have completed their work prior to the installation of the resilient athletic flooring. The general contractor or construction manager shall maintain a secure and clean working environment before, during and after the installation.
- D. Maintain a stable room temperature of at least 65°F for a minimum of one (1) week prior to, during and thereafter installation.
- E. An effective low-permeance vapor barrier is placed directly beneath the concrete subfloor. For "on" or "below grade" installations, it is recommended to provide a permanent vapor barrier resistant to long term hydrostatic pressure/moisture exposure. Protrusions should be sealed to prevent moisture migration into the slab. Moisture should not be allowed to enter the slab after the completed construction.
- F. Concrete subfloor surface pH level within the 7 to 11 range dependent upon installation type.
- G. Concrete subfloor should be no greater than 1/8" within a 10 ft diameter. This tolerance can be measured in accordance with ASTM E1155. A specified (F<sub>F</sub>) of 50 and an (F<sub>L</sub>) of 30 should reach this degree of floor flatness and floor level. There is no numerical correlation between F numbers and the deviation from the straight

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

edge. However, the above specified numbers should achieve a flat floor with minimal deviation in the slab. Reference ACI 117 and ACI 302.1R. The general contractor should provide a certificate of compliance with the above recommendations.

- H. Concrete subfloor must be clean and free of all foreign materials or objects including, but not limited to, curing compounds and sealers.
- I. Fill cracks, grooves, voids, depressions, and other minor imperfections. Follow the manufacturer's directions. Moveable joints must be treated utilizing specific transitioning joint devices depending upon the architect's recommendations. Follow current ASTM F710 guidelines for the preparation of concrete slabs to receive resilient flooring.
- J. Refer to ACI 302.2R "Guidelines for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials" for concrete design and construction.
- K. Concrete slab shall be fortified with continual steel reinforcement. Fiber reinforcement alone shall not be considered adequate fortification.

1.6 *WARRANTY*

- A. Special Limited Warranty:
  - 1. Manufacturer's standard form in which manufacturer agrees to repair or replace sports flooring including labor that fails within specified warranty period.
- B. Material warranty must be direct from the product manufacturer.
  - 1. Material warranties from separate or third party insurance providers are not valid.
  - 2. Material warranties must come from original manufacturer or division thereof. Private label warranties from distributors or brokers are not valid. Supply original point of manufacturing upon request.
- C. Failures include, but are not limited to, the following:
  - 1. Material manufacturing defects.
  - 2. Surface wear and deterioration to the point of wear-through of wear layer per ASTM F410/ASTM F1303.
  - 3. Failure due to substrate moisture exposure exceeding 80 percent relative humidity when tested according to ASTM F2170.
- D. Warranty Period:
  - 1. For material defects and surface wear-through: 15 years from date of substantial completion.
- E. Installer's Limited Warranty:
  - 1. Installer's standard form in which installer agrees to repair or replace sports flooring that fails due to poor workmanship or faulty installation within the specified warranty period.
  - 2. Warranty Period: 2 years from date of substantial completion.

1.7 *ADDITIONAL MATERIALS*

- A. Furnish to the owner additional materials containing a total of at least 1% of each different color or design of the indoor resilient athletic surfacing used on the project.

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

1.8 *LEED™ CERTIFICATION*

- A. The indoor resilient athletic surfacing should be able to help this facility to achieve points towards *LEED™ certification*. Flooring system must be certified by FloorScore.
- B. LEED categories positively affected by the indoor resilient athletic surfacing:

<b>LEED™ V4 Credit</b>		Contribution
Materials & Resources: Building Product Disclosure & Optimization (BPDO)		
MRC3: Sourcing of Raw Materials	Options 1 & 2	2 Points
MRC4: Material Ingredients	Option 1	1 Point
MRC5: Construction and Demolition Management	Reclamation and Recycling	ReStart® Program
Indoor Environmental Quality		
EQc2: Low-Emitting Materials	TVOC: 0.5 mg/m <sup>3</sup> or less	FloorScore®

***PART 2 - PRODUCTS***

2.1 *MANUFACTURERS*

- A. The basis of the design for the indoor resilient multipurpose surfacing is Omnisports 7.1 mm and Lumaflex Fit system as manufactured by Tarkett.
- B. All other installation accessories and related components must be either made or approved by the indoor resilient athletic surfacing manufacturer.
- C. Other products may be approved as equal if deemed qualified and submitted in accordance with the General Conditions.
- D. Test reports confirming compliance from an independent sports laboratory must be provided along with samples, technical data, installation, maintenance, and warranty prior to acceptance as an alternative product.

2.2 *MATERIALS*

- A. Omnisports 7.1 mm - Prefabricated sport surface 2.0 mm (0.08") with wood flooring design and slightly textured embossed surface as supplied by Tarkett.
  - 1. Embossing of wood design and solid colors must be the same; varying embossing or surface textures will not be allowed.
  - 2. Printing of wood design shall closely resemble standard wood strip flooring in size, color, board length, and grain appearance.
  - 3. The wood design shall be protected by a clear layer of pure PVC (Polyvinyl Chloride) and TopClean xp, a factory-applied UV cured urethane treatment.
  - 4. Intermediate layers shall be fortified with a non-woven fiberglass grid for increased dimensional stability.
  - 5. The Lumaflex Fit System shall incorporate Lumaflex Fit double tongue and grooved multi-ply engineered panels, force reduction cushion, and appropriate vapor retarder.

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

B. Physical properties of the indoor resilient athletic surfacing shall conform to the following minimums:

Width	—	6' 6" (2 m)
Length	—	85' (25.9m) approx.
Wear Layer	—	2 mm
Total Thickness	—	7.1 mm
Total Combined Thickness		51mm (2")
Wear Layer	Type 1– Grade 1	ASTM F1303/F410
Rolling Load	PASSED	0.30 (EN 1569 {11/1999})
Force Reduction	PASSED	ASTM F2772 Class 5
Surface Finish Effect	PASSED	ASTM F2772 (80 – 110)
Vertical Deformation	PASSED	ASTM F2772
Ball Rebound	PASSED	ASTM F2772 > 90%
Chemical Resistance	Excellent	ASTM F925
Impact Resistance	PASSED	EN 1717
Abrasion Resistance	PASSED	0.10 (EN ISO 5470-1 {06/1999})
Static Load Limit	PASSED	ASTM F970- Load 175 Lbs
Phthalate-free technology	—	YES
REACH Compliant	—	YES
Heavy Metals	—	NO
ISO 9001	—	YES
ISO 14001	—	YES

1. Color: As available from the indoor resilient athletic surfacing manufacturer's standard range.
  2. Hardwood Design Series: A wood look design as available from the indoor resilient athletic surfacing manufacturer's standard range.
  3. Texture: Texture to remain consistent between solid colors and wood design when blending colors.
- C. Welding Rod: As supplied by the indoor resilient athletic surfacing manufacturer or supplier.
1. Color to blend with the indoor resilient athletic surfacing color or design.
  2. All seams shall be welded to create a monolithic and impermeable surface.
- D. Adhesive: As approved by the indoor resilient athletic surfacing manufacturer.
- E. Game Line Paint and Primer: As approved by the indoor resilient athletic surfacing manufacturer.



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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

***PART 3 - EXECUTION***

**3.1**     *EXAMINATION*

- A. It is the responsibility of the general contractor/construction manager to ensure that project/site conditions are acceptable for the installation of the indoor resilient athletic flooring.
- B. Verify that the area in which the indoor resilient athletic surfacing will be installed is dry and weather tight. Verify that permanent heat, light and ventilation are installed and operable.
- C. Verify that all other work that could cause damage, dirt and dust or interrupt the normal pace of the indoor resilient athletic flooring installation is completed or suspended.
- D. Verify that there is a stable room temperature of at least 65°F.
- E. Verify that there are no foreign materials or objects on the subfloor and that the subfloor is clean and ready for installation.
- F. Concrete Subfloor: moisture content less than 85% RH when tested per ASTM F2170.
- G. Follow Fieldturf USA, Inc. installation recommendations.
- H. Do not average the results of the tests. Report all field test results in writing to the General Contractor, Architect, and End User prior to installation.
- I. Verify that the concrete subfloor surface pH level is within the 7 - 11 range.
- J. Document the results confirming the slab is within manufacturer's tolerances for slab deviation.

**3.2**     *PREPARATION OF SURFACES*

- A. Sand the entire surface of the concrete slab.
- B. Sweep the concrete slab so as to remove all dirt and dust. If a sweeping compound is to be used it must be a sweeping compound that does not contain oil or other items that may inhibit the adhesive bond.
- C. Slab must be dust free. In the event that dust impairs adhesive bond, priming the slab prior to application of adhesive may be necessary. Follow installation guidelines.
- D. Follow OSHA guidelines.

**3.3**     *INSTALLATION*

- A. The installation area shall be closed to all traffic and activity for a period to be set by the indoor resilient athletic surfacing installer. The indoor resilient athletic surfacing installation shall not begin until the installer is familiar with the existing conditions.
- B. All necessary precautions should be taken to minimize noise, smell, dust, the use of hazardous materials and any other items that may inconvenience others.
- C. Install the indoor resilient athletic surfacing in strict accordance with the indoor resilient athletic surfacing manufacturer's written instructions.
- D. Install the indoor resilient athletic surfacing minimizing cross seams. Provide a seam diagram during the submittal process for approval prior to installation. Vinyl Sheet Flooring Seams: Comply with ASTM F 1516. Rout joints and heat weld to permanently and seamlessly fuse sections together.
- E. Paint game lines using approved game line paint primer and game line paint in strict accordance with the game line paint manufacturer's instructions.
- F. Install appropriate threshold plates or transition strips where necessary.

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

2.0 *CLEANING*

- A. Remove all unused materials, tools, and equipment and dispose of any debris properly. Clean the indoor resilient athletic surfacing in accordance with the manufacturer's instructions.

3.6 *PROTECTION*

- A. If required, protect the indoor resilient athletic surfacing from damage using coverings approved by the manufacturer until acceptance of work by the customer or their authorized representative.

3.7 *RELATED STANDARDS AND GUIDELINES*

- A. ASTM F2170 "Standard Test Method for Determining Relative Humidity In Concrete Floor Slabs Using In-Situ Probes"
- B. ASTM F710 "Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring"
- C. ACI 302.2R-06 "Guideline for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials"
- D. ASTM F2772-11 "Standard Specification for Athletic Performance Properties of Indoor Sports Floor Systems"

**END OF SECTION**

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

***PART 1 – GENERAL***

1.1 *SECTION INCLUDES*

- A. Supply and installation of the indoor resilient multipurpose surfacing
- B. Application of the game lines
- C. References for the correct construction and preparation of concrete slabs to receive resilient flooring.

1.2 *SUBMITTALS*

- A. Product Data:
  - 1. Manufacturer's promotional brochures, specifications and installation instructions
- B. Manufacturer Certifications:
  - 1. Provide certification that accurately identifies the Original Equipment Manufacturer (OEM) of flooring furnished for this project including manufacturer's name, address and factory location.
  - 2. Suppliers of private label flooring for this project must identify themselves as such and fully disclose the OEM information listed above.
  - 3. All "manufacturer" requirements in these specifications must be complied with by the OEM, including warranties, certifications, qualifications, product data, test results, environmental requirements, performance data, etc.
- C. Samples:
  - 1. Submit for selection and approval three (3) sets of the indoor resilient multipurpose surfacing, manufacturer's brochures, samples or sample boards of all of the available colors, textures and styles.
  - 2. Submit color samples of all the available game line paint colors for selection and approval.
- D. Closeout Submittals:
  - 1. Submit three (3) copies of the indoor resilient multipurpose surfacing and manufacturer's maintenance instructions.
  - 2. Submit three (3) copies of the material and installation warranties as specified.

1.3 *QUALITY ASSURANCE*

- A. Qualifications:
  - 1. The indoor resilient multipurpose surfacing shall have been actively marketed for a minimum of ten (10) years.
  - 2. The indoor resilient multipurpose surfacing shall be manufactured in an ISO 9001 certified plant.
  - 3. The indoor resilient multipurpose surfacing shall be manufactured in an ISO 14001 certified plant.
  - 4. The indoor resilient multipurpose surfacing supplier shall be an established firm, experienced in the field, and competent in the techniques required by the manufacturer.
  - 5. The installer of the indoor resilient multipurpose surfacing shall have a minimum of five (5) years of experience in the field installing indoor resilient multipurpose surfacing and have worked on at least five (5) projects of similar size, type and complexity.

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

- B. Certifications:
  - 1. Installer to submit the indoor resilient athletic surfacing manufacturer's certification attesting that they are a trained installer of the indoor resilient multipurpose surfacing.
  - 2. The indoor resilient multipurpose surfacing manufacturer to submit official ISO 9001 certification for the facility in which the indoor resilient multipurpose surfacing is manufactured.
- C. Testing:
  - 1. Tests shall be relative for multi-purpose use with certificates from independent testing resources to be made available upon request.
  - 2. Test results shall be no more than 5 years old and performed according to ASTM standard testing procedures.

1.4 *DELIVERY, STORAGE AND HANDLING*

- A. Delivery:

Material shall not be delivered until all related work is in place and finished and/or proper storage facilities and conditions can be provided and guaranteed stable according to FieldTurf USA, Inc. recommendations.
- B. Storage:
  - 1. Store the material in a secure, clean and dry location.
  - 2. Maintain temperature between 55° and 85° Fahrenheit.
  - 3. Store the indoor resilient athletic surfacing rolls in an upright position on a smooth flat surface immediately upon delivery to jobsite.
  - 4. Rolls shipped in rigid protective cardboard containers can be laid horizontally prior to unpacking and installation.

1.5 *PROJECT/SITE CONDITIONS*

- A. It is the responsibility of the general contractor/construction manager to maintain project/site conditions acceptable for the installation of the indoor resilient multipurpose flooring.
- B. The area in which the indoor resilient multipurpose surfacing will be installed shall be dry and weather tight. Permanent heat, light and ventilation shall be installed and operable.
- C. All other trades shall have completed their work prior to the installation of the resilient athletic flooring. The general contractor or construction manager shall maintain a secure and clean working environment before, during and after the installation.
- D. Maintain a stable room temperature of at least 65°F for a minimum of one (1) week prior to, during and thereafter installation.
- E. An effective low-permeance vapor barrier is placed directly beneath the concrete subfloor. For "on" or "below grade" installations, it is recommended to provide a permanent vapor barrier resistant to long term hydrostatic pressure/moisture exposure. Protrusions should be sealed to prevent moisture migration into the slab. Moisture should not be allowed to enter the slab after the completed construction.
- F. Concrete subfloor surface pH level within the 7 to 11 range dependent upon installation type.
- G. Concrete subfloor should be no greater than 1/8" within a 10 ft diameter. This tolerance can be measured in accordance with ASTM E1155. A specified ( $F_F$ ) of 50 and an ( $F_L$ ) of 30 should reach this degree of floor flatness and floor level. There is no numerical correlation between F numbers and the deviation from the straight

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edge. However, the above specified numbers should achieve a flat floor with minimal deviation in the slab. Reference ACI 117 and ACI 302.1R. The general contractor should provide a certificate of compliance with the above recommendations.

- H. Concrete subfloor must be clean and free of all foreign materials or objects including, but not limited to, curing compounds and sealers.
- I. Fill cracks, grooves, voids, depressions, and other minor imperfections. Follow the manufacturer's directions. Moveable joints must be treated utilizing specific transitioning joint devices depending upon the architect's recommendations. Follow current ASTM F710 guidelines for the preparation of concrete slabs to receive resilient flooring.
- J. Refer to ACI 302.2R "Guidelines for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials" for concrete design and construction.
- K. Concrete slab shall be fortified with continual steel reinforcement. Fiber reinforcement alone shall not be considered adequate fortification.

1.6 *WARRANTY*

- A. Special Limited Warranty:
  - 1. Manufacturer's standard form in which manufacturer agrees to repair or replace sports flooring including labor that fails within specified warranty period.
- B. Material warranty must be direct from the product manufacturer.
  - 1. Material warranties from separate or third party insurance providers are not valid.
  - 2. Material warranties must come from original manufacturer or division thereof. Private label warranties from distributors or brokers are not valid. Supply original point of manufacturing upon request.
- C. Failures include, but are not limited to, the following:
  - 1. Material manufacturing defects.
  - 2. Surface wear and deterioration to the point of wear-through of wear layer per ASTM F410/ASTM F1303.
  - 3. Failure due to substrate moisture exposure exceeding 80 percent relative humidity when tested according to ASTM F2170.
- D. Warranty Period:
  - 1. For material defects and surface wear-through: 15 years from date of substantial completion.
- E. Installer's Limited Warranty:
  - 1. Installer's standard form in which installer agrees to repair or replace sports flooring that fails due to poor workmanship or faulty installation within the specified warranty period.
  - 2. Warranty Period: 2 years from date of substantial completion.

1.7 *ADDITIONAL MATERIALS*

- A. Furnish to the owner additional materials containing a total of at least 1% of each different color or design of the indoor resilient athletic surfacing used on the project.

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

1.8 *LEED™ CERTIFICATION*

- A. The indoor resilient athletic surfacing should be able to help this facility to achieve points towards *LEED™ certification*. Flooring system must be certified by FloorScore.
- B. LEED categories positively affected by the indoor resilient athletic surfacing:

<b>LEED™ V4 Credit</b>		Contribution
Materials & Resources: Building Product Disclosure & Optimization (BPDO)		
MRC3: Sourcing of Raw Materials	Options 1 & 2	2 Points
MRC4: Material Ingredients	Option 1	1 Point
MRC5: Construction and Demolition Management	Reclamation and Recycling	ReStart® Program
Indoor Environmental Quality		
EQc2: Low-Emitting Materials	TVOC: 0.5 mg/m <sup>3</sup> or less	FloorScore®

**PART 2 - PRODUCTS**

2.1 *MANUFACTURERS*

- A. The basis of the design for the indoor resilient multipurpose surfacing is Omnisports 7.1 mm and Lumaflex system as manufactured by Tarkett.
- B. All other installation accessories and related components must be either made or approved by the indoor resilient athletic surfacing manufacturer.
- C. Other products may be approved as equal if deemed qualified and submitted in accordance with the General Conditions.
- D. Test reports confirming compliance from an independent sports laboratory must be provided along with samples, technical data, installation, maintenance, and warranty prior to acceptance as an alternative product.

2.2 *MATERIALS*

- A. Omnisports 7.1 mm - Prefabricated sport surface 2.0 mm (0.08") with wood flooring design and slightly textured embossed surface as supplied by Tarkett.
  - 1. Embossing of wood design and solid colors must be the same; varying embossing or surface textures will not be allowed.
  - 2. Printing of wood design shall closely resemble standard wood strip flooring in size, color, board length, and grain appearance.
  - 3. The wood design shall be protected by a clear layer of pure PVC (Polyvinyl Chloride) and TopClean xp, a factory-applied UV cured urethane treatment.
  - 4. Intermediate layers shall be fortified with a non-woven fiberglass grid for increased dimensional stability.
  - 5. The Lumaflex System shall incorporate Lumaflex double tongue and grooved multi-ply engineered panels, force reduction cushion, and appropriate vapor retarder.

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

B. Physical properties of the indoor resilient athletic surfacing shall conform to the following minimums:

Width	—	6' 6" (2 m)
Length	—	85' (25.9m) approx.
Wear Layer	—	2 mm
Total Thickness	—	7.1 mm
Total Combined Thickness		1 1/2" (37.1 mm approx.)
Wear Layer	Type 1- Grade 1	ASTM F1303/F410
Rolling Load	PASSED	0.30 (EN 1569 {11/1999})
Force Reduction	PASSED	ASTM F2772 Class 4
Surface Finish Effect	PASSED	ASTM F2772 (80 – 110)
Vertical Deformation	PASSED	ASTM F2772
Ball Rebound	PASSED	ASTM F2772 > 90%
Chemical Resistance	Excellent	ASTM F925
Impact Resistance	PASSED	EN 1717
Abrasion Resistance	PASSED	0.10 (EN ISO 5470-1 {06/1999})
Static Load Limit	PASSED	ASTM F970- Load 175 Lbs
Fire Rating	PASSED	ASTM E648 Class 1
Phthalate-free technology	—	YES
Lumaflex Foam		GreenGuard Certified
REACH Compliant	—	YES
Heavy Metals	—	NO
ISO 9001	—	YES
ISO 14001	—	YES

1. Color: As available from the indoor resilient athletic surfacing manufacturer's standard range.
  2. Hardwood Design Series: A wood look design as available from the indoor resilient athletic surfacing manufacturer's standard range.
  3. Texture: Texture to remain consistent between solid colors and wood design when blending colors.
- C. Welding Rod: As supplied by the indoor resilient athletic surfacing manufacturer or supplier.
1. Color to blend with the indoor resilient athletic surfacing color or design.
  2. All seams shall be welded to create a monolithic and impermeable surface.
- D. Adhesive: As approved by the indoor resilient athletic surfacing manufacturer.
- E. Game Line Paint and Primer: As approved by the indoor resilient athletic surfacing manufacturer.

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

***PART 3 - EXECUTION***

**3.1**     *EXAMINATION*

- A. It is the responsibility of the general contractor/construction manager to ensure that project/site conditions are acceptable for the installation of the indoor resilient athletic flooring.
- B. Verify that the area in which the indoor resilient athletic surfacing will be installed is dry and weather tight. Verify that permanent heat, light and ventilation are installed and operable.
- C. Verify that all other work that could cause damage, dirt and dust or interrupt the normal pace of the indoor resilient athletic flooring installation is completed or suspended.
- D. Verify that there is a stable room temperature of at least 65°F.
- E. Verify that there are no foreign materials or objects on the subfloor and that the subfloor is clean and ready for installation.
- F. Concrete Subfloor: moisture content less than 85% RH when tested per ASTM F2170.
- G. Follow Fieldturf USA, Inc. installation recommendations.
- H. Do not average the results of the tests. Report all field test results in writing to the General Contractor, Architect, and End User prior to installation.
- I. Verify that the concrete subfloor surface pH level is within the 7 - 11 range.
- J. Document the results confirming the slab is within manufacturer's tolerances for slab deviation.

**3.2**     *PREPARATION OF SURFACES*

- A. Sand the entire surface of the concrete slab.
- B. Sweep the concrete slab so as to remove all dirt and dust. If a sweeping compound is to be used it must be a sweeping compound that does not contain oil or other items that may inhibit the adhesive bond.
- C. Slab must be dust free. In the event that dust impairs adhesive bond, priming the slab prior to application of adhesive may be necessary. Follow installation guidelines.
- D. Follow OSHA guidelines.

**3.3**     *INSTALLATION*

- A. The installation area shall be closed to all traffic and activity for a period to be set by the indoor resilient athletic surfacing installer. The indoor resilient athletic surfacing installation shall not begin until the installer is familiar with the existing conditions.
- B. All necessary precautions should be taken to minimize noise, smell, dust, the use of hazardous materials and any other items that may inconvenience others.
- C. Install the indoor resilient athletic surfacing in strict accordance with the indoor resilient athletic surfacing manufacturer's written instructions.
- D. Install the indoor resilient athletic surfacing minimizing cross seams. Provide a seam diagram during the submittal process for approval prior to installation. Vinyl Sheet Flooring Seams: Comply with ASTM F 1516. Rout joints and heat weld to permanently and seamlessly fuse sections together.
- E. Paint game lines using approved game line paint primer and game line paint in strict accordance with the game line paint manufacturer's instructions.
- F. Install appropriate threshold plates or transition strips where necessary.



**SECTION 09 65 66**  
**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

2.0 *CLEANING*

- A. Remove all unused materials, tools, and equipment and dispose of any debris properly. Clean the indoor resilient athletic surfacing in accordance with the manufacturer's instructions.

3.6 *PROTECTION*

- A. If required, protect the indoor resilient athletic surfacing from damage using coverings approved by the manufacturer until acceptance of work by the customer or their authorized representative.

3.7 *RELATED STANDARDS AND GUIDELINES*

- A. ASTM F2170 "Standard Test Method for Determining Relative Humidity In Concrete Floor Slabs Using In-Situ Probes"
- B. ASTM F710 "Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring"
- C. ACI 302.2R-06 "Guideline for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials"
- D. ASTM F2772-11 "Standard Specification for Athletic Performance Properties of Indoor Sports Floor Systems"

**END OF SECTION**

**SECTION 09 65 66**  
**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

***PART 1 – GENERAL***

1.1 *SECTION INCLUDES*

- A. Supply and installation of the indoor resilient multipurpose surfacing
- B. Application of the game lines
- C. References for the correct construction and preparation of concrete slabs to receive resilient flooring.

1.2 *SUBMITTALS*

- A. Product Data:
  - 1. Manufacturer's promotional brochures, specifications and installation instructions
- B. Manufacturer Certifications:
  - 1. Provide certification that accurately identifies the Original Equipment Manufacturer (OEM) of flooring furnished for this project including manufacturer's name, address and factory location.
  - 2. Suppliers of private label flooring for this project must identify themselves as such and fully disclose the OEM information listed above.
  - 3. All "manufacturer" requirements in these specifications must be complied with by the OEM, including warranties, certifications, qualifications, product data, test results, environmental requirements, performance data, etc.
- C. Samples:
  - 1. Submit for selection and approval three (3) sets of the indoor resilient multipurpose surfacing, manufacturer's brochures, samples or sample boards of all of the available colors, textures and styles.
  - 2. Submit color samples of all the available game line paint colors for selection and approval.
- D. Closeout Submittals:
  - 1. Submit three (3) copies of the indoor resilient multipurpose surfacing and manufacturer's maintenance instructions.
  - 2. Submit three (3) copies of the material and installation warranties as specified.

1.3 *QUALITY ASSURANCE*

- A. Qualifications:
  - 1. The indoor resilient multipurpose surfacing shall have been actively marketed for a minimum of ten (10) years.
  - 2. The indoor resilient multipurpose surfacing shall be manufactured in an ISO 9001 certified plant.
  - 3. The indoor resilient multipurpose surfacing shall be manufactured in an ISO 14001 certified plant.
  - 4. The indoor resilient multipurpose surfacing supplier shall be an established firm, experienced in the field, and competent in the techniques required by the manufacturer.
  - 5. The installer of the indoor resilient multipurpose surfacing shall have a minimum of five (5) years of experience in the field installing indoor resilient multipurpose surfacing and have worked on at least five (5) projects of similar size, type and complexity.

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

- B. Certifications:
  - 1. Installer to submit the indoor resilient athletic surfacing manufacturer's certification attesting that they are a trained installer of the indoor resilient multipurpose surfacing.
  - 2. The indoor resilient multipurpose surfacing manufacturer to submit official ISO 9001 certification for the facility in which the indoor resilient multipurpose surfacing is manufactured.
- C. Testing:
  - 1. Tests shall be relative for multi-purpose use with certificates from independent testing resources to be made available upon request.
  - 2. Test results shall be no more than 5 years old and performed according to ASTM standard testing procedures.

1.4 *DELIVERY, STORAGE AND HANDLING*

- A. Delivery:

Material shall not be delivered until all related work is in place and finished and/or proper storage facilities and conditions can be provided and guaranteed stable according to FieldTurf USA, Inc. recommendations.
- B. Storage:
  - 1. Store the material in a secure, clean and dry location.
  - 2. Maintain temperature between 55° and 85° Fahrenheit.
  - 3. Store the indoor resilient athletic surfacing rolls in an upright position on a smooth flat surface immediately upon delivery to jobsite.
  - 4. Rolls shipped in rigid protective cardboard containers can be laid horizontally prior to unpacking and installation.

1.5 *PROJECT/SITE CONDITIONS*

- A. It is the responsibility of the general contractor/construction manager to maintain project/site conditions acceptable for the installation of the indoor resilient multipurpose flooring.
- B. The area in which the indoor resilient multipurpose surfacing will be installed shall be dry and weather tight. Permanent heat, light and ventilation shall be installed and operable.
- C. All other trades shall have completed their work prior to the installation of the resilient athletic flooring. The general contractor or construction manager shall maintain a secure and clean working environment before, during and after the installation.
- D. Maintain a stable room temperature of at least 65°F for a minimum of one (1) week prior to, during and thereafter installation.
- E. An effective low-permeance vapor barrier is placed directly beneath the concrete subfloor. For "on" or "below grade" installations, it is recommended to provide a permanent vapor barrier resistant to long term hydrostatic pressure/moisture exposure. Protrusions should be sealed to prevent moisture migration into the slab. Moisture should not be allowed to enter the slab after the completed construction.
- F. Concrete subfloor surface pH level within the 7 to 11 range dependent upon installation type.
- G. Concrete subfloor should be no greater than 1/8" within a 10 ft diameter. This tolerance can be measured in accordance with ASTM E1155. A specified (F<sub>F</sub>) of 50 and an (F<sub>L</sub>) of 30 should reach this degree of floor flatness and floor level. There is no numerical correlation between F numbers and the deviation from the straight

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

edge. However, the above specified numbers should achieve a flat floor with minimal deviation in the slab. Reference ACI 117 and ACI 302.1R. The general contractor should provide a certificate of compliance with the above recommendations.

- H. Concrete subfloor must be clean and free of all foreign materials or objects including, but not limited to, curing compounds and sealers.
- I. Fill cracks, grooves, voids, depressions, and other minor imperfections. Follow the manufacturer's directions. Moveable joints must be treated utilizing specific transitioning joint devices depending upon the architect's recommendations. Follow current ASTM F710 guidelines for the preparation of concrete slabs to receive resilient flooring.
- J. Refer to ACI 302.2R "Guidelines for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials" for concrete design and construction.
- K. Concrete slab shall be fortified with continual steel reinforcement. Fiber reinforcement alone shall not be considered adequate fortification.

1.6 *WARRANTY*

- A. Special Limited Warranty:
  - 1. Manufacturer's standard form in which manufacturer agrees to repair or replace sports flooring including labor that fails within specified warranty period.
- B. Material warranty must be direct from the product manufacturer.
  - 1. Material warranties from separate or third party insurance providers are not valid.
  - 2. Material warranties must come from original manufacturer or division thereof. Private label warranties from distributors or brokers are not valid. Supply original point of manufacturing upon request.
- C. Failures include, but are not limited to, the following:
  - 1. Material manufacturing defects.
  - 2. Surface wear and deterioration to the point of wear-through of wear layer per ASTM F410/ASTM F1303.
  - 3. Failure due to substrate moisture exposure exceeding 80 percent relative humidity when tested according to ASTM F2170.
- D. Warranty Period:
  - 1. For material defects and surface wear-through: 15 years from date of substantial completion.
- E. Installer's Limited Warranty:
  - 1. Installer's standard form in which installer agrees to repair or replace sports flooring that fails due to poor workmanship or faulty installation within the specified warranty period.
  - 2. Warranty Period: 2 years from date of substantial completion.

1.7 *ADDITIONAL MATERIALS*

- A. Furnish to the owner additional materials containing a total of at least 1% of each different color or design of the indoor resilient athletic surfacing used on the project.

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

1.8 *LEED™ CERTIFICATION*

- A. The indoor resilient athletic surfacing should be able to help this facility to achieve points towards *LEED™ certification*. Flooring system must be certified by FloorScore.
- B. LEED categories positively affected by the indoor resilient athletic surfacing:

<b>LEED™ V4 Credit</b>		Contribution
Materials & Resources: Building Product Disclosure & Optimization (BPDO)		
MRC3: Sourcing of Raw Materials	Options 1 & 2	2 Points
MRC4: Material Ingredients	Option 1	1 Point
MRC5: Construction and Demolition Management	Reclamation and Recycling	ReStart® Program
Indoor Environmental Quality		
EQc2: Low-Emitting Materials	TVOC: 0.5 mg/m <sup>3</sup> or less	FloorScore®

**PART 2 - PRODUCTS**

2.1 *MANUFACTURERS*

- A. The basis of the design for the indoor resilient multipurpose surfacing is Omnisports 9.4 mm and Lumaflex Elite system as manufactured by Tarkett.
- B. All other installation accessories and related components must be either made or approved by the indoor resilient athletic surfacing manufacturer.
- C. Other products may be approved as equal if deemed qualified and submitted in accordance with the General Conditions.
- D. Test reports confirming compliance from an independent sports laboratory must be provided along with samples, technical data, installation, maintenance, and warranty prior to acceptance as an alternative product.

2.2 *MATERIALS*

- A. Omnisports 9.4 mm - Prefabricated sport surface 2.0 mm (0.08") with wood flooring design and slightly textured embossed surface as supplied by Tarkett.
  - 1. Embossing of wood design and solid colors must be the same; varying embossing or surface textures will not be allowed.
  - 2. Printing of wood design shall closely resemble standard wood strip flooring in size, color, board length, and grain appearance.
  - 3. The wood design shall be protected by a clear layer of pure PVC (Polyvinyl Chloride) and TopClean xp, a factory-applied UV cured urethane treatment.
  - 4. Intermediate layers shall be fortified with a non-woven fiberglass grid for increased dimensional stability.
  - 5. The Lumaflex Elite System shall incorporate Lumaflex Elite double tongue and grooved multi-ply engineered panels, force reduction cushion, and appropriate vapor retarder.

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

B. Physical properties of the indoor resilient athletic surfacing shall conform to the following minimums:

Width	—	6' 6" (2 m)
Length	—	85' (25.9m) approx.
Wear Layer	—	2 mm
Total Thickness	—	9.4 mm
Total Combined Thickness		1 5/8" (40 mm approx.)
Wear Layer	Type 1- Grade 1	ASTM F1303/F410
Rolling Load	PASSED	0.30 (EN 1569 {11/1999})
Force Reduction	PASSED	ASTM F2772 Class 5
Surface Finish Effect	PASSED	ASTM F2772 (80 – 110)
Vertical Deformation	PASSED	ASTM F2772
Ball Rebound	PASSED	ASTM F2772 > 90%
Chemical Resistance	Excellent	ASTM F925
Impact Resistance	PASSED	EN 1717
Abrasion Resistance	PASSED	0.10 (EN ISO 5470-1 {06/1999})
Static Load Limit	PASSED	ASTM F970- Load 175 Lbs
Phthalate-free technology	—	YES
REACH Compliant	—	YES
Heavy Metals	—	NO
ISO 9001	—	YES
ISO 14001	—	YES

1. Color: As available from the indoor resilient athletic surfacing manufacturer's standard range.
  2. Hardwood Design Series: A wood look design as available from the indoor resilient athletic surfacing manufacturer's standard range.
  3. Texture: Texture to remain consistent between solid colors and wood design when blending colors.
- C. Welding Rod: As supplied by the indoor resilient athletic surfacing manufacturer or supplier.
1. Color to blend with the indoor resilient athletic surfacing color or design.
  2. All seams shall be welded to create a monolithic and impermeable surface.
- D. Adhesive: As approved by the indoor resilient athletic surfacing manufacturer.
- E. Game Line Paint and Primer: As approved by the indoor resilient athletic surfacing manufacturer.

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

***PART 3 - EXECUTION***

3.1 *EXAMINATION*

- A. It is the responsibility of the general contractor/construction manager to ensure that project/site conditions are acceptable for the installation of the indoor resilient athletic flooring.
- B. Verify that the area in which the indoor resilient athletic surfacing will be installed is dry and weather tight. Verify that permanent heat, light and ventilation are installed and operable.
- C. Verify that all other work that could cause damage, dirt and dust or interrupt the normal pace of the indoor resilient athletic flooring installation is completed or suspended.
- D. Verify that there is a stable room temperature of at least 65°F.
- E. Verify that there are no foreign materials or objects on the subfloor and that the subfloor is clean and ready for installation.
- F. Concrete Subfloor: moisture content less than 85% RH when tested per ASTM F2170.
- G. Follow Fieldturf USA, Inc. installation recommendations.
- H. Do not average the results of the tests. Report all field test results in writing to the General Contractor, Architect, and End User prior to installation.
- I. Verify that the concrete subfloor surface pH level is within the 7 - 11 range.
- J. Document the results confirming the slab is within manufacturer's tolerances for slab deviation.

3.2 *PREPARATION OF SURFACES*

- A. Sand the entire surface of the concrete slab.
- B. Sweep the concrete slab so as to remove all dirt and dust. If a sweeping compound is to be used it must be a sweeping compound that does not contain oil or other items that may inhibit the adhesive bond.
- C. Slab must be dust free. In the event that dust impairs adhesive bond, priming the slab prior to application of adhesive may be necessary. Follow installation guidelines.
- D. Follow OSHA guidelines.

3.3 *INSTALLATION*

- A. The installation area shall be closed to all traffic and activity for a period to be set by the indoor resilient athletic surfacing installer. The indoor resilient athletic surfacing installation shall not begin until the installer is familiar with the existing conditions.
- B. All necessary precautions should be taken to minimize noise, smell, dust, the use of hazardous materials and any other items that may inconvenience others.
- C. Install the indoor resilient athletic surfacing in strict accordance with the indoor resilient athletic surfacing manufacturer's written instructions.
- D. Install the indoor resilient athletic surfacing minimizing cross seams. Provide a seam diagram during the submittal process for approval prior to installation. Vinyl Sheet Flooring Seams: Comply with ASTM F 1516. Rout joints and heat weld to permanently and seamlessly fuse sections together.
- E. Paint game lines using approved game line paint primer and game line paint in strict accordance with the game line paint manufacturer's instructions.
- F. Install appropriate threshold plates or transition strips where necessary.

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

2.0 *CLEANING*

- A. Remove all unused materials, tools, and equipment and dispose of any debris properly. Clean the indoor resilient athletic surfacing in accordance with the manufacturer's instructions.

3.6 *PROTECTION*

- A. If required, protect the indoor resilient athletic surfacing from damage using coverings approved by the manufacturer until acceptance of work by the customer or their authorized representative.

3.7 *RELATED STANDARDS AND GUIDELINES*

- A. ASTM F2170 "Standard Test Method for Determining Relative Humidity In Concrete Floor Slabs Using In-Situ Probes"
- B. ASTM F710 "Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring"
- C. ACI 302.2R-06 "Guideline for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials"
- D. ASTM F2772-11 "Standard Specification for Athletic Performance Properties of Indoor Sports Floor Systems"

**END OF SECTION**



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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

***PART 1 – GENERAL***

1.1 *SECTION INCLUDES*

- A. Supply and installation of the indoor resilient multipurpose surfacing
- B. Application of the game lines
- C. References for the correct construction and preparation of concrete slabs to receive resilient flooring.

1.2 *SUBMITTALS*

- A. Product Data:
  - 1. Manufacturer's promotional brochures, specifications and installation instructions
- B. Manufacturer Certifications:
  - 1. Provide certification that accurately identifies the Original Equipment Manufacturer (OEM) of flooring furnished for this project including manufacturer's name, address and factory location.
  - 2. Suppliers of private label flooring for this project must identify themselves as such and fully disclose the OEM information listed above.
  - 3. All "manufacturer" requirements in these specifications must be complied with by the OEM, including warranties, certifications, qualifications, product data, test results, environmental requirements, performance data, etc.
- C. Samples:
  - 1. Submit for selection and approval three (3) sets of the indoor resilient multipurpose surfacing, manufacturer's brochures, samples or sample boards of all of the available colors, textures and styles.
  - 2. Submit color samples of all the available game line paint colors for selection and approval.
- D. Closeout Submittals:
  - 1. Submit three (3) copies of the indoor resilient multipurpose surfacing and manufacturer's maintenance instructions.
  - 2. Submit three (3) copies of the material and installation warranties as specified.

1.3 *QUALITY ASSURANCE*

- A. Qualifications:
  - 1. The indoor resilient multipurpose surfacing shall have been actively marketed for a minimum of ten (10) years.
  - 2. The indoor resilient multipurpose surfacing shall be manufactured in an ISO 9001 certified plant.
  - 3. The indoor resilient multipurpose surfacing shall be manufactured in an ISO 14001 certified plant.
  - 4. The indoor resilient multipurpose surfacing supplier shall be an established firm, experienced in the field, and competent in the techniques required by the manufacturer.
  - 5. The installer of the indoor resilient multipurpose surfacing shall have a minimum of five (5) years of experience in the field installing indoor resilient multipurpose surfacing and have worked on at least five (5) projects of similar size, type and complexity.

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- B. Certifications:
  - 1. Installer to submit the indoor resilient athletic surfacing manufacturer's certification attesting that they are a trained installer of the indoor resilient multipurpose surfacing.
  - 2. The indoor resilient multipurpose surfacing manufacturer to submit official ISO 9001 certification for the facility in which the indoor resilient multipurpose surfacing is manufactured.
- C. Testing:
  - 1. Tests shall be relative for multi-purpose use with certificates from independent testing resources to be made available upon request.
  - 2. Test results shall be no more than 5 years old and performed according to ASTM standard testing procedures.

1.4 *DELIVERY, STORAGE AND HANDLING*

- A. Delivery:

Material shall not be delivered until all related work is in place and finished and/or proper storage facilities and conditions can be provided and guaranteed stable according to FieldTurf USA, Inc. recommendations.
- B. Storage:
  - 1. Store the material in a secure, clean and dry location.
  - 2. Maintain temperature between 55° and 85° Fahrenheit.
  - 3. Store the indoor resilient athletic surfacing rolls in an upright position on a smooth flat surface immediately upon delivery to jobsite.
  - 4. Rolls shipped in rigid protective cardboard containers can be laid horizontally prior to unpacking and installation.

1.5 *PROJECT/SITE CONDITIONS*

- A. It is the responsibility of the general contractor/construction manager to maintain project/site conditions acceptable for the installation of the indoor resilient multipurpose flooring.
- B. The area in which the indoor resilient multipurpose surfacing will be installed shall be dry and weather tight. Permanent heat, light and ventilation shall be installed and operable.
- C. All other trades shall have completed their work prior to the installation of the resilient athletic flooring. The general contractor or construction manager shall maintain a secure and clean working environment before, during and after the installation.
- D. Maintain a stable room temperature of at least 65°F for a minimum of one (1) week prior to, during and thereafter installation.
- E. An effective low-permeance vapor barrier is placed directly beneath the concrete subfloor. For "on" or "below grade" installations, it is recommended to provide a permanent vapor barrier resistant to long term hydrostatic pressure/moisture exposure. Protrusions should be sealed to prevent moisture migration into the slab. Moisture should not be allowed to enter the slab after the completed construction.
- F. Concrete subfloor surface pH level within the 7 to 11 range dependent upon installation type.
- G. Concrete subfloor should be no greater than 1/8" within a 10 ft diameter. This tolerance can be measured in accordance with ASTM E1155. A specified (F<sub>F</sub>) of 50 and an (F<sub>L</sub>) of 30 should reach this degree of floor flatness and floor level. There is no numerical correlation between F numbers and the deviation from the straight

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edge. However, the above specified numbers should achieve a flat floor with minimal deviation in the slab. Reference ACI 117 and ACI 302.1R. The general contractor should provide a certificate of compliance with the above recommendations.

- H. Concrete subfloor must be clean and free of all foreign materials or objects including, but not limited to, curing compounds and sealers.
- I. Fill cracks, grooves, voids, depressions, and other minor imperfections. Follow the manufacturer's directions. Moveable joints must be treated utilizing specific transitioning joint devices depending upon the architect's recommendations. Follow current ASTM F710 guidelines for the preparation of concrete slabs to receive resilient flooring.
- J. Refer to ACI 302.2R "Guidelines for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials" for concrete design and construction.
- K. Concrete slab shall be fortified with continual steel reinforcement. Fiber reinforcement alone shall not be considered adequate fortification.

1.6 *WARRANTY*

- A. Special Limited Warranty:
  - 1. Manufacturer's standard form in which manufacturer agrees to repair or replace sports flooring including labor that fails within specified warranty period.
- B. Material warranty must be direct from the product manufacturer.
  - 1. Material warranties from separate or third party insurance providers are not valid.
  - 2. Material warranties must come from original manufacturer or division thereof. Private label warranties from distributors or brokers are not valid. Supply original point of manufacturing upon request.
- C. Failures include, but are not limited to, the following:
  - 1. Material manufacturing defects.
  - 2. Surface wear and deterioration to the point of wear-through of wear layer per ASTM F410/ASTM F1303.
  - 3. Failure due to substrate moisture exposure exceeding 80 percent relative humidity when tested according to ASTM F2170.
- D. Warranty Period:
  - 1. For material defects and surface wear-through: 15 years from date of substantial completion.
- E. Installer's Limited Warranty:
  - 1. Installer's standard form in which installer agrees to repair or replace sports flooring that fails due to poor workmanship or faulty installation within the specified warranty period.
  - 2. Warranty Period: 2 years from date of substantial completion.

1.7 *ADDITIONAL MATERIALS*

- A. Furnish to the owner additional materials containing a total of at least 1% of each different color or design of the indoor resilient athletic surfacing used on the project.

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1.8 *LEED™ CERTIFICATION*

- A. The indoor resilient athletic surfacing should be able to help this facility to achieve points towards *LEED™ certification*. Flooring system must be certified by FloorScore.
- B. LEED categories positively affected by the indoor resilient athletic surfacing:

<b>LEED™ V4 Credit</b>		Contribution
Materials & Resources: Building Product Disclosure & Optimization (BPDO)		
MRC3: Sourcing of Raw Materials	Options 1 & 2	2 Points
MRC4: Material Ingredients	Option 1	1 Point
MRC5: Construction and Demolition Management	Reclamation and Recycling	ReStart® Program
Indoor Environmental Quality		
EQc2: Low-Emitting Materials	TVOC: 0.5 mg/m <sup>3</sup> or less	FloorScore®

**PART 2 - PRODUCTS**

2.1 *MANUFACTURERS*

- A. The basis of the design for the indoor resilient multipurpose surfacing is Omnisports 9.4 mm and Lumaflex Fit system as manufactured by Tarkett.
- B. All other installation accessories and related components must be either made or approved by the indoor resilient athletic surfacing manufacturer.
- C. Other products may be approved as equal if deemed qualified and submitted in accordance with the General Conditions.
- D. Test reports confirming compliance from an independent sports laboratory must be provided along with samples, technical data, installation, maintenance, and warranty prior to acceptance as an alternative product.

2.2 *MATERIALS*

- A. Omnisports 9.4 mm - Prefabricated sport surface 2.0 mm (0.08") with wood flooring design and slightly textured embossed surface as supplied by Tarkett.
  - 1. Embossing of wood design and solid colors must be the same; varying embossing or surface textures will not be allowed.
  - 2. Printing of wood design shall closely resemble standard wood strip flooring in size, color, board length, and grain appearance.
  - 3. The wood design shall be protected by a clear layer of pure PVC (Polyvinyl Chloride) and TopClean xp, a factory-applied UV cured urethane treatment.
  - 4. Intermediate layers shall be fortified with a non-woven fiberglass grid for increased dimensional stability.
  - 5. The Lumaflex Fit System shall incorporate Lumaflex Fit double tongue and grooved multi-ply engineered panels, force reduction cushion, and appropriate vapor retarder.

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

B. Physical properties of the indoor resilient athletic surfacing shall conform to the following minimums:

Width	—	6' 6" (2 m)
Length	—	85' (25.9m) approx.
Wear Layer	—	2 mm
Total Thickness	—	9.4 mm
Total Combined Thickness		53mm (2 1/8") approx
Wear Layer	Type 1– Grade 1	ASTM F1303/F410
Rolling Load	PASSED	0.30 (EN 1569 {11/1999})
Force Reduction	PASSED	ASTM F2772 Class 5
Surface Finish Effect	PASSED	ASTM F2772 (80 – 110)
Vertical Deformation	PASSED	ASTM F2772
Ball Rebound	PASSED	ASTM F2772 > 90%
Chemical Resistance	Excellent	ASTM F925
Impact Resistance	PASSED	EN 1717
Abrasion Resistance	PASSED	0.10 (EN ISO 5470-1 {06/1999})
Static Load Limit	PASSED	ASTM F970- Load 175 Lbs
Phthalate-free technology	—	YES
REACH Compliant	—	YES
Heavy Metals	—	NO
ISO 9001	—	YES
ISO 14001	—	YES

1. Color: As available from the indoor resilient athletic surfacing manufacturer's standard range.
  2. Hardwood Design Series: A wood look design as available from the indoor resilient athletic surfacing manufacturer's standard range.
  3. Texture: Texture to remain consistent between solid colors and wood design when blending colors.
- C. Welding Rod: As supplied by the indoor resilient athletic surfacing manufacturer or supplier.
1. Color to blend with the indoor resilient athletic surfacing color or design.
  2. All seams shall be welded to create a monolithic and impermeable surface.
- D. Adhesive: As approved by the indoor resilient athletic surfacing manufacturer.
- E. Game Line Paint and Primer: As approved by the indoor resilient athletic surfacing manufacturer.

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

***PART 3 - EXECUTION***

3.1 *EXAMINATION*

- A. It is the responsibility of the general contractor/construction manager to ensure that project/site conditions are acceptable for the installation of the indoor resilient athletic flooring.
- B. Verify that the area in which the indoor resilient athletic surfacing will be installed is dry and weather tight. Verify that permanent heat, light and ventilation are installed and operable.
- C. Verify that all other work that could cause damage, dirt and dust or interrupt the normal pace of the indoor resilient athletic flooring installation is completed or suspended.
- D. Verify that there is a stable room temperature of at least 65°F.
- E. Verify that there are no foreign materials or objects on the subfloor and that the subfloor is clean and ready for installation.
- F. Concrete Subfloor: moisture content less than 85% RH when tested per ASTM F2170.
- G. Follow Fieldturf USA, Inc. installation recommendations.
- H. Do not average the results of the tests. Report all field test results in writing to the General Contractor, Architect, and End User prior to installation.
- I. Verify that the concrete subfloor surface pH level is within the 7 - 11 range.
- J. Document the results confirming the slab is within manufacturer's tolerances for slab deviation.

3.2 *PREPARATION OF SURFACES*

- A. Sand the entire surface of the concrete slab.
- B. Sweep the concrete slab so as to remove all dirt and dust. If a sweeping compound is to be used it must be a sweeping compound that does not contain oil or other items that may inhibit the adhesive bond.
- C. Slab must be dust free. In the event that dust impairs adhesive bond, priming the slab prior to application of adhesive may be necessary. Follow installation guidelines.
- D. Follow OSHA guidelines.

3.3 *INSTALLATION*

- A. The installation area shall be closed to all traffic and activity for a period to be set by the indoor resilient athletic surfacing installer. The indoor resilient athletic surfacing installation shall not begin until the installer is familiar with the existing conditions.
- B. All necessary precautions should be taken to minimize noise, smell, dust, the use of hazardous materials and any other items that may inconvenience others.
- C. Install the indoor resilient athletic surfacing in strict accordance with the indoor resilient athletic surfacing manufacturer's written instructions.
- D. Install the indoor resilient athletic surfacing minimizing cross seams. Provide a seam diagram during the submittal process for approval prior to installation. Vinyl Sheet Flooring Seams: Comply with ASTM F 1516. Rout joints and heat weld to permanently and seamlessly fuse sections together.
- E. Paint game lines using approved game line paint primer and game line paint in strict accordance with the game line paint manufacturer's instructions.
- F. Install appropriate threshold plates or transition strips where necessary.

**SECTION 09 65 66**  
**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

2.0 *CLEANING*

- A. Remove all unused materials, tools, and equipment and dispose of any debris properly. Clean the indoor resilient athletic surfacing in accordance with the manufacturer's instructions.

3.6 *PROTECTION*

- A. If required, protect the indoor resilient athletic surfacing from damage using coverings approved by the manufacturer until acceptance of work by the customer or their authorized representative.

3.7 *RELATED STANDARDS AND GUIDELINES*

- A. ASTM F2170 "Standard Test Method for Determining Relative Humidity In Concrete Floor Slabs Using In-Situ Probes"
- B. ASTM F710 "Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring"
- C. ACI 302.2R-06 "Guideline for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials"
- D. ASTM F2772-11 "Standard Specification for Athletic Performance Properties of Indoor Sports Floor Systems"

**END OF SECTION**

**SECTION 09 65 66**  
**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

***PART 1 – GENERAL***

1.1 *SECTION INCLUDES*

- A. Supply and installation of the indoor resilient multipurpose surfacing
- B. Application of the game lines
- C. References for the correct construction and preparation of concrete slabs to receive resilient flooring.

1.2 *SUBMITTALS*

- A. Product Data:
  - 1. Manufacturer's promotional brochures, specifications and installation instructions
- B. Manufacturer Certifications:
  - 1. Provide certification that accurately identifies the Original Equipment Manufacturer (OEM) of flooring furnished for this project including manufacturer's name, address and factory location.
  - 2. Suppliers of private label flooring for this project must identify themselves as such and fully disclose the OEM information listed above.
  - 3. All "manufacturer" requirements in these specifications must be complied with by the OEM, including warranties, certifications, qualifications, product data, test results, environmental requirements, performance data, etc.
- C. Samples:
  - 1. Submit for selection and approval three (3) sets of the indoor resilient multipurpose surfacing, manufacturer's brochures, samples or sample boards of all of the available colors, textures and styles.
  - 2. Submit color samples of all the available game line paint colors for selection and approval.
- D. Closeout Submittals:
  - 1. Submit three (3) copies of the indoor resilient multipurpose surfacing and manufacturer's maintenance instructions.
  - 2. Submit three (3) copies of the material and installation warranties as specified.

1.3 *QUALITY ASSURANCE*

- A. Qualifications:
  - 1. The indoor resilient multipurpose surfacing shall have been actively marketed for a minimum of ten (10) years.
  - 2. The indoor resilient multipurpose surfacing shall be manufactured in an ISO 9001 certified plant.
  - 3. The indoor resilient multipurpose surfacing shall be manufactured in an ISO 14001 certified plant.
  - 4. The indoor resilient multipurpose surfacing supplier shall be an established firm, experienced in the field, and competent in the techniques required by the manufacturer.
  - 5. The installer of the indoor resilient multipurpose surfacing shall have a minimum of five (5) years of experience in the field installing indoor resilient multipurpose surfacing and have worked on at least five (5) projects of similar size, type and complexity.



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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

- B. Certifications:
  - 1. Installer to submit the indoor resilient athletic surfacing manufacturer's certification attesting that they are a trained installer of the indoor resilient multipurpose surfacing.
  - 2. The indoor resilient multipurpose surfacing manufacturer to submit official ISO 9001 certification for the facility in which the indoor resilient multipurpose surfacing is manufactured.
- C. Testing:
  - 1. Tests shall be relative for multi-purpose use with certificates from independent testing resources to be made available upon request.
  - 2. Test results shall be no more than 5 years old and performed according to ASTM standard testing procedures.

1.4 *DELIVERY, STORAGE AND HANDLING*

- A. Delivery:

Material shall not be delivered until all related work is in place and finished and/or proper storage facilities and conditions can be provided and guaranteed stable according to FieldTurf USA, Inc. recommendations.
- B. Storage:
  - 1. Store the material in a secure, clean and dry location.
  - 2. Maintain temperature between 55° and 85° Fahrenheit.
  - 3. Store the indoor resilient athletic surfacing rolls in an upright position on a smooth flat surface immediately upon delivery to jobsite.
  - 4. Rolls shipped in rigid protective cardboard containers can be laid horizontally prior to unpacking and installation.

1.5 *PROJECT/SITE CONDITIONS*

- A. It is the responsibility of the general contractor/construction manager to maintain project/site conditions acceptable for the installation of the indoor resilient multipurpose flooring.
- B. The area in which the indoor resilient multipurpose surfacing will be installed shall be dry and weather tight. Permanent heat, light and ventilation shall be installed and operable.
- C. All other trades shall have completed their work prior to the installation of the resilient athletic flooring. The general contractor or construction manager shall maintain a secure and clean working environment before, during and after the installation.
- D. Maintain a stable room temperature of at least 65°F for a minimum of one (1) week prior to, during and thereafter installation.
- E. An effective low-permeance vapor barrier is placed directly beneath the concrete subfloor. For "on" or "below grade" installations, it is recommended to provide a permanent vapor barrier resistant to long term hydrostatic pressure/moisture exposure. Protrusions should be sealed to prevent moisture migration into the slab. Moisture should not be allowed to enter the slab after the completed construction.
- F. Concrete subfloor surface pH level within the 7 to 11 range dependent upon installation type.
- G. Concrete subfloor should be no greater than 1/8" within a 10 ft diameter. This tolerance can be measured in accordance with ASTM E1155. A specified ( $F_F$ ) of 50 and an ( $F_L$ ) of 30 should reach this degree of floor flatness and floor level. There is no numerical correlation between F numbers and the deviation from the straight

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

edge. However, the above specified numbers should achieve a flat floor with minimal deviation in the slab. Reference ACI 117 and ACI 302.1R. The general contractor should provide a certificate of compliance with the above recommendations.

- H. Concrete subfloor must be clean and free of all foreign materials or objects including, but not limited to, curing compounds and sealers.
- I. Fill cracks, grooves, voids, depressions, and other minor imperfections. Follow the manufacturer's directions. Moveable joints must be treated utilizing specific transitioning joint devices depending upon the architect's recommendations. Follow current ASTM F710 guidelines for the preparation of concrete slabs to receive resilient flooring.
- J. Refer to ACI 302.2R "Guidelines for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials" for concrete design and construction.
- K. Concrete slab shall be fortified with continual steel reinforcement. Fiber reinforcement alone shall not be considered adequate fortification.

1.6 *WARRANTY*

- A. Special Limited Warranty:
  - 1. Manufacturer's standard form in which manufacturer agrees to repair or replace sports flooring including labor that fails within specified warranty period.
- B. Material warranty must be direct from the product manufacturer.
  - 1. Material warranties from separate or third party insurance providers are not valid.
  - 2. Material warranties must come from original manufacturer or division thereof. Private label warranties from distributors or brokers are not valid. Supply original point of manufacturing upon request.
- C. Failures include, but are not limited to, the following:
  - 1. Material manufacturing defects.
  - 2. Surface wear and deterioration to the point of wear-through of wear layer per ASTM F410/ASTM F1303.
  - 3. Failure due to substrate moisture exposure exceeding 80 percent relative humidity when tested according to ASTM F2170.
- D. Warranty Period:
  - 1. For material defects and surface wear-through: 15 years from date of substantial completion.
- E. Installer's Limited Warranty:
  - 1. Installer's standard form in which installer agrees to repair or replace sports flooring that fails due to poor workmanship or faulty installation within the specified warranty period.
  - 2. Warranty Period: 2 years from date of substantial completion.

1.7 *ADDITIONAL MATERIALS*

- A. Furnish to the owner additional materials containing a total of at least 1% of each different color or design of the indoor resilient athletic surfacing used on the project.

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

1.8 *LEED™ CERTIFICATION*

- A. The indoor resilient athletic surfacing should be able to help this facility to achieve points towards *LEED™ certification*. Flooring system must be certified by FloorScore.
- B. LEED categories positively affected by the indoor resilient athletic surfacing:

<b>LEED™ V4 Credit</b>		Contribution
Materials & Resources: Building Product Disclosure & Optimization (BPDO)		
MRC3: Sourcing of Raw Materials	Options 1 & 2	2 Points
MRC4: Material Ingredients	Option 1	1 Point
MRC5: Construction and Demolition Management	Reclamation and Recycling	ReStart® Program
Indoor Environmental Quality		
EQc2: Low-Emitting Materials	TVOC: 0.5 mg/m <sup>3</sup> or less	FloorScore®

**PART 2 - PRODUCTS**

2.1 *MANUFACTURERS*

- A. The basis of the design for the indoor resilient multipurpose surfacing is Omnisports 9.4 mm and Lumaflex system as manufactured by Tarkett.
- B. All other installation accessories and related components must be either made or approved by the indoor resilient athletic surfacing manufacturer.
- C. Other products may be approved as equal if deemed qualified and submitted in accordance with the General Conditions.
- D. Test reports confirming compliance from an independent sports laboratory must be provided along with samples, technical data, installation, maintenance, and warranty prior to acceptance as an alternative product.

2.2 *MATERIALS*

- A. Omnisports 9.4 mm - Prefabricated sport surface 2.0 mm (0.08") with wood flooring design and slightly textured embossed surface as supplied by Tarkett.
  - 1. Embossing of wood design and solid colors must be the same; varying embossing or surface textures will not be allowed.
  - 2. Printing of wood design shall closely resemble standard wood strip flooring in size, color, board length, and grain appearance.
  - 3. The wood design shall be protected by a clear layer of pure PVC (Polyvinyl Chloride) and TopClean xp, a factory-applied UV cured urethane treatment.
  - 4. Intermediate layers shall be fortified with a non-woven fiberglass grid for increased dimensional stability.
  - 5. The Lumaflex System shall incorporate Lumaflex double tongue and grooved multi-ply engineered panels, force reduction cushion, and appropriate vapor retarder.

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

- B. Physical properties of the indoor resilient athletic surfacing shall conform to the following minimums:

Width	—	6' 6" (2 m)
Length	—	85' (25.9m) approx.
Wear Layer	—	2 mm
Total Thickness	—	9.4 mm
Total Combined Thickness		1 5/8" (40 mm approx.)
Wear Layer	Type 1- Grade 1	ASTM F1303/F410
Rolling Load	PASSED	0.30 (EN 1569 {11/1999})
Force Reduction	PASSED	ASTM F2772 Class 4
Surface Finish Effect	PASSED	ASTM F2772 (80 – 110)
Vertical Deformation	PASSED	ASTM F2772
Ball Rebound	PASSED	ASTM F2772 > 90%
Chemical Resistance	Excellent	ASTM F925
Impact Resistance	PASSED	EN 1717
Abrasion Resistance	PASSED	0.10 (EN ISO 5470-1 {06/1999})
Static Load Limit	PASSED	ASTM F970- Load 175 Lbs
Fire Rating	PASSED	ASTM E648 Class 1
Phthalate-free technology	—	YES
Lumaflex Foam		GreenGuard Certified
REACH Compliant	—	YES
Heavy Metals	—	NO
ISO 9001	—	YES
ISO 14001	—	YES

1. Color: As available from the indoor resilient athletic surfacing manufacturer's standard range.
  2. Hardwood Design Series: A wood look design as available from the indoor resilient athletic surfacing manufacturer's standard range.
  3. Texture: Texture to remain consistent between solid colors and wood design when blending colors.
- C. Welding Rod: As supplied by the indoor resilient athletic surfacing manufacturer or supplier.
1. Color to blend with the indoor resilient athletic surfacing color or design.
  2. All seams shall be welded to create a monolithic and impermeable surface.
- D. Adhesive: As approved by the indoor resilient athletic surfacing manufacturer.
- E. Game Line Paint and Primer: As approved by the indoor resilient athletic surfacing manufacturer.

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

***PART 3 - EXECUTION***

**3.1**     *EXAMINATION*

- A. It is the responsibility of the general contractor/construction manager to ensure that project/site conditions are acceptable for the installation of the indoor resilient athletic flooring.
- B. Verify that the area in which the indoor resilient athletic surfacing will be installed is dry and weather tight. Verify that permanent heat, light and ventilation are installed and operable.
- C. Verify that all other work that could cause damage, dirt and dust or interrupt the normal pace of the indoor resilient athletic flooring installation is completed or suspended.
- D. Verify that there is a stable room temperature of at least 65°F.
- E. Verify that there are no foreign materials or objects on the subfloor and that the subfloor is clean and ready for installation.
- F. Concrete Subfloor: moisture content less than 85% RH when tested per ASTM F2170.
- G. Follow Fieldturf USA, Inc. installation recommendations.
- H. Do not average the results of the tests. Report all field test results in writing to the General Contractor, Architect, and End User prior to installation.
- I. Verify that the concrete subfloor surface pH level is within the 7 - 11 range.
- J. Document the results confirming the slab is within manufacturer's tolerances for slab deviation.

**3.2**     *PREPARATION OF SURFACES*

- A. Sand the entire surface of the concrete slab.
- B. Sweep the concrete slab so as to remove all dirt and dust. If a sweeping compound is to be used it must be a sweeping compound that does not contain oil or other items that may inhibit the adhesive bond.
- C. Slab must be dust free. In the event that dust impairs adhesive bond, priming the slab prior to application of adhesive may be necessary. Follow installation guidelines.
- D. Follow OSHA guidelines.

**3.3**     *INSTALLATION*

- A. The installation area shall be closed to all traffic and activity for a period to be set by the indoor resilient athletic surfacing installer. The indoor resilient athletic surfacing installation shall not begin until the installer is familiar with the existing conditions.
- B. All necessary precautions should be taken to minimize noise, smell, dust, the use of hazardous materials and any other items that may inconvenience others.
- C. Install the indoor resilient athletic surfacing in strict accordance with the indoor resilient athletic surfacing manufacturer's written instructions.
- D. Install the indoor resilient athletic surfacing minimizing cross seams. Provide a seam diagram during the submittal process for approval prior to installation. Vinyl Sheet Flooring Seams: Comply with ASTM F 1516. Rout joints and heat weld to permanently and seamlessly fuse sections together.
- E. Paint game lines using approved game line paint primer and game line paint in strict accordance with the game line paint manufacturer's instructions.
- F. Install appropriate threshold plates or transition strips where necessary.

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

2.0 *CLEANING*

- A. Remove all unused materials, tools, and equipment and dispose of any debris properly. Clean the indoor resilient athletic surfacing in accordance with the manufacturer's instructions.

3.6 *PROTECTION*

- A. If required, protect the indoor resilient athletic surfacing from damage using coverings approved by the manufacturer until acceptance of work by the customer or their authorized representative.

3.7 *RELATED STANDARDS AND GUIDELINES*

- A. ASTM F2170 "Standard Test Method for Determining Relative Humidity In Concrete Floor Slabs Using In-Situ Probes"
- B. ASTM F710 "Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring"
- C. ACI 302.2R-06 "Guideline for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials"
- D. ASTM F2772-11 "Standard Specification for Athletic Performance Properties of Indoor Sports Floor Systems"

**END OF SECTION**

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

***PART 1 – GENERAL***

**1.1**     ***SECTION INCLUDES***

- A. Supply and installation of the indoor resilient multipurpose surfacing
- B. Application of the game lines
- C. References for the correct construction and preparation of concrete slabs to receive resilient flooring.

**1.2**     ***SUBMITTALS***

- A. Product Data:
  - 1. Manufacturer's promotional brochures, specifications and installation instructions
- B. Manufacturer Certifications:
  - 1. Provide certification that accurately identifies the Original Equipment Manufacturer (OEM) of flooring furnished for this project including manufacturer's name, address and factory location.
  - 2. Suppliers of private label flooring for this project must identify themselves as such and fully disclose the OEM information listed above.
  - 3. All "manufacturer" requirements in these specifications must be complied with by the OEM, including warranties, certifications, qualifications, product data, test results, environmental requirements, performance data, etc.
- C. Samples:
  - 1. Submit for selection and approval three (3) sets of the indoor resilient multipurpose surfacing, manufacturer's brochures, samples or sample boards of all of the available colors, textures and styles.
  - 2. Submit color samples of all the available game line paint colors for selection and approval.
- D. Closeout Submittals:
  - 1. Submit three (3) copies of the indoor resilient multipurpose surfacing and manufacturer's maintenance instructions.
  - 2. Submit three (3) copies of the material and installation warranties as specified.

**1.3**     ***QUALITY ASSURANCE***

- A. Qualifications:
  - 1. The indoor resilient multipurpose surfacing shall have been actively marketed for a minimum of ten (10) years.
  - 2. The indoor resilient multipurpose surfacing shall be manufactured in an ISO 9001 certified plant.
  - 3. The indoor resilient multipurpose surfacing shall be manufactured in an ISO 14001 certified plant.
  - 4. The indoor resilient multipurpose surfacing supplier shall be an established firm, experienced in the field, and competent in the techniques required by the manufacturer.
  - 5. The installer of the indoor resilient multipurpose surfacing shall have a minimum of five (5) years of experience in the field installing indoor resilient multipurpose surfacing and have worked on at least five (5) projects of similar size, type and complexity.

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- B. Certifications:
  - 1. Installer to submit the indoor resilient athletic surfacing manufacturer's or distributor's certification attesting that they are an approved installer of the indoor resilient multipurpose surfacing.
  - 2. The indoor resilient multipurpose surfacing manufacturer to submit official ISO 9001 certification for the facility in which the indoor resilient multipurpose surfacing is manufactured.
- C. Testing:

Tests shall be relative for multi-purpose use with certificates from independent testing resources to be made available upon request. Test results shall be performed according to ASTM standard testing procedures including ASTM F2772 "Standard Specification for Athletic Performance Properties of Indoor Sports Floor Systems".

1.4 *DELIVERY, STORAGE AND HANDLING*

- A. Delivery:

Material shall not be delivered until all related work is in place and finished and/or proper storage facilities and conditions can be provided and guaranteed stable according to FieldTurf USA, Inc. recommendations.
- B. Storage:
  - 1. Store the material in a secure, clean and dry location.
  - 2. Maintain temperature between 55° and 85° Fahrenheit.
  - 3. Store the indoor resilient athletic surfacing rolls in an upright position on a smooth flat surface immediately upon delivery to jobsite.
  - 4. Rolls shipped in rigid protective cardboard containers can be laid horizontally prior to unpacking and installation.

1.5 *PROJECT/SITE CONDITIONS*

- A. It is the responsibility of the general contractor/construction manager to maintain project/site conditions acceptable for the installation of the indoor resilient multipurpose flooring.
- B. The area in which the indoor resilient multipurpose surfacing will be installed shall be dry and weather tight. Permanent heat, light and ventilation shall be installed and operable.
- C. All other trades shall have completed their work prior to the installation of the resilient athletic flooring. The general contractor or construction manager shall maintain a secure and clean working environment before, during and after the installation.
- D. Maintain a stable room temperature of at least 65°F for a minimum of one (1) week prior to, during and thereafter installation.
- E. An effective low-permeance vapor barrier is placed directly beneath the concrete subfloor. For "on" or "below grade" installations, it is recommended to provide a permanent vapor barrier resistant to long term hydrostatic pressure/moisture exposure. Protrusions should be sealed to prevent moisture migration into the slab. Moisture should not be allowed to enter the slab after the completed construction.
- F. Concrete subfloor surface pH level within the 7 to 10 range dependent upon installation type.
- G. Concrete subfloor should be no greater than 1/8" within a 10 ft diameter. This tolerance can be measured in accordance with ASTM E1155. A specified (F<sub>F</sub>) of 50 and an (F<sub>L</sub>) of 30 should reach this degree of floor flatness and floor level. There is no numerical correlation between F numbers and the deviation from the straight



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edge. However, the above specified numbers should achieve a flat floor with minimal deviation in the slab. Reference ACI 117 and ACI 302.1R. The general contractor should provide a certificate of compliance with the above recommendations.

- H. Concrete subfloor must be clean and free of all foreign materials or objects including, but not limited to, curing compounds and sealers.
- I. Fill cracks, grooves, voids, depressions, and other minor imperfections. Follow the manufacturer's directions. Moveable joints must be treated utilizing specific transitioning joint devices depending upon the architect's recommendations. Follow current ASTM F710 guidelines for the preparation of concrete slabs to receive resilient flooring.
- J. Refer to ACI 302.2R "Guidelines for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials" for concrete design and construction.
- K. Concrete slab shall be fortified with continual steel reinforcement. Fiber reinforcement alone shall not be considered adequate fortification.

1.6 *WARRANTY*

- A. Special Limited Warranty:
  - 1. Manufacturer's standard form in which manufacturer agrees to repair or replace sports flooring including labor that fails within specified warranty period.
- B. Material warranty must be direct from the product manufacturer.
  - 1. Material warranties must come from original manufacturer or division thereof. Private label warranties from distributors or brokers are not valid. Supply original point of manufacturing upon request.
- C. Failures include, but are not limited to, the following:
  - 1. Material manufacturing defects.
  - 2. Surface wear and deterioration to the point of wear-through of wear layer per ASTM F410/ASTM F1303.
  - 3. Failure due to substrate moisture exposure exceeding 98 percent relative humidity when tested according to ASTM F2170.
- D. Warranty Period:
  - 1. For material defects and surface wear-through: **25** years from date of substantial completion.
  - 2. For moisture vapor tolerance: **25** years from date of substantial completion.
- E. Installer's Limited Warranty:
  - 1. Installer's standard form in which installer agrees to repair or replace sports flooring that fails due to poor workmanship or faulty installation within the specified warranty period.
  - 2. Warranty Period: 2 years from date of substantial completion.

1.7 *ADDITIONAL MATERIALS*

- A. Furnish to the owner additional materials containing a total of at least 1% of each different color or design of the indoor resilient athletic surfacing used on the project.

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1.8 *LEED™ CERTIFICATION*

- A. The indoor resilient athletic surfacing should be able to help this facility to achieve points towards *LEED™ certification*. Flooring system must be certified by FloorScore.
- B. LEED categories positively affected by the indoor resilient athletic surfacing:

<b>LEED™ V4 Credit</b>		Contribution
Materials & Resources: Building Product Disclosure & Optimization (BPDO)		
MRC3: Sourcing of Raw Materials	Options 1 & 2	2 Points
MRC4: Material Ingredients	Option 1	1 Point
MRC5: Construction and Demolition Management	Reclamation and Recycling	ReStart® Program
Indoor Environmental Quality		
EQc2: Low-Emitting Materials	TVOC: 0.5 mg/m <sup>3</sup> or less	FloorScore®

***PART 2 - PRODUCTS***

2.1 *MANUFACTURERS*

- A. The basis of the design for the indoor resilient multipurpose surfacing is Omnisports Active+ as manufactured by Tarkett.
- B. All other installation accessories and related components must be either made or approved by the indoor resilient athletic surfacing manufacturer.
- C. Other products may be approved as equal if deemed qualified and submitted in accordance with the General Conditions.
- D. Test reports confirming compliance from an independent sports laboratory must be provided along with samples, technical data, installation, maintenance, and warranty prior to acceptance as an alternative product.

2.2 *MATERIALS*

- A. Omnisports Active+ - Prefabricated sport surface 8.1 mm (0.14") with wood flooring design, single surface embossing and Extreme Three (3) Layers technology (X3LT) as supplied by Tarkett.
  - 1. Embossing of wood design and solid colors must be the same; varying embossing or surface textures will not be allowed.
  - 2. Printing of wood design shall closely resemble standard wood strip flooring in size, color, board length, and grain appearance.
  - 3. Surface embossing combined with TopClean XP must offer proper balance of surface friction per the ASTM F2772.
  - 4. Surface embossing combined with TopClean XP must provide resistance to stains and scratches. Surface profile must not incorporate linear embossing.
  - 5. The wood design shall be protected by a clear layer of pure PVC (Polyvinyl Chloride) and TopClean XP, a factory-applied UV cured urethane treatment.
  - 6. Extreme Three (3) Layers technology (X3LT) includes Omnisports XCS cushion, glass veil and calendared sheet must offer improved shock absorbing comfort while providing better indentation recovery

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

7. The XCS cushion force reduction layer shall be high-density closed cell PVC foam with honeycomb embossing, and is applied in one continuous manufacturing process.
8. Laminated or adhered foam layers will not be allowed.
9. Field constructed products will not be accepted.

A. Physical properties of the indoor resilient athletic surfacing shall conform to the following minimums:

Width	—	6' 6" (2 m)
Length	—	85' (25.9m) approx.
Wear Layer	—	2 mm
Total Thickness	—	8.1 mm
Wear Layer	Type 1– Grade 1	ASTM F1303/F410
Vertical Deformation	PASSED	ASTM F2772
Rolling Load	PASSED	0.30 (EN 1569 {11/1999})
Surface Finish Effect	PASSED	ASTM F2772 (80 – 110)
Chemical Resistance	Excellent	ASTM F925
Impact Resistance	PASSED	EN 1717
Abrasion Resistance	PASSED	0.10 (EN ISO 5470-1 {06/1999})
Static Load Limit	PASSED	ASTM F970- Load 175 Lbs
Sound Insulation	Excellent	+/- 19 dB (ISO 717/2)
In-Room Sound Insulation	Excellent	61dB (NF S31-074)
Ball Rebound	PASSED	ASTM F2772 > 90%
Force Reduction	PASSED	ASTM F2772 Class 3
Fire Rating	PASSED	ASTM E648 Class 1
Microbial Assays Test	No Growth	G21 ASTM - Backing
Asthma and Allergy Friendly™	ASP: 05-01/101	Certified Compliant
VOC	<10µg/m <sup>3</sup>	ASTM D5116 (small chamber)
Phthalate-free technology	—	YES
REACH Compliant	—	YES
Heavy Metals	—	NO
ISO 9001	—	YES
ISO 14001	—	YES

1. Color: As available from the indoor resilient athletic surfacing manufacturer's standard range.
  2. Hardwood Design Series: High definition printing for a realistic wood surface appearance as available from the indoor resilient athletic surfacing manufacturer's standard range.
  3. Texture: Texture to remain consistent between solid colors and wood design when blending colors.
- C. Welding Rod: As supplied by the indoor resilient athletic surfacing manufacturer or supplier.
1. Color to blend with the indoor resilient athletic surfacing color or design.
  2. All seams shall be welded to create a monolithic and impermeable surface.

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- D. Adhesive: As approved by the indoor resilient athletic surfacing manufacturer.
- E. Game Line Paint and Primer: As approved by the indoor resilient athletic surfacing manufacturer.

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

***PART 3 - EXECUTION***

**3.1 EXAMINATION**

- A. It is the responsibility of the general contractor/construction manager to ensure that project/site conditions are acceptable for the installation of the indoor resilient athletic flooring.
- B. Verify that the area in which the indoor resilient athletic surfacing will be installed is dry and weather tight. Verify that permanent heat, light and ventilation are installed and operable.
- C. Verify that all other work that could cause damage, dirt and dust or interrupt the normal pace of the indoor resilient athletic flooring installation is completed or suspended.
- D. Verify that there is a stable room temperature of at least 65°F.
- E. Verify that there are no foreign materials or objects on the subfloor and that the subfloor is clean and ready for installation.
- F. For GreenLay™ Installation to Concrete Subfloor: moisture content less than 92% RH when tested per ASTM F2170.
- G. Follow Fieldturf USA, Inc. installation recommendations.
- H. Do not average the results of the tests. Report all field test results in writing to the General Contractor, Architect, and End User prior to installation.
- I. Verify that the concrete subfloor surface pH level is within the 7 - 10 range.
- J. Document the results confirming the slab is within manufacturer's tolerances for slab deviation.

**3.2 PREPARATION OF SURFACES**

- A. Sand the entire surface of the concrete slab.
- B. Sweep the concrete slab so as to remove all dirt and dust. If a sweeping compound is to be used it must be a sweeping compound that does not contain oil or other items that may inhibit the adhesive bond.
- C. Slab must be dust free. In the event that dust impairs adhesive bond, priming the slab prior to application of adhesive may be necessary. Follow installation guidelines.
- D. Follow OSHA guidelines

**3.3 INSTALLATION**

- A. The installation area shall be closed to all traffic and activity for a period to be set by the indoor resilient athletic surfacing installer. The indoor resilient athletic surfacing installation shall not begin until the installer is familiar with the existing conditions.
- B. All necessary precautions should be taken to minimize noise, smell, dust, the use of hazardous materials and any other items that may inconvenience others.
- C. Install the indoor resilient athletic surfacing in strict accordance with the indoor resilient athletic surfacing manufacturer's written instructions.
- D. Install the indoor resilient athletic surfacing minimizing cross seams. Provide a seam diagram during the submittal process for approval prior to installation. Vinyl Sheet Flooring Seams: Comply with ASTM F 1516. Rout joints and heat weld to permanently and seamlessly fuse sections together.
- E. Paint game lines using approved game line paint primer and game line paint in strict accordance with the game line paint manufacturer's instructions.
- F. Install appropriate threshold plates or transition strips where necessary.

**3.5 CLEANING**

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- A. Remove all unused materials, tools, and equipment and dispose of any debris properly. Clean the indoor resilient athletic surfacing in accordance with the manufacturer's instructions.

3.6 *PROTECTION*

- A. If required, protect the indoor resilient athletic surfacing from damage using coverings approved by the manufacturer until acceptance of work by the customer or their authorized representative.

3.7 *RELATED STANDARDS AND GUIDELINES*

- A. ASTM F2170 "Standard Test Method for Determining Relative Humidity In Concrete Floor Slabs Using In-Situ Probes"
- B. ASTM F710 "Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring"
- C. ACI 302.2R-06 "Guideline for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials"
- D. ASTM F2772-11 "Standard Specification for Athletic Performance Properties of Indoor Sports Floor Systems"

**END OF SECTION**

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

***PART 1 – GENERAL***

**1.1**     ***SECTION INCLUDES***

- A. Supply and installation of the indoor resilient multipurpose surfacing
- B. Application of the game lines
- C. References for the correct construction and preparation of concrete slabs to receive resilient flooring.

**1.2**     ***SUBMITTALS***

- A. Product Data:
  - 1. Manufacturer’s promotional brochures, specifications and installation instructions
- B. Manufacturer Certifications:
  - 1. Provide certification that accurately identifies the Original Equipment Manufacturer (OEM) of flooring furnished for this project including manufacturer’s name, address and factory location.
  - 2. Suppliers of private label flooring for this project must identify themselves as such and fully disclose the OEM information listed above.
  - 3. All “manufacturer” requirements in these specifications must be complied with by the OEM, including warranties, certifications, qualifications, product data, test results, environmental requirements, performance data, etc.
- C. Samples:
  - 1. Submit for selection and approval three (3) sets of the indoor resilient multipurpose surfacing, manufacturer’s brochures, samples or sample boards of all of the available colors, textures and styles.
  - 2. Submit color samples of all the available game line paint colors for selection and approval.
- D. Closeout Submittals:
  - 1. Submit three (3) copies of the indoor resilient multipurpose surfacing and manufacturer’s maintenance instructions.
  - 2. Submit three (3) copies of the material and installation warranties as specified.

**1.3**     ***QUALITY ASSURANCE***

- A. Qualifications:
  - 1. The indoor resilient multipurpose surfacing shall have been actively marketed for a minimum of ten (10) years.
  - 2. The indoor resilient multipurpose surfacing shall be manufactured in an ISO 9001 certified plant.
  - 3. The indoor resilient multipurpose surfacing shall be manufactured in an ISO 14001 certified plant.
  - 4. The indoor resilient multipurpose surfacing supplier shall be an established firm, experienced in the field, and competent in the techniques required by the manufacturer.
  - 5. The installer of the indoor resilient multipurpose surfacing shall have a minimum of five (5) years of experience in the field installing indoor resilient multipurpose surfacing and have worked on at least five (5) projects of similar size, type and complexity.

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

- B. Certifications:
  - 1. Installer to submit the indoor resilient athletic surfacing manufacturer's or distributor's certification attesting that they are an approved installer of the indoor resilient multipurpose surfacing.
  - 2. The indoor resilient multipurpose surfacing manufacturer to submit official ISO 9001 certification for the facility in which the indoor resilient multipurpose surfacing is manufactured.
- C. Testing:

Tests shall be relative for multi-purpose use with certificates from independent testing resources to be made available upon request. Test results shall be performed according to ASTM standard testing procedures including ASTM F2772 "Standard Specification for Athletic Performance Properties of Indoor Sports Floor Systems".

1.4 *DELIVERY, STORAGE AND HANDLING*

- A. Delivery:

Material shall not be delivered until all related work is in place and finished and/or proper storage facilities and conditions can be provided and guaranteed stable according to FieldTurf USA, Inc. recommendations.
- B. Storage:
  - 1. Store the material in a secure, clean and dry location.
  - 2. Maintain temperature between 55° and 85° Fahrenheit.
  - 3. Store the indoor resilient athletic surfacing rolls in an upright position on a smooth flat surface immediately upon delivery to jobsite.
  - 4. Rolls shipped in rigid protective cardboard containers can be laid horizontally prior to unpacking and installation.

1.5 *PROJECT/SITE CONDITIONS*

- A. It is the responsibility of the general contractor/construction manager to maintain project/site conditions acceptable for the installation of the indoor resilient multipurpose flooring.
- B. The area in which the indoor resilient multipurpose surfacing will be installed shall be dry and weather tight. Permanent heat, light and ventilation shall be installed and operable.
- C. All other trades shall have completed their work prior to the installation of the resilient athletic flooring. The general contractor or construction manager shall maintain a secure and clean working environment before, during and after the installation.
- D. Maintain a stable room temperature of at least 65°F for a minimum of one (1) week prior to, during and thereafter installation.
- E. An effective low-permeance vapor barrier is placed directly beneath the concrete subfloor. For "on" or "below grade" installations, it is recommended to provide a permanent vapor barrier resistant to long term hydrostatic pressure/moisture exposure. Protrusions should be sealed to prevent moisture migration into the slab. Moisture should not be allowed to enter the slab after the completed construction.
- F. Concrete subfloor surface pH level within the 7 to 10 range dependent upon installation type.
- G. Concrete subfloor should be no greater than 1/8" within a 10 ft diameter. This tolerance can be measured in accordance with ASTM E1155. A specified (F<sub>F</sub>) of 50 and an (F<sub>L</sub>) of 30 should reach this degree of floor flatness and floor level. There is no numerical correlation between F numbers and the deviation from the straight



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edge. However, the above specified numbers should achieve a flat floor with minimal deviation in the slab. Reference ACI 117 and ACI 302.1R. The general contractor should provide a certificate of compliance with the above recommendations.

- H. Concrete subfloor must be clean and free of all foreign materials or objects including, but not limited to, curing compounds and sealers.
- I. Fill cracks, grooves, voids, depressions, and other minor imperfections. Follow the manufacturer's directions. Moveable joints must be treated utilizing specific transitioning joint devices depending upon the architect's recommendations. Follow current ASTM F710 guidelines for the preparation of concrete slabs to receive resilient flooring.
- J. Refer to ACI 302.2R "Guidelines for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials" for concrete design and construction.
- K. Concrete slab shall be fortified with continual steel reinforcement. Fiber reinforcement alone shall not be considered adequate fortification.

1.6 *WARRANTY*

- A. Special Limited Warranty:
  - 1. Manufacturer's standard form in which manufacturer agrees to repair or replace sports flooring including labor that fails within specified warranty period.
- B. Material warranty must be direct from the product manufacturer.
  - 1. Material warranties must come from original manufacturer or division thereof. Private label warranties from distributors or brokers are not valid. Supply original point of manufacturing upon request.
- C. Failures include, but are not limited to, the following:
  - 1. Material manufacturing defects.
  - 2. Surface wear and deterioration to the point of wear-through of wear layer per ASTM F410/ASTM F1303.
  - 3. Failure due to substrate moisture exposure exceeding 98 percent relative humidity when tested according to ASTM F2170.
- D. Warranty Period:
  - 1. For material defects and surface wear-through: **25** years from date of substantial completion.
  - 2. For moisture vapor tolerance: **25** years from date of substantial completion.
- E. Installer's Limited Warranty:
  - 1. Installer's standard form in which installer agrees to repair or replace sports flooring that fails due to poor workmanship or faulty installation within the specified warranty period.
  - 2. Warranty Period: 2 years from date of substantial completion.

1.7 *ADDITIONAL MATERIALS*

- A. Furnish to the owner additional materials containing a total of at least 1% of each different color or design of the indoor resilient athletic surfacing used on the project.

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1.8 *LEED™ CERTIFICATION*

- A. The indoor resilient athletic surfacing should be able to help this facility to achieve points towards *LEED™ certification*. Flooring system must be certified by FloorScore.
- B. LEED categories positively affected by the indoor resilient athletic surfacing:

<b>LEED™ V4 Credit</b>		Contribution
Materials & Resources: Building Product Disclosure & Optimization (BPDO)		
MRC3: Sourcing of Raw Materials	Options 1 & 2	2 Points
MRC4: Material Ingredients	Option 1	1 Point
MRC5: Construction and Demolition Management	Reclamation and Recycling	ReStart® Program
Indoor Environmental Quality		
EQc2: Low-Emitting Materials	TVOC: 0.5 mg/m <sup>3</sup> or less	FloorScore®

***PART 2 - PRODUCTS***

2.1 *MANUFACTURERS*

- A. The basis of the design for the indoor resilient multipurpose surfacing is Omnisports Active+ as manufactured by Tarkett.
- B. All other installation accessories and related components must be either made or approved by the indoor resilient athletic surfacing manufacturer.
- C. Other products may be approved as equal if deemed qualified and submitted in accordance with the General Conditions.
- D. Test reports confirming compliance from an independent sports laboratory must be provided along with samples, technical data, installation, maintenance, and warranty prior to acceptance as an alternative product.

2.2 *MATERIALS*

- A. Omnisports Active+ - Prefabricated sport surface 8.1 mm (0.14") with wood flooring design, single surface embossing and Extreme Three (3) Layers technology (X3LT) as supplied by Tarkett.
  - 1. Embossing of wood design and solid colors must be the same; varying embossing or surface textures will not be allowed.
  - 2. Printing of wood design shall closely resemble standard wood strip flooring in size, color, board length, and grain appearance.
  - 3. Surface embossing combined with TopClean XP must offer proper balance of surface friction per the ASTM F2772.
  - 4. Surface embossing combined with TopClean XP must provide resistance to stains and scratches. Surface profile must not incorporate linear embossing.
  - 5. The wood design shall be protected by a clear layer of pure PVC (Polyvinyl Chloride) and TopClean XP, a factory-applied UV cured urethane treatment.
  - 6. Extreme Three (3) Layers technology (X3LT) includes Omnisports XCS cushion, glass veil and calendared sheet must offer improved shock absorbing comfort while providing better indentation recovery

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7. The XCS cushion force reduction layer shall be high-density closed cell PVC foam with honeycomb embossing, and is applied in one continuous manufacturing process.
8. Laminated or adhered foam layers will not be allowed.
9. Field constructed products will not be accepted.

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

- A. Physical properties of the indoor resilient athletic surfacing shall conform to the following minimums:

Width	—	6' 6" (2 m)
Length	—	85' (25.9m) approx.
Wear Layer	—	2 mm
Total Thickness	—	8.1 mm
Wear Layer	Type 1– Grade 1	ASTM F1303/F410
Vertical Deformation	PASSED	ASTM F2772
Rolling Load	PASSED	0.30 (EN 1569 {11/1999})
Surface Finish Effect	PASSED	ASTM F2772 (80 – 110)
Chemical Resistance	Excellent	ASTM F925
Impact Resistance	PASSED	EN 1717
Abrasion Resistance	PASSED	0.10 (EN ISO 5470-1 {06/1999})
Static Load Limit	PASSED	ASTM F970- Load 175 Lbs
Sound Insulation	Excellent	+/- 19 dB (ISO 717/2)
In-Room Sound Insulation	Excellent	61dB (NF S31-074)
Ball Rebound	PASSED	ASTM F2772 > 90%
Force Reduction	PASSED	ASTM F2772 Class 3
Fire Rating	PASSED	ASTM E648 Class 1
Microbial Assays Test	No Growth	G21 ASTM - Backing
Asthma and Allergy Friendly™	ASP: 05-01/101	Certified Compliant
Phthalate-free technology	—	YES
REACH Compliant	—	YES
Heavy Metals	—	NO
ISO 9001	—	YES
ISO 14001	—	YES

1. Color: As available from the indoor resilient athletic surfacing manufacturer's standard range.
  2. Hardwood Design Series: High definition printing for a realistic wood surface appearance as available from the indoor resilient athletic surfacing manufacturer's standard range.
  3. Texture: Texture to remain consistent between solid colors and wood design when blending colors.
- C. Welding Rod: As supplied by the indoor resilient athletic surfacing manufacturer or supplier.
1. Color to blend with the indoor resilient athletic surfacing color or design.
  2. All seams shall be welded to create a monolithic and impermeable surface.
- D. Adhesive: As approved by the indoor resilient athletic surfacing manufacturer.
- E. Game Line Paint and Primer: As approved by the indoor resilient athletic surfacing manufacturer.

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

***PART 3 - EXECUTION***

**3.1 EXAMINATION**

- A. It is the responsibility of the general contractor/construction manager to ensure that project/site conditions are acceptable for the installation of the indoor resilient athletic flooring.
- B. Verify that the area in which the indoor resilient athletic surfacing will be installed is dry and weather tight. Verify that permanent heat, light and ventilation are installed and operable.
- C. Verify that all other work that could cause damage, dirt and dust or interrupt the normal pace of the indoor resilient athletic flooring installation is completed or suspended.
- D. Verify that there is a stable room temperature of at least 65°F.
- E. Verify that there are no foreign materials or objects on the subfloor and that the subfloor is clean and ready for installation.
- F. Direct Full Spread Adhering to Concrete Subfloor HS Sports Spray : moisture content less than 90% RH when tested per ASTM F2170.
- G. Follow Fieldturf USA, Inc installation recommendations.
- H. Do not average the results of the tests. Report all field test results in writing to the General Contractor, Architect, and End User prior to installation.
- I. Verify that the concrete subfloor surface pH level is within the 7 - 10 range.
- J. Document the results indicating the slab is within manufacturer's tolerances for slab deviation.

**3.2 PREPARATION OF SURFACES**

- A. Sand the entire surface of the concrete slab.
- B. Sweep the concrete slab so as to remove all dirt and dust. If a sweeping compound is to be used it must be a sweeping compound that does not contain oil or other items that may inhibit the adhesive bond.
- C. Slab must be dust free. In the event that dust impairs adhesive bond, priming the slab prior to application of adhesive may be necessary. Follow installation guidelines.

**3.3 INSTALLATION**

- A. The installation area shall be closed to all traffic and activity for a period to be set by the indoor resilient athletic surfacing installer. The indoor resilient athletic surfacing installation shall not begin until the installer is familiar with the existing conditions.
- B. All necessary precautions should be taken to minimize noise, smell, dust, the use of hazardous materials and any other items that may inconvenience others.
- C. Install the indoor resilient athletic surfacing in strict accordance with the indoor resilient athletic surfacing manufacturer's written instructions.
- D. Install the indoor resilient athletic surfacing minimizing cross seams. Provide a seam diagram during the submittal process for approval prior to installation. Vinyl Sheet Flooring Seams: Comply with ASTM F 1516. Rout joints and heat weld to permanently and seamlessly fuse sections together. Apply transitions at doorways as needed.
- E. Paint game lines using approved game line paint primer and game line paint in strict accordance with the game line paint manufacturer's instructions.
- F. Install appropriate threshold plates or transition strips where necessary.

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3.5 *CLEANING*

- A. Remove all unused materials, tools, and equipment and dispose of any debris properly. Clean the indoor resilient athletic surfacing in accordance with the manufacturer's instructions.

3.6 *PROTECTION*

- A. If required, protect the indoor resilient athletic surfacing from damage using coverings approved by the manufacturer until acceptance of work by the customer or their authorized representative.

3.7 *RELATED STANDARDS AND GUIDELINES*

- A. ASTM F2170 "Standard Test Method for Determining Relative Humidity In Concrete Floor Slabs Using In-Situ Probes"
- B. ASTM F710 "Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring"
- C. ACI 302.2R-06 "Guideline for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials"
- D. ASTM F2772-11 "Standard Specification for Athletic Performance Properties of Indoor Sports Floor Systems"

**END OF SECTION**

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

***PART 1 – GENERAL***

**1.1**     *SECTION INCLUDES*

- A. Supply and installation of the indoor resilient multipurpose surfacing
- B. Application of the game lines
- C. References for the correct construction and preparation of concrete slabs to receive resilient flooring.

**1.2**     *SUBMITTALS*

- A. Product Data:
  - 1. Manufacturer’s promotional brochures, specifications and installation instructions
- B. Manufacturer Certifications:
  - 1. Provide certification that accurately identifies the Original Equipment Manufacturer (OEM) of flooring furnished for this project including manufacturer’s name, address and factory location.
  - 2. Suppliers of private label flooring for this project must identify themselves as such and fully disclose the OEM information listed above.
  - 3. All “manufacturer” requirements in these specifications must be complied with by the OEM, including warranties, certifications, qualifications, product data, test results, environmental requirements, performance data, etc.
- C. Samples:
  - 1. Submit for selection and approval three (3) sets of the indoor resilient multipurpose surfacing, manufacturer’s brochures, samples or sample boards of all of the available colors, textures and styles.
  - 2. Submit color samples of all the available game line paint colors for selection and approval.
- D. Closeout Submittals:
  - 1. Submit three (3) copies of the indoor resilient multipurpose surfacing and manufacturer’s maintenance instructions.
  - 2. Submit three (3) copies of the material and installation warranties as specified.

**1.3**     *QUALITY ASSURANCE*

- A. Qualifications:
  - 1. The indoor resilient multipurpose surfacing shall have been actively marketed for a minimum of ten (10) years.
  - 2. The indoor resilient multipurpose surfacing shall be manufactured in an ISO 9001 certified plant.
  - 3. The indoor resilient multipurpose surfacing shall be manufactured in an ISO 14001 certified plant.
  - 4. The indoor resilient multipurpose surfacing supplier shall be an established firm, experienced in the field, and competent in the techniques required by the manufacturer.
  - 5. The installer of the indoor resilient multipurpose surfacing shall have a minimum of five (5) years of experience in the field installing indoor resilient multipurpose surfacing and have worked on at least five (5) projects of similar size, type and complexity.

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- B. Certifications:
  - 1. Installer to submit the indoor resilient athletic surfacing manufacturer's or distributor's certification attesting that they are an approved installer of the indoor resilient multipurpose surfacing.
  - 2. The indoor resilient multipurpose surfacing manufacturer to submit official ISO 9001 certification for the facility in which the indoor resilient multipurpose surfacing is manufactured.
- C. Testing:

Tests shall be relative for multi-purpose use with certificates from independent testing resources to be made available upon request. Test results shall be performed according to ASTM standard testing procedures including ASTM F2772 "Standard Specification for Athletic Performance Properties of Indoor Sports Floor Systems".

1.4 *DELIVERY, STORAGE AND HANDLING*

- A. Delivery:

Material shall not be delivered until all related work is in place and finished and/or proper storage facilities and conditions can be provided and guaranteed stable according to FieldTurf USA, Inc. recommendations.
- B. Storage:
  - 1. Store the material in a secure, clean and dry location.
  - 2. Maintain temperature between 55° and 85° Fahrenheit.
  - 3. Store the indoor resilient athletic surfacing rolls in an upright position on a smooth flat surface immediately upon delivery to jobsite.
  - 4. Rolls shipped in rigid protective cardboard containers can be laid horizontally prior to unpacking and installation.

1.5 *PROJECT/SITE CONDITIONS*

- A. It is the responsibility of the general contractor/construction manager to maintain project/site conditions acceptable for the installation of the indoor resilient multipurpose flooring.
- B. The area in which the indoor resilient multipurpose surfacing will be installed shall be dry and weather tight. Permanent heat, light and ventilation shall be installed and operable.
- C. All other trades shall have completed their work prior to the installation of the resilient athletic flooring. The general contractor or construction manager shall maintain a secure and clean working environment before, during and after the installation.
- D. Maintain a stable room temperature of at least 65°F for a minimum of one (1) week prior to, during and thereafter installation.
- E. An effective low-permeance vapor barrier is placed directly beneath the concrete subfloor. For "on" or "below grade" installations, it is recommended to provide a permanent vapor barrier resistant to long term hydrostatic pressure/moisture exposure. Protrusions should be sealed to prevent moisture migration into the slab. Moisture should not be allowed to enter the slab after the completed construction.
- F. Concrete subfloor surface pH level within the 7 to 11 range dependent upon installation type.
- G. Concrete subfloor should be no greater than 1/8" within a 10 ft diameter. This tolerance can be measured in accordance with ASTM E1155. A specified (F<sub>F</sub>) of 50 and an (F<sub>L</sub>) of 30 should reach this degree of floor flatness and floor level. There is no numerical correlation between F numbers and the deviation from the straight



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edge. However, the above specified numbers should achieve a flat floor with minimal deviation in the slab. Reference ACI 117 and ACI 302.1R. The general contractor should provide a certificate of compliance with the above recommendations.

- H. Concrete subfloor must be clean and free of all foreign materials or objects including, but not limited to, curing compounds and sealers.
- I. Fill cracks, grooves, voids, depressions, and other minor imperfections. Follow the manufacturer's directions. Moveable joints must be treated utilizing specific transitioning joint devices depending upon the architect's recommendations. Follow current ASTM F710 guidelines for the preparation of concrete slabs to receive resilient flooring.
- J. Refer to ACI 302.2R "Guidelines for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials" for concrete design and construction.
- K. Concrete slab shall be fortified with continual steel reinforcement. Fiber reinforcement alone shall not be considered adequate fortification.

1.6 *WARRANTY*

- A. Special Limited Warranty:
  - 1. Manufacturer's standard form in which manufacturer agrees to repair or replace sports flooring including labor that fails within specified warranty period.
- B. Material warranty must be direct from the product manufacturer.
  - 1. Material warranties must come from original manufacturer or division thereof. Private label warranties from distributors or brokers are not valid. Supply original point of manufacturing upon request.
- C. Failures include, but are not limited to, the following:
  - 1. Material manufacturing defects.
  - 2. Surface wear and deterioration to the point of wear-through of wear layer per ASTM F410/ASTM F1303.
  - 3. Failure due to substrate moisture exposure exceeding 98 percent relative humidity when tested according to ASTM F2170.
- D. Warranty Period:
  - 1. For material defects and surface wear-through: 25 years from date of substantial completion.
  - 2. For moisture vapor tolerance: 25 years from date of substantial completion.
- E. Installer's Limited Warranty:
  - 1. Installer's standard form in which installer agrees to repair or replace sports flooring that fails due to poor workmanship or faulty installation within the specified warranty period.
  - 2. Warranty Period: 2 years from date of substantial completion.

1.7 *ADDITIONAL MATERIALS*

- A. Furnish to the owner additional materials containing a total of at least 1% of each different color or design of the indoor resilient athletic surfacing used on the project.

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1.8 *LEED™ CERTIFICATION*

- A. The indoor resilient athletic surfacing should be able to help this facility to achieve points towards *LEED™ certification*. Flooring system must be certified by FloorScore.
- B. LEED categories positively affected by the indoor resilient athletic surfacing:

<b>LEED™ V4 Credit</b>		Contribution
Materials & Resources: Building Product Disclosure & Optimization (BPDO)		
MRC3: Sourcing of Raw Materials	Options 1 & 2	2 Points
MRC4: Material Ingredients	Option 1	1 Point
MRC5: Construction and Demolition Management	Reclamation and Recycling	ReStart® Program
Indoor Environmental Quality		
EQc2: Low-Emitting Materials	TVOC: 0.5 mg/m <sup>3</sup> or less	FloorScore®

***PART 2 - PRODUCTS***

2.1 *MANUFACTURERS*

- A. The basis of the design for the indoor resilient multipurpose surfacing is Omnisports Active+ as manufactured by Tarkett.
- B. All other installation accessories and related components must be either made or approved by the indoor resilient athletic surfacing manufacturer.
- C. Other products may be approved as equal if deemed qualified and submitted in accordance with the General Conditions.
- D. Test reports confirming compliance from an independent sports laboratory must be provided along with samples, technical data, installation, maintenance, and warranty prior to acceptance as an alternative product.

2.2 *MATERIALS*

- A. Omnisports Active+ - Prefabricated sport surface 8.1 mm (0.14") with wood flooring design, single surface embossing and Extreme Three (3) Layers technology (X3LT) as supplied by Tarkett.
  - 1. Embossing of wood design and solid colors must be the same; varying embossing or surface textures will not be allowed.
  - 2. Printing of wood design shall closely resemble standard wood strip flooring in size, color, board length, and grain appearance.
  - 3. Surface embossing combined with TopClean XP must offer proper balance of surface friction per the ASTM F2772.
  - 4. Surface embossing combined with TopClean XP must provide resistance to stains and scratches. Surface profile must not incorporate linear embossing.
  - 5. The wood design shall be protected by a clear layer of pure PVC (Polyvinyl Chloride) and TopClean XP, a factory-applied UV cured urethane treatment.
  - 6. Extreme Three (3) Layers technology (X3LT) includes Omnisports XCS cushion, glass veil and calendared sheet must offer improved shock absorbing comfort while providing better indentation recovery

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7. The XCS cushion force reduction layer shall be high-density closed cell PVC foam with honeycomb embossing, and is applied in one continuous manufacturing process.
8. Laminated or adhered foam layers will not be allowed.
9. Field constructed products will not be accepted.

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

- A. Physical properties of the indoor resilient athletic surfacing shall conform to the following minimums:

Width	—	6' 6" (2 m)
Length	—	85' (25.9m) approx.
Wear Layer	—	2 mm
Total Thickness	—	8.1 mm
Wear Layer	Type 1– Grade 1	ASTM F1303/F410
Vertical Deformation	PASSED	ASTM F2772
Rolling Load	PASSED	0.30 (EN 1569 {11/1999})
Surface Finish Effect	PASSED	ASTM F2772 (80 – 110)
Chemical Resistance	Excellent	ASTM F925
Impact Resistance	PASSED	EN 1717
Abrasion Resistance	PASSED	0.10 (EN ISO 5470-1 {06/1999})
Static Load Limit	PASSED	ASTM F970- Load 175 Lbs
Sound Insulation	Excellent	+/- 19 dB (ISO 717/2)
In-Room Sound Insulation	Excellent	61dB (NF S31-074)
Ball Rebound	PASSED	ASTM F2772 > 90%
Force Reduction	PASSED	ASTM F2772 Class 3
Fire Rating	PASSED	ASTM E648 Class 1
Microbial Assays Test	No Growth	G21 ASTM - Backing
Asthma and Allergy Friendly™	ASP: 05-01/101	Certified Compliant
Phthalate-free technology	—	YES
VOC	<10µg/m <sup>3</sup>	ASTM D5116 (small chamber)
REACH Compliant	—	YES
Heavy Metals	—	NO
ISO 9001	—	YES
ISO 14001	—	YES

1. Color: As available from the indoor resilient athletic surfacing manufacturer's standard range.
  2. Hardwood Design Series: High definition printing for a realistic wood surface appearance as available from the indoor resilient athletic surfacing manufacturer's standard range.
  3. Texture: Texture to remain consistent between solid colors and wood design when blending colors.
- C. Welding Rod: As supplied by the indoor resilient athletic surfacing manufacturer or supplier.
1. Color to blend with the indoor resilient athletic surfacing color or design.
  2. All seams shall be welded to create a monolithic and impermeable surface.
- D. Adhesive: As approved by the indoor resilient athletic surfacing manufacturer.
- E. Game Line Paint and Primer: As approved by the indoor resilient athletic surfacing manufacturer.

**SECTION 09 65 66**  
**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

***PART 3 - EXECUTION***

**3.1 EXAMINATION**

- A. It is the responsibility of the general contractor/construction manager to ensure that project/site conditions are acceptable for the installation of the indoor resilient athletic flooring.
- B. Verify that the area in which the indoor resilient athletic surfacing will be installed is dry and weather tight. Verify that permanent heat, light and ventilation are installed and operable.
- C. Verify that all other work that could cause damage, dirt and dust or interrupt the normal pace of the indoor resilient athletic flooring installation is completed or suspended.
- D. Verify that there is a stable room temperature of at least 65°F.
- E. Verify that there are no foreign materials or objects on the subfloor and that the subfloor is clean and ready for installation.
- F. Direct Full Spread Adhering to Concrete Subfloor Multi-Poxy : moisture content less than 98% RH when tested per ASTM F2170.
- G. Follow Fieldturf USA, Inc. installation recommendations.
- H. Do not average the results of the tests. Report all field test results in writing to the General Contractor, Architect, and End User prior to installation.
- I. Verify that the concrete subfloor surface pH level is within the 7 - 11 range.
- J. Document the results confirming the slab is within manufacturer's tolerances for slab deviation.

**3.2 PREPARATION OF SURFACES**

- A. Sand the entire surface of the concrete slab.
- B. Sweep the concrete slab so as to remove all dirt and dust. If a sweeping compound is to be used it must be a sweeping compound that does not contain oil or other items that may inhibit the adhesive bond.
- C. Slab must be dust free. In the event that dust impairs adhesive bond, priming the slab prior to application of adhesive may be necessary. Follow installation guidelines.
- D. Follow OSHA guidelines.

**3.3 INSTALLATION**

- A. The installation area shall be closed to all traffic and activity for a period to be set by the indoor resilient athletic surfacing installer. The indoor resilient athletic surfacing installation shall not begin until the installer is familiar with the existing conditions.
- B. All necessary precautions should be taken to minimize noise, smell, dust, the use of hazardous materials and any other items that may inconvenience others.
- C. Install the indoor resilient athletic surfacing in strict accordance with the indoor resilient athletic surfacing manufacturer's written instructions.
- D. Install the indoor resilient athletic surfacing minimizing cross seams. Provide a seam diagram during the submittal process for approval prior to installation. Vinyl Sheet Flooring Seams: Comply with ASTM F 1516. Rout joints and heat weld to permanently and seamlessly fuse sections together.
- E. Paint game lines using approved game line paint primer and game line paint in strict accordance with the game line paint manufacturer's instructions.
- F. Install appropriate threshold plates or transition strips where necessary.

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

3.5 *CLEANING*

- A. Remove all unused materials, tools, and equipment and dispose of any debris properly. Clean the indoor resilient athletic surfacing in accordance with the manufacturer's instructions.

3.6 *PROTECTION*

- A. If required, protect the indoor resilient athletic surfacing from damage using coverings approved by the manufacturer until acceptance of work by the customer or their authorized representative.

3.7 *RELATED STANDARDS AND GUIDELINES*

- A. ASTM F2170 "Standard Test Method for Determining Relative Humidity In Concrete Floor Slabs Using In-Situ Probes"
- B. ASTM F710 "Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring"
- C. ACI 302.2R-06 "Guideline for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials"
- D. ASTM F2772-11 "Standard Specification for Athletic Performance Properties of Indoor Sports Floor Systems"

**END OF SECTION**

**SECTION 09 65 66**  
**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

***PART 1 – GENERAL***

**1.1**     ***SECTION INCLUDES***

- A. Supply and installation of the indoor resilient multipurpose surfacing
- B. Application of the game lines
- C. References for the correct construction and preparation of concrete slabs to receive resilient flooring.

**1.2**     ***SUBMITTALS***

- A. Product Data:
  - 1. Manufacturer's promotional brochures, specifications and installation instructions
- B. Manufacturer Certifications:
  - 1. Provide certification that accurately identifies the Original Equipment Manufacturer (OEM) of flooring furnished for this project including manufacturer's name, address and factory location.
  - 2. Suppliers of private label flooring for this project must identify themselves as such and fully disclose the OEM information listed above.
  - 3. All "manufacturer" requirements in these specifications must be complied with by the OEM, including warranties, certifications, qualifications, product data, test results, environmental requirements, performance data, etc.
- C. Samples:
  - 1. Submit for selection and approval three (3) sets of the indoor resilient multipurpose surfacing, manufacturer's brochures, samples or sample boards of all of the available colors, textures and styles.
  - 2. Submit color samples of all the available game line paint colors for selection and approval.
- D. Closeout Submittals:
  - 1. Submit three (3) copies of the indoor resilient multipurpose surfacing and manufacturer's maintenance instructions.
  - 2. Submit three (3) copies of the material and installation warranties as specified.

**1.3**     ***QUALITY ASSURANCE***

- A. Qualifications:
  - 1. The indoor resilient multipurpose surfacing shall have been actively marketed for a minimum of ten (10) years.
  - 2. The indoor resilient multipurpose surfacing shall be manufactured in an ISO 9001 certified plant.
  - 3. The indoor resilient multipurpose surfacing shall be manufactured in an ISO 14001 certified plant.
  - 4. The indoor resilient multipurpose surfacing supplier shall be an established firm, experienced in the field, and competent in the techniques required by the manufacturer.
  - 5. The installer of the indoor resilient multipurpose surfacing shall have a minimum of five (5) years of experience in the field installing indoor resilient multipurpose surfacing and have worked on at least five (5) projects of similar size, type and complexity.

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

- B. Certifications:
  - 1. Installer to submit the indoor resilient athletic surfacing manufacturer's or distributor's certification attesting that they are an approved installer of the indoor resilient multipurpose surfacing.
  - 2. The indoor resilient multipurpose surfacing manufacturer to submit official ISO 9001 certification for the facility in which the indoor resilient multipurpose surfacing is manufactured.
- C. Testing:

Tests shall be relative for multi-purpose use with certificates from independent testing resources to be made available upon request. Test results shall be performed according to ASTM standard testing procedures including ASTM F2772 "Standard Specification for Athletic Performance Properties of Indoor Sports Floor Systems".

1.4 *DELIVERY, STORAGE AND HANDLING*

- A. Delivery:

Material shall not be delivered until all related work is in place and finished and/or proper storage facilities and conditions can be provided and guaranteed stable according to FieldTurf USA, Inc. recommendations.
- B. Storage:
  - 1. Store the material in a secure, clean and dry location.
  - 2. Maintain temperature between 55° and 85° Fahrenheit.
  - 3. Store the indoor resilient athletic surfacing rolls in an upright position on a smooth flat surface immediately upon delivery to jobsite.
  - 4. Rolls shipped in rigid protective cardboard containers can be laid horizontally prior to unpacking and installation.

1.5 *PROJECT/SITE CONDITIONS*

- A. It is the responsibility of the general contractor/construction manager to maintain project/site conditions acceptable for the installation of the indoor resilient multipurpose flooring.
- B. The area in which the indoor resilient multipurpose surfacing will be installed shall be dry and weather tight. Permanent heat, light and ventilation shall be installed and operable.
- C. All other trades shall have completed their work prior to the installation of the resilient athletic flooring. The general contractor or construction manager shall maintain a secure and clean working environment before, during and after the installation.
- D. Maintain a stable room temperature of at least 65°F for a minimum of one (1) week prior to, during and thereafter installation.
- E. An effective low-permeance vapor barrier is placed directly beneath the concrete subfloor. For "on" or "below grade" installations, it is recommended to provide a permanent vapor barrier resistant to long term hydrostatic pressure/moisture exposure. Protrusions should be sealed to prevent moisture migration into the slab. Moisture should not be allowed to enter the slab after the completed construction.
- F. Concrete subfloor surface pH level within the 7 to 10 range dependent upon installation type.
- G. Concrete subfloor should be no greater than 1/8" within a 10 ft diameter. This tolerance can be measured in accordance with ASTM E1155. A specified (F<sub>F</sub>) of 50 and an (F<sub>L</sub>) of 30 should reach this degree of floor flatness and floor level. There is no numerical correlation between F numbers and the deviation from the straight



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edge. However, the above specified numbers should achieve a flat floor with minimal deviation in the slab. Reference ACI 117 and ACI 302.1R. The general contractor should provide a certificate of compliance with the above recommendations.

- H. Concrete subfloor must be clean and free of all foreign materials or objects including, but not limited to, curing compounds and sealers.
- I. Fill cracks, grooves, voids, depressions, and other minor imperfections. Follow the manufacturer's directions. Moveable joints must be treated utilizing specific transitioning joint devices depending upon the architect's recommendations. Follow current ASTM F710 guidelines for the preparation of concrete slabs to receive resilient flooring.
- J. Refer to ACI 302.2R "Guidelines for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials" for concrete design and construction.
- K. Concrete slab shall be fortified with continual steel reinforcement. Fiber reinforcement alone shall not be considered adequate fortification.

1.6 *WARRANTY*

- A. Special Limited Warranty:
  - 1. Manufacturer's standard form in which manufacturer agrees to repair or replace sports flooring including labor that fails within specified warranty period.
- B. Material warranty must be direct from the product manufacturer.
  - 1. Material warranties must come from original manufacturer or division thereof. Private label warranties from distributors or brokers are not valid. Supply original point of manufacturing upon request.
- C. Failures include, but are not limited to, the following:
  - 1. Material manufacturing defects.
  - 2. Surface wear and deterioration to the point of wear-through of wear layer per ASTM F410/ASTM F1303.
  - 3. Failure due to substrate moisture exposure exceeding 98 percent relative humidity when tested according to ASTM F2170.
- D. Warranty Period:
  - 1. For material defects and surface wear-through: 25 years from date of substantial completion.
  - 2. For moisture vapor tolerance: 25 years from date of substantial completion.
- E. Installer's Limited Warranty:
  - 1. Installer's standard form in which installer agrees to repair or replace sports flooring that fails due to poor workmanship or faulty installation within the specified warranty period.
  - 2. Warranty Period: 2 years from date of substantial completion.

1.7 *ADDITIONAL MATERIALS*

- A. Furnish to the owner additional materials containing a total of at least 1% of each different color or design of the indoor resilient athletic surfacing used on the project.

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

1.8 *LEED™ CERTIFICATION*

- A. The indoor resilient athletic surfacing should be able to help this facility to achieve points towards *LEED™ certification*. Flooring system must be certified by FloorScore.
- B. LEED categories positively affected by the indoor resilient athletic surfacing:

<b>LEED™ V4 Credit</b>		Contribution
Materials & Resources: Building Product Disclosure & Optimization (BPDO)		
MRC3: Sourcing of Raw Materials	Options 1 & 2	2 Points
MRC4: Material Ingredients	Option 1	1 Point
MRC5: Construction and Demolition Management	Reclamation and Recycling	ReStart® Program
Indoor Environmental Quality		
EQc2: Low-Emitting Materials	TVOC: 0.5 mg/m <sup>3</sup> or less	FloorScore®

***PART 2 - PRODUCTS***

2.1 *MANUFACTURERS*

- A. The basis of the design for the indoor resilient multipurpose surfacing is Omnisports Active+ as manufactured by Tarkett.
- B. All other installation accessories and related components must be either made or approved by the indoor resilient athletic surfacing manufacturer.
- C. Other products may be approved as equal if deemed qualified and submitted in accordance with the General Conditions.
- D. Test reports confirming compliance from an independent sports laboratory must be provided along with samples, technical data, installation, maintenance, and warranty prior to acceptance as an alternative product.

2.2 *MATERIALS*

- A. Omnisports Active+ - Prefabricated sport surface 8.1 mm (0.14") with wood flooring design, single surface embossing and Extreme Three (3) Layers technology (X3LT) as supplied by Tarkett.
  - 1. Embossing of wood design and solid colors must be the same; varying embossing or surface textures will not be allowed.
  - 2. Printing of wood design shall closely resemble standard wood strip flooring in size, color, board length, and grain appearance.
  - 3. Surface embossing combined with TopClean XP must offer proper balance of surface friction per the ASTM F2772.
  - 4. Surface embossing combined with TopClean XP must provide resistance to stains and scratches. Surface profile must not incorporate linear embossing.
  - 5. The wood design shall be protected by a clear layer of pure PVC (Polyvinyl Chloride) and TopClean XP, a factory-applied UV cured urethane treatment.
  - 6. Extreme Three (3) Layers technology (X3LT) includes Omnisports XCS cushion, glass veil and calendared sheet must offer improved shock absorbing comfort while providing better indentation recovery

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7. The XCS cushion force reduction layer shall be high-density closed cell PVC foam with honeycomb embossing, and is applied in one continuous manufacturing process.
8. Laminated or adhered foam layers will not be allowed.
9. Field constructed products will not be accepted.

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

- A. Physical properties of the indoor resilient athletic surfacing shall conform to the following minimums:

Width	—	6' 6" (2 m)
Length	—	85' (25.9m) approx.
Wear Layer	—	2 mm
Total Thickness	—	8.1 mm
Wear Layer	Type 1– Grade 1	ASTM F1303/F410
Vertical Deformation	PASSED	ASTM F2772
Rolling Load	PASSED	0.30 (EN 1569 {11/1999})
Surface Finish Effect	PASSED	ASTM F2772 (80 – 110)
Chemical Resistance	Excellent	ASTM F925
Impact Resistance	PASSED	EN 1717
Abrasion Resistance	PASSED	0.10 (EN ISO 5470-1 {06/1999})
Static Load Limit	PASSED	ASTM F970- Load 175 Lbs
Sound Insulation	Excellent	+/- 19 dB (ISO 717/2)
In-Room Sound Insulation	Excellent	61dB (NF S31-074)
Ball Rebound	PASSED	ASTM F2772 > 90%
Force Reduction	PASSED	ASTM F2772 Class 3
Fire Rating	PASSED	ASTM E648 Class 1
Microbial Assays Test	No Growth	G21 ASTM - Backing
Asthma and Allergy Friendly™	ASP: 05-01/101	Certified Compliant
Phthalate-free technology	—	YES
REACH Compliant	—	YES
Heavy Metals	—	NO
ISO 9001	—	YES
ISO 14001	—	YES

1. Color: As available from the indoor resilient athletic surfacing manufacturer's standard range.
  2. Hardwood Design Series: A wood look design as available from the indoor resilient athletic surfacing manufacturer's standard range.
  3. Texture: Texture to remain consistent between solid colors and wood design when blending colors.
- C. Welding Rod: As supplied by the indoor resilient athletic surfacing manufacturer or supplier.
1. Color to blend with the indoor resilient athletic surfacing color or design.
  2. All seams shall be welded to create a monolithic and impermeable surface.
- D. Adhesive: As approved by the indoor resilient athletic surfacing manufacturer.
- E. Game Line Paint and Primer: As approved by the indoor resilient athletic surfacing manufacturer.

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

***PART 3 - EXECUTION***

**3.1 EXAMINATION**

- A. It is the responsibility of the general contractor/construction manager to ensure that project/site conditions are acceptable for the installation of the indoor resilient athletic flooring.
- B. Verify that the area in which the indoor resilient athletic surfacing will be installed is dry and weather tight. Verify that permanent heat, light and ventilation are installed and operable.
- C. Verify that all other work that could cause damage, dirt and dust or interrupt the normal pace of the indoor resilient athletic flooring installation is completed or suspended.
- D. Verify that there is a stable room temperature of at least 65°F.
- E. Verify that there are no foreign materials or objects on the subfloor and that the subfloor is clean and ready for installation.
- F. Direct Full Spread Adhering to Concrete Subfloor Multi-Set : moisture content less than 83% RH when tested per ASTM F2170.
- G. Follow Fieldturf USA, Inc installation recommendations.
- H. Do not average the results of the tests. Report all field test results in writing to the General Contractor, Architect, and End User prior to installation.
- I. Verify that the concrete subfloor surface pH level is within the 7 - 10 range.
- J. Document the results indicating the slab is within manufacturer's tolerances for slab deviation.

**3.2 PREPARATION OF SURFACES**

- A. Sand the entire surface of the concrete slab.
- B. Sweep the concrete slab so as to remove all dirt and dust. If a sweeping compound is to be used it must be a sweeping compound that does not contain oil or other items that may inhibit the adhesive bond.
- C. Slab must be dust free. In the event that dust impairs adhesive bond, priming the slab prior to application of adhesive may be necessary. Follow installation guidelines.

**3.3 INSTALLATION**

- A. The installation area shall be closed to all traffic and activity for a period to be set by the indoor resilient athletic surfacing installer. The indoor resilient athletic surfacing installation shall not begin until the installer is familiar with the existing conditions.
- B. All necessary precautions should be taken to minimize noise, smell, dust, the use of hazardous materials and any other items that may inconvenience others.
- C. Install the indoor resilient athletic surfacing in strict accordance with the indoor resilient athletic surfacing manufacturer's written instructions.
- D. Install the indoor resilient athletic surfacing minimizing cross seams. Provide a seam diagram during the submittal process for approval prior to installation. Vinyl Sheet Flooring Seams: Comply with ASTM F 1516. Rout joints and heat weld to permanently and seamlessly fuse sections together. Apply transitions at doorways as needed.
- E. Paint game lines using approved game line paint primer and game line paint in strict accordance with the game line paint manufacturer's instructions.
- F. Install appropriate threshold plates or transition strips where necessary.

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3.5 *CLEANING*

- A. Remove all unused materials, tools, and equipment and dispose of any debris properly. Clean the indoor resilient athletic surfacing in accordance with the manufacturer's instructions.

3.6 *PROTECTION*

- A. If required, protect the indoor resilient athletic surfacing from damage using coverings approved by the manufacturer until acceptance of work by the customer or their authorized representative.

3.7 *RELATED STANDARDS AND GUIDELINES*

- A. ASTM F2170 "Standard Test Method for Determining Relative Humidity In Concrete Floor Slabs Using In-Situ Probes"
- B. ASTM F710 "Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring"
- C. ACI 302.2R-06 "Guideline for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials"
- D. ASTM F2772-11 "Standard Specification for Athletic Performance Properties of Indoor Sports Floor Systems"

**END OF SECTION**

**SECTION 09 65 66**  
**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

***PART 1 – GENERAL***

**1.1**     ***SECTION INCLUDES***

- A. Supply and installation of the indoor resilient multipurpose surfacing
- B. Application of the game lines
- C. References for the correct construction and preparation of concrete slabs to receive resilient flooring.

**1.2**     ***SUBMITTALS***

- A. Product Data:
  - 1. Manufacturer's promotional brochures, specifications and installation instructions
- B. Manufacturer Certifications:
  - 1. Provide certification that accurately identifies the Original Equipment Manufacturer (OEM) of flooring furnished for this project including manufacturer's name, address and factory location.
  - 2. Suppliers of private label flooring for this project must identify themselves as such and fully disclose the OEM information listed above.
  - 3. All "manufacturer" requirements in these specifications must be complied with by the OEM, including warranties, certifications, qualifications, product data, test results, environmental requirements, performance data, etc.
- C. Samples:
  - 1. Submit for selection and approval three (3) sets of the indoor resilient multipurpose surfacing, manufacturer's brochures, samples or sample boards of all of the available colors, textures and styles.
  - 2. Submit color samples of all the available game line paint colors for selection and approval.
- D. Closeout Submittals:
  - 1. Submit three (3) copies of the indoor resilient multipurpose surfacing and manufacturer's maintenance instructions.
  - 2. Submit three (3) copies of the material and installation warranties as specified.

**1.3**     ***QUALITY ASSURANCE***

- A. Qualifications:
  - 1. The indoor resilient multipurpose surfacing shall have been actively marketed for a minimum of ten (10) years.
  - 2. The indoor resilient multipurpose surfacing shall be manufactured in an ISO 9001 certified plant.
  - 3. The indoor resilient multipurpose surfacing shall be manufactured in an ISO 14001 certified plant.
  - 4. The indoor resilient multipurpose surfacing supplier shall be an established firm, experienced in the field, and competent in the techniques required by the manufacturer.
  - 5. The installer of the indoor resilient multipurpose surfacing shall have a minimum of five (5) years of experience in the field installing indoor resilient multipurpose surfacing and have worked on at least five (5) projects of similar size, type and complexity.

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- B. Certifications:
  - 1. Installer to submit the indoor resilient athletic surfacing manufacturer's or distributor's certification attesting that they are an approved installer of the indoor resilient multipurpose surfacing.
  - 2. The indoor resilient multipurpose surfacing manufacturer to submit official ISO 9001 certification for the facility in which the indoor resilient multipurpose surfacing is manufactured.
- C. Testing:

Tests shall be relative for multi-purpose use with certificates from independent testing resources to be made available upon request. Test results shall be performed according to ASTM standard testing procedures including ASTM F2772 "Standard Specification for Athletic Performance Properties of Indoor Sports Floor Systems".

1.4 *DELIVERY, STORAGE AND HANDLING*

- A. Delivery:

Material shall not be delivered until all related work is in place and finished and/or proper storage facilities and conditions can be provided and guaranteed stable according to FieldTurf USA, Inc. recommendations.
- B. Storage:
  - 1. Store the material in a secure, clean and dry location.
  - 2. Maintain temperature between 55° and 85° Fahrenheit.
  - 3. Store the indoor resilient athletic surfacing rolls in an upright position on a smooth flat surface immediately upon delivery to jobsite.
  - 4. Rolls shipped in rigid protective cardboard containers can be laid horizontally prior to unpacking and installation.

1.5 *PROJECT/SITE CONDITIONS*

- A. It is the responsibility of the general contractor/construction manager to maintain project/site conditions acceptable for the installation of the indoor resilient multipurpose flooring.
- B. The area in which the indoor resilient multipurpose surfacing will be installed shall be dry and weather tight. Permanent heat, light and ventilation shall be installed and operable.
- C. All other trades shall have completed their work prior to the installation of the resilient athletic flooring. The general contractor or construction manager shall maintain a secure and clean working environment before, during and after the installation.
- D. Maintain a stable room temperature of at least 65°F for a minimum of one (1) week prior to, during and thereafter installation.
- E. An effective low-permeance vapor barrier is placed directly beneath the concrete subfloor. For "on" or "below grade" installations, it is recommended to provide a permanent vapor barrier resistant to long term hydrostatic pressure/moisture exposure. Protrusions should be sealed to prevent moisture migration into the slab. Moisture should not be allowed to enter the slab after the completed construction.
- F. Concrete subfloor surface pH level within the 7 to 11 range dependent upon installation type.
- G. Concrete subfloor should be no greater than 1/8" within a 10 ft diameter. This tolerance can be measured in accordance with ASTM E1155. A specified (F<sub>F</sub>) of 50 and an (F<sub>L</sub>) of 30 should reach this degree of floor flatness and floor level. There is no numerical correlation between F numbers and the deviation from the straight



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edge. However, the above specified numbers should achieve a flat floor with minimal deviation in the slab. Reference ACI 117 and ACI 302.1R. The general contractor should provide a certificate of compliance with the above recommendations.

- H. Concrete subfloor must be clean and free of all foreign materials or objects including, but not limited to, curing compounds and sealers.
- I. Fill cracks, grooves, voids, depressions, and other minor imperfections. Follow the manufacturer's directions. Moveable joints must be treated utilizing specific transitioning joint devices depending upon the architect's recommendations. Follow current ASTM F710 guidelines for the preparation of concrete slabs to receive resilient flooring.
- J. Refer to ACI 302.2R "Guidelines for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials" for concrete design and construction.
- K. Concrete slab shall be fortified with continual steel reinforcement. Fiber reinforcement alone shall not be considered adequate fortification.

1.6 *WARRANTY*

- A. Special Limited Warranty:
  - 1. Manufacturer's standard form in which manufacturer agrees to repair or replace sports flooring including labor that fails within specified warranty period.
- B. Material warranty must be direct from the product manufacturer.
  - 1. Material warranties must come from original manufacturer or division thereof. Private label warranties from distributors or brokers are not valid. Supply original point of manufacturing upon request.
- C. Failures include, but are not limited to, the following:
  - 1. Material manufacturing defects.
  - 2. Surface wear and deterioration to the point of wear-through of wear layer per ASTM F410/ASTM F1303.
  - 3. Failure due to substrate moisture exposure exceeding 98 percent relative humidity when tested according to ASTM F2170.
- D. Warranty Period:
  - 1. For material defects and surface wear-through: **25** years from date of substantial completion.
  - 2. For moisture vapor tolerance: **25** years from date of substantial completion.
- E. Installer's Limited Warranty:
  - 1. Installer's standard form in which installer agrees to repair or replace sports flooring that fails due to poor workmanship or faulty installation within the specified warranty period.
  - 2. Warranty Period: 2 years from date of substantial completion.

1.7 *ADDITIONAL MATERIALS*

- A. Furnish to the owner additional materials containing a total of at least 1% of each different color or design of the indoor resilient athletic surfacing used on the project.

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

1.8 *LEED™ CERTIFICATION*

- A. The indoor resilient athletic surfacing should be able to help this facility to achieve points towards *LEED™ certification*. Flooring system must be certified by FloorScore.
- B. LEED categories positively affected by the indoor resilient athletic surfacing:

<b>LEED™ V4 Credit</b>		Contribution
Materials & Resources: Building Product Disclosure & Optimization (BPDO)		
MRC3: Sourcing of Raw Materials	Options 1 & 2	2 Points
MRC4: Material Ingredients	Option 1	1 Point
MRC5: Construction and Demolition Management	Reclamation and Recycling	ReStart® Program
Indoor Environmental Quality		
EQc2: Low-Emitting Materials	TVOC: 0.5 mg/m <sup>3</sup> or less	FloorScore®

***PART 2 - PRODUCTS***

2.1 *MANUFACTURERS*

- A. The basis of the design for the indoor resilient multipurpose surfacing is Omnisports Active+ as manufactured by Tarkett.
- B. All other installation accessories and related components must be either made or approved by the indoor resilient athletic surfacing manufacturer.
- C. Other products may be approved as equal if deemed qualified and submitted in accordance with the General Conditions.
- D. Test reports confirming compliance from an independent sports laboratory must be provided along with samples, technical data, installation, maintenance, and warranty prior to acceptance as an alternative product.

2.2 *MATERIALS*

- A. Omnisports Active+ - Prefabricated sport surface 8.1 mm (0.14") with wood flooring design, single surface embossing and Extreme Three (3) Layers technology (X3LT) as supplied by Tarkett.
  - 1. Embossing of wood design and solid colors must be the same; varying embossing or surface textures will not be allowed.
  - 2. Printing of wood design shall closely resemble standard wood strip flooring in size, color, board length, and grain appearance.
  - 3. Surface embossing combined with TopClean XP must offer proper balance of surface friction per the ASTM F2772.
  - 4. Surface embossing combined with TopClean XP must provide resistance to stains and scratches. Surface profile must not incorporate linear embossing.
  - 5. The wood design shall be protected by a clear layer of pure PVC (Polyvinyl Chloride) and TopClean XP, a factory-applied UV cured urethane treatment.
  - 6. Extreme Three (3) Layers technology (X3LT) includes Omnisports XCS cushion, glass veil and calendared sheet must offer improved shock absorbing comfort while providing better indentation recovery

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

7. The XCS cushion force reduction layer shall be high-density closed cell PVC foam with honeycomb embossing, and is applied in one continuous manufacturing process.
8. Laminated or adhered foam layers will not be allowed.
9. Field constructed products will not be accepted.

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

- A. Physical properties of the indoor resilient athletic surfacing shall conform to the following minimums:

Width	—	6' 6" (2 m)
Length	—	85' (25.9m) approx.
Wear Layer	—	2 mm
Total Thickness	—	8.1 mm
Wear Layer	Type 1– Grade 1	ASTM F1303/F410
Vertical Deformation	PASSED	ASTM F2772
Rolling Load	PASSED	0.30 (EN 1569 {11/1999})
Surface Finish Effect	PASSED	ASTM F2772 (80 – 110)
Chemical Resistance	Excellent	ASTM F925
Impact Resistance	PASSED	EN 1717
Abrasion Resistance	PASSED	0.10 (EN ISO 5470-1 {06/1999})
Static Load Limit	PASSED	ASTM F970- Load 175 Lbs
Sound Insulation	Excellent	+/- 19 dB (ISO 717/2)
In-Room Sound Insulation	Excellent	61dB (NF S31-074)
Ball Rebound	PASSED	ASTM F2772 > 90%
Force Reduction	PASSED	ASTM F2772 Class 3
Fire Rating	PASSED	ASTM E648 Class 1
Microbial Assays Test	No Growth	G21 ASTM - Backing
Asthma and Allergy Friendly™	ASP: 05-01/101	Certified Compliant
Phthalate-free technology	—	YES
REACH Compliant	—	YES
Heavy Metals	—	NO
ISO 9001	—	YES
ISO 14001	—	YES

1. Color: As available from the indoor resilient athletic surfacing manufacturer's standard range.
  2. Hardwood Design Series: A wood look design as available from the indoor resilient athletic surfacing manufacturer's standard range.
  3. Texture: Texture to remain consistent between solid colors and wood design when blending colors.
- C. Tarkolay – A high quality low permeance slip sheet vapor retarder designed to separate the installed system from the substrate below.
1. Tarkolay as manufactured by Tarkett can be used below, on, or above grade substrates that experience elevated moisture conditions.
  2. Moisture tolerances shall have no limitation per ASTM F2170. Physical properties of the indoor resilient athletic surfacing shall conform to the following minimums:

Width	—	6' 6" (2 m)
Length	—	147'7" (45 m) approx.
Total Thickness	—	1.3 mm
Dimensional Stability	PASSED	.01% (EN 1434)
Permeance	Excellent	<0.20 (ASTM E96)

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

- D. Welding Rod: As supplied by the indoor resilient athletic surfacing manufacturer or supplier.
  - 1. Color to blend with the indoor resilient athletic surfacing color or design.
  - 2. All seams shall be welded to create a monolithic and impermeable surface.
- E. Adhesive: As approved by the indoor resilient athletic surfacing manufacturer.
- F. Game Line Paint and Primer: As approved by the indoor resilient athletic surfacing manufacturer.

***PART 3 - EXECUTION***

**3.1 EXAMINATION**

- A. It is the responsibility of the general contractor/construction manager to ensure that project/site conditions are acceptable for the installation of the indoor resilient athletic flooring.
- B. Verify that the area in which the indoor resilient athletic surfacing will be installed is dry and weather tight. Verify that permanent heat, light and ventilation are installed and operable.
- C. Verify that all other work that could cause damage, dirt and dust or interrupt the normal pace of the indoor resilient athletic flooring installation is completed or suspended.
- D. Verify that there is a stable room temperature of at least 65°F.
- E. Verify that there are no foreign materials or objects on the subfloor and that the subfloor is clean and ready for installation.
- F. Installation with Tarkolay to Concrete Subfloor : moisture content no limitation when tested per ASTM F2170.
- G. Follow Fieldturf USA, Inc. installation recommendations.
- H. Do not average the results of the tests. Report all field test results in writing to the General Contractor, Architect, and End User prior to installation.
- I. Verify that the concrete subfloor surface pH level is within the 7 - 11 range.
- J. Document the results confirming the slab is within manufacturer's tolerances for slab deviation.

**3.2 PREPARATION OF SURFACES**

- A. Sand the entire surface of the concrete slab.
- B. Sweep the concrete slab so as to remove all dirt and dust. If a sweeping compound is to be used it must be a sweeping compound that does not contain oil or other items that may inhibit the adhesive bond.
- C. Slab must be dust free. In the event that dust impairs adhesive bond, priming the slab prior to application of adhesive may be necessary. Follow installation guidelines.
- D. Follow OSHA guidelines.

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

3.3 *INSTALLATION*

- A. The installation area shall be closed to all traffic and activity for a period to be set by the indoor resilient athletic surfacing installer. The indoor resilient athletic surfacing installation shall not begin until the installer is familiar with the existing conditions.
- B. All necessary precautions should be taken to minimize noise, smell, dust, the use of hazardous materials and any other items that may inconvenience others.
- C. Install the indoor resilient athletic surfacing in strict accordance with the indoor resilient athletic surfacing manufacturer's written instructions.
- D. Install the indoor resilient athletic surfacing minimizing cross seams. Provide a seam diagram during the submittal process for approval prior to installation. Vinyl Sheet Flooring Seams: Comply with ASTM F 1516. Rout joints and heat weld to permanently and seamlessly fuse sections together.
- E. Paint game lines using approved game line paint primer and game line paint in strict accordance with the game line paint manufacturer's instructions.
- F. Install appropriate threshold plates or transition strips where necessary.

3.5 *CLEANING*

- A. Remove all unused materials, tools, and equipment and dispose of any debris properly. Clean the indoor resilient athletic surfacing in accordance with the manufacturer's instructions.

3.6 *PROTECTION*

- A. If required, protect the indoor resilient athletic surfacing from damage using coverings approved by the manufacturer until acceptance of work by the customer or their authorized representative.

3.7 *RELATED STANDARDS AND GUIDELINES*

- A. ASTM F2170 "Standard Test Method for Determining Relative Humidity In Concrete Floor Slabs Using In-Situ Probes"
- B. ASTM F710 "Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring"
- C. ACI 302.2R-06 "Guideline for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials"
- D. ASTM F2772-11 "Standard Specification for Athletic Performance Properties of Indoor Sports Floor Systems"

**END OF SECTION**

**SECTION 09 65 66**  
**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

***PART 1 – GENERAL***

1.1 *SECTION INCLUDES*

- A. Supply and installation of the indoor resilient multipurpose surfacing
- B. Application of the game lines
- C. References for the correct construction and preparation of concrete slabs to receive resilient flooring.

1.2 *SUBMITTALS*

- A. Product Data:
  - 1. Manufacturer's promotional brochures, specifications and installation instructions
- B. Manufacturer Certifications:
  - 1. Provide certification that accurately identifies the Original Equipment Manufacturer (OEM) of flooring furnished for this project including manufacturer's name, address and factory location.
  - 2. Suppliers of private label flooring for this project must identify themselves as such and fully disclose the OEM information listed above.
  - 3. All "manufacturer" requirements in these specifications must be complied with by the OEM, including warranties, certifications, qualifications, product data, test results, environmental requirements, performance data, etc.
- C. Samples:
  - 1. Submit for selection and approval three (3) sets of the indoor resilient multipurpose surfacing, manufacturer's brochures, samples or sample boards of all of the available colors, textures and styles.
  - 2. Submit color samples of all the available game line paint colors for selection and approval.
- D. Closeout Submittals:
  - 1. Submit three (3) copies of the indoor resilient multipurpose surfacing and manufacturer's maintenance instructions.
  - 2. Submit three (3) copies of the material and installation warranties as specified.

1.3 *QUALITY ASSURANCE*

- A. Qualifications:
  - 1. The indoor resilient multipurpose surfacing shall have been actively marketed for a minimum of ten (10) years.
  - 2. The indoor resilient multipurpose surfacing shall be manufactured in an ISO 9001 certified plant.
  - 3. The indoor resilient multipurpose surfacing shall be manufactured in an ISO 14001 certified plant.
  - 4. The indoor resilient multipurpose surfacing supplier shall be an established firm, experienced in the field, and competent in the techniques required by the manufacturer.
  - 5. The installer of the indoor resilient multipurpose surfacing shall have a minimum of five (5) years of experience in the field installing indoor resilient multipurpose surfacing and have worked on at least five (5) projects of similar size, type and complexity.

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

- B. Certifications:
  - 1. Installer to submit the indoor resilient athletic surfacing manufacturer's certification attesting that they are a trained installer of the indoor resilient multipurpose surfacing.
  - 2. The indoor resilient multipurpose surfacing manufacturer to submit official ISO 9001 certification for the facility in which the indoor resilient multipurpose surfacing is manufactured.
- C. Testing:
  - 1. Tests shall be relative for multi-purpose use with certificates from independent testing resources to be made available upon request.
  - 2. Test results shall be no more than 5 years old and performed according to ASTM standard testing procedures.

1.4 *DELIVERY, STORAGE AND HANDLING*

- A. Delivery:

Material shall not be delivered until all related work is in place and finished and/or proper storage facilities and conditions can be provided and guaranteed stable according to FieldTurf USA, Inc. recommendations.
- B. Storage:
  - 1. Store the material in a secure, clean and dry location.
  - 2. Maintain temperature between 55° and 85° Fahrenheit.
  - 3. Store the indoor resilient athletic surfacing rolls in an upright position on a smooth flat surface immediately upon delivery to jobsite.
  - 4. Rolls shipped in rigid protective cardboard containers can be laid horizontally prior to unpacking and installation.

1.5 *PROJECT/SITE CONDITIONS*

- A. It is the responsibility of the general contractor/construction manager to maintain project/site conditions acceptable for the installation of the indoor resilient multipurpose flooring.
- B. The area in which the indoor resilient multipurpose surfacing will be installed shall be dry and weather tight. Permanent heat, light and ventilation shall be installed and operable.
- C. All other trades shall have completed their work prior to the installation of the resilient athletic flooring. The general contractor or construction manager shall maintain a secure and clean working environment before, during and after the installation.
- D. Maintain a stable room temperature of at least 65°F for a minimum of one (1) week prior to, during and thereafter installation.
- E. An effective low-permeance vapor barrier is placed directly beneath the concrete subfloor. For "on" or "below grade" installations, it is recommended to provide a permanent vapor barrier resistant to long term hydrostatic pressure/moisture exposure. Protrusions should be sealed to prevent moisture migration into the slab. Moisture should not be allowed to enter the slab after the completed construction.
- F. Concrete subfloor surface pH level within the 7 to 11 range dependent upon installation type.
- G. Concrete subfloor should be no greater than 1/8" within a 10 ft diameter. This tolerance can be measured in accordance with ASTM E1155. A specified (F<sub>F</sub>) of 50 and an (F<sub>L</sub>) of 30 should reach this degree of floor flatness and floor level. There is no numerical correlation between F numbers and the deviation from the straight



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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

edge. However, the above specified numbers should achieve a flat floor with minimal deviation in the slab. Reference ACI 117 and ACI 302.1R. The general contractor should provide a certificate of compliance with the above recommendations.

- H. Concrete subfloor must be clean and free of all foreign materials or objects including, but not limited to, curing compounds and sealers.
- I. Fill cracks, grooves, voids, depressions, and other minor imperfections. Follow the manufacturer's directions. Moveable joints must be treated utilizing specific transitioning joint devices depending upon the architect's recommendations. Follow current ASTM F710 guidelines for the preparation of concrete slabs to receive resilient flooring.
- J. Refer to ACI 302.2R "Guidelines for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials" for concrete design and construction.
- K. Concrete slab shall be fortified with continual steel reinforcement. Fiber reinforcement alone shall not be considered adequate fortification.

1.6 *WARRANTY*

- A. Special Limited Warranty:
  - 1. Manufacturer's standard form in which manufacturer agrees to repair or replace sports flooring including labor that fails within specified warranty period.
- B. Material warranty must be direct from the product manufacturer.
  - 1. Material warranties from separate or third party insurance providers are not valid.
  - 2. Material warranties must come from original manufacturer or division thereof. Private label warranties from distributors or brokers are not valid. Supply original point of manufacturing upon request.
- C. Failures include, but are not limited to, the following:
  - 1. Material manufacturing defects.
  - 2. Surface wear and deterioration to the point of wear-through of wear layer per ASTM F410/ASTM F1303.
  - 3. Failure due to substrate moisture exposure exceeding 80 percent relative humidity when tested according to ASTM F2170.
- D. Warranty Period:
  - 1. For material defects and surface wear-through: **15** years from date of substantial completion.
  - 2. For moisture vapor tolerance: **10** years from date of substantial completion.
- E. Installer's Limited Warranty:
  - 1. Installer's standard form in which installer agrees to repair or replace sports flooring that fails due to poor workmanship or faulty installation within the specified warranty period.
  - 2. Warranty Period: 2 years from date of substantial completion.

1.7 *ADDITIONAL MATERIALS*

- A. Furnish to the owner additional materials containing a total of at least 1% of each different color or design of the indoor resilient athletic surfacing used on the project.

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

1.8 *LEED™ CERTIFICATION*

- A. The indoor resilient athletic surfacing should be able to help this facility to achieve points towards *LEED™ certification*. Flooring system must be certified by FloorScore.
- B. LEED categories positively affected by the indoor resilient athletic surfacing:

<b>LEED™ V4 Credit</b>		Contribution
Materials & Resources: Building Product Disclosure & Optimization (BPDO)		
MRC3: Sourcing of Raw Materials	Options 1 & 2	2 Points
MRC4: Material Ingredients	Option 1	1 Point
MRC5: Construction and Demolition Management	Reclamation and Recycling	ReStart® Program
Indoor Environmental Quality		
EQc2: Low-Emitting Materials	TVOC: 0.5 mg/m <sup>3</sup> or less	FloorScore®

**PART 2 - PRODUCTS**

2.1 *MANUFACTURERS*

- A. The basis of the design for the indoor resilient multipurpose surfacing is Omnisports 2.0 mm and Lumaflex Elite system as manufactured by Tarkett.
- B. All other installation accessories and related components must be either made or approved by the indoor resilient athletic surfacing manufacturer.
- C. Other products may be approved as equal if deemed qualified and submitted in accordance with the General Conditions.
- D. Test reports confirming compliance from an independent sports laboratory must be provided along with samples, technical data, installation, maintenance, and warranty prior to acceptance as an alternative product.

2.2 *MATERIALS*

- A. Omnisports 2.0 mm - Prefabricated sport surface 2.0 mm (0.08") with wood flooring design and slightly textured embossed surface as supplied by Tarkett.
  - 1. Embossing of wood design and solid colors must be the same; varying embossing or surface textures will not be allowed.
  - 2. Printing of wood design shall closely resemble standard wood strip flooring in size, color, board length, and grain appearance.
  - 3. The wood design shall be protected by a clear layer of pure PVC (Polyvinyl Chloride) and TopClean xp, a factory-applied UV cured urethane treatment.
  - 4. Intermediate layers shall be fortified with a non-woven fiberglass grid for increased dimensional stability.
  - 5. The Lumaflex Elite System shall incorporate Lumaflex Elite double tongue and grooved multi-ply engineered panels, force reduction cushion, and appropriate vapor retarder.

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B. Physical properties of the indoor resilient athletic surfacing shall conform to the following minimums:

Width	—	6' 6" (2 m)
Length	—	85' (25.9m) approx.
Wear Layer	—	2 mm
Total Thickness	—	2.0 mm
Total Combined Thickness		1 ¼" (33 mm approx.)
Wear Layer	Type 1– Grade 1	ASTM F1303/F410
Rolling Load	PASSED	0.30 (EN 1569 {11/1999})
Force Reduction	PASSED	ASTM F2772 Class 5
Surface Finish Effect	PASSED	ASTM F2772 (80 – 110)
Vertical Deformation	PASSED	ASTM F2772
Ball Rebound	PASSED	ASTM F2772 > 90%
Chemical Resistance	Excellent	ASTM F925
Impact Resistance	PASSED	EN 1717
Abrasion Resistance	PASSED	0.10 (EN ISO 5470-1 {06/1999})
Static Load Limit	PASSED	ASTM F970- Load 175 Lbs
Phthalate-free technology	—	YES
REACH Compliant	—	YES
Heavy Metals	—	NO
ISO 9001	—	YES
ISO 14001	—	YES

1. Color: As available from the indoor resilient athletic surfacing manufacturer's standard range.
  2. Hardwood Design Series: A wood look design as available from the indoor resilient athletic surfacing manufacturer's standard range.
  3. Texture: Texture to remain consistent between solid colors and wood design when blending colors.
- C. Welding Rod: As supplied by the indoor resilient athletic surfacing manufacturer or supplier.
1. Color to blend with the indoor resilient athletic surfacing color or design.
  2. All seams shall be welded to create a monolithic and impermeable surface.
- D. Adhesive: As approved by the indoor resilient athletic surfacing manufacturer.
- E. Game Line Paint and Primer: As approved by the indoor resilient athletic surfacing manufacturer.

**SECTION 09 65 66**  
**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

***PART 3 - EXECUTION***

3.1 *EXAMINATION*

- A. It is the responsibility of the general contractor/construction manager to ensure that project/site conditions are acceptable for the installation of the indoor resilient athletic flooring.
- B. Verify that the area in which the indoor resilient athletic surfacing will be installed is dry and weather tight. Verify that permanent heat, light and ventilation are installed and operable.
- C. Verify that all other work that could cause damage, dirt and dust or interrupt the normal pace of the indoor resilient athletic flooring installation is completed or suspended.
- D. Verify that there is a stable room temperature of at least 65°F.
- E. Verify that there are no foreign materials or objects on the subfloor and that the subfloor is clean and ready for installation.
- F. Concrete Subfloor: moisture content less than 85% RH when tested per ASTM F2170.
- G. Follow Fieldturf USA, Inc. installation recommendations.
- H. Do not average the results of the tests. Report all field test results in writing to the General Contractor, Architect, and End User prior to installation.
- I. Verify that the concrete subfloor surface pH level is within the 7 - 11 range.
- J. Document the results confirming the slab is within manufacturer's tolerances for slab deviation.

3.2 *PREPARATION OF SURFACES*

- A. Sand the entire surface of the concrete slab.
- B. Sweep the concrete slab so as to remove all dirt and dust. If a sweeping compound is to be used it must be a sweeping compound that does not contain oil or other items that may inhibit the adhesive bond.
- C. Slab must be dust free. In the event that dust impairs adhesive bond, priming the slab prior to application of adhesive may be necessary. Follow installation guidelines.
- D. Follow OSHA guidelines.

3.3 *INSTALLATION*

- A. The installation area shall be closed to all traffic and activity for a period to be set by the indoor resilient athletic surfacing installer. The indoor resilient athletic surfacing installation shall not begin until the installer is familiar with the existing conditions.
- B. All necessary precautions should be taken to minimize noise, smell, dust, the use of hazardous materials and any other items that may inconvenience others.
- C. Install the indoor resilient athletic surfacing in strict accordance with the indoor resilient athletic surfacing manufacturer's written instructions.
- D. Install the indoor resilient athletic surfacing minimizing cross seams. Provide a seam diagram during the submittal process for approval prior to installation. Vinyl Sheet Flooring Seams: Comply with ASTM F 1516. Rout joints and heat weld to permanently and seamlessly fuse sections together.
- E. Paint game lines using approved game line paint primer and game line paint in strict accordance with the game line paint manufacturer's instructions.
- F. Install appropriate threshold plates or transition strips where necessary.

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

2.0 *CLEANING*

- A. Remove all unused materials, tools, and equipment and dispose of any debris properly. Clean the indoor resilient athletic surfacing in accordance with the manufacturer's instructions.

3.6 *PROTECTION*

- A. If required, protect the indoor resilient athletic surfacing from damage using coverings approved by the manufacturer until acceptance of work by the customer or their authorized representative.

3.7 *RELATED STANDARDS AND GUIDELINES*

- A. ASTM F2170 "Standard Test Method for Determining Relative Humidity In Concrete Floor Slabs Using In-Situ Probes"
- B. ASTM F710 "Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring"
- C. ACI 302.2R-06 "Guideline for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials"
- D. ASTM F2772-11 "Standard Specification for Athletic Performance Properties of Indoor Sports Floor Systems"

**END OF SECTION**

**SECTION 09 65 66**  
**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

***PART 1 – GENERAL***

1.1 *SECTION INCLUDES*

- A. Supply and installation of the indoor resilient multipurpose surfacing
- B. Application of the game lines
- C. References for the correct construction and preparation of concrete slabs to receive resilient flooring.

1.2 *SUBMITTALS*

- A. Product Data:
  - 1. Manufacturer's promotional brochures, specifications and installation instructions
- B. Manufacturer Certifications:
  - 1. Provide certification that accurately identifies the Original Equipment Manufacturer (OEM) of flooring furnished for this project including manufacturer's name, address and factory location.
  - 2. Suppliers of private label flooring for this project must identify themselves as such and fully disclose the OEM information listed above.
  - 3. All "manufacturer" requirements in these specifications must be complied with by the OEM, including warranties, certifications, qualifications, product data, test results, environmental requirements, performance data, etc.
- C. Samples:
  - 1. Submit for selection and approval three (3) sets of the indoor resilient multipurpose surfacing, manufacturer's brochures, samples or sample boards of all of the available colors, textures and styles.
  - 2. Submit color samples of all the available game line paint colors for selection and approval.
- D. Closeout Submittals:
  - 1. Submit three (3) copies of the indoor resilient multipurpose surfacing and manufacturer's maintenance instructions.
  - 2. Submit three (3) copies of the material and installation warranties as specified.

1.3 *QUALITY ASSURANCE*

- A. Qualifications:
  - 1. The indoor resilient multipurpose surfacing shall have been actively marketed for a minimum of ten (10) years.
  - 2. The indoor resilient multipurpose surfacing shall be manufactured in an ISO 9001 certified plant.
  - 3. The indoor resilient multipurpose surfacing shall be manufactured in an ISO 14001 certified plant.
  - 4. The indoor resilient multipurpose surfacing supplier shall be an established firm, experienced in the field, and competent in the techniques required by the manufacturer.
  - 5. The installer of the indoor resilient multipurpose surfacing shall have a minimum of five (5) years of experience in the field installing indoor resilient multipurpose surfacing and have worked on at least five (5) projects of similar size, type and complexity.

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

- B. Certifications:
  - 1. Installer to submit the indoor resilient athletic surfacing manufacturer's certification attesting that they are a trained installer of the indoor resilient multipurpose surfacing.
  - 2. The indoor resilient multipurpose surfacing manufacturer to submit official ISO 9001 certification for the facility in which the indoor resilient multipurpose surfacing is manufactured.
- C. Testing:
  - 1. Tests shall be relative for multi-purpose use with certificates from independent testing resources to be made available upon request.
  - 2. Test results shall be no more than 5 years old and performed according to ASTM standard testing procedures.

1.4 *DELIVERY, STORAGE AND HANDLING*

- A. Delivery:

Material shall not be delivered until all related work is in place and finished and/or proper storage facilities and conditions can be provided and guaranteed stable according to FieldTurf USA, Inc. recommendations.
- B. Storage:
  - 1. Store the material in a secure, clean and dry location.
  - 2. Maintain temperature between 55° and 85° Fahrenheit.
  - 3. Store the indoor resilient athletic surfacing rolls in an upright position on a smooth flat surface immediately upon delivery to jobsite.
  - 4. Rolls shipped in rigid protective cardboard containers can be laid horizontally prior to unpacking and installation.

1.5 *PROJECT/SITE CONDITIONS*

- A. It is the responsibility of the general contractor/construction manager to maintain project/site conditions acceptable for the installation of the indoor resilient multipurpose flooring.
- B. The area in which the indoor resilient multipurpose surfacing will be installed shall be dry and weather tight. Permanent heat, light and ventilation shall be installed and operable.
- C. All other trades shall have completed their work prior to the installation of the resilient athletic flooring. The general contractor or construction manager shall maintain a secure and clean working environment before, during and after the installation.
- D. Maintain a stable room temperature of at least 65°F for a minimum of one (1) week prior to, during and thereafter installation.
- E. An effective low-permeance vapor barrier is placed directly beneath the concrete subfloor. For "on" or "below grade" installations, it is recommended to provide a permanent vapor barrier resistant to long term hydrostatic pressure/moisture exposure. Protrusions should be sealed to prevent moisture migration into the slab. Moisture should not be allowed to enter the slab after the completed construction.
- F. Concrete subfloor surface pH level within the 7 to 11 range dependent upon installation type.
- G. Concrete subfloor should be no greater than 1/8" within a 10 ft diameter. This tolerance can be measured in accordance with ASTM E1155. A specified (F<sub>F</sub>) of 50 and an (F<sub>L</sub>) of 30 should reach this degree of floor flatness and floor level. There is no numerical correlation between F numbers and the deviation from the straight

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edge. However, the above specified numbers should achieve a flat floor with minimal deviation in the slab. Reference ACI 117 and ACI 302.1R. The general contractor should provide a certificate of compliance with the above recommendations.

- H. Concrete subfloor must be clean and free of all foreign materials or objects including, but not limited to, curing compounds and sealers.
- I. Fill cracks, grooves, voids, depressions, and other minor imperfections. Follow the manufacturer's directions. Moveable joints must be treated utilizing specific transitioning joint devices depending upon the architect's recommendations. Follow current ASTM F710 guidelines for the preparation of concrete slabs to receive resilient flooring.
- J. Refer to ACI 302.2R "Guidelines for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials" for concrete design and construction.
- K. Concrete slab shall be fortified with continual steel reinforcement. Fiber reinforcement alone shall not be considered adequate fortification.

1.6 *WARRANTY*

- A. Special Limited Warranty:
  - 1. Manufacturer's standard form in which manufacturer agrees to repair or replace sports flooring including labor that fails within specified warranty period.
- B. Material warranty must be direct from the product manufacturer.
  - 1. Material warranties from separate or third party insurance providers are not valid.
  - 2. Material warranties must come from original manufacturer or division thereof. Private label warranties from distributors or brokers are not valid. Supply original point of manufacturing upon request.
- C. Failures include, but are not limited to, the following:
  - 1. Material manufacturing defects.
  - 2. Surface wear and deterioration to the point of wear-through of wear layer per ASTM F410/ASTM F1303.
  - 3. Failure due to substrate moisture exposure exceeding 80 percent relative humidity when tested according to ASTM F2170.
- D. Warranty Period:
  - 1. For material defects and surface wear-through: **15** years from date of substantial completion.
  - 2. For moisture vapor tolerance: **10** years from date of substantial completion.
- E. Installer's Limited Warranty:
  - 1. Installer's standard form in which installer agrees to repair or replace sports flooring that fails due to poor workmanship or faulty installation within the specified warranty period.
  - 2. Warranty Period: 2 years from date of substantial completion.

1.7 *ADDITIONAL MATERIALS*

- A. Furnish to the owner additional materials containing a total of at least 1% of each different color or design of the indoor resilient athletic surfacing used on the project.



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1.8 *LEED™ CERTIFICATION*

- A. The indoor resilient athletic surfacing should be able to help this facility to achieve points towards *LEED™ certification*. Flooring system must be certified by FloorScore.
- B. LEED categories positively affected by the indoor resilient athletic surfacing:

<b>LEED™ V4 Credit</b>		Contribution
Materials & Resources: Building Product Disclosure & Optimization (BPDO)		
MRC3: Sourcing of Raw Materials	Options 1 & 2	2 Points
MRC4: Material Ingredients	Option 1	1 Point
MRC5: Construction and Demolition Management	Reclamation and Recycling	ReStart® Program
Indoor Environmental Quality		
EQc2: Low-Emitting Materials	TVOC: 0.5 mg/m <sup>3</sup> or less	FloorScore®

**PART 2 - PRODUCTS**

2.1 *MANUFACTURERS*

- A. The basis of the design for the indoor resilient multipurpose surfacing is Omnisports 2.0 mm and Lumaflex Fit system as manufactured by Tarkett.
- B. All other installation accessories and related components must be either made or approved by the indoor resilient athletic surfacing manufacturer.
- C. Other products may be approved as equal if deemed qualified and submitted in accordance with the General Conditions.
- D. Test reports confirming compliance from an independent sports laboratory must be provided along with samples, technical data, installation, maintenance, and warranty prior to acceptance as an alternative product.

2.2 *MATERIALS*

- A. Omnisports 2.0 mm - Prefabricated sport surface 2.0 mm (0.08") with wood flooring design and slightly textured embossed surface as supplied by Tarkett.
  - 1. Embossing of wood design and solid colors must be the same; varying embossing or surface textures will not be allowed.
  - 2. Printing of wood design shall closely resemble standard wood strip flooring in size, color, board length, and grain appearance.
  - 3. The wood design shall be protected by a clear layer of pure PVC (Polyvinyl Chloride) and TopClean xp, a factory-applied UV cured urethane treatment.
  - 4. Intermediate layers shall be fortified with a non-woven fiberglass grid for increased dimensional stability.
  - 5. The Lumaflex Fit System shall incorporate Lumaflex Fit double tongue and grooved multi-ply engineered panels, force reduction cushion, and appropriate vapor retarder.

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B. Physical properties of the indoor resilient athletic surfacing shall conform to the following minimums:

Width	—	6' 6" (2 m)
Length	—	85' (25.9m) approx.
Wear Layer	—	2 mm
Total Thickness	—	2.0 mm
Total Combined Thickness		1 7/8" (46 mm approx.)
Wear Layer	Type 1- Grade 1	ASTM F1303/F410
Rolling Load	PASSED	0.30 (EN 1569 {11/1999})
Force Reduction	PASSED	ASTM F2772 Class 5
Surface Finish Effect	PASSED	ASTM F2772 (80 – 110)
Vertical Deformation	PASSED	ASTM F2772
Ball Rebound	PASSED	ASTM F2772 > 90%
Chemical Resistance	Excellent	ASTM F925
Impact Resistance	PASSED	EN 1717
Abrasion Resistance	PASSED	0.10 (EN ISO 5470-1 {06/1999})
Static Load Limit	PASSED	ASTM F970- Load 175 Lbs
Phthalate-free technology	—	YES
REACH Compliant	—	YES
Heavy Metals	—	NO
ISO 9001	—	YES
ISO 14001	—	YES

1. Color: As available from the indoor resilient athletic surfacing manufacturer's standard range.
  2. Hardwood Design Series: A wood look design as available from the indoor resilient athletic surfacing manufacturer's standard range.
  3. Texture: Texture to remain consistent between solid colors and wood design when blending colors.
- C. Welding Rod: As supplied by the indoor resilient athletic surfacing manufacturer or supplier.
1. Color to blend with the indoor resilient athletic surfacing color or design.
  2. All seams shall be welded to create a monolithic and impermeable surface.
- D. Adhesive: As approved by the indoor resilient athletic surfacing manufacturer.
- E. Game Line Paint and Primer: As approved by the indoor resilient athletic surfacing manufacturer.

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***PART 3 - EXECUTION***

**3.1**     *EXAMINATION*

- A. It is the responsibility of the general contractor/construction manager to ensure that project/site conditions are acceptable for the installation of the indoor resilient athletic flooring.
- B. Verify that the area in which the indoor resilient athletic surfacing will be installed is dry and weather tight. Verify that permanent heat, light and ventilation are installed and operable.
- C. Verify that all other work that could cause damage, dirt and dust or interrupt the normal pace of the indoor resilient athletic flooring installation is completed or suspended.
- D. Verify that there is a stable room temperature of at least 65°F.
- E. Verify that there are no foreign materials or objects on the subfloor and that the subfloor is clean and ready for installation.
- F. Concrete Subfloor: moisture content less than 85% RH when tested per ASTM F2170.
- G. Follow Fieldturf USA, Inc. installation recommendations.
- H. Do not average the results of the tests. Report all field test results in writing to the General Contractor, Architect, and End User prior to installation.
- I. Verify that the concrete subfloor surface pH level is within the 7 - 11 range.
- J. Document the results confirming the slab is within manufacturer's tolerances for slab deviation.

**3.2**     *PREPARATION OF SURFACES*

- A. Sand the entire surface of the concrete slab.
- B. Sweep the concrete slab so as to remove all dirt and dust. If a sweeping compound is to be used it must be a sweeping compound that does not contain oil or other items that may inhibit the adhesive bond.
- C. Slab must be dust free. In the event that dust impairs adhesive bond, priming the slab prior to application of adhesive may be necessary. Follow installation guidelines.
- D. Follow OSHA guidelines.

**3.3**     *INSTALLATION*

- A. The installation area shall be closed to all traffic and activity for a period to be set by the indoor resilient athletic surfacing installer. The indoor resilient athletic surfacing installation shall not begin until the installer is familiar with the existing conditions.
- B. All necessary precautions should be taken to minimize noise, smell, dust, the use of hazardous materials and any other items that may inconvenience others.
- C. Install the indoor resilient athletic surfacing in strict accordance with the indoor resilient athletic surfacing manufacturer's written instructions.
- D. Install the indoor resilient athletic surfacing minimizing cross seams. Provide a seam diagram during the submittal process for approval prior to installation. Vinyl Sheet Flooring Seams: Comply with ASTM F 1516. Rout joints and heat weld to permanently and seamlessly fuse sections together.
- E. Paint game lines using approved game line paint primer and game line paint in strict accordance with the game line paint manufacturer's instructions.
- F. Install appropriate threshold plates or transition strips where necessary.

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2.0 *CLEANING*

- A. Remove all unused materials, tools, and equipment and dispose of any debris properly. Clean the indoor resilient athletic surfacing in accordance with the manufacturer's instructions.

3.6 *PROTECTION*

- A. If required, protect the indoor resilient athletic surfacing from damage using coverings approved by the manufacturer until acceptance of work by the customer or their authorized representative.

3.7 *RELATED STANDARDS AND GUIDELINES*

- A. ASTM F2170 "Standard Test Method for Determining Relative Humidity In Concrete Floor Slabs Using In-Situ Probes"
- B. ASTM F710 "Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring"
- C. ACI 302.2R-06 "Guideline for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials"
- D. ASTM F2772-11 "Standard Specification for Athletic Performance Properties of Indoor Sports Floor Systems"

**END OF SECTION**

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

***PART 1 – GENERAL***

1.1 *SECTION INCLUDES*

- A. Supply and installation of the indoor resilient multipurpose surfacing
- B. Application of the game lines
- C. References for the correct construction and preparation of concrete slabs to receive resilient flooring.

1.2 *SUBMITTALS*

- A. Product Data:
  - 1. Manufacturer's promotional brochures, specifications and installation instructions
- B. Manufacturer Certifications:
  - 1. Provide certification that accurately identifies the Original Equipment Manufacturer (OEM) of flooring furnished for this project including manufacturer's name, address and factory location.
  - 2. Suppliers of private label flooring for this project must identify themselves as such and fully disclose the OEM information listed above.
  - 3. All "manufacturer" requirements in these specifications must be complied with by the OEM, including warranties, certifications, qualifications, product data, test results, environmental requirements, performance data, etc.
- C. Samples:
  - 1. Submit for selection and approval three (3) sets of the indoor resilient multipurpose surfacing, manufacturer's brochures, samples or sample boards of all of the available colors, textures and styles.
  - 2. Submit color samples of all the available game line paint colors for selection and approval.
- D. Closeout Submittals:
  - 1. Submit three (3) copies of the indoor resilient multipurpose surfacing and manufacturer's maintenance instructions.
  - 2. Submit three (3) copies of the material and installation warranties as specified.

1.3 *QUALITY ASSURANCE*

- A. Qualifications:
  - 1. The indoor resilient multipurpose surfacing shall have been actively marketed for a minimum of ten (10) years.
  - 2. The indoor resilient multipurpose surfacing shall be manufactured in an ISO 9001 certified plant.
  - 3. The indoor resilient multipurpose surfacing shall be manufactured in an ISO 14001 certified plant.
  - 4. The indoor resilient multipurpose surfacing supplier shall be an established firm, experienced in the field, and competent in the techniques required by the manufacturer.
  - 5. The installer of the indoor resilient multipurpose surfacing shall have a minimum of five (5) years of experience in the field installing indoor resilient multipurpose surfacing and have worked on at least five (5) projects of similar size, type and complexity.

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- B. Certifications:
  - 1. Installer to submit the indoor resilient athletic surfacing manufacturer's certification attesting that they are a trained installer of the indoor resilient multipurpose surfacing.
  - 2. The indoor resilient multipurpose surfacing manufacturer to submit official ISO 9001 certification for the facility in which the indoor resilient multipurpose surfacing is manufactured.
- C. Testing:
  - 1. Tests shall be relative for multi-purpose use with certificates from independent testing resources to be made available upon request.
  - 2. Test results shall be no more than 5 years old and performed according to ASTM standard testing procedures.

1.4 *DELIVERY, STORAGE AND HANDLING*

- A. Delivery:

Material shall not be delivered until all related work is in place and finished and/or proper storage facilities and conditions can be provided and guaranteed stable according to FieldTurf USA, Inc. recommendations.
- B. Storage:
  - 1. Store the material in a secure, clean and dry location.
  - 2. Maintain temperature between 55° and 85° Fahrenheit.
  - 3. Store the indoor resilient athletic surfacing rolls in an upright position on a smooth flat surface immediately upon delivery to jobsite.
  - 4. Rolls shipped in rigid protective cardboard containers can be laid horizontally prior to unpacking and installation.

1.5 *PROJECT/SITE CONDITIONS*

- A. It is the responsibility of the general contractor/construction manager to maintain project/site conditions acceptable for the installation of the indoor resilient multipurpose flooring.
- B. The area in which the indoor resilient multipurpose surfacing will be installed shall be dry and weather tight. Permanent heat, light and ventilation shall be installed and operable.
- C. All other trades shall have completed their work prior to the installation of the resilient athletic flooring. The general contractor or construction manager shall maintain a secure and clean working environment before, during and after the installation.
- D. Maintain a stable room temperature of at least 65°F for a minimum of one (1) week prior to, during and thereafter installation.
- E. An effective low-permeance vapor barrier is placed directly beneath the concrete subfloor. For "on" or "below grade" installations, it is recommended to provide a permanent vapor barrier resistant to long term hydrostatic pressure/moisture exposure. Protrusions should be sealed to prevent moisture migration into the slab. Moisture should not be allowed to enter the slab after the completed construction.
- F. Concrete subfloor surface pH level within the 7 to 11 range dependent upon installation type.
- G. Concrete subfloor should be no greater than 1/8" within a 10 ft diameter. This tolerance can be measured in accordance with ASTM E1155. A specified (F<sub>F</sub>) of 50 and an (F<sub>L</sub>) of 30 should reach this degree of floor flatness and floor level. There is no numerical correlation between F numbers and the deviation from the straight

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edge. However, the above specified numbers should achieve a flat floor with minimal deviation in the slab. Reference ACI 117 and ACI 302.1R. The general contractor should provide a certificate of compliance with the above recommendations.

- H. Concrete subfloor must be clean and free of all foreign materials or objects including, but not limited to, curing compounds and sealers.
- I. Fill cracks, grooves, voids, depressions, and other minor imperfections. Follow the manufacturer's directions. Moveable joints must be treated utilizing specific transitioning joint devices depending upon the architect's recommendations. Follow current ASTM F710 guidelines for the preparation of concrete slabs to receive resilient flooring.
- J. Refer to ACI 302.2R "Guidelines for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials" for concrete design and construction.
- K. Concrete slab shall be fortified with continual steel reinforcement. Fiber reinforcement alone shall not be considered adequate fortification.

1.6 *WARRANTY*

- A. Special Limited Warranty:
  - 1. Manufacturer's standard form in which manufacturer agrees to repair or replace sports flooring including labor that fails within specified warranty period.
- B. Material warranty must be direct from the product manufacturer.
  - 1. Material warranties from separate or third party insurance providers are not valid.
  - 2. Material warranties must come from original manufacturer or division thereof. Private label warranties from distributors or brokers are not valid. Supply original point of manufacturing upon request.
- C. Failures include, but are not limited to, the following:
  - 1. Material manufacturing defects.
  - 2. Surface wear and deterioration to the point of wear-through of wear layer per ASTM F410/ASTM F1303.
  - 3. Failure due to substrate moisture exposure exceeding 80 percent relative humidity when tested according to ASTM F2170.
- D. Warranty Period:
  - 1. For material defects and surface wear-through: **15** years from date of substantial completion.
  - 2. For moisture vapor tolerance: **10** years from date of substantial completion.
- E. Installer's Limited Warranty:
  - 1. Installer's standard form in which installer agrees to repair or replace sports flooring that fails due to poor workmanship or faulty installation within the specified warranty period.
  - 2. Warranty Period: 2 years from date of substantial completion.

1.7 *ADDITIONAL MATERIALS*

- A. Furnish to the owner additional materials containing a total of at least 1% of each different color or design of the indoor resilient athletic surfacing used on the project.

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1.8 *LEED™ CERTIFICATION*

- A. The indoor resilient athletic surfacing should be able to help this facility to achieve points towards *LEED™ certification*. Flooring system must be certified by FloorScore.
- B. LEED categories positively affected by the indoor resilient athletic surfacing:

<b>LEED™ V4 Credit</b>		Contribution
Materials & Resources: Building Product Disclosure & Optimization (BPDO)		
MRC3: Sourcing of Raw Materials	Options 1 & 2	2 Points
MRC4: Material Ingredients	Option 1	1 Point
MRC5: Construction and Demolition Management	Reclamation and Recycling	ReStart® Program
Indoor Environmental Quality		
EQc2: Low-Emitting Materials	TVOC: 0.5 mg/m <sup>3</sup> or less	FloorScore®

**PART 2 - PRODUCTS**

2.1 *MANUFACTURERS*

- A. The basis of the design for the indoor resilient multipurpose surfacing is Omnisports 2.0 mm and Lumaflex system as manufactured by Tarkett.
- B. All other installation accessories and related components must be either made or approved by the indoor resilient athletic surfacing manufacturer.
- C. Other products may be approved as equal if deemed qualified and submitted in accordance with the General Conditions.
- D. Test reports confirming compliance from an independent sports laboratory must be provided along with samples, technical data, installation, maintenance, and warranty prior to acceptance as an alternative product.

2.2 *MATERIALS*

- A. Omnisports 2.0 mm - Prefabricated sport surface 2.0 mm (0.08") with wood flooring design and slightly textured embossed surface as supplied by Tarkett.
  - 1. Embossing of wood design and solid colors must be the same; varying embossing or surface textures will not be allowed.
  - 2. Printing of wood design shall closely resemble standard wood strip flooring in size, color, board length, and grain appearance.
  - 3. The wood design shall be protected by a clear layer of pure PVC (Polyvinyl Chloride) and TopClean xp, a factory-applied UV cured urethane treatment.
  - 4. Intermediate layers shall be fortified with a non-woven fiberglass grid for increased dimensional stability.
  - 5. The Lumaflex System shall incorporate Lumaflex double tongue and grooved multi-ply engineered panels, force reduction cushion, and appropriate vapor retarder.



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B. Physical properties of the indoor resilient athletic surfacing shall conform to the following minimums:

Width	—	6' 6" (2 m)
Length	—	85' (25.9m) approx.
Wear Layer	—	2 mm
Total Thickness	—	2.0 mm
Total Combined Thickness		1 ¼" (33 mm approx.)
Wear Layer	Type 1– Grade 1	ASTM F1303/F410
Rolling Load	PASSED	0.30 (EN 1569 {11/1999})
Force Reduction	PASSED	ASTM F2772 Class 4
Surface Finish Effect	PASSED	ASTM F2772 (80 – 110)
Vertical Deformation	PASSED	ASTM F2772
Ball Rebound	PASSED	ASTM F2772 > 90%
Chemical Resistance	Excellent	ASTM F925
Impact Resistance	PASSED	EN 1717
Abrasion Resistance	PASSED	0.10 (EN ISO 5470-1 {06/1999})
Static Load Limit	PASSED	ASTM F970- Load 175 Lbs
Fire Rating	PASSED	ASTM E648 Class 1
Phthalate-free technology	—	YES
Lumaflex Foam		GreenGuard Certified
REACH Compliant	—	YES
Heavy Metals	—	NO
ISO 9001	—	YES
ISO 14001	—	YES

1. Color: As available from the indoor resilient athletic surfacing manufacturer's standard range.
  2. Hardwood Design Series: A wood look design as available from the indoor resilient athletic surfacing manufacturer's standard range.
  3. Texture: Texture to remain consistent between solid colors and wood design when blending colors.
- C. Welding Rod: As supplied by the indoor resilient athletic surfacing manufacturer or supplier.
1. Color to blend with the indoor resilient athletic surfacing color or design.
  2. All seams shall be welded to create a monolithic and impermeable surface.
- D. Adhesive: As approved by the indoor resilient athletic surfacing manufacturer.
- E. Game Line Paint and Primer: As approved by the indoor resilient athletic surfacing manufacturer.

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

***PART 3 - EXECUTION***

**3.1**     *EXAMINATION*

- A. It is the responsibility of the general contractor/construction manager to ensure that project/site conditions are acceptable for the installation of the indoor resilient athletic flooring.
- B. Verify that the area in which the indoor resilient athletic surfacing will be installed is dry and weather tight. Verify that permanent heat, light and ventilation are installed and operable.
- C. Verify that all other work that could cause damage, dirt and dust or interrupt the normal pace of the indoor resilient athletic flooring installation is completed or suspended.
- D. Verify that there is a stable room temperature of at least 65°F.
- E. Verify that there are no foreign materials or objects on the subfloor and that the subfloor is clean and ready for installation.
- F. Concrete Subfloor: moisture content less than 85% RH when tested per ASTM F2170.
- G. Follow Fieldturf USA, Inc. installation recommendations.
- H. Do not average the results of the tests. Report all field test results in writing to the General Contractor, Architect, and End User prior to installation.
- I. Verify that the concrete subfloor surface pH level is within the 7 - 11 range.
- J. Document the results confirming the slab is within manufacturer's tolerances for slab deviation.

**3.2**     *PREPARATION OF SURFACES*

- A. Sand the entire surface of the concrete slab.
- B. Sweep the concrete slab so as to remove all dirt and dust. If a sweeping compound is to be used it must be a sweeping compound that does not contain oil or other items that may inhibit the adhesive bond.
- C. Slab must be dust free. In the event that dust impairs adhesive bond, priming the slab prior to application of adhesive may be necessary. Follow installation guidelines.
- D. Follow OSHA guidelines.

**3.3**     *INSTALLATION*

- A. The installation area shall be closed to all traffic and activity for a period to be set by the indoor resilient athletic surfacing installer. The indoor resilient athletic surfacing installation shall not begin until the installer is familiar with the existing conditions.
- B. All necessary precautions should be taken to minimize noise, smell, dust, the use of hazardous materials and any other items that may inconvenience others.
- C. Install the indoor resilient athletic surfacing in strict accordance with the indoor resilient athletic surfacing manufacturer's written instructions.
- D. Install the indoor resilient athletic surfacing minimizing cross seams. Provide a seam diagram during the submittal process for approval prior to installation. Vinyl Sheet Flooring Seams: Comply with ASTM F 1516. Rout joints and heat weld to permanently and seamlessly fuse sections together.
- E. Paint game lines using approved game line paint primer and game line paint in strict accordance with the game line paint manufacturer's instructions.
- F. Install appropriate threshold plates or transition strips where necessary.

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2.0 *CLEANING*

- A. Remove all unused materials, tools, and equipment and dispose of any debris properly. Clean the indoor resilient athletic surfacing in accordance with the manufacturer's instructions.

3.6 *PROTECTION*

- A. If required, protect the indoor resilient athletic surfacing from damage using coverings approved by the manufacturer until acceptance of work by the customer or their authorized representative.

3.7 *RELATED STANDARDS AND GUIDELINES*

- A. ASTM F2170 "Standard Test Method for Determining Relative Humidity In Concrete Floor Slabs Using In-Situ Probes"
- B. ASTM F710 "Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring"
- C. ACI 302.2R-06 "Guideline for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials"
- D. ASTM F2772-11 "Standard Specification for Athletic Performance Properties of Indoor Sports Floor Systems"

**END OF SECTION**

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***PART 1 – GENERAL***

**1.1**     ***SECTION INCLUDES***

- A. Supply and installation of the indoor resilient multipurpose surfacing
- B. Application of the game lines
- C. References for the correct construction and preparation of concrete slabs to receive resilient flooring.

**1.2**     ***SUBMITTALS***

- A. Product Data:
  - 1. Manufacturer's promotional brochures, specifications and installation instructions
- B. Manufacturer Certifications:
  - 1. Provide certification that accurately identifies the Original Equipment Manufacturer (OEM) of flooring furnished for this project including manufacturer's name, address and factory location.
  - 2. Suppliers of private label flooring for this project must identify themselves as such and fully disclose the OEM information listed above.
  - 3. All "manufacturer" requirements in these specifications must be complied with by the OEM, including warranties, certifications, qualifications, product data, test results, environmental requirements, performance data, etc.
- C. Samples:
  - 1. Submit for selection and approval three (3) sets of the indoor resilient multipurpose surfacing, manufacturer's brochures, samples or sample boards of all of the available colors, textures and styles.
  - 2. Submit color samples of all the available game line paint colors for selection and approval.
- D. Closeout Submittals:
  - 1. Submit three (3) copies of the indoor resilient multipurpose surfacing and manufacturer's maintenance instructions.
  - 2. Submit three (3) copies of the material and installation warranties as specified.

**1.3**     ***QUALITY ASSURANCE***

- A. Qualifications:
  - 1. The indoor resilient multipurpose surfacing shall have been actively marketed for a minimum of ten (10) years.
  - 2. The indoor resilient multipurpose surfacing shall be manufactured in an ISO 9001 certified plant.
  - 3. The indoor resilient multipurpose surfacing shall be manufactured in an ISO 14001 certified plant.
  - 4. The indoor resilient multipurpose surfacing supplier shall be an established firm, experienced in the field, and competent in the techniques required by the manufacturer.
  - 5. The installer of the indoor resilient multipurpose surfacing shall have a minimum of five (5) years of experience in the field installing indoor resilient multipurpose surfacing and have worked on at least five (5) projects of similar size, type and complexity.

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- B. Certifications:
  - 1. Installer to submit the indoor resilient athletic surfacing manufacturer's or distributor's certification attesting that they are an approved installer of the indoor resilient multipurpose surfacing.
  - 2. The indoor resilient multipurpose surfacing manufacturer to submit official ISO 9001 certification for the facility in which the indoor resilient multipurpose surfacing is manufactured.
- C. Testing:

Tests shall be relative for multi-purpose use with certificates from independent testing resources to be made available upon request. Test results shall be performed according to ASTM standard testing procedures including ASTM F2772 "Standard Specification for Athletic Performance Properties of Indoor Sports Floor Systems".

1.4 *DELIVERY, STORAGE AND HANDLING*

- A. Delivery:

Material shall not be delivered until all related work is in place and finished and/or proper storage facilities and conditions can be provided and guaranteed stable according to FieldTurf USA, Inc. recommendations.
- B. Storage:
  - 1. Store the material in a secure, clean and dry location.
  - 2. Maintain temperature between 55° and 85° Fahrenheit.
  - 3. Store the indoor resilient athletic surfacing rolls in an upright position on a smooth flat surface immediately upon delivery to jobsite.
  - 4. Rolls shipped in rigid protective cardboard containers can be laid horizontally prior to unpacking and installation.

1.5 *PROJECT/SITE CONDITIONS*

- A. It is the responsibility of the general contractor/construction manager to maintain project/site conditions acceptable for the installation of the indoor resilient multipurpose flooring.
- B. The area in which the indoor resilient multipurpose surfacing will be installed shall be dry and weather tight. Permanent heat, light and ventilation shall be installed and operable.
- C. All other trades shall have completed their work prior to the installation of the resilient athletic flooring. The general contractor or construction manager shall maintain a secure and clean working environment before, during and after the installation.
- D. Maintain a stable room temperature of at least 65°F for a minimum of one (1) week prior to, during and thereafter installation.
- E. An effective low-permeance vapor barrier is placed directly beneath the concrete subfloor. For "on" or "below grade" installations, it is recommended to provide a permanent vapor barrier resistant to long term hydrostatic pressure/moisture exposure. Protrusions should be sealed to prevent moisture migration into the slab. Moisture should not be allowed to enter the slab after the completed construction.
- F. Concrete subfloor surface pH level within the 7 to 11 range dependent upon installation type.
- G. Concrete subfloor should be no greater than 1/8" within a 10 ft diameter. This tolerance can be measured in accordance with ASTM E1155. A specified (F<sub>F</sub>) of 50 and an (F<sub>L</sub>) of 30 should reach this degree of floor flatness and floor level. There is no numerical correlation between F numbers and the deviation from the straight

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edge. However, the above specified numbers should achieve a flat floor with minimal deviation in the slab. Reference ACI 117 and ACI 302.1R. The general contractor should provide a certificate of compliance with the above recommendations.

- H. Concrete subfloor must be clean and free of all foreign materials or objects including, but not limited to, curing compounds and sealers.
- I. Fill cracks, grooves, voids, depressions, and other minor imperfections. Follow the manufacturer's directions. Moveable joints must be treated utilizing specific transitioning joint devices depending upon the architect's recommendations. Follow current ASTM F710 guidelines for the preparation of concrete slabs to receive resilient flooring.
- J. Refer to ACI 302.2R "Guidelines for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials" for concrete design and construction.
- K. Concrete slab shall be fortified with continual steel reinforcement. Fiber reinforcement alone shall not be considered adequate fortification.

1.6 *WARRANTY*

- A. Special Limited Warranty:
  - 1. Manufacturer's standard form in which manufacturer agrees to repair or replace sports flooring including labor that fails within specified warranty period.
- B. Material warranty must be direct from the product manufacturer.
  - 1. Material warranties must come from original manufacturer or division thereof. Private label warranties from distributors or brokers are not valid. Supply original point of manufacturing upon request.
- C. Failures include, but are not limited to, the following:
  - 1. Material manufacturing defects.
  - 2. Surface wear and deterioration to the point of wear-through of wear layer per ASTM F410/ASTM F1303.
  - 3. Failure due to substrate moisture exposure exceeding 98 percent relative humidity when tested according to ASTM F2170.
- D. Warranty Period:
  - 1. For material defects and surface wear-through: **25** years from date of substantial completion.
  - 2. For moisture vapor tolerance: **25** years from date of substantial completion.
- E. Installer's Limited Warranty:
  - 1. Installer's standard form in which installer agrees to repair or replace sports flooring that fails due to poor workmanship or faulty installation within the specified warranty period.
  - 2. Warranty Period: 2 years from date of substantial completion.

1.7 *ADDITIONAL MATERIALS*

- A. Furnish to the owner additional materials containing a total of at least 1% of each different color or design of the indoor resilient athletic surfacing used on the project.

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1.8 *LEED™ CERTIFICATION*

- A. The indoor resilient athletic surfacing should be able to help this facility to achieve points towards *LEED™ certification*. Flooring system must be certified by FloorScore.
- B. LEED categories positively affected by the indoor resilient athletic surfacing:

<b>LEED™ V4 Credit</b>		Contribution
Materials & Resources: Building Product Disclosure & Optimization (BPDO)		
MRc3: Sourcing of Raw Materials	Options 1 & 2	2 Points
MRc4: Material Ingredients	Option 1	1 Point
MRc5: Construction and Demolition Management	Reclamation and Recycling	ReStart® Program
Indoor Environmental Quality		
EQc2: Low-Emitting Materials	TVOC: 0.5 mg/m <sup>3</sup> or less	FloorScore®

***PART 2 - PRODUCTS***

2.1 *MANUFACTURERS*

- A. The basis of the design for the indoor resilient multipurpose surfacing is Omnisports Extreme as manufactured by Tarkett.
- B. All other installation accessories and related components must be either made or approved by the indoor resilient athletic surfacing manufacturer.
- C. Other products may be approved as equal if deemed qualified and submitted in accordance with the General Conditions.
- D. Test reports confirming compliance from an independent sports laboratory must be provided along with samples, technical data, installation, maintenance, and warranty prior to acceptance as an alternative product.

2.2 *MATERIALS*

- A. Omnisports Extreme - Prefabricated sport surface 12 mm (0.47") with wood flooring design and slightly textured embossed surface as supplied by Tarkett.
  - 1. Embossing of wood design and solid colors must be the same; varying embossing or surface textures will not be allowed.
  - 2. Printing of wood design shall closely resemble standard wood strip flooring in size, color, board length, and grain appearance.
  - 3. The wood design shall be protected by a clear layer of pure PVC (Polyvinyl Chloride) and TopClean xp, a factory-applied UV cured urethane treatment.
  - 4. Intermediate layers shall be fortified with a non-woven fiberglass grid for increased dimensional stability.
  - 5. The foam force reduction layer shall be high-density closed cell PVC foam with honeycomb embossing, and is applied in one continuous manufacturing process.
  - 6. Laminated or adhered foam layers will not be allowed.
  - 7. Field constructed products will not be accepted.

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

- A. Physical properties of the indoor resilient athletic surfacing shall conform to the following minimums:

Width	—	6' 6" (2 m)
Length	—	49.2' (15m) approx.
Wear Layer	—	2 mm
Total Thickness	—	12 mm
Wear Layer	Type 1– Grade 1	ASTM F1303/F410
Vertical Deformation	PASSED	ASTM F2772
Rolling Load	PASSED	0.30 (EN 1569 {11/1999})
Surface Finish Effect	PASSED	ASTM F2772 (80 – 110)
Chemical Resistance	Excellent	ASTM F925
Impact Resistance	PASSED	EN 1717
Abrasion Resistance	PASSED	0.10 (EN ISO 5470-1 {06/1999})
Static Load Limit	PASSED	ASTM F970- Load 175 Lbs
Sound Insulation	Excellent	+/- 21 dB (ISO 717/2)
In-Room Sound Insulation	Excellent	61dB (NF S31-074)
Ball Rebound	PASSED	ASTM F2772 > 90%
Force Reduction	PASSED	ASTM F2772 Class 4
Fire Rating	PASSED	ASTM E648 Class 1
Microbial Assays Test	No Growth	G21 ASTM - Backing
Phthalate-free technology	—	YES
REACH Compliant	—	YES
Heavy Metals	—	NO
ISO 9001	—	YES
ISO 14001	—	YES

1. Color: As available from the indoor resilient athletic surfacing manufacturer's standard range.
  2. Hardwood Design Series: High definition printing for a realistic wood surface appearance as available from the indoor resilient athletic surfacing manufacturer's standard range.
  3. Texture: Texture to remain consistent between solid colors and wood design when blending colors.
- C. Welding Rod: As supplied by the indoor resilient athletic surfacing manufacturer or supplier.
1. Color to blend with the indoor resilient athletic surfacing color or design.
  2. All seams shall be welded to create a monolithic and impermeable surface.
- D. Adhesive: As approved by the indoor resilient athletic surfacing manufacturer.
- E. Game Line Paint and Primer: As approved by the indoor resilient athletic surfacing manufacturer.



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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

***PART 3 - EXECUTION***

**3.1 EXAMINATION**

- A. It is the responsibility of the general contractor/construction manager to ensure that project/site conditions are acceptable for the installation of the indoor resilient athletic flooring.
- B. Verify that the area in which the indoor resilient athletic surfacing will be installed is dry and weather tight. Verify that permanent heat, light and ventilation are installed and operable.
- C. Verify that all other work that could cause damage, dirt and dust or interrupt the normal pace of the indoor resilient athletic flooring installation is completed or suspended.
- D. Verify that there is a stable room temperature of at least 65°F.
- E. Verify that there are no foreign materials or objects on the subfloor and that the subfloor is clean and ready for installation.
- F. Direct Full Spread Adhering to Concrete Subfloor HS Sports Spray : moisture content less than 90% RH when tested per ASTM F2170.
- G. Follow Fieldturf USA, Inc. installation recommendations.
- H. Do not average the results of the tests. Report all field test results in writing to the General Contractor, Architect, and End User prior to installation.
- I. Verify that the concrete subfloor surface pH level is within the 7 - 11 range.
- J. Document the results confirming the slab is within manufacturer's tolerances for slab deviation.

**3.2 PREPARATION OF SURFACES**

- A. Sand the entire surface of the concrete slab.
- B. Sweep the concrete slab so as to remove all dirt and dust. If a sweeping compound is to be used it must be a sweeping compound that does not contain oil or other items that may inhibit the adhesive bond.
- C. Slab must be dust free. In the event that dust impairs adhesive bond, priming the slab prior to application of adhesive may be necessary. Follow installation guidelines.
- D. Follow OSHA guidelines.

**3.3 INSTALLATION**

- A. The installation area shall be closed to all traffic and activity for a period to be set by the indoor resilient athletic surfacing installer. The indoor resilient athletic surfacing installation shall not begin until the installer is familiar with the existing conditions.
- B. All necessary precautions should be taken to minimize noise, smell, dust, the use of hazardous materials and any other items that may inconvenience others.
- C. Install the indoor resilient athletic surfacing in strict accordance with the indoor resilient athletic surfacing manufacturer's written instructions.
- D. Install the indoor resilient athletic surfacing minimizing cross seams. Provide a seam diagram during the submittal process for approval prior to installation. Vinyl Sheet Flooring Seams: Comply with ASTM F 1516. Rout joints and heat weld to permanently and seamlessly fuse sections together.
- E. Paint game lines using approved game line paint primer and game line paint in strict accordance with the game line paint manufacturer's instructions.
- F. Install appropriate threshold plates or transition strips where necessary.

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3.5 *CLEANING*

- A. Remove all unused materials, tools, and equipment and dispose of any debris properly. Clean the indoor resilient athletic surfacing in accordance with the manufacturer's instructions.

3.6 *PROTECTION*

- A. If required, protect the indoor resilient athletic surfacing from damage using coverings approved by the manufacturer until acceptance of work by the customer or their authorized representative.

3.7 *RELATED STANDARDS AND GUIDELINES*

- A. ASTM F2170 "Standard Test Method for Determining Relative Humidity In Concrete Floor Slabs Using In-Situ Probes"
- B. ASTM F710 "Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring"
- C. ACI 302.2R-06 "Guideline for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials"
- D. ASTM F2772-11 "Standard Specification for Athletic Performance Properties of Indoor Sports Floor Systems"

**END OF SECTION**

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

***PART 1 – GENERAL***

**1.1**     ***SECTION INCLUDES***

- A. Supply and installation of the indoor resilient multipurpose surfacing
- B. Application of the game lines
- C. References for the correct construction and preparation of concrete slabs to receive resilient flooring.

**1.2**     ***SUBMITTALS***

- A. Product Data:
  - 1. Manufacturer's promotional brochures, specifications and installation instructions
- B. Manufacturer Certifications:
  - 1. Provide certification that accurately identifies the Original Equipment Manufacturer (OEM) of flooring furnished for this project including manufacturer's name, address and factory location.
  - 2. Suppliers of private label flooring for this project must identify themselves as such and fully disclose the OEM information listed above.
  - 3. All "manufacturer" requirements in these specifications must be complied with by the OEM, including warranties, certifications, qualifications, product data, test results, environmental requirements, performance data, etc.
- C. Samples:
  - 1. Submit for selection and approval three (3) sets of the indoor resilient multipurpose surfacing, manufacturer's brochures, samples or sample boards of all of the available colors, textures and styles.
  - 2. Submit color samples of all the available game line paint colors for selection and approval.
- D. Closeout Submittals:
  - 1. Submit three (3) copies of the indoor resilient multipurpose surfacing and manufacturer's maintenance instructions.
  - 2. Submit three (3) copies of the material and installation warranties as specified.

**1.3**     ***QUALITY ASSURANCE***

- A. Qualifications:
  - 1. The indoor resilient multipurpose surfacing shall have been actively marketed for a minimum of ten (10) years.
  - 2. The indoor resilient multipurpose surfacing shall be manufactured in an ISO 9001 certified plant.
  - 3. The indoor resilient multipurpose surfacing shall be manufactured in an ISO 14001 certified plant.
  - 4. The indoor resilient multipurpose surfacing supplier shall be an established firm, experienced in the field, and competent in the techniques required by the manufacturer.
  - 5. The installer of the indoor resilient multipurpose surfacing shall have a minimum of five (5) years of experience in the field installing indoor resilient multipurpose surfacing and have worked on at least five (5) projects of similar size, type and complexity.

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- B. Certifications:
  - 1. Installer to submit the indoor resilient athletic surfacing manufacturer's or distributor's certification attesting that they are an approved installer of the indoor resilient multipurpose surfacing.
  - 2. The indoor resilient multipurpose surfacing manufacturer to submit official ISO 9001 certification for the facility in which the indoor resilient multipurpose surfacing is manufactured.
- C. Testing:

Tests shall be relative for multi-purpose use with certificates from independent testing resources to be made available upon request. Test results shall be performed according to ASTM standard testing procedures including ASTM F2772 "Standard Specification for Athletic Performance Properties of Indoor Sports Floor Systems".

1.4 *DELIVERY, STORAGE AND HANDLING*

- A. Delivery:

Material shall not be delivered until all related work is in place and finished and/or proper storage facilities and conditions can be provided and guaranteed stable according to FieldTurf USA, Inc. recommendations.
- B. Storage:
  - 1. Store the material in a secure, clean and dry location.
  - 2. Maintain temperature between 55° and 85° Fahrenheit.
  - 3. Store the indoor resilient athletic surfacing rolls in an upright position on a smooth flat surface immediately upon delivery to jobsite.
  - 4. Rolls shipped in rigid protective cardboard containers can be laid horizontally prior to unpacking and installation.

1.5 *PROJECT/SITE CONDITIONS*

- A. It is the responsibility of the general contractor/construction manager to maintain project/site conditions acceptable for the installation of the indoor resilient multipurpose flooring.
- B. The area in which the indoor resilient multipurpose surfacing will be installed shall be dry and weather tight. Permanent heat, light and ventilation shall be installed and operable.
- C. All other trades shall have completed their work prior to the installation of the resilient athletic flooring. The general contractor or construction manager shall maintain a secure and clean working environment before, during and after the installation.
- D. Maintain a stable room temperature of at least 65°F for a minimum of one (1) week prior to, during and thereafter installation.
- E. An effective low-permeance vapor barrier is placed directly beneath the concrete subfloor. For "on" or "below grade" installations, it is recommended to provide a permanent vapor barrier resistant to long term hydrostatic pressure/moisture exposure. Protrusions should be sealed to prevent moisture migration into the slab. Moisture should not be allowed to enter the slab after the completed construction.
- F. Concrete subfloor surface pH level within the 7 to 11 range dependent upon installation type.
- G. Concrete subfloor should be no greater than 1/8" within a 10 ft diameter. This tolerance can be measured in accordance with ASTM E1155. A specified (F<sub>F</sub>) of 50 and an (F<sub>L</sub>) of 30 should reach this degree of floor flatness and floor level. There is no numerical correlation between F numbers and the deviation from the straight

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edge. However, the above specified numbers should achieve a flat floor with minimal deviation in the slab. Reference ACI 117 and ACI 302.1R. The general contractor should provide a certificate of compliance with the above recommendations.

- H. Concrete subfloor must be clean and free of all foreign materials or objects including, but not limited to, curing compounds and sealers.
- I. Fill cracks, grooves, voids, depressions, and other minor imperfections. Follow the manufacturer's directions. Moveable joints must be treated utilizing specific transitioning joint devices depending upon the architect's recommendations. Follow current ASTM F710 guidelines for the preparation of concrete slabs to receive resilient flooring.
- J. Refer to ACI 302.2R "Guidelines for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials" for concrete design and construction.
- K. Concrete slab shall be fortified with continual steel reinforcement. Fiber reinforcement alone shall not be considered adequate fortification.

1.6 *WARRANTY*

- A. Special Limited Warranty:
  - 1. Manufacturer's standard form in which manufacturer agrees to repair or replace sports flooring including labor that fails within specified warranty period.
- B. Material warranty must be direct from the product manufacturer.
  - 1. Material warranties must come from original manufacturer or division thereof. Private label warranties from distributors or brokers are not valid. Supply original point of manufacturing upon request.
- C. Failures include, but are not limited to, the following:
  - 1. Material manufacturing defects.
  - 2. Surface wear and deterioration to the point of wear-through of wear layer per ASTM F410/ASTM F1303.
  - 3. Failure due to substrate moisture exposure exceeding 98 percent relative humidity when tested according to ASTM F2170.
- D. Warranty Period:
  - 1. For material defects and surface wear-through: 25 years from date of substantial completion.
  - 2. For moisture vapor tolerance: 25 years from date of substantial completion.
- E. Installer's Limited Warranty:
  - 1. Installer's standard form in which installer agrees to repair or replace sports flooring that fails due to poor workmanship or faulty installation within the specified warranty period.
  - 2. Warranty Period: 2 years from date of substantial completion.

1.7 *ADDITIONAL MATERIALS*

- A. Furnish to the owner additional materials containing a total of at least 1% of each different color or design of the indoor resilient athletic surfacing used on the project.

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1.8 *LEED™ CERTIFICATION*

- A. The indoor resilient athletic surfacing should be able to help this facility to achieve points towards *LEED™ certification*. Flooring system must be certified by FloorScore.
- B. LEED categories positively affected by the indoor resilient athletic surfacing:

<b>LEED™ V4 Credit</b>		Contribution
Materials & Resources: Building Product Disclosure & Optimization (BPDO)		
MRC3: Sourcing of Raw Materials	Options 1 & 2	2 Points
MRC4: Material Ingredients	Option 1	1 Point
MRC5: Construction and Demolition Management	Reclamation and Recycling	ReStart® Program
Indoor Environmental Quality		
EQc2: Low-Emitting Materials	TVOC: 0.5 mg/m <sup>3</sup> or less	FloorScore®

**PART 2 - PRODUCTS**

2.1 *MANUFACTURERS*

- A. The basis of the design for the indoor resilient multipurpose surfacing is Omnisports Extreme as manufactured by Tarkett.
- B. All other installation accessories and related components must be either made or approved by the indoor resilient athletic surfacing manufacturer.
- C. Other products may be approved as equal if deemed qualified and submitted in accordance with the General Conditions.
- D. Test reports confirming compliance from an independent sports laboratory must be provided along with samples, technical data, installation, maintenance, and warranty prior to acceptance as an alternative product.

2.2 *MATERIALS*

- A. Omnisports Extreme - Prefabricated sport surface 12 mm (0.47") with wood flooring design and slightly textured embossed surface as supplied by Tarkett.
  - 1. Embossing of wood design and solid colors must be the same; varying embossing or surface textures will not be allowed.
  - 2. Printing of wood design shall closely resemble standard wood strip flooring in size, color, board length, and grain appearance.
  - 3. The wood design shall be protected by a clear layer of pure PVC (Polyvinyl Chloride) and TopClean xp, a factory-applied UV cured urethane treatment.
  - 4. Intermediate layers shall be fortified with a non-woven fiberglass grid for increased dimensional stability.
  - 5. The foam force reduction layer shall be high-density closed cell PVC foam with honeycomb embossing, and is applied in one continuous manufacturing process.
  - 6. Laminated or adhered foam layers will not be allowed.
  - 7. Field constructed products will not be accepted.

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

- A. Physical properties of the indoor resilient athletic surfacing shall conform to the following minimums:

Width	—	6' 6" (2 m)
Length	—	49.2' (15m) approx.
Wear Layer	—	2 mm
Total Thickness	—	12 mm
Wear Layer	Type 1– Grade 1	ASTM F1303/F410
Vertical Deformation	PASSED	ASTM F2772
Rolling Load	PASSED	0.30 (EN 1569 {11/1999})
Surface Finish Effect	PASSED	ASTM F2772 (80 – 110)
Chemical Resistance	Excellent	ASTM F925
Impact Resistance	PASSED	EN 1717
Abrasion Resistance	PASSED	0.10 (EN ISO 5470-1 {06/1999})
Static Load Limit	PASSED	ASTM F970- Load 175 Lbs
Sound Insulation	Excellent	+/- 21 dB (ISO 717/2)
In-Room Sound Insulation	Excellent	61dB (NF S31-074)
Ball Rebound	PASSED	ASTM F2772 > 90%
Force Reduction	PASSED	ASTM F2772 Class 4
Fire Rating	PASSED	ASTM E648 Class 1
Microbial Assays Test	No Growth	G21 ASTM - Backing
Phthalate-free technology	—	YES
REACH Compliant	—	YES
Heavy Metals	—	NO
ISO 9001	—	YES
ISO 14001	—	YES

1. Color: As available from the indoor resilient athletic surfacing manufacturer's standard range.
  2. Hardwood Design Series: High definition printing for a realistic wood surface appearance as available from the indoor resilient athletic surfacing manufacturer's standard range.
  3. Texture: Texture to remain consistent between solid colors and wood design when blending colors.
- C. Welding Rod: As supplied by the indoor resilient athletic surfacing manufacturer or supplier.
1. Color to blend with the indoor resilient athletic surfacing color or design.
  2. All seams shall be welded to create a monolithic and impermeable surface.
- D. Adhesive: As approved by the indoor resilient athletic surfacing manufacturer.
- E. Game Line Paint and Primer: As approved by the indoor resilient athletic surfacing manufacturer.

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

***PART 3 - EXECUTION***

**3.1 EXAMINATION**

- A. It is the responsibility of the general contractor/construction manager to ensure that project/site conditions are acceptable for the installation of the indoor resilient athletic flooring.
- B. Verify that the area in which the indoor resilient athletic surfacing will be installed is dry and weather tight. Verify that permanent heat, light and ventilation are installed and operable.
- C. Verify that all other work that could cause damage, dirt and dust or interrupt the normal pace of the indoor resilient athletic flooring installation is completed or suspended.
- D. Verify that there is a stable room temperature of at least 65°F.
- E. Verify that there are no foreign materials or objects on the subfloor and that the subfloor is clean and ready for installation.
- F. Direct Full Spread Adhering to Concrete Subfloor Multi-Poxy : moisture content less than 98% RH when tested per ASTM F2170.
- G. Follow Fieldturf USA, Inc. installation recommendations.
- H. Do not average the results of the tests. Report all field test results in writing to the General Contractor, Architect, and End User prior to installation.
- I. Verify that the concrete subfloor surface pH level is within the 7 - 11 range.
- J. Document the results confirming the slab is within manufacturer's tolerances for slab deviation.

**3.2 PREPARATION OF SURFACES**

- A. Sand the entire surface of the concrete slab.
- B. Sweep the concrete slab so as to remove all dirt and dust. If a sweeping compound is to be used it must be a sweeping compound that does not contain oil or other items that may inhibit the adhesive bond.
- C. Slab must be dust free. In the event that dust impairs adhesive bond, priming the slab prior to application of adhesive may be necessary. Follow installation guidelines.
- D. Follow OSHA guidelines.

**3.3 INSTALLATION**

- A. The installation area shall be closed to all traffic and activity for a period to be set by the indoor resilient athletic surfacing installer. The indoor resilient athletic surfacing installation shall not begin until the installer is familiar with the existing conditions.
- B. All necessary precautions should be taken to minimize noise, smell, dust, the use of hazardous materials and any other items that may inconvenience others.
- C. Install the indoor resilient athletic surfacing in strict accordance with the indoor resilient athletic surfacing manufacturer's written instructions.
- D. Install the indoor resilient athletic surfacing minimizing cross seams. Provide a seam diagram during the submittal process for approval prior to installation. Vinyl Sheet Flooring Seams: Comply with ASTM F 1516. Rout joints and heat weld to permanently and seamlessly fuse sections together.
- E. Paint game lines using approved game line paint primer and game line paint in strict accordance with the game line paint manufacturer's instructions.
- F. Install appropriate threshold plates or transition strips where necessary.



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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

3.5 *CLEANING*

- A. Remove all unused materials, tools, and equipment and dispose of any debris properly. Clean the indoor resilient athletic surfacing in accordance with the manufacturer's instructions.

3.6 *PROTECTION*

- A. If required, protect the indoor resilient athletic surfacing from damage using coverings approved by the manufacturer until acceptance of work by the customer or their authorized representative.

3.7 *RELATED STANDARDS AND GUIDELINES*

- A. ASTM F2170 "Standard Test Method for Determining Relative Humidity In Concrete Floor Slabs Using In-Situ Probes"
- B. ASTM F710 "Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring"
- C. ACI 302.2R-06 "Guideline for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials"
- D. ASTM F2772-11 "Standard Specification for Athletic Performance Properties of Indoor Sports Floor Systems"

**END OF SECTION**

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

***PART 1 – GENERAL***

**1.1**     ***SECTION INCLUDES***

- A. Supply and installation of the indoor resilient multipurpose surfacing
- B. Application of the game lines
- C. References for the correct construction and preparation of concrete slabs to receive resilient flooring.

**1.2**     ***SUBMITTALS***

- A. Product Data:
  - 1. Manufacturer's promotional brochures, specifications and installation instructions
- B. Manufacturer Certifications:
  - 1. Provide certification that accurately identifies the Original Equipment Manufacturer (OEM) of flooring furnished for this project including manufacturer's name, address and factory location.
  - 2. Suppliers of private label flooring for this project must identify themselves as such and fully disclose the OEM information listed above.
  - 3. All "manufacturer" requirements in these specifications must be complied with by the OEM, including warranties, certifications, qualifications, product data, test results, environmental requirements, performance data, etc.
- C. Samples:
  - 1. Submit for selection and approval three (3) sets of the indoor resilient multipurpose surfacing, manufacturer's brochures, samples or sample boards of all of the available colors, textures and styles.
  - 2. Submit color samples of all the available game line paint colors for selection and approval.
- D. Closeout Submittals:
  - 1. Submit three (3) copies of the indoor resilient multipurpose surfacing and manufacturer's maintenance instructions.
  - 2. Submit three (3) copies of the material and installation warranties as specified.

**1.3**     ***QUALITY ASSURANCE***

- A. Qualifications:
  - 1. The indoor resilient multipurpose surfacing shall have been actively marketed for a minimum of ten (10) years.
  - 2. The indoor resilient multipurpose surfacing shall be manufactured in an ISO 9001 certified plant.
  - 3. The indoor resilient multipurpose surfacing shall be manufactured in an ISO 14001 certified plant.
  - 4. The indoor resilient multipurpose surfacing supplier shall be an established firm, experienced in the field, and competent in the techniques required by the manufacturer.
  - 5. The installer of the indoor resilient multipurpose surfacing shall have a minimum of five (5) years of experience in the field installing indoor resilient multipurpose surfacing and have worked on at least five (5) projects of similar size, type and complexity.

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- B. Certifications:
  - 1. Installer to submit the indoor resilient athletic surfacing manufacturer's or distributor's certification attesting that they are an approved installer of the indoor resilient multipurpose surfacing.
  - 2. The indoor resilient multipurpose surfacing manufacturer to submit official ISO 9001 certification for the facility in which the indoor resilient multipurpose surfacing is manufactured.
- C. Testing:

Tests shall be relative for multi-purpose use with certificates from independent testing resources to be made available upon request. Test results shall be performed according to ASTM standard testing procedures including ASTM F2772 "Standard Specification for Athletic Performance Properties of Indoor Sports Floor Systems".

1.4 *DELIVERY, STORAGE AND HANDLING*

- A. Delivery:

Material shall not be delivered until all related work is in place and finished and/or proper storage facilities and conditions can be provided and guaranteed stable according to FieldTurf USA, Inc. recommendations.
- B. Storage:
  - 1. Store the material in a secure, clean and dry location.
  - 2. Maintain temperature between 55° and 85° Fahrenheit.
  - 3. Store the indoor resilient athletic surfacing rolls in an upright position on a smooth flat surface immediately upon delivery to jobsite.
  - 4. Rolls shipped in rigid protective cardboard containers can be laid horizontally prior to unpacking and installation.

1.5 *PROJECT/SITE CONDITIONS*

- A. It is the responsibility of the general contractor/construction manager to maintain project/site conditions acceptable for the installation of the indoor resilient multipurpose flooring.
- B. The area in which the indoor resilient multipurpose surfacing will be installed shall be dry and weather tight. Permanent heat, light and ventilation shall be installed and operable.
- C. All other trades shall have completed their work prior to the installation of the resilient athletic flooring. The general contractor or construction manager shall maintain a secure and clean working environment before, during and after the installation.
- D. Maintain a stable room temperature of at least 65°F for a minimum of one (1) week prior to, during and thereafter installation.
- E. An effective low-permeance vapor barrier is placed directly beneath the concrete subfloor. For "on" or "below grade" installations, it is recommended to provide a permanent vapor barrier resistant to long term hydrostatic pressure/moisture exposure. Protrusions should be sealed to prevent moisture migration into the slab. Moisture should not be allowed to enter the slab after the completed construction.
- F. Concrete subfloor surface pH level within the 7 to 11 range dependent upon installation type.
- G. Concrete subfloor should be no greater than 1/8" within a 10 ft diameter. This tolerance can be measured in accordance with ASTM E1155. A specified (F<sub>F</sub>) of 50 and an (F<sub>L</sub>) of 30 should reach this degree of floor flatness and floor level. There is no numerical correlation between F numbers and the deviation from the straight

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edge. However, the above specified numbers should achieve a flat floor with minimal deviation in the slab. Reference ACI 117 and ACI 302.1R. The general contractor should provide a certificate of compliance with the above recommendations.

- H. Concrete subfloor must be clean and free of all foreign materials or objects including, but not limited to, curing compounds and sealers.
- I. Fill cracks, grooves, voids, depressions, and other minor imperfections. Follow the manufacturer's directions. Moveable joints must be treated utilizing specific transitioning joint devices depending upon the architect's recommendations. Follow current ASTM F710 guidelines for the preparation of concrete slabs to receive resilient flooring.
- J. Refer to ACI 302.2R "Guidelines for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials" for concrete design and construction.
- K. Concrete slab shall be fortified with continual steel reinforcement. Fiber reinforcement alone shall not be considered adequate fortification.

1.6 *WARRANTY*

- A. Special Limited Warranty:
  - 1. Manufacturer's standard form in which manufacturer agrees to repair or replace sports flooring including labor that fails within specified warranty period.
- B. Material warranty must be direct from the product manufacturer.
  - 1. Material warranties must come from original manufacturer or division thereof. Private label warranties from distributors or brokers are not valid. Supply original point of manufacturing upon request.
- C. Failures include, but are not limited to, the following:
  - 1. Material manufacturing defects.
  - 2. Surface wear and deterioration to the point of wear-through of wear layer per ASTM F410/ASTM F1303.
  - 3. Failure due to substrate moisture exposure exceeding 98 percent relative humidity when tested according to ASTM F2170.
- D. Warranty Period:
  - 1. For material defects and surface wear-through: **25** years from date of substantial completion.
  - 2. For moisture vapor tolerance: **25** years from date of substantial completion.
- E. Installer's Limited Warranty:
  - 1. Installer's standard form in which installer agrees to repair or replace sports flooring that fails due to poor workmanship or faulty installation within the specified warranty period.
  - 2. Warranty Period: 2 years from date of substantial completion.

1.7 *ADDITIONAL MATERIALS*

- A. Furnish to the owner additional materials containing a total of at least 1% of each different color or design of the indoor resilient athletic surfacing used on the project.

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1.8 *LEED™ CERTIFICATION*

- A. The indoor resilient athletic surfacing should be able to help this facility to achieve points towards *LEED™ certification*. Flooring system must be certified by FloorScore.
- B. LEED categories positively affected by the indoor resilient athletic surfacing:

<b>LEED™ V4 Credit</b>		Contribution
Materials & Resources: Building Product Disclosure & Optimization (BPDO)		
MRC3: Sourcing of Raw Materials	Options 1 & 2	2 Points
MRC4: Material Ingredients	Option 1	1 Point
MRC5: Construction and Demolition Management	Reclamation and Recycling	ReStart® Program
Indoor Environmental Quality		
EQc2: Low-Emitting Materials	TVOC: 0.5 mg/m <sup>3</sup> or less	FloorScore®

**PART 2 - PRODUCTS**

2.1 *MANUFACTURERS*

- A. The basis of the design for the indoor resilient multipurpose surfacing is Omnisports Extreme as manufactured by Tarkett.
- B. All other installation accessories and related components must be either made or approved by the indoor resilient athletic surfacing manufacturer.
- C. Other products may be approved as equal if deemed qualified and submitted in accordance with the General Conditions.
- D. Test reports confirming compliance from an independent sports laboratory must be provided along with samples, technical data, installation, maintenance, and warranty prior to acceptance as an alternative product.

2.2 *MATERIALS*

- A. Omnisports Extreme - Prefabricated sport surface 12 mm (0.47") with wood flooring design and slightly textured embossed surface as supplied by Tarkett.
  - 1. Embossing of wood design and solid colors must be the same; varying embossing or surface textures will not be allowed.
  - 2. Printing of wood design shall closely resemble standard wood strip flooring in size, color, board length, and grain appearance.
  - 3. The wood design shall be protected by a clear layer of pure PVC (Polyvinyl Chloride) and TopClean xp, a factory-applied UV cured urethane treatment.
  - 4. Intermediate layers shall be fortified with a non-woven fiberglass grid for increased dimensional stability.
  - 5. The foam force reduction layer shall be high-density closed cell PVC foam with honeycomb embossing, and is applied in one continuous manufacturing process.
  - 6. Laminated or adhered foam layers will not be allowed.
  - 7. Field constructed products will not be accepted.

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- A. Physical properties of the indoor resilient athletic surfacing shall conform to the following minimums:

Width	—	6' 6" (2 m)
Length	—	49.2' (15m) approx.
Wear Layer	—	2 mm
Total Thickness	—	12 mm
Wear Layer	Type 1– Grade 1	ASTM F1303/F410
Vertical Deformation	PASSED	ASTM F2772
Rolling Load	PASSED	0.30 (EN 1569 {11/1999})
Surface Finish Effect	PASSED	ASTM F2772 (80 – 110)
Chemical Resistance	Excellent	ASTM F925
Impact Resistance	PASSED	EN 1717
Abrasion Resistance	PASSED	0.10 (EN ISO 5470-1 {06/1999})
Static Load Limit	PASSED	ASTM F970- Load 175 Lbs
Sound Insulation	Excellent	+/- 21 dB (ISO 717/2)
In-Room Sound Insulation	Excellent	61dB (NF S31-074)
Ball Rebound	PASSED	ASTM F2772 > 90%
Force Reduction	PASSED	ASTM F2772 Class 4
Fire Rating	PASSED	ASTM E648 Class 1
Microbial Assays Test	No Growth	G21 ASTM - Backing
Phthalate-free technology	—	YES
REACH Compliant	—	YES
Heavy Metals	—	NO
ISO 9001	—	YES
ISO 14001	—	YES

1. Color: As available from the indoor resilient athletic surfacing manufacturer's standard range.
  2. Hardwood Design Series: High definition printing for a realistic wood surface appearance as available from the indoor resilient athletic surfacing manufacturer's standard range.
  3. Texture: Texture to remain consistent between solid colors and wood design when blending colors.
- C. Welding Rod: As supplied by the indoor resilient athletic surfacing manufacturer or supplier.
1. Color to blend with the indoor resilient athletic surfacing color or design.
  2. All seams shall be welded to create a monolithic and impermeable surface.
- D. Adhesive: As approved by the indoor resilient athletic surfacing manufacturer.
- E. Game Line Paint and Primer: As approved by the indoor resilient athletic surfacing manufacturer.

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

***PART 3 - EXECUTION***

**3.1 EXAMINATION**

- A. It is the responsibility of the general contractor/construction manager to ensure that project/site conditions are acceptable for the installation of the indoor resilient athletic flooring.
- B. Verify that the area in which the indoor resilient athletic surfacing will be installed is dry and weather tight. Verify that permanent heat, light and ventilation are installed and operable.
- C. Verify that all other work that could cause damage, dirt and dust or interrupt the normal pace of the indoor resilient athletic flooring installation is completed or suspended.
- D. Verify that there is a stable room temperature of at least 65°F.
- E. Verify that there are no foreign materials or objects on the subfloor and that the subfloor is clean and ready for installation.
- F. Direct Full Spread Adhering to Concrete Subfloor Multi-Set : moisture content less than 83% RH when tested per ASTM F2170.
- G. Follow Fieldturf USA, Inc. installation recommendations.
- H. Do not average the results of the tests. Report all field test results in writing to the General Contractor, Architect, and End User prior to installation.
- I. Verify that the concrete subfloor surface pH level is within the 7 - 11 range.
- J. Document the results confirming the slab is within manufacturer's tolerances for slab deviation.

**3.2 PREPARATION OF SURFACES**

- A. Sand the entire surface of the concrete slab.
- B. Sweep the concrete slab so as to remove all dirt and dust. If a sweeping compound is to be used it must be a sweeping compound that does not contain oil or other items that may inhibit the adhesive bond.
- C. Slab must be dust free. In the event that dust impairs adhesive bond, priming the slab prior to application of adhesive may be necessary. Follow installation guidelines.
- D. Follow OSHA guidelines.

**3.3 INSTALLATION**

- A. The installation area shall be closed to all traffic and activity for a period to be set by the indoor resilient athletic surfacing installer. The indoor resilient athletic surfacing installation shall not begin until the installer is familiar with the existing conditions.
- B. All necessary precautions should be taken to minimize noise, smell, dust, the use of hazardous materials and any other items that may inconvenience others.
- C. Install the indoor resilient athletic surfacing in strict accordance with the indoor resilient athletic surfacing manufacturer's written instructions.
- D. Install the indoor resilient athletic surfacing minimizing cross seams. Provide a seam diagram during the submittal process for approval prior to installation. Vinyl Sheet Flooring Seams: Comply with ASTM F 1516. Rout joints and heat weld to permanently and seamlessly fuse sections together.
- E. Paint game lines using approved game line paint primer and game line paint in strict accordance with the game line paint manufacturer's instructions.
- F. Install appropriate threshold plates or transition strips where necessary.

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3.5 *CLEANING*

- A. Remove all unused materials, tools, and equipment and dispose of any debris properly. Clean the indoor resilient athletic surfacing in accordance with the manufacturer's instructions.

3.6 *PROTECTION*

- A. If required, protect the indoor resilient athletic surfacing from damage using coverings approved by the manufacturer until acceptance of work by the customer or their authorized representative.

3.7 *RELATED STANDARDS AND GUIDELINES*

- A. ASTM F2170 "Standard Test Method for Determining Relative Humidity In Concrete Floor Slabs Using In-Situ Probes"
- B. ASTM F710 "Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring"
- C. ACI 302.2R-06 "Guideline for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials"
- D. ASTM F2772-11 "Standard Specification for Athletic Performance Properties of Indoor Sports Floor Systems"

**END OF SECTION**



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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

***PART 1 – GENERAL***

**1.1**     ***SECTION INCLUDES***

- A. Supply and installation of the indoor resilient multipurpose surfacing
- B. Application of the game lines
- C. References for the correct construction and preparation of concrete slabs to receive resilient flooring.

**1.2**     ***SUBMITTALS***

- A. Product Data:
  - 1. Manufacturer's promotional brochures, specifications and installation instructions
- B. Manufacturer Certifications:
  - 1. Provide certification that accurately identifies the Original Equipment Manufacturer (OEM) of flooring furnished for this project including manufacturer's name, address and factory location.
  - 2. Suppliers of private label flooring for this project must identify themselves as such and fully disclose the OEM information listed above.
  - 3. All "manufacturer" requirements in these specifications must be complied with by the OEM, including warranties, certifications, qualifications, product data, test results, environmental requirements, performance data, etc.
- C. Samples:
  - 1. Submit for selection and approval three (3) sets of the indoor resilient multipurpose surfacing, manufacturer's brochures, samples or sample boards of all of the available colors, textures and styles.
  - 2. Submit color samples of all the available game line paint colors for selection and approval.
- D. Closeout Submittals:
  - 1. Submit three (3) copies of the indoor resilient multipurpose surfacing and manufacturer's maintenance instructions.
  - 2. Submit three (3) copies of the material and installation warranties as specified.

**1.3**     ***QUALITY ASSURANCE***

- A. Qualifications:
  - 1. The indoor resilient multipurpose surfacing shall have been actively marketed for a minimum of ten (10) years.
  - 2. The indoor resilient multipurpose surfacing shall be manufactured in an ISO 9001 certified plant.
  - 3. The indoor resilient multipurpose surfacing shall be manufactured in an ISO 14001 certified plant.
  - 4. The indoor resilient multipurpose surfacing supplier shall be an established firm, experienced in the field, and competent in the techniques required by the manufacturer.
  - 5. The installer of the indoor resilient multipurpose surfacing shall have a minimum of five (5) years of experience in the field installing indoor resilient multipurpose surfacing and have worked on at least five (5) projects of similar size, type and complexity.

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- B. Certifications:
  - 1. Installer to submit the indoor resilient athletic surfacing manufacturer's or distributor's certification attesting that they are an approved installer of the indoor resilient multipurpose surfacing.
  - 2. The indoor resilient multipurpose surfacing manufacturer to submit official ISO 9001 certification for the facility in which the indoor resilient multipurpose surfacing is manufactured.
- C. Testing:

Tests shall be relative for multi-purpose use with certificates from independent testing resources to be made available upon request. Test results shall be performed according to ASTM standard testing procedures including ASTM F2772 "Standard Specification for Athletic Performance Properties of Indoor Sports Floor Systems".

1.4 *DELIVERY, STORAGE AND HANDLING*

- A. Delivery:

Material shall not be delivered until all related work is in place and finished and/or proper storage facilities and conditions can be provided and guaranteed stable according to FieldTurf USA, Inc. recommendations.
- B. Storage:
  - 1. Store the material in a secure, clean and dry location.
  - 2. Maintain temperature between 55° and 85° Fahrenheit.
  - 3. Store the indoor resilient athletic surfacing rolls in an upright position on a smooth flat surface immediately upon delivery to jobsite.
  - 4. Rolls shipped in rigid protective cardboard containers can be laid horizontally prior to unpacking and installation.

1.5 *PROJECT/SITE CONDITIONS*

- A. It is the responsibility of the general contractor/construction manager to maintain project/site conditions acceptable for the installation of the indoor resilient multipurpose flooring.
- B. The area in which the indoor resilient multipurpose surfacing will be installed shall be dry and weather tight. Permanent heat, light and ventilation shall be installed and operable.
- C. All other trades shall have completed their work prior to the installation of the resilient athletic flooring. The general contractor or construction manager shall maintain a secure and clean working environment before, during and after the installation.
- D. Maintain a stable room temperature of at least 65°F for a minimum of one (1) week prior to, during and thereafter installation.
- E. An effective low-permeance vapor barrier is placed directly beneath the concrete subfloor. For "on" or "below grade" installations, it is recommended to provide a permanent vapor barrier resistant to long term hydrostatic pressure/moisture exposure. Protrusions should be sealed to prevent moisture migration into the slab. Moisture should not be allowed to enter the slab after the completed construction.
- F. Concrete subfloor surface pH level within the 7 to 11 range dependent upon installation type.
- G. Concrete subfloor should be no greater than 1/8" within a 10 ft diameter. This tolerance can be measured in accordance with ASTM E1155. A specified (F<sub>F</sub>) of 50 and an (F<sub>L</sub>) of 30 should reach this degree of floor flatness and floor level. There is no numerical correlation between F numbers and the deviation from the straight

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edge. However, the above specified numbers should achieve a flat floor with minimal deviation in the slab. Reference ACI 117 and ACI 302.1R. The general contractor should provide a certificate of compliance with the above recommendations.

- H. Concrete subfloor must be clean and free of all foreign materials or objects including, but not limited to, curing compounds and sealers.
- I. Fill cracks, grooves, voids, depressions, and other minor imperfections. Follow the manufacturer's directions. Moveable joints must be treated utilizing specific transitioning joint devices depending upon the architect's recommendations. Follow current ASTM F710 guidelines for the preparation of concrete slabs to receive resilient flooring.
- J. Refer to ACI 302.2R "Guidelines for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials" for concrete design and construction.
- K. Concrete slab shall be fortified with continual steel reinforcement. Fiber reinforcement alone shall not be considered adequate fortification.

1.6 *WARRANTY*

- A. Special Limited Warranty:
  - 1. Manufacturer's standard form in which manufacturer agrees to repair or replace sports flooring including labor that fails within specified warranty period.
- B. Material warranty must be direct from the product manufacturer.
  - 1. Material warranties must come from original manufacturer or division thereof. Private label warranties from distributors or brokers are not valid. Supply original point of manufacturing upon request.
- C. Failures include, but are not limited to, the following:
  - 1. Material manufacturing defects.
  - 2. Surface wear and deterioration to the point of wear-through of wear layer per ASTM F410/ASTM F1303.
  - 3. Failure due to substrate moisture exposure exceeding 98 percent relative humidity when tested according to ASTM F2170.
- D. Warranty Period:
  - 1. For material defects and surface wear-through: **25** years from date of substantial completion.
  - 2. For moisture vapor tolerance: **25** years from date of substantial completion.
- E. Installer's Limited Warranty:
  - 1. Installer's standard form in which installer agrees to repair or replace sports flooring that fails due to poor workmanship or faulty installation within the specified warranty period.
  - 2. Warranty Period: 2 years from date of substantial completion.

1.7 *ADDITIONAL MATERIALS*

- A. Furnish to the owner additional materials containing a total of at least 1% of each different color or design of the indoor resilient athletic surfacing used on the project.

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1.8 *LEED™ CERTIFICATION*

- A. The indoor resilient athletic surfacing should be able to help this facility to achieve points towards *LEED™ certification*. Flooring system must be certified by FloorScore.
- B. LEED categories positively affected by the indoor resilient athletic surfacing:

<b>LEED™ V4 Credit</b>		Contribution
Materials & Resources: Building Product Disclosure & Optimization (BPDO)		
MRC3: Sourcing of Raw Materials	Options 1 & 2	2 Points
MRC4: Material Ingredients	Option 1	1 Point
MRC5: Construction and Demolition Management	Reclamation and Recycling	ReStart® Program
Indoor Environmental Quality		
EQc2: Low-Emitting Materials	TVOC: 0.5 mg/m <sup>3</sup> or less	FloorScore®

**PART 2 - PRODUCTS**

2.1 *MANUFACTURERS*

- A. The basis of the design for the indoor resilient multipurpose surfacing is Omnisports Extreme as manufactured by Tarkett.
- B. All other installation accessories and related components must be either made or approved by the indoor resilient athletic surfacing manufacturer.
- C. Other products may be approved as equal if deemed qualified and submitted in accordance with the General Conditions.
- D. Test reports confirming compliance from an independent sports laboratory must be provided along with samples, technical data, installation, maintenance, and warranty prior to acceptance as an alternative product.

2.2 *MATERIALS*

- A. Omnisports Extreme - Prefabricated sport surface 12 mm (0.47") with wood flooring design and slightly textured embossed surface as supplied by Tarkett.
  - 1. Embossing of wood design and solid colors must be the same; varying embossing or surface textures will not be allowed.
  - 2. Printing of wood design shall closely resemble standard wood strip flooring in size, color, board length, and grain appearance.
  - 3. The wood design shall be protected by a clear layer of pure PVC (Polyvinyl Chloride) and TopClean xp, a factory-applied UV cured urethane treatment.
  - 4. Intermediate layers shall be fortified with a non-woven fiberglass grid for increased dimensional stability.
  - 5. The foam force reduction layer shall be high-density closed cell PVC foam with honeycomb embossing, and is applied in one continuous manufacturing process.
  - 6. Laminated or adhered foam layers will not be allowed.
  - 7. Field constructed products will not be accepted.

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

- A. Physical properties of the indoor resilient athletic surfacing shall conform to the following minimums:

Width	—	6' 6" (2 m)
Length	—	49.2' (15m) approx.
Wear Layer	—	2 mm
Total Thickness	—	12 mm
Wear Layer	Type 1– Grade 1	ASTM F1303/F410
Vertical Deformation	PASSED	ASTM F2772
Rolling Load	PASSED	0.30 (EN 1569 {11/1999})
Surface Finish Effect	PASSED	ASTM F2772 (80 – 110)
Chemical Resistance	Excellent	ASTM F925
Impact Resistance	PASSED	EN 1717
Abrasion Resistance	PASSED	0.10 (EN ISO 5470-1 {06/1999})
Static Load Limit	PASSED	ASTM F970- Load 175 Lbs
Sound Insulation	Excellent	+/- 21 dB (ISO 717/2)
In-Room Sound Insulation	Excellent	61dB (NF S31-074)
Ball Rebound	PASSED	ASTM F2772 > 90%
Force Reduction	PASSED	ASTM F2772 Class 4
Fire Rating	PASSED	ASTM E648 Class 1
Microbial Assays Test	No Growth	G21 ASTM - Backing
Phthalate-free technology	—	YES
REACH Compliant	—	YES
Heavy Metals	—	NO
ISO 9001	—	YES
ISO 14001	—	YES

1. Color: As available from the indoor resilient athletic surfacing manufacturer's standard range.
  2. Hardwood Design Series: High definition printing for a realistic wood surface appearance as available from the indoor resilient athletic surfacing manufacturer's standard range.
  3. Texture: Texture to remain consistent between solid colors and wood design when blending colors.
- C. Tarkolay – A high quality low permeance slip sheet vapor retarder designed to separate the installed system from the substrate below.
1. Tarkolay as manufactured by Tarkett can be used below, on, or above grade substrates that experience elevated moisture conditions.
  2. Moisture tolerances shall have no limitation per ASTM F2170. Physical properties of the indoor resilient athletic surfacing shall conform to the following minimums:

Width	—	6' 6" (2 m)
Length	—	147'7" (45 m) approx.
Total Thickness	—	1.3 mm
Dimensional Stability	PASSED	.01% (EN 1434)
Permeance	Excellent	<0.20 (ASTM E96)

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

- D. Welding Rod: As supplied by the indoor resilient athletic surfacing manufacturer or supplier.
  - 1. Color to blend with the indoor resilient athletic surfacing color or design.
  - 2. All seams shall be welded to create a monolithic and impermeable surface.
- E. Adhesive: As approved by the indoor resilient athletic surfacing manufacturer.
- F. Game Line Paint and Primer: As approved by the indoor resilient athletic surfacing manufacturer.

***PART 3 - EXECUTION***

**3.1 EXAMINATION**

- A. It is the responsibility of the general contractor/construction manager to ensure that project/site conditions are acceptable for the installation of the indoor resilient athletic flooring.
- B. Verify that the area in which the indoor resilient athletic surfacing will be installed is dry and weather tight. Verify that permanent heat, light and ventilation are installed and operable.
- C. Verify that all other work that could cause damage, dirt and dust or interrupt the normal pace of the indoor resilient athletic flooring installation is completed or suspended.
- D. Verify that there is a stable room temperature of at least 65°F.
- E. Verify that there are no foreign materials or objects on the subfloor and that the subfloor is clean and ready for installation.
- F. Installation with Tarkolay to Concrete Subfloor : moisture content no limitation when tested per ASTM F2170.
- G. Follow Fieldturf USA, Inc. installation recommendations.
- H. Do not average the results of the tests. Report all field test results in writing to the General Contractor, Architect, and End User prior to installation.
- I. Verify that the concrete subfloor surface pH level is within the 7 - 11 range.
- J. Document the results confirming the slab is within manufacturer's tolerances for slab deviation.

**3.2 PREPARATION OF SURFACES**

- A. Sand the entire surface of the concrete slab.
- B. Sweep the concrete slab so as to remove all dirt and dust. If a sweeping compound is to be used it must be a sweeping compound that does not contain oil or other items that may inhibit the adhesive bond.
- C. Slab must be dust free. In the event that dust impairs adhesive bond, priming the slab prior to application of adhesive may be necessary. Follow installation guidelines.
- D. Follow OSHA guidelines.

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

3.3 *INSTALLATION*

- A. The installation area shall be closed to all traffic and activity for a period to be set by the indoor resilient athletic surfacing installer. The indoor resilient athletic surfacing installation shall not begin until the installer is familiar with the existing conditions.
- B. All necessary precautions should be taken to minimize noise, smell, dust, the use of hazardous materials and any other items that may inconvenience others.
- C. Install the indoor resilient athletic surfacing in strict accordance with the indoor resilient athletic surfacing manufacturer's written instructions.
- D. Install the indoor resilient athletic surfacing minimizing cross seams. Provide a seam diagram during the submittal process for approval prior to installation. Vinyl Sheet Flooring Seams: Comply with ASTM F 1516. Rout joints and heat weld to permanently and seamlessly fuse sections together.
- E. Paint game lines using approved game line paint primer and game line paint in strict accordance with the game line paint manufacturer's instructions.
- F. Install appropriate threshold plates or transition strips where necessary.

3.5 *CLEANING*

- A. Remove all unused materials, tools, and equipment and dispose of any debris properly. Clean the indoor resilient athletic surfacing in accordance with the manufacturer's instructions.

3.6 *PROTECTION*

- A. If required, protect the indoor resilient athletic surfacing from damage using coverings approved by the manufacturer until acceptance of work by the customer or their authorized representative.

3.7 *RELATED STANDARDS AND GUIDELINES*

- A. ASTM F2170 "Standard Test Method for Determining Relative Humidity In Concrete Floor Slabs Using In-Situ Probes"
- B. ASTM F710 "Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring"
- C. ACI 302.2R-06 "Guideline for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials"
- D. ASTM F2772-11 "Standard Specification for Athletic Performance Properties of Indoor Sports Floor Systems"

**END OF SECTION**

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

***PART 1 – GENERAL***

1.1 *SECTION INCLUDES*

- A. Supply and installation of the indoor resilient multipurpose surfacing
- B. Application of the game lines
- C. References for the correct construction and preparation of concrete slabs to receive resilient flooring.

1.2 *SUBMITTALS*

- A. Product Data:
  - 1. Manufacturer's promotional brochures, specifications and installation instructions
- B. Manufacturer Certifications:
  - 1. Provide certification that accurately identifies the Original Equipment Manufacturer (OEM) of flooring furnished for this project including manufacturer's name, address and factory location.
  - 2. Suppliers of private label flooring for this project must identify themselves as such and fully disclose the OEM information listed above.
  - 3. All "manufacturer" requirements in these specifications must be complied with by the OEM, including warranties, certifications, qualifications, product data, test results, environmental requirements, performance data, etc.
- C. Samples:
  - 1. Submit for selection and approval three (3) sets of the indoor resilient multipurpose surfacing, manufacturer's brochures, samples or sample boards of all of the available colors, textures and styles.
  - 2. Submit color samples of all the available game line paint colors for selection and approval.
- D. Closeout Submittals:
  - 1. Submit three (3) copies of the indoor resilient multipurpose surfacing and manufacturer's maintenance instructions.
  - 2. Submit three (3) copies of the material and installation warranties as specified.

1.3 *QUALITY ASSURANCE*

- A. Qualifications:
  - 1. The indoor resilient multipurpose surfacing shall have been actively marketed for a minimum of ten (10) years.
  - 2. The indoor resilient multipurpose surfacing shall be manufactured in an ISO 9001 certified plant.
  - 3. The indoor resilient multipurpose surfacing shall be manufactured in an ISO 14001 certified plant.
  - 4. The indoor resilient multipurpose surfacing supplier shall be an established firm, experienced in the field, and competent in the techniques required by the manufacturer.
  - 5. The installer of the indoor resilient multipurpose surfacing shall have a minimum of five (5) years of experience in the field installing indoor resilient multipurpose surfacing and have worked on at least five (5) projects of similar size, type and complexity.



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- B. Certifications:
  - 1. Installer to submit the indoor resilient athletic surfacing manufacturer's or distributor's certification attesting that they are an approved installer of the indoor resilient multipurpose surfacing.
  - 2. The indoor resilient multipurpose surfacing manufacturer to submit official ISO 9001 certification for the facility in which the indoor resilient multipurpose surfacing is manufactured.
- C. Testing:

Tests shall be relative for multi-purpose use with certificates from independent testing resources to be made available upon request. Test results shall be performed according to ASTM standard testing procedures including ASTM F2772 "Standard Specification for Athletic Performance Properties of Indoor Sports Floor Systems".

1.4 *DELIVERY, STORAGE AND HANDLING*

- A. Delivery:

Material shall not be delivered until all related work is in place and finished and/or proper storage facilities and conditions can be provided and guaranteed stable according to FieldTurf USA, Inc. recommendations.
- B. Storage:
  - 1. Store the material in a secure, clean and dry location.
  - 2. Maintain temperature between 55° and 85° Fahrenheit.
  - 3. Store the indoor resilient athletic surfacing rolls in an upright position on a smooth flat surface immediately upon delivery to jobsite.
  - 4. Rolls shipped in rigid protective cardboard containers can be laid horizontally prior to unpacking and installation.

1.5 *PROJECT/SITE CONDITIONS*

- A. It is the responsibility of the general contractor/construction manager to maintain project/site conditions acceptable for the installation of the indoor resilient multipurpose flooring.
- B. The area in which the indoor resilient multipurpose surfacing will be installed shall be dry and weather tight. Permanent heat, light and ventilation shall be installed and operable.
- C. All other trades shall have completed their work prior to the installation of the resilient athletic flooring. The general contractor or construction manager shall maintain a secure and clean working environment before, during and after the installation.
- D. Maintain a stable room temperature of at least 65°F for a minimum of one (1) week prior to, during and thereafter installation.
- E. An effective low-permeance vapor barrier is placed directly beneath the concrete subfloor. For "on" or "below grade" installations, it is recommended to provide a permanent vapor barrier resistant to long term hydrostatic pressure/moisture exposure. Protrusions should be sealed to prevent moisture migration into the slab. Moisture should not be allowed to enter the slab after the completed construction.
- F. Concrete subfloor surface pH level within the 7 to 11 range dependent upon installation type.
- G. Concrete subfloor should be no greater than 1/8" within a 10 ft diameter. This tolerance can be measured in accordance with ASTM E1155. A specified ( $F_F$ ) of 50 and an ( $F_L$ ) of 30 should reach this degree of floor flatness and floor level. There is no numerical correlation between F numbers and the deviation from the straight

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edge. However, the above specified numbers should achieve a flat floor with minimal deviation in the slab. Reference ACI 117 and ACI 302.1R. The general contractor should provide a certificate of compliance with the above recommendations.

- H. Concrete subfloor must be clean and free of all foreign materials or objects including, but not limited to, curing compounds and sealers.
- I. Fill cracks, grooves, voids, depressions, and other minor imperfections. Follow the manufacturer's directions. Moveable joints must be treated utilizing specific transitioning joint devices depending upon the architect's recommendations. Follow current ASTM F710 guidelines for the preparation of concrete slabs to receive resilient flooring.
- J. Refer to ACI 302.2R "Guidelines for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials" for concrete design and construction.
- K. Concrete slab shall be fortified with continual steel reinforcement. Fiber reinforcement alone shall not be considered adequate fortification.

1.6 *WARRANTY*

- A. Special Limited Warranty:
  - 1. Manufacturer's standard form in which manufacturer agrees to repair or replace sports flooring including labor that fails within specified warranty period.
- B. Material warranty must be direct from the product manufacturer.
  - 1. Material warranties must come from original manufacturer or division thereof. Private label warranties from distributors or brokers are not valid. Supply original point of manufacturing upon request.
- C. Failures include, but are not limited to, the following:
  - 1. Material manufacturing defects.
  - 2. Surface wear and deterioration to the point of wear-through of wear layer per ASTM F410/ASTM F1303.
  - 3. Failure due to substrate moisture exposure exceeding 98 percent relative humidity when tested according to ASTM F2170.
- D. Warranty Period:
  - 1. For material defects and surface wear-through: **15** years from date of substantial completion.
  - 2. For moisture vapor tolerance: **15** years from date of substantial completion.
- E. Installer's Limited Warranty:
  - 1. Installer's standard form in which installer agrees to repair or replace sports flooring that fails due to poor workmanship or faulty installation within the specified warranty period.
  - 2. Warranty Period: 2 years from date of substantial completion.

1.7 *ADDITIONAL MATERIALS*

- A. Furnish to the owner additional materials containing a total of at least 1% of each different color or design of the indoor resilient athletic surfacing used on the project.

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1.8 *LEED™ CERTIFICATION*

- A. The indoor resilient athletic surfacing should be able to help this facility to achieve points towards *LEED™ certification*.
- B. LEED categories positively affected by the indoor resilient athletic surfacing:

<b>LEED™ V4 Credit</b>		Contribution
Materials & Resources: Building Product Disclosure & Optimization (BPDO)		
MRc3: Sourcing of Raw Materials	Options 1 & 2	2 Points
MRc4: Material Ingredients	Option 1	1 Point
MRc5: Construction and Demolition Management	Reclamation and Recycling	ReStart® Program

***PART 2 - PRODUCTS***

2.1 *MANUFACTURERS*

- A. The basis of the design for the indoor resilient multipurpose surfacing is Omnisports HPL 7 mm as manufactured by Tarkett.
- B. All other installation accessories and related components must be either made or approved by the indoor resilient athletic surfacing manufacturer.
- C. Other products may be approved as equal if deemed qualified and submitted in accordance with the General Conditions.
- D. Test reports confirming compliance from an independent sports laboratory must be provided along with samples, technical data, installation, maintenance, and warranty prior to acceptance as an alternative product.

2.2 *MATERIALS*

- A. Omnisports HPL 7 mm - Prefabricated sport surface with wood flooring design and slightly textured embossed surface as supplied by Tarkett.
  - 1. Embossing of wood design and solid colors must be the same; varying embossing or surface textures will not be allowed.
  - 2. Printing of wood design shall closely resemble standard wood strip flooring in size, color, board length, and grain appearance.
  - 3. The wood design shall be protected by a clear layer of pure PVC (Polyvinyl Chloride) and TopClean xp, a factory-applied UV cured urethane treatment.
  - 4. Intermediate layers shall be fortified with a non-woven fiberglass grid for increased dimensional stability.
  - 5. A high density load resistant underlayment, field constructed and installed per manufacturer's construction specifications incorporated to provide higher load resistance.

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- B. Physical properties of the indoor resilient athletic surfacing shall conform to the following minimums:

Width	Omnisports	6' 6" (2 m)
Length	Omnisports	85' (25.9m) approx.
Wear Layer	Omnisports	2 mm
Total Thickness	Omnisports HPL	7 mm (5 + 2)
High Density Underlayment	ASTM D297	0.67 g/cm <sup>3</sup>
Tear Strength	ASTM D412	410-425 min. Die C
Elongation	ASTM D412	120-125 min. Die C
Static Load	ASTM F970	500 psi
Reaction to Fire	ASTM E648	Class 1
Specular Gloss	EN ISO 2813	13%
Wear Layer	Type 1, Grade 1	ASTM F1303/F410
Taber Abrasion	ASTM D3389	0.02 g (1000 cycles)
Stain Resistance	ASTM F925	Excellent
Moisture Tolerance with Multi-Poxy	ASTM F2170	98% RH
Vertical Deformation	PASSED	ASTM F2772
Surface Finish Effect	PASSED	ASTM F2772 (80 - 100)
Ball Rebound	PASSED	ASTM F2772 >90%
Force Reduction	PASSED	ASTM F2772 Class 1
Phthalate-free technology	—	YES
REACH Compliant	—	YES
Heavy Metals	—	NO
ISO 9001	—	YES
ISO 14001	—	YES

1. Color: As available from the indoor resilient athletic surfacing manufacturer's standard range.
  2. Hardwood Design Series: High definition printing for a realistic wood surface appearance as available from the indoor resilient athletic surfacing manufacturer's standard range.
  3. Texture: Texture to remain consistent between solid colors and wood design when blending colors.
- C. Welding Rod: As supplied by the indoor resilient athletic surfacing manufacturer or supplier.
1. Color to blend with the indoor resilient athletic surfacing color or design.
  2. All seams shall be welded to create a monolithic and impermeable surface.
- D. Adhesive: As approved by the indoor resilient athletic surfacing manufacturer.
- E. Game Line Paint and Primer: As approved by the indoor resilient athletic surfacing manufacturer.

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***PART 3 - EXECUTION***

**3.1**     ***EXAMINATION***

- A. It is the responsibility of the general contractor/construction manager to ensure that project/site conditions are acceptable for the installation of the indoor resilient athletic flooring.
- B. Verify that the area in which the indoor resilient athletic surfacing will be installed is dry and weather tight. Verify that permanent heat, light and ventilation are installed and operable.
- C. Verify that all other work that could cause damage, dirt and dust or interrupt the normal pace of the indoor resilient athletic flooring installation is completed or suspended.
- D. Verify that there is a stable room temperature of at least 65°F.
- E. Verify that there are no foreign materials or objects on the subfloor and that the subfloor is clean and ready for installation.
- F. *Direct Full Spread Adhering to Concrete Subfloor Multi-Poxy : moisture content less than 98% RH when tested per ASTM F2170.*
- G. Follow Fieldturf USA, Inc. installation recommendations.
- H. Do not average the results of the tests. Report all field test results in writing to the General Contractor, Architect, and End User prior to installation.
- I. Verify that the concrete subfloor surface pH level is within the 7 - 11 range.
- J. Document the results confirming the slab is within manufacturer's tolerances for slab deviation.

**3.2**     ***PREPARATION OF SURFACES***

- A. Sand the entire surface of the concrete slab.
- B. Sweep the concrete slab so as to remove all dirt and dust. If a sweeping compound is to be used it must be a sweeping compound that does not contain oil or other items that may inhibit the adhesive bond.
- C. Slab must be dust free. In the event that dust impairs adhesive bond, priming the slab prior to application of adhesive may be necessary. Follow installation guidelines.
- D. Follow OSHA guidelines.

**3.3**     ***INSTALLATION***

- A. The installation area shall be closed to all traffic and activity for a period to be set by the indoor resilient athletic surfacing installer. The indoor resilient athletic surfacing installation shall not begin until the installer is familiar with the existing conditions.
- B. All necessary precautions should be taken to minimize noise, smell, dust, the use of hazardous materials and any other items that may inconvenience others.
- C. Install the indoor resilient athletic surfacing in strict accordance with the indoor resilient athletic surfacing manufacturer's written instructions.
- D. Install the indoor resilient athletic surfacing minimizing cross seams. Provide a seam diagram during the submittal process for approval prior to installation. Vinyl Sheet Flooring Seams: Comply with ASTM F 1516. Rout joints and heat weld to permanently and seamlessly fuse sections together.
- E. Paint game lines using approved game line paint primer and game line paint in strict accordance with the game line paint manufacturer's instructions.
- F. Install appropriate threshold plates or transition strips where necessary.

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3.5 *CLEANING*

- A. Remove all unused materials, tools, and equipment and dispose of any debris properly. Clean the indoor resilient athletic surfacing in accordance with the manufacturer's instructions.

3.6 *PROTECTION*

- A. If required, protect the indoor resilient athletic surfacing from damage using coverings approved by the manufacturer until acceptance of work by the customer or their authorized representative.

3.7 *RELATED STANDARDS AND GUIDELINES*

- A. ASTM F2170 "Standard Test Method for Determining Relative Humidity In Concrete Floor Slabs Using In-Situ Probes"
- B. ASTM F710 "Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring"
- C. ACI 302.2R-06 "Guideline for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials"
- D. ASTM F2772-11 "Standard Specification for Athletic Performance Properties of Indoor Sports Floor Systems"

**END OF SECTION**

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***PART 1 – GENERAL***

1.1 *SECTION INCLUDES*

- A. Supply and installation of the indoor resilient multipurpose surfacing
- B. Application of the game lines
- C. References for the correct construction and preparation of concrete slabs to receive resilient flooring.

1.2 *SUBMITTALS*

- A. Product Data:
  - 1. Manufacturer's promotional brochures, specifications and installation instructions
- B. Manufacturer Certifications:
  - 1. Provide certification that accurately identifies the Original Equipment Manufacturer (OEM) of flooring furnished for this project including manufacturer's name, address and factory location.
  - 2. Suppliers of private label flooring for this project must identify themselves as such and fully disclose the OEM information listed above.
  - 3. All "manufacturer" requirements in these specifications must be complied with by the OEM, including warranties, certifications, qualifications, product data, test results, environmental requirements, performance data, etc.
- C. Samples:
  - 1. Submit for selection and approval three (3) sets of the indoor resilient multipurpose surfacing, manufacturer's brochures, samples or sample boards of all of the available colors, textures and styles.
  - 2. Submit color samples of all the available game line paint colors for selection and approval.
- D. Closeout Submittals:
  - 1. Submit three (3) copies of the indoor resilient multipurpose surfacing and manufacturer's maintenance instructions.
  - 2. Submit three (3) copies of the material and installation warranties as specified.

1.3 *QUALITY ASSURANCE*

- A. Qualifications:
  - 1. The indoor resilient multipurpose surfacing shall have been actively marketed for a minimum of ten (10) years.
  - 2. The indoor resilient multipurpose surfacing shall be manufactured in an ISO 9001 certified plant.
  - 3. The indoor resilient multipurpose surfacing shall be manufactured in an ISO 14001 certified plant.
  - 4. The indoor resilient multipurpose surfacing supplier shall be an established firm, experienced in the field, and competent in the techniques required by the manufacturer.
  - 5. The installer of the indoor resilient multipurpose surfacing shall have a minimum of five (5) years of experience in the field installing indoor resilient multipurpose surfacing and have worked on at least five (5) projects of similar size, type and complexity.

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- B. Certifications:
  - 1. Installer to submit the indoor resilient athletic surfacing manufacturer's or distributor's certification attesting that they are an approved installer of the indoor resilient multipurpose surfacing.
  - 2. The indoor resilient multipurpose surfacing manufacturer to submit official ISO 9001 certification for the facility in which the indoor resilient multipurpose surfacing is manufactured.
- C. Testing:

Tests shall be relative for multi-purpose use with certificates from independent testing resources to be made available upon request. Test results shall be performed according to ASTM standard testing procedures including ASTM F2772 "Standard Specification for Athletic Performance Properties of Indoor Sports Floor Systems".

1.4 *DELIVERY, STORAGE AND HANDLING*

- A. Delivery:

Material shall not be delivered until all related work is in place and finished and/or proper storage facilities and conditions can be provided and guaranteed stable according to FieldTurf USA, Inc. recommendations.
- B. Storage:
  - 1. Store the material in a secure, clean and dry location.
  - 2. Maintain temperature between 55° and 85° Fahrenheit.
  - 3. Store the indoor resilient athletic surfacing rolls in an upright position on a smooth flat surface immediately upon delivery to jobsite.
  - 4. Rolls shipped in rigid protective cardboard containers can be laid horizontally prior to unpacking and installation.

1.5 *PROJECT/SITE CONDITIONS*

- A. It is the responsibility of the general contractor/construction manager to maintain project/site conditions acceptable for the installation of the indoor resilient multipurpose flooring.
- B. The area in which the indoor resilient multipurpose surfacing will be installed shall be dry and weather tight. Permanent heat, light and ventilation shall be installed and operable.
- C. All other trades shall have completed their work prior to the installation of the resilient athletic flooring. The general contractor or construction manager shall maintain a secure and clean working environment before, during and after the installation.
- D. Maintain a stable room temperature of at least 65°F for a minimum of one (1) week prior to, during and thereafter installation.
- E. An effective low-permeance vapor barrier is placed directly beneath the concrete subfloor. For "on" or "below grade" installations, it is recommended to provide a permanent vapor barrier resistant to long term hydrostatic pressure/moisture exposure. Protrusions should be sealed to prevent moisture migration into the slab. Moisture should not be allowed to enter the slab after the completed construction.
- F. Concrete subfloor surface pH level within the 7 to 11 range dependent upon installation type.
- G. Concrete subfloor should be no greater than 1/8" within a 10 ft diameter. This tolerance can be measured in accordance with ASTM E1155. A specified (F<sub>F</sub>) of 50 and an (F<sub>L</sub>) of 30 should reach this degree of floor flatness and floor level. There is no numerical correlation between F numbers and the deviation from the straight



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edge. However, the above specified numbers should achieve a flat floor with minimal deviation in the slab. Reference ACI 117 and ACI 302.1R. The general contractor should provide a certificate of compliance with the above recommendations.

- H. Concrete subfloor must be clean and free of all foreign materials or objects including, but not limited to, curing compounds and sealers.
- I. Fill cracks, grooves, voids, depressions, and other minor imperfections. Follow the manufacturer's directions. Moveable joints must be treated utilizing specific transitioning joint devices depending upon the architect's recommendations. Follow current ASTM F710 guidelines for the preparation of concrete slabs to receive resilient flooring.
- J. Refer to ACI 302.2R "Guidelines for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials" for concrete design and construction.
- K. Concrete slab shall be fortified with continual steel reinforcement. Fiber reinforcement alone shall not be considered adequate fortification.

1.6 *WARRANTY*

- A. Special Limited Warranty:
  - 1. Manufacturer's standard form in which manufacturer agrees to repair or replace sports flooring including labor that fails within specified warranty period.
- B. Material warranty must be direct from the product manufacturer.
  - 1. Material warranties must come from original manufacturer or division thereof. Private label warranties from distributors or brokers are not valid. Supply original point of manufacturing upon request.
- C. Failures include, but are not limited to, the following:
  - 1. Material manufacturing defects.
  - 2. Surface wear and deterioration to the point of wear-through of wear layer per ASTM F410/ASTM F1303.
  - 3. Failure due to substrate moisture exposure exceeding 98 percent relative humidity when tested according to ASTM F2170.
- D. Warranty Period:
  - 1. For material defects and surface wear-through: **15** years from date of substantial completion.
  - 2. For moisture vapor tolerance: **15** years from date of substantial completion.
- E. Installer's Limited Warranty:
  - 1. Installer's standard form in which installer agrees to repair or replace sports flooring that fails due to poor workmanship or faulty installation within the specified warranty period.
  - 2. Warranty Period: 2 years from date of substantial completion.

1.7 *ADDITIONAL MATERIALS*

- A. Furnish to the owner additional materials containing a total of at least 1% of each different color or design of the indoor resilient athletic surfacing used on the project.

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1.8 *LEED™ CERTIFICATION*

- A. The indoor resilient athletic surfacing should be able to help this facility to achieve points towards *LEED™ certification*.
- B. LEED categories positively affected by the indoor resilient athletic surfacing:

<b>LEED™ V4 Credit</b>		Contribution
Materials & Resources: Building Product Disclosure & Optimization (BPDO)		
MRc3: Sourcing of Raw Materials	Options 1 & 2	2 Points
MRc4: Material Ingredients	Option 1	1 Point
MRc5: Construction and Demolition Management	Reclamation and Recycling	ReStart® Program

***PART 2 - PRODUCTS***

2.1 *MANUFACTURERS*

- A. The basis of the design for the indoor resilient multipurpose surfacing is Omnisports HPL 9 mm as manufactured by Tarkett.
- B. All other installation accessories and related components must be either made or approved by the indoor resilient athletic surfacing manufacturer.
- C. Other products may be approved as equal if deemed qualified and submitted in accordance with the General Conditions.
- D. Test reports confirming compliance from an independent sports laboratory must be provided along with samples, technical data, installation, maintenance, and warranty prior to acceptance as an alternative product.

2.2 *MATERIALS*

- A. Omnisports HPL 9 mm - Prefabricated sport surface with wood flooring design and slightly textured embossed surface as supplied by Tarkett.
  - 1. Embossing of wood design and solid colors must be the same; varying embossing or surface textures will not be allowed.
  - 2. Printing of wood design shall closely resemble standard wood strip flooring in size, color, board length, and grain appearance.
  - 3. The wood design shall be protected by a clear layer of pure PVC (Polyvinyl Chloride) and TopClean xp, a factory-applied UV cured urethane treatment.
  - 4. Intermediate layers shall be fortified with a non-woven fiberglass grid for increased dimensional stability.
  - 5. A high density load resistant underlayment, field constructed and installed per manufacturer’s construction specifications incorporated to provide higher load resistance.

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- B. Physical properties of the indoor resilient athletic surfacing shall conform to the following minimums:

Width	Omnisports	6' 6" (2 m)
Length	Omnisports	85' (25.9m) approx.
Wear Layer	Omnisports	2 mm
Total Thickness	Omnisports HPL	9 mm (7 + 2)
High Density Underlayment	ASTM D297	0.67 g/cm <sup>3</sup>
Tear Strength	ASTM D412	410-425 min. Die C
Elongation	ASTM D412	120-125 min. Die C
Static Load	ASTM F970	500 psi
Reaction to Fire	ASTM E648	Class 1
Specular Gloss	EN ISO 2813	13%
Wear Layer	Type 1, Grade 1	ASTM F1303/F410
Taber Abrasion	ASTM D3389	0.02 g (1000 cycles)
Stain Resistance	ASTM F925	Excellent
Moisture Tolerance with Multi-Poxy	ASTM F2170	98% RH
Vertical Deformation	PASSED	ASTM F2772
Surface Finish Effect	PASSED	ASTM F2772 (80 - 100)
Ball Rebound	PASSED	ASTM F2772 >90%
Force Reduction	PASSED	ASTM F2772 Class 2
Phthalate-free technology	—	YES
REACH Compliant	—	YES
Heavy Metals	—	NO
ISO 9001	—	YES
ISO 14001	—	YES

1. Color: As available from the indoor resilient athletic surfacing manufacturer's standard range.
  2. Hardwood Design Series: High definition printing for a realistic wood surface appearance as available from the indoor resilient athletic surfacing manufacturer's standard range.
  3. Texture: Texture to remain consistent between solid colors and wood design when blending colors.
- C. Welding Rod: As supplied by the indoor resilient athletic surfacing manufacturer or supplier.
1. Color to blend with the indoor resilient athletic surfacing color or design.
  2. All seams shall be welded to create a monolithic and impermeable surface.
- D. Adhesive: As approved by the indoor resilient athletic surfacing manufacturer.
- E. Game Line Paint and Primer: As approved by the indoor resilient athletic surfacing manufacturer.

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***PART 3 - EXECUTION***

**3.1 EXAMINATION**

- A. It is the responsibility of the general contractor/construction manager to ensure that project/site conditions are acceptable for the installation of the indoor resilient athletic flooring.
- B. Verify that the area in which the indoor resilient athletic surfacing will be installed is dry and weather tight. Verify that permanent heat, light and ventilation are installed and operable.
- C. Verify that all other work that could cause damage, dirt and dust or interrupt the normal pace of the indoor resilient athletic flooring installation is completed or suspended.
- D. Verify that there is a stable room temperature of at least 65°F.
- E. Verify that there are no foreign materials or objects on the subfloor and that the subfloor is clean and ready for installation.
- F. Direct Full Spread Adhering to Concrete Subfloor Multi-Poxy : moisture content less than 98% RH when tested per ASTM F2170.
- G. Follow Fieldturf USA, Inc. installation recommendations.
- H. Do not average the results of the tests. Report all field test results in writing to the General Contractor, Architect, and End User prior to installation.
- I. Verify that the concrete subfloor surface pH level is within the 7 - 11 range.
- J. Document the results confirming the slab is within manufacturer's tolerances for slab deviation.

**3.2 PREPARATION OF SURFACES**

- A. Sand the entire surface of the concrete slab.
- B. Sweep the concrete slab so as to remove all dirt and dust. If a sweeping compound is to be used it must be a sweeping compound that does not contain oil or other items that may inhibit the adhesive bond.
- C. Slab must be dust free. In the event that dust impairs adhesive bond, priming the slab prior to application of adhesive may be necessary. Follow installation guidelines.
- D. Follow OSHA guidelines.

**3.3 INSTALLATION**

- A. The installation area shall be closed to all traffic and activity for a period to be set by the indoor resilient athletic surfacing installer. The indoor resilient athletic surfacing installation shall not begin until the installer is familiar with the existing conditions.
- B. All necessary precautions should be taken to minimize noise, smell, dust, the use of hazardous materials and any other items that may inconvenience others.
- C. Install the indoor resilient athletic surfacing in strict accordance with the indoor resilient athletic surfacing manufacturer's written instructions.
- D. Install the indoor resilient athletic surfacing minimizing cross seams. Provide a seam diagram during the submittal process for approval prior to installation. Vinyl Sheet Flooring Seams: Comply with ASTM F 1516. Rout joints and heat weld to permanently and seamlessly fuse sections together.
- E. Paint game lines using approved game line paint primer and game line paint in strict accordance with the game line paint manufacturer's instructions.
- F. Install appropriate threshold plates or transition strips where necessary.

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3.5 *CLEANING*

- A. Remove all unused materials, tools, and equipment and dispose of any debris properly. Clean the indoor resilient athletic surfacing in accordance with the manufacturer's instructions.

3.6 *PROTECTION*

- A. If required, protect the indoor resilient athletic surfacing from damage using coverings approved by the manufacturer until acceptance of work by the customer or their authorized representative.

3.7 *RELATED STANDARDS AND GUIDELINES*

- A. ASTM F2170 "Standard Test Method for Determining Relative Humidity In Concrete Floor Slabs Using In-Situ Probes"
- B. ASTM F710 "Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring"
- C. ACI 302.2R-06 "Guideline for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials"
- D. ASTM F2772-11 "Standard Specification for Athletic Performance Properties of Indoor Sports Floor Systems"

**END OF SECTION**

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

***PART 1 – GENERAL***

1.1 *SECTION INCLUDES*

- A. Supply and installation of the indoor resilient multipurpose surfacing
- B. Application of the game lines
- C. References for the correct construction and preparation of concrete slabs to receive resilient flooring.

1.2 *SUBMITTALS*

- A. Product Data:
  - 1. Manufacturer's promotional brochures, specifications and installation instructions
- B. Manufacturer Certifications:
  - 1. Provide certification that accurately identifies the Original Equipment Manufacturer (OEM) of flooring furnished for this project including manufacturer's name, address and factory location.
  - 2. Suppliers of private label flooring for this project must identify themselves as such and fully disclose the OEM information listed above.
  - 3. All "manufacturer" requirements in these specifications must be complied with by the OEM, including warranties, certifications, qualifications, product data, test results, environmental requirements, performance data, etc.
- C. Samples:
  - 1. Submit for selection and approval three (3) sets of the indoor resilient multipurpose surfacing, manufacturer's brochures, samples or sample boards of all of the available colors, textures and styles.
  - 2. Submit color samples of all the available game line paint colors for selection and approval.
- D. Closeout Submittals:
  - 1. Submit three (3) copies of the indoor resilient multipurpose surfacing and manufacturer's maintenance instructions.
  - 2. Submit three (3) copies of the material and installation warranties as specified.

1.3 *QUALITY ASSURANCE*

- A. Qualifications:
  - 1. The indoor resilient multipurpose surfacing shall have been actively marketed for a minimum of ten (10) years.
  - 2. The indoor resilient multipurpose surfacing shall be manufactured in an ISO 9001 certified plant.
  - 3. The indoor resilient multipurpose surfacing shall be manufactured in an ISO 14001 certified plant.
  - 4. The indoor resilient multipurpose surfacing supplier shall be an established firm, experienced in the field, and competent in the techniques required by the manufacturer.
  - 5. The installer of the indoor resilient multipurpose surfacing shall have a minimum of five (5) years of experience in the field installing indoor resilient multipurpose surfacing and have worked on at least five (5) projects of similar size, type and complexity.

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- B. Certifications:
  - 1. Installer to submit the indoor resilient athletic surfacing manufacturer's or distributor's certification attesting that they are an approved installer of the indoor resilient multipurpose surfacing.
  - 2. The indoor resilient multipurpose surfacing manufacturer to submit official ISO 9001 certification for the facility in which the indoor resilient multipurpose surfacing is manufactured.
- C. Testing:

Tests shall be relative for multi-purpose use with certificates from independent testing resources to be made available upon request. Test results shall be performed according to ASTM standard testing procedures including ASTM F2772 "Standard Specification for Athletic Performance Properties of Indoor Sports Floor Systems".

1.4 *DELIVERY, STORAGE AND HANDLING*

- A. Delivery:

Material shall not be delivered until all related work is in place and finished and/or proper storage facilities and conditions can be provided and guaranteed stable according to FieldTurf USA, Inc. recommendations.
- B. Storage:
  - 1. Store the material in a secure, clean and dry location.
  - 2. Maintain temperature between 55° and 85° Fahrenheit.
  - 3. Store the indoor resilient athletic surfacing rolls in an upright position on a smooth flat surface immediately upon delivery to jobsite.
  - 4. Rolls shipped in rigid protective cardboard containers can be laid horizontally prior to unpacking and installation.

1.5 *PROJECT/SITE CONDITIONS*

- A. It is the responsibility of the general contractor/construction manager to maintain project/site conditions acceptable for the installation of the indoor resilient multipurpose flooring.
- B. The area in which the indoor resilient multipurpose surfacing will be installed shall be dry and weather tight. Permanent heat, light and ventilation shall be installed and operable.
- C. All other trades shall have completed their work prior to the installation of the resilient athletic flooring. The general contractor or construction manager shall maintain a secure and clean working environment before, during and after the installation.
- D. Maintain a stable room temperature of at least 65°F for a minimum of one (1) week prior to, during and thereafter installation.
- E. An effective low-permeance vapor barrier is placed directly beneath the concrete subfloor. For "on" or "below grade" installations, it is recommended to provide a permanent vapor barrier resistant to long term hydrostatic pressure/moisture exposure. Protrusions should be sealed to prevent moisture migration into the slab. Moisture should not be allowed to enter the slab after the completed construction.
- F. Concrete subfloor surface pH level within the 7 to 10 range dependent upon installation type.
- G. Concrete subfloor should be no greater than 1/8" within a 10 ft diameter. This tolerance can be measured in accordance with ASTM E1155. A specified (F<sub>F</sub>) of 50 and an (F<sub>L</sub>) of 30 should reach this degree of floor flatness and floor level. There is no numerical correlation between F numbers and the deviation from the straight

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edge. However, the above specified numbers should achieve a flat floor with minimal deviation in the slab. Reference ACI 117 and ACI 302.1R. The general contractor should provide a certificate of compliance with the above recommendations.

- H. Concrete subfloor must be clean and free of all foreign materials or objects including, but not limited to, curing compounds and sealers.
- I. Fill cracks, grooves, voids, depressions, and other minor imperfections. Follow the manufacturer's directions. Moveable joints must be treated utilizing specific transitioning joint devices depending upon the architect's recommendations. Follow current ASTM F710 guidelines for the preparation of concrete slabs to receive resilient flooring.
- J. Refer to ACI 302.2R "Guidelines for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials" for concrete design and construction.
- K. Concrete slab shall be fortified with continual steel reinforcement. Fiber reinforcement alone shall not be considered adequate fortification.

1.6 *WARRANTY*

- A. Special Limited Warranty:
  - 1. Manufacturer's standard form in which manufacturer agrees to repair or replace sports flooring including labor that fails within specified warranty period.
- B. Material warranty must be direct from the product manufacturer.
  - 1. Material warranties must come from original manufacturer or division thereof. Private label warranties from distributors or brokers are not valid. Supply original point of manufacturing upon request.
- C. Failures include, but are not limited to, the following:
  - 1. Material manufacturing defects.
  - 2. Surface wear and deterioration to the point of wear-through of wear layer per ASTM F410/ASTM F1303.
  - 3. Failure due to substrate moisture exposure exceeding 98 percent relative humidity when tested according to ASTM F2170.
- D. Warranty Period:
  - 1. For material defects and surface wear-through: **25** years from date of substantial completion.
  - 2. For moisture vapor tolerance: **25** years from date of substantial completion.
- E. Installer's Limited Warranty:
  - 1. Installer's standard form in which installer agrees to repair or replace sports flooring that fails due to poor workmanship or faulty installation within the specified warranty period.
  - 2. Warranty Period: 2 years from date of substantial completion.

1.7 *ADDITIONAL MATERIALS*

- A. Furnish to the owner additional materials containing a total of at least 1% of each different color or design of the indoor resilient athletic surfacing used on the project.



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1.8 *LEED™ CERTIFICATION*

- A. The indoor resilient athletic surfacing should be able to help this facility to achieve points towards *LEED™ certification*. Flooring system must be certified by FloorScore.
- B. LEED categories positively affected by the indoor resilient athletic surfacing:

<b>LEED™ V4 Credit</b>		Contribution
Materials & Resources: Building Product Disclosure & Optimization (BPDO)		
MRc3: Sourcing of Raw Materials	Options 1 & 2	2 Points
MRc4: Material Ingredients	Option 1	1 Point
MRc5: Construction and Demolition Management	Reclamation and Recycling	ReStart® Program
Indoor Environmental Quality		
EQc2: Low-Emitting Materials	TVOC: 0.5 mg/m <sup>3</sup> or less	FloorScore®

***PART 2 - PRODUCTS***

2.1 *MANUFACTURERS*

- A. The basis of the design for the indoor resilient multipurpose surfacing is Omnisports Multi-Use as manufactured by Tarkett.
- B. All other installation accessories and related components must be either made or approved by the indoor resilient athletic surfacing manufacturer.
- C. Other products may be approved as equal if deemed qualified and submitted in accordance with the General Conditions.
- D. Test reports confirming compliance from an independent sports laboratory must be provided along with samples, technical data, installation, maintenance, and warranty prior to acceptance as an alternative product.

2.2 *MATERIALS*

- A. Omnisports Multi-Use - Prefabricated sport surface 6.2 mm (0.14") with wood flooring design, single surface embossing and Extreme Three (3) Layers technology (X3LT) as supplied by Tarkett.
  - 1. Embossing of wood design and solid colors must be the same; varying embossing or surface textures will not be allowed.
  - 2. Printing of wood design shall closely resemble standard wood strip flooring in size, color, board length, and grain appearance.
  - 3. Surface embossing combined with TopClean XP must offer proper balance of surface friction per the ASTM F2772.
  - 4. Surface embossing combined with TopClean XP must provide resistance to stains and scratches. Surface profile must not incorporate linear embossing.
  - 5. The wood design shall be protected by a clear layer of pure PVC (Polyvinyl Chloride) and TopClean XP, a factory-applied UV cured urethane treatment.
  - 6. Extreme Three (3) Layers technology (X3LT) includes Omnisports XCS cushion, glass veil and calendared sheet must offer improved shock absorbing comfort while providing better indentation recovery

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7. The XCS cushion force reduction layer shall be high-density closed cell PVC foam with honeycomb embossing, and is applied in one continuous manufacturing process.
  8. Laminated or adhered foam layers will not be allowed.
  9. Field constructed products will not be accepted.
- A. Physical properties of the indoor resilient athletic surfacing shall conform to the following minimums:

Width	—	6' 5" (2 m)
Length	—	85' (26 m) approx.
Wear Layer	—	2 mm
Total Thickness	—	6.2 mm
Wear Layer	Type 1– Grade 1	ASTM F1303/F410
Vertical Deformation	PASSED	ASTM F2772
Rolling Load	PASSED	≤0.50 mm (EN 1569 {11/1999})
Surface Finish Effect	PASSED	ASTM F2772 (80 – 110)
Chemical Resistance	Excellent	ASTM F925
Impact Resistance	PASSED	EN 1717
Abrasion Resistance	PASSED	0.10 (EN ISO 5470-1 {06/1999})
Static Load Limit	PASSED	ASTM F970- Load 175 Lbs
Sound Insulation	Excellent	+/- 19 dB (ISO 717/2)
In-Room Sound Insulation	Excellent	65dB (NF S31-074)
Ball Rebound	PASSED	ASTM F2772 > 90%
Force Reduction	PASSED	ASTM F2772 Class 2
Fire Rating	PASSED	ASTM E648 Class 1
Microbial Assays Test	No Growth	G21 ASTM - Backing
Asthma and Allergy Friendly™	ASP: 05-01/101	Certified Compliant
VOC	<10µg/m <sup>3</sup>	ASTM D5116 (small chamber)
Phthalate-free technology	—	YES
REACH Compliant	—	YES
Heavy Metals	—	NO
ISO 9001	—	YES
ISO 14001	—	YES

1. Color: As available from the indoor resilient athletic surfacing manufacturer's standard range.
  2. Hardwood Design Series: High definition printing for a realistic wood surface appearance as available from the indoor resilient athletic surfacing manufacturer's standard range.
  3. Texture: Texture to remain consistent between solid colors and wood design when blending colors.
- C. Welding Rod: As supplied by the indoor resilient athletic surfacing manufacturer or supplier.
1. Color to blend with the indoor resilient athletic surfacing color or design.
  2. All seams shall be welded to create a monolithic and impermeable surface.

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- D. Adhesive: As approved by the indoor resilient athletic surfacing manufacturer.
- E. Game Line Paint and Primer: As approved by the indoor resilient athletic surfacing manufacturer.

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

***PART 3 - EXECUTION***

**3.1**     ***EXAMINATION***

- A. It is the responsibility of the general contractor/construction manager to ensure that project/site conditions are acceptable for the installation of the indoor resilient athletic flooring.
- B. Verify that the area in which the indoor resilient athletic surfacing will be installed is dry and weather tight. Verify that permanent heat, light and ventilation are installed and operable.
- C. Verify that all other work that could cause damage, dirt and dust or interrupt the normal pace of the indoor resilient athletic flooring installation is completed or suspended.
- D. Verify that there is a stable room temperature of at least 65°F.
- E. Verify that there are no foreign materials or objects on the subfloor and that the subfloor is clean and ready for installation.
- F. *For GreenLay™ Installation to Concrete Subfloor: moisture content less than 92% RH when tested per ASTM F2170.*
- G. Follow Fieldturf USA, Inc. installation recommendations.
- H. Do not average the results of the tests. Report all field test results in writing to the General Contractor, Architect, and End User prior to installation.
- I. Verify that the concrete subfloor surface pH level is within the 7 - 10 range.
- J. Document the results confirming the slab is within manufacturer's tolerances for slab deviation.

**3.2**     ***PREPARATION OF SURFACES***

- A. Sand the entire surface of the concrete slab.
- B. Sweep the concrete slab so as to remove all dirt and dust. If a sweeping compound is to be used it must be a sweeping compound that does not contain oil or other items that may inhibit the adhesive bond.
- C. Slab must be dust free. In the event that dust impairs adhesive bond, priming the slab prior to application of adhesive may be necessary. Follow installation guidelines.
- D. Follow OSHA guidelines

**3.3**     ***INSTALLATION***

- A. The installation area shall be closed to all traffic and activity for a period to be set by the indoor resilient athletic surfacing installer. The indoor resilient athletic surfacing installation shall not begin until the installer is familiar with the existing conditions.
- B. All necessary precautions should be taken to minimize noise, smell, dust, the use of hazardous materials and any other items that may inconvenience others.
- C. Install the indoor resilient athletic surfacing in strict accordance with the indoor resilient athletic surfacing manufacturer's written instructions.
- D. Install the indoor resilient athletic surfacing minimizing cross seams. Provide a seam diagram during the submittal process for approval prior to installation. Vinyl Sheet Flooring Seams: Comply with ASTM F 1516. Rout joints and heat weld to permanently and seamlessly fuse sections together.
- E. Paint game lines using approved game line paint primer and game line paint in strict accordance with the game line paint manufacturer's instructions.
- F. Install appropriate threshold plates or transition strips where necessary.

**3.5**     ***CLEANING***

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- A. Remove all unused materials, tools, and equipment and dispose of any debris properly. Clean the indoor resilient athletic surfacing in accordance with the manufacturer's instructions.

3.6 *PROTECTION*

- A. If required, protect the indoor resilient athletic surfacing from damage using coverings approved by the manufacturer until acceptance of work by the customer or their authorized representative.

3.7 *RELATED STANDARDS AND GUIDELINES*

- A. ASTM F2170 "Standard Test Method for Determining Relative Humidity In Concrete Floor Slabs Using In-Situ Probes"
- B. ASTM F710 "Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring"
- C. ACI 302.2R-06 "Guideline for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials"
- D. ASTM F2772-11 "Standard Specification for Athletic Performance Properties of Indoor Sports Floor Systems"

**END OF SECTION**

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

***PART 1 – GENERAL***

1.1 *SECTION INCLUDES*

- A. Supply and installation of the indoor resilient multipurpose surfacing
- B. Application of the game lines
- C. References for the correct construction and preparation of concrete slabs to receive resilient flooring.

1.2 *SUBMITTALS*

- A. Product Data:
  - 1. Manufacturer's promotional brochures, specifications and installation instructions
- B. Manufacturer Certifications:
  - 1. Provide certification that accurately identifies the Original Equipment Manufacturer (OEM) of flooring furnished for this project including manufacturer's name, address and factory location.
  - 2. Suppliers of private label flooring for this project must identify themselves as such and fully disclose the OEM information listed above.
  - 3. All "manufacturer" requirements in these specifications must be complied with by the OEM, including warranties, certifications, qualifications, product data, test results, environmental requirements, performance data, etc.
- C. Samples:
  - 1. Submit for selection and approval three (3) sets of the indoor resilient multipurpose surfacing, manufacturer's brochures, samples or sample boards of all of the available colors, textures and styles.
  - 2. Submit color samples of all the available game line paint colors for selection and approval.
- D. Closeout Submittals:
  - 1. Submit three (3) copies of the indoor resilient multipurpose surfacing and manufacturer's maintenance instructions.
  - 2. Submit three (3) copies of the material and installation warranties as specified.

1.3 *QUALITY ASSURANCE*

- A. Qualifications:
  - 1. The indoor resilient multipurpose surfacing shall have been actively marketed for a minimum of ten (10) years.
  - 2. The indoor resilient multipurpose surfacing shall be manufactured in an ISO 9001 certified plant.
  - 3. The indoor resilient multipurpose surfacing shall be manufactured in an ISO 14001 certified plant.
  - 4. The indoor resilient multipurpose surfacing supplier shall be an established firm, experienced in the field, and competent in the techniques required by the manufacturer.
  - 5. The installer of the indoor resilient multipurpose surfacing shall have a minimum of five (5) years of experience in the field installing indoor resilient multipurpose surfacing and have worked on at least five (5) projects of similar size, type and complexity.

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- B. Certifications:
  - 1. Installer to submit the indoor resilient athletic surfacing manufacturer's or distributor's certification attesting that they are an approved installer of the indoor resilient multipurpose surfacing.
  - 2. The indoor resilient multipurpose surfacing manufacturer to submit official ISO 9001 certification for the facility in which the indoor resilient multipurpose surfacing is manufactured.
- C. Testing:

Tests shall be relative for multi-purpose use with certificates from independent testing resources to be made available upon request. Test results shall be performed according to ASTM standard testing procedures including ASTM F2772 "Standard Specification for Athletic Performance Properties of Indoor Sports Floor Systems".

1.4 *DELIVERY, STORAGE AND HANDLING*

- A. Delivery:

Material shall not be delivered until all related work is in place and finished and/or proper storage facilities and conditions can be provided and guaranteed stable according to FieldTurf USA, Inc. recommendations.
- B. Storage:
  - 1. Store the material in a secure, clean and dry location.
  - 2. Maintain temperature between 55° and 85° Fahrenheit.
  - 3. Store the indoor resilient athletic surfacing rolls in an upright position on a smooth flat surface immediately upon delivery to jobsite.
  - 4. Rolls shipped in rigid protective cardboard containers can be laid horizontally prior to unpacking and installation.

1.5 *PROJECT/SITE CONDITIONS*

- A. It is the responsibility of the general contractor/construction manager to maintain project/site conditions acceptable for the installation of the indoor resilient multipurpose flooring.
- B. The area in which the indoor resilient multipurpose surfacing will be installed shall be dry and weather tight. Permanent heat, light and ventilation shall be installed and operable.
- C. All other trades shall have completed their work prior to the installation of the resilient athletic flooring. The general contractor or construction manager shall maintain a secure and clean working environment before, during and after the installation.
- D. Maintain a stable room temperature of at least 65°F for a minimum of one (1) week prior to, during and thereafter installation.
- E. An effective low-permeance vapor barrier is placed directly beneath the concrete subfloor. For "on" or "below grade" installations, it is recommended to provide a permanent vapor barrier resistant to long term hydrostatic pressure/moisture exposure. Protrusions should be sealed to prevent moisture migration into the slab. Moisture should not be allowed to enter the slab after the completed construction.
- F. Concrete subfloor surface pH level within the 7 to 10 range dependent upon installation type.
- G. Concrete subfloor should be no greater than 1/8" within a 10 ft diameter. This tolerance can be measured in accordance with ASTM E1155. A specified (F<sub>F</sub>) of 50 and an (F<sub>L</sub>) of 30 should reach this degree of floor flatness and floor level. There is no numerical correlation between F numbers and the deviation from the straight

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edge. However, the above specified numbers should achieve a flat floor with minimal deviation in the slab. Reference ACI 117 and ACI 302.1R. The general contractor should provide a certificate of compliance with the above recommendations.

- H. Concrete subfloor must be clean and free of all foreign materials or objects including, but not limited to, curing compounds and sealers.
- I. Fill cracks, grooves, voids, depressions, and other minor imperfections. Follow the manufacturer's directions. Moveable joints must be treated utilizing specific transitioning joint devices depending upon the architect's recommendations. Follow current ASTM F710 guidelines for the preparation of concrete slabs to receive resilient flooring.
- J. Refer to ACI 302.2R "Guidelines for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials" for concrete design and construction.
- K. Concrete slab shall be fortified with continual steel reinforcement. Fiber reinforcement alone shall not be considered adequate fortification.

1.6 *WARRANTY*

- A. Special Limited Warranty:
  - 1. Manufacturer's standard form in which manufacturer agrees to repair or replace sports flooring including labor that fails within specified warranty period.
- B. Material warranty must be direct from the product manufacturer.
  - 1. Material warranties must come from original manufacturer or division thereof. Private label warranties from distributors or brokers are not valid. Supply original point of manufacturing upon request.
- C. Failures include, but are not limited to, the following:
  - 1. Material manufacturing defects.
  - 2. Surface wear and deterioration to the point of wear-through of wear layer per ASTM F410/ASTM F1303.
  - 3. Failure due to substrate moisture exposure exceeding 98 percent relative humidity when tested according to ASTM F2170.
- D. Warranty Period:
  - 1. For material defects and surface wear-through: **25** years from date of substantial completion.
  - 2. For moisture vapor tolerance: **25** years from date of substantial completion.
- E. Installer's Limited Warranty:
  - 1. Installer's standard form in which installer agrees to repair or replace sports flooring that fails due to poor workmanship or faulty installation within the specified warranty period.
  - 2. Warranty Period: 2 years from date of substantial completion.

1.7 *ADDITIONAL MATERIALS*

- A. Furnish to the owner additional materials containing a total of at least 1% of each different color or design of the indoor resilient athletic surfacing used on the project.



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1.8 *LEED™ CERTIFICATION*

- A. The indoor resilient athletic surfacing should be able to help this facility to achieve points towards *LEED™ certification*. Flooring system must be certified by FloorScore.
- B. LEED categories positively affected by the indoor resilient athletic surfacing:

<b>LEED™ V4 Credit</b>		Contribution
Materials & Resources: Building Product Disclosure & Optimization (BPDO)		
MRC3: Sourcing of Raw Materials	Options 1 & 2	2 Points
MRC4: Material Ingredients	Option 1	1 Point
MRC5: Construction and Demolition Management	Reclamation and Recycling	ReStart® Program
Indoor Environmental Quality		
EQc2: Low-Emitting Materials	TVOC: 0.5 mg/m <sup>3</sup> or less	FloorScore®

***PART 2 - PRODUCTS***

2.1 *MANUFACTURERS*

- A. The basis of the design for the indoor resilient multipurpose surfacing is Omnisports Multi-Use as manufactured by Tarkett.
- B. All other installation accessories and related components must be either made or approved by the indoor resilient athletic surfacing manufacturer.
- C. Other products may be approved as equal if deemed qualified and submitted in accordance with the General Conditions.
- D. Test reports confirming compliance from an independent sports laboratory must be provided along with samples, technical data, installation, maintenance, and warranty prior to acceptance as an alternative product.

2.2 *MATERIALS*

- A. Omnisports Multi-Use - Prefabricated sport surface 6.2 mm (0.14") with wood flooring design, single surface embossing and Extreme Three (3) Layers technology (X3LT) as supplied by Tarkett.
  - 1. Embossing of wood design and solid colors must be the same; varying embossing or surface textures will not be allowed.
  - 2. Printing of wood design shall closely resemble standard wood strip flooring in size, color, board length, and grain appearance.
  - 3. Surface embossing combined with TopClean XP must offer proper balance of surface friction per the ASTM F2772.
  - 4. Surface embossing combined with TopClean XP must provide resistance to stains and scratches. Surface profile must not incorporate linear embossing.
  - 5. The wood design shall be protected by a clear layer of pure PVC (Polyvinyl Chloride) and TopClean XP, a factory-applied UV cured urethane treatment.
  - 6. Extreme Three (3) Layers technology (X3LT) includes Omnisports XCS cushion, glass veil and calendared sheet must offer improved shock absorbing comfort while providing better indentation recovery

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7. The XCS cushion force reduction layer shall be high-density closed cell PVC foam with honeycomb embossing, and is applied in one continuous manufacturing process.
8. Laminated or adhered foam layers will not be allowed.
9. Field constructed products will not be accepted.

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- A. Physical properties of the indoor resilient athletic surfacing shall conform to the following minimums:

Width	—	6' 6" (2 m)
Length	—	85' (25.9m) approx.
Wear Layer	—	2 mm
Total Thickness	—	6.2 mm
Wear Layer	Type 1– Grade 1	ASTM F1303/F410
Vertical Deformation	PASSED	ASTM F2772
Rolling Load	PASSED	≤0.50 mm (EN 1569 {11/1999})
Surface Finish Effect	PASSED	ASTM F2772 (80 – 110)
Chemical Resistance	Excellent	ASTM F925
Impact Resistance	PASSED	EN 1717
Abrasion Resistance	PASSED	0.10 (EN ISO 5470-1 {06/1999})
Static Load Limit	PASSED	ASTM F970- Load 175 Lbs
Sound Insulation	Excellent	+/- 19 dB (ISO 717/2)
In-Room Sound Insulation	Excellent	65dB (NF S31-074)
Ball Rebound	PASSED	ASTM F2772 > 90%
Force Reduction	PASSED	ASTM F2772 Class 2
Fire Rating	PASSED	ASTM E648 Class 1
Microbial Assays Test	No Growth	G21 ASTM - Backing
Asthma and Allergy Friendly™	ASP: 05-01/101	Certified Compliant
VOC	<10µg/m <sup>3</sup>	ASTM D5116 (small chamber)
Phthalate-free technology	—	YES
REACH Compliant	—	YES
Heavy Metals	—	NO
ISO 9001	—	YES
ISO 14001	—	YES

1. Color: As available from the indoor resilient athletic surfacing manufacturer's standard range.
  2. Hardwood Design Series: High definition printing for a realistic wood surface appearance as available from the indoor resilient athletic surfacing manufacturer's standard range.
  3. Texture: Texture to remain consistent between solid colors and wood design when blending colors.
- C. Welding Rod: As supplied by the indoor resilient athletic surfacing manufacturer or supplier.
1. Color to blend with the indoor resilient athletic surfacing color or design.
  2. All seams shall be welded to create a monolithic and impermeable surface.
- D. Adhesive: As approved by the indoor resilient athletic surfacing manufacturer.
- E. Game Line Paint and Primer: As approved by the indoor resilient athletic surfacing manufacturer.

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***PART 3 - EXECUTION***

**3.1 EXAMINATION**

- A. It is the responsibility of the general contractor/construction manager to ensure that project/site conditions are acceptable for the installation of the indoor resilient athletic flooring.
- B. Verify that the area in which the indoor resilient athletic surfacing will be installed is dry and weather tight. Verify that permanent heat, light and ventilation are installed and operable.
- C. Verify that all other work that could cause damage, dirt and dust or interrupt the normal pace of the indoor resilient athletic flooring installation is completed or suspended.
- D. Verify that there is a stable room temperature of at least 65°F.
- E. Verify that there are no foreign materials or objects on the subfloor and that the subfloor is clean and ready for installation.
- F. Direct Full Spread Adhering to Concrete Subfloor HS Sports Spray : moisture content less than 90% RH when tested per ASTM F2170.
- G. Follow Fieldturf USA, Inc installation recommendations.
- H. Do not average the results of the tests. Report all field test results in writing to the General Contractor, Architect, and End User prior to installation.
- I. Verify that the concrete subfloor surface pH level is within the 7 - 10 range.
- J. Document the results indicating the slab is within manufacturer's tolerances for slab deviation.

**3.2 PREPARATION OF SURFACES**

- A. Sand the entire surface of the concrete slab.
- B. Sweep the concrete slab so as to remove all dirt and dust. If a sweeping compound is to be used it must be a sweeping compound that does not contain oil or other items that may inhibit the adhesive bond.
- C. Slab must be dust free. In the event that dust impairs adhesive bond, priming the slab prior to application of adhesive may be necessary. Follow installation guidelines.

**3.3 INSTALLATION**

- A. The installation area shall be closed to all traffic and activity for a period to be set by the indoor resilient athletic surfacing installer. The indoor resilient athletic surfacing installation shall not begin until the installer is familiar with the existing conditions.
- B. All necessary precautions should be taken to minimize noise, smell, dust, the use of hazardous materials and any other items that may inconvenience others.
- C. Install the indoor resilient athletic surfacing in strict accordance with the indoor resilient athletic surfacing manufacturer's written instructions.
- D. Install the indoor resilient athletic surfacing minimizing cross seams. Provide a seam diagram during the submittal process for approval prior to installation. Vinyl Sheet Flooring Seams: Comply with ASTM F 1516. Rout joints and heat weld to permanently and seamlessly fuse sections together. Apply transitions at doorways as needed.
- E. Paint game lines using approved game line paint primer and game line paint in strict accordance with the game line paint manufacturer's instructions.
- F. Install appropriate threshold plates or transition strips where necessary.

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

3.5 *CLEANING*

- A. Remove all unused materials, tools, and equipment and dispose of any debris properly. Clean the indoor resilient athletic surfacing in accordance with the manufacturer's instructions.

3.6 *PROTECTION*

- A. If required, protect the indoor resilient athletic surfacing from damage using coverings approved by the manufacturer until acceptance of work by the customer or their authorized representative.

3.7 *RELATED STANDARDS AND GUIDELINES*

- A. ASTM F2170 "Standard Test Method for Determining Relative Humidity In Concrete Floor Slabs Using In-Situ Probes"
- B. ASTM F710 "Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring"
- C. ACI 302.2R-06 "Guideline for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials"
- D. ASTM F2772-11 "Standard Specification for Athletic Performance Properties of Indoor Sports Floor Systems"

**END OF SECTION**

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

***PART 1 – GENERAL***

1.1 *SECTION INCLUDES*

- A. Supply and installation of the indoor resilient multipurpose surfacing
- B. Application of the game lines
- C. References for the correct construction and preparation of concrete slabs to receive resilient flooring.

1.2 *SUBMITTALS*

- A. Product Data:
  - 1. Manufacturer's promotional brochures, specifications and installation instructions
- B. Manufacturer Certifications:
  - 1. Provide certification that accurately identifies the Original Equipment Manufacturer (OEM) of flooring furnished for this project including manufacturer's name, address and factory location.
  - 2. Suppliers of private label flooring for this project must identify themselves as such and fully disclose the OEM information listed above.
  - 3. All "manufacturer" requirements in these specifications must be complied with by the OEM, including warranties, certifications, qualifications, product data, test results, environmental requirements, performance data, etc.
- C. Samples:
  - 1. Submit for selection and approval three (3) sets of the indoor resilient multipurpose surfacing, manufacturer's brochures, samples or sample boards of all of the available colors, textures and styles.
  - 2. Submit color samples of all the available game line paint colors for selection and approval.
- D. Closeout Submittals:
  - 1. Submit three (3) copies of the indoor resilient multipurpose surfacing and manufacturer's maintenance instructions.
  - 2. Submit three (3) copies of the material and installation warranties as specified.

1.3 *QUALITY ASSURANCE*

- A. Qualifications:
  - 1. The indoor resilient multipurpose surfacing shall have been actively marketed for a minimum of ten (10) years.
  - 2. The indoor resilient multipurpose surfacing shall be manufactured in an ISO 9001 certified plant.
  - 3. The indoor resilient multipurpose surfacing shall be manufactured in an ISO 14001 certified plant.
  - 4. The indoor resilient multipurpose surfacing supplier shall be an established firm, experienced in the field, and competent in the techniques required by the manufacturer.
  - 5. The installer of the indoor resilient multipurpose surfacing shall have a minimum of five (5) years of experience in the field installing indoor resilient multipurpose surfacing and have worked on at least five (5) projects of similar size, type and complexity.

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

- B. Certifications:
  - 1. Installer to submit the indoor resilient athletic surfacing manufacturer's or distributor's certification attesting that they are an approved installer of the indoor resilient multipurpose surfacing.
  - 2. The indoor resilient multipurpose surfacing manufacturer to submit official ISO 9001 certification for the facility in which the indoor resilient multipurpose surfacing is manufactured.
- C. Testing:

Tests shall be relative for multi-purpose use with certificates from independent testing resources to be made available upon request. Test results shall be performed according to ASTM standard testing procedures including ASTM F2772 "Standard Specification for Athletic Performance Properties of Indoor Sports Floor Systems".

1.4 *DELIVERY, STORAGE AND HANDLING*

- A. Delivery:

Material shall not be delivered until all related work is in place and finished and/or proper storage facilities and conditions can be provided and guaranteed stable according to FieldTurf USA, Inc. recommendations.
- B. Storage:
  - 1. Store the material in a secure, clean and dry location.
  - 2. Maintain temperature between 55° and 85° Fahrenheit.
  - 3. Store the indoor resilient athletic surfacing rolls in an upright position on a smooth flat surface immediately upon delivery to jobsite.
  - 4. Rolls shipped in rigid protective cardboard containers can be laid horizontally prior to unpacking and installation.

1.5 *PROJECT/SITE CONDITIONS*

- A. It is the responsibility of the general contractor/construction manager to maintain project/site conditions acceptable for the installation of the indoor resilient multipurpose flooring.
- B. The area in which the indoor resilient multipurpose surfacing will be installed shall be dry and weather tight. Permanent heat, light and ventilation shall be installed and operable.
- C. All other trades shall have completed their work prior to the installation of the resilient athletic flooring. The general contractor or construction manager shall maintain a secure and clean working environment before, during and after the installation.
- D. Maintain a stable room temperature of at least 65°F for a minimum of one (1) week prior to, during and thereafter installation.
- E. An effective low-permeance vapor barrier is placed directly beneath the concrete subfloor. For "on" or "below grade" installations, it is recommended to provide a permanent vapor barrier resistant to long term hydrostatic pressure/moisture exposure. Protrusions should be sealed to prevent moisture migration into the slab. Moisture should not be allowed to enter the slab after the completed construction.
- F. Concrete subfloor surface pH level within the 7 to 11 range dependent upon installation type.
- G. Concrete subfloor should be no greater than 1/8" within a 10 ft diameter. This tolerance can be measured in accordance with ASTM E1155. A specified (F<sub>F</sub>) of 50 and an (F<sub>L</sub>) of 30 should reach this degree of floor flatness and floor level. There is no numerical correlation between F numbers and the deviation from the straight

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edge. However, the above specified numbers should achieve a flat floor with minimal deviation in the slab. Reference ACI 117 and ACI 302.1R. The general contractor should provide a certificate of compliance with the above recommendations.

- H. Concrete subfloor must be clean and free of all foreign materials or objects including, but not limited to, curing compounds and sealers.
- I. Fill cracks, grooves, voids, depressions, and other minor imperfections. Follow the manufacturer's directions. Moveable joints must be treated utilizing specific transitioning joint devices depending upon the architect's recommendations. Follow current ASTM F710 guidelines for the preparation of concrete slabs to receive resilient flooring.
- J. Refer to ACI 302.2R "Guidelines for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials" for concrete design and construction.
- K. Concrete slab shall be fortified with continual steel reinforcement. Fiber reinforcement alone shall not be considered adequate fortification.

1.6 *WARRANTY*

- A. Special Limited Warranty:
  - 1. Manufacturer's standard form in which manufacturer agrees to repair or replace sports flooring including labor that fails within specified warranty period.
- B. Material warranty must be direct from the product manufacturer.
  - 1. Material warranties must come from original manufacturer or division thereof. Private label warranties from distributors or brokers are not valid. Supply original point of manufacturing upon request.
- C. Failures include, but are not limited to, the following:
  - 1. Material manufacturing defects.
  - 2. Surface wear and deterioration to the point of wear-through of wear layer per ASTM F410/ASTM F1303.
  - 3. Failure due to substrate moisture exposure exceeding 98 percent relative humidity when tested according to ASTM F2170.
- D. Warranty Period:
  - 1. For material defects and surface wear-through: **25** years from date of substantial completion.
  - 2. For moisture vapor tolerance: **25** years from date of substantial completion.
- E. Installer's Limited Warranty:
  - 1. Installer's standard form in which installer agrees to repair or replace sports flooring that fails due to poor workmanship or faulty installation within the specified warranty period.
  - 2. Warranty Period: 2 years from date of substantial completion.

1.7 *ADDITIONAL MATERIALS*

- A. Furnish to the owner additional materials containing a total of at least 1% of each different color or design of the indoor resilient athletic surfacing used on the project.



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1.8 *LEED™ CERTIFICATION*

- A. The indoor resilient athletic surfacing should be able to help this facility to achieve points towards *LEED™ certification*. Flooring system must be certified by FloorScore.
- B. LEED categories positively affected by the indoor resilient athletic surfacing:

<b>LEED™ V4 Credit</b>		Contribution
Materials & Resources: Building Product Disclosure & Optimization (BPDO)		
MRC3: Sourcing of Raw Materials	Options 1 & 2	2 Points
MRC4: Material Ingredients	Option 1	1 Point
MRC5: Construction and Demolition Management	Reclamation and Recycling	ReStart® Program
Indoor Environmental Quality		
EQc2: Low-Emitting Materials	TVOC: 0.5 mg/m <sup>3</sup> or less	FloorScore®

***PART 2 - PRODUCTS***

2.1 *MANUFACTURERS*

- A. The basis of the design for the indoor resilient multipurpose surfacing is Omnisports Multi-Use as manufactured by Tarkett.
- B. All other installation accessories and related components must be either made or approved by the indoor resilient athletic surfacing manufacturer.
- C. Other products may be approved as equal if deemed qualified and submitted in accordance with the General Conditions.
- D. Test reports confirming compliance from an independent sports laboratory must be provided along with samples, technical data, installation, maintenance, and warranty prior to acceptance as an alternative product.

2.2 *MATERIALS*

- A. Omnisports Multi-Use - Prefabricated sport surface 6.2 mm (0.14") with wood flooring design, single surface embossing and Extreme Three (3) Layers technology (X3LT) as supplied by Tarkett.
  - 1. Embossing of wood design and solid colors must be the same; varying embossing or surface textures will not be allowed.
  - 2. Printing of wood design shall closely resemble standard wood strip flooring in size, color, board length, and grain appearance.
  - 3. Surface embossing combined with TopClean XP must offer proper balance of surface friction per the ASTM F2772.
  - 4. Surface embossing combined with TopClean XP must provide resistance to stains and scratches. Surface profile must not incorporate linear embossing.
  - 5. The wood design shall be protected by a clear layer of pure PVC (Polyvinyl Chloride) and TopClean XP, a factory-applied UV cured urethane treatment.
  - 6. Extreme Three (3) Layers technology (X3LT) includes Omnisports XCS cushion, glass veil and calendared sheet must offer improved shock absorbing comfort while providing better indentation recovery

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7. The XCS cushion force reduction layer shall be high-density closed cell PVC foam with honeycomb embossing, and is applied in one continuous manufacturing process.
8. Laminated or adhered foam layers will not be allowed.
9. Field constructed products will not be accepted.

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

- A. Physical properties of the indoor resilient athletic surfacing shall conform to the following minimums:

Width	—	6' 6" (2 m)
Length	—	85' (25.9m) approx.
Wear Layer	—	2 mm
Total Thickness	—	6.2 mm
Wear Layer	Type 1– Grade 1	ASTM F1303/F410
Vertical Deformation	PASSED	ASTM F2772
Rolling Load	PASSED	≤0.50 mm (EN 1569 {11/1999})
Surface Finish Effect	PASSED	ASTM F2772 (80 – 110)
Chemical Resistance	Excellent	ASTM F925
Impact Resistance	PASSED	EN 1717
Abrasion Resistance	PASSED	0.10 (EN ISO 5470-1 {06/1999})
Static Load Limit	PASSED	ASTM F970- Load 175 Lbs
Sound Insulation	Excellent	+/- 19 dB (ISO 717/2)
In-Room Sound Insulation	Excellent	65dB (NF S31-074)
Ball Rebound	PASSED	ASTM F2772 > 90%
Force Reduction	PASSED	ASTM F2772 Class 2
Fire Rating	PASSED	ASTM E648 Class 1
Microbial Assays Test	No Growth	G21 ASTM - Backing
Asthma and Allergy Friendly™	ASP: 05-01/101	Certified Compliant
VOC	<10µg/m <sup>3</sup>	ASTM D5116 (small chamber)
Phthalate-free technology	—	YES
REACH Compliant	—	YES
Heavy Metals	—	NO
ISO 9001	—	YES
ISO 14001	—	YES

1. Color: As available from the indoor resilient athletic surfacing manufacturer's standard range.
  2. Hardwood Design Series: High definition printing for a realistic wood surface appearance as available from the indoor resilient athletic surfacing manufacturer's standard range.
  3. Texture: Texture to remain consistent between solid colors and wood design when blending colors.
- C. Welding Rod: As supplied by the indoor resilient athletic surfacing manufacturer or supplier.
1. Color to blend with the indoor resilient athletic surfacing color or design.
  2. All seams shall be welded to create a monolithic and impermeable surface.
- D. Adhesive: As approved by the indoor resilient athletic surfacing manufacturer.
- E. Game Line Paint and Primer: As approved by the indoor resilient athletic surfacing manufacturer.

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

***PART 3 - EXECUTION***

**3.1 EXAMINATION**

- A. It is the responsibility of the general contractor/construction manager to ensure that project/site conditions are acceptable for the installation of the indoor resilient athletic flooring.
- B. Verify that the area in which the indoor resilient athletic surfacing will be installed is dry and weather tight. Verify that permanent heat, light and ventilation are installed and operable.
- C. Verify that all other work that could cause damage, dirt and dust or interrupt the normal pace of the indoor resilient athletic flooring installation is completed or suspended.
- D. Verify that there is a stable room temperature of at least 65°F.
- E. Verify that there are no foreign materials or objects on the subfloor and that the subfloor is clean and ready for installation.
- F. Direct Full Spread Adhering to Concrete Subfloor Multi-Poxy : moisture content less than 98% RH when tested per ASTM F2170.
- G. Follow Fieldturf USA, Inc. installation recommendations.
- H. Do not average the results of the tests. Report all field test results in writing to the General Contractor, Architect, and End User prior to installation.
- I. Verify that the concrete subfloor surface pH level is within the 7 - 11 range.
- J. Document the results confirming the slab is within manufacturer's tolerances for slab deviation.

**3.2 PREPARATION OF SURFACES**

- A. Sand the entire surface of the concrete slab.
- B. Sweep the concrete slab so as to remove all dirt and dust. If a sweeping compound is to be used it must be a sweeping compound that does not contain oil or other items that may inhibit the adhesive bond.
- C. Slab must be dust free. In the event that dust impairs adhesive bond, priming the slab prior to application of adhesive may be necessary. Follow installation guidelines.
- D. Follow OSHA guidelines.

**3.3 INSTALLATION**

- A. The installation area shall be closed to all traffic and activity for a period to be set by the indoor resilient athletic surfacing installer. The indoor resilient athletic surfacing installation shall not begin until the installer is familiar with the existing conditions.
- B. All necessary precautions should be taken to minimize noise, smell, dust, the use of hazardous materials and any other items that may inconvenience others.
- C. Install the indoor resilient athletic surfacing in strict accordance with the indoor resilient athletic surfacing manufacturer's written instructions.
- D. Install the indoor resilient athletic surfacing minimizing cross seams. Provide a seam diagram during the submittal process for approval prior to installation. Vinyl Sheet Flooring Seams: Comply with ASTM F 1516. Rout joints and heat weld to permanently and seamlessly fuse sections together.
- E. Paint game lines using approved game line paint primer and game line paint in strict accordance with the game line paint manufacturer's instructions.
- F. Install appropriate threshold plates or transition strips where necessary.

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3.5 *CLEANING*

- A. Remove all unused materials, tools, and equipment and dispose of any debris properly. Clean the indoor resilient athletic surfacing in accordance with the manufacturer's instructions.

3.6 *PROTECTION*

- A. If required, protect the indoor resilient athletic surfacing from damage using coverings approved by the manufacturer until acceptance of work by the customer or their authorized representative.

3.7 *RELATED STANDARDS AND GUIDELINES*

- A. ASTM F2170 "Standard Test Method for Determining Relative Humidity In Concrete Floor Slabs Using In-Situ Probes"
- B. ASTM F710 "Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring"
- C. ACI 302.2R-06 "Guideline for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials"
- D. ASTM F2772-11 "Standard Specification for Athletic Performance Properties of Indoor Sports Floor Systems"

**END OF SECTION**

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

***PART 1 – GENERAL***

1.1 *SECTION INCLUDES*

- A. Supply and installation of the indoor resilient multipurpose surfacing
- B. Application of the game lines
- C. References for the correct construction and preparation of concrete slabs to receive resilient flooring.

1.2 *SUBMITTALS*

- A. Product Data:
  - 1. Manufacturer's promotional brochures, specifications and installation instructions
- B. Manufacturer Certifications:
  - 1. Provide certification that accurately identifies the Original Equipment Manufacturer (OEM) of flooring furnished for this project including manufacturer's name, address and factory location.
  - 2. Suppliers of private label flooring for this project must identify themselves as such and fully disclose the OEM information listed above.
  - 3. All "manufacturer" requirements in these specifications must be complied with by the OEM, including warranties, certifications, qualifications, product data, test results, environmental requirements, performance data, etc.
- C. Samples:
  - 1. Submit for selection and approval three (3) sets of the indoor resilient multipurpose surfacing, manufacturer's brochures, samples or sample boards of all of the available colors, textures and styles.
  - 2. Submit color samples of all the available game line paint colors for selection and approval.
- D. Closeout Submittals:
  - 1. Submit three (3) copies of the indoor resilient multipurpose surfacing and manufacturer's maintenance instructions.
  - 2. Submit three (3) copies of the material and installation warranties as specified.

1.3 *QUALITY ASSURANCE*

- A. Qualifications:
  - 1. The indoor resilient multipurpose surfacing shall have been actively marketed for a minimum of ten (10) years.
  - 2. The indoor resilient multipurpose surfacing shall be manufactured in an ISO 9001 certified plant.
  - 3. The indoor resilient multipurpose surfacing shall be manufactured in an ISO 14001 certified plant.
  - 4. The indoor resilient multipurpose surfacing supplier shall be an established firm, experienced in the field, and competent in the techniques required by the manufacturer.
  - 5. The installer of the indoor resilient multipurpose surfacing shall have a minimum of five (5) years of experience in the field installing indoor resilient multipurpose surfacing and have worked on at least five (5) projects of similar size, type and complexity.

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- B. Certifications:
  - 1. Installer to submit the indoor resilient athletic surfacing manufacturer's or distributor's certification attesting that they are an approved installer of the indoor resilient multipurpose surfacing.
  - 2. The indoor resilient multipurpose surfacing manufacturer to submit official ISO 9001 certification for the facility in which the indoor resilient multipurpose surfacing is manufactured.
- C. Testing:

Tests shall be relative for multi-purpose use with certificates from independent testing resources to be made available upon request. Test results shall be performed according to ASTM standard testing procedures including ASTM F2772 "Standard Specification for Athletic Performance Properties of Indoor Sports Floor Systems".

1.4 *DELIVERY, STORAGE AND HANDLING*

- A. Delivery:

Material shall not be delivered until all related work is in place and finished and/or proper storage facilities and conditions can be provided and guaranteed stable according to FieldTurf USA, Inc. recommendations.
- B. Storage:
  - 1. Store the material in a secure, clean and dry location.
  - 2. Maintain temperature between 55° and 85° Fahrenheit.
  - 3. Store the indoor resilient athletic surfacing rolls in an upright position on a smooth flat surface immediately upon delivery to jobsite.
  - 4. Rolls shipped in rigid protective cardboard containers can be laid horizontally prior to unpacking and installation.

1.5 *PROJECT/SITE CONDITIONS*

- A. It is the responsibility of the general contractor/construction manager to maintain project/site conditions acceptable for the installation of the indoor resilient multipurpose flooring.
- B. The area in which the indoor resilient multipurpose surfacing will be installed shall be dry and weather tight. Permanent heat, light and ventilation shall be installed and operable.
- C. All other trades shall have completed their work prior to the installation of the resilient athletic flooring. The general contractor or construction manager shall maintain a secure and clean working environment before, during and after the installation.
- D. Maintain a stable room temperature of at least 65°F for a minimum of one (1) week prior to, during and thereafter installation.
- E. An effective low-permeance vapor barrier is placed directly beneath the concrete subfloor. For "on" or "below grade" installations, it is recommended to provide a permanent vapor barrier resistant to long term hydrostatic pressure/moisture exposure. Protrusions should be sealed to prevent moisture migration into the slab. Moisture should not be allowed to enter the slab after the completed construction.
- F. Concrete subfloor surface pH level within the 7 to 11 range dependent upon installation type.
- G. Concrete subfloor should be no greater than 1/8" within a 10 ft diameter. This tolerance can be measured in accordance with ASTM E1155. A specified ( $F_F$ ) of 50 and an ( $F_L$ ) of 30 should reach this degree of floor flatness and floor level. There is no numerical correlation between F numbers and the deviation from the straight

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edge. However, the above specified numbers should achieve a flat floor with minimal deviation in the slab. Reference ACI 117 and ACI 302.1R. The general contractor should provide a certificate of compliance with the above recommendations.

- H. Concrete subfloor must be clean and free of all foreign materials or objects including, but not limited to, curing compounds and sealers.
- I. Fill cracks, grooves, voids, depressions, and other minor imperfections. Follow the manufacturer's directions. Moveable joints must be treated utilizing specific transitioning joint devices depending upon the architect's recommendations. Follow current ASTM F710 guidelines for the preparation of concrete slabs to receive resilient flooring.
- J. Refer to ACI 302.2R "Guidelines for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials" for concrete design and construction.
- K. Concrete slab shall be fortified with continual steel reinforcement. Fiber reinforcement alone shall not be considered adequate fortification.

1.6 *WARRANTY*

- A. Special Limited Warranty:
  - 1. Manufacturer's standard form in which manufacturer agrees to repair or replace sports flooring including labor that fails within specified warranty period.
- B. Material warranty must be direct from the product manufacturer.
  - 1. Material warranties must come from original manufacturer or division thereof. Private label warranties from distributors or brokers are not valid. Supply original point of manufacturing upon request.
- C. Failures include, but are not limited to, the following:
  - 1. Material manufacturing defects.
  - 2. Surface wear and deterioration to the point of wear-through of wear layer per ASTM F410/ASTM F1303.
  - 3. Failure due to substrate moisture exposure exceeding 98 percent relative humidity when tested according to ASTM F2170.
- D. Warranty Period:
  - 1. For material defects and surface wear-through: 25 years from date of substantial completion.
  - 2. For moisture vapor tolerance: 25 years from date of substantial completion.
- E. Installer's Limited Warranty:
  - 1. Installer's standard form in which installer agrees to repair or replace sports flooring that fails due to poor workmanship or faulty installation within the specified warranty period.
  - 2. Warranty Period: 2 years from date of substantial completion.

1.7 *ADDITIONAL MATERIALS*

- A. Furnish to the owner additional materials containing a total of at least 1% of each different color or design of the indoor resilient athletic surfacing used on the project.



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1.8 *LEED™ CERTIFICATION*

- A. The indoor resilient athletic surfacing should be able to help this facility to achieve points towards *LEED™ certification*. Flooring system must be certified by FloorScore.
- B. LEED categories positively affected by the indoor resilient athletic surfacing:

<b>LEED™ V4 Credit</b>		Contribution
Materials & Resources: Building Product Disclosure & Optimization (BPDO)		
MRc3: Sourcing of Raw Materials	Options 1 & 2	2 Points
MRc4: Material Ingredients	Option 1	1 Point
MRc5: Construction and Demolition Management	Reclamation and Recycling	ReStart® Program
Indoor Environmental Quality		
EQc2: Low-Emitting Materials	TVOC: 0.5 mg/m <sup>3</sup> or less	FloorScore®

***PART 2 - PRODUCTS***

2.1 *MANUFACTURERS*

- A. The basis of the design for the indoor resilient multipurpose surfacing is Omnisports Multi-Use as manufactured by Tarkett.
- B. All other installation accessories and related components must be either made or approved by the indoor resilient athletic surfacing manufacturer.
- C. Other products may be approved as equal if deemed qualified and submitted in accordance with the General Conditions.
- D. Test reports confirming compliance from an independent sports laboratory must be provided along with samples, technical data, installation, maintenance, and warranty prior to acceptance as an alternative product.

2.2 *MATERIALS*

- A. Omnisports Multi-Use - Prefabricated sport surface 6.2 mm (0.22") with wood flooring design and slightly textured embossed surface as supplied by Tarkett.
  - 1. Embossing of wood design and solid colors must be the same; varying embossing or surface textures will not be allowed.
  - 2. Printing of wood design shall closely resemble standard wood strip flooring in size, color, board length, and grain appearance.
  - 3. Surface embossing combined with TopClean XP must offer proper balance of surface friction per the ASTM F2772.
  - 4. Surface embossing combined with TopClean XP must provide resistance to stains and scratches. Surface profile must not incorporate linear embossing.
  - 5. The wood design shall be protected by a clear layer of pure PVC (Polyvinyl Chloride) and TopClean XP, a factory-applied UV cured urethane treatment.
  - 6. Extreme Three (3) Layers technology (X3LT) includes Omnisports XCS cushion, glass veil and calendared sheet must offer improved shock absorbing comfort while providing better indentation recovery
  - 7. The XCS cushion force reduction layer shall be high-density closed cell PVC foam with honeycomb embossing, and is applied in one continuous manufacturing process.

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8. Laminated or adhered foam layers will not be allowed.
9. Field constructed products will not be accepted.

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- B. Physical properties of the indoor resilient athletic surfacing shall conform to the following minimums:

Width	—	6' 6" (2 m)
Length	—	85' (25.9m) approx.
Wear Layer	—	2 mm
Total Thickness	—	6.2 mm
Wear Layer	Type 1– Grade 1	ASTM F1303/F410
Vertical Deformation	PASSED	ASTM F2772
Rolling Load	PASSED	0.30 (EN 1569 {11/1999})
Surface Finish Effect	PASSED	ASTM F2772 (80 – 110)
Chemical Resistance	Excellent	ASTM F925
Impact Resistance	PASSED	EN 1517
Abrasion Resistance	PASSED	0.10 (EN ISO 5470-1 {06/1999})
Static Load Limit	PASSED	ASTM F970- Load 175 Lbs
Sound Insulation	Excellent	+/- 19 dB (ISO 717/2)
In-Room Sound Insulation	Excellent	61dB (NF S31-074)
Ball Rebound	PASSED	ASTM F2772 > 90%
Force Reduction	PASSED	ASTM F2772 Class 2
Fire Rating	PASSED	ASTM E648 Class 1
Microbial Assays Test	No Growth	G21 ASTM - Backing
Phthalate-free technology	—	YES
REACH Compliant	—	YES
Heavy Metals	—	NO
ISO 9001	—	YES
ISO 14001	—	YES

1. Color: As available from the indoor resilient athletic surfacing manufacturer's standard range.
  2. Hardwood Design Series: A wood look design as available from the indoor resilient athletic surfacing manufacturer's standard range.
  3. Texture: Texture to remain consistent between solid colors and wood design when blending colors.
- C. Welding Rod: As supplied by the indoor resilient athletic surfacing manufacturer or supplier.
1. Color to blend with the indoor resilient athletic surfacing color or design.
  2. All seams shall be welded to create a monolithic and impermeable surface.
- D. Adhesive: As approved by the indoor resilient athletic surfacing manufacturer.
- E. Game Line Paint and Primer: As approved by the indoor resilient athletic surfacing manufacturer.

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

***PART 3 - EXECUTION***

**3.1 EXAMINATION**

- A. It is the responsibility of the general contractor/construction manager to ensure that project/site conditions are acceptable for the installation of the indoor resilient athletic flooring.
- B. Verify that the area in which the indoor resilient athletic surfacing will be installed is dry and weather tight. Verify that permanent heat, light and ventilation are installed and operable.
- C. Verify that all other work that could cause damage, dirt and dust or interrupt the normal pace of the indoor resilient athletic flooring installation is completed or suspended.
- D. Verify that there is a stable room temperature of at least 65°F.
- E. Verify that there are no foreign materials or objects on the subfloor and that the subfloor is clean and ready for installation.
- F. Direct Full Spread Adhering to Concrete Subfloor Multi-Set : moisture content less than 83% RH when tested per ASTM F2170.
- G. Follow Fieldturf USA, Inc. installation recommendations.
- H. Do not average the results of the tests. Report all field test results in writing to the General Contractor, Architect, and End User prior to installation.
- I. Verify that the concrete subfloor surface pH level is within the 7 - 11 range.
- J. Document the results confirming the slab is within manufacturer's tolerances for slab deviation.

**3.2 PREPARATION OF SURFACES**

- A. Sand the entire surface of the concrete slab.
- B. Sweep the concrete slab so as to remove all dirt and dust. If a sweeping compound is to be used it must be a sweeping compound that does not contain oil or other items that may inhibit the adhesive bond.
- C. Slab must be dust free. In the event that dust impairs adhesive bond, priming the slab prior to application of adhesive may be necessary. Follow installation guidelines.
- D. Follow OSHA guidelines.

**3.3 INSTALLATION**

- A. The installation area shall be closed to all traffic and activity for a period to be set by the indoor resilient athletic surfacing installer. The indoor resilient athletic surfacing installation shall not begin until the installer is familiar with the existing conditions.
- B. All necessary precautions should be taken to minimize noise, smell, dust, the use of hazardous materials and any other items that may inconvenience others.
- C. Install the indoor resilient athletic surfacing in strict accordance with the indoor resilient athletic surfacing manufacturer's written instructions.
- D. Install the indoor resilient athletic surfacing minimizing cross seams. Provide a seam diagram during the submittal process for approval prior to installation. Vinyl Sheet Flooring Seams: Comply with ASTM F 1516. Rout joints and heat weld to permanently and seamlessly fuse sections together.
- E. Paint game lines using approved game line paint primer and game line paint in strict accordance with the game line paint manufacturer's instructions.
- F. Install appropriate threshold plates or transition strips where necessary.

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

3.5 *CLEANING*

- A. Remove all unused materials, tools, and equipment and dispose of any debris properly. Clean the indoor resilient athletic surfacing in accordance with the manufacturer's instructions.

3.6 *PROTECTION*

- A. If required, protect the indoor resilient athletic surfacing from damage using coverings approved by the manufacturer until acceptance of work by the customer or their authorized representative.

3.7 *RELATED STANDARDS AND GUIDELINES*

- A. ASTM F2170 "Standard Test Method for Determining Relative Humidity In Concrete Floor Slabs Using In-Situ Probes"
- B. ASTM F710 "Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring"
- C. ACI 302.2R-06 "Guideline for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials"
- D. ASTM F2772-11 "Standard Specification for Athletic Performance Properties of Indoor Sports Floor Systems"

**END OF SECTION**

**SECTION 09 65 66**  
**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

***PART 1 – GENERAL***

1.1 *SECTION INCLUDES*

- A. Supply and installation of the indoor resilient multipurpose surfacing
- B. Application of the game lines
- C. References for the correct construction and preparation of concrete slabs to receive resilient flooring.

1.2 *SUBMITTALS*

- A. Product Data:
  - 1. Manufacturer's promotional brochures, specifications and installation instructions
- B. Manufacturer Certifications:
  - 1. Provide certification that accurately identifies the Original Equipment Manufacturer (OEM) of flooring furnished for this project including manufacturer's name, address and factory location.
  - 2. Suppliers of private label flooring for this project must identify themselves as such and fully disclose the OEM information listed above.
  - 3. All "manufacturer" requirements in these specifications must be complied with by the OEM, including warranties, certifications, qualifications, product data, test results, environmental requirements, performance data, etc.
- C. Samples:
  - 1. Submit for selection and approval three (3) sets of the indoor resilient multipurpose surfacing, manufacturer's brochures, samples or sample boards of all of the available colors, textures and styles.
  - 2. Submit color samples of all the available game line paint colors for selection and approval.
- D. Closeout Submittals:
  - 1. Submit three (3) copies of the indoor resilient multipurpose surfacing and manufacturer's maintenance instructions.
  - 2. Submit three (3) copies of the material and installation warranties as specified.

1.3 *QUALITY ASSURANCE*

- A. Qualifications:
  - 1. The indoor resilient multipurpose surfacing shall have been actively marketed for a minimum of ten (10) years.
  - 2. The indoor resilient multipurpose surfacing shall be manufactured in an ISO 9001 certified plant.
  - 3. The indoor resilient multipurpose surfacing shall be manufactured in an ISO 14001 certified plant.
  - 4. The indoor resilient multipurpose surfacing supplier shall be an established firm, experienced in the field, and competent in the techniques required by the manufacturer.
  - 5. The installer of the indoor resilient multipurpose surfacing shall have a minimum of five (5) years of experience in the field installing indoor resilient multipurpose surfacing and have worked on at least five (5) projects of similar size, type and complexity.

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

- B. Certifications:
  - 1. Installer to submit the indoor resilient athletic surfacing manufacturer's or distributor's certification attesting that they are an approved installer of the indoor resilient multipurpose surfacing.
  - 2. The indoor resilient multipurpose surfacing manufacturer to submit official ISO 9001 certification for the facility in which the indoor resilient multipurpose surfacing is manufactured.
- C. Testing:

Tests shall be relative for multi-purpose use with certificates from independent testing resources to be made available upon request. Test results shall be performed according to ASTM standard testing procedures including ASTM F2772 "Standard Specification for Athletic Performance Properties of Indoor Sports Floor Systems".

1.4 *DELIVERY, STORAGE AND HANDLING*

- A. Delivery:

Material shall not be delivered until all related work is in place and finished and/or proper storage facilities and conditions can be provided and guaranteed stable according to FieldTurf USA, Inc. recommendations.
- B. Storage:
  - 1. Store the material in a secure, clean and dry location.
  - 2. Maintain temperature between 55° and 85° Fahrenheit.
  - 3. Store the indoor resilient athletic surfacing rolls in an upright position on a smooth flat surface immediately upon delivery to jobsite.
  - 4. Rolls shipped in rigid protective cardboard containers can be laid horizontally prior to unpacking and installation.

1.5 *PROJECT/SITE CONDITIONS*

- A. It is the responsibility of the general contractor/construction manager to maintain project/site conditions acceptable for the installation of the indoor resilient multipurpose flooring.
- B. The area in which the indoor resilient multipurpose surfacing will be installed shall be dry and weather tight. Permanent heat, light and ventilation shall be installed and operable.
- C. All other trades shall have completed their work prior to the installation of the resilient athletic flooring. The general contractor or construction manager shall maintain a secure and clean working environment before, during and after the installation.
- D. Maintain a stable room temperature of at least 65°F for a minimum of one (1) week prior to, during and thereafter installation.
- E. An effective low-permeance vapor barrier is placed directly beneath the concrete subfloor. For "on" or "below grade" installations, it is recommended to provide a permanent vapor barrier resistant to long term hydrostatic pressure/moisture exposure. Protrusions should be sealed to prevent moisture migration into the slab. Moisture should not be allowed to enter the slab after the completed construction.
- F. Concrete subfloor surface pH level within the 7 to 11 range dependent upon installation type.
- G. Concrete subfloor should be no greater than 1/8" within a 10 ft diameter. This tolerance can be measured in accordance with ASTM E1155. A specified (F<sub>F</sub>) of 50 and an (F<sub>L</sub>) of 30 should reach this degree of floor flatness and floor level. There is no numerical correlation between F numbers and the deviation from the straight

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edge. However, the above specified numbers should achieve a flat floor with minimal deviation in the slab. Reference ACI 117 and ACI 302.1R. The general contractor should provide a certificate of compliance with the above recommendations.

- H. Concrete subfloor must be clean and free of all foreign materials or objects including, but not limited to, curing compounds and sealers.
- I. Fill cracks, grooves, voids, depressions, and other minor imperfections. Follow the manufacturer's directions. Moveable joints must be treated utilizing specific transitioning joint devices depending upon the architect's recommendations. Follow current ASTM F710 guidelines for the preparation of concrete slabs to receive resilient flooring.
- J. Refer to ACI 302.2R "Guidelines for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials" for concrete design and construction.
- K. Concrete slab shall be fortified with continual steel reinforcement. Fiber reinforcement alone shall not be considered adequate fortification.

1.6 *WARRANTY*

- A. Special Limited Warranty:
  - 1. Manufacturer's standard form in which manufacturer agrees to repair or replace sports flooring including labor that fails within specified warranty period.
- B. Material warranty must be direct from the product manufacturer.
  - 1. Material warranties must come from original manufacturer or division thereof. Private label warranties from distributors or brokers are not valid. Supply original point of manufacturing upon request.
- C. Failures include, but are not limited to, the following:
  - 1. Material manufacturing defects.
  - 2. Surface wear and deterioration to the point of wear-through of wear layer per ASTM F410/ASTM F1303.
  - 3. Failure due to substrate moisture exposure exceeding 98 percent relative humidity when tested according to ASTM F2170.
- D. Warranty Period:
  - 1. For material defects and surface wear-through: **25** years from date of substantial completion.
  - 2. For moisture vapor tolerance: **25** years from date of substantial completion.
- E. Installer's Limited Warranty:
  - 1. Installer's standard form in which installer agrees to repair or replace sports flooring that fails due to poor workmanship or faulty installation within the specified warranty period.
  - 2. Warranty Period: 2 years from date of substantial completion.

1.7 *ADDITIONAL MATERIALS*

- A. Furnish to the owner additional materials containing a total of at least 1% of each different color or design of the indoor resilient athletic surfacing used on the project.



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1.8 *LEED™ CERTIFICATION*

- A. The indoor resilient athletic surfacing should be able to help this facility to achieve points towards *LEED™ certification*. Flooring system must be certified by FloorScore.
- B. LEED categories positively affected by the indoor resilient athletic surfacing:

<b>LEED™ V4 Credit</b>		Contribution
Materials & Resources: Building Product Disclosure & Optimization (BPDO)		
MRC3: Sourcing of Raw Materials	Options 1 & 2	2 Points
MRC4: Material Ingredients	Option 1	1 Point
MRC5: Construction and Demolition Management	Reclamation and Recycling	ReStart® Program
Indoor Environmental Quality		
EQc2: Low-Emitting Materials	TVOC: 0.5 mg/m <sup>3</sup> or less	FloorScore®

***PART 2 - PRODUCTS***

2.1 *MANUFACTURERS*

- A. The basis of the design for the indoor resilient multipurpose surfacing is Omnisports Multi-Use as manufactured by Tarkett.
- B. All other installation accessories and related components must be either made or approved by the indoor resilient athletic surfacing manufacturer.
- C. Other products may be approved as equal if deemed qualified and submitted in accordance with the General Conditions.
- D. Test reports confirming compliance from an independent sports laboratory must be provided along with samples, technical data, installation, maintenance, and warranty prior to acceptance as an alternative product.

2.2 *MATERIALS*

- A. Omnisports Multi-Use - Prefabricated sport surface 6.2 mm (0.14") with wood flooring design, single surface embossing and Extreme Three (3) Layers technology (X3LT) as supplied by Tarkett.
  - 1. Embossing of wood design and solid colors must be the same; varying embossing or surface textures will not be allowed.
  - 2. Printing of wood design shall closely resemble standard wood strip flooring in size, color, board length, and grain appearance.
  - 3. Surface embossing combined with TopClean XP must offer proper balance of surface friction per the ASTM F2772.
  - 4. Surface embossing combined with TopClean XP must provide resistance to stains and scratches. Surface profile must not incorporate linear embossing.
  - 5. The wood design shall be protected by a clear layer of pure PVC (Polyvinyl Chloride) and TopClean XP, a factory-applied UV cured urethane treatment.
  - 6. Extreme Three (3) Layers technology (X3LT) includes Omnisports XCS cushion, glass veil and calendared sheet must offer improved shock absorbing comfort while providing better indentation recovery

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7. The XCS cushion force reduction layer shall be high-density closed cell PVC foam with honeycomb embossing, and is applied in one continuous manufacturing process.
8. Laminated or adhered foam layers will not be allowed.
9. Field constructed products will not be accepted.

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- A. Physical properties of the indoor resilient athletic surfacing shall conform to the following minimums:

Width	—	6' 6" (2 m)
Length	—	85' (25.9m) approx.
Wear Layer	—	2 mm
Total Thickness	—	6.2 mm
Wear Layer	Type 1– Grade 1	ASTM F1303/F410
Vertical Deformation	PASSED	ASTM F2772
Rolling Load	PASSED	≤0.50 mm (EN 1569 {11/1999})
Surface Finish Effect	PASSED	ASTM F2772 (80 – 110)
Chemical Resistance	Excellent	ASTM F925
Impact Resistance	PASSED	EN 1717
Abrasion Resistance	PASSED	0.10 (EN ISO 5470-1 {06/1999})
Static Load Limit	PASSED	ASTM F970- Load 175 Lbs
Sound Insulation	Excellent	+/- 19 dB (ISO 717/2)
In-Room Sound Insulation	Excellent	65dB (NF S31-074)
Ball Rebound	PASSED	ASTM F2772 > 90%
Force Reduction	PASSED	ASTM F2772 Class 2
Fire Rating	PASSED	ASTM E648 Class 1
Microbial Assays Test	No Growth	G21 ASTM - Backing
Asthma and Allergy Friendly™	ASP: 05-01/101	Certified Compliant
VOC	<10µg/m <sup>3</sup>	ASTM D5116 (small chamber)
Phthalate-free technology	—	YES
REACH Compliant	—	YES
Heavy Metals	—	NO
ISO 9001	—	YES
ISO 14001	—	YES

1. Color: As available from the indoor resilient athletic surfacing manufacturer's standard range.
  2. Hardwood Design Series: High definition printing for a realistic wood surface appearance as available from the indoor resilient athletic surfacing manufacturer's standard range.
  3. Texture: Texture to remain consistent between solid colors and wood design when blending colors.
- C. Tarkolay – A high quality low permeance slip sheet vapor retarder designed to separate the installed system from the substrate below.
1. Tarkolay as manufactured by Tarkett can be used below, on, or above grade substrates that experience elevated moisture conditions.
  2. Moisture tolerances shall have no limitation per ASTM F2170. Physical properties of the indoor resilient athletic surfacing shall conform to the following minimums:

Width	—	6' 6" (2 m)
Length	—	147'7" (45 m) approx.
Total Thickness	—	1.3 mm
Dimensional Stability	PASSED	.01% (EN 1434)

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

Permeance	Excellent	<0.20 (ASTM E96)
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- D. Welding Rod: As supplied by the indoor resilient athletic surfacing manufacturer or supplier.
  - 1. Color to blend with the indoor resilient athletic surfacing color or design.
  - 2. All seams shall be welded to create a monolithic and impermeable surface.
- E. Adhesive: As approved by the indoor resilient athletic surfacing manufacturer.
- F. Game Line Paint and Primer: As approved by the indoor resilient athletic surfacing manufacturer.

***PART 3 - EXECUTION***

3.1 *EXAMINATION*

- A. It is the responsibility of the general contractor/construction manager to ensure that project/site conditions are acceptable for the installation of the indoor resilient athletic flooring.
- B. Verify that the area in which the indoor resilient athletic surfacing will be installed is dry and weather tight. Verify that permanent heat, light and ventilation are installed and operable.
- C. Verify that all other work that could cause damage, dirt and dust or interrupt the normal pace of the indoor resilient athletic flooring installation is completed or suspended.
- D. Verify that there is a stable room temperature of at least 65°F.
- E. Verify that there are no foreign materials or objects on the subfloor and that the subfloor is clean and ready for installation.
- F. *Installation with Tarkolay to Concrete Subfloor : moisture content no limitation when tested per ASTM F2170.*
- G. Follow Fieldturf USA, Inc. installation recommendations.
- H. Do not average the results of the tests. Report all field test results in writing to the General Contractor, Architect, and End User prior to installation.
- I. Verify that the concrete subfloor surface pH level is within the 7 - 11 range.
- J. Document the results confirming the slab is within manufacturer's tolerances for slab deviation.

3.2 *PREPARATION OF SURFACES*

- A. Sand the entire surface of the concrete slab.
- B. Sweep the concrete slab so as to remove all dirt and dust. If a sweeping compound is to be used it must be a sweeping compound that does not contain oil or other items that may inhibit the adhesive bond.
- C. Slab must be dust free. In the event that dust impairs adhesive bond, priming the slab prior to application of adhesive may be necessary. Follow installation guidelines.
- D. Follow OSHA guidelines.

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3.3 *INSTALLATION*

- A. The installation area shall be closed to all traffic and activity for a period to be set by the indoor resilient athletic surfacing installer. The indoor resilient athletic surfacing installation shall not begin until the installer is familiar with the existing conditions.
- B. All necessary precautions should be taken to minimize noise, smell, dust, the use of hazardous materials and any other items that may inconvenience others.
- C. Install the indoor resilient athletic surfacing in strict accordance with the indoor resilient athletic surfacing manufacturer's written instructions.
- D. Install the indoor resilient athletic surfacing minimizing cross seams. Provide a seam diagram during the submittal process for approval prior to installation. Vinyl Sheet Flooring Seams: Comply with ASTM F 1516. Rout joints and heat weld to permanently and seamlessly fuse sections together.
- E. Paint game lines using approved game line paint primer and game line paint in strict accordance with the game line paint manufacturer's instructions.
- F. Install appropriate threshold plates or transition strips where necessary.

3.5 *CLEANING*

- A. Remove all unused materials, tools, and equipment and dispose of any debris properly. Clean the indoor resilient athletic surfacing in accordance with the manufacturer's instructions.

3.6 *PROTECTION*

- A. If required, protect the indoor resilient athletic surfacing from damage using coverings approved by the manufacturer until acceptance of work by the customer or their authorized representative.

3.7 *RELATED STANDARDS AND GUIDELINES*

- A. ASTM F2170 "Standard Test Method for Determining Relative Humidity In Concrete Floor Slabs Using In-Situ Probes"
- B. ASTM F710 "Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring"
- C. ACI 302.2R-06 "Guideline for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials"
- D. ASTM F2772-11 "Standard Specification for Athletic Performance Properties of Indoor Sports Floor Systems"

**END OF SECTION**

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

***PART 1 – GENERAL***

**1.1**     *SECTION INCLUDES*

- A. Supply and installation of the indoor resilient multipurpose surfacing
- B. Application of the game lines
- C. References for the correct construction and preparation of concrete slabs to receive resilient flooring.

**1.2**     *SUBMITTALS*

- A. Product Data:
  - 1. Manufacturer’s promotional brochures, specifications and installation instructions
- B. Manufacturer Certifications:
  - 1. Provide certification that accurately identifies the Original Equipment Manufacturer (OEM) of flooring furnished for this project including manufacturer’s name, address and factory location.
  - 2. Suppliers of private label flooring for this project must identify themselves as such and fully disclose the OEM information listed above.
  - 3. All “manufacturer” requirements in these specifications must be complied with by the OEM, including warranties, certifications, qualifications, product data, test results, environmental requirements, performance data, etc.
- C. Samples:
  - 1. Submit for selection and approval three (3) sets of the indoor resilient multipurpose surfacing, manufacturer’s brochures, samples or sample boards of all of the available colors, textures and styles.
  - 2. Submit color samples of all the available game line paint colors for selection and approval.
- D. Closeout Submittals:
  - 1. Submit three (3) copies of the indoor resilient multipurpose surfacing and manufacturer’s maintenance instructions.
  - 2. Submit three (3) copies of the material and installation warranties as specified.

**1.3**     *QUALITY ASSURANCE*

- A. Qualifications:
  - 1. The indoor resilient multipurpose surfacing shall have been actively marketed for a minimum of ten (10) years.
  - 2. The indoor resilient multipurpose surfacing shall be manufactured in an ISO 9001 certified plant.
  - 3. The indoor resilient multipurpose surfacing shall be manufactured in an ISO 14001 certified plant.
  - 4. The indoor resilient multipurpose surfacing supplier shall be an established firm, experienced in the field, and competent in the techniques required by the manufacturer.
  - 5. The installer of the indoor resilient multipurpose surfacing shall have a minimum of five (5) years of experience in the field installing indoor resilient multipurpose surfacing and have worked on at least five (5) projects of similar size, type and complexity.

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- B. Certifications:
  - 1. Installer to submit the indoor resilient athletic surfacing manufacturer's or distributor's certification attesting that they are an approved installer of the indoor resilient multipurpose surfacing.
  - 2. The indoor resilient multipurpose surfacing manufacturer to submit official ISO 9001 certification for the facility in which the indoor resilient multipurpose surfacing is manufactured.
- C. Testing:

Tests shall be relative for multi-purpose use with certificates from independent testing resources to be made available upon request. Test results shall be performed according to ASTM standard testing procedures including ASTM F2772 "Standard Specification for Athletic Performance Properties of Indoor Sports Floor Systems".

1.4 *DELIVERY, STORAGE AND HANDLING*

- A. Delivery:

Material shall not be delivered until all related work is in place and finished and/or proper storage facilities and conditions can be provided and guaranteed stable according to FieldTurf USA, Inc. recommendations.
- B. Storage:
  - 1. Store the material in a secure, clean and dry location.
  - 2. Maintain temperature between 55° and 85° Fahrenheit.
  - 3. Store the indoor resilient athletic surfacing rolls in an upright position on a smooth flat surface immediately upon delivery to jobsite.
  - 4. Rolls shipped in rigid protective cardboard containers can be laid horizontally prior to unpacking and installation.

1.5 *PROJECT/SITE CONDITIONS*

- A. It is the responsibility of the general contractor/construction manager to maintain project/site conditions acceptable for the installation of the indoor resilient multipurpose flooring.
- B. The area in which the indoor resilient multipurpose surfacing will be installed shall be dry and weather tight. Permanent heat, light and ventilation shall be installed and operable.
- C. All other trades shall have completed their work prior to the installation of the resilient athletic flooring. The general contractor or construction manager shall maintain a secure and clean working environment before, during and after the installation.
- D. Maintain a stable room temperature of at least 65°F for a minimum of one (1) week prior to, during and thereafter installation.
- E. An effective low-permeance vapor barrier is placed directly beneath the concrete subfloor. For "on" or "below grade" installations, it is recommended to provide a permanent vapor barrier resistant to long term hydrostatic pressure/moisture exposure. Protrusions should be sealed to prevent moisture migration into the slab. Moisture should not be allowed to enter the slab after the completed construction.
- F. Concrete subfloor surface pH level within the 7 to 10 range dependent upon installation type.
- G. Concrete subfloor should be no greater than 1/8" within a 10 ft diameter. This tolerance can be measured in accordance with ASTM E1155. A specified (F<sub>F</sub>) of 50 and an (F<sub>L</sub>) of 30 should reach this degree of floor flatness and floor level. There is no numerical correlation between F numbers and the deviation from the straight

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edge. However, the above specified numbers should achieve a flat floor with minimal deviation in the slab. Reference ACI 117 and ACI 302.1R. The general contractor should provide a certificate of compliance with the above recommendations.

- H. Concrete subfloor must be clean and free of all foreign materials or objects including, but not limited to, curing compounds and sealers.
- I. Fill cracks, grooves, voids, depressions, and other minor imperfections. Follow the manufacturer's directions. Moveable joints must be treated utilizing specific transitioning joint devices depending upon the architect's recommendations. Follow current ASTM F710 guidelines for the preparation of concrete slabs to receive resilient flooring.
- J. Refer to ACI 302.2R "Guidelines for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials" for concrete design and construction.
- K. Concrete slab shall be fortified with continual steel reinforcement. Fiber reinforcement alone shall not be considered adequate fortification.

1.6 *WARRANTY*

- A. Special Limited Warranty:
  - 1. Manufacturer's standard form in which manufacturer agrees to repair or replace sports flooring including labor that fails within specified warranty period.
- B. Material warranty must be direct from the product manufacturer.
  - 1. Material warranties must come from original manufacturer or division thereof. Private label warranties from distributors or brokers are not valid. Supply original point of manufacturing upon request.
- C. Failures include, but are not limited to, the following:
  - 1. Material manufacturing defects.
  - 2. Surface wear and deterioration to the point of wear-through of wear layer per ASTM F410/ASTM F1303.
  - 3. Failure due to substrate moisture exposure exceeding 98 percent relative humidity when tested according to ASTM F2170.
- D. Warranty Period:
  - 1. For material defects and surface wear-through: 25 years from date of substantial completion.
  - 2. For moisture vapor tolerance: 25 years from date of substantial completion.
- E. Installer's Limited Warranty:
  - 1. Installer's standard form in which installer agrees to repair or replace sports flooring that fails due to poor workmanship or faulty installation within the specified warranty period.
  - 2. Warranty Period: 2 years from date of substantial completion.

1.7 *ADDITIONAL MATERIALS*

- A. Furnish to the owner additional materials containing a total of at least 1% of each different color or design of the indoor resilient athletic surfacing used on the project.



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1.8 *LEED™ CERTIFICATION*

- A. The indoor resilient athletic surfacing should be able to help this facility to achieve points towards *LEED™ certification*. Flooring system must be certified by FloorScore.
- B. LEED categories positively affected by the indoor resilient athletic surfacing:

<b>LEED™ V4 Credit</b>		Contribution
Materials & Resources: Building Product Disclosure & Optimization (BPDO)		
MRc3: Sourcing of Raw Materials	Options 1 & 2	2 Points
MRc4: Material Ingredients	Option 1	1 Point
MRc5: Construction and Demolition Management	Reclamation and Recycling	ReStart® Program
Indoor Environmental Quality		
EQc2: Low-Emitting Materials	TVOC: 0.5 mg/m <sup>3</sup> or less	FloorScore®

**PART 2 - PRODUCTS**

2.1 *MANUFACTURERS*

- A. The basis of the design for the indoor resilient multipurpose surfacing is Omnisports PurePlay as manufactured by Tarkett.
- B. All other installation accessories and related components must be either made or approved by the indoor resilient athletic surfacing manufacturer.
- C. Other products may be approved as equal if deemed qualified and submitted in accordance with the General Conditions.
- D. Test reports confirming compliance from an independent sports laboratory must be provided along with samples, technical data, installation, maintenance, and warranty prior to acceptance as an alternative product.

2.2 *MATERIALS*

- A. Omnisports PurePlay - Prefabricated sport surface 9.4 mm (3/8") with wood flooring design and slightly textured embossed surface as supplied by Tarkett.
  - 1. Embossing of wood design and solid colors must be the same; varying embossing or surface textures will not be allowed.
  - 2. Printing of wood design shall closely resemble standard wood strip flooring in size, color, board length, and grain appearance.
  - 3. The wood design shall be protected by a clear layer of pure PVC (Polyvinyl Chloride) and TopClean xp, a factory-applied UV cured urethane treatment.
  - 4. Intermediate layers shall be fortified with a non-woven fiberglass grid for increased dimensional stability.
  - 5. The foam force reduction layer shall be high-density closed cell PVC foam with honeycomb embossing, and is applied in one continuous manufacturing process.
  - 6. Laminated or adhered foam layers will not be allowed.
  - 7. Field constructed products will not be accepted.

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B. Physical properties of the indoor resilient athletic surfacing shall conform to the following minimums:

Width	—	6' 6" (2 m)
Length	—	85' (25.9m) approx.
Wear Layer	—	2 mm
Total Thickness	—	9.4 mm
Wear Layer	Type 1– Grade 1	ASTM F1303/F410
Vertical Deformation	PASSED	ASTM F2772
Rolling Load	PASSED	0.30 (EN 1569 {11/1999})
Surface Finish Effect	PASSED	ASTM F2772 (80 – 110)
Chemical Resistance	Excellent	ASTM F925
Impact Resistance	PASSED	EN 1517
Abrasion Resistance	PASSED	0.10 (EN ISO 5470-1 {06/1999})
Static Load Limit	PASSED	ASTM F970- Load 175 Lbs
Sound Insulation	Excellent	+/- 19 dB (ISO 717/2)
In-Room Sound Insulation	Excellent	61dB (NF S31-074)
Ball Rebound	PASSED	ASTM F2772 > 90%
Force Reduction	PASSED	ASTM F2772 Class 3
Fire Rating	PASSED	ASTM E648 Class 1
Microbial Assays Test	No Growth	G21 ASTM - Backing
Asthma and Allergy Friendly™	ASP: 05-01/101	Certified Compliant
Phthalate-free technology	—	YES
REACH Compliant	—	YES
Heavy Metals	—	NO
ISO 9001	—	YES
ISO 14001	—	YES

1. Color: As available from the indoor resilient athletic surfacing manufacturer's standard range.
  2. Hardwood Design Series: High definition printing for a realistic wood surface appearance as available from the indoor resilient athletic surfacing manufacturer's standard range.
  3. Texture: Texture to remain consistent between solid colors and wood design when blending colors.
- C. Welding Rod: As supplied by the indoor resilient athletic surfacing manufacturer or supplier.
1. Color to blend with the indoor resilient athletic surfacing color or design.
  2. All seams shall be welded to create a monolithic and impermeable surface.
- D. Adhesive: As approved by the indoor resilient athletic surfacing manufacturer.
- E. Game Line Paint and Primer: As approved by the indoor resilient athletic surfacing manufacturer.

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

***PART 3 - EXECUTION***

**3.1 EXAMINATION**

- A. It is the responsibility of the general contractor/construction manager to ensure that project/site conditions are acceptable for the installation of the indoor resilient athletic flooring.
- B. Verify that the area in which the indoor resilient athletic surfacing will be installed is dry and weather tight. Verify that permanent heat, light and ventilation are installed and operable.
- C. Verify that all other work that could cause damage, dirt and dust or interrupt the normal pace of the indoor resilient athletic flooring installation is completed or suspended.
- D. Verify that there is a stable room temperature of at least 65°F.
- E. Verify that there are no foreign materials or objects on the subfloor and that the subfloor is clean and ready for installation.
- F. For GreenLay™ Installation to Concrete Subfloor: moisture content less than 92% RH when tested per ASTM F2170.
- G. Follow Fieldturf USA, Inc. installation recommendations.
- H. Do not average the results of the tests. Report all field test results in writing to the General Contractor, Architect, and End User prior to installation.
- I. Verify that the concrete subfloor surface pH level is within the 7 - 10 range.
- J. Document the results confirming the slab is within manufacturer's tolerances for slab deviation.

**3.2 PREPARATION OF SURFACES**

- A. Sand the entire surface of the concrete slab.
- B. Sweep the concrete slab so as to remove all dirt and dust. If a sweeping compound is to be used it must be a sweeping compound that does not contain oil or other items that may inhibit the adhesive bond.
- C. Slab must be dust free. In the event that dust impairs adhesive bond, priming the slab prior to application of adhesive may be necessary. Follow installation guidelines.
- D. Follow OSHA guidelines

**3.3 INSTALLATION**

- A. The installation area shall be closed to all traffic and activity for a period to be set by the indoor resilient athletic surfacing installer. The indoor resilient athletic surfacing installation shall not begin until the installer is familiar with the existing conditions.
- B. All necessary precautions should be taken to minimize noise, smell, dust, the use of hazardous materials and any other items that may inconvenience others.
- C. Install the indoor resilient athletic surfacing in strict accordance with the indoor resilient athletic surfacing manufacturer's written instructions.
- D. Install the indoor resilient athletic surfacing minimizing cross seams. Provide a seam diagram during the submittal process for approval prior to installation. Vinyl Sheet Flooring Seams: Comply with ASTM F 1516. Rout joints and heat weld to permanently and seamlessly fuse sections together.
- E. Paint game lines using approved game line paint primer and game line paint in strict accordance with the game line paint manufacturer's instructions.
- F. Install appropriate threshold plates or transition strips where necessary.

**3.5 CLEANING**

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- A. Remove all unused materials, tools, and equipment and dispose of any debris properly. Clean the indoor resilient athletic surfacing in accordance with the manufacturer's instructions.

3.6 *PROTECTION*

- A. If required, protect the indoor resilient athletic surfacing from damage using coverings approved by the manufacturer until acceptance of work by the customer or their authorized representative.

3.7 *RELATED STANDARDS AND GUIDELINES*

- A. ASTM F2170 "Standard Test Method for Determining Relative Humidity In Concrete Floor Slabs Using In-Situ Probes"
- B. ASTM F710 "Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring"
- C. ACI 302.2R-06 "Guideline for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials"
- D. ASTM F2772-11 "Standard Specification for Athletic Performance Properties of Indoor Sports Floor Systems"

**END OF SECTION**

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

***PART 1 – GENERAL***

**1.1**     ***SECTION INCLUDES***

- A. Supply and installation of the indoor resilient multipurpose surfacing
- B. Application of the game lines
- C. References for the correct construction and preparation of concrete slabs to receive resilient flooring.

**1.2**     ***SUBMITTALS***

- A. Product Data:
  - 1. Manufacturer’s promotional brochures, specifications and installation instructions
- B. Manufacturer Certifications:
  - 1. Provide certification that accurately identifies the Original Equipment Manufacturer (OEM) of flooring furnished for this project including manufacturer’s name, address and factory location.
  - 2. Suppliers of private label flooring for this project must identify themselves as such and fully disclose the OEM information listed above.
  - 3. All “manufacturer” requirements in these specifications must be complied with by the OEM, including warranties, certifications, qualifications, product data, test results, environmental requirements, performance data, etc.
- C. Samples:
  - 1. Submit for selection and approval three (3) sets of the indoor resilient multipurpose surfacing, manufacturer’s brochures, samples or sample boards of all of the available colors, textures and styles.
  - 2. Submit color samples of all the available game line paint colors for selection and approval.
- D. Closeout Submittals:
  - 1. Submit three (3) copies of the indoor resilient multipurpose surfacing and manufacturer’s maintenance instructions.
  - 2. Submit three (3) copies of the material and installation warranties as specified.

**1.3**     ***QUALITY ASSURANCE***

- A. Qualifications:
  - 1. The indoor resilient multipurpose surfacing shall have been actively marketed for a minimum of ten (10) years.
  - 2. The indoor resilient multipurpose surfacing shall be manufactured in an ISO 9001 certified plant.
  - 3. The indoor resilient multipurpose surfacing shall be manufactured in an ISO 14001 certified plant.
  - 4. The indoor resilient multipurpose surfacing supplier shall be an established firm, experienced in the field, and competent in the techniques required by the manufacturer.
  - 5. The installer of the indoor resilient multipurpose surfacing shall have a minimum of five (5) years of experience in the field installing indoor resilient multipurpose surfacing and have worked on at least five (5) projects of similar size, type and complexity.

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

- B. Certifications:
  - 1. Installer to submit the indoor resilient athletic surfacing manufacturer's or distributor's certification attesting that they are an approved installer of the indoor resilient multipurpose surfacing.
  - 2. The indoor resilient multipurpose surfacing manufacturer to submit official ISO 9001 certification for the facility in which the indoor resilient multipurpose surfacing is manufactured.
- C. Testing:

Tests shall be relative for multi-purpose use with certificates from independent testing resources to be made available upon request. Test results shall be performed according to ASTM standard testing procedures including ASTM F2772 "Standard Specification for Athletic Performance Properties of Indoor Sports Floor Systems".

1.4 *DELIVERY, STORAGE AND HANDLING*

- A. Delivery:

Material shall not be delivered until all related work is in place and finished and/or proper storage facilities and conditions can be provided and guaranteed stable according to FieldTurf USA, Inc. recommendations.
- B. Storage:
  - 1. Store the material in a secure, clean and dry location.
  - 2. Maintain temperature between 55° and 85° Fahrenheit.
  - 3. Store the indoor resilient athletic surfacing rolls in an upright position on a smooth flat surface immediately upon delivery to jobsite.
  - 4. Rolls shipped in rigid protective cardboard containers can be laid horizontally prior to unpacking and installation.

1.5 *PROJECT/SITE CONDITIONS*

- A. It is the responsibility of the general contractor/construction manager to maintain project/site conditions acceptable for the installation of the indoor resilient multipurpose flooring.
- B. The area in which the indoor resilient multipurpose surfacing will be installed shall be dry and weather tight. Permanent heat, light and ventilation shall be installed and operable.
- C. All other trades shall have completed their work prior to the installation of the resilient athletic flooring. The general contractor or construction manager shall maintain a secure and clean working environment before, during and after the installation.
- D. Maintain a stable room temperature of at least 65°F for a minimum of one (1) week prior to, during and thereafter installation.
- E. An effective low-permeance vapor barrier is placed directly beneath the concrete subfloor. For "on" or "below grade" installations, it is recommended to provide a permanent vapor barrier resistant to long term hydrostatic pressure/moisture exposure. Protrusions should be sealed to prevent moisture migration into the slab. Moisture should not be allowed to enter the slab after the completed construction.
- F. Concrete subfloor surface pH level within the 7 to 11 range dependent upon installation type.
- G. Concrete subfloor should be no greater than 1/8" within a 10 ft diameter. This tolerance can be measured in accordance with ASTM E1155. A specified (F<sub>F</sub>) of 50 and an (F<sub>L</sub>) of 30 should reach this degree of floor flatness and floor level. There is no numerical correlation between F numbers and the deviation from the straight

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edge. However, the above specified numbers should achieve a flat floor with minimal deviation in the slab. Reference ACI 117 and ACI 302.1R. The general contractor should provide a certificate of compliance with the above recommendations.

- H. Concrete subfloor must be clean and free of all foreign materials or objects including, but not limited to, curing compounds and sealers.
- I. Fill cracks, grooves, voids, depressions, and other minor imperfections. Follow the manufacturer's directions. Moveable joints must be treated utilizing specific transitioning joint devices depending upon the architect's recommendations. Follow current ASTM F710 guidelines for the preparation of concrete slabs to receive resilient flooring.
- J. Refer to ACI 302.2R "Guidelines for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials" for concrete design and construction.
- K. Concrete slab shall be fortified with continual steel reinforcement. Fiber reinforcement alone shall not be considered adequate fortification.

1.6 *WARRANTY*

- A. Special Limited Warranty:
  - 1. Manufacturer's standard form in which manufacturer agrees to repair or replace sports flooring including labor that fails within specified warranty period.
- B. Material warranty must be direct from the product manufacturer.
  - 1. Material warranties must come from original manufacturer or division thereof. Private label warranties from distributors or brokers are not valid. Supply original point of manufacturing upon request.
- C. Failures include, but are not limited to, the following:
  - 1. Material manufacturing defects.
  - 2. Surface wear and deterioration to the point of wear-through of wear layer per ASTM F410/ASTM F1303.
  - 3. Failure due to substrate moisture exposure exceeding 98 percent relative humidity when tested according to ASTM F2170.
- D. Warranty Period:
  - 1. For material defects and surface wear-through: 25 years from date of substantial completion.
  - 2. For moisture vapor tolerance: 25 years from date of substantial completion.
- E. Installer's Limited Warranty:
  - 1. Installer's standard form in which installer agrees to repair or replace sports flooring that fails due to poor workmanship or faulty installation within the specified warranty period.
  - 2. Warranty Period: 2 years from date of substantial completion.

1.7 *ADDITIONAL MATERIALS*

- A. Furnish to the owner additional materials containing a total of at least 1% of each different color or design of the indoor resilient athletic surfacing used on the project.

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1.8 *LEED™ CERTIFICATION*

- A. The indoor resilient athletic surfacing should be able to help this facility to achieve points towards *LEED™ certification*. Flooring system must be certified by FloorScore.
- B. LEED categories positively affected by the indoor resilient athletic surfacing:

<b>LEED™ V4 Credit</b>		Contribution
Materials & Resources: Building Product Disclosure & Optimization (BPDO)		
MRC3: Sourcing of Raw Materials	Options 1 & 2	2 Points
MRC4: Material Ingredients	Option 1	1 Point
MRC5: Construction and Demolition Management	Reclamation and Recycling	ReStart® Program
Indoor Environmental Quality		
EQc2: Low-Emitting Materials	TVOC: 0.5 mg/m <sup>3</sup> or less	FloorScore®

**PART 2 - PRODUCTS**

2.1 *MANUFACTURERS*

- A. The basis of the design for the indoor resilient multipurpose surfacing is Omnisports PurePlay as manufactured by Tarkett.
- B. All other installation accessories and related components must be either made or approved by the indoor resilient athletic surfacing manufacturer.
- C. Other products may be approved as equal if deemed qualified and submitted in accordance with the General Conditions.
- D. Test reports confirming compliance from an independent sports laboratory must be provided along with samples, technical data, installation, maintenance, and warranty prior to acceptance as an alternative product.

2.2 *MATERIALS*

- A. Omnisports PurePlay - Prefabricated sport surface 9.4 mm (3/8") with wood flooring design and slightly textured embossed surface as supplied by Tarkett.
  - 1. Embossing of wood design and solid colors must be the same; varying embossing or surface textures will not be allowed.
  - 2. Printing of wood design shall closely resemble standard wood strip flooring in size, color, board length, and grain appearance.
  - 3. The wood design shall be protected by a clear layer of pure PVC (Polyvinyl Chloride) and TopClean xp, a factory-applied UV cured urethane treatment.
  - 4. Intermediate layers shall be fortified with a non-woven fiberglass grid for increased dimensional stability.
  - 5. The foam force reduction layer shall be high-density closed cell PVC foam with honeycomb embossing, and is applied in one continuous manufacturing process.
  - 6. Laminated or adhered foam layers will not be allowed.
  - 7. Field constructed products will not be accepted.



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- A. Physical properties of the indoor resilient athletic surfacing shall conform to the following minimums:

Width	—	6' 6" (2 m)
Length	—	85' (25.9m) approx.
Wear Layer	—	2 mm
Total Thickness	—	9.4 mm
Wear Layer	Type 1– Grade 1	ASTM F1303/F410
Vertical Deformation	PASSED	ASTM F2772
Rolling Load	PASSED	0.30 (EN 1569 {11/1999})
Surface Finish Effect	PASSED	ASTM F2772 (80 – 110)
Chemical Resistance	Excellent	ASTM F925
Impact Resistance	PASSED	EN 1517
Abrasion Resistance	PASSED	0.10 (EN ISO 5470-1 {06/1999})
Static Load Limit	PASSED	ASTM F970- Load 175 Lbs
Sound Insulation	Excellent	+/- 19 dB (ISO 717/2)
In-Room Sound Insulation	Excellent	61dB (NF S31-074)
Ball Rebound	PASSED	ASTM F2772 > 90%
Force Reduction	PASSED	ASTM F2772 Class 3
Fire Rating	PASSED	ASTM E648 Class 1
Microbial Assays Test	No Growth	G21 ASTM - Backing
Asthma and Allergy Friendly™	ASP: 05-01/101	Certified Compliant
Phthalate-free technology	—	YES
REACH Compliant	—	YES
Heavy Metals	—	NO
ISO 9001	—	YES
ISO 14001	—	YES

1. Color: As available from the indoor resilient athletic surfacing manufacturer's standard range.
  2. Hardwood Design Series: High definition printing for a realistic wood surface appearance as available from the indoor resilient athletic surfacing manufacturer's standard range.
  3. Texture: Texture to remain consistent between solid colors and wood design when blending colors.
- C. Welding Rod: As supplied by the indoor resilient athletic surfacing manufacturer or supplier.
1. Color to blend with the indoor resilient athletic surfacing color or design.
  2. All seams shall be welded to create a monolithic and impermeable surface.
- D. Adhesive: As approved by the indoor resilient athletic surfacing manufacturer.
- E. Game Line Paint and Primer: As approved by the indoor resilient athletic surfacing manufacturer.

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

***PART 3 - EXECUTION***

**3.1 EXAMINATION**

- A. It is the responsibility of the general contractor/construction manager to ensure that project/site conditions are acceptable for the installation of the indoor resilient athletic flooring.
- B. Verify that the area in which the indoor resilient athletic surfacing will be installed is dry and weather tight. Verify that permanent heat, light and ventilation are installed and operable.
- C. Verify that all other work that could cause damage, dirt and dust or interrupt the normal pace of the indoor resilient athletic flooring installation is completed or suspended.
- D. Verify that there is a stable room temperature of at least 65°F.
- E. Verify that there are no foreign materials or objects on the subfloor and that the subfloor is clean and ready for installation.
- F. Direct Full Spread Adhering to Concrete Subfloor HS Sports Spray : moisture content less than 90% RH when tested per ASTM F2170.
- G. Follow Fieldturf USA, Inc. installation recommendations.
- H. Do not average the results of the tests. Report all field test results in writing to the General Contractor, Architect, and End User prior to installation.
- I. Verify that the concrete subfloor surface pH level is within the 7 - 11 range.
- J. Document the results confirming the slab is within manufacturer's tolerances for slab deviation.

**3.2 PREPARATION OF SURFACES**

- A. Sand the entire surface of the concrete slab.
- B. Sweep the concrete slab so as to remove all dirt and dust. If a sweeping compound is to be used it must be a sweeping compound that does not contain oil or other items that may inhibit the adhesive bond.
- C. Slab must be dust free. In the event that dust impairs adhesive bond, priming the slab prior to application of adhesive may be necessary. Follow installation guidelines.
- D. Follow OSHA guidelines.

**3.3 INSTALLATION**

- A. The installation area shall be closed to all traffic and activity for a period to be set by the indoor resilient athletic surfacing installer. The indoor resilient athletic surfacing installation shall not begin until the installer is familiar with the existing conditions.
- B. All necessary precautions should be taken to minimize noise, smell, dust, the use of hazardous materials and any other items that may inconvenience others.
- C. Install the indoor resilient athletic surfacing in strict accordance with the indoor resilient athletic surfacing manufacturer's written instructions.
- D. Install the indoor resilient athletic surfacing minimizing cross seams. Provide a seam diagram during the submittal process for approval prior to installation. Vinyl Sheet Flooring Seams: Comply with ASTM F 1516. Rout joints and heat weld to permanently and seamlessly fuse sections together.
- E. Paint game lines using approved game line paint primer and game line paint in strict accordance with the game line paint manufacturer's instructions.
- F. Install appropriate threshold plates or transition strips where necessary.

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3.5 *CLEANING*

- A. Remove all unused materials, tools, and equipment and dispose of any debris properly. Clean the indoor resilient athletic surfacing in accordance with the manufacturer's instructions.

3.6 *PROTECTION*

- A. If required, protect the indoor resilient athletic surfacing from damage using coverings approved by the manufacturer until acceptance of work by the customer or their authorized representative.

3.7 *RELATED STANDARDS AND GUIDELINES*

- A. ASTM F2170 "Standard Test Method for Determining Relative Humidity In Concrete Floor Slabs Using In-Situ Probes"
- B. ASTM F710 "Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring"
- C. ACI 302.2R-06 "Guideline for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials"
- D. ASTM F2772-11 "Standard Specification for Athletic Performance Properties of Indoor Sports Floor Systems"

**END OF SECTION**

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***PART 1 – GENERAL***

**1.1**     *SECTION INCLUDES*

- A. Supply and installation of the indoor resilient multipurpose surfacing
- B. Application of the game lines
- C. References for the correct construction and preparation of concrete slabs to receive resilient flooring.

**1.2**     *SUBMITTALS*

- A. Product Data:
  - 1. Manufacturer’s promotional brochures, specifications and installation instructions
- B. Manufacturer Certifications:
  - 1. Provide certification that accurately identifies the Original Equipment Manufacturer (OEM) of flooring furnished for this project including manufacturer’s name, address and factory location.
  - 2. Suppliers of private label flooring for this project must identify themselves as such and fully disclose the OEM information listed above.
  - 3. All “manufacturer” requirements in these specifications must be complied with by the OEM, including warranties, certifications, qualifications, product data, test results, environmental requirements, performance data, etc.
- C. Samples:
  - 1. Submit for selection and approval three (3) sets of the indoor resilient multipurpose surfacing, manufacturer’s brochures, samples or sample boards of all of the available colors, textures and styles.
  - 2. Submit color samples of all the available game line paint colors for selection and approval.
- D. Closeout Submittals:
  - 1. Submit three (3) copies of the indoor resilient multipurpose surfacing and manufacturer’s maintenance instructions.
  - 2. Submit three (3) copies of the material and installation warranties as specified.

**1.3**     *QUALITY ASSURANCE*

- A. Qualifications:
  - 1. The indoor resilient multipurpose surfacing shall have been actively marketed for a minimum of ten (10) years.
  - 2. The indoor resilient multipurpose surfacing shall be manufactured in an ISO 9001 certified plant.
  - 3. The indoor resilient multipurpose surfacing shall be manufactured in an ISO 14001 certified plant.
  - 4. The indoor resilient multipurpose surfacing supplier shall be an established firm, experienced in the field, and competent in the techniques required by the manufacturer.
  - 5. The installer of the indoor resilient multipurpose surfacing shall have a minimum of five (5) years of experience in the field installing indoor resilient multipurpose surfacing and have worked on at least five (5) projects of similar size, type and complexity.

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- B. Certifications:
  - 1. Installer to submit the indoor resilient athletic surfacing manufacturer's or distributor's certification attesting that they are an approved installer of the indoor resilient multipurpose surfacing.
  - 2. The indoor resilient multipurpose surfacing manufacturer to submit official ISO 9001 certification for the facility in which the indoor resilient multipurpose surfacing is manufactured.
- C. Testing:

Tests shall be relative for multi-purpose use with certificates from independent testing resources to be made available upon request. Test results shall be performed according to ASTM standard testing procedures including ASTM F2772 "Standard Specification for Athletic Performance Properties of Indoor Sports Floor Systems".

1.4 *DELIVERY, STORAGE AND HANDLING*

- A. Delivery:

Material shall not be delivered until all related work is in place and finished and/or proper storage facilities and conditions can be provided and guaranteed stable according to FieldTurf USA, Inc. recommendations.
- B. Storage:
  - 1. Store the material in a secure, clean and dry location.
  - 2. Maintain temperature between 55° and 85° Fahrenheit.
  - 3. Store the indoor resilient athletic surfacing rolls in an upright position on a smooth flat surface immediately upon delivery to jobsite.
  - 4. Rolls shipped in rigid protective cardboard containers can be laid horizontally prior to unpacking and installation.

1.5 *PROJECT/SITE CONDITIONS*

- A. It is the responsibility of the general contractor/construction manager to maintain project/site conditions acceptable for the installation of the indoor resilient multipurpose flooring.
- B. The area in which the indoor resilient multipurpose surfacing will be installed shall be dry and weather tight. Permanent heat, light and ventilation shall be installed and operable.
- C. All other trades shall have completed their work prior to the installation of the resilient athletic flooring. The general contractor or construction manager shall maintain a secure and clean working environment before, during and after the installation.
- D. Maintain a stable room temperature of at least 65°F for a minimum of one (1) week prior to, during and thereafter installation.
- E. An effective low-permeance vapor barrier is placed directly beneath the concrete subfloor. For "on" or "below grade" installations, it is recommended to provide a permanent vapor barrier resistant to long term hydrostatic pressure/moisture exposure. Protrusions should be sealed to prevent moisture migration into the slab. Moisture should not be allowed to enter the slab after the completed construction.
- F. Concrete subfloor surface pH level within the 7 to 11 range dependent upon installation type.
- G. Concrete subfloor should be no greater than 1/8" within a 10 ft diameter. This tolerance can be measured in accordance with ASTM E1155. A specified (F<sub>F</sub>) of 50 and an (F<sub>L</sub>) of 30 should reach this degree of floor flatness and floor level. There is no numerical correlation between F numbers and the deviation from the straight

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edge. However, the above specified numbers should achieve a flat floor with minimal deviation in the slab. Reference ACI 117 and ACI 302.1R. The general contractor should provide a certificate of compliance with the above recommendations.

- H. Concrete subfloor must be clean and free of all foreign materials or objects including, but not limited to, curing compounds and sealers.
- I. Fill cracks, grooves, voids, depressions, and other minor imperfections. Follow the manufacturer's directions. Moveable joints must be treated utilizing specific transitioning joint devices depending upon the architect's recommendations. Follow current ASTM F710 guidelines for the preparation of concrete slabs to receive resilient flooring.
- J. Refer to ACI 302.2R "Guidelines for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials" for concrete design and construction.
- K. Concrete slab shall be fortified with continual steel reinforcement. Fiber reinforcement alone shall not be considered adequate fortification.

1.6 *WARRANTY*

- A. Special Limited Warranty:
  - 1. Manufacturer's standard form in which manufacturer agrees to repair or replace sports flooring including labor that fails within specified warranty period.
- B. Material warranty must be direct from the product manufacturer.
  - 1. Material warranties must come from original manufacturer or division thereof. Private label warranties from distributors or brokers are not valid. Supply original point of manufacturing upon request.
- C. Failures include, but are not limited to, the following:
  - 1. Material manufacturing defects.
  - 2. Surface wear and deterioration to the point of wear-through of wear layer per ASTM F410/ASTM F1303.
  - 3. Failure due to substrate moisture exposure exceeding 98 percent relative humidity when tested according to ASTM F2170.
- D. Warranty Period:
  - 1. For material defects and surface wear-through: **25** years from date of substantial completion.
  - 2. For moisture vapor tolerance: **25** years from date of substantial completion.
- E. Installer's Limited Warranty:
  - 1. Installer's standard form in which installer agrees to repair or replace sports flooring that fails due to poor workmanship or faulty installation within the specified warranty period.
  - 2. Warranty Period: 2 years from date of substantial completion.

1.7 *ADDITIONAL MATERIALS*

- A. Furnish to the owner additional materials containing a total of at least 1% of each different color or design of the indoor resilient athletic surfacing used on the project.

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1.8 *LEED™ CERTIFICATION*

- A. The indoor resilient athletic surfacing should be able to help this facility to achieve points towards *LEED™ certification*. Flooring system must be certified by FloorScore.
- B. LEED categories positively affected by the indoor resilient athletic surfacing:

<b>LEED™ V4 Credit</b>		Contribution
Materials & Resources: Building Product Disclosure & Optimization (BPDO)		
MRC3: Sourcing of Raw Materials	Options 1 & 2	2 Points
MRC4: Material Ingredients	Option 1	1 Point
MRC5: Construction and Demolition Management	Reclamation and Recycling	ReStart® Program
Indoor Environmental Quality		
EQc2: Low-Emitting Materials	TVOC: 0.5 mg/m <sup>3</sup> or less	FloorScore®

**PART 2 - PRODUCTS**

2.1 *MANUFACTURERS*

- A. The basis of the design for the indoor resilient multipurpose surfacing is Omnisports PurePlay as manufactured by Tarkett.
- B. All other installation accessories and related components must be either made or approved by the indoor resilient athletic surfacing manufacturer.
- C. Other products may be approved as equal if deemed qualified and submitted in accordance with the General Conditions.
- D. Test reports confirming compliance from an independent sports laboratory must be provided along with samples, technical data, installation, maintenance, and warranty prior to acceptance as an alternative product.

2.2 *MATERIALS*

- A. Omnisports PurePlay - Prefabricated sport surface 9.4 mm (3/8") with wood flooring design and slightly textured embossed surface as supplied by Tarkett.
  - 1. Embossing of wood design and solid colors must be the same; varying embossing or surface textures will not be allowed.
  - 2. Printing of wood design shall closely resemble standard wood strip flooring in size, color, board length, and grain appearance.
  - 3. The wood design shall be protected by a clear layer of pure PVC (Polyvinyl Chloride) and TopClean xp, a factory-applied UV cured urethane treatment.
  - 4. Intermediate layers shall be fortified with a non-woven fiberglass grid for increased dimensional stability.
  - 5. The foam force reduction layer shall be high-density closed cell PVC foam with honeycomb embossing, and is applied in one continuous manufacturing process.
  - 6. Laminated or adhered foam layers will not be allowed.
  - 7. Field constructed products will not be accepted.

**SECTION 09 65 66**  
**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

- A. Physical properties of the indoor resilient athletic surfacing shall conform to the following minimums:

Width	—	6' 6" (2 m)
Length	—	85' (25.9m) approx.
Wear Layer	—	2 mm
Total Thickness	—	9.4 mm
Wear Layer	Type 1– Grade 1	ASTM F1303/F410
Vertical Deformation	PASSED	ASTM F2772
Rolling Load	PASSED	0.30 (EN 1569 {11/1999})
Surface Finish Effect	PASSED	ASTM F2772 (80 – 110)
Chemical Resistance	Excellent	ASTM F925
Impact Resistance	PASSED	EN 1517
Abrasion Resistance	PASSED	0.10 (EN ISO 5470-1 {06/1999})
Static Load Limit	PASSED	ASTM F970- Load 175 Lbs
Sound Insulation	Excellent	+/- 19 dB (ISO 717/2)
In-Room Sound Insulation	Excellent	61dB (NF S31-074)
Ball Rebound	PASSED	ASTM F2772 > 90%
Force Reduction	PASSED	ASTM F2772 Class 3
Fire Rating	PASSED	ASTM E648 Class 1
Microbial Assays Test	No Growth	G21 ASTM - Backing
Asthma and Allergy Friendly™	ASP: 05-01/101	Certified Compliant
Phthalate-free technology	—	YES
REACH Compliant	—	YES
Heavy Metals	—	NO
ISO 9001	—	YES
ISO 14001	—	YES

1. Color: As available from the indoor resilient athletic surfacing manufacturer's standard range.
  2. Hardwood Design Series: High definition printing for a realistic wood surface appearance as available from the indoor resilient athletic surfacing manufacturer's standard range.
  3. Texture: Texture to remain consistent between solid colors and wood design when blending colors.
- C. Welding Rod: As supplied by the indoor resilient athletic surfacing manufacturer or supplier.
1. Color to blend with the indoor resilient athletic surfacing color or design.
  2. All seams shall be welded to create a monolithic and impermeable surface.
- D. Adhesive: As approved by the indoor resilient athletic surfacing manufacturer.
- E. Game Line Paint and Primer: As approved by the indoor resilient athletic surfacing manufacturer.



**SECTION 09 65 66**  
**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

***PART 3 - EXECUTION***

**3.1 EXAMINATION**

- A. It is the responsibility of the general contractor/construction manager to ensure that project/site conditions are acceptable for the installation of the indoor resilient athletic flooring.
- B. Verify that the area in which the indoor resilient athletic surfacing will be installed is dry and weather tight. Verify that permanent heat, light and ventilation are installed and operable.
- C. Verify that all other work that could cause damage, dirt and dust or interrupt the normal pace of the indoor resilient athletic flooring installation is completed or suspended.
- D. Verify that there is a stable room temperature of at least 65°F.
- E. Verify that there are no foreign materials or objects on the subfloor and that the subfloor is clean and ready for installation.
- F. Direct Full Spread Adhering to Concrete Subfloor Multi-Poxy : moisture content less than 98% RH when tested per ASTM F2170.
- G. Follow Fieldturf USA, Inc. installation recommendations.
- H. Do not average the results of the tests. Report all field test results in writing to the General Contractor, Architect, and End User prior to installation.
- I. Verify that the concrete subfloor surface pH level is within the 7 - 11 range.
- J. Document the results confirming the slab is within manufacturer's tolerances for slab deviation.

**3.2 PREPARATION OF SURFACES**

- A. Sand the entire surface of the concrete slab.
- B. Sweep the concrete slab so as to remove all dirt and dust. If a sweeping compound is to be used it must be a sweeping compound that does not contain oil or other items that may inhibit the adhesive bond.
- C. Slab must be dust free. In the event that dust impairs adhesive bond, priming the slab prior to application of adhesive may be necessary. Follow installation guidelines.
- D. Follow OSHA guidelines.

**3.3 INSTALLATION**

- A. The installation area shall be closed to all traffic and activity for a period to be set by the indoor resilient athletic surfacing installer. The indoor resilient athletic surfacing installation shall not begin until the installer is familiar with the existing conditions.
- B. All necessary precautions should be taken to minimize noise, smell, dust, the use of hazardous materials and any other items that may inconvenience others.
- C. Install the indoor resilient athletic surfacing in strict accordance with the indoor resilient athletic surfacing manufacturer's written instructions.
- D. Install the indoor resilient athletic surfacing minimizing cross seams. Provide a seam diagram during the submittal process for approval prior to installation. Vinyl Sheet Flooring Seams: Comply with ASTM F 1516. Rout joints and heat weld to permanently and seamlessly fuse sections together.
- E. Paint game lines using approved game line paint primer and game line paint in strict accordance with the game line paint manufacturer's instructions.
- F. Install appropriate threshold plates or transition strips where necessary.

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

3.5 *CLEANING*

- A. Remove all unused materials, tools, and equipment and dispose of any debris properly. Clean the indoor resilient athletic surfacing in accordance with the manufacturer's instructions.

3.6 *PROTECTION*

- A. If required, protect the indoor resilient athletic surfacing from damage using coverings approved by the manufacturer until acceptance of work by the customer or their authorized representative.

3.7 *RELATED STANDARDS AND GUIDELINES*

- A. ASTM F2170 "Standard Test Method for Determining Relative Humidity In Concrete Floor Slabs Using In-Situ Probes"
- B. ASTM F710 "Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring"
- C. ACI 302.2R-06 "Guideline for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials"
- D. ASTM F2772-11 "Standard Specification for Athletic Performance Properties of Indoor Sports Floor Systems"

**END OF SECTION**

**SECTION 09 65 66**  
**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

***PART 1 – GENERAL***

**1.1**     *SECTION INCLUDES*

- A. Supply and installation of the indoor resilient multipurpose surfacing
- B. Application of the game lines
- C. References for the correct construction and preparation of concrete slabs to receive resilient flooring.

**1.2**     *SUBMITTALS*

- A. Product Data:
  - 1. Manufacturer's promotional brochures, specifications and installation instructions
- B. Manufacturer Certifications:
  - 1. Provide certification that accurately identifies the Original Equipment Manufacturer (OEM) of flooring furnished for this project including manufacturer's name, address and factory location.
  - 2. Suppliers of private label flooring for this project must identify themselves as such and fully disclose the OEM information listed above.
  - 3. All "manufacturer" requirements in these specifications must be complied with by the OEM, including warranties, certifications, qualifications, product data, test results, environmental requirements, performance data, etc.
- C. Samples:
  - 1. Submit for selection and approval three (3) sets of the indoor resilient multipurpose surfacing, manufacturer's brochures, samples or sample boards of all of the available colors, textures and styles.
  - 2. Submit color samples of all the available game line paint colors for selection and approval.
- D. Closeout Submittals:
  - 1. Submit three (3) copies of the indoor resilient multipurpose surfacing and manufacturer's maintenance instructions.
  - 2. Submit three (3) copies of the material and installation warranties as specified.

**1.3**     *QUALITY ASSURANCE*

- A. Qualifications:
  - 1. The indoor resilient multipurpose surfacing shall have been actively marketed for a minimum of ten (10) years.
  - 2. The indoor resilient multipurpose surfacing shall be manufactured in an ISO 9001 certified plant.
  - 3. The indoor resilient multipurpose surfacing shall be manufactured in an ISO 14001 certified plant.
  - 4. The indoor resilient multipurpose surfacing supplier shall be an established firm, experienced in the field, and competent in the techniques required by the manufacturer.
  - 5. The installer of the indoor resilient multipurpose surfacing shall have a minimum of five (5) years of experience in the field installing indoor resilient multipurpose surfacing and have worked on at least five (5) projects of similar size, type and complexity.

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

- B. Certifications:
  - 1. Installer to submit the indoor resilient athletic surfacing manufacturer's or distributor's certification attesting that they are an approved installer of the indoor resilient multipurpose surfacing.
  - 2. The indoor resilient multipurpose surfacing manufacturer to submit official ISO 9001 certification for the facility in which the indoor resilient multipurpose surfacing is manufactured.
- C. Testing:

Tests shall be relative for multi-purpose use with certificates from independent testing resources to be made available upon request. Test results shall be performed according to ASTM standard testing procedures including ASTM F2772 "Standard Specification for Athletic Performance Properties of Indoor Sports Floor Systems".

1.4 *DELIVERY, STORAGE AND HANDLING*

- A. Delivery:

Material shall not be delivered until all related work is in place and finished and/or proper storage facilities and conditions can be provided and guaranteed stable according to FieldTurf USA, Inc. recommendations.
- B. Storage:
  - 1. Store the material in a secure, clean and dry location.
  - 2. Maintain temperature between 55° and 85° Fahrenheit.
  - 3. Store the indoor resilient athletic surfacing rolls in an upright position on a smooth flat surface immediately upon delivery to jobsite.
  - 4. Rolls shipped in rigid protective cardboard containers can be laid horizontally prior to unpacking and installation.

1.5 *PROJECT/SITE CONDITIONS*

- A. It is the responsibility of the general contractor/construction manager to maintain project/site conditions acceptable for the installation of the indoor resilient multipurpose flooring.
- B. The area in which the indoor resilient multipurpose surfacing will be installed shall be dry and weather tight. Permanent heat, light and ventilation shall be installed and operable.
- C. All other trades shall have completed their work prior to the installation of the resilient athletic flooring. The general contractor or construction manager shall maintain a secure and clean working environment before, during and after the installation.
- D. Maintain a stable room temperature of at least 65°F for a minimum of one (1) week prior to, during and thereafter installation.
- E. An effective low-permeance vapor barrier is placed directly beneath the concrete subfloor. For "on" or "below grade" installations, it is recommended to provide a permanent vapor barrier resistant to long term hydrostatic pressure/moisture exposure. Protrusions should be sealed to prevent moisture migration into the slab. Moisture should not be allowed to enter the slab after the completed construction.
- F. Concrete subfloor surface pH level within the 7 to 11 range dependent upon installation type.
- G. Concrete subfloor should be no greater than 1/8" within a 10 ft diameter. This tolerance can be measured in accordance with ASTM E1155. A specified (F<sub>F</sub>) of 50 and an (F<sub>L</sub>) of 30 should reach this degree of floor flatness and floor level. There is no numerical correlation between F numbers and the deviation from the straight

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

edge. However, the above specified numbers should achieve a flat floor with minimal deviation in the slab. Reference ACI 117 and ACI 302.1R. The general contractor should provide a certificate of compliance with the above recommendations.

- H. Concrete subfloor must be clean and free of all foreign materials or objects including, but not limited to, curing compounds and sealers.
- I. Fill cracks, grooves, voids, depressions, and other minor imperfections. Follow the manufacturer's directions. Moveable joints must be treated utilizing specific transitioning joint devices depending upon the architect's recommendations. Follow current ASTM F710 guidelines for the preparation of concrete slabs to receive resilient flooring.
- J. Refer to ACI 302.2R "Guidelines for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials" for concrete design and construction.
- K. Concrete slab shall be fortified with continual steel reinforcement. Fiber reinforcement alone shall not be considered adequate fortification.

1.6 *WARRANTY*

- A. Special Limited Warranty:
  - 1. Manufacturer's standard form in which manufacturer agrees to repair or replace sports flooring including labor that fails within specified warranty period.
- B. Material warranty must be direct from the product manufacturer.
  - 1. Material warranties must come from original manufacturer or division thereof. Private label warranties from distributors or brokers are not valid. Supply original point of manufacturing upon request.
- C. Failures include, but are not limited to, the following:
  - 1. Material manufacturing defects.
  - 2. Surface wear and deterioration to the point of wear-through of wear layer per ASTM F410/ASTM F1303.
  - 3. Failure due to substrate moisture exposure exceeding 98 percent relative humidity when tested according to ASTM F2170.
- D. Warranty Period:
  - 1. For material defects and surface wear-through: 25 years from date of substantial completion.
  - 2. For moisture vapor tolerance: 25 years from date of substantial completion.
- E. Installer's Limited Warranty:
  - 1. Installer's standard form in which installer agrees to repair or replace sports flooring that fails due to poor workmanship or faulty installation within the specified warranty period.
  - 2. Warranty Period: 2 years from date of substantial completion.

1.7 *ADDITIONAL MATERIALS*

- A. Furnish to the owner additional materials containing a total of at least 1% of each different color or design of the indoor resilient athletic surfacing used on the project.

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1.8 *LEED™ CERTIFICATION*

- A. The indoor resilient athletic surfacing should be able to help this facility to achieve points towards *LEED™ certification*. Flooring system must be certified by FloorScore.
- B. LEED categories positively affected by the indoor resilient athletic surfacing:

<b>LEED™ V4 Credit</b>		Contribution
Materials & Resources: Building Product Disclosure & Optimization (BPDO)		
MRC3: Sourcing of Raw Materials	Options 1 & 2	2 Points
MRC4: Material Ingredients	Option 1	1 Point
MRC5: Construction and Demolition Management	Reclamation and Recycling	ReStart® Program
Indoor Environmental Quality		
EQc2: Low-Emitting Materials	TVOC: 0.5 mg/m <sup>3</sup> or less	FloorScore®

**PART 2 - PRODUCTS**

2.1 *MANUFACTURERS*

- A. The basis of the design for the indoor resilient multipurpose surfacing is Omnisports PurePlay as manufactured by Tarkett.
- B. All other installation accessories and related components must be either made or approved by the indoor resilient athletic surfacing manufacturer.
- C. Other products may be approved as equal if deemed qualified and submitted in accordance with the General Conditions.
- D. Test reports confirming compliance from an independent sports laboratory must be provided along with samples, technical data, installation, maintenance, and warranty prior to acceptance as an alternative product.

2.2 *MATERIALS*

- A. Omnisports PurePlay - Prefabricated sport surface 9.4 mm (3/8") with wood flooring design and slightly textured embossed surface as supplied by Tarkett.
  - 1. Embossing of wood design and solid colors must be the same; varying embossing or surface textures will not be allowed.
  - 2. Printing of wood design shall closely resemble standard wood strip flooring in size, color, board length, and grain appearance.
  - 3. The wood design shall be protected by a clear layer of pure PVC (Polyvinyl Chloride) and TopClean xp, a factory-applied UV cured urethane treatment.
  - 4. Intermediate layers shall be fortified with a non-woven fiberglass grid for increased dimensional stability.
  - 5. The foam force reduction layer shall be high-density closed cell PVC foam with honeycomb embossing, and is applied in one continuous manufacturing process.
  - 6. Laminated or adhered foam layers will not be allowed.
  - 7. Field constructed products will not be accepted.

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

- A. Physical properties of the indoor resilient athletic surfacing shall conform to the following minimums:

Width	—	6' 6" (2 m)
Length	—	85' (25.9m) approx.
Wear Layer	—	2 mm
Total Thickness	—	9.4 mm
Wear Layer	Type 1– Grade 1	ASTM F1303/F410
Vertical Deformation	PASSED	ASTM F2772
Rolling Load	PASSED	0.30 (EN 1569 {11/1999})
Surface Finish Effect	PASSED	ASTM F2772 (80 – 110)
Chemical Resistance	Excellent	ASTM F925
Impact Resistance	PASSED	EN 1517
Abrasion Resistance	PASSED	0.10 (EN ISO 5470-1 {06/1999})
Static Load Limit	PASSED	ASTM F970- Load 175 Lbs
Sound Insulation	Excellent	+/- 19 dB (ISO 717/2)
In-Room Sound Insulation	Excellent	61dB (NF S31-074)
Ball Rebound	PASSED	ASTM F2772 > 90%
Force Reduction	PASSED	ASTM F2772 Class 3
Fire Rating	PASSED	ASTM E648 Class 1
Microbial Assays Test	No Growth	G21 ASTM - Backing
Asthma and Allergy Friendly™	ASP: 05-01/101	Certified Compliant
Phthalate-free technology	—	YES
REACH Compliant	—	YES
Heavy Metals	—	NO
ISO 9001	—	YES
ISO 14001	—	YES

1. Color: As available from the indoor resilient athletic surfacing manufacturer's standard range.
  2. Hardwood Design Series: High definition printing for a realistic wood surface appearance as available from the indoor resilient athletic surfacing manufacturer's standard range.
  3. Texture: Texture to remain consistent between solid colors and wood design when blending colors.
- C. Welding Rod: As supplied by the indoor resilient athletic surfacing manufacturer or supplier.
1. Color to blend with the indoor resilient athletic surfacing color or design.
  2. All seams shall be welded to create a monolithic and impermeable surface.
- D. Adhesive: As approved by the indoor resilient athletic surfacing manufacturer.
- E. Game Line Paint and Primer: As approved by the indoor resilient athletic surfacing manufacturer.

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

***PART 3 - EXECUTION***

**3.1 EXAMINATION**

- A. It is the responsibility of the general contractor/construction manager to ensure that project/site conditions are acceptable for the installation of the indoor resilient athletic flooring.
- B. Verify that the area in which the indoor resilient athletic surfacing will be installed is dry and weather tight. Verify that permanent heat, light and ventilation are installed and operable.
- C. Verify that all other work that could cause damage, dirt and dust or interrupt the normal pace of the indoor resilient athletic flooring installation is completed or suspended.
- D. Verify that there is a stable room temperature of at least 65°F.
- E. Verify that there are no foreign materials or objects on the subfloor and that the subfloor is clean and ready for installation.
- F. Direct Full Spread Adhering to Concrete Subfloor Multi-Set : moisture content less than 83% RH when tested per ASTM F2170.
- G. Follow Fieldturf USA, Inc. installation recommendations.
- H. Do not average the results of the tests. Report all field test results in writing to the General Contractor, Architect, and End User prior to installation.
- I. Verify that the concrete subfloor surface pH level is within the 7 - 11 range.
- J. Document the results confirming the slab is within manufacturer's tolerances for slab deviation.

**3.2 PREPARATION OF SURFACES**

- A. Sand the entire surface of the concrete slab.
- B. Sweep the concrete slab so as to remove all dirt and dust. If a sweeping compound is to be used it must be a sweeping compound that does not contain oil or other items that may inhibit the adhesive bond.
- C. Slab must be dust free. In the event that dust impairs adhesive bond, priming the slab prior to application of adhesive may be necessary. Follow installation guidelines.
- D. Follow OSHA guidelines.

**3.3 INSTALLATION**

- A. The installation area shall be closed to all traffic and activity for a period to be set by the indoor resilient athletic surfacing installer. The indoor resilient athletic surfacing installation shall not begin until the installer is familiar with the existing conditions.
- B. All necessary precautions should be taken to minimize noise, smell, dust, the use of hazardous materials and any other items that may inconvenience others.
- C. Install the indoor resilient athletic surfacing in strict accordance with the indoor resilient athletic surfacing manufacturer's written instructions.
- D. Install the indoor resilient athletic surfacing minimizing cross seams. Provide a seam diagram during the submittal process for approval prior to installation. Vinyl Sheet Flooring Seams: Comply with ASTM F 1516. Rout joints and heat weld to permanently and seamlessly fuse sections together.
- E. Paint game lines using approved game line paint primer and game line paint in strict accordance with the game line paint manufacturer's instructions.
- F. Install appropriate threshold plates or transition strips where necessary.



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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

3.5 *CLEANING*

- A. Remove all unused materials, tools, and equipment and dispose of any debris properly. Clean the indoor resilient athletic surfacing in accordance with the manufacturer's instructions.

3.6 *PROTECTION*

- A. If required, protect the indoor resilient athletic surfacing from damage using coverings approved by the manufacturer until acceptance of work by the customer or their authorized representative.

3.7 *RELATED STANDARDS AND GUIDELINES*

- A. ASTM F2170 "Standard Test Method for Determining Relative Humidity In Concrete Floor Slabs Using In-Situ Probes"
- B. ASTM F710 "Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring"
- C. ACI 302.2R-06 "Guideline for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials"
- D. ASTM F2772-11 "Standard Specification for Athletic Performance Properties of Indoor Sports Floor Systems"

**END OF SECTION**

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

***PART 1 – GENERAL***

**1.1**     ***SECTION INCLUDES***

- A. Supply and installation of the indoor resilient multipurpose surfacing
- B. Application of the game lines
- C. References for the correct construction and preparation of concrete slabs to receive resilient flooring.

**1.2**     ***SUBMITTALS***

- A. Product Data:
  - 1. Manufacturer’s promotional brochures, specifications and installation instructions
- B. Manufacturer Certifications:
  - 1. Provide certification that accurately identifies the Original Equipment Manufacturer (OEM) of flooring furnished for this project including manufacturer’s name, address and factory location.
  - 2. Suppliers of private label flooring for this project must identify themselves as such and fully disclose the OEM information listed above.
  - 3. All “manufacturer” requirements in these specifications must be complied with by the OEM, including warranties, certifications, qualifications, product data, test results, environmental requirements, performance data, etc.
- C. Samples:
  - 1. Submit for selection and approval three (3) sets of the indoor resilient multipurpose surfacing, manufacturer’s brochures, samples or sample boards of all of the available colors, textures and styles.
  - 2. Submit color samples of all the available game line paint colors for selection and approval.
- D. Closeout Submittals:
  - 1. Submit three (3) copies of the indoor resilient multipurpose surfacing and manufacturer’s maintenance instructions.
  - 2. Submit three (3) copies of the material and installation warranties as specified.

**1.3**     ***QUALITY ASSURANCE***

- A. Qualifications:
  - 1. The indoor resilient multipurpose surfacing shall have been actively marketed for a minimum of ten (10) years.
  - 2. The indoor resilient multipurpose surfacing shall be manufactured in an ISO 9001 certified plant.
  - 3. The indoor resilient multipurpose surfacing shall be manufactured in an ISO 14001 certified plant.
  - 4. The indoor resilient multipurpose surfacing supplier shall be an established firm, experienced in the field, and competent in the techniques required by the manufacturer.
  - 5. The installer of the indoor resilient multipurpose surfacing shall have a minimum of five (5) years of experience in the field installing indoor resilient multipurpose surfacing and have worked on at least five (5) projects of similar size, type and complexity.

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

- B. Certifications:
  - 1. Installer to submit the indoor resilient athletic surfacing manufacturer's or distributor's certification attesting that they are an approved installer of the indoor resilient multipurpose surfacing.
  - 2. The indoor resilient multipurpose surfacing manufacturer to submit official ISO 9001 certification for the facility in which the indoor resilient multipurpose surfacing is manufactured.
- C. Testing:

Tests shall be relative for multi-purpose use with certificates from independent testing resources to be made available upon request. Test results shall be performed according to ASTM standard testing procedures including ASTM F2772 "Standard Specification for Athletic Performance Properties of Indoor Sports Floor Systems".

1.4 *DELIVERY, STORAGE AND HANDLING*

- A. Delivery:

Material shall not be delivered until all related work is in place and finished and/or proper storage facilities and conditions can be provided and guaranteed stable according to FieldTurf USA, Inc. recommendations.
- B. Storage:
  - 1. Store the material in a secure, clean and dry location.
  - 2. Maintain temperature between 55° and 85° Fahrenheit.
  - 3. Store the indoor resilient athletic surfacing rolls in an upright position on a smooth flat surface immediately upon delivery to jobsite.
  - 4. Rolls shipped in rigid protective cardboard containers can be laid horizontally prior to unpacking and installation.

1.5 *PROJECT/SITE CONDITIONS*

- A. It is the responsibility of the general contractor/construction manager to maintain project/site conditions acceptable for the installation of the indoor resilient multipurpose flooring.
- B. The area in which the indoor resilient multipurpose surfacing will be installed shall be dry and weather tight. Permanent heat, light and ventilation shall be installed and operable.
- C. All other trades shall have completed their work prior to the installation of the resilient athletic flooring. The general contractor or construction manager shall maintain a secure and clean working environment before, during and after the installation.
- D. Maintain a stable room temperature of at least 65°F for a minimum of one (1) week prior to, during and thereafter installation.
- E. An effective low-permeance vapor barrier is placed directly beneath the concrete subfloor. For "on" or "below grade" installations, it is recommended to provide a permanent vapor barrier resistant to long term hydrostatic pressure/moisture exposure. Protrusions should be sealed to prevent moisture migration into the slab. Moisture should not be allowed to enter the slab after the completed construction.
- F. Concrete subfloor surface pH level within the 7 to 11 range dependent upon installation type.
- G. Concrete subfloor should be no greater than 1/8" within a 10 ft diameter. This tolerance can be measured in accordance with ASTM E1155. A specified (F<sub>F</sub>) of 50 and an (F<sub>L</sub>) of 30 should reach this degree of floor flatness and floor level. There is no numerical correlation between F numbers and the deviation from the straight

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edge. However, the above specified numbers should achieve a flat floor with minimal deviation in the slab. Reference ACI 117 and ACI 302.1R. The general contractor should provide a certificate of compliance with the above recommendations.

- H. Concrete subfloor must be clean and free of all foreign materials or objects including, but not limited to, curing compounds and sealers.
- I. Fill cracks, grooves, voids, depressions, and other minor imperfections. Follow the manufacturer's directions. Moveable joints must be treated utilizing specific transitioning joint devices depending upon the architect's recommendations. Follow current ASTM F710 guidelines for the preparation of concrete slabs to receive resilient flooring.
- J. Refer to ACI 302.2R "Guidelines for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials" for concrete design and construction.
- K. Concrete slab shall be fortified with continual steel reinforcement. Fiber reinforcement alone shall not be considered adequate fortification.

1.6 *WARRANTY*

- A. Special Limited Warranty:
  - 1. Manufacturer's standard form in which manufacturer agrees to repair or replace sports flooring including labor that fails within specified warranty period.
- B. Material warranty must be direct from the product manufacturer.
  - 1. Material warranties must come from original manufacturer or division thereof. Private label warranties from distributors or brokers are not valid. Supply original point of manufacturing upon request.
- C. Failures include, but are not limited to, the following:
  - 1. Material manufacturing defects.
  - 2. Surface wear and deterioration to the point of wear-through of wear layer per ASTM F410/ASTM F1303.
  - 3. Failure due to substrate moisture exposure exceeding 98 percent relative humidity when tested according to ASTM F2170.
- D. Warranty Period:
  - 1. For material defects and surface wear-through: 25 years from date of substantial completion.
  - 2. For moisture vapor tolerance: 25 years from date of substantial completion.
- E. Installer's Limited Warranty:
  - 1. Installer's standard form in which installer agrees to repair or replace sports flooring that fails due to poor workmanship or faulty installation within the specified warranty period.
  - 2. Warranty Period: 2 years from date of substantial completion.

1.7 *ADDITIONAL MATERIALS*

- A. Furnish to the owner additional materials containing a total of at least 1% of each different color or design of the indoor resilient athletic surfacing used on the project.

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

1.8 *LEED™ CERTIFICATION*

- A. The indoor resilient athletic surfacing should be able to help this facility to achieve points towards *LEED™ certification*. Flooring system must be certified by FloorScore.
- B. LEED categories positively affected by the indoor resilient athletic surfacing:

<b>LEED™ V4 Credit</b>		Contribution
Materials & Resources: Building Product Disclosure & Optimization (BPDO)		
MRC3: Sourcing of Raw Materials	Options 1 & 2	2 Points
MRC4: Material Ingredients	Option 1	1 Point
MRC5: Construction and Demolition Management	Reclamation and Recycling	ReStart® Program
Indoor Environmental Quality		
EQc2: Low-Emitting Materials	TVOC: 0.5 mg/m <sup>3</sup> or less	FloorScore®

**PART 2 - PRODUCTS**

2.1 *MANUFACTURERS*

- A. The basis of the design for the indoor resilient multipurpose surfacing is Omnisports PurePlay as manufactured by Tarkett.
- B. All other installation accessories and related components must be either made or approved by the indoor resilient athletic surfacing manufacturer.
- C. Other products may be approved as equal if deemed qualified and submitted in accordance with the General Conditions.
- D. Test reports confirming compliance from an independent sports laboratory must be provided along with samples, technical data, installation, maintenance, and warranty prior to acceptance as an alternative product.

2.2 *MATERIALS*

- A. Omnisports PurePlay - Prefabricated sport surface 9.4 mm (3/8") with wood flooring design and slightly textured embossed surface as supplied by Tarkett.
  - 1. Embossing of wood design and solid colors must be the same; varying embossing or surface textures will not be allowed.
  - 2. Printing of wood design shall closely resemble standard wood strip flooring in size, color, board length, and grain appearance.
  - 3. The wood design shall be protected by a clear layer of pure PVC (Polyvinyl Chloride) and TopClean xp, a factory-applied UV cured urethane treatment.
  - 4. Intermediate layers shall be fortified with a non-woven fiberglass grid for increased dimensional stability.
  - 5. The foam force reduction layer shall be high-density closed cell PVC foam with honeycomb embossing, and is applied in one continuous manufacturing process.
  - 6. Laminated or adhered foam layers will not be allowed.
  - 7. Field constructed products will not be accepted.

**SECTION 09 65 66**  
**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

- A. Physical properties of the indoor resilient athletic surfacing shall conform to the following minimums:

Width	—	6' 6" (2 m)
Length	—	85' (25.9m) approx.
Wear Layer	—	2 mm
Total Thickness	—	9.4 mm
Wear Layer	Type 1– Grade 1	ASTM F1303/F410
Vertical Deformation	PASSED	ASTM F2772
Rolling Load	PASSED	0.30 (EN 1569 {11/1999})
Surface Finish Effect	PASSED	ASTM F2772 (80 – 110)
Chemical Resistance	Excellent	ASTM F925
Impact Resistance	PASSED	EN 1517
Abrasion Resistance	PASSED	0.10 (EN ISO 5470-1 {06/1999})
Static Load Limit	PASSED	ASTM F970- Load 175 Lbs
Sound Insulation	Excellent	+/- 19 dB (ISO 717/2)
In-Room Sound Insulation	Excellent	61dB (NF S31-074)
Ball Rebound	PASSED	ASTM F2772 > 90%
Force Reduction	PASSED	ASTM F2772 Class 3
Fire Rating	PASSED	ASTM E648 Class 1
Microbial Assays Test	No Growth	G21 ASTM - Backing
Asthma and Allergy Friendly™	ASP: 05-01/101	Certified Compliant
Phthalate-free technology	—	YES
REACH Compliant	—	YES
Heavy Metals	—	NO
ISO 9001	—	YES
ISO 14001	—	YES

1. Color: As available from the indoor resilient athletic surfacing manufacturer's standard range.
  2. Hardwood Design Series: High definition printing for a realistic wood surface appearance as available from the indoor resilient athletic surfacing manufacturer's standard range.
  3. Texture: Texture to remain consistent between solid colors and wood design when blending colors.
- C. Tarkolay – A high quality low permeance slip sheet vapor retarder designed to separate the installed system from the substrate below.
1. Tarkolay as manufactured by Tarkett can be used below, on, or above grade substrates that experience elevated moisture conditions.
  2. Moisture tolerances shall have no limitation per ASTM F2170. Physical properties of the indoor resilient athletic surfacing shall conform to the following minimums:

Width	—	6' 6" (2 m)
Length	—	147'7" (45 m) approx.
Total Thickness	—	1.3 mm
Dimensional Stability	PASSED	.01% (EN 1434)
Permeance	Excellent	<0.20 (ASTM E96)

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

- D. Welding Rod: As supplied by the indoor resilient athletic surfacing manufacturer or supplier.
  - 1. Color to blend with the indoor resilient athletic surfacing color or design.
  - 2. All seams shall be welded to create a monolithic and impermeable surface.
- E. Adhesive: As approved by the indoor resilient athletic surfacing manufacturer.
- F. Game Line Paint and Primer: As approved by the indoor resilient athletic surfacing manufacturer.

***PART 3 - EXECUTION***

**3.1 EXAMINATION**

- A. It is the responsibility of the general contractor/construction manager to ensure that project/site conditions are acceptable for the installation of the indoor resilient athletic flooring.
- B. Verify that the area in which the indoor resilient athletic surfacing will be installed is dry and weather tight. Verify that permanent heat, light and ventilation are installed and operable.
- C. Verify that all other work that could cause damage, dirt and dust or interrupt the normal pace of the indoor resilient athletic flooring installation is completed or suspended.
- D. Verify that there is a stable room temperature of at least 65°F.
- E. Verify that there are no foreign materials or objects on the subfloor and that the subfloor is clean and ready for installation.
- F. Installation with Tarkolay to Concrete Subfloor : moisture content no limitation when tested per ASTM F2170.
- G. Follow Fieldturf USA, Inc. installation recommendations.
- H. Do not average the results of the tests. Report all field test results in writing to the General Contractor, Architect, and End User prior to installation.
- I. Verify that the concrete subfloor surface pH level is within the 7 - 11 range.
- J. Document the results indicating the slab is within manufacturer's tolerances for slab deviation.

**3.2 PREPARATION OF SURFACES**

- A. Sand the entire surface of the concrete slab.
- B. Sweep the concrete slab so as to remove all dirt and dust. If a sweeping compound is to be used it must be a sweeping compound that does not contain oil or other items that may inhibit the adhesive bond.
- C. Slab must be dust free. In the event that dust impairs adhesive bond, priming the slab prior to application of adhesive may be necessary. Follow installation guidelines.
- D. Follow OSHA guidelines.

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

3.3 *INSTALLATION*

- A. The installation area shall be closed to all traffic and activity for a period to be set by the indoor resilient athletic surfacing installer. The indoor resilient athletic surfacing installation shall not begin until the installer is familiar with the existing conditions.
- B. All necessary precautions should be taken to minimize noise, smell, dust, the use of hazardous materials and any other items that may inconvenience others.
- C. Install the indoor resilient athletic surfacing in strict accordance with the indoor resilient athletic surfacing manufacturer's written instructions.
- D. Install the indoor resilient athletic surfacing minimizing cross seams. Provide a seam diagram during the submittal process for approval prior to installation. Vinyl Sheet Flooring Seams: Comply with ASTM F 1516. Rout joints and heat weld to permanently and seamlessly fuse sections together.
- E. Paint game lines using approved game line paint primer and game line paint in strict accordance with the game line paint manufacturer's instructions.
- F. Install appropriate threshold plates or transition strips where necessary.

3.5 *CLEANING*

- A. Remove all unused materials, tools, and equipment and dispose of any debris properly. Clean the indoor resilient athletic surfacing in accordance with the manufacturer's instructions.

3.6 *PROTECTION*

- A. If required, protect the indoor resilient athletic surfacing from damage using coverings approved by the manufacturer until acceptance of work by the customer or their authorized representative.

3.7 *RELATED STANDARDS AND GUIDELINES*

- A. ASTM F2170 "Standard Test Method for Determining Relative Humidity In Concrete Floor Slabs Using In-Situ Probes"
- B. ASTM F710 "Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring"
- C. ACI 302.2R-06 "Guideline for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials"
- D. ASTM F2772-11 "Standard Specification for Athletic Performance Properties of Indoor Sports Floor Systems"

**END OF SECTION**



**SECTION 09 65 66**  
**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

***PART 1 – GENERAL***

**1.1**     ***SECTION INCLUDES***

- A. Supply and installation of the indoor resilient multipurpose surfacing
- B. Application of the game lines
- C. References for the correct construction and preparation of concrete slabs to receive resilient flooring.

**1.2**     ***SUBMITTALS***

- A. Product Data:
  - 1. Manufacturer's promotional brochures, specifications and installation instructions
- B. Manufacturer Certifications:
  - 1. Provide certification that accurately identifies the Original Equipment Manufacturer (OEM) of flooring furnished for this project including manufacturer's name, address and factory location.
  - 2. Suppliers of private label flooring for this project must identify themselves as such and fully disclose the OEM information listed above.
  - 3. All "manufacturer" requirements in these specifications must be complied with by the OEM, including warranties, certifications, qualifications, product data, test results, environmental requirements, performance data, etc.
- C. Samples:
  - 1. Submit for selection and approval three (3) sets of the indoor resilient multipurpose surfacing, manufacturer's brochures, samples or sample boards of all of the available colors, textures and styles.
  - 2. Submit color samples of all the available game line paint colors for selection and approval.
- D. Closeout Submittals:
  - 1. Submit three (3) copies of the indoor resilient multipurpose surfacing and manufacturer's maintenance instructions.
  - 2. Submit three (3) copies of the material and installation warranties as specified.

**1.3**     ***QUALITY ASSURANCE***

- A. Qualifications:
  - 1. The indoor resilient multipurpose surfacing shall have been actively marketed for a minimum of ten (10) years.
  - 2. The indoor resilient multipurpose surfacing shall be manufactured in an ISO 9001 certified plant.
  - 3. The indoor resilient multipurpose surfacing shall be manufactured in an ISO 14001 certified plant.
  - 4. The indoor resilient multipurpose surfacing supplier shall be an established firm, experienced in the field, and competent in the techniques required by the manufacturer.
  - 5. The installer of the indoor resilient multipurpose surfacing shall have a minimum of five (5) years of experience in the field installing indoor resilient multipurpose surfacing and have worked on at least five (5) projects of similar size, type and complexity.

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

- B. Certifications:
  - 1. Installer to submit the indoor resilient athletic surfacing manufacturer's or distributor's certification attesting that they are an approved installer of the indoor resilient multipurpose surfacing.
  - 2. The indoor resilient multipurpose surfacing manufacturer to submit official ISO 9001 certification for the facility in which the indoor resilient multipurpose surfacing is manufactured.
- C. Testing:

Tests shall be relative for multi-purpose use with certificates from independent testing resources to be made available upon request. Test results shall be performed according to ASTM standard testing procedures including ASTM F2772 "Standard Specification for Athletic Performance Properties of Indoor Sports Floor Systems".

1.4 *DELIVERY, STORAGE AND HANDLING*

- A. Delivery:

Material shall not be delivered until all related work is in place and finished and/or proper storage facilities and conditions can be provided and guaranteed stable according to FieldTurf USA, Inc. recommendations.
- B. Storage:
  - 1. Store the material in a secure, clean and dry location.
  - 2. Maintain temperature between 55° and 85° Fahrenheit.
  - 3. Store the indoor resilient athletic surfacing rolls in an upright position on a smooth flat surface immediately upon delivery to jobsite.
  - 4. Rolls shipped in rigid protective cardboard containers can be laid horizontally prior to unpacking and installation.

1.5 *PROJECT/SITE CONDITIONS*

- A. It is the responsibility of the general contractor/construction manager to maintain project/site conditions acceptable for the installation of the indoor resilient multipurpose flooring.
- B. The area in which the indoor resilient multipurpose surfacing will be installed shall be dry and weather tight. Permanent heat, light and ventilation shall be installed and operable.
- C. All other trades shall have completed their work prior to the installation of the resilient athletic flooring. The general contractor or construction manager shall maintain a secure and clean working environment before, during and after the installation.
- D. Maintain a stable room temperature of at least 65°F for a minimum of one (1) week prior to, during and thereafter installation.
- E. An effective low-permeance vapor barrier is placed directly beneath the concrete subfloor. For "on" or "below grade" installations, it is recommended to provide a permanent vapor barrier resistant to long term hydrostatic pressure/moisture exposure. Protrusions should be sealed to prevent moisture migration into the slab. Moisture should not be allowed to enter the slab after the completed construction.
- F. Concrete subfloor surface pH level within the 7 to 11 range dependent upon installation type.
- G. Concrete subfloor should be no greater than 1/8" within a 10 ft diameter. This tolerance can be measured in accordance with ASTM E1155. A specified (F<sub>F</sub>) of 50 and an (F<sub>L</sub>) of 30 should reach this degree of floor flatness and floor level. There is no numerical correlation between F numbers and the deviation from the straight

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

edge. However, the above specified numbers should achieve a flat floor with minimal deviation in the slab. Reference ACI 117 and ACI 302.1R. The general contractor should provide a certificate of compliance with the above recommendations.

- H. Concrete subfloor must be clean and free of all foreign materials or objects including, but not limited to, curing compounds and sealers.
- I. Fill cracks, grooves, voids, depressions, and other minor imperfections. Follow the manufacturer's directions. Moveable joints must be treated utilizing specific transitioning joint devices depending upon the architect's recommendations. Follow current ASTM F710 guidelines for the preparation of concrete slabs to receive resilient flooring.
- J. Refer to ACI 302.2R "Guidelines for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials" for concrete design and construction.
- K. Concrete slab shall be fortified with continual steel reinforcement. Fiber reinforcement alone shall not be considered adequate fortification.

1.6 *WARRANTY*

- A. Special Limited Warranty:
  - 1. Manufacturer's standard form in which manufacturer agrees to repair or replace sports flooring including labor that fails within specified warranty period.
- B. Material warranty must be direct from the product manufacturer.
  - 1. Material warranties must come from original manufacturer or division thereof. Private label warranties from distributors or brokers are not valid. Supply original point of manufacturing upon request.
- C. Failures include, but are not limited to, the following:
  - 1. Material manufacturing defects.
  - 2. Surface wear and deterioration to the point of wear-through of wear layer per ASTM F410/ASTM F1303.
  - 3. Failure due to substrate moisture exposure exceeding 98 percent relative humidity when tested according to ASTM F2170.
- D. Warranty Period:
  - 1. For material defects and surface wear-through: **25** years from date of substantial completion.
  - 2. For moisture vapor tolerance: **25** years from date of substantial completion.
- E. Installer's Limited Warranty:
  - 1. Installer's standard form in which installer agrees to repair or replace sports flooring that fails due to poor workmanship or faulty installation within the specified warranty period.
  - 2. Warranty Period: 2 years from date of substantial completion.

1.7 *ADDITIONAL MATERIALS*

- A. Furnish to the owner additional materials containing a total of at least 1% of each different color or design of the indoor resilient athletic surfacing used on the project.

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

1.8 *LEED™ CERTIFICATION*

- A. The indoor resilient athletic surfacing should be able to help this facility to achieve points towards *LEED™ certification*. Flooring system must be certified by FloorScore.
- B. LEED categories positively affected by the indoor resilient athletic surfacing:

<b>LEED™ V4 Credit</b>		Contribution
Materials & Resources: Building Product Disclosure & Optimization (BPDO)		
MRc3: Sourcing of Raw Materials	Options 1 & 2	2 Points
MRc4: Material Ingredients	Option 1	1 Point
MRc5: Construction and Demolition Management	Reclamation and Recycling	ReStart® Program
Indoor Environmental Quality		
EQc2: Low-Emitting Materials	TVOC: 0.5 mg/m <sup>3</sup> or less	FloorScore®

***PART 2 - PRODUCTS***

2.1 *MANUFACTURERS*

- A. The basis of the design for the indoor resilient multipurpose surfacing is Omnisports Speed as manufactured by Tarkett.
- B. All other installation accessories and related components must be either made or approved by the indoor resilient athletic surfacing manufacturer.
- C. Other products may be approved as equal if deemed qualified and submitted in accordance with the General Conditions.
- D. Test reports confirming compliance from an independent sports laboratory must be provided along with samples, technical data, installation, maintenance, and warranty prior to acceptance as an alternative product.

2.2 *MATERIALS*

- A. Omnisports Speed - Prefabricated sport surface (0.14") with wood flooring design, single surface embossing and Extreme Three (3) Layers technology (X3LT) as supplied by Tarkett.
  - 1. Embossing of wood design and solid colors must be the same; varying embossing or surface textures will not be allowed.
  - 2. Printing of wood design shall closely resemble standard wood strip flooring in size, color, board length, and grain appearance.
  - 3. Surface embossing combined with TopClean XP must offer proper balance of surface friction per the ASTM F2772.
  - 4. Surface embossing combined with TopClean XP must provide resistance to stains and scratches. Surface profile must not incorporate linear embossing.
  - 5. The wood design shall be protected by a clear layer of pure PVC (Polyvinyl Chloride) and TopClean XP, a factory-applied UV cured urethane treatment.
  - 6. Extreme Three (3) Layers technology (X3LT) includes Omnisports XCS cushion, glass veil and calendared sheet must offer improved shock absorbing comfort while providing better indentation recovery

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7. The XCS cushion force reduction layer shall be high-density closed cell PVC foam with honeycomb embossing, and is applied in one continuous manufacturing process.
8. Laminated or adhered foam layers will not be allowed.
9. Field constructed products will not be accepted.

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

B. Physical properties of the indoor resilient athletic surfacing shall conform to the following minimums:

Width	—	6' 6" (2 m)
Length	—	75.5' (23m) approx.
Wear Layer	—	2 mm
Total Thickness	—	3.5 mm
Wear Layer	Type 1– Grade 1	ASTM F1303/F410
Vertical Deformation	PASSED	ASTM F2772
Rolling Load	PASSED	0.30 (EN 1569 {11/1999})
Surface Finish Effect	PASSED	ASTM F2772 (80 – 110)
Chemical Resistance	Excellent	ASTM F925
Impact Resistance	PASSED	EN 1517
Abrasion Resistance	PASSED	0.10 (EN ISO 5470-1 {06/1999})
Static Load Limit	PASSED	ASTM F970- Load 175 Lbs
Sound Insulation	Excellent	+/- 19 dB (ISO 717/2)
In-Room Sound Insulation	Excellent	62dB (NF S31-074)
Ball Rebound	PASSED	ASTM F2772 > 90%
Force Reduction	PASSED	ASTM F2772 Class 1
Fire Rating	PASSED	ASTM E648 Class 1
Microbial Assays Test	No Growth	G21 ASTM - Backing
Phthalate-free technology	—	YES
REACH Compliant	—	YES
Heavy Metals	—	NO
ISO 9001	—	YES
ISO 14001	—	YES

1. Color: As available from the indoor resilient athletic surfacing manufacturer's standard range.
  2. Hardwood Design Series: High definition printing for a realistic wood surface appearance as available from the indoor resilient athletic surfacing manufacturer's standard range.
  3. Texture: Texture to remain consistent between solid colors and wood design when blending colors.
- C. Welding Rod: As supplied by the indoor resilient athletic surfacing manufacturer or supplier.
1. Color to blend with the indoor resilient athletic surfacing color or design.
  2. All seams shall be welded to create a monolithic and impermeable surface.
- D. Adhesive: As approved by the indoor resilient athletic surfacing manufacturer.
- E. Game Line Paint and Primer: As approved by the indoor resilient athletic surfacing manufacturer.

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

***PART 3 - EXECUTION***

**3.1 EXAMINATION**

- A. It is the responsibility of the general contractor/construction manager to ensure that project/site conditions are acceptable for the installation of the indoor resilient athletic flooring.
- B. Verify that the area in which the indoor resilient athletic surfacing will be installed is dry and weather tight. Verify that permanent heat, light and ventilation are installed and operable.
- C. Verify that all other work that could cause damage, dirt and dust or interrupt the normal pace of the indoor resilient athletic flooring installation is completed or suspended.
- D. Verify that there is a stable room temperature of at least 65°F.
- E. Verify that there are no foreign materials or objects on the subfloor and that the subfloor is clean and ready for installation.
- F. Direct Full Spread Adhering to Concrete Subfloor HS Sports Spray : moisture content less than 90% RH when tested per ASTM F2170.
- G. Follow Fieldturf USA, Inc. installation recommendations.
- H. Do not average the results of the tests. Report all field test results in writing to the General Contractor, Architect, and End User prior to installation.
- I. Verify that the concrete subfloor surface pH level is within the 7 - 11 range.
- J. Document the results confirming the slab is within manufacturer's tolerances for slab deviation.

**3.2 PREPARATION OF SURFACES**

- A. Sand the entire surface of the concrete slab.
- B. Sweep the concrete slab so as to remove all dirt and dust. If a sweeping compound is to be used it must be a sweeping compound that does not contain oil or other items that may inhibit the adhesive bond.
- C. Slab must be dust free. In the event that dust impairs adhesive bond, priming the slab prior to application of adhesive may be necessary. Follow installation guidelines.
- D. Follow OSHA guidelines.

**3.3 INSTALLATION**

- A. The installation area shall be closed to all traffic and activity for a period to be set by the indoor resilient athletic surfacing installer. The indoor resilient athletic surfacing installation shall not begin until the installer is familiar with the existing conditions.
- B. All necessary precautions should be taken to minimize noise, smell, dust, the use of hazardous materials and any other items that may inconvenience others.
- C. Install the indoor resilient athletic surfacing in strict accordance with the indoor resilient athletic surfacing manufacturer's written instructions.
- D. Install the indoor resilient athletic surfacing minimizing cross seams. Provide a seam diagram during the submittal process for approval prior to installation. Vinyl Sheet Flooring Seams: Comply with ASTM F 1516. Rout joints and heat weld to permanently and seamlessly fuse sections together.
- E. Paint game lines using approved game line paint primer and game line paint in strict accordance with the game line paint manufacturer's instructions.
- F. Install appropriate threshold plates or transition strips where necessary.

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

3.5 *CLEANING*

- A. Remove all unused materials, tools, and equipment and dispose of any debris properly. Clean the indoor resilient athletic surfacing in accordance with the manufacturer's instructions.

3.6 *PROTECTION*

- A. If required, protect the indoor resilient athletic surfacing from damage using coverings approved by the manufacturer until acceptance of work by the customer or their authorized representative.

3.7 *RELATED STANDARDS AND GUIDELINES*

- A. ASTM F2170 "Standard Test Method for Determining Relative Humidity In Concrete Floor Slabs Using In-Situ Probes"
- B. ASTM F710 "Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring"
- C. ACI 302.2R-06 "Guideline for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials"
- D. ASTM F2772-11 "Standard Specification for Athletic Performance Properties of Indoor Sports Floor Systems"

**END OF SECTION**



**SECTION 09 65 66**  
**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

***PART 1 – GENERAL***

**1.1**     ***SECTION INCLUDES***

- A. Supply and installation of the indoor resilient multipurpose surfacing
- B. Application of the game lines
- C. References for the correct construction and preparation of concrete slabs to receive resilient flooring.

**1.2**     ***SUBMITTALS***

- A. Product Data:
  - 1. Manufacturer's promotional brochures, specifications and installation instructions
- B. Manufacturer Certifications:
  - 1. Provide certification that accurately identifies the Original Equipment Manufacturer (OEM) of flooring furnished for this project including manufacturer's name, address and factory location.
  - 2. Suppliers of private label flooring for this project must identify themselves as such and fully disclose the OEM information listed above.
  - 3. All "manufacturer" requirements in these specifications must be complied with by the OEM, including warranties, certifications, qualifications, product data, test results, environmental requirements, performance data, etc.
- C. Samples:
  - 1. Submit for selection and approval three (3) sets of the indoor resilient multipurpose surfacing, manufacturer's brochures, samples or sample boards of all of the available colors, textures and styles.
  - 2. Submit color samples of all the available game line paint colors for selection and approval.
- D. Closeout Submittals:
  - 1. Submit three (3) copies of the indoor resilient multipurpose surfacing and manufacturer's maintenance instructions.
  - 2. Submit three (3) copies of the material and installation warranties as specified.

**1.3**     ***QUALITY ASSURANCE***

- A. Qualifications:
  - 1. The indoor resilient multipurpose surfacing shall have been actively marketed for a minimum of ten (10) years in the country.
  - 2. The indoor resilient multipurpose surfacing shall be manufactured in an ISO 9001 certified plant.
  - 3. The indoor resilient multipurpose surfacing shall be manufactured in an ISO 14001 certified plant.
  - 4. The indoor resilient multipurpose surfacing supplier shall be an established firm, experienced in the field, and competent in the techniques required by the manufacturer.
  - 5. The installer of the indoor resilient multipurpose surfacing shall have a minimum of five (5) years of experience in the field installing indoor resilient multipurpose surfacing and have worked on at least five (5) projects of similar size, type and complexity.

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

- B. Certifications:
  - 1. Installer to submit the indoor resilient athletic surfacing manufacturer's or distributor's certification attesting that they are an approved installer of the indoor resilient multipurpose surfacing.
  - 2. The indoor resilient multipurpose surfacing manufacturer to submit official ISO 9001 certification for the facility in which the indoor resilient multipurpose surfacing is manufactured.
- C. Testing:

Tests shall be relative for multi-purpose use with certificates from independent testing resources to be made available upon request. Test results shall be performed according to ASTM standard testing procedures including ASTM F2772 "Standard Specification for Athletic Performance Properties of Indoor Sports Floor Systems".

1.4 *DELIVERY, STORAGE AND HANDLING*

- A. Delivery:

Material shall not be delivered until all related work is in place and finished and/or proper storage facilities and conditions can be provided and guaranteed stable according to FieldTurf USA, Inc. recommendations.
- B. Storage:
  - 1. Store the material in a secure, clean and dry location.
  - 2. Maintain temperature between 55° and 85° Fahrenheit.
  - 3. Store the indoor resilient athletic surfacing rolls in an upright position on a smooth flat surface immediately upon delivery to jobsite.
  - 4. Rolls shipped in rigid protective cardboard containers can be laid horizontally prior to unpacking and installation.

1.5 *PROJECT/SITE CONDITIONS*

- A. It is the responsibility of the general contractor/construction manager to maintain project/site conditions acceptable for the installation of the indoor resilient multipurpose flooring.
- B. The area in which the indoor resilient multipurpose surfacing will be installed shall be dry and weather tight. Permanent heat, light and ventilation shall be installed and operable.
- C. All other trades shall have completed their work prior to the installation of the resilient athletic flooring. The general contractor or construction manager shall maintain a secure and clean working environment before, during and after the installation.
- D. Maintain a stable room temperature of at least 65°F for a minimum of one (1) week prior to, during and thereafter installation.
- E. An effective low-permeance vapor barrier is placed directly beneath the concrete subfloor. For "on" or "below grade" installations, it is recommended to provide a permanent vapor barrier resistant to long term hydrostatic pressure/moisture exposure. Protrusions should be sealed to prevent moisture migration into the slab. Moisture should not be allowed to enter the slab after the completed construction.
- F. Concrete subfloor surface pH level within the 7 to 11 range dependent upon installation type.
- G. Concrete subfloor should be no greater than 1/8" within a 10 ft diameter. This tolerance can be measured in accordance with ASTM E1155. A specified (F<sub>F</sub>) of 50 and an (F<sub>L</sub>) of 30 should reach this degree of floor flatness and floor level. There is no numerical correlation between F numbers and the deviation from the straight

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edge. However, the above specified numbers should achieve a flat floor with minimal deviation in the slab. Reference ACI 117 and ACI 302.1R. The general contractor should provide a certificate of compliance with the above recommendations.

- H. Concrete subfloor must be clean and free of all foreign materials or objects including, but not limited to, curing compounds and sealers.
- I. Fill cracks, grooves, voids, depressions, and other minor imperfections. Follow the manufacturer's directions. Moveable joints must be treated utilizing specific transitioning joint devices depending upon the architect's recommendations. Follow current ASTM F710 guidelines for the preparation of concrete slabs to receive resilient flooring.
- J. Refer to ACI 302.2R "Guidelines for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials" for concrete design and construction.
- K. Concrete slab shall be fortified with continual steel reinforcement. Fiber reinforcement alone shall not be considered adequate fortification.

1.6 *WARRANTY*

- A. Special Limited Warranty:
  - 1. Manufacturer's standard form in which manufacturer agrees to repair or replace sports flooring including labor that fails within specified warranty period.
- B. Material warranty must be direct from the product manufacturer.
  - 1. Material warranties must come from original manufacturer or division thereof. Private label warranties from distributors or brokers are not valid. Supply original point of manufacturing upon request.
- C. Failures include, but are not limited to, the following:
  - 1. Material manufacturing defects.
  - 2. Surface wear and deterioration to the point of wear-through of wear layer per ASTM F410/ASTM F1303.
  - 3. Failure due to substrate moisture exposure exceeding 98 percent relative humidity when tested according to ASTM F2170.
- D. Warranty Period:
  - 1. For material defects and surface wear-through: 25 years from date of substantial completion.
  - 2. For moisture vapor tolerance: 25 years from date of substantial completion.
- E. Installer's Limited Warranty:
  - 1. Installer's standard form in which installer agrees to repair or replace sports flooring that fails due to poor workmanship or faulty installation within the specified warranty period.
  - 2. Warranty Period: 2 years from date of substantial completion.

1.7 *ADDITIONAL MATERIALS*

- A. Furnish to the owner additional materials containing a total of at least 1% of each different color or design of the indoor resilient athletic surfacing used on the project.

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1.8 *LEED™ CERTIFICATION*

- A. The indoor resilient athletic surfacing should be able to help this facility to achieve points towards *LEED™ certification*. Flooring system must be certified by FloorScore.
- B. LEED categories positively affected by the indoor resilient athletic surfacing:

<b>LEED™ V4 Credit</b>		Contribution
Materials & Resources: Building Product Disclosure & Optimization (BPDO)		
MRC3: Sourcing of Raw Materials	Options 1 & 2	2 Points
MRC4: Material Ingredients	Option 1	1 Point
MRC5: Construction and Demolition Management	Reclamation and Recycling	ReStart® Program
Indoor Environmental Quality		
EQc2: Low-Emitting Materials	TVOC: 0.5 mg/m <sup>3</sup> or less	FloorScore®

***PART 2 - PRODUCTS***

2.1 *MANUFACTURERS*

- A. The basis of the design for the indoor resilient multipurpose surfacing is Omnisports Speed as manufactured by Tarkett.
- B. All other installation accessories and related components must be either made or approved by the indoor resilient athletic surfacing manufacturer.
- C. Other products may be approved as equal if deemed qualified and submitted in accordance with the General Conditions.
- D. Test reports confirming compliance from an independent sports laboratory must be provided along with samples, technical data, installation, maintenance, and warranty prior to acceptance as an alternative product.

2.2 *MATERIALS*

- A. Omnisports Speed - Prefabricated sport surface (0.14”) with wood flooring design, single surface embossing and Extreme Three (3) Layers technology (X3LT) as supplied by Tarkett.
  - 1. Embossing of wood design and solid colors must be the same; varying embossing or surface textures will not be allowed.
  - 2. Printing of wood design shall closely resemble standard wood strip flooring in size, color, board length, and grain appearance.
  - 3. Surface embossing combined with TopClean XP must offer proper balance of surface friction per the ASTM F2772.
  - 4. Surface embossing combined with TopClean XP must provide resistance to stains and scratches. Surface profile must not incorporate linear embossing.
  - 5. The wood design shall be protected by a clear layer of pure PVC (Polyvinyl Chloride) and TopClean XP, a factory-applied UV cured urethane treatment.
  - 6. Extreme Three (3) Layers technology (X3LT) includes Omnisports XCS cushion, glass veil and calendared sheet must offer improved shock absorbing comfort while providing better indentation recovery

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7. The XCS cushion force reduction layer shall be high-density closed cell PVC foam with honeycomb embossing, and is applied in one continuous manufacturing process.
8. Laminated or adhered foam layers will not be allowed.
9. Field constructed products will not be accepted.

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B. Physical properties of the indoor resilient athletic surfacing shall conform to the following minimums:

Width	—	6' 6" (2 m)
Length	—	75.5' (23m) approx.
Wear Layer	—	2 mm
Total Thickness	—	3.5 mm
Wear Layer	Type 1– Grade 1	ASTM F1303/F410
Vertical Deformation	PASSED	ASTM F2772
Rolling Load	PASSED	0.30 (EN 1569 {11/1999})
Surface Finish Effect	PASSED	ASTM F2772 (80 – 110)
Chemical Resistance	Excellent	ASTM F925
Impact Resistance	PASSED	EN 1517
Abrasion Resistance	PASSED	0.10 (EN ISO 5470-1 {06/1999})
Static Load Limit	PASSED	ASTM F970- Load 175 Lbs
Sound Insulation	Excellent	+/- 19 dB (ISO 717/2)
In-Room Sound Insulation	Excellent	62dB (NF S31-074)
Ball Rebound	PASSED	ASTM F2772 > 90%
Force Reduction	PASSED	ASTM F2772 Class 1
Fire Rating	PASSED	ASTM E648 Class 1
Microbial Assays Test	No Growth	G21 ASTM - Backing
Phthalate-free technology	—	YES
REACH Compliant	—	YES
Heavy Metals	—	NO
ISO 9001	—	YES
ISO 14001	—	YES

1. Color: As available from the indoor resilient athletic surfacing manufacturer's standard range.
  2. Hardwood Design Series: High definition printing for a realistic wood surface appearance as available from the indoor resilient athletic surfacing manufacturer's standard range.
  3. Texture: Texture to remain consistent between solid colors and wood design when blending colors.
- C. Welding Rod: As supplied by the indoor resilient athletic surfacing manufacturer or supplier.
1. Color to blend with the indoor resilient athletic surfacing color or design.
  2. All seams shall be welded to create a monolithic and impermeable surface.
- D. Adhesive: As approved by the indoor resilient athletic surfacing manufacturer.
- E. Game Line Paint and Primer: As approved by the indoor resilient athletic surfacing manufacturer.

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

***PART 3 - EXECUTION***

**3.1 EXAMINATION**

- A. It is the responsibility of the general contractor/construction manager to ensure that project/site conditions are acceptable for the installation of the indoor resilient athletic flooring.
- B. Verify that the area in which the indoor resilient athletic surfacing will be installed is dry and weather tight. Verify that permanent heat, light and ventilation are installed and operable.
- C. Verify that all other work that could cause damage, dirt and dust or interrupt the normal pace of the indoor resilient athletic flooring installation is completed or suspended.
- D. Verify that there is a stable room temperature of at least 65°F.
- E. Verify that there are no foreign materials or objects on the subfloor and that the subfloor is clean and ready for installation.
- F. Direct Full Spread Adhering to Concrete Subfloor Multi-Poxy : moisture content less than 98% RH when tested per ASTM F2170.
- G. Follow Fieldturf USA, Inc. installation recommendations.
- H. Do not average the results of the tests. Report all field test results in writing to the General Contractor, Architect, and End User prior to installation.
- I. Verify that the concrete subfloor surface pH level is within the 7 - 11 range.
- J. Document the results confirming the slab is within manufacturer's tolerances for slab deviation.

**3.2 PREPARATION OF SURFACES**

- A. Sand the entire surface of the concrete slab.
- B. Sweep the concrete slab so as to remove all dirt and dust. If a sweeping compound is to be used it must be a sweeping compound that does not contain oil or other items that may inhibit the adhesive bond.
- C. Slab must be dust free. In the event that dust impairs adhesive bond, priming the slab prior to application of adhesive may be necessary. Follow installation guidelines.
- D. Follow OSHA guidelines.

**3.3 INSTALLATION**

- A. The installation area shall be closed to all traffic and activity for a period to be set by the indoor resilient athletic surfacing installer. The indoor resilient athletic surfacing installation shall not begin until the installer is familiar with the existing conditions.
- B. All necessary precautions should be taken to minimize noise, smell, dust, the use of hazardous materials and any other items that may inconvenience others.
- C. Install the indoor resilient athletic surfacing in strict accordance with the indoor resilient athletic surfacing manufacturer's written instructions.
- D. Install the indoor resilient athletic surfacing minimizing cross seams. Provide a seam diagram during the submittal process for approval prior to installation. Vinyl Sheet Flooring Seams: Comply with ASTM F 1516. Rout joints and heat weld to permanently and seamlessly fuse sections together.
- E. Paint game lines using approved game line paint primer and game line paint in strict accordance with the game line paint manufacturer's instructions.
- F. Install appropriate threshold plates or transition strips where necessary.

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3.5 *CLEANING*

- A. Remove all unused materials, tools, and equipment and dispose of any debris properly. Clean the indoor resilient athletic surfacing in accordance with the manufacturer's instructions.

3.6 *PROTECTION*

- A. If required, protect the indoor resilient athletic surfacing from damage using coverings approved by the manufacturer until acceptance of work by the customer or their authorized representative.

3.7 *RELATED STANDARDS AND GUIDELINES*

- A. ASTM F2170 "Standard Test Method for Determining Relative Humidity In Concrete Floor Slabs Using In-Situ Probes"
- B. ASTM F710 "Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring"
- C. ACI 302.2R-06 "Guideline for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials"
- D. ASTM F2772-11 "Standard Specification for Athletic Performance Properties of Indoor Sports Floor Systems"

**END OF SECTION**



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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

***PART 1 – GENERAL***

**1.1**     ***SECTION INCLUDES***

- A. Supply and installation of the indoor resilient multipurpose surfacing
- B. Application of the game lines
- C. References for the correct construction and preparation of concrete slabs to receive resilient flooring.

**1.2**     ***SUBMITTALS***

- A. Product Data:
  - 1. Manufacturer's promotional brochures, specifications and installation instructions
- B. Manufacturer Certifications:
  - 1. Provide certification that accurately identifies the Original Equipment Manufacturer (OEM) of flooring furnished for this project including manufacturer's name, address and factory location.
  - 2. Suppliers of private label flooring for this project must identify themselves as such and fully disclose the OEM information listed above.
  - 3. All "manufacturer" requirements in these specifications must be complied with by the OEM, including warranties, certifications, qualifications, product data, test results, environmental requirements, performance data, etc.
- C. Samples:
  - 1. Submit for selection and approval three (3) sets of the indoor resilient multipurpose surfacing, manufacturer's brochures, samples or sample boards of all of the available colors, textures and styles.
  - 2. Submit color samples of all the available game line paint colors for selection and approval.
- D. Closeout Submittals:
  - 1. Submit three (3) copies of the indoor resilient multipurpose surfacing and manufacturer's maintenance instructions.
  - 2. Submit three (3) copies of the material and installation warranties as specified.

**1.3**     ***QUALITY ASSURANCE***

- A. Qualifications:
  - 1. The indoor resilient multipurpose surfacing shall have been actively marketed for a minimum of ten (10) years.
  - 2. The indoor resilient multipurpose surfacing shall be manufactured in an ISO 9001 certified plant.
  - 3. The indoor resilient multipurpose surfacing shall be manufactured in an ISO 14001 certified plant.
  - 4. The indoor resilient multipurpose surfacing supplier shall be an established firm, experienced in the field, and competent in the techniques required by the manufacturer.
  - 5. The installer of the indoor resilient multipurpose surfacing shall have a minimum of five (5) years of experience in the field installing indoor resilient multipurpose surfacing and have worked on at least five (5) projects of similar size, type and complexity.

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- B. Certifications:
  - 1. Installer to submit the indoor resilient athletic surfacing manufacturer's or distributor's certification attesting that they are an approved installer of the indoor resilient multipurpose surfacing.
  - 2. The indoor resilient multipurpose surfacing manufacturer to submit official ISO 9001 certification for the facility in which the indoor resilient multipurpose surfacing is manufactured.
- C. Testing:

Tests shall be relative for multi-purpose use with certificates from independent testing resources to be made available upon request. Test results shall be performed according to ASTM standard testing procedures including ASTM F2772 "Standard Specification for Athletic Performance Properties of Indoor Sports Floor Systems".

1.4 *DELIVERY, STORAGE AND HANDLING*

- A. Delivery:

Material shall not be delivered until all related work is in place and finished and/or proper storage facilities and conditions can be provided and guaranteed stable according to FieldTurf USA, Inc. recommendations.
- B. Storage:
  - 1. Store the material in a secure, clean and dry location.
  - 2. Maintain temperature between 55° and 85° Fahrenheit.
  - 3. Store the indoor resilient athletic surfacing rolls in an upright position on a smooth flat surface immediately upon delivery to jobsite.
  - 4. Rolls shipped in rigid protective cardboard containers can be laid horizontally prior to unpacking and installation.

1.5 *PROJECT/SITE CONDITIONS*

- A. It is the responsibility of the general contractor/construction manager to maintain project/site conditions acceptable for the installation of the indoor resilient multipurpose flooring.
- B. The area in which the indoor resilient multipurpose surfacing will be installed shall be dry and weather tight. Permanent heat, light and ventilation shall be installed and operable.
- C. All other trades shall have completed their work prior to the installation of the resilient athletic flooring. The general contractor or construction manager shall maintain a secure and clean working environment before, during and after the installation.
- D. Maintain a stable room temperature of at least 65°F for a minimum of one (1) week prior to, during and thereafter installation.
- E. An effective low-permeance vapor barrier is placed directly beneath the concrete subfloor. For "on" or "below grade" installations, it is recommended to provide a permanent vapor barrier resistant to long term hydrostatic pressure/moisture exposure. Protrusions should be sealed to prevent moisture migration into the slab. Moisture should not be allowed to enter the slab after the completed construction.
- F. Concrete subfloor surface pH level within the 7 to 11 range dependent upon installation type.
- G. Concrete subfloor should be no greater than 1/8" within a 10 ft diameter. This tolerance can be measured in accordance with ASTM E1155. A specified (F<sub>F</sub>) of 50 and an (F<sub>L</sub>) of 30 should reach this degree of floor flatness and floor level. There is no numerical correlation between F numbers and the deviation from the straight

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edge. However, the above specified numbers should achieve a flat floor with minimal deviation in the slab. Reference ACI 117 and ACI 302.1R. The general contractor should provide a certificate of compliance with the above recommendations.

- H. Concrete subfloor must be clean and free of all foreign materials or objects including, but not limited to, curing compounds and sealers.
- I. Fill cracks, grooves, voids, depressions, and other minor imperfections. Follow the manufacturer's directions. Moveable joints must be treated utilizing specific transitioning joint devices depending upon the architect's recommendations. Follow current ASTM F710 guidelines for the preparation of concrete slabs to receive resilient flooring.
- J. Refer to ACI 302.2R "Guidelines for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials" for concrete design and construction.
- K. Concrete slab shall be fortified with continual steel reinforcement. Fiber reinforcement alone shall not be considered adequate fortification.

1.6 *WARRANTY*

- A. Special Limited Warranty:
  - 1. Manufacturer's standard form in which manufacturer agrees to repair or replace sports flooring including labor that fails within specified warranty period.
- B. Material warranty must be direct from the product manufacturer.
  - 1. Material warranties must come from original manufacturer or division thereof. Private label warranties from distributors or brokers are not valid. Supply original point of manufacturing upon request.
- C. Failures include, but are not limited to, the following:
  - 1. Material manufacturing defects.
  - 2. Surface wear and deterioration to the point of wear-through of wear layer per ASTM F410/ASTM F1303.
  - 3. Failure due to substrate moisture exposure exceeding 98 percent relative humidity when tested according to ASTM F2170.
- D. Warranty Period:
  - 1. For material defects and surface wear-through: 25 years from date of substantial completion.
  - 2. For moisture vapor tolerance: 25 years from date of substantial completion.
- E. Installer's Limited Warranty:
  - 1. Installer's standard form in which installer agrees to repair or replace sports flooring that fails due to poor workmanship or faulty installation within the specified warranty period.
  - 2. Warranty Period: 2 years from date of substantial completion.

1.7 *ADDITIONAL MATERIALS*

- A. Furnish to the owner additional materials containing a total of at least 1% of each different color or design of the indoor resilient athletic surfacing used on the project.

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1.8 *LEED™ CERTIFICATION*

- A. The indoor resilient athletic surfacing should be able to help this facility to achieve points towards *LEED™ certification*. Flooring system must be certified by FloorScore.
- B. LEED categories positively affected by the indoor resilient athletic surfacing:

<b>LEED™ V4 Credit</b>		Contribution
Materials & Resources: Building Product Disclosure & Optimization (BPDO)		
MRC3: Sourcing of Raw Materials	Options 1 & 2	2 Points
MRC4: Material Ingredients	Option 1	1 Point
MRC5: Construction and Demolition Management	Reclamation and Recycling	ReStart® Program
Indoor Environmental Quality		
EQc2: Low-Emitting Materials	TVOC: 0.5 mg/m <sup>3</sup> or less	FloorScore®

***PART 2 - PRODUCTS***

2.1 *MANUFACTURERS*

- A. The basis of the design for the indoor resilient multipurpose surfacing is Omnisports Speed as manufactured by Tarkett.
- B. All other installation accessories and related components must be either made or approved by the indoor resilient athletic surfacing manufacturer.
- C. Other products may be approved as equal if deemed qualified and submitted in accordance with the General Conditions.
- D. Test reports confirming compliance from an independent sports laboratory must be provided along with samples, technical data, installation, maintenance, and warranty prior to acceptance as an alternative product.

2.2 *MATERIALS*

- A. Omnisports Speed - Prefabricated sport surface (0.14") with wood flooring design, single surface embossing and Extreme Three (3) Layers technology (X3LT) as supplied by Tarkett.
  - 1. Embossing of wood design and solid colors must be the same; varying embossing or surface textures will not be allowed.
  - 2. Printing of wood design shall closely resemble standard wood strip flooring in size, color, board length, and grain appearance.
  - 3. Surface embossing combined with TopClean XP must offer proper balance of surface friction per the ASTM F2772.
  - 4. Surface embossing combined with TopClean XP must provide resistance to stains and scratches. Surface profile must not incorporate linear embossing.
  - 5. The wood design shall be protected by a clear layer of pure PVC (Polyvinyl Chloride) and TopClean XP, a factory-applied UV cured urethane treatment.
  - 6. Extreme Three (3) Layers technology (X3LT) includes Omnisports XCS cushion, glass veil and calendared sheet must offer improved shock absorbing comfort while providing better indentation recovery

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7. The XCS cushion force reduction layer shall be high-density closed cell PVC foam with honeycomb embossing, and is applied in one continuous manufacturing process.
8. Laminated or adhered foam layers will not be allowed.
9. Field constructed products will not be accepted.

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- A. Physical properties of the indoor resilient athletic surfacing shall conform to the following minimums:

Width	—	6' 6" (2 m)
Length	—	75.5' (23m) approx.
Wear Layer	—	2 mm
Total Thickness	—	3.5 mm
Wear Layer	Type 1– Grade 1	ASTM F1303/F410
Vertical Deformation	PASSED	ASTM F2772
Rolling Load	PASSED	0.30 (EN 1569 {11/1999})
Surface Finish Effect	PASSED	ASTM F2772 (80 – 110)
Chemical Resistance	Excellent	ASTM F925
Impact Resistance	PASSED	EN 1517
Abrasion Resistance	PASSED	0.10 (EN ISO 5470-1 {06/1999})
Static Load Limit	PASSED	ASTM F970- Load 175 Lbs
Sound Insulation	Excellent	+/- 19 dB (ISO 717/2)
In-Room Sound Insulation	Excellent	62dB (NF S31-074)
Ball Rebound	PASSED	ASTM F2772 > 90%
Force Reduction	PASSED	ASTM F2772 Class 1
Fire Rating	PASSED	ASTM E648 Class 1
Microbial Assays Test	No Growth	G21 ASTM - Backing
Phthalate-free technology	—	YES
REACH Compliant	—	YES
Heavy Metals	—	NO
ISO 9001	—	YES
ISO 14001	—	YES

1. Color: As available from the indoor resilient athletic surfacing manufacturer's standard range.
  2. Hardwood Design Series: High definition printing for a realistic wood surface appearance as available from the indoor resilient athletic surfacing manufacturer's standard range.
  3. Texture: Texture to remain consistent between solid colors and wood design when blending colors.
- C. Welding Rod: As supplied by the indoor resilient athletic surfacing manufacturer or supplier.
1. Color to blend with the indoor resilient athletic surfacing color or design.
  2. All seams shall be welded to create a monolithic and impermeable surface.
- D. Adhesive: As approved by the indoor resilient athletic surfacing manufacturer.
- E. Game Line Paint and Primer: As approved by the indoor resilient athletic surfacing manufacturer.

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***PART 3 - EXECUTION***

**3.1 EXAMINATION**

- A. It is the responsibility of the general contractor/construction manager to ensure that project/site conditions are acceptable for the installation of the indoor resilient athletic flooring.
- B. Verify that the area in which the indoor resilient athletic surfacing will be installed is dry and weather tight. Verify that permanent heat, light and ventilation are installed and operable.
- C. Verify that all other work that could cause damage, dirt and dust or interrupt the normal pace of the indoor resilient athletic flooring installation is completed or suspended.
- D. Verify that there is a stable room temperature of at least 65°F.
- E. Verify that there are no foreign materials or objects on the subfloor and that the subfloor is clean and ready for installation.
- F. Direct Full Spread Adhering to Concrete Subfloor Multi-Set : moisture content less than 83% RH when tested per ASTM F2170.
- G. Follow Fieldturf USA, Inc. installation recommendations.
- H. Do not average the results of the tests. Report all field test results in writing to the General Contractor, Architect, and End User prior to installation.
- I. Verify that the concrete subfloor surface pH level is within the 7 - 11 range.
- J. Document the results confirming the slab is within manufacturer's tolerances for slab deviation.

**3.2 PREPARATION OF SURFACES**

- A. Sand the entire surface of the concrete slab.
- B. Sweep the concrete slab so as to remove all dirt and dust. If a sweeping compound is to be used it must be a sweeping compound that does not contain oil or other items that may inhibit the adhesive bond.
- C. Slab must be dust free. In the event that dust impairs adhesive bond, priming the slab prior to application of adhesive may be necessary. Follow installation guidelines.
- D. Follow OSHA guidelines.

**3.3 INSTALLATION**

- A. The installation area shall be closed to all traffic and activity for a period to be set by the indoor resilient athletic surfacing installer. The indoor resilient athletic surfacing installation shall not begin until the installer is familiar with the existing conditions.
- B. All necessary precautions should be taken to minimize noise, smell, dust, the use of hazardous materials and any other items that may inconvenience others.
- C. Install the indoor resilient athletic surfacing in strict accordance with the indoor resilient athletic surfacing manufacturer's written instructions.
- D. Install the indoor resilient athletic surfacing minimizing cross seams. Provide a seam diagram during the submittal process for approval prior to installation. Vinyl Sheet Flooring Seams: Comply with ASTM F 1516. Rout joints and heat weld to permanently and seamlessly fuse sections together.
- E. Paint game lines using approved game line paint primer and game line paint in strict accordance with the game line paint manufacturer's instructions.
- F. Install appropriate threshold plates or transition strips where necessary.

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3.5 *CLEANING*

- A. Remove all unused materials, tools, and equipment and dispose of any debris properly. Clean the indoor resilient athletic surfacing in accordance with the manufacturer's instructions.

3.6 *PROTECTION*

- A. If required, protect the indoor resilient athletic surfacing from damage using coverings approved by the manufacturer until acceptance of work by the customer or their authorized representative.

3.7 *RELATED STANDARDS AND GUIDELINES*

- A. ASTM F2170 "Standard Test Method for Determining Relative Humidity In Concrete Floor Slabs Using In-Situ Probes"
- B. ASTM F710 "Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring"
- C. ACI 302.2R-06 "Guideline for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials"
- D. ASTM F2772-11 "Standard Specification for Athletic Performance Properties of Indoor Sports Floor Systems"

**END OF SECTION**



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***PART 1 – GENERAL***

**1.1**     *SECTION INCLUDES*

- A. Supply and installation of the indoor resilient multipurpose surfacing
- B. Application of the game lines
- C. References for the correct construction and preparation of concrete slabs to receive resilient flooring.

**1.2**     *SUBMITTALS*

- A. Product Data:
  - 1. Manufacturer’s promotional brochures, specifications and installation instructions
- B. Manufacturer Certifications:
  - 1. Provide certification that accurately identifies the Original Equipment Manufacturer (OEM) of flooring furnished for this project including manufacturer’s name, address and factory location.
  - 2. Suppliers of private label flooring for this project must identify themselves as such and fully disclose the OEM information listed above.
  - 3. All “manufacturer” requirements in these specifications must be complied with by the OEM, including warranties, certifications, qualifications, product data, test results, environmental requirements, performance data, etc.
- C. Samples:
  - 1. Submit for selection and approval three (3) sets of the indoor resilient multipurpose surfacing, manufacturer’s brochures, samples or sample boards of all of the available colors, textures and styles.
  - 2. Submit color samples of all the available game line paint colors for selection and approval.
- D. Closeout Submittals:
  - 1. Submit three (3) copies of the indoor resilient multipurpose surfacing and manufacturer’s maintenance instructions.
  - 2. Submit three (3) copies of the material and installation warranties as specified.

**1.3**     *QUALITY ASSURANCE*

- A. Qualifications:
  - 1. The indoor resilient multipurpose surfacing shall have been actively marketed for a minimum of ten (10) years.
  - 2. The indoor resilient multipurpose surfacing shall be manufactured in an ISO 9001 certified plant.
  - 3. The indoor resilient multipurpose surfacing shall be manufactured in an ISO 14001 certified plant.
  - 4. The indoor resilient multipurpose surfacing supplier shall be an established firm, experienced in the field, and competent in the techniques required by the manufacturer.
  - 5. The installer of the indoor resilient multipurpose surfacing shall have a minimum of five (5) years of experience in the field installing indoor resilient multipurpose surfacing and have worked on at least five (5) projects of similar size, type and complexity.

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- B. Certifications:
  - 1. Installer to submit the indoor resilient athletic surfacing manufacturer's or distributor's certification attesting that they are an approved installer of the indoor resilient multipurpose surfacing.
  - 2. The indoor resilient multipurpose surfacing manufacturer to submit official ISO 9001 certification for the facility in which the indoor resilient multipurpose surfacing is manufactured.
- C. Testing:

Tests shall be relative for multi-purpose use with certificates from independent testing resources to be made available upon request. Test results shall be performed according to ASTM standard testing procedures including ASTM F2772 "Standard Specification for Athletic Performance Properties of Indoor Sports Floor Systems".

1.4 *DELIVERY, STORAGE AND HANDLING*

- A. Delivery:

Material shall not be delivered until all related work is in place and finished and/or proper storage facilities and conditions can be provided and guaranteed stable according to FieldTurf USA, Inc. recommendations.
- B. Storage:
  - 1. Store the material in a secure, clean and dry location.
  - 2. Maintain temperature between 55° and 85° Fahrenheit.
  - 3. Store the indoor resilient athletic surfacing rolls in an upright position on a smooth flat surface immediately upon delivery to jobsite.
  - 4. Rolls shipped in rigid protective cardboard containers can be laid horizontally prior to unpacking and installation.

1.5 *PROJECT/SITE CONDITIONS*

- A. It is the responsibility of the general contractor/construction manager to maintain project/site conditions acceptable for the installation of the indoor resilient multipurpose flooring.
- B. The area in which the indoor resilient multipurpose surfacing will be installed shall be dry and weather tight. Permanent heat, light and ventilation shall be installed and operable.
- C. All other trades shall have completed their work prior to the installation of the resilient athletic flooring. The general contractor or construction manager shall maintain a secure and clean working environment before, during and after the installation.
- D. Maintain a stable room temperature of at least 65°F for a minimum of one (1) week prior to, during and thereafter installation.
- E. An effective low-permeance vapor barrier is placed directly beneath the concrete subfloor. For "on" or "below grade" installations, it is recommended to provide a permanent vapor barrier resistant to long term hydrostatic pressure/moisture exposure. Protrusions should be sealed to prevent moisture migration into the slab. Moisture should not be allowed to enter the slab after the completed construction.
- F. Concrete subfloor surface pH level within the 7 to 11 range dependent upon installation type.
- G. Concrete subfloor should be no greater than 1/8" within a 10 ft diameter. This tolerance can be measured in accordance with ASTM E1155. A specified (F<sub>F</sub>) of 50 and an (F<sub>L</sub>) of 30 should reach this degree of floor flatness and floor level. There is no numerical correlation between F numbers and the deviation from the straight

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edge. However, the above specified numbers should achieve a flat floor with minimal deviation in the slab. Reference ACI 117 and ACI 302.1R. The general contractor should provide a certificate of compliance with the above recommendations.

- H. Concrete subfloor must be clean and free of all foreign materials or objects including, but not limited to, curing compounds and sealers.
- I. Fill cracks, grooves, voids, depressions, and other minor imperfections. Follow the manufacturer's directions. Moveable joints must be treated utilizing specific transitioning joint devices depending upon the architect's recommendations. Follow current ASTM F710 guidelines for the preparation of concrete slabs to receive resilient flooring.
- J. Refer to ACI 302.2R "Guidelines for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials" for concrete design and construction.
- K. Concrete slab shall be fortified with continual steel reinforcement. Fiber reinforcement alone shall not be considered adequate fortification.

1.6 *WARRANTY*

- A. Special Limited Warranty:
  - 1. Manufacturer's standard form in which manufacturer agrees to repair or replace sports flooring including labor that fails within specified warranty period.
- B. Material warranty must be direct from the product manufacturer.
  - 1. Material warranties must come from original manufacturer or division thereof. Private label warranties from distributors or brokers are not valid. Supply original point of manufacturing upon request.
- C. Failures include, but are not limited to, the following:
  - 1. Material manufacturing defects.
  - 2. Surface wear and deterioration to the point of wear-through of wear layer per ASTM F410/ASTM F1303.
  - 3. Failure due to substrate moisture exposure exceeding 98 percent relative humidity when tested according to ASTM F2170.
- D. Warranty Period:
  - 1. For material defects and surface wear-through: **25** years from date of substantial completion.
  - 2. For moisture vapor tolerance: **25** years from date of substantial completion.
- E. Installer's Limited Warranty:
  - 1. Installer's standard form in which installer agrees to repair or replace sports flooring that fails due to poor workmanship or faulty installation within the specified warranty period.
  - 2. Warranty Period: 2 years from date of substantial completion.

1.7 *ADDITIONAL MATERIALS*

- A. Furnish to the owner additional materials containing a total of at least 1% of each different color or design of the indoor resilient athletic surfacing used on the project.

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

1.8 *LEED™ CERTIFICATION*

- A. The indoor resilient athletic surfacing should be able to help this facility to achieve points towards *LEED™ certification*. Flooring system must be certified by FloorScore.
- B. LEED categories positively affected by the indoor resilient athletic surfacing:

<b>LEED™ V4 Credit</b>		Contribution
Materials & Resources: Building Product Disclosure & Optimization (BPDO)		
MRC3: Sourcing of Raw Materials	Options 1 & 2	2 Points
MRC4: Material Ingredients	Option 1	1 Point
MRC5: Construction and Demolition Management	Reclamation and Recycling	ReStart® Program
Indoor Environmental Quality		
EQc2: Low-Emitting Materials	TVOC: 0.5 mg/m <sup>3</sup> or less	FloorScore®

***PART 2 - PRODUCTS***

2.1 *MANUFACTURERS*

- A. The basis of the design for the indoor resilient multipurpose surfacing is Omnisports Speed as manufactured by Tarkett.
- B. All other installation accessories and related components must be either made or approved by the indoor resilient athletic surfacing manufacturer.
- C. Other products may be approved as equal if deemed qualified and submitted in accordance with the General Conditions.
- D. Test reports confirming compliance from an independent sports laboratory must be provided along with samples, technical data, installation, maintenance, and warranty prior to acceptance as an alternative product.

2.2 *MATERIALS*

- A. Omnisports Speed - Prefabricated sport surface (0.14") with wood flooring design, single surface embossing and Extreme Three (3) Layers technology (X3LT) as supplied by Tarkett.
  - 1. Embossing of wood design and solid colors must be the same; varying embossing or surface textures will not be allowed.
  - 2. Printing of wood design shall closely resemble standard wood strip flooring in size, color, board length, and grain appearance.
  - 3. Surface embossing combined with TopClean XP must offer proper balance of surface friction per the ASTM F2772.
  - 4. Surface embossing combined with TopClean XP must provide resistance to stains and scratches. Surface profile must not incorporate linear embossing.
  - 5. The wood design shall be protected by a clear layer of pure PVC (Polyvinyl Chloride) and TopClean XP, a factory-applied UV cured urethane treatment.
  - 6. Extreme Three (3) Layers technology (X3LT) includes Omnisports XCS cushion, glass veil and calendared sheet must offer improved shock absorbing comfort while providing better indentation recovery

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7. The XCS cushion force reduction layer shall be high-density closed cell PVC foam with honeycomb embossing, and is applied in one continuous manufacturing process.
8. Laminated or adhered foam layers will not be allowed.
9. Field constructed products will not be accepted.

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

- A. Physical properties of the indoor resilient athletic surfacing shall conform to the following minimums:

Width	—	6' 6" (2 m)
Length	—	75.5' (23m) approx.
Wear Layer	—	2 mm
Total Thickness	—	3.5 mm
Wear Layer	Type 1– Grade 1	ASTM F1303/F410
Vertical Deformation	PASSED	ASTM F2772
Rolling Load	PASSED	0.30 (EN 1569 {11/1999})
Surface Finish Effect	PASSED	ASTM F2772 (80 – 110)
Chemical Resistance	Excellent	ASTM F925
Impact Resistance	PASSED	EN 1517
Abrasion Resistance	PASSED	0.10 (EN ISO 5470-1 {06/1999})
Static Load Limit	PASSED	ASTM F970- Load 175 Lbs
Sound Insulation	Excellent	+/- 19 dB (ISO 717/2)
In-Room Sound Insulation	Excellent	61dB (NF S31-074)
Ball Rebound	PASSED	ASTM F2772 > 90%
Force Reduction	PASSED	ASTM F2772 Class 1
Fire Rating	PASSED	ASTM E648 Class 1
Microbial Assays Test	No Growth	G21 ASTM - Backing
Phthalate-free technology	—	YES
REACH Compliant	—	YES
Heavy Metals	—	NO
ISO 9001	—	YES
ISO 14001	—	YES

1. Color: As available from the indoor resilient athletic surfacing manufacturer's standard range.
  2. Hardwood Design Series: High definition printing for a realistic wood surface appearance as available from the indoor resilient athletic surfacing manufacturer's standard range.
  3. Texture: Texture to remain consistent between solid colors and wood design when blending colors.
- C. Tarkolay – A high quality low permeance slip sheet vapor retarder designed to separate the installed system from the substrate below.
1. Tarkolay as manufactured by Tarkett can be used below, on, or above grade substrates that experience elevated moisture conditions.
  2. Moisture tolerances shall have no limitation per ASTM F2170. Physical properties of the indoor resilient athletic surfacing shall conform to the following minimums:

Width	—	6' 6" (2 m)
Length	—	147'7" (45 m) approx.
Total Thickness	—	1.3 mm
Dimensional Stability	PASSED	.01% (EN 1434)
Permeance	Excellent	<0.20 (ASTM E96)

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

- D. Welding Rod: As supplied by the indoor resilient athletic surfacing manufacturer or supplier.
  - 1. Color to blend with the indoor resilient athletic surfacing color or design.
  - 2. All seams shall be welded to create a monolithic and impermeable surface.
- E. Adhesive: As approved by the indoor resilient athletic surfacing manufacturer.
- F. Game Line Paint and Primer: As approved by the indoor resilient athletic surfacing manufacturer.

***PART 3 - EXECUTION***

**3.1 EXAMINATION**

- A. It is the responsibility of the general contractor/construction manager to ensure that project/site conditions are acceptable for the installation of the indoor resilient athletic flooring.
- B. Verify that the area in which the indoor resilient athletic surfacing will be installed is dry and weather tight. Verify that permanent heat, light and ventilation are installed and operable.
- C. Verify that all other work that could cause damage, dirt and dust or interrupt the normal pace of the indoor resilient athletic flooring installation is completed or suspended.
- D. Verify that there is a stable room temperature of at least 65°F.
- E. Verify that there are no foreign materials or objects on the subfloor and that the subfloor is clean and ready for installation.
- F. Installation with Tarkolay to Concrete Subfloor : moisture content no limitation when tested per ASTM F2170.
- G. Follow Fieldturf USA, Inc. installation recommendations.
- H. Do not average the results of the tests. Report all field test results in writing to the General Contractor, Architect, and End User prior to installation.
- I. Verify that the concrete subfloor surface pH level is within the 7 - 11 range.
- J. Document the results confirming the slab is within manufacturer's tolerances for slab deviation.

**3.2 PREPARATION OF SURFACES**

- A. Sand the entire surface of the concrete slab.
- B. Sweep the concrete slab so as to remove all dirt and dust. If a sweeping compound is to be used it must be a sweeping compound that does not contain oil or other items that may inhibit the adhesive bond.
- C. Slab must be dust free. In the event that dust impairs adhesive bond, priming the slab prior to application of adhesive may be necessary. Follow installation guidelines.
- D. Follow OSHA guidelines.

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

3.3 *INSTALLATION*

- A. The installation area shall be closed to all traffic and activity for a period to be set by the indoor resilient athletic surfacing installer. The indoor resilient athletic surfacing installation shall not begin until the installer is familiar with the existing conditions.
- B. All necessary precautions should be taken to minimize noise, smell, dust, the use of hazardous materials and any other items that may inconvenience others.
- C. Install the indoor resilient athletic surfacing in strict accordance with the indoor resilient athletic surfacing manufacturer's written instructions.
- D. Install the indoor resilient athletic surfacing minimizing cross seams. Provide a seam diagram during the submittal process for approval prior to installation. Vinyl Sheet Flooring Seams: Comply with ASTM F 1516. Rout joints and heat weld to permanently and seamlessly fuse sections together.
- E. Paint game lines using approved game line paint primer and game line paint in strict accordance with the game line paint manufacturer's instructions.
- F. Install appropriate threshold plates or transition strips where necessary.

3.5 *CLEANING*

- A. Remove all unused materials, tools, and equipment and dispose of any debris properly. Clean the indoor resilient athletic surfacing in accordance with the manufacturer's instructions.

3.6 *PROTECTION*

- A. If required, protect the indoor resilient athletic surfacing from damage using coverings approved by the manufacturer until acceptance of work by the customer or their authorized representative.

3.7 *RELATED STANDARDS AND GUIDELINES*

- A. ASTM F2170 "Standard Test Method for Determining Relative Humidity In Concrete Floor Slabs Using In-Situ Probes"
- B. ASTM F710 "Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring"
- C. ACI 302.2R-06 "Guideline for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials"
- D. ASTM F2772-11 "Standard Specification for Athletic Performance Properties of Indoor Sports Floor Systems"

**END OF SECTION**



**SECTION 09 65 66**  
**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

***PART 1 – GENERAL***

1.1 *SECTION INCLUDES*

- A. Supply and installation of the indoor resilient multipurpose surfacing
- B. Application of the game lines
- C. References for the correct construction and preparation of concrete slabs to receive resilient flooring.

1.2 *SUBMITTALS*

- A. Product Data:
  - 1. Manufacturer's promotional brochures, specifications and installation instructions
- B. Manufacturer Certifications:
  - 1. Provide certification that accurately identifies the Original Equipment Manufacturer (OEM) of flooring furnished for this project including manufacturer's name, address and factory location.
  - 2. Suppliers of private label flooring for this project must identify themselves as such and fully disclose the OEM information listed above.
  - 3. All "manufacturer" requirements in these specifications must be complied with by the OEM, including warranties, certifications, qualifications, product data, test results, environmental requirements, performance data, etc.
- C. Samples:
  - 1. Submit for selection and approval three (3) sets of the indoor resilient multipurpose surfacing, manufacturer's brochures, samples or sample boards of all of the available colors, textures and styles.
  - 2. Submit color samples of all the available game line paint colors for selection and approval.
- D. Closeout Submittals:
  - 1. Submit three (3) copies of the indoor resilient multipurpose surfacing and manufacturer's maintenance instructions.
  - 2. Submit three (3) copies of the material and installation warranties as specified.

1.3 *QUALITY ASSURANCE*

- A. Qualifications:
  - 1. The indoor resilient multipurpose surfacing shall have been actively marketed for a minimum of ten (10) years.
  - 2. The indoor resilient multipurpose surfacing shall be manufactured in an ISO 9001 certified plant.
  - 3. The indoor resilient multipurpose surfacing shall be manufactured in an ISO 14001 certified plant.
  - 4. The indoor resilient multipurpose surfacing supplier shall be an established firm, experienced in the field, and competent in the techniques required by the manufacturer.
  - 5. The installer of the indoor resilient multipurpose surfacing shall have a minimum of five (5) years of experience in the field installing indoor resilient multipurpose surfacing and have worked on at least five (5) projects of similar size, type and complexity.

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

- B. Certifications:
  - 1. Installer to submit the indoor resilient athletic surfacing manufacturer's certification attesting that they are a trained installer of the indoor resilient multipurpose surfacing.
  - 2. The indoor resilient multipurpose surfacing manufacturer to submit official ISO 9001 certification for the facility in which the indoor resilient multipurpose surfacing is manufactured.
- C. Testing:
  - 1. Tests shall be relative for multi-purpose use with certificates from independent testing resources to be made available upon request.
  - 2. Test results shall be no more than 5 years old and performed according to ASTM standard testing procedures.

1.4 *DELIVERY, STORAGE AND HANDLING*

- A. Delivery:

Material shall not be delivered until all related work is in place and finished and/or proper storage facilities and conditions can be provided and guaranteed stable according to FieldTurf USA, Inc. recommendations.
- B. Storage:
  - 1. Store the material in a secure, clean and dry location.
  - 2. Maintain temperature between 55° and 85° Fahrenheit.
  - 3. Store the indoor resilient athletic surfacing rolls in an upright position on a smooth flat surface immediately upon delivery to jobsite.
  - 4. Rolls shipped in rigid protective cardboard containers can be laid horizontally prior to unpacking and installation.

1.5 *PROJECT/SITE CONDITIONS*

- A. It is the responsibility of the general contractor/construction manager to maintain project/site conditions acceptable for the installation of the indoor resilient multipurpose flooring.
- B. The area in which the indoor resilient multipurpose surfacing will be installed shall be dry and weather tight. Permanent heat, light and ventilation shall be installed and operable.
- C. All other trades shall have completed their work prior to the installation of the resilient athletic flooring. The general contractor or construction manager shall maintain a secure and clean working environment before, during and after the installation.
- D. Maintain a stable room temperature of at least 65°F for a minimum of one (1) week prior to, during and thereafter installation.
- E. An effective low-permeance vapor barrier is placed directly beneath the concrete subfloor. For "on" or "below grade" installations, it is recommended to provide a permanent vapor barrier resistant to long term hydrostatic pressure/moisture exposure. Protrusions should be sealed to prevent moisture migration into the slab. Moisture should not be allowed to enter the slab after the completed construction.
- F. Concrete subfloor surface pH level within the 7 to 11 range dependent upon installation type.
- G. Concrete subfloor should be no greater than 1/8" within a 10 ft diameter. This tolerance can be measured in accordance with ASTM E1155. A specified ( $F_F$ ) of 50 and an ( $F_L$ ) of 30 should reach this degree of floor flatness and floor level. There is no numerical correlation between F numbers and the deviation from the straight

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edge. However, the above specified numbers should achieve a flat floor with minimal deviation in the slab. Reference ACI 117 and ACI 302.1R. The general contractor should provide a certificate of compliance with the above recommendations.

- H. Concrete subfloor must be clean and free of all foreign materials or objects including, but not limited to, curing compounds and sealers.
- I. Fill cracks, grooves, voids, depressions, and other minor imperfections. Follow the manufacturer's directions. Moveable joints must be treated utilizing specific transitioning joint devices depending upon the architect's recommendations. Follow current ASTM F710 guidelines for the preparation of concrete slabs to receive resilient flooring.
- J. Refer to ACI 302.2R "Guidelines for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials" for concrete design and construction.
- K. Concrete slab shall be fortified with continual steel reinforcement. Fiber reinforcement alone shall not be considered adequate fortification.

**1.6 WARRANTY**

- A. Materials:  
The indoor resilient athletic surfacing shall be covered by the manufacturer against surfacing product defects for 30 years. The manufacturer of the indoor resilient multipurpose surfacing must provide this warranty upon request.
- B. Installation:  
The installation of the indoor resilient multipurpose surfacing shall be covered against poor workmanship and faulty installation by a two (2) year written, limited warranty provided by the contractor performing/overseeing the installation.

**1.7 ADDITIONAL MATERIALS**

- A. Furnish to the owner additional materials containing a total of at least 1% of each different color or design of the indoor resilient athletic surfacing used on the project.

**1.8 LEED™ CERTIFICATION**

- A. The indoor resilient athletic surfacing should be able to help this facility to achieve points towards *LEED™ certification*. Flooring system must be certified by FloorScore.
- B. LEED categories positively affected by the indoor resilient athletic surfacing:

Product Type			PU with Recycled Base Layer
<b>Building Reuse Maintain Interior Nonstructural Elements</b>	<b>MR 1.2</b>	Renovation	1
<b>Construction Waste Management</b>	<b>MR 2</b>	Renovation	2
<b>Recycled Content</b>	<b>MR 4</b>	New/Renovation	2
	<b>20% - 2 points</b>		
<b>Regional Materials</b>	<b>MR 5</b>	New/Renovation	2
	<b>20% - 2 points</b>		
<b>Materials and Resources Rapidly Renewable Materials</b>	<b>MR 6</b>	New/Renovation	1
<b>Indoor Environmental Air Quality Low VOC Adhesives/Sealants</b>	<b>IEQ 4.1</b>	New/Renovation	1
<b>Low-emitting Materials Paints and Coatings</b>	<b>IEQ 4.2</b>	New/Renovation	1

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

***PART 2 - PRODUCTS***

2.1 *MANUFACTURERS*

- A. The basis of the design for the indoor resilient multipurpose surfacing is Polyturf Plus Elite Pad and Pour 4+ 2 and Lumaflex system as manufactured by Tarkett.
- B. All other installation accessories and related components must be either made or approved by the indoor resilient athletic surfacing manufacturer.
- C. Other products may be approved as equal if deemed qualified and submitted in accordance with the General Conditions.
- D. Test reports confirming compliance from an independent sports laboratory must be provided along with samples, technical data, installation, maintenance, and warranty prior to acceptance as an alternative product.

2.2 *MATERIALS*

Flooring System:

Polyturf Plus Elite 4+2 (6mm total thickness) consists of a recycled resilient sheet force reduction layer integrated with seamless, liquid applied, and self-leveling 2 mm polyurethane topcoat.

A durable protective color coat shall be applied to a thickness of approximately 7 mils. The finished product shall be a seamless surface heterogeneous resilient multipurpose synthetic flooring system. System shall comply with the following criteria. Colors to be selected from manufacturer's standard range.

The Lumaflex System shall incorporate Lumaflex double tongue and grooved multi-ply engineered panels, force reduction cushion, and appropriate vapor retarder.

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

- A. Physical properties of the indoor resilient athletic surfacing shall conform to the following minimums:

Properties	Standards	PolyTurf Plus Pad & Pour		
		Base Mat + Wear Coat +Top Coat		
<b>Base Mat Properties</b>				
<b>Width</b>		59"		
<b>Length</b>		82 lin. ft		
<b>Weight</b>		1.2 lb/sq ft		
<b>Density</b>	ASTM D297	.67 min (g/cm <sup>3</sup> )		
<b>Tensile Strength</b>	ASTM D412	88 psi (Die Cast C)		
<b>Elongation</b>	ASTM D412	48.5% (Die Cast C)		
<b>Compression</b>	ASTM F36	@50 psi 87%	@100 psi 91%	@200 psi 91%
<b>Tear Strength</b>	ASTM D624	30 PPI Die C		
<b>Flexibility</b>	ASTM F147	0-1		
<b>Compression Set B</b>	ASTM D395	37% (25% deflection 158°F/22hrs)		
<b>Compression Set B</b>	ASTM D395	26% (50% deflection 158°F/22hrs)		
<b>2mm Wear Coat Properties</b>				
<b>Shore Hardness</b>	Shore A	80		
<b>Tensile Strength</b>	ASTM D412	1600psi		
<b>Elongation</b>	ASTM D412	150%		
<b>Tear Strength</b>	ASTM D624	122PLI		
<b>Misc Technical</b>				
<b>Environmental Certification</b>	GreenGuard	GreenGuard Plus Certified		
<b>Sports Characteristics</b>				
<b>Overall Thickness</b>		37 mm		
<b>Shock Absorption</b>	ASTM F2772	Class 5		
<b>Ball Bounce</b>	ASTM F2772	>90%		
<b>Vertical Deformation</b>	ASTM F2772	Passed		
<b>Surface Finish Effect</b>	ASTM F2772	Passed		

- B. Adhesive: As approved by the indoor resilient athletic surfacing manufacturer.  
 C. Game Line Paint and Primer: As approved by the indoor resilient athletic surfacing manufacturer.  
 D. Colors selected from standard color range.

**PART 3 - EXECUTION**

3.1 EXAMINATION

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- A. It is the responsibility of the general contractor/construction manager to ensure that project/site conditions are acceptable for the installation of the indoor resilient athletic flooring.
- B. Verify that the area in which the indoor resilient athletic surfacing will be installed is dry and weather tight. Verify that permanent heat, light and ventilation are installed and operable.
- C. Verify that all other work that could cause damage, dirt and dust or interrupt the normal pace of the indoor resilient athletic flooring installation is completed or suspended.
- D. Verify that there is a stable room temperature of at least 65°F.
- E. Verify that there are no foreign materials or objects on the subfloor and that the subfloor is clean and ready for installation.
- F. Concrete Subfloor: moisture content less than 85% RH when tested per ASTM F2170.
- G. Follow Fieldturf USA, Inc. installation recommendations.
- H. Do not average the results of the tests. Report all field test results in writing to the General Contractor, Architect, and End User prior to installation.
- I. Verify that the concrete subfloor surface pH level is within the 7 - 11 range.
- J. Document the results confirming the slab is within manufacturer's tolerances for slab deviation.

3.2 *PREPARATION OF SURFACES*

- A. Sand the entire surface of the concrete slab.
- B. Sweep the concrete slab so as to remove all dirt and dust. If a sweeping compound is to be used it must be a sweeping compound that does not contain oil or other items that may inhibit the adhesive bond.
- C. Slab must be dust free. In the event that dust impairs adhesive bond, priming the slab prior to application of adhesive may be necessary. Follow installation guidelines.
- D. Follow OSHA guidelines.

3.3 *INSTALLATION*

- A. The installation area shall be closed to all traffic and activity for a period to be set by the indoor resilient athletic surfacing installer. The indoor resilient athletic surfacing installation shall not begin until the installer is familiar with the existing conditions.
- B. All necessary precautions should be taken to minimize noise, smell, dust, the use of hazardous materials and any other items that may inconvenience others.
- C. Install the indoor resilient athletic surfacing in strict accordance with the indoor resilient athletic surfacing manufacturer's written instructions.
- D. Paint game lines using approved game line paint primer and game line paint in strict accordance with the game line paint manufacturer's instructions.
- E. Install appropriate threshold plates or transition strips where necessary.

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

2.0 *CLEANING*

- A. Remove all unused materials, tools, and equipment and dispose of any debris properly. Clean the indoor resilient athletic surfacing in accordance with the manufacturer's instructions.

3.6 *PROTECTION*

- A. If required, protect the indoor resilient athletic surfacing from damage using coverings approved by the manufacturer until acceptance of work by the customer or their authorized representative.

3.7 *RELATED STANDARDS AND GUIDELINES*

- A. ASTM F2170 "Standard Test Method for Determining Relative Humidity In Concrete Floor Slabs Using In-Situ Probes"
- B. ASTM F710 "Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring"
- C. ACI 302.2R-06 "Guideline for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials"
- D. ASTM F2772-11 "Standard Specification for Athletic Performance Properties of Indoor Sports Floor Systems"

**END OF SECTION**

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

***PART 1 – GENERAL***

1.1 *SECTION INCLUDES*

- A. Supply and installation of the indoor resilient multipurpose surfacing
- B. Application of the game lines
- C. References for the correct construction and preparation of concrete slabs to receive resilient flooring.

1.2 *SUBMITTALS*

- A. Product Data:
  - 1. Manufacturer's promotional brochures, specifications and installation instructions
- B. Manufacturer Certifications:
  - 1. Provide certification that accurately identifies the Original Equipment Manufacturer (OEM) of flooring furnished for this project including manufacturer's name, address and factory location.
  - 2. Suppliers of private label flooring for this project must identify themselves as such and fully disclose the OEM information listed above.
  - 3. All "manufacturer" requirements in these specifications must be complied with by the OEM, including warranties, certifications, qualifications, product data, test results, environmental requirements, performance data, etc.
- C. Samples:
  - 1. Submit for selection and approval three (3) sets of the indoor resilient multipurpose surfacing, manufacturer's brochures, samples or sample boards of all of the available colors, textures and styles.
  - 2. Submit color samples of all the available game line paint colors for selection and approval.
- D. Closeout Submittals:
  - 1. Submit three (3) copies of the indoor resilient multipurpose surfacing and manufacturer's maintenance instructions.
  - 2. Submit three (3) copies of the material and installation warranties as specified.

1.3 *QUALITY ASSURANCE*

- A. Qualifications:
  - 1. The indoor resilient multipurpose surfacing shall have been actively marketed for a minimum of ten (10) years.
  - 2. The indoor resilient multipurpose surfacing shall be manufactured in an ISO 9001 certified plant.
  - 3. The indoor resilient multipurpose surfacing shall be manufactured in an ISO 14001 certified plant.
  - 4. The indoor resilient multipurpose surfacing supplier shall be an established firm, experienced in the field, and competent in the techniques required by the manufacturer.
  - 5. The installer of the indoor resilient multipurpose surfacing shall have a minimum of five (5) years of experience in the field installing indoor resilient multipurpose surfacing and have worked on at least five (5) projects of similar size, type and complexity.



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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

- B. Certifications:
  - 1. Installer to submit the indoor resilient athletic surfacing manufacturer's certification attesting that they are a trained installer of the indoor resilient multipurpose surfacing.
  - 2. The indoor resilient multipurpose surfacing manufacturer to submit official ISO 9001 certification for the facility in which the indoor resilient multipurpose surfacing is manufactured.
- C. Testing:
  - 1. Tests shall be relative for multi-purpose use with certificates from independent testing resources to be made available upon request.
  - 2. Test results shall be no more than 5 years old and performed according to ASTM standard testing procedures.

1.4 *DELIVERY, STORAGE AND HANDLING*

- A. Delivery:

Material shall not be delivered until all related work is in place and finished and/or proper storage facilities and conditions can be provided and guaranteed stable according to FieldTurf USA, Inc. recommendations.
- B. Storage:
  - 1. Store the material in a secure, clean and dry location.
  - 2. Maintain temperature between 55° and 85° Fahrenheit.
  - 3. Store the indoor resilient athletic surfacing rolls in an upright position on a smooth flat surface immediately upon delivery to jobsite.
  - 4. Rolls shipped in rigid protective cardboard containers can be laid horizontally prior to unpacking and installation.

1.5 *PROJECT/SITE CONDITIONS*

- A. It is the responsibility of the general contractor/construction manager to maintain project/site conditions acceptable for the installation of the indoor resilient multipurpose flooring.
- B. The area in which the indoor resilient multipurpose surfacing will be installed shall be dry and weather tight. Permanent heat, light and ventilation shall be installed and operable.
- C. All other trades shall have completed their work prior to the installation of the resilient athletic flooring. The general contractor or construction manager shall maintain a secure and clean working environment before, during and after the installation.
- D. Maintain a stable room temperature of at least 65°F for a minimum of one (1) week prior to, during and thereafter installation.
- E. An effective low-permeance vapor barrier is placed directly beneath the concrete subfloor. For "on" or "below grade" installations, it is recommended to provide a permanent vapor barrier resistant to long term hydrostatic pressure/moisture exposure. Protrusions should be sealed to prevent moisture migration into the slab. Moisture should not be allowed to enter the slab after the completed construction.
- F. Concrete subfloor surface pH level within the 7 to 11 range dependent upon installation type.
- G. Concrete subfloor should be no greater than 1/8" within a 10 ft diameter. This tolerance can be measured in accordance with ASTM E1155. A specified ( $F_F$ ) of 50 and an ( $F_L$ ) of 30 should reach this degree of floor flatness and floor level. There is no numerical correlation between F numbers and the deviation from the straight

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edge. However, the above specified numbers should achieve a flat floor with minimal deviation in the slab. Reference ACI 117 and ACI 302.1R. The general contractor should provide a certificate of compliance with the above recommendations.

- H. Concrete subfloor must be clean and free of all foreign materials or objects including, but not limited to, curing compounds and sealers.
- I. Fill cracks, grooves, voids, depressions, and other minor imperfections. Follow the manufacturer's directions. Moveable joints must be treated utilizing specific transitioning joint devices depending upon the architect's recommendations. Follow current ASTM F710 guidelines for the preparation of concrete slabs to receive resilient flooring.
- J. Refer to ACI 302.2R "Guidelines for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials" for concrete design and construction.
- K. Concrete slab shall be fortified with continual steel reinforcement. Fiber reinforcement alone shall not be considered adequate fortification.

**1.6 WARRANTY**

- A. Materials:  
The indoor resilient athletic surfacing shall be covered by the manufacturer against surfacing product defects for 30 years. The manufacturer of the indoor resilient multipurpose surfacing must provide this warranty upon request.
- B. Installation:  
The installation of the indoor resilient multipurpose surfacing shall be covered against poor workmanship and faulty installation by a two (2) year written, limited warranty provided by the contractor performing/overseeing the installation.

**1.7 ADDITIONAL MATERIALS**

- A. Furnish to the owner additional materials containing a total of at least 1% of each different color or design of the indoor resilient athletic surfacing used on the project.

**1.8 LEED™ CERTIFICATION**

- A. The indoor resilient athletic surfacing should be able to help this facility to achieve points towards *LEED™ certification*. Flooring system must be certified by FloorScore.
- B. LEED categories positively affected by the indoor resilient athletic surfacing:

Product Type			PU with Recycled Base Layer
<b>Building Reuse Maintain Interior Nonstructural Elements</b>	<b>MR 1.2</b>	Renovation	1
<b>Construction Waste Management</b>	<b>MR 2</b>	Renovation	2
<b>Recycled Content</b>	<b>MR 4</b>	New/Renovation	2
	<b>20% - 2 points</b>		
<b>Regional Materials</b>	<b>MR 5</b>	New/Renovation	2
	<b>20% - 2 points</b>		
<b>Materials and Resources Rapidly Renewable Materials</b>	<b>MR 6</b>	New/Renovation	1
<b>Indoor Environmental Air Quality Low VOC Adhesives/Sealants</b>	<b>IEQ 4.1</b>	New/Renovation	1
<b>Low-emitting Materials Paints and Coatings</b>	<b>IEQ 4.2</b>	New/Renovation	1

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

***PART 2 - PRODUCTS***

2.1 *MANUFACTURERS*

- A. The basis of the design for the indoor resilient multipurpose surfacing is Polyturf Plus Pad and Pour 4+ 2 and Lumaflex system as manufactured by Tarkett.
- B. All other installation accessories and related components must be either made or approved by the indoor resilient athletic surfacing manufacturer.
- C. Other products may be approved as equal if deemed qualified and submitted in accordance with the General Conditions.
- D. Test reports confirming compliance from an independent sports laboratory must be provided along with samples, technical data, installation, maintenance, and warranty prior to acceptance as an alternative product.

2.2 *MATERIALS*

Flooring System:

Polyturf Plus 4+2 (6mm total thickness) consists of a recycled resilient sheet force reduction layer integrated with seamless, liquid applied, and self-leveling 2 mm polyurethane topcoat.

A durable protective color coat shall be applied to a thickness of approximately 7 mils. The finished product shall be a seamless surface heterogeneous resilient multipurpose synthetic flooring system. System shall comply with the following criteria. Colors to be selected from manufacturer's standard range.

The Lumaflex System shall incorporate Lumaflex double tongue and grooved multi-ply engineered panels, force reduction cushion, and appropriate vapor retarder.

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

A. Physical properties of the indoor resilient athletic surfacing shall conform to the following minimums:

Properties	Standards	PolyTurf Plus Pad & Pour		
		Base Mat + Wear Coat +Top Coat		
<b>Base Mat Properties</b>				
<b>Width</b>		59"		
<b>Length</b>		82 lin. ft		
<b>Weight</b>		1.2 lb/sq ft		
<b>Density</b>	ASTM D297	.67 min (g/cm <sup>3</sup> )		
<b>Tensile Strength</b>	ASTM D412	88 psi (Die Cast C)		
<b>Elongation</b>	ASTM D412	48.5% (Die Cast C)		
<b>Compression</b>	ASTM F36	@50 psi 87%	@100 psi 91%	@200 psi 91%
<b>Tear Strength</b>	ASTM D624	30 PPI Die C		
<b>Flexibility</b>	ASTM F147	0-1		
<b>Compression Set B</b>	ASTM D395	37% (25% deflection 158°F/22hrs)		
<b>Compression Set B</b>	ASTM D395	26% (50% deflection 158°F/22hrs)		
<b>2mm Wear Coat Properties</b>				
<b>Shore Hardness</b>	Shore A	80		
<b>Tensile Strength</b>	ASTM D412	1600psi		
<b>Elongation</b>	ASTM D412	150%		
<b>Tear Strength</b>	ASTM D624	122PLI		
<b>Misc Technical</b>				
<b>Environmental Certification</b>	GreenGuard	GreenGuard Plus Certified		
<b>Sports Characteristics</b>				
<b>Overall Thickness</b>		37 mm		
<b>Shock Absorption</b>	ASTM F2772	Class 4		
<b>Ball Bounce</b>	ASTM F2772	>90%		
<b>Vertical Deformation</b>	ASTM F2772	Passed		
<b>Surface Finish Effect</b>	ASTM F2772	Passed		

- B. Adhesive: As approved by the indoor resilient athletic surfacing manufacturer.
- C. Game Line Paint and Primer: As approved by the indoor resilient athletic surfacing manufacturer.
- D. Colors selected from standard color range.

**PART 3 - EXECUTION**

3.1 EXAMINATION

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

- A. It is the responsibility of the general contractor/construction manager to ensure that project/site conditions are acceptable for the installation of the indoor resilient athletic flooring.
- B. Verify that the area in which the indoor resilient athletic surfacing will be installed is dry and weather tight. Verify that permanent heat, light and ventilation are installed and operable.
- C. Verify that all other work that could cause damage, dirt and dust or interrupt the normal pace of the indoor resilient athletic flooring installation is completed or suspended.
- D. Verify that there is a stable room temperature of at least 65°F.
- E. Verify that there are no foreign materials or objects on the subfloor and that the subfloor is clean and ready for installation.
- F. Concrete Subfloor: moisture content less than 85% RH when tested per ASTM F2170.
- G. Follow Fieldturf USA, Inc. installation recommendations.
- H. Do not average the results of the tests. Report all field test results in writing to the General Contractor, Architect, and End User prior to installation.
- I. Verify that the concrete subfloor surface pH level is within the 7 - 11 range.
- J. Document the results confirming the slab is within manufacturer's tolerances for slab deviation.

3.2 *PREPARATION OF SURFACES*

- A. Sand the entire surface of the concrete slab.
- B. Sweep the concrete slab so as to remove all dirt and dust. If a sweeping compound is to be used it must be a sweeping compound that does not contain oil or other items that may inhibit the adhesive bond.
- C. Slab must be dust free. In the event that dust impairs adhesive bond, priming the slab prior to application of adhesive may be necessary. Follow installation guidelines.
- D. Follow OSHA guidelines.

3.3 *INSTALLATION*

- A. The installation area shall be closed to all traffic and activity for a period to be set by the indoor resilient athletic surfacing installer. The indoor resilient athletic surfacing installation shall not begin until the installer is familiar with the existing conditions.
- B. All necessary precautions should be taken to minimize noise, smell, dust, the use of hazardous materials and any other items that may inconvenience others.
- C. Install the indoor resilient athletic surfacing in strict accordance with the indoor resilient athletic surfacing manufacturer's written instructions.
- D. Paint game lines using approved game line paint primer and game line paint in strict accordance with the game line paint manufacturer's instructions.
- E. Install appropriate threshold plates or transition strips where necessary.

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

2.0 *CLEANING*

- A. Remove all unused materials, tools, and equipment and dispose of any debris properly. Clean the indoor resilient athletic surfacing in accordance with the manufacturer's instructions.

3.6 *PROTECTION*

- A. If required, protect the indoor resilient athletic surfacing from damage using coverings approved by the manufacturer until acceptance of work by the customer or their authorized representative.

3.7 *RELATED STANDARDS AND GUIDELINES*

- A. ASTM F2170 "Standard Test Method for Determining Relative Humidity In Concrete Floor Slabs Using In-Situ Probes"
- B. ASTM F710 "Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring"
- C. ACI 302.2R-06 "Guideline for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials"
- D. ASTM F2772-11 "Standard Specification for Athletic Performance Properties of Indoor Sports Floor Systems"

**END OF SECTION**

**SECTION 09 65 66**  
**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

***PART 1 – GENERAL***

1.1 *SECTION INCLUDES*

- A. Supply and installation of the indoor resilient multipurpose surfacing
- B. Application of the game lines
- C. References for the correct construction and preparation of concrete slabs to receive resilient flooring.

1.2 *SUBMITTALS*

- A. Product Data:
  - 1. Manufacturer's promotional brochures, specifications and installation instructions
- B. Manufacturer Certifications:
  - 1. Provide certification that accurately identifies the Original Equipment Manufacturer (OEM) of flooring furnished for this project including manufacturer's name, address and factory location.
  - 2. Suppliers of private label flooring for this project must identify themselves as such and fully disclose the OEM information listed above.
  - 3. All "manufacturer" requirements in these specifications must be complied with by the OEM, including warranties, certifications, qualifications, product data, test results, environmental requirements, performance data, etc.
- C. Samples:
  - 1. Submit for selection and approval three (3) sets of the indoor resilient multipurpose surfacing, manufacturer's brochures, samples or sample boards of all of the available colors, textures and styles.
  - 2. Submit color samples of all the available game line paint colors for selection and approval.
- D. Closeout Submittals:
  - 1. Submit three (3) copies of the indoor resilient multipurpose surfacing and manufacturer's maintenance instructions.
  - 2. Submit three (3) copies of the material and installation warranties as specified.

1.3 *QUALITY ASSURANCE*

- A. Qualifications:
  - 1. The indoor resilient multipurpose surfacing shall have been actively marketed for a minimum of ten (10) years.
  - 2. The indoor resilient multipurpose surfacing shall be manufactured in an ISO 9001 certified plant.
  - 3. The indoor resilient multipurpose surfacing shall be manufactured in an ISO 14001 certified plant.
  - 4. The indoor resilient multipurpose surfacing supplier shall be an established firm, experienced in the field, and competent in the techniques required by the manufacturer.
  - 5. The installer of the indoor resilient multipurpose surfacing shall have a minimum of five (5) years of experience in the field installing indoor resilient multipurpose surfacing and have worked on at least five (5) projects of similar size, type and complexity.

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

- B. Certifications:
  - 1. Installer to submit the indoor resilient athletic surfacing manufacturer's certification attesting that they are a trained installer of the indoor resilient multipurpose surfacing.
  - 2. The indoor resilient multipurpose surfacing manufacturer to submit official ISO 9001 certification for the facility in which the indoor resilient multipurpose surfacing is manufactured.
- C. Testing:
  - 1. Tests shall be relative for multi-purpose use with certificates from independent testing resources to be made available upon request.
  - 2. Test results shall be no more than 5 years old and performed according to ASTM standard testing procedures.

1.4 *DELIVERY, STORAGE AND HANDLING*

- A. Delivery:

Material shall not be delivered until all related work is in place and finished and/or proper storage facilities and conditions can be provided and guaranteed stable according to FieldTurf USA, Inc. recommendations.
- B. Storage:
  - 1. Store the material in a secure, clean and dry location.
  - 2. Maintain temperature between 55° and 85° Fahrenheit.
  - 3. Store the indoor resilient athletic surfacing rolls in an upright position on a smooth flat surface immediately upon delivery to jobsite.
  - 4. Rolls shipped in rigid protective cardboard containers can be laid horizontally prior to unpacking and installation.

1.5 *PROJECT/SITE CONDITIONS*

- A. It is the responsibility of the general contractor/construction manager to maintain project/site conditions acceptable for the installation of the indoor resilient multipurpose flooring.
- B. The area in which the indoor resilient multipurpose surfacing will be installed shall be dry and weather tight. Permanent heat, light and ventilation shall be installed and operable.
- C. All other trades shall have completed their work prior to the installation of the resilient athletic flooring. The general contractor or construction manager shall maintain a secure and clean working environment before, during and after the installation.
- D. Maintain a stable room temperature of at least 65°F for a minimum of one (1) week prior to, during and thereafter installation.
- E. An effective low-permeance vapor barrier is placed directly beneath the concrete subfloor. For "on" or "below grade" installations, it is recommended to provide a permanent vapor barrier resistant to long term hydrostatic pressure/moisture exposure. Protrusions should be sealed to prevent moisture migration into the slab. Moisture should not be allowed to enter the slab after the completed construction.
- F. Concrete subfloor surface pH level within the 7 to 11 range dependent upon installation type.
- G. Concrete subfloor should be no greater than 1/8" within a 10 ft diameter. This tolerance can be measured in accordance with ASTM E1155. A specified ( $F_F$ ) of 50 and an ( $F_L$ ) of 30 should reach this degree of floor flatness and floor level. There is no numerical correlation between F numbers and the deviation from the straight



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edge. However, the above specified numbers should achieve a flat floor with minimal deviation in the slab. Reference ACI 117 and ACI 302.1R. The general contractor should provide a certificate of compliance with the above recommendations.

- H. Concrete subfloor must be clean and free of all foreign materials or objects including, but not limited to, curing compounds and sealers.
- I. Fill cracks, grooves, voids, depressions, and other minor imperfections. Follow the manufacturer's directions. Moveable joints must be treated utilizing specific transitioning joint devices depending upon the architect's recommendations. Follow current ASTM F710 guidelines for the preparation of concrete slabs to receive resilient flooring.
- J. Refer to ACI 302.2R "Guidelines for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials" for concrete design and construction.
- K. Concrete slab shall be fortified with continual steel reinforcement. Fiber reinforcement alone shall not be considered adequate fortification.

**1.6 WARRANTY**

- A. Materials:  
The indoor resilient athletic surfacing shall be covered by the manufacturer against surfacing product defects for 30 years. The manufacturer of the indoor resilient multipurpose surfacing must provide this warranty upon request.
- B. Installation:  
The installation of the indoor resilient multipurpose surfacing shall be covered against poor workmanship and faulty installation by a two (2) year written, limited warranty provided by the contractor performing/overseeing the installation.

**1.7 ADDITIONAL MATERIALS**

- A. Furnish to the owner additional materials containing a total of at least 1% of each different color or design of the indoor resilient athletic surfacing used on the project.

**1.8 LEED™ CERTIFICATION**

- A. The indoor resilient athletic surfacing should be able to help this facility to achieve points towards *LEED™ certification*. Flooring system must be certified by FloorScore.
- B. LEED categories positively affected by the indoor resilient athletic surfacing:

Product Type			PU with Recycled Base Layer
<b>Building Reuse Maintain Interior Nonstructural Elements</b>	<b>MR 1.2</b>	Renovation	1
<b>Construction Waste Management</b>	<b>MR 2</b>	Renovation	2
<b>Recycled Content</b>	<b>MR 4</b>	New/Renovation	2
	<b>20% - 2 points</b>		
<b>Regional Materials</b>	<b>MR 5</b>	New/Renovation	2
	<b>20% - 2 points</b>		
<b>Materials and Resources Rapidly Renewable Materials</b>	<b>MR 6</b>	New/Renovation	1
<b>Indoor Environmental Air Quality Low VOC Adhesives/Sealants</b>	<b>IEQ 4.1</b>	New/Renovation	1
<b>Low-emitting Materials Paints and Coatings</b>	<b>IEQ 4.2</b>	New/Renovation	1

**SECTION 09 65 66**  
**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

***PART 2 - PRODUCTS***

2.1 *MANUFACTURERS*

- A. The basis of the design for the indoor resilient multipurpose surfacing is Polyturf Plus Elite Pad and Pour 7+2 and Lumaflex system as manufactured by Tarkett.
- B. All other installation accessories and related components must be either made or approved by the indoor resilient athletic surfacing manufacturer.
- C. Other products may be approved as equal if deemed qualified and submitted in accordance with the General Conditions.
- D. Test reports confirming compliance from an independent sports laboratory must be provided along with samples, technical data, installation, maintenance, and warranty prior to acceptance as an alternative product.

2.2 *MATERIALS*

Flooring System:

Polyturf Plus Elite 7+2 (9mm total thickness) consists of a recycled resilient sheet force reduction layer integrated with seamless, liquid applied, and self-leveling 2 mm polyurethane topcoat.

A durable protective color coat shall be applied to a thickness of approximately 7 mils. The finished product shall be a seamless surface heterogeneous resilient multipurpose synthetic flooring system. System shall comply with the following criteria. Colors to be selected from manufacturer's standard range.

The Lumaflex System shall incorporate Lumaflex double tongue and grooved multi-ply engineered panels, force reduction cushion, and appropriate vapor retarder.

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

- A. Physical properties of the indoor resilient athletic surfacing shall conform to the following minimums:

Properties	Standards	PolyTurf Plus Pad & Pour		
		Base Mat + Wear Coat +Top Coat		
<b>Base Mat Properties</b>				
<b>Width</b>		59"		
<b>Length</b>		82 lin. ft		
<b>Weight</b>		1.2 lb/sq ft		
<b>Density</b>	ASTM D297	.67 min (g/cm <sup>3</sup> )		
<b>Tensile Strength</b>	ASTM D412	88 psi (Die Cast C)		
<b>Elongation</b>	ASTM D412	48.5% (Die Cast C)		
<b>Compression</b>	ASTM F36	@50 psi 87%	@100 psi 91%	@200 psi 91%
<b>Tear Strength</b>	ASTM D624	30 PPI Die C		
<b>Flexibility</b>	ASTM F147	0-1		
<b>Compression Set B</b>	ASTM D395	37% (25% deflection 158°F/22hrs)		
<b>Compression Set B</b>	ASTM D395	26% (50% deflection 158°F/22hrs)		
<b>2mm Wear Coat Properties</b>				
<b>Shore Hardness</b>	Shore A	80		
<b>Tensile Strength</b>	ASTM D412	1600psi		
<b>Elongation</b>	ASTM D412	150%		
<b>Tear Strength</b>	ASTM D624	122PLI		
<b>Misc Technical</b>				
<b>Environmental Certification</b>	GreenGuard	GreenGuard Plus Certified		
<b>Sports Characteristics</b>				
<b>Overall Thickness</b>		40 mm		
<b>Shock Absorption</b>	ASTM F2772	Class 5		
<b>Ball Bounce</b>	ASTM F2772	>90%		
<b>Vertical Deformation</b>	ASTM F2772	Passed		
<b>Surface Finish Effect</b>	ASTM F2772	Passed		

- B. Adhesive: As approved by the indoor resilient athletic surfacing manufacturer.  
 C. Game Line Paint and Primer: As approved by the indoor resilient athletic surfacing manufacturer.  
 D. Colors selected from standard color range.

**PART 3 - EXECUTION**

3.1 EXAMINATION

**SECTION 09 65 66**  
**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

- A. It is the responsibility of the general contractor/construction manager to ensure that project/site conditions are acceptable for the installation of the indoor resilient athletic flooring.
- B. Verify that the area in which the indoor resilient athletic surfacing will be installed is dry and weather tight. Verify that permanent heat, light and ventilation are installed and operable.
- C. Verify that all other work that could cause damage, dirt and dust or interrupt the normal pace of the indoor resilient athletic flooring installation is completed or suspended.
- D. Verify that there is a stable room temperature of at least 65°F.
- E. Verify that there are no foreign materials or objects on the subfloor and that the subfloor is clean and ready for installation.
- F. Concrete Subfloor: moisture content less than 85% RH when tested per ASTM F2170.
- G. Follow Fieldturf USA, Inc. installation recommendations.
- H. Do not average the results of the tests. Report all field test results in writing to the General Contractor, Architect, and End User prior to installation.
- I. Verify that the concrete subfloor surface pH level is within the 7 - 11 range.
- J. Document the results confirming the slab is within manufacturer's tolerances for slab deviation.

3.2 *PREPARATION OF SURFACES*

- A. Sand the entire surface of the concrete slab.
- B. Sweep the concrete slab so as to remove all dirt and dust. If a sweeping compound is to be used it must be a sweeping compound that does not contain oil or other items that may inhibit the adhesive bond.
- C. Slab must be dust free. In the event that dust impairs adhesive bond, priming the slab prior to application of adhesive may be necessary. Follow installation guidelines.
- D. Follow OSHA guidelines.

3.3 *INSTALLATION*

- A. The installation area shall be closed to all traffic and activity for a period to be set by the indoor resilient athletic surfacing installer. The indoor resilient athletic surfacing installation shall not begin until the installer is familiar with the existing conditions.
- B. All necessary precautions should be taken to minimize noise, smell, dust, the use of hazardous materials and any other items that may inconvenience others.
- C. Install the indoor resilient athletic surfacing in strict accordance with the indoor resilient athletic surfacing manufacturer's written instructions.
- D. Paint game lines using approved game line paint primer and game line paint in strict accordance with the game line paint manufacturer's instructions.
- E. Install appropriate threshold plates or transition strips where necessary.

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

2.0 *CLEANING*

- A. Remove all unused materials, tools, and equipment and dispose of any debris properly. Clean the indoor resilient athletic surfacing in accordance with the manufacturer's instructions.

3.6 *PROTECTION*

- A. If required, protect the indoor resilient athletic surfacing from damage using coverings approved by the manufacturer until acceptance of work by the customer or their authorized representative.

3.7 *RELATED STANDARDS AND GUIDELINES*

- A. ASTM F2170 "Standard Test Method for Determining Relative Humidity In Concrete Floor Slabs Using In-Situ Probes"
- B. ASTM F710 "Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring"
- C. ACI 302.2R-06 "Guideline for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials"
- D. ASTM F2772-11 "Standard Specification for Athletic Performance Properties of Indoor Sports Floor Systems"

**END OF SECTION**

**SECTION 09 65 66**  
**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

***PART 1 – GENERAL***

1.1 *SECTION INCLUDES*

- A. Supply and installation of the indoor resilient multipurpose surfacing
- B. Application of the game lines
- C. References for the correct construction and preparation of concrete slabs to receive resilient flooring.

1.2 *SUBMITTALS*

- A. Product Data:
  - 1. Manufacturer's promotional brochures, specifications and installation instructions
- B. Manufacturer Certifications:
  - 1. Provide certification that accurately identifies the Original Equipment Manufacturer (OEM) of flooring furnished for this project including manufacturer's name, address and factory location.
  - 2. Suppliers of private label flooring for this project must identify themselves as such and fully disclose the OEM information listed above.
  - 3. All "manufacturer" requirements in these specifications must be complied with by the OEM, including warranties, certifications, qualifications, product data, test results, environmental requirements, performance data, etc.
- C. Samples:
  - 1. Submit for selection and approval three (3) sets of the indoor resilient multipurpose surfacing, manufacturer's brochures, samples or sample boards of all of the available colors, textures and styles.
  - 2. Submit color samples of all the available game line paint colors for selection and approval.
- D. Closeout Submittals:
  - 1. Submit three (3) copies of the indoor resilient multipurpose surfacing and manufacturer's maintenance instructions.
  - 2. Submit three (3) copies of the material and installation warranties as specified.

1.3 *QUALITY ASSURANCE*

- A. Qualifications:
  - 1. The indoor resilient multipurpose surfacing shall have been actively marketed for a minimum of ten (10) years.
  - 2. The indoor resilient multipurpose surfacing shall be manufactured in an ISO 9001 certified plant.
  - 3. The indoor resilient multipurpose surfacing shall be manufactured in an ISO 14001 certified plant.
  - 4. The indoor resilient multipurpose surfacing supplier shall be an established firm, experienced in the field, and competent in the techniques required by the manufacturer.
  - 5. The installer of the indoor resilient multipurpose surfacing shall have a minimum of five (5) years of experience in the field installing indoor resilient multipurpose surfacing and have worked on at least five (5) projects of similar size, type and complexity.

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

- B. Certifications:
  - 1. Installer to submit the indoor resilient athletic surfacing manufacturer's certification attesting that they are a trained installer of the indoor resilient multipurpose surfacing.
  - 2. The indoor resilient multipurpose surfacing manufacturer to submit official ISO 9001 certification for the facility in which the indoor resilient multipurpose surfacing is manufactured.
- C. Testing:
  - 1. Tests shall be relative for multi-purpose use with certificates from independent testing resources to be made available upon request.
  - 2. Test results shall be no more than 5 years old and performed according to ASTM standard testing procedures.

1.4 *DELIVERY, STORAGE AND HANDLING*

- A. Delivery:

Material shall not be delivered until all related work is in place and finished and/or proper storage facilities and conditions can be provided and guaranteed stable according to FieldTurf USA, Inc. recommendations.
- B. Storage:
  - 1. Store the material in a secure, clean and dry location.
  - 2. Maintain temperature between 55° and 85° Fahrenheit.
  - 3. Store the indoor resilient athletic surfacing rolls in an upright position on a smooth flat surface immediately upon delivery to jobsite.
  - 4. Rolls shipped in rigid protective cardboard containers can be laid horizontally prior to unpacking and installation.

1.5 *PROJECT/SITE CONDITIONS*

- A. It is the responsibility of the general contractor/construction manager to maintain project/site conditions acceptable for the installation of the indoor resilient multipurpose flooring.
- B. The area in which the indoor resilient multipurpose surfacing will be installed shall be dry and weather tight. Permanent heat, light and ventilation shall be installed and operable.
- C. All other trades shall have completed their work prior to the installation of the resilient athletic flooring. The general contractor or construction manager shall maintain a secure and clean working environment before, during and after the installation.
- D. Maintain a stable room temperature of at least 65°F for a minimum of one (1) week prior to, during and thereafter installation.
- E. An effective low-permeance vapor barrier is placed directly beneath the concrete subfloor. For "on" or "below grade" installations, it is recommended to provide a permanent vapor barrier resistant to long term hydrostatic pressure/moisture exposure. Protrusions should be sealed to prevent moisture migration into the slab. Moisture should not be allowed to enter the slab after the completed construction.
- F. Concrete subfloor surface pH level within the 7 to 11 range dependent upon installation type.
- G. Concrete subfloor should be no greater than 1/8" within a 10 ft diameter. This tolerance can be measured in accordance with ASTM E1155. A specified ( $F_F$ ) of 50 and an ( $F_L$ ) of 30 should reach this degree of floor flatness and floor level. There is no numerical correlation between F numbers and the deviation from the straight

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edge. However, the above specified numbers should achieve a flat floor with minimal deviation in the slab. Reference ACI 117 and ACI 302.1R. The general contractor should provide a certificate of compliance with the above recommendations.

- H. Concrete subfloor must be clean and free of all foreign materials or objects including, but not limited to, curing compounds and sealers.
- I. Fill cracks, grooves, voids, depressions, and other minor imperfections. Follow the manufacturer's directions. Moveable joints must be treated utilizing specific transitioning joint devices depending upon the architect's recommendations. Follow current ASTM F710 guidelines for the preparation of concrete slabs to receive resilient flooring.
- J. Refer to ACI 302.2R "Guidelines for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials" for concrete design and construction.
- K. Concrete slab shall be fortified with continual steel reinforcement. Fiber reinforcement alone shall not be considered adequate fortification.

**1.6 WARRANTY**

**A. Materials:**

The indoor resilient athletic surfacing shall be covered by the manufacturer against surfacing product defects for 30 years. The manufacturer of the indoor resilient multipurpose surfacing must provide this warranty upon request.

**B. Installation:**

The installation of the indoor resilient multipurpose surfacing shall be covered against poor workmanship and faulty installation by a two (2) year written, limited warranty provided by the contractor performing/overseeing the installation.

**1.7 ADDITIONAL MATERIALS**

- A. Furnish to the owner additional materials containing a total of at least 1% of each different color or design of the indoor resilient athletic surfacing used on the project.

**1.8 LEED™ CERTIFICATION**

- A. The indoor resilient athletic surfacing should be able to help this facility to achieve points towards *LEED™ certification*. Flooring system must be certified by FloorScore.
- B. LEED categories positively affected by the indoor resilient athletic surfacing:

Product Type			PU with Recycled Base Layer
<b>Building Reuse Maintain Interior Nonstructural Elements</b>	<b>MR 1.2</b>	Renovation	1
<b>Construction Waste Management</b>	<b>MR 2</b>	Renovation	2
<b>Recycled Content</b>	<b>MR 4</b>	New/Renovation	2
	<b>20% - 2 points</b>		
<b>Regional Materials</b>	<b>MR 5</b>	New/Renovation	2
	<b>20% - 2 points</b>		
<b>Materials and Resources Rapidly Renewable Materials</b>	<b>MR 6</b>	New/Renovation	1
<b>Indoor Environmental Air Quality Low VOC Adhesives/Sealants</b>	<b>IEQ 4.1</b>	New/Renovation	1
<b>Low-emitting Materials Paints and Coatings</b>	<b>IEQ 4.2</b>	New/Renovation	1



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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

***PART 2 - PRODUCTS***

2.1 *MANUFACTURERS*

- A. The basis of the design for the indoor resilient multipurpose surfacing is Polyturf Plus Pad and Pour 7+2 and Lumaflex system as manufactured by Tarkett.
- B. All other installation accessories and related components must be either made or approved by the indoor resilient athletic surfacing manufacturer.
- C. Other products may be approved as equal if deemed qualified and submitted in accordance with the General Conditions.
- D. Test reports confirming compliance from an independent sports laboratory must be provided along with samples, technical data, installation, maintenance, and warranty prior to acceptance as an alternative product.

2.2 *MATERIALS*

Flooring System:

Polyturf Plus Pad and Pour 7+2 (9 mm total thickness) consists of a recycled resilient sheet force reduction layer integrated with seamless, liquid applied, and self-leveling 2 mm polyurethane topcoat.

A durable protective color coat shall be applied to a thickness of approximately 7 mils. The finished product shall be a seamless surface heterogeneous resilient multipurpose synthetic flooring system. System shall comply with the following criteria. Colors to be selected from manufacturer's standard range.

The Lumaflex System shall incorporate Lumaflex double tongue and grooved multi-ply engineered panels, force reduction cushion, and appropriate vapor retarder.

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

- A. Physical properties of the indoor resilient athletic surfacing shall conform to the following minimums:

Properties	Standards	PolyTurf Plus Pad & Pour		
		Base Mat + Wear Coat +Top Coat		
<b>Base Mat Properties</b>				
<b>Width</b>		59"		
<b>Length</b>		82 lin. ft		
<b>Weight</b>		1.2 lb/sq ft		
<b>Density</b>	ASTM D297	.67 min (g/cm <sup>3</sup> )		
<b>Tensile Strength</b>	ASTM D412	88 psi (Die Cast C)		
<b>Elongation</b>	ASTM D412	48.5% (Die Cast C)		
<b>Compression</b>	ASTM F36	@50 psi 87%	@100 psi 91%	@200 psi 91%
<b>Tear Strength</b>	ASTM D624	30 PPI Die C		
<b>Flexibility</b>	ASTM F147	0-1		
<b>Compression Set B</b>	ASTM D395	37% (25% deflection 158°F/22hrs)		
<b>Compression Set B</b>	ASTM D395	26% (50% deflection 158°F/22hrs)		
<b>2mm Wear Coat Properties</b>				
<b>Shore Hardness</b>	Shore A	80		
<b>Tensile Strength</b>	ASTM D412	1600psi		
<b>Elongation</b>	ASTM D412	150%		
<b>Tear Strength</b>	ASTM D624	122PLI		
<b>Misc Technical</b>				
<b>Environmental Certification</b>	GreenGuard	GreenGuard Plus Certified		
<b>Sports Characteristics</b>				
<b>Overall Thickness</b>		40 mm		
<b>Shock Absorption</b>	ASTM F2772	Class 4		
<b>Ball Bounce</b>	ASTM F2772	>90%		
<b>Vertical Deformation</b>	ASTM F2772	Passed		
<b>Surface Finish Effect</b>	ASTM F2772	Passed		

- B. Adhesive: As approved by the indoor resilient athletic surfacing manufacturer.  
 C. Game Line Paint and Primer: As approved by the indoor resilient athletic surfacing manufacturer.  
 D. Colors selected from standard color range.

**PART 3 - EXECUTION**

3.1 EXAMINATION

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

- A. It is the responsibility of the general contractor/construction manager to ensure that project/site conditions are acceptable for the installation of the indoor resilient athletic flooring.
- B. Verify that the area in which the indoor resilient athletic surfacing will be installed is dry and weather tight. Verify that permanent heat, light and ventilation are installed and operable.
- C. Verify that all other work that could cause damage, dirt and dust or interrupt the normal pace of the indoor resilient athletic flooring installation is completed or suspended.
- D. Verify that there is a stable room temperature of at least 65°F.
- E. Verify that there are no foreign materials or objects on the subfloor and that the subfloor is clean and ready for installation.
- F. Concrete Subfloor: moisture content less than 85% RH when tested per ASTM F2170.
- G. Follow Fieldturf USA, Inc. installation recommendations.
- H. Do not average the results of the tests. Report all field test results in writing to the General Contractor, Architect, and End User prior to installation.
- I. Verify that the concrete subfloor surface pH level is within the 7 - 11 range.
- J. Document the results confirming the slab is within manufacturer's tolerances for slab deviation.

3.2 *PREPARATION OF SURFACES*

- A. Sand the entire surface of the concrete slab.
- B. Sweep the concrete slab so as to remove all dirt and dust. If a sweeping compound is to be used it must be a sweeping compound that does not contain oil or other items that may inhibit the adhesive bond.
- C. Slab must be dust free. In the event that dust impairs adhesive bond, priming the slab prior to application of adhesive may be necessary. Follow installation guidelines.
- D. Follow OSHA guidelines.

3.3 *INSTALLATION*

- A. The installation area shall be closed to all traffic and activity for a period to be set by the indoor resilient athletic surfacing installer. The indoor resilient athletic surfacing installation shall not begin until the installer is familiar with the existing conditions.
- B. All necessary precautions should be taken to minimize noise, smell, dust, the use of hazardous materials and any other items that may inconvenience others.
- C. Install the indoor resilient athletic surfacing in strict accordance with the indoor resilient athletic surfacing manufacturer's written instructions.
- D. Paint game lines using approved game line paint primer and game line paint in strict accordance with the game line paint manufacturer's instructions.
- E. Install appropriate threshold plates or transition strips where necessary.

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

2.0 *CLEANING*

- A. Remove all unused materials, tools, and equipment and dispose of any debris properly. Clean the indoor resilient athletic surfacing in accordance with the manufacturer's instructions.

3.6 *PROTECTION*

- A. If required, protect the indoor resilient athletic surfacing from damage using coverings approved by the manufacturer until acceptance of work by the customer or their authorized representative.

3.7 *RELATED STANDARDS AND GUIDELINES*

- A. ASTM F2170 "Standard Test Method for Determining Relative Humidity In Concrete Floor Slabs Using In-Situ Probes"
- B. ASTM F710 "Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring"
- C. ACI 302.2R-06 "Guideline for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials"
- D. ASTM F2772-11 "Standard Specification for Athletic Performance Properties of Indoor Sports Floor Systems"

**END OF SECTION**

**SECTION 09 65 66**  
**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

***PART 1 – GENERAL***

1.1 *SECTION INCLUDES*

- A. Supply and installation of the indoor resilient multipurpose surfacing
- B. Application of the game lines
- C. References for the correct construction and preparation of concrete slabs to receive resilient flooring.

1.2 *SUBMITTALS*

- A. Product Data:
  - 1. Manufacturer's promotional brochures, specifications and installation instructions
- B. Manufacturer Certifications:
  - 1. Provide certification that accurately identifies the Original Equipment Manufacturer (OEM) of flooring furnished for this project including manufacturer's name, address and factory location.
  - 2. Suppliers of private label flooring for this project must identify themselves as such and fully disclose the OEM information listed above.
  - 3. All "manufacturer" requirements in these specifications must be complied with by the OEM, including warranties, certifications, qualifications, product data, test results, environmental requirements, performance data, etc.
- C. Samples:
  - 1. Submit for selection and approval three (3) sets of the indoor resilient multipurpose surfacing, manufacturer's brochures, samples or sample boards of all of the available colors, textures and styles.
  - 2. Submit color samples of all the available game line paint colors for selection and approval.
- D. Closeout Submittals:
  - 1. Submit three (3) copies of the indoor resilient multipurpose surfacing and manufacturer's maintenance instructions.
  - 2. Submit three (3) copies of the material and installation warranties as specified.

1.3 *QUALITY ASSURANCE*

- A. Qualifications:
  - 1. The indoor resilient multipurpose surfacing shall have been actively marketed for a minimum of ten (10) years.
  - 2. The indoor resilient multipurpose surfacing shall be manufactured in an ISO 9001 certified plant.
  - 3. The indoor resilient multipurpose surfacing shall be manufactured in an ISO 14001 certified plant.
  - 4. The indoor resilient multipurpose surfacing supplier shall be an established firm, experienced in the field, and competent in the techniques required by the manufacturer.
  - 5. The installer of the indoor resilient multipurpose surfacing shall have a minimum of five (5) years of experience in the field installing indoor resilient multipurpose surfacing and have worked on at least five (5) projects of similar size, type and complexity.

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

- B. Certifications:
  - 1. Installer to submit the indoor resilient athletic surfacing manufacturer's certification attesting that they are a trained installer of the indoor resilient multipurpose surfacing.
  - 2. The indoor resilient multipurpose surfacing manufacturer to submit official ISO 9001 certification for the facility in which the indoor resilient multipurpose surfacing is manufactured.
- C. Testing:
  - 1. Tests shall be relative for multi-purpose use with certificates from independent testing resources to be made available upon request.
  - 2. Test results shall be no more than 5 years old and performed according to ASTM standard testing procedures.

1.4 *DELIVERY, STORAGE AND HANDLING*

- A. Delivery:

Material shall not be delivered until all related work is in place and finished and/or proper storage facilities and conditions can be provided and guaranteed stable according to FieldTurf USA, Inc. recommendations.
- B. Storage:
  - 1. Store the material in a secure, clean and dry location.
  - 2. Maintain temperature between 55° and 85° Fahrenheit.
  - 3. Store the indoor resilient athletic surfacing rolls in an upright position on a smooth flat surface immediately upon delivery to jobsite.
  - 4. Rolls shipped in rigid protective cardboard containers can be laid horizontally prior to unpacking and installation.

1.5 *PROJECT/SITE CONDITIONS*

- A. It is the responsibility of the general contractor/construction manager to maintain project/site conditions acceptable for the installation of the indoor resilient multipurpose flooring.
- B. The area in which the indoor resilient multipurpose surfacing will be installed shall be dry and weather tight. Permanent heat, light and ventilation shall be installed and operable.
- C. All other trades shall have completed their work prior to the installation of the resilient athletic flooring. The general contractor or construction manager shall maintain a secure and clean working environment before, during and after the installation.
- D. Maintain a stable room temperature of at least 65°F for a minimum of one (1) week prior to, during and thereafter installation.
- E. An effective low-permeance vapor barrier is placed directly beneath the concrete subfloor. For "on" or "below grade" installations, it is recommended to provide a permanent vapor barrier resistant to long term hydrostatic pressure/moisture exposure. Protrusions should be sealed to prevent moisture migration into the slab. Moisture should not be allowed to enter the slab after the completed construction.
- F. Concrete subfloor surface pH level within the 7 to 11 range dependent upon installation type.
- G. Concrete subfloor should be no greater than 1/8" within a 10 ft diameter. This tolerance can be measured in accordance with ASTM E1155. A specified ( $F_F$ ) of 50 and an ( $F_L$ ) of 30 should reach this degree of floor flatness and floor level. There is no numerical correlation between F numbers and the deviation from the straight

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edge. However, the above specified numbers should achieve a flat floor with minimal deviation in the slab. Reference ACI 117 and ACI 302.1R. The general contractor should provide a certificate of compliance with the above recommendations.

- H. Concrete subfloor must be clean and free of all foreign materials or objects including, but not limited to, curing compounds and sealers.
- I. Fill cracks, grooves, voids, depressions, and other minor imperfections. Follow the manufacturer's directions. Moveable joints must be treated utilizing specific transitioning joint devices depending upon the architect's recommendations. Follow current ASTM F710 guidelines for the preparation of concrete slabs to receive resilient flooring.
- J. Refer to ACI 302.2R "Guidelines for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials" for concrete design and construction.
- K. Concrete slab shall be fortified with continual steel reinforcement. Fiber reinforcement alone shall not be considered adequate fortification.

**1.6 WARRANTY**

- A. **Materials:**  
The indoor resilient athletic surfacing shall be covered by the manufacturer against surfacing product defects for 30 years. The manufacturer of the indoor resilient multipurpose surfacing must provide this warranty upon request.
- B. **Installation:**  
The installation of the indoor resilient multipurpose surfacing shall be covered against poor workmanship and faulty installation by a two (2) year written, limited warranty provided by the contractor performing/overseeing the installation.

**1.7 ADDITIONAL MATERIALS**

- A. Furnish to the owner additional materials containing a total of at least 1% of each different color or design of the indoor resilient athletic surfacing used on the project.

**1.8 LEED™ CERTIFICATION**

- A. The indoor resilient athletic surfacing should be able to help this facility to achieve points towards *LEED™ certification*. Flooring system must be certified by FloorScore.
- B. LEED categories positively affected by the indoor resilient athletic surfacing:

Product Type			PU with Recycled Base Layer
<b>Building Reuse Maintain Interior Nonstructural Elements</b>	<b>MR 1.2</b>	Renovation	1
<b>Construction Waste Management</b>	<b>MR 2</b>	Renovation	2
<b>Recycled Content</b>	<b>MR 4</b>	New/Renovation	2
	<b>20% - 2 points</b>		
<b>Regional Materials</b>	<b>MR 5</b>	New/Renovation	2
	<b>20% - 2 points</b>		
<b>Materials and Resources Rapidly Renewable Materials</b>	<b>MR 6</b>	New/Renovation	1
<b>Indoor Environmental Air Quality Low VOC Adhesives/Sealants</b>	<b>IEQ 4.1</b>	New/Renovation	1
<b>Low-emitting Materials Paints and Coatings</b>	<b>IEQ 4.2</b>	New/Renovation	1

**SECTION 09 65 66**  
**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

***PART 2 - PRODUCTS***

2.1 *MANUFACTURERS*

- A. The basis of the design for the indoor resilient multipurpose surfacing is Polyturf Plus Elite Pad and Pour 9+2 and Lumaflex system as manufactured by Tarkett.
- B. All other installation accessories and related components must be either made or approved by the indoor resilient athletic surfacing manufacturer.
- C. Other products may be approved as equal if deemed qualified and submitted in accordance with the General Conditions.
- D. Test reports confirming compliance from an independent sports laboratory must be provided along with samples, technical data, installation, maintenance, and warranty prior to acceptance as an alternative product.

2.2 *MATERIALS*

Flooring System:

Polyturf Plus Elite 9+2 (11mm total thickness) consists of a recycled resilient sheet force reduction layer integrated with seamless, liquid applied, and self-leveling 2 mm polyurethane topcoat.

A durable protective color coat shall be applied to a thickness of approximately 7 mils. The finished product shall be a seamless surface heterogeneous resilient multipurpose synthetic flooring system. System shall comply with the following criteria. Colors to be selected from manufacturer's standard range.

The Lumaflex System shall incorporate Lumaflex double tongue and grooved multi-ply engineered panels, force reduction cushion, and appropriate vapor retarder.



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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

- A. Physical properties of the indoor resilient athletic surfacing shall conform to the following minimums:

Properties	Standards	PolyTurf Plus Pad & Pour		
		Base Mat + Wear Coat +Top Coat		
<b>Base Mat Properties</b>				
<b>Width</b>		59"		
<b>Length</b>		82 lin. ft		
<b>Weight</b>		1.2 lb/sq ft		
<b>Density</b>	ASTM D297	.67 min (g/cm <sup>3</sup> )		
<b>Tensile Strength</b>	ASTM D412	88 psi (Die Cast C)		
<b>Elongation</b>	ASTM D412	48.5% (Die Cast C)		
<b>Compression</b>	ASTM F36	@50 psi 87%	@100 psi 91%	@200 psi 91%
<b>Tear Strength</b>	ASTM D624	30 PPI Die C		
<b>Flexibility</b>	ASTM F147	0-1		
<b>Compression Set B</b>	ASTM D395	37% (25% deflection 158°F/22hrs)		
<b>Compression Set B</b>	ASTM D395	26% (50% deflection 158°F/22hrs)		
<b>2mm Wear Coat Properties</b>				
<b>Shore Hardness</b>	Shore A	80		
<b>Tensile Strength</b>	ASTM D412	1600psi		
<b>Elongation</b>	ASTM D412	150%		
<b>Tear Strength</b>	ASTM D624	122PLI		
<b>Misc Technical</b>				
<b>Environmental Certification</b>	GreenGuard	GreenGuard Plus Certified		
<b>Sports Characteristics</b>				
<b>Overall Thickness</b>		42 mm		
<b>Shock Absorption</b>	ASTM F2772	Class 5		
<b>Ball Bounce</b>	ASTM F2772	>90%		
<b>Vertical Deformation</b>	ASTM F2772	Passed		
<b>Surface Finish Effect</b>	ASTM F2772	Passed		

- B. Adhesive: As approved by the indoor resilient athletic surfacing manufacturer.  
 C. Game Line Paint and Primer: As approved by the indoor resilient athletic surfacing manufacturer.  
 D. Colors selected from standard color range.

**PART 3 - EXECUTION**

3.1 EXAMINATION

**SECTION 09 65 66**  
**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

- A. It is the responsibility of the general contractor/construction manager to ensure that project/site conditions are acceptable for the installation of the indoor resilient athletic flooring.
- B. Verify that the area in which the indoor resilient athletic surfacing will be installed is dry and weather tight. Verify that permanent heat, light and ventilation are installed and operable.
- C. Verify that all other work that could cause damage, dirt and dust or interrupt the normal pace of the indoor resilient athletic flooring installation is completed or suspended.
- D. Verify that there is a stable room temperature of at least 65°F.
- E. Verify that there are no foreign materials or objects on the subfloor and that the subfloor is clean and ready for installation.
- F. Concrete Subfloor: moisture content less than 85% RH when tested per ASTM F2170.
- G. Follow Fieldturf USA, Inc. installation recommendations.
- H. Do not average the results of the tests. Report all field test results in writing to the General Contractor, Architect, and End User prior to installation.
- I. Verify that the concrete subfloor surface pH level is within the 7 - 11 range.
- J. Document the results confirming the slab is within manufacturer's tolerances for slab deviation.

3.2 *PREPARATION OF SURFACES*

- A. Sand the entire surface of the concrete slab.
- B. Sweep the concrete slab so as to remove all dirt and dust. If a sweeping compound is to be used it must be a sweeping compound that does not contain oil or other items that may inhibit the adhesive bond.
- C. Slab must be dust free. In the event that dust impairs adhesive bond, priming the slab prior to application of adhesive may be necessary. Follow installation guidelines.
- D. Follow OSHA guidelines.

3.3 *INSTALLATION*

- A. The installation area shall be closed to all traffic and activity for a period to be set by the indoor resilient athletic surfacing installer. The indoor resilient athletic surfacing installation shall not begin until the installer is familiar with the existing conditions.
- B. All necessary precautions should be taken to minimize noise, smell, dust, the use of hazardous materials and any other items that may inconvenience others.
- C. Install the indoor resilient athletic surfacing in strict accordance with the indoor resilient athletic surfacing manufacturer's written instructions.
- D. Paint game lines using approved game line paint primer and game line paint in strict accordance with the game line paint manufacturer's instructions.
- E. Install appropriate threshold plates or transition strips where necessary.

**SECTION 09 65 66**  
**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

2.0 *CLEANING*

- A. Remove all unused materials, tools, and equipment and dispose of any debris properly. Clean the indoor resilient athletic surfacing in accordance with the manufacturer's instructions.

3.6 *PROTECTION*

- A. If required, protect the indoor resilient athletic surfacing from damage using coverings approved by the manufacturer until acceptance of work by the customer or their authorized representative.

3.7 *RELATED STANDARDS AND GUIDELINES*

- A. ASTM F2170 "Standard Test Method for Determining Relative Humidity In Concrete Floor Slabs Using In-Situ Probes"
- B. ASTM F710 "Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring"
- C. ACI 302.2R-06 "Guideline for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials"
- D. ASTM F2772-11 "Standard Specification for Athletic Performance Properties of Indoor Sports Floor Systems"

**END OF SECTION**

**SECTION 09 65 66**  
**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

***PART 1 – GENERAL***

1.1 *SECTION INCLUDES*

- A. Supply and installation of the indoor resilient multipurpose surfacing
- B. Application of the game lines
- C. References for the correct construction and preparation of concrete slabs to receive resilient flooring.

1.2 *SUBMITTALS*

- A. Product Data:
  - 1. Manufacturer's promotional brochures, specifications and installation instructions
- B. Manufacturer Certifications:
  - 1. Provide certification that accurately identifies the Original Equipment Manufacturer (OEM) of flooring furnished for this project including manufacturer's name, address and factory location.
  - 2. Suppliers of private label flooring for this project must identify themselves as such and fully disclose the OEM information listed above.
  - 3. All "manufacturer" requirements in these specifications must be complied with by the OEM, including warranties, certifications, qualifications, product data, test results, environmental requirements, performance data, etc.
- C. Samples:
  - 1. Submit for selection and approval three (3) sets of the indoor resilient multipurpose surfacing, manufacturer's brochures, samples or sample boards of all of the available colors, textures and styles.
  - 2. Submit color samples of all the available game line paint colors for selection and approval.
- D. Closeout Submittals:
  - 1. Submit three (3) copies of the indoor resilient multipurpose surfacing and manufacturer's maintenance instructions.
  - 2. Submit three (3) copies of the material and installation warranties as specified.

1.3 *QUALITY ASSURANCE*

- A. Qualifications:
  - 1. The indoor resilient multipurpose surfacing shall have been actively marketed for a minimum of ten (10) years.
  - 2. The indoor resilient multipurpose surfacing shall be manufactured in an ISO 9001 certified plant.
  - 3. The indoor resilient multipurpose surfacing shall be manufactured in an ISO 14001 certified plant.
  - 4. The indoor resilient multipurpose surfacing supplier shall be an established firm, experienced in the field, and competent in the techniques required by the manufacturer.
  - 5. The installer of the indoor resilient multipurpose surfacing shall have a minimum of five (5) years of experience in the field installing indoor resilient multipurpose surfacing and have worked on at least five (5) projects of similar size, type and complexity.

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

- B. Certifications:
  - 1. Installer to submit the indoor resilient athletic surfacing manufacturer's certification attesting that they are a trained installer of the indoor resilient multipurpose surfacing.
  - 2. The indoor resilient multipurpose surfacing manufacturer to submit official ISO 9001 certification for the facility in which the indoor resilient multipurpose surfacing is manufactured.
- C. Testing:
  - 1. Tests shall be relative for multi-purpose use with certificates from independent testing resources to be made available upon request.
  - 2. Test results shall be no more than 5 years old and performed according to ASTM standard testing procedures.

1.4 *DELIVERY, STORAGE AND HANDLING*

- A. Delivery:

Material shall not be delivered until all related work is in place and finished and/or proper storage facilities and conditions can be provided and guaranteed stable according to FieldTurf USA, Inc. recommendations.
- B. Storage:
  - 1. Store the material in a secure, clean and dry location.
  - 2. Maintain temperature between 55° and 85° Fahrenheit.
  - 3. Store the indoor resilient athletic surfacing rolls in an upright position on a smooth flat surface immediately upon delivery to jobsite.
  - 4. Rolls shipped in rigid protective cardboard containers can be laid horizontally prior to unpacking and installation.

1.5 *PROJECT/SITE CONDITIONS*

- A. It is the responsibility of the general contractor/construction manager to maintain project/site conditions acceptable for the installation of the indoor resilient multipurpose flooring.
- B. The area in which the indoor resilient multipurpose surfacing will be installed shall be dry and weather tight. Permanent heat, light and ventilation shall be installed and operable.
- C. All other trades shall have completed their work prior to the installation of the resilient athletic flooring. The general contractor or construction manager shall maintain a secure and clean working environment before, during and after the installation.
- D. Maintain a stable room temperature of at least 65°F for a minimum of one (1) week prior to, during and thereafter installation.
- E. An effective low-permeance vapor barrier is placed directly beneath the concrete subfloor. For "on" or "below grade" installations, it is recommended to provide a permanent vapor barrier resistant to long term hydrostatic pressure/moisture exposure. Protrusions should be sealed to prevent moisture migration into the slab. Moisture should not be allowed to enter the slab after the completed construction.
- F. Concrete subfloor surface pH level within the 7 to 11 range dependent upon installation type.
- G. Concrete subfloor should be no greater than 1/8" within a 10 ft diameter. This tolerance can be measured in accordance with ASTM E1155. A specified ( $F_F$ ) of 50 and an ( $F_L$ ) of 30 should reach this degree of floor flatness and floor level. There is no numerical correlation between F numbers and the deviation from the straight

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

edge. However, the above specified numbers should achieve a flat floor with minimal deviation in the slab. Reference ACI 117 and ACI 302.1R. The general contractor should provide a certificate of compliance with the above recommendations.

- H. Concrete subfloor must be clean and free of all foreign materials or objects including, but not limited to, curing compounds and sealers.
- I. Fill cracks, grooves, voids, depressions, and other minor imperfections. Follow the manufacturer's directions. Moveable joints must be treated utilizing specific transitioning joint devices depending upon the architect's recommendations. Follow current ASTM F710 guidelines for the preparation of concrete slabs to receive resilient flooring.
- J. Refer to ACI 302.2R "Guidelines for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials" for concrete design and construction.
- K. Concrete slab shall be fortified with continual steel reinforcement. Fiber reinforcement alone shall not be considered adequate fortification.

**1.6 WARRANTY**

**A. Materials:**

The indoor resilient athletic surfacing shall be covered by the manufacturer against surfacing product defects for 30 years. The manufacturer of the indoor resilient multipurpose surfacing must provide this warranty upon request.

**B. Installation:**

The installation of the indoor resilient multipurpose surfacing shall be covered against poor workmanship and faulty installation by a two (2) year written, limited warranty provided by the contractor performing/overseeing the installation.

**1.7 ADDITIONAL MATERIALS**

- A. Furnish to the owner additional materials containing a total of at least 1% of each different color or design of the indoor resilient athletic surfacing used on the project.

**1.8 LEED™ CERTIFICATION**

- A. The indoor resilient athletic surfacing should be able to help this facility to achieve points towards *LEED™ certification*. Flooring system must be certified by FloorScore.
- B. LEED categories positively affected by the indoor resilient athletic surfacing:

Product Type			PU with Recycled Base Layer
<b>Building Reuse Maintain Interior Nonstructural Elements</b>	<b>MR 1.2</b>	Renovation	1
<b>Construction Waste Management</b>	<b>MR 2</b>	Renovation	2
<b>Recycled Content</b>	<b>MR 4</b>	New/Renovation	2
	<b>20% - 2 points</b>		
<b>Regional Materials</b>	<b>MR 5</b>	New/Renovation	2
	<b>20% - 2 points</b>		
<b>Materials and Resources Rapidly Renewable Materials</b>	<b>MR 6</b>	New/Renovation	1
<b>Indoor Environmental Air Quality Low VOC Adhesives/Sealants</b>	<b>IEQ 4.1</b>	New/Renovation	1
<b>Low-emitting Materials Paints and Coatings</b>	<b>IEQ 4.2</b>	New/Renovation	1

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

***PART 2 - PRODUCTS***

2.1 *MANUFACTURERS*

- A. The basis of the design for the indoor resilient multipurpose surfacing is Polyturf Plus Pad and Pour 9+2 and Lumaflex system as manufactured by Tarkett.
- B. All other installation accessories and related components must be either made or approved by the indoor resilient athletic surfacing manufacturer.
- C. Other products may be approved as equal if deemed qualified and submitted in accordance with the General Conditions.
- D. Test reports confirming compliance from an independent sports laboratory must be provided along with samples, technical data, installation, maintenance, and warranty prior to acceptance as an alternative product.

2.2 *MATERIALS*

Flooring System:

Polyturf Plus Pad and Pour 9+2 (11mm total thickness) consists of a recycled resilient sheet force reduction layer integrated with seamless, liquid applied, and self-leveling 2 mm polyurethane topcoat.

A durable protective color coat shall be applied to a thickness of approximately 7 mils. The finished product shall be a seamless surface heterogeneous resilient multipurpose synthetic flooring system. System shall comply with the following criteria. Colors to be selected from manufacturer's standard range.

The Lumaflex System shall incorporate Lumaflex double tongue and grooved multi-ply engineered panels, force reduction cushion, and appropriate vapor retarder.

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

A. Physical properties of the indoor resilient athletic surfacing shall conform to the following minimums:

Properties	Standards	PolyTurf Plus Pad & Pour		
		Base Mat + Wear Coat +Top Coat		
<b>Base Mat Properties</b>				
<b>Width</b>		59"		
<b>Length</b>		82 lin. ft		
<b>Weight</b>		1.2 lb/sq ft		
<b>Density</b>	ASTM D297	.67 min (g/cm <sup>3</sup> )		
<b>Tensile Strength</b>	ASTM D412	88 psi (Die Cast C)		
<b>Elongation</b>	ASTM D412	48.5% (Die Cast C)		
<b>Compression</b>	ASTM F36	@50 psi 87%	@100 psi 91%	@200 psi 91%
<b>Tear Strength</b>	ASTM D624	30 PPI Die C		
<b>Flexibility</b>	ASTM F147	0-1		
<b>Compression Set B</b>	ASTM D395	37% (25% deflection 158°F/22hrs)		
<b>Compression Set B</b>	ASTM D395	26% (50% deflection 158°F/22hrs)		
<b>2mm Wear Coat Properties</b>				
<b>Shore Hardness</b>	Shore A	80		
<b>Tensile Strength</b>	ASTM D412	1600psi		
<b>Elongation</b>	ASTM D412	150%		
<b>Tear Strength</b>	ASTM D624	122PLI		
<b>Misc Technical</b>				
<b>Environmental Certification</b>	GreenGuard	GreenGuard Plus Certified		
<b>Sports Characteristics</b>				
<b>Overall Thickness</b>		42 mm		
<b>Shock Absorption</b>	ASTM F2772	Class 4		
<b>Ball Bounce</b>	ASTM F2772	>90%		
<b>Vertical Deformation</b>	ASTM F2772	Passed		
<b>Surface Finish Effect</b>	ASTM F2772	Passed		

- B. Adhesive: As approved by the indoor resilient athletic surfacing manufacturer.
- C. Game Line Paint and Primer: As approved by the indoor resilient athletic surfacing manufacturer.
- D. Colors selected from standard color range.

**PART 3 - EXECUTION**

3.1 EXAMINATION



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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

- A. It is the responsibility of the general contractor/construction manager to ensure that project/site conditions are acceptable for the installation of the indoor resilient athletic flooring.
- B. Verify that the area in which the indoor resilient athletic surfacing will be installed is dry and weather tight. Verify that permanent heat, light and ventilation are installed and operable.
- C. Verify that all other work that could cause damage, dirt and dust or interrupt the normal pace of the indoor resilient athletic flooring installation is completed or suspended.
- D. Verify that there is a stable room temperature of at least 65°F.
- E. Verify that there are no foreign materials or objects on the subfloor and that the subfloor is clean and ready for installation.
- F. Concrete Subfloor: moisture content less than 85% RH when tested per ASTM F2170.
- G. Follow Fieldturf USA, Inc. installation recommendations.
- H. Do not average the results of the tests. Report all field test results in writing to the General Contractor, Architect, and End User prior to installation.
- I. Verify that the concrete subfloor surface pH level is within the 7 - 11 range.
- J. Document the results confirming the slab is within manufacturer's tolerances for slab deviation.

3.2 *PREPARATION OF SURFACES*

- A. Sand the entire surface of the concrete slab.
- B. Sweep the concrete slab so as to remove all dirt and dust. If a sweeping compound is to be used it must be a sweeping compound that does not contain oil or other items that may inhibit the adhesive bond.
- C. Slab must be dust free. In the event that dust impairs adhesive bond, priming the slab prior to application of adhesive may be necessary. Follow installation guidelines.
- D. Follow OSHA guidelines.

3.3 *INSTALLATION*

- A. The installation area shall be closed to all traffic and activity for a period to be set by the indoor resilient athletic surfacing installer. The indoor resilient athletic surfacing installation shall not begin until the installer is familiar with the existing conditions.
- B. All necessary precautions should be taken to minimize noise, smell, dust, the use of hazardous materials and any other items that may inconvenience others.
- C. Install the indoor resilient athletic surfacing in strict accordance with the indoor resilient athletic surfacing manufacturer's written instructions.
- D. Paint game lines using approved game line paint primer and game line paint in strict accordance with the game line paint manufacturer's instructions.
- E. Install appropriate threshold plates or transition strips where necessary.

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

2.0 *CLEANING*

- A. Remove all unused materials, tools, and equipment and dispose of any debris properly. Clean the indoor resilient athletic surfacing in accordance with the manufacturer's instructions.

3.6 *PROTECTION*

- A. If required, protect the indoor resilient athletic surfacing from damage using coverings approved by the manufacturer until acceptance of work by the customer or their authorized representative.

3.7 *RELATED STANDARDS AND GUIDELINES*

- A. ASTM F2170 "Standard Test Method for Determining Relative Humidity In Concrete Floor Slabs Using In-Situ Probes"
- B. ASTM F710 "Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring"
- C. ACI 302.2R-06 "Guideline for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials"
- D. ASTM F2772-11 "Standard Specification for Athletic Performance Properties of Indoor Sports Floor Systems"

**END OF SECTION**

**SECTION 09645**  
**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC**  
**SURFACING**

**PART 1 – GENERAL**

- 1.1 *SECTION INCLUDES*
- A. Supply and installation of the indoor resilient multipurpose surfacing
  - B. Application of the game lines
  - C. References for the construction and preparation of concrete slabs to receive resilient flooring.
- 1.2 *SUBMITTALS*
- A. Product Data:  
Manufacturer's promotional brochures, specifications and installation instructions
  - B. Samples:
    - 1. Submit for selection and approval three (3) sets of the indoor resilient multipurpose surfacing, manufacturer's brochures, samples or sample boards of all of the available colors, textures and styles.
    - 2. Submit color samples of all the available game line paint colors for selection and approval.
  - C. Closeout Submittals:
    - 1. Submit three (3) copies of the indoor resilient multipurpose surfacing and manufacturer's maintenance instructions.
    - 2. Submit three (3) copies of the material and installation warranties as specified.
- 1.3 *QUALITY ASSURANCE*
- A. Qualifications:
    - 1. The indoor resilient multipurpose surfacing shall have been actively marketed for a minimum of ten (10) years.
    - 2. The indoor resilient multipurpose surfacing shall be manufactured in an ISO 9001 certified plant.
    - 4. The indoor resilient multipurpose surfacing supplier shall be an established firm, experienced in the field, and appointed as a distributor by the manufacturer of the indoor resilient multipurpose surfacing.
    - 5. The installer of the indoor resilient multipurpose surfacing shall have a minimum of five (5) years of experience in the field installing indoor resilient multipurpose surfacing and have worked on at least five (5) projects of similar size, type and complexity.
  - B. Certifications:
    - 1. Installer to submit the indoor resilient athletic surfacing manufacturer's certification attesting that they are an approved installer of the indoor resilient multipurpose surfacing.
    - 2. The indoor resilient multipurpose surfacing manufacturer to submit official ISO 9001 certification for the facility in which the indoor resilient multipurpose surfacing is manufactured.

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**SURFACING**

C. Testing:  
Tests shall be relative for multi-purpose use with certificates from independent testing resources to be made available upon request. Test results shall be no more than 5 years old and performed according to ASTM standard testing procedures.

B. Certifications:  
3. Installer to submit the indoor resilient athletic surfacing manufacturer's or distributor's certification attesting that they are an approved installer of the indoor resilient multipurpose surfacing.

C. Testing:  
Tests shall be relative for multi-purpose use with certificates from independent testing resources to be made available upon request. Test results shall be no more than 5 years old and performed according to ASTM F2772 standard testing procedures for force reduction, ball bounce, vertical deformation, and surface finish effect.

1.4 *DELIVERY, STORAGE AND HANDLING*

A. Delivery:  
Material shall not be delivered until all related work is in place and finished and/or proper storage facilities and conditions can be provided and guaranteed stable according to Fieldturf<sup>®</sup> recommendations.

B. Storage:  
Store the material in a secure, clean and dry location. Maintain temperature between 55° and 85° Fahrenheit.

1.5 *PROJECT/SITE CONDITIONS*

A. It is the responsibility of the general contractor/construction manager to maintain project/site conditions acceptable for the installation of the indoor resilient multipurpose flooring.

B. The area in which the indoor resilient multipurpose surfacing will be installed shall be dry and weather tight. Permanent heat, light and ventilation shall be installed and operable.

C. All other trades shall have completed their work prior to the installation of the resilient athletic flooring. The general contractor or Construction Manager shall maintain a secure and clean working environment before, during and after the installation. Suspension of other trades' work may be authorized providing their work will not damage the new flooring.

D. Maintain a stable room temperature of at least 65°F for a minimum of one (1) week prior to, during, and thereafter installation.

E. An effective low-permeance vapor barrier is placed directly beneath the concrete subfloor. For "on" or "below grade" installations, it is recommended to provide a permanent vapor barrier resistant to long term hydrostatic pressure/moisture exposure. Protrusions should be sealed to prevent moisture migration into the slab. Moisture should not be allowed to

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enter the slab after the completed construction.

- F. Concrete subfloor surface pH level within the 7 to 10 range dependent upon installation type.
- G. Concrete subfloor should be no greater than 1/8" within a 10 ft diameter. This tolerance can be measured in accordance with ASTM E1155. A specified ( $F_F$ ) of 50 and an ( $F_L$ ) of 30 should reach this degree of floor flatness and floor level. There is no numerical correlation between  $F$  numbers and the deviation from the straight edge, however the above specified numbers should achieve a flat floor with minimal deviation in the slab. Reference ACI 117 and ACI 302.1R. The general contractor should provide a certificate of compliance with the above recommendations.
- H. Concrete subfloor must be clean and free of all foreign materials or objects including, but not limited to, curing compounds and sealers.
- I. Fill cracks, grooves, voids, depressions, and other minor imperfections with Ardex (or equal) cement-based patching/leveling compounds. Follow the manufacturer's directions. Moveable joints must be treated utilizing specific transition joint devices depending upon the architect's recommendations. Follow current ASTM F710 guidelines for the preparation of concrete slabs to receive resilient flooring.
- J. Refer to ACI 302.2R "Guidelines for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials" for concrete design and construction.
- K. Concrete slab shall be fortified with continual steel reinforcement. Fiber reinforcement alone shall not be considered adequate fortification.

1.6 **WARRANTY**

A. **Materials:**

The indoor resilient athletic surfacing shall be covered by the manufacturer against product defects for 30 years and moisture warranty for 10 years. The manufacturer of the indoor resilient multipurpose surfacing must provide this warranty upon request.

B. **Installation:**

The installation of the indoor resilient multipurpose surfacing shall be covered against poor workmanship and faulty installation by a two (2) year written, limited warranty provided by the contractor performing/overseeing the installation.

1.7 **ADDITIONAL MATERIALS**

Furnish to the owner additional materials containing a total of at least 1% of each different color or design of the indoor resilient athletic surfacing used on the project.

1.8 **LEED™ CERTIFICATION**

The indoor resilient athletic surfacing should be able to help this facility to achieve points towards *LEED™* certification.

LEED categories positively affected by the indoor resilient athletic surfacing:

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**SURFACING**

Product Type			PU with Recycled Base Layer
<b>Building Reuse Maintain Interior Nonstructural Elements</b>	<b>MR 1.2</b>	Renovation	1
<b>Construction Waste Management</b>	<b>MR 2</b>	Renovation	2
<b>Recycled Content</b>	<b>MR 4</b>	New/Renovation	2
	<b>20% - 2 points</b>		
<b>Regional Materials</b>	<b>MR 5</b>	New/Renovation	2
	<b>20% - 2 points</b>		
<b>Materials and Resources Rapidly Renewable Materials</b>	<b>MR 6</b>	New/Renovation	1
<b>Indoor Environmental Air Quality Low VOC Adhesives/Sealants</b>	<b>IEQ 4.1</b>	New/Renovation	1
<b>Low-emitting Materials Paints and Coatings</b>	<b>IEQ 4.2</b>	New/Renovation	1

**PART 2 - PRODUCTS**

2.1 *MANUFACTURERS*

The basis of the design for the indoor resilient multipurpose surfacing is Polyturf Plus Pad and Pour as provided by Fieldturf or equal. Product shall be manufactured by an ISO 9001 company.

2.2 *MATERIALS.*

A.) Flooring System:

Polyturf Plus 4+2 (6mm total thickness) consists of a recycled resilient sheet force reduction layer integrated with seamless, liquid applied, and self-leveling 2 mm polyurethane topcoat.

A durable protective color coat shall be applied to a thickness of approximately 7 mils. The finished product shall be a seamless surface heterogeneous resilient multipurpose synthetic flooring system. System shall comply with the following criteria. Colors to be selected from manufacturer's standard range.

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Properties	Standards	PolyTurf Plus Pad & Pour		
		Base Mat + Wear Coat +Top Coat		
<b>Base Mat Properties</b>				
Width		59"		
Length		82 lin. ft		
Weight		1.2 lb/sq ft		
Density	ASTM D297	.67 min (g/cm <sup>3</sup> )		
Tensile Strength	ASTM D412	88 psi (Die Cast C)		
Elongation	ASTM D412	48.5% (Die Cast C)		
Compression	ASTM F36	@50 psi 87%	@100 psi 91%	@200 psi 91%
Tear Strength	ASTM D624	30 PPI Die C		
Flexibility	ASTM F147	0-1		
Compression Set B	ASTM D395	37% (25% deflection 158°F/22hrs)		
Compression Set B	ASTM D395	26% (50% deflection 158°F/22hrs)		
<b>2mm Wear Coat Properties</b>				
Shore Hardness	Shore A	80		
Tensile Strength	ASTM D412	3200psi		
Elongation	ASTM D412	340%		
Tear Strength	ASTM D624	360PLI		
<b>Misc Technical</b>				
Fire Classification	ASTM E648	Class 1		
Environmental Certification	GreenGuard	GreenGuard Plus Certified		
<b>Sports Characteristics</b>				
Overall Thickness		4+2 (6mm)		
Shock Absorption	ASTM F2772	Class 1		
Ball Bounce I	ASTM F2772	>90%		
Vertical Deformation	ASTM F2772	Passed		
Surface Finish Effect	ASTM F2772	Passed		
Installation with Multi-Poxy		92% Per ASTM F2170		

**Game Line Paint:**

As approved by the indoor resilient athletic surfacing manufacturer. Colors are to be selected from the manufacturer's standard range.

**PART 3 - EXECUTION**

3.1 *EXAMINATION*

- A. It is the responsibility of the general contractor/construction manager to ensure that project/site conditions are acceptable for the installation of the indoor resilient athletic flooring.
- B. Verify that the area in which the indoor resilient athletic surfacing will be installed is dry and weather tight. Verify that permanent heat, light and ventilation is installed and operable.
- C. Verify that all other work that could cause damage, dirt and dust or interrupt the normal pace of the indoor resilient athletic flooring installation is completed or suspended.
- D. Verify that there is a stable room temperature of at least 65°F.
- E. Verify that there are no foreign materials or objects on the subfloor and that the subfloor is clean and ready for installation.

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- F. Moisture content less than 98 % RH when tested per ASTM F2170. Follow Fieldturf Installation Recommendations.
- G. If both tests are performed, use the highest value. Do not average the results of the tests. Report all field test results in writing to the General Contractor, Architect, and End User prior to installation.
- H. Verify that the concrete subfloor surface pH level is within the 7 - 10 range.
- I. Document the results indicating the slab is within manufacturer's tolerances for slab deviation.

3.2 *PREPARATION OF SURFACES*

- A. Sand the entire surface of the concrete slab.
- B. Sweep the concrete slab so as to remove all dirt and dust. If a sweeping compound is to be used it must be a sweeping compound that does not contain oil or other items that may inhibit the adhesive bond.
- C. Slab must be dust free. In the event that dust impairs adhesive bond, priming the slab prior to application of adhesive may be necessary. Follow installation guidelines.

3.3 *INSTALLATION*

- A. The installation area shall be closed to all traffic and activity for a period to be set by the indoor resilient athletic surfacing installer. The indoor resilient athletic surfacing installation shall not begin until the installer is familiar with the existing conditions.
- B. All necessary precautions should be taken to minimize noise, smell, dust, the use of hazardous materials, and any other items that may inconvenience others.
- C. Install the indoor resilient athletic surfacing in strict accordance with the indoor resilient athletic surfacing manufacturer's written instructions.
- D. Paint game lines using approved game line paint primer and game line paint in strict accordance with the game line paint manufacturer's instructions.
- E. Install appropriate threshold plates or transition strips where necessary.
- F. Use only approved adhesive as recommended by the manufacturer.

3.4 *CLEANING*

- A. Remove all unused materials, tools, and equipment and dispose of any debris properly. Clean the indoor resilient athletic surfacing in accordance with the manufacturer's instructions.

3.5 *PROTECTION*

If required, protect the indoor resilient athletic surfacing from damage using coverings approved by the manufacturer until acceptance of work by the customer or their authorized representative.

3.6 *RELATED STANDARDS AND GUIDELINES*

- A. ASTM F2170 "Standard Test Method for Determining Relative Humidity In Concrete Floor Slabs Using In-Situ Probes"
- B. ASTM F710 "Standard Practice for Preparing Concrete Floors to Receive



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- Resilient Flooring”
- C. ACI 302.2R-06 “Guideline for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials”

**END OF SECTION**

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**PART 1 – GENERAL**

- 1.1 *SECTION INCLUDES*
- A. Supply and installation of the indoor resilient multipurpose surfacing
  - B. Application of the game lines
  - C. References for the construction and preparation of concrete slabs to receive resilient flooring.
- 1.2 *SUBMITTALS*
- A. Product Data:  
Manufacturer's promotional brochures, specifications and installation instructions
  - B. Samples:
    - 1. Submit for selection and approval three (3) sets of the indoor resilient multipurpose surfacing, manufacturer's brochures, samples or sample boards of all of the available colors, textures and styles.
    - 2. Submit color samples of all the available game line paint colors for selection and approval.
  - C. Closeout Submittals:
    - 1. Submit three (3) copies of the indoor resilient multipurpose surfacing and manufacturer's maintenance instructions.
    - 2. Submit three (3) copies of the material and installation warranties as specified.
- 1.3 *QUALITY ASSURANCE*
- A. Qualifications:
    - 1. The indoor resilient multipurpose surfacing shall have been actively marketed for a minimum of ten (10) years.
    - 2. The indoor resilient multipurpose surfacing shall be manufactured in an ISO 9001 certified plant.
    - 4. The indoor resilient multipurpose surfacing supplier shall be an established firm, experienced in the field, and appointed as a distributor by the manufacturer of the indoor resilient multipurpose surfacing.
    - 5. The installer of the indoor resilient multipurpose surfacing shall have a minimum of five (5) years of experience in the field installing indoor resilient multipurpose surfacing and have worked on at least five (5) projects of similar size, type and complexity.
  - B. Certifications:
    - 1. Installer to submit the indoor resilient athletic surfacing manufacturer's certification attesting that they are an approved installer of the indoor resilient multipurpose surfacing.
    - 2. The indoor resilient multipurpose surfacing manufacturer to submit official ISO 9001 certification for the facility in which the indoor resilient multipurpose surfacing is manufactured.
  - C. Testing:  
Tests shall be relative for multi-purpose use with certificates from independent testing resources to be made available upon request. Test

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results shall be no more than 5 years old and performed according to ASTM standard testing procedures.

B. Certifications:

3. Installer to submit the indoor resilient athletic surfacing manufacturer's or distributor's certification attesting that they are an approved installer of the indoor resilient multipurpose surfacing.

C. Testing:

Tests shall be relative for multi-purpose use with certificates from independent testing resources to be made available upon request. Test results shall be no more than 5 years old and performed according to ASTM F2772 standard testing procedures for force reduction, ball bounce, vertical deformation, and surface finish effect.

#### 1.4 *DELIVERY, STORAGE AND HANDLING*

A. Delivery:

Material shall not be delivered until all related work is in place and finished and/or proper storage facilities and conditions can be provided and guaranteed stable according to Fieldturf® recommendations.

B. Storage:

Store the material in a secure, clean and dry location. Maintain temperature between 55° and 85° Fahrenheit.

#### 1.5 *PROJECT/SITE CONDITIONS*

- A. It is the responsibility of the general contractor/construction manager to maintain project/site conditions acceptable for the installation of the indoor resilient multipurpose flooring.
- B. The area in which the indoor resilient multipurpose surfacing will be installed shall be dry and weather tight. Permanent heat, light and ventilation shall be installed and operable.
- C. All other trades shall have completed their work prior to the installation of the resilient athletic flooring. The general contractor or Construction Manager shall maintain a secure and clean working environment before, during and after the installation. Suspension of other trades' work may be authorized providing their work will not damage the new flooring.
- D. Maintain a stable room temperature of at least 65°F for a minimum of one (1) week prior to, during, and thereafter installation.
- E. An effective low-permeance vapor barrier is placed directly beneath the concrete subfloor. For "on" or "below grade" installations, it is recommended to provide a permanent vapor barrier resistant to long term hydrostatic pressure/moisture exposure. Protrusions should be sealed to prevent moisture migration into the slab. Moisture should not be allowed to enter the slab after the completed construction.
- F. Concrete subfloor surface pH level within the 7 to 10 range dependent upon installation type.
- G. Concrete subfloor should be no greater than 1/8" within a 10 ft diameter. This tolerance can be measured in accordance with ASTM E1155. A specified ( $F_F$ ) of 50 and an ( $F_L$ ) of 30 should reach this degree of floor

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flatness and floor level. There is no numerical correlation between F numbers and the deviation from the straight edge, however the above specified numbers should achieve a flat floor with minimal deviation in the slab. Reference ACI 117 and ACI 302.1R. The general contractor should provide a certificate of compliance with the above recommendations.

- H. Concrete subfloor must be clean and free of all foreign materials or objects including, but not limited to, curing compounds and sealers.
- I. Fill cracks, grooves, voids, depressions, and other minor imperfections with Ardex (or equal) cement-based patching/leveling compounds. Follow the manufacturer’s directions. Moveable joints must be treated utilizing specific transition joint devices depending upon the architect’s recommendations. Follow current ASTM F710 guidelines for the preparation of concrete slabs to receive resilient flooring.
- J. Refer to ACI 302.2R “Guidelines for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials” for concrete design and construction.
- K. Concrete slab shall be fortified with continual steel reinforcement. Fiber reinforcement alone shall not be considered adequate fortification.

**1.6 WARRANTY**

**A. Materials:**

The indoor resilient athletic surfacing shall be covered by the manufacturer against product defects for 30 years and moisture warranty for 10 years. The manufacturer of the indoor resilient multipurpose surfacing must provide this warranty upon request.

**B. Installation:**

The installation of the indoor resilient multipurpose surfacing shall be covered against poor workmanship and faulty installation by a two (2) year written, limited warranty provided by the contractor performing/overseeing the installation.

**1.7 ADDITIONAL MATERIALS**

Furnish to the owner additional materials containing a total of at least 1% of each different color or design of the indoor resilient athletic surfacing used on the project.

**1.8 LEED™ CERTIFICATION**

The indoor resilient athletic surfacing should be able to help this facility to achieve points towards LEED™ certification.

LEED categories positively affected by the indoor resilient athletic surfacing:

Product Type			PU with Recycled Base Layer
<b>Building Reuse Maintain Interior Nonstructural Elements</b>	<b>MR 1.2</b>	Renovation	1
<b>Construction Waste Management</b>	<b>MR 2</b>	Renovation	2
<b>Recycled Content</b>	<b>MR 4</b>	New/Renovation	2
	<b>20% - 2 points</b>		
<b>Regional Materials</b>	<b>MR 5</b>	New/Renovation	2
	<b>20% - 2 points</b>		

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Materials and Resources Rapidly Renewable Materials	MR 6	New/Renovation	1
Indoor Environmental Air Quality Low VOC Adhesives/Sealants	IEQ 4.1	New/Renovation	1
Low-emitting Materials Paints and Coatings	IEQ 4.2	New/Renovation	1

**PART 2 - PRODUCTS**

2.1 *MANUFACTURERS*

The basis of the design for the indoor resilient multipurpose surfacing is Polyturf Plus Pad and Pour as provided by Fieldturf or equal. Product shall be manufactured by an ISO 9001 company.

2.2 *MATERIALS.*

A.) Flooring System:

Polyturf Plus 4+2 (6 mm total thickness) consists of a recycled resilient sheet force reduction layer integrated with seamless, liquid applied, and self-leveling 2 mm polyurethane topcoat.

A durable protective color coat shall be applied to a thickness of approximately 7 mils. The finished product shall be a seamless surface heterogeneous resilient multipurpose synthetic flooring system. System shall comply with the following criteria. Colors to be selected from manufacturer's standard range.

Properties	Standards	PolyTurf Plus Pad & Pour		
		Base Mat + Wear Coat +Top Coat		
<b>Base Mat Properties</b>				
Width		59"		
Length		82 lin. ft		
Weight		1.2 lb/sq ft		
Density	ASTM D297	.67 min (g/cm <sup>3</sup> )		
Tensile Strength	ASTM D412	88 psi (Die Cast C)		
Elongation	ASTM D412	48.5% (Die Cast C)		
Compression	ASTM F36	@50 psi 87%	@100 psi 91%	@200 psi 91%
Tear Strength	ASTM D624	30 PPI Die C		
Flexibility	ASTM F147	0-1		
Compression Set B	ASTM D395	37% (25% deflection 158°F/22hrs)		
Compression Set B	ASTM D395	26% (50% deflection 158°F/22hrs)		
<b>2mm Wear Coat Properties</b>				
Shore Hardness	Shore A	80		
Tensile Strength	ASTM D412	3200 psi		
Elongation	ASTM D412	340%		
Tear Strength	ASTM D624	360 PLI		
<b>Misc Technical</b>				
Fire Classification	ASTM E648	Class 1		
Environmental Certification	GreenGuard	GreenGuard Plus Certified		
<b>Sports Characteristics</b>				
Overall Thickness		4+2 (6 mm)		
Shock Absorption	ASTM F2772	Class 1		
Ball Bounce	ASTM F2772	>90%		
Vertical Deformation	ASTM F2772	Passed		
Surface Finish Effect	ASTM F2772	Passed		
Installation with Multi-Poxy		92% Per ASTM F2170		

s approved by the indoor resilient athletic surfacing manufacturer. Colors are to be selected from the manufacturer's standard range.

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B. Tarkolay – A high quality low permeance slip sheet vapor retarder designed to separate the installed system from the substrate below. Tarkolay as manufactured by FieldTurf USA, Inc. can be used below, on, or above grade substrates that experience elevated moisture conditions. Moisture tolerances shall not exceed 100% RH per ASTM F2170.

1. Physical properties of the vapor retarder shall conform to the following minimums:

Width	.....	6'6" (2 m)
Length	.....	147'7" (45 m) approx.
Total Thickness	.....	1.3 mm
Dimensional Stability	PASSED	.01% (EN 1434)
Permeance	Excellent	<0.20 (ASTM E96)

**PART 3 - EXECUTION**

3.1 *EXAMINATION*

- A. It is the responsibility of the general contractor/construction manager to ensure that project/site conditions are acceptable for the installation of the indoor resilient athletic flooring.
- B. Verify that the area in which the indoor resilient athletic surfacing will be installed is dry and weather tight. Verify that permanent heat, light and ventilation is installed and operable.
- C. Verify that all other work that could cause damage, dirt and dust or interrupt the normal pace of the indoor resilient athletic flooring installation is completed or suspended.
- D. Verify that there is a stable room temperature of at least 65°F.
- E. Verify that there are no foreign materials or objects on the subfloor and that the subfloor is clean and ready for installation.
- F. Moisture content less than 98 % RH when tested per ASTM F2170. Follow Fieldturf Installation Recommendations.
- G. Do not average the results of the tests. Report all field test results in writing to the General Contractor, Architect, and End User prior to installation.
- H. Verify that the concrete subfloor surface pH level is within the 7 - 10 range.
- I. Document the results indicating the slab is within manufacturer's tolerances for slab deviation.

3.2 *PREPARATION OF SURFACES*

- A. Sand the entire surface of the concrete slab.
- B. Sweep the concrete slab so as to remove all dirt and dust. If a sweeping compound is to be used it must be a sweeping compound that does not contain oil or other items that may inhibit the adhesive bond.
- C. Slab must be dust free. In the event that dust impairs adhesive bond, priming the slab prior to application of adhesive may be necessary. Follow installation guidelines.

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**3.3**     ***INSTALLATION***

- A. The installation area shall be closed to all traffic and activity for a period to be set by the indoor resilient athletic surfacing installer. The indoor resilient athletic surfacing installation shall not begin until the installer is familiar with the existing conditions.
- B. All necessary precautions should be taken to minimize noise, smell, dust, the use of hazardous materials, and any other items that may inconvenience others.
- C. Install the indoor resilient athletic surfacing in strict accordance with the indoor resilient athletic surfacing manufacturer's written instructions.
- D. Paint game lines using approved game line paint primer and game line paint in strict accordance with the game line paint manufacturer's instructions.
- E. Install appropriate threshold plates or transition strips where necessary.
- F. Use only approved adhesive as recommended by the manufacturer.

**3.4**     ***CLEANING***

- A. Remove all unused materials, tools, and equipment and dispose of any debris properly. Clean the indoor resilient athletic surfacing in accordance with the manufacturer's instructions.

**3.5**     ***PROTECTION***

If required, protect the indoor resilient athletic surfacing from damage using coverings approved by the manufacturer until acceptance of work by the customer or their authorized representative.

**3.6**     **RELATED STANDARDS AND GUIDELINES**

- A. ASTM F2170 "Standard Test Method for Determining Relative Humidity In Concrete Floor Slabs Using In-Situ Probes"
- B. ASTM F710 "Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring"
- C. ACI 302.2R-06 "Guideline for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials"

**END OF SECTION**

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC**  
**SURFACING**

**PART 1 – GENERAL**

- 1.1 *SECTION INCLUDES*
- A. Supply and installation of the indoor resilient multipurpose surfacing
  - B. Application of the game lines
  - C. References for the construction and preparation of concrete slabs to receive resilient flooring.
- 1.2 *SUBMITTALS*
- A. Product Data:  
Manufacturer's promotional brochures, specifications and installation instructions
  - B. Samples:
    - 1. Submit for selection and approval three (3) sets of the indoor resilient multipurpose surfacing, manufacturer's brochures, samples or sample boards of all of the available colors, textures and styles.
    - 2. Submit color samples of all the available game line paint colors for selection and approval.
  - C. Closeout Submittals:
    - 1. Submit three (3) copies of the indoor resilient multipurpose surfacing and manufacturer's maintenance instructions.
    - 2. Submit three (3) copies of the material and installation warranties as specified.
- 1.3 *QUALITY ASSURANCE*
- A. Qualifications:
    - 1. The indoor resilient multipurpose surfacing shall have been actively marketed for a minimum of ten (10) years.
    - 2. The indoor resilient multipurpose surfacing shall be manufactured in an ISO 9001 certified plant.
    - 4. The indoor resilient multipurpose surfacing supplier shall be an established firm, experienced in the field, and appointed as a distributor by the manufacturer of the indoor resilient multipurpose surfacing.
    - 5. The installer of the indoor resilient multipurpose surfacing shall have a minimum of five (5) years of experience in the field installing indoor resilient multipurpose surfacing and have worked on at least five (5) projects of similar size, type and complexity.
  - B. Certifications:
    - 1. Installer to submit the indoor resilient athletic surfacing manufacturer's certification attesting that they are an approved installer of the indoor resilient multipurpose surfacing.
    - 2. The indoor resilient multipurpose surfacing manufacturer to submit official ISO 9001 certification for the facility in which the indoor resilient multipurpose surfacing is manufactured.



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C. Testing:  
Tests shall be relative for multi-purpose use with certificates from independent testing resources to be made available upon request. Test results shall be no more than 5 years old and performed according to ASTM standard testing procedures.

B. Certifications:  
3. Installer to submit the indoor resilient athletic surfacing manufacturer's or distributor's certification attesting that they are an approved installer of the indoor resilient multipurpose surfacing.

C. Testing:  
Tests shall be relative for multi-purpose use with certificates from independent testing resources to be made available upon request. Test results shall be no more than 5 years old and performed according to ASTM F2772 standard testing procedures for force reduction, ball bounce, vertical deformation, and surface finish effect.

1.4 *DELIVERY, STORAGE AND HANDLING*

A. Delivery:  
Material shall not be delivered until all related work is in place and finished and/or proper storage facilities and conditions can be provided and guaranteed stable according to Fieldturf<sup>®</sup> recommendations.

B. Storage:  
Store the material in a secure, clean and dry location. Maintain temperature between 55° and 85° Fahrenheit.

1.5 *PROJECT/SITE CONDITIONS*

A. It is the responsibility of the general contractor/construction manager to maintain project/site conditions acceptable for the installation of the indoor resilient multipurpose flooring.

B. The area in which the indoor resilient multipurpose surfacing will be installed shall be dry and weather tight. Permanent heat, light and ventilation shall be installed and operable.

C. All other trades shall have completed their work prior to the installation of the resilient athletic flooring. The general contractor or Construction Manager shall maintain a secure and clean working environment before, during and after the installation. Suspension of other trades' work may be authorized providing their work will not damage the new flooring.

D. Maintain a stable room temperature of at least 65°F for a minimum of one (1) week prior to, during, and thereafter installation.

E. An effective low-permeance vapor barrier is placed directly beneath the concrete subfloor. For "on" or "below grade" installations, it is recommended to provide a permanent vapor barrier resistant to long term hydrostatic pressure/moisture exposure. Protrusions should be sealed to prevent moisture migration into the slab. Moisture should not be allowed to

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enter the slab after the completed construction.

- F. Concrete subfloor surface pH level within the 7 to 10 range dependent upon installation type.
- G. Concrete subfloor should be no greater than 1/8" within a 10 ft diameter. This tolerance can be measured in accordance with ASTM E1155. A specified ( $F_F$ ) of 50 and an ( $F_L$ ) of 30 should reach this degree of floor flatness and floor level. There is no numerical correlation between  $F$  numbers and the deviation from the straight edge, however the above specified numbers should achieve a flat floor with minimal deviation in the slab. Reference ACI 117 and ACI 302.1R. The general contractor should provide a certificate of compliance with the above recommendations.
- H. Concrete subfloor must be clean and free of all foreign materials or objects including, but not limited to, curing compounds and sealers.
- I. Fill cracks, grooves, voids, depressions, and other minor imperfections with Ardex (or equal) cement-based patching/leveling compounds. Follow the manufacturer's directions. Moveable joints must be treated utilizing specific transitioning joint devices depending upon the architect's recommendations. Follow current ASTM F710 guidelines for the preparation of concrete slabs to receive resilient flooring.
- J. Refer to ACI 302.2R "Guidelines for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials" for concrete design and construction.
- K. Concrete slab shall be fortified with continual steel reinforcement. Fiber reinforcement alone shall not be considered adequate fortification.

1.6 **WARRANTY**

A. **Materials:**

The indoor resilient athletic surfacing shall be covered by the manufacturer against product defects for 30 years and moisture warranty for 10 years. The manufacturer of the indoor resilient multipurpose surfacing must provide this warranty upon request.

B. **Installation:**

The installation of the indoor resilient multipurpose surfacing shall be covered against poor workmanship and faulty installation by a two (2) year written, limited warranty provided by the contractor performing/overseeing the installation.

1.7 **ADDITIONAL MATERIALS**

Furnish to the owner additional materials containing a total of at least 1% of each different color or design of the indoor resilient athletic surfacing used on the project.

1.8 **LEED™ CERTIFICATION**

The indoor resilient athletic surfacing should be able to help this facility to achieve points towards *LEED™* certification.

LEED categories positively affected by the indoor resilient athletic surfacing:

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Product Type			PU with Recycled Base Layer
<b>Building Reuse Maintain Interior Nonstructural Elements</b>	<b>MR 1.2</b>	Renovation	1
<b>Construction Waste Management</b>	<b>MR 2</b>	Renovation	2
<b>Recycled Content</b>	<b>MR 4</b>	New/Renovation	2
	<b>20% - 2 points</b>		
<b>Regional Materials</b>	<b>MR 5</b>	New/Renovation	2
	<b>20% - 2 points</b>		
<b>Materials and Resources Rapidly Renewable Materials</b>	<b>MR 6</b>	New/Renovation	1
<b>Indoor Environmental Air Quality Low VOC Adhesives/Sealants</b>	<b>IEQ 4.1</b>	New/Renovation	1
<b>Low-emitting Materials Paints and Coatings</b>	<b>IEQ 4.2</b>	New/Renovation	1

**PART 2 - PRODUCTS**

2.1 *MANUFACTURERS*

The basis of the design for the indoor resilient multipurpose surfacing is Polyturf Plus Pad and Pour as provided by Fieldturf or equal. Product shall be manufactured by an ISO 9001 company.

2.2 *MATERIALS.*

A.) Flooring System:

Polyturf Plus 7+2 (9mm total thickness) consists of a recycled resilient sheet force reduction layer integrated with seamless, liquid applied, and self-leveling 2 mm polyurethane topcoat.

A durable protective color coat shall be applied to a thickness of approximately 7 mils. The finished product shall be a seamless surface heterogeneous resilient multipurpose synthetic flooring system. System shall comply with the following criteria. Colors to be selected from manufacturer's standard range.

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Properties	Standards	PolyTurf Plus Pad & Pour		
		Base Mat + Wear Coat +Top Coat		
<b>Base Mat Properties</b>				
Width		59"		
Length		82 lin. ft		
Weight		1.2 lb/sq ft		
Density	ASTM D297	.67 min (g/cm <sup>3</sup> )		
Tensile Strength	ASTM D412	88 psi (Die Cast C)		
Elongation	ASTM D412	48.5% (Die Cast C)		
Compression	ASTM F36	@50 psi 87%	@100 psi 91%	@200 psi 91%
Tear Strength	ASTM D624	30 PPI Die C		
Flexibility	ASTM F147	0-1		
Compression Set B	ASTM D395	37% (25% deflection 158°F/22hrs)		
Compression Set B	ASTM D395	26% (50% deflection 158°F/22hrs)		
<b>2mm Wear Coat Properties</b>				
Shore Hardness	Shore A	80		
Tensile Strength	ASTM D412	3200 psi		
Elongation	ASTM D412	340%		
Tear Strength	ASTM D624	360 PLI		
<b>Misc Technical</b>				
Fire Classification	ASTM E648	Class 1		
Environmental Certification	GreenGuard	GreenGuard Plus Certified		
<b>Sports Characteristics</b>				
Overall Thickness		7+2 (9mm)		
Shock Absorption	ASTM F2772	Class 2		
Ball Bounce I	ASTM F2772	>90%		
Vertical Deformation	ASTM F2772	Passed		
Surface Finish Effect	ASTM F2772	Passed		
Installation with Multi-Poxy		92% Per ASTM F2170		

**Game Line Paint:**

As approved by the indoor resilient athletic surfacing manufacturer. Colors are to be selected from the manufacturer's standard range.

**PART 3 - EXECUTION**

3.1 *EXAMINATION*

- A. It is the responsibility of the general contractor/construction manager to ensure that project/site conditions are acceptable for the installation of the indoor resilient athletic flooring.
- B. Verify that the area in which the indoor resilient athletic surfacing will be installed is dry and weather tight. Verify that permanent heat, light and ventilation is installed and operable.
- C. Verify that all other work that could cause damage, dirt and dust or interrupt the normal pace of the indoor resilient athletic flooring installation is completed or suspended.
- D. Verify that there is a stable room temperature of at least 65°F.
- E. Verify that there are no foreign materials or objects on the subfloor and that the subfloor is clean and ready for installation.

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- F. Moisture content less than 98 % RH when tested per ASTM F2170. Follow Fieldturf Installation Recommendations.
- G. If both tests are performed, use the highest value. Do not average the results of the tests. Report all field test results in writing to the General Contractor, Architect, and End User prior to installation.
- H. Verify that the concrete subfloor surface pH level is within the 7 - 10 range.
- I. Document the results indicating the slab is within manufacturer's tolerances for slab deviation.

3.2 *PREPARATION OF SURFACES*

- A. Sand the entire surface of the concrete slab.
- B. Sweep the concrete slab so as to remove all dirt and dust. If a sweeping compound is to be used it must be a sweeping compound that does not contain oil or other items that may inhibit the adhesive bond.
- C. Slab must be dust free. In the event that dust impairs adhesive bond, priming the slab prior to application of adhesive may be necessary. Follow installation guidelines.

3.3 *INSTALLATION*

- A. The installation area shall be closed to all traffic and activity for a period to be set by the indoor resilient athletic surfacing installer. The indoor resilient athletic surfacing installation shall not begin until the installer is familiar with the existing conditions.
- B. All necessary precautions should be taken to minimize noise, smell, dust, the use of hazardous materials, and any other items that may inconvenience others.
- C. Install the indoor resilient athletic surfacing in strict accordance with the indoor resilient athletic surfacing manufacturer's written instructions.
- D. Paint game lines using approved game line paint primer and game line paint in strict accordance with the game line paint manufacturer's instructions.
- E. Install appropriate threshold plates or transition strips where necessary.
- F. Use only approved adhesive as recommended by the manufacturer.

3.4 *CLEANING*

- A. Remove all unused materials, tools, and equipment and dispose of any debris properly. Clean the indoor resilient athletic surfacing in accordance with the manufacturer's instructions.

3.5 *PROTECTION*

If required, protect the indoor resilient athletic surfacing from damage using coverings approved by the manufacturer until acceptance of work by the customer or their authorized representative.

3.6 *RELATED STANDARDS AND GUIDELINES*

- A. ASTM F2170 "Standard Test Method for Determining Relative Humidity In Concrete Floor Slabs Using In-Situ Probes"
- B. ASTM F710 "Standard Practice for Preparing Concrete Floors to Receive

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- Resilient Flooring”
- C. ACI 302.2R-06 “Guideline for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials”

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**PART 1 – GENERAL**

- 1.1 *SECTION INCLUDES*
- A. Supply and installation of the indoor resilient multipurpose surfacing
  - B. Application of the game lines
  - C. References for the construction and preparation of concrete slabs to receive resilient flooring.
- 1.2 *SUBMITTALS*
- A. Product Data:  
Manufacturer's promotional brochures, specifications and installation instructions
  - B. Samples:
    - 1. Submit for selection and approval three (3) sets of the indoor resilient multipurpose surfacing, manufacturer's brochures, samples or sample boards of all of the available colors, textures and styles.
    - 2. Submit color samples of all the available game line paint colors for selection and approval.
  - C. Closeout Submittals:
    - 1. Submit three (3) copies of the indoor resilient multipurpose surfacing and manufacturer's maintenance instructions.
    - 2. Submit three (3) copies of the material and installation warranties as specified.
- 1.3 *QUALITY ASSURANCE*
- A. Qualifications:
    - 1. The indoor resilient multipurpose surfacing shall have been actively marketed for a minimum of ten (10) years.
    - 2. The indoor resilient multipurpose surfacing shall be manufactured in an ISO 9001 certified plant.
    - 4. The indoor resilient multipurpose surfacing supplier shall be an established firm, experienced in the field, and appointed as a distributor by the manufacturer of the indoor resilient multipurpose surfacing.
    - 5. The installer of the indoor resilient multipurpose surfacing shall have a minimum of five (5) years of experience in the field installing indoor resilient multipurpose surfacing and have worked on at least five (5) projects of similar size, type and complexity.
  - B. Certifications:
    - 1. Installer to submit the indoor resilient athletic surfacing manufacturer's certification attesting that they are an approved installer of the indoor resilient multipurpose surfacing.
    - 2. The indoor resilient multipurpose surfacing manufacturer to submit official ISO 9001 certification for the facility in which the indoor resilient multipurpose surfacing is manufactured.
  - C. Testing:  
Tests shall be relative for multi-purpose use with certificates from independent testing resources to be made available upon request. Test

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results shall be no more than 5 years old and performed according to ASTM standard testing procedures.

B. Certifications:

3. Installer to submit the indoor resilient athletic surfacing manufacturer's or distributor's certification attesting that they are an approved installer of the indoor resilient multipurpose surfacing.

C. Testing:

Tests shall be relative for multi-purpose use with certificates from independent testing resources to be made available upon request. Test results shall be no more than 5 years old and performed according to ASTM F2772 standard testing procedures for force reduction, ball bounce, vertical deformation, and surface finish effect.

1.4 *DELIVERY, STORAGE AND HANDLING*

A. Delivery:

Material shall not be delivered until all related work is in place and finished and/or proper storage facilities and conditions can be provided and guaranteed stable according to Fieldturf® recommendations.

B. Storage:

Store the material in a secure, clean and dry location. Maintain temperature between 55° and 85° Fahrenheit.

1.5 *PROJECT/SITE CONDITIONS*

A. It is the responsibility of the general contractor/construction manager to maintain project/site conditions acceptable for the installation of the indoor resilient multipurpose flooring.

B. The area in which the indoor resilient multipurpose surfacing will be installed shall be dry and weather tight. Permanent heat, light and ventilation shall be installed and operable.

C. All other trades shall have completed their work prior to the installation of the resilient athletic flooring. The general contractor or Construction Manager shall maintain a secure and clean working environment before, during and after the installation. Suspension of other trades' work may be authorized providing their work will not damage the new flooring.

D. Maintain a stable room temperature of at least 65°F for a minimum of one (1) week prior to, during, and thereafter installation.

E. An effective low-permeance vapor barrier is placed directly beneath the concrete subfloor. For "on" or "below grade" installations, it is recommended to provide a permanent vapor barrier resistant to long term hydrostatic pressure/moisture exposure. Protrusions should be sealed to prevent moisture migration into the slab. Moisture should not be allowed to enter the slab after the completed construction.

F. Concrete subfloor surface pH level within the 7 to 10 range dependent upon installation type.

G. Concrete subfloor should be no greater than 1/8" within a 10 ft diameter.

This tolerance can be measured in accordance with ASTM E1155.

A specified ( $F_F$ ) of 50 and an ( $F_L$ ) of 30 should reach this degree of floor



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flatness and floor level. There is no numerical correlation between F numbers and the deviation from the straight edge, however the above specified numbers should achieve a flat floor with minimal deviation in the slab. Reference ACI 117 and ACI 302.1R. The general contractor should provide a certificate of compliance with the above recommendations.

- H. Concrete subfloor must be clean and free of all foreign materials or objects including, but not limited to, curing compounds and sealers.
- I. Fill cracks, grooves, voids, depressions, and other minor imperfections with Ardex (or equal) cement-based patching/leveling compounds. Follow the manufacturer’s directions. Moveable joints must be treated utilizing specific transition joint devices depending upon the architect’s recommendations. Follow current ASTM F710 guidelines for the preparation of concrete slabs to receive resilient flooring.
- J. Refer to ACI 302.2R “Guidelines for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials” for concrete design and construction.
- K. Concrete slab shall be fortified with continual steel reinforcement. Fiber reinforcement alone shall not be considered adequate fortification.

**1.6 WARRANTY**

**A. Materials:**

The indoor resilient athletic surfacing shall be covered by the manufacturer against product defects for 30 years and moisture warranty for 10 years. The manufacturer of the indoor resilient multipurpose surfacing must provide this warranty upon request.

**B. Installation:**

The installation of the indoor resilient multipurpose surfacing shall be covered against poor workmanship and faulty installation by a two (2) year written, limited warranty provided by the contractor performing/overseeing the installation.

**1.7 ADDITIONAL MATERIALS**

Furnish to the owner additional materials containing a total of at least 1% of each different color or design of the indoor resilient athletic surfacing used on the project.

**1.8 LEED™ CERTIFICATION**

The indoor resilient athletic surfacing should be able to help this facility to achieve points towards LEED™ certification.

LEED categories positively affected by the indoor resilient athletic surfacing:

Product Type			PU with Recycled Base Layer
<b>Building Reuse Maintain Interior Nonstructural Elements</b>	<b>MR 1.2</b>	Renovation	1
<b>Construction Waste Management</b>	<b>MR 2</b>	Renovation	2
<b>Recycled Content</b>	<b>MR 4</b>	New/Renovation	2
	<b>20% - 2 points</b>		
<b>Regional Materials</b>	<b>MR 5</b>	New/Renovation	2
	<b>20% - 2 points</b>		

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

Materials and Resources Rapidly Renewable Materials	MR 6	New/Renovation	1
Indoor Environmental Air Quality Low VOC Adhesives/Sealants	IEQ 4.1	New/Renovation	1
Low-emitting Materials Paints and Coatings	IEQ 4.2	New/Renovation	1

**PART 2 - PRODUCTS**

2.1 *MANUFACTURERS*

The basis of the design for the indoor resilient multipurpose surfacing is Polyturf Plus Pad and Pour as provided by Fieldturf or equal. Product shall be manufactured by an ISO 9001 company.

2.2 *MATERIALS.*

A.) Flooring System:

Polyturf Plus 7+2 (9 mm total thickness) consists of a recycled resilient sheet force reduction layer integrated with seamless, liquid applied, and self-leveling 2 mm polyurethane topcoat.

A durable protective color coat shall be applied to a thickness of approximately 7 mils. The finished product shall be a seamless surface heterogeneous resilient multipurpose synthetic flooring system. System shall comply with the following criteria. Colors to be selected from manufacturer's standard range.

Properties	Standards	PolyTurf Plus Pad & Pour		
		Base Mat + Wear Coat +Top Coat		
<b>Base Mat Properties</b>				
Width		59"		
Length		82 lin. ft		
Weight		1.2 lb/sq ft		
Density	ASTM D297	.67 min (g/cm <sup>3</sup> )		
Tensile Strength	ASTM D412	88 psi (Die Cast C)		
Elongation	ASTM D412	48.5% (Die Cast C)		
Compression	ASTM F36	@50 psi 87%	@100 psi 91%	@200 psi 91%
Tear Strength	ASTM D624	30 PPI Die C		
Flexibility	ASTM F147	0-1		
Compression Set B	ASTM D395	37% (25% deflection 158°F/22hrs)		
Compression Set B	ASTM D395	26% (50% deflection 158°F/22hrs)		
<b>2mm Wear Coat Properties</b>				
Shore Hardness	Shore A	80		
Tensile Strength	ASTM D412	3200 psi		
Elongation	ASTM D412	340%		
Tear Strength	ASTM D624	360 PLI		
<b>Misc Technical</b>				
Fire Classification	ASTM E648	Class 2		
Environmental Certification	GreenGuard	GreenGuard Plus Certified		
<b>Sports Characteristics</b>				
Overall Thickness		7+2 (9 mm)		
Shock Absorption	ASTM F2772	Class 1		
Ball Bounce	ASTM F2772	>90%		
Vertical Deformation	ASTM F2772	Passed		
Surface Finish Effect	ASTM F2772	Passed		
Installation with Multi-Poxy		92% Per ASTM F2170		

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

1. Game Line Paint:

As approved by the indoor resilient athletic surfacing manufacturer. Colors are to be selected from the manufacturer’s standard range.

B. Tarkolay – A high quality low permeance slip sheet vapor retarder designed to separate the installed system from the substrate below. Tarkolay as manufactured by FieldTurf USA, Inc. can be used below, on, or above grade substrates that experience elevated moisture conditions. Moisture tolerances shall not exceed 100% RH per ASTM F2170.

1. Physical properties of the vapor retarder shall conform to the following minimums:

Width	.....	6’6” (2 m)
Length	.....	147’7” (45 m) approx.
Total Thickness	.....	1.3 mm
Dimensional Stability	PASSED	.01% (EN 1434)
Permeance	Excellent	<0.20 (ASTM E96)

**PART 3 - EXECUTION**

3.1 *EXAMINATION*

- A. It is the responsibility of the general contractor/construction manager to ensure that project/site conditions are acceptable for the installation of the indoor resilient athletic flooring.
- B. Verify that the area in which the indoor resilient athletic surfacing will be installed is dry and weather tight. Verify that permanent heat, light and ventilation is installed and operable.
- C. Verify that all other work that could cause damage, dirt and dust or interrupt the normal pace of the indoor resilient athletic flooring installation is completed or suspended.
- D. Verify that there is a stable room temperature of at least 65°F.
- E. Verify that there are no foreign materials or objects on the subfloor and that the subfloor is clean and ready for installation.
- F. Moisture content less than 98 % RH when tested per ASTM F2170. Follow Fieldturf Installation Recommendations.
- G. Do not average the results of the tests. Report all field test results in writing to the General Contractor, Architect, and End User prior to installation.
- H. Verify that the concrete subfloor surface pH level is within the 7 - 10 range.
- I. Document the results indicating the slab is within manufacturer’s tolerances for slab deviation.

3.2 *PREPARATION OF SURFACES*

- A. Sand the entire surface of the concrete slab.
- B. Sweep the concrete slab so as to remove all dirt and dust. If a sweeping compound is to be used it must be a sweeping compound that does not contain oil or other items that may inhibit the adhesive bond.

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

- C. Slab must be dust free. In the event that dust impairs adhesive bond, priming the slab prior to application of adhesive may be necessary. Follow installation guidelines.

3.3 *INSTALLATION*

- A. The installation area shall be closed to all traffic and activity for a period to be set by the indoor resilient athletic surfacing installer. The indoor resilient athletic surfacing installation shall not begin until the installer is familiar with the existing conditions.
- B. All necessary precautions should be taken to minimize noise, smell, dust, the use of hazardous materials, and any other items that may inconvenience others.
- C. Install the indoor resilient athletic surfacing in strict accordance with the indoor resilient athletic surfacing manufacturer's written instructions.
- D. Paint game lines using approved game line paint primer and game line paint in strict accordance with the game line paint manufacturer's instructions.
- E. Install appropriate threshold plates or transition strips where necessary.
- F. Use only approved adhesive as recommended by the manufacturer.

3.4 *CLEANING*

- A. Remove all unused materials, tools, and equipment and dispose of any debris properly. Clean the indoor resilient athletic surfacing in accordance with the manufacturer's instructions.

3.5 *PROTECTION*

If required, protect the indoor resilient athletic surfacing from damage using coverings approved by the manufacturer until acceptance of work by the customer or their authorized representative.

3.6 *RELATED STANDARDS AND GUIDELINES*

- A. ASTM F2170 "Standard Test Method for Determining Relative Humidity In Concrete Floor Slabs Using In-Situ Probes"
- B. ASTM F710 "Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring"
- C. ACI 302.2R-06 "Guideline for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials"

**END OF SECTION**

**SECTION 09645**  
**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC**  
**SURFACING**

**PART 1 – GENERAL**

- 1.1 *SECTION INCLUDES*
- A. Supply and installation of the indoor resilient multipurpose surfacing
  - B. Application of the game lines
  - C. References for the construction and preparation of concrete slabs to receive resilient flooring.
- 1.2 *SUBMITTALS*
- A. Product Data:  
Manufacturer's promotional brochures, specifications and installation instructions
  - B. Samples:
    - 1. Submit for selection and approval three (3) sets of the indoor resilient multipurpose surfacing, manufacturer's brochures, samples or sample boards of all of the available colors, textures and styles.
    - 2. Submit color samples of all the available game line paint colors for selection and approval.
  - C. Closeout Submittals:
    - 1. Submit three (3) copies of the indoor resilient multipurpose surfacing and manufacturer's maintenance instructions.
    - 2. Submit three (3) copies of the material and installation warranties as specified.
- 1.3 *QUALITY ASSURANCE*
- A. Qualifications:
    - 1. The indoor resilient multipurpose surfacing shall have been actively marketed for a minimum of ten (10) years.
    - 2. The indoor resilient multipurpose surfacing shall be manufactured in an ISO 9001 certified plant.
    - 4. The indoor resilient multipurpose surfacing supplier shall be an established firm, experienced in the field, and appointed as a distributor by the manufacturer of the indoor resilient multipurpose surfacing.
    - 5. The installer of the indoor resilient multipurpose surfacing shall have a minimum of five (5) years of experience in the field installing indoor resilient multipurpose surfacing and have worked on at least five (5) projects of similar size, type and complexity.
  - B. Certifications:
    - 1. Installer to submit the indoor resilient athletic surfacing manufacturer's certification attesting that they are an approved installer of the indoor resilient multipurpose surfacing.
    - 2. The indoor resilient multipurpose surfacing manufacturer to submit official ISO 9001 certification for the facility in which the indoor resilient multipurpose surfacing is manufactured.

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**SURFACING**

C. Testing:  
Tests shall be relative for multi-purpose use with certificates from independent testing resources to be made available upon request. Test results shall be no more than 5 years old and performed according to ASTM standard testing procedures.

B. Certifications:  
3. Installer to submit the indoor resilient athletic surfacing manufacturer's or distributor's certification attesting that they are an approved installer of the indoor resilient multipurpose surfacing.

C. Testing:  
Tests shall be relative for multi-purpose use with certificates from independent testing resources to be made available upon request. Test results shall be no more than 5 years old and performed according to ASTM F2772 standard testing procedures for force reduction, ball bounce, vertical deformation, and surface finish effect.

1.4 *DELIVERY, STORAGE AND HANDLING*

A. Delivery:  
Material shall not be delivered until all related work is in place and finished and/or proper storage facilities and conditions can be provided and guaranteed stable according to Fieldturf<sup>®</sup> recommendations.

B. Storage:  
Store the material in a secure, clean and dry location. Maintain temperature between 55° and 85° Fahrenheit.

1.5 *PROJECT/SITE CONDITIONS*

A. It is the responsibility of the general contractor/construction manager to maintain project/site conditions acceptable for the installation of the indoor resilient multipurpose flooring.

B. The area in which the indoor resilient multipurpose surfacing will be installed shall be dry and weather tight. Permanent heat, light and ventilation shall be installed and operable.

C. All other trades shall have completed their work prior to the installation of the resilient athletic flooring. The general contractor or Construction Manager shall maintain a secure and clean working environment before, during and after the installation. Suspension of other trades' work may be authorized providing their work will not damage the new flooring.

D. Maintain a stable room temperature of at least 65°F for a minimum of one (1) week prior to, during, and thereafter installation.

E. An effective low-permeance vapor barrier is placed directly beneath the concrete subfloor. For "on" or "below grade" installations, it is recommended to provide a permanent vapor barrier resistant to long term hydrostatic pressure/moisture exposure. Protrusions should be sealed to prevent moisture migration into the slab. Moisture should not be allowed to

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**SURFACING**

enter the slab after the completed construction.

- F. Concrete subfloor surface pH level within the 7 to 10 range dependent upon installation type.
- G. Concrete subfloor should be no greater than 1/8" within a 10 ft diameter. This tolerance can be measured in accordance with ASTM E1155. A specified ( $F_F$ ) of 50 and an ( $F_L$ ) of 30 should reach this degree of floor flatness and floor level. There is no numerical correlation between  $F$  numbers and the deviation from the straight edge, however the above specified numbers should achieve a flat floor with minimal deviation in the slab. Reference ACI 117 and ACI 302.1R. The general contractor should provide a certificate of compliance with the above recommendations.
- H. Concrete subfloor must be clean and free of all foreign materials or objects including, but not limited to, curing compounds and sealers.
- I. Fill cracks, grooves, voids, depressions, and other minor imperfections with Ardex (or equal) cement-based patching/leveling compounds. Follow the manufacturer's directions. Moveable joints must be treated utilizing specific transitioning joint devices depending upon the architect's recommendations. Follow current ASTM F710 guidelines for the preparation of concrete slabs to receive resilient flooring.
- J. Refer to ACI 302.2R "Guidelines for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials" for concrete design and construction.
- K. Concrete slab shall be fortified with continual steel reinforcement. Fiber reinforcement alone shall not be considered adequate fortification.

1.6 **WARRANTY**

A. **Materials:**

The indoor resilient athletic surfacing shall be covered by the manufacturer against product defects for 30 years and moisture warranty for 10 years. The manufacturer of the indoor resilient multipurpose surfacing must provide this warranty upon request.

B. **Installation:**

The installation of the indoor resilient multipurpose surfacing shall be covered against poor workmanship and faulty installation by a two (2) year written, limited warranty provided by the contractor performing/overseeing the installation.

1.7 **ADDITIONAL MATERIALS**

Furnish to the owner additional materials containing a total of at least 1% of each different color or design of the indoor resilient athletic surfacing used on the project.

1.8 **LEED™ CERTIFICATION**

The indoor resilient athletic surfacing should be able to help this facility to achieve points towards *LEED™* certification.

LEED categories positively affected by the indoor resilient athletic surfacing:

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**SURFACING**

Product Type			PU with Recycled Base Layer
<b>Building Reuse Maintain Interior Nonstructural Elements</b>	<b>MR 1.2</b>	Renovation	1
<b>Construction Waste Management</b>	<b>MR 2</b>	Renovation	2
<b>Recycled Content</b>	<b>MR 4</b>	New/Renovation	2
	<b>20% - 2 points</b>		
<b>Regional Materials</b>	<b>MR 5</b>	New/Renovation	2
	<b>20% - 2 points</b>		
<b>Materials and Resources Rapidly Renewable Materials</b>	<b>MR 6</b>	New/Renovation	1
<b>Indoor Environmental Air Quality Low VOC Adhesives/Sealants</b>	<b>IEQ 4.1</b>	New/Renovation	1
<b>Low-emitting Materials Paints and Coatings</b>	<b>IEQ 4.2</b>	New/Renovation	1

**PART 2 - PRODUCTS**

2.1 *MANUFACTURERS*

The basis of the design for the indoor resilient multipurpose surfacing is Polyurf Plus Pad and Pour as provided by Fieldturf or equal. Product shall be manufactured by an ISO 9001 company.

2.2 *MATERIALS.*

A.) Flooring System:

Polyurf Plus 9+2 (11mm total thickness) consists of a recycled resilient sheet force reduction layer integrated with seamless, liquid applied, and self-leveling 2 mm polyurethane topcoat.

A durable protective color coat shall be applied to a thickness of approximately 7 mils. The finished product shall be a seamless surface heterogeneous resilient multipurpose synthetic flooring system. System shall comply with the following criteria. Colors to be selected from manufacturer's standard range.



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**SURFACING**

Properties	Standards	PolyTurf Plus Pad & Pour		
		Base Mat + Wear Coat +Top Coat		
<b>Base Mat Properties</b>				
Width		59"		
Length		82 lin. ft		
Weight		1.2 lb/sq ft		
Density	ASTM D297	.67 min (g/cm <sup>3</sup> )		
Tensile Strength	ASTM D412	88 psi (Die Cast C)		
Elongation	ASTM D412	48.5% (Die Cast C)		
Compression	ASTM F36	@50 psi 87%	@100 psi 91%	@200 psi 91%
Tear Strength	ASTM D624	30 PPI Die C		
Flexibility	ASTM F147	0-1		
Compression Set B	ASTM D395	37% (25% deflection 158°F/22hrs)		
Compression Set B	ASTM D395	26% (50% deflection 158°F/22hrs)		
<b>2mm Wear Coat Properties</b>				
Shore Hardness	Shore A	80		
Tensile Strength	ASTM D412	3200 psi		
Elongation	ASTM D412	340%		
Tear Strength	ASTM D624	360 PLI		
<b>Misc Technical</b>				
Fire Classification	ASTM E648	Class 1		
Environmental Certification	GreenGuard	GreenGuard Plus Certified		
<b>Sports Characteristics</b>				
Overall Thickness		9+2 (11mm)		
Shock Absorption	ASTM F2772	Class 2		
Ball Bounce	ASTM F2772	>90%		
Vertical Deformation	ASTM F2772	Passed		
Surface Finish Effect	ASTM F2772	Passed		
Installation with Multi-Poxy		92% Per ASTM F2170		

**Game Line Paint:**

As approved by the indoor resilient athletic surfacing manufacturer. Colors are to be selected from the manufacturer's standard range.

**PART 3 - EXECUTION**

3.1 **EXAMINATION**

- A. It is the responsibility of the general contractor/construction manager to ensure that project/site conditions are acceptable for the installation of the indoor resilient athletic flooring.
- B. Verify that the area in which the indoor resilient athletic surfacing will be installed is dry and weather tight. Verify that permanent heat, light and ventilation is installed and operable.
- C. Verify that all other work that could cause damage, dirt and dust or interrupt the normal pace of the indoor resilient athletic flooring installation is completed or suspended.
- D. Verify that there is a stable room temperature of at least 65°F.
- E. Verify that there are no foreign materials or objects on the subfloor and that the subfloor is clean and ready for installation.

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**SURFACING**

- F. Moisture content less than 98 % RH when tested per ASTM F2170. Follow Fieldturf Installation Recommendations.
- G. If both tests are performed, use the highest value. Do not average the results of the tests. Report all field test results in writing to the General Contractor, Architect, and End User prior to installation.
- H. Verify that the concrete subfloor surface pH level is within the 7 - 10 range.
- I. Document the results indicating the slab is within manufacturer's tolerances for slab deviation.

3.2 *PREPARATION OF SURFACES*

- A. Sand the entire surface of the concrete slab.
- B. Sweep the concrete slab so as to remove all dirt and dust. If a sweeping compound is to be used it must be a sweeping compound that does not contain oil or other items that may inhibit the adhesive bond.
- C. Slab must be dust free. In the event that dust impairs adhesive bond, priming the slab prior to application of adhesive may be necessary. Follow installation guidelines.

3.3 *INSTALLATION*

- A. The installation area shall be closed to all traffic and activity for a period to be set by the indoor resilient athletic surfacing installer. The indoor resilient athletic surfacing installation shall not begin until the installer is familiar with the existing conditions.
- B. All necessary precautions should be taken to minimize noise, smell, dust, the use of hazardous materials, and any other items that may inconvenience others.
- C. Install the indoor resilient athletic surfacing in strict accordance with the indoor resilient athletic surfacing manufacturer's written instructions.
- D. Paint game lines using approved game line paint primer and game line paint in strict accordance with the game line paint manufacturer's instructions.
- E. Install appropriate threshold plates or transition strips where necessary.
- F. Use only approved adhesive as recommended by the manufacturer.

3.4 *CLEANING*

- A. Remove all unused materials, tools, and equipment and dispose of any debris properly. Clean the indoor resilient athletic surfacing in accordance with the manufacturer's instructions.

3.5 *PROTECTION*

If required, protect the indoor resilient athletic surfacing from damage using coverings approved by the manufacturer until acceptance of work by the customer or their authorized representative.

3.6 *RELATED STANDARDS AND GUIDELINES*

- A. ASTM F2170 "Standard Test Method for Determining Relative Humidity In Concrete Floor Slabs Using In-Situ Probes"
- B. ASTM F710 "Standard Practice for Preparing Concrete Floors to Receive

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- Resilient Flooring”
- C. ACI 302.2R-06 “Guideline for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials”

**END OF SECTION**

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

**PART 1 – GENERAL**

- 1.1 *SECTION INCLUDES*
- A. Supply and installation of the indoor resilient multipurpose surfacing
  - B. Application of the game lines
  - C. References for the construction and preparation of concrete slabs to receive resilient flooring.
- 1.2 *SUBMITTALS*
- A. Product Data:  
Manufacturer's promotional brochures, specifications and installation instructions
  - B. Samples:
    - 1. Submit for selection and approval three (3) sets of the indoor resilient multipurpose surfacing, manufacturer's brochures, samples or sample boards of all of the available colors, textures and styles.
    - 2. Submit color samples of all the available game line paint colors for selection and approval.
  - C. Closeout Submittals:
    - 1. Submit three (3) copies of the indoor resilient multipurpose surfacing and manufacturer's maintenance instructions.
    - 2. Submit three (3) copies of the material and installation warranties as specified.
- 1.3 *QUALITY ASSURANCE*
- A. Qualifications:
    - 1. The indoor resilient multipurpose surfacing shall have been actively marketed for a minimum of ten (10) years.
    - 2. The indoor resilient multipurpose surfacing shall be manufactured in an ISO 9001 certified plant.
    - 4. The indoor resilient multipurpose surfacing supplier shall be an established firm, experienced in the field, and appointed as a distributor by the manufacturer of the indoor resilient multipurpose surfacing.
    - 5. The installer of the indoor resilient multipurpose surfacing shall have a minimum of five (5) years of experience in the field installing indoor resilient multipurpose surfacing and have worked on at least five (5) projects of similar size, type and complexity.
  - B. Certifications:
    - 1. Installer to submit the indoor resilient athletic surfacing manufacturer's certification attesting that they are an approved installer of the indoor resilient multipurpose surfacing.
    - 2. The indoor resilient multipurpose surfacing manufacturer to submit official ISO 9001 certification for the facility in which the indoor resilient multipurpose surfacing is manufactured.
  - C. Testing:  
Tests shall be relative for multi-purpose use with certificates from independent testing resources to be made available upon request. Test

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results shall be no more than 5 years old and performed according to ASTM standard testing procedures.

B. Certifications:

3. Installer to submit the indoor resilient athletic surfacing manufacturer's or distributor's certification attesting that they are an approved installer of the indoor resilient multipurpose surfacing.

C. Testing:

Tests shall be relative for multi-purpose use with certificates from independent testing resources to be made available upon request. Test results shall be no more than 5 years old and performed according to ASTM F2772 standard testing procedures for force reduction, ball bounce, vertical deformation, and surface finish effect.

#### 1.4 *DELIVERY, STORAGE AND HANDLING*

A. Delivery:

Material shall not be delivered until all related work is in place and finished and/or proper storage facilities and conditions can be provided and guaranteed stable according to Fieldturf® recommendations.

B. Storage:

Store the material in a secure, clean and dry location. Maintain temperature between 55° and 85° Fahrenheit.

#### 1.5 *PROJECT/SITE CONDITIONS*

- A. It is the responsibility of the general contractor/construction manager to maintain project/site conditions acceptable for the installation of the indoor resilient multipurpose flooring.
- B. The area in which the indoor resilient multipurpose surfacing will be installed shall be dry and weather tight. Permanent heat, light and ventilation shall be installed and operable.
- C. All other trades shall have completed their work prior to the installation of the resilient athletic flooring. The general contractor or Construction Manager shall maintain a secure and clean working environment before, during and after the installation. Suspension of other trades' work may be authorized providing their work will not damage the new flooring.
- D. Maintain a stable room temperature of at least 65°F for a minimum of one (1) week prior to, during, and thereafter installation.
- E. An effective low-permeance vapor barrier is placed directly beneath the concrete subfloor. For "on" or "below grade" installations, it is recommended to provide a permanent vapor barrier resistant to long term hydrostatic pressure/moisture exposure. Protrusions should be sealed to prevent moisture migration into the slab. Moisture should not be allowed to enter the slab after the completed construction.
- F. Concrete subfloor surface pH level within the 7 to 10 range dependent upon installation type.
- G. Concrete subfloor should be no greater than 1/8" within a 10 ft diameter. This tolerance can be measured in accordance with ASTM E1155. A specified ( $F_F$ ) of 50 and an ( $F_L$ ) of 30 should reach this degree of floor

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flatness and floor level. There is no numerical correlation between F numbers and the deviation from the straight edge, however the above specified numbers should achieve a flat floor with minimal deviation in the slab. Reference ACI 117 and ACI 302.1R. The general contractor should provide a certificate of compliance with the above recommendations.

- H. Concrete subfloor must be clean and free of all foreign materials or objects including, but not limited to, curing compounds and sealers.
- I. Fill cracks, grooves, voids, depressions, and other minor imperfections with Ardex (or equal) cement-based patching/leveling compounds. Follow the manufacturer’s directions. Moveable joints must be treated utilizing specific transition joint devices depending upon the architect’s recommendations. Follow current ASTM F710 guidelines for the preparation of concrete slabs to receive resilient flooring.
- J. Refer to ACI 302.2R “Guidelines for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials” for concrete design and construction.
- K. Concrete slab shall be fortified with continual steel reinforcement. Fiber reinforcement alone shall not be considered adequate fortification.

**1.6 WARRANTY**

**A. Materials:**

The indoor resilient athletic surfacing shall be covered by the manufacturer against product defects for 30 years and moisture warranty for 10 years. The manufacturer of the indoor resilient multipurpose surfacing must provide this warranty upon request.

**B. Installation:**

The installation of the indoor resilient multipurpose surfacing shall be covered against poor workmanship and faulty installation by a two (2) year written, limited warranty provided by the contractor performing/overseeing the installation.

**1.7 ADDITIONAL MATERIALS**

Furnish to the owner additional materials containing a total of at least 1% of each different color or design of the indoor resilient athletic surfacing used on the project.

**1.8 LEED™ CERTIFICATION**

The indoor resilient athletic surfacing should be able to help this facility to achieve points towards LEED™ certification.

LEED categories positively affected by the indoor resilient athletic surfacing:

Product Type			PU with Recycled Base Layer
<b>Building Reuse Maintain Interior Nonstructural Elements</b>	<b>MR 1.2</b>	Renovation	1
<b>Construction Waste Management</b>	<b>MR 2</b>	Renovation	2
<b>Recycled Content</b>	<b>MR 4</b>	New/Renovation	2
	<b>20% - 2 points</b>		
<b>Regional Materials</b>	<b>MR 5</b>	New/Renovation	2
	<b>20% - 2 points</b>		

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

Materials and Resources Rapidly Renewable Materials	MR 6	New/Renovation	1
Indoor Environmental Air Quality Low VOC Adhesives/Sealants	IEQ 4.1	New/Renovation	1
Low-emitting Materials Paints and Coatings	IEQ 4.2	New/Renovation	1

**PART 2 - PRODUCTS**

2.1 *MANUFACTURERS*

The basis of the design for the indoor resilient multipurpose surfacing is Polyturf Plus Pad and Pour as provided by Fieldturf or equal. Product shall be manufactured by an ISO 9001 company.

2.2 *MATERIALS.*

A.) Flooring System:

Polyturf Plus 9+2 (11 mm total thickness) consists of a recycled resilient sheet force reduction layer integrated with seamless, liquid applied, and self-leveling 2 mm polyurethane topcoat.

A durable protective color coat shall be applied to a thickness of approximately 7 mils. The finished product shall be a seamless surface heterogeneous resilient multipurpose synthetic flooring system. System shall comply with the following criteria. Colors to be selected from manufacturer's standard range.

Properties	Standards	PolyTurf Plus Pad & Pour		
		Base Mat + Wear Coat +Top Coat		
<b>Base Mat Properties</b>				
Width		59"		
Length		82 lin. ft		
Weight		1.2 lb/sq ft		
Density	ASTM D297	.67 min (g/cm <sup>3</sup> )		
Tensile Strength	ASTM D412	88 psi (Die Cast C)		
Elongation	ASTM D412	48.5% (Die Cast C)		
Compression	ASTM F36	@50 psi 87%	@100 psi 91%	@200 psi 91%
Tear Strength	ASTM D624	30 PPI Die C		
Flexibility	ASTM F147	0-1		
Compression Set B	ASTM D395	37% (25% deflection 158°F/22hrs)		
Compression Set B	ASTM D395	26% (50% deflection 158°F/22hrs)		
<b>2mm Wear Coat Properties</b>				
Shore Hardness	Shore A	80		
Tensile Strength	ASTM D412	3200 psi		
Elongation	ASTM D412	340%		
Tear Strength	ASTM D624	360 PLI		
<b>Misc Technical</b>				
Fire Classification	ASTM E648	Class 2		
Environmental Certification	GreenGuard	GreenGuard Plus Certified		
<b>Sports Characteristics</b>				
Overall Thickness		9+2 (11 mm)		
Shock Absorption	ASTM F2772	Class 2		
Ball Bounce	ASTM F2772	>90%		
Vertical Deformation	ASTM F2772	Passed		
Surface Finish Effect	ASTM F2772	Passed		
Installation with Multi-Poxy		92% Per ASTM F2170		

**SECTION 09645**  
**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

1. Game Line Paint:

As approved by the indoor resilient athletic surfacing manufacturer. Colors are to be selected from the manufacturer’s standard range.

B. Tarkolay – A high quality low permeance slip sheet vapor retarder designed to separate the installed system from the substrate below. Tarkolay as manufactured by FieldTurf USA, Inc. can be used below, on, or above grade substrates that experience elevated moisture conditions. Moisture tolerances shall not exceed 100% RH per ASTM F2170.

1. Physical properties of the vapor retarder shall conform to the following minimums:

Width	.....	6’6” (2 m)
Length	.....	147’7” (45 m) approx.
Total Thickness	.....	1.3 mm
Dimensional Stability	PASSED	.01% (EN 1434)
Permeance	Excellent	<0.20 (ASTM E96)

**PART 3 - EXECUTION**

3.1 *EXAMINATION*

- A. It is the responsibility of the general contractor/construction manager to ensure that project/site conditions are acceptable for the installation of the indoor resilient athletic flooring.
- B. Verify that the area in which the indoor resilient athletic surfacing will be installed is dry and weather tight. Verify that permanent heat, light and ventilation is installed and operable.
- C. Verify that all other work that could cause damage, dirt and dust or interrupt the normal pace of the indoor resilient athletic flooring installation is completed or suspended.
- D. Verify that there is a stable room temperature of at least 65°F.
- E. Verify that there are no foreign materials or objects on the subfloor and that the subfloor is clean and ready for installation.
- F. Moisture content less than 98 % RH when tested per ASTM F2170. Follow Fieldturf Installation Recommendations.
- G. Do not average the results of the tests. Report all field test results in writing to the General Contractor, Architect, and End User prior to installation.
- H. Verify that the concrete subfloor surface pH level is within the 7 - 10 range.
- I. Document the results indicating the slab is within manufacturer’s tolerances for slab deviation.

3.2 *PREPARATION OF SURFACES*

- A. Sand the entire surface of the concrete slab.
- B. Sweep the concrete slab so as to remove all dirt and dust. If a sweeping compound is to be used it must be a sweeping compound that does not contain oil or other items that may inhibit the adhesive bond.



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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

- C. Slab must be dust free. In the event that dust impairs adhesive bond, priming the slab prior to application of adhesive may be necessary. Follow installation guidelines.

3.3 *INSTALLATION*

- A. The installation area shall be closed to all traffic and activity for a period to be set by the indoor resilient athletic surfacing installer. The indoor resilient athletic surfacing installation shall not begin until the installer is familiar with the existing conditions.
- B. All necessary precautions should be taken to minimize noise, smell, dust, the use of hazardous materials, and any other items that may inconvenience others.
- C. Install the indoor resilient athletic surfacing in strict accordance with the indoor resilient athletic surfacing manufacturer's written instructions.
- D. Paint game lines using approved game line paint primer and game line paint in strict accordance with the game line paint manufacturer's instructions.
- E. Install appropriate threshold plates or transition strips where necessary.
- F. Use only approved adhesive as recommended by the manufacturer.

3.4 *CLEANING*

- A. Remove all unused materials, tools, and equipment and dispose of any debris properly. Clean the indoor resilient athletic surfacing in accordance with the manufacturer's instructions.

3.5 *PROTECTION*

If required, protect the indoor resilient athletic surfacing from damage using coverings approved by the manufacturer until acceptance of work by the customer or their authorized representative.

3.6 *RELATED STANDARDS AND GUIDELINES*

- A. ASTM F2170 "Standard Test Method for Determining Relative Humidity In Concrete Floor Slabs Using In-Situ Probes"
- B. ASTM F710 "Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring"
- C. ACI 302.2R-06 "Guideline for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials"

**END OF SECTION**

**SECTION 09645**  
**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC**  
**SURFACING**

**PART 1 – GENERAL**

- 1.1 *SECTION INCLUDES*
- A. Supply and installation of the indoor resilient multipurpose surfacing
  - B. Application of the game lines
  - C. References for the construction and preparation of concrete slabs to receive resilient flooring.
- 1.2 *SUBMITTALS*
- A. Product Data:  
Manufacturer's promotional brochures, specifications and installation instructions
  - B. Samples:
    - 1. Submit for selection and approval three (3) sets of the indoor resilient multipurpose surfacing, manufacturer's brochures, samples or sample boards of all of the available colors, textures and styles.
    - 2. Submit color samples of all the available game line paint colors for selection and approval.
  - C. Closeout Submittals:
    - 1. Submit three (3) copies of the indoor resilient multipurpose surfacing and manufacturer's maintenance instructions.
    - 2. Submit three (3) copies of the material and installation warranties as specified.
- 1.3 *QUALITY ASSURANCE*
- A. Qualifications:
    - 1. The indoor resilient multipurpose surfacing shall have been actively marketed for a minimum of ten (10) years.
    - 2. The indoor resilient multipurpose surfacing shall be manufactured in an ISO 9001 certified plant.
    - 4. The indoor resilient multipurpose surfacing supplier shall be an established firm, experienced in the field, and appointed as a distributor by the manufacturer of the indoor resilient multipurpose surfacing.
    - 5. The installer of the indoor resilient multipurpose surfacing shall have a minimum of five (5) years of experience in the field installing indoor resilient multipurpose surfacing and have worked on at least five (5) projects of similar size, type and complexity.
  - B. Certifications:
    - 1. Installer to submit the indoor resilient athletic surfacing manufacturer's certification attesting that they are an approved installer of the indoor resilient multipurpose surfacing.
    - 2. The indoor resilient multipurpose surfacing manufacturer to submit official ISO 9001 certification for the facility in which the indoor resilient multipurpose surfacing is manufactured.

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC**  
**SURFACING**

C. Testing:  
Tests shall be relative for multi-purpose use with certificates from independent testing resources to be made available upon request. Test results shall be no more than 5 years old and performed according to ASTM standard testing procedures.

B. Certifications:  
3. Installer to submit the indoor resilient athletic surfacing manufacturer's or distributor's certification attesting that they are an approved installer of the indoor resilient multipurpose surfacing.

C. Testing:  
Tests shall be relative for multi-purpose use with certificates from independent testing resources to be made available upon request. Test results shall be no more than 5 years old and performed according to ASTM F2772 standard testing procedures for force reduction, ball bounce, vertical deformation, and surface finish effect.

1.4 *DELIVERY, STORAGE AND HANDLING*

A. Delivery:  
Material shall not be delivered until all related work is in place and finished and/or proper storage facilities and conditions can be provided and guaranteed stable according to Fieldturf<sup>®</sup> recommendations.

B. Storage:  
Store the material in a secure, clean and dry location. Maintain temperature between 55° and 85° Fahrenheit.

1.5 *PROJECT/SITE CONDITIONS*

A. It is the responsibility of the general contractor/construction manager to maintain project/site conditions acceptable for the installation of the indoor resilient multipurpose flooring.

B. The area in which the indoor resilient multipurpose surfacing will be installed shall be dry and weather tight. Permanent heat, light and ventilation shall be installed and operable.

C. All other trades shall have completed their work prior to the installation of the resilient athletic flooring. The general contractor or Construction Manager shall maintain a secure and clean working environment before, during and after the installation. Suspension of other trades' work may be authorized providing their work will not damage the new flooring.

D. Maintain a stable room temperature of at least 65°F for a minimum of one (1) week prior to, during, and thereafter installation.

E. An effective low-permeance vapor barrier is placed directly beneath the concrete subfloor. For "on" or "below grade" installations, it is recommended to provide a permanent vapor barrier resistant to long term hydrostatic pressure/moisture exposure. Protrusions should be sealed to prevent moisture migration into the slab. Moisture should not be allowed to

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC**  
**SURFACING**

enter the slab after the completed construction.

- F. Concrete subfloor surface pH level within the 7 to 10 range dependent upon installation type.
- G. Concrete subfloor should be no greater than 1/8" within a 10 ft diameter. This tolerance can be measured in accordance with ASTM E1155. A specified ( $F_F$ ) of 50 and an ( $F_L$ ) of 30 should reach this degree of floor flatness and floor level. There is no numerical correlation between  $F$  numbers and the deviation from the straight edge, however the above specified numbers should achieve a flat floor with minimal deviation in the slab. Reference ACI 117 and ACI 302.1R. The general contractor should provide a certificate of compliance with the above recommendations.
- H. Concrete subfloor must be clean and free of all foreign materials or objects including, but not limited to, curing compounds and sealers.
- I. Fill cracks, grooves, voids, depressions, and other minor imperfections with Ardex (or equal) cement-based patching/leveling compounds. Follow the manufacturer's directions. Moveable joints must be treated utilizing specific transitioning joint devices depending upon the architect's recommendations. Follow current ASTM F710 guidelines for the preparation of concrete slabs to receive resilient flooring.
- J. Refer to ACI 302.2R "Guidelines for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials" for concrete design and construction.
- K. Concrete slab shall be fortified with continual steel reinforcement. Fiber reinforcement alone shall not be considered adequate fortification.

1.6 **WARRANTY**

A. **Materials:**

The indoor resilient athletic surfacing shall be covered by the manufacturer against product defects for 30 years and moisture warranty for 10 years. The manufacturer of the indoor resilient multipurpose surfacing must provide this warranty upon request.

B. **Installation:**

The installation of the indoor resilient multipurpose surfacing shall be covered against poor workmanship and faulty installation by a two (2) year written, limited warranty provided by the contractor performing/overseeing the installation.

1.7 **ADDITIONAL MATERIALS**

Furnish to the owner additional materials containing a total of at least 1% of each different color or design of the indoor resilient athletic surfacing used on the project.

1.8 **LEED™ CERTIFICATION**

The indoor resilient athletic surfacing should be able to help this facility to achieve points towards *LEED™* certification.

LEED categories positively affected by the indoor resilient athletic surfacing:

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Product Type			PU with Recycled Base Layer
<b>Building Reuse Maintain Interior Nonstructural Elements</b>	<b>MR 1.2</b>	Renovation	1
<b>Construction Waste Management</b>	<b>MR 2</b>	Renovation	2
<b>Recycled Content</b>	<b>MR 4</b>	New/Renovation	2
	<b>20% - 2 points</b>		
<b>Regional Materials</b>	<b>MR 5</b>	New/Renovation	2
	<b>20% - 2 points</b>		
<b>Materials and Resources Rapidly Renewable Materials</b>	<b>MR 6</b>	New/Renovation	1
<b>Indoor Environmental Air Quality Low VOC Adhesives/Sealants</b>	<b>IEQ 4.1</b>	New/Renovation	1
<b>Low-emitting Materials Paints and Coatings</b>	<b>IEQ 4.2</b>	New/Renovation	1

**PART 2 - PRODUCTS**

2.1 *MANUFACTURERS*

The basis of the design for the indoor resilient multipurpose surfacing is Polyurf Plus Pad and Pour as provided by Fieldturf or equal. Product shall be manufactured by an ISO 9001 company.

2.2 *MATERIALS.*

A.) Flooring System:

Polyurf Plus 12+2 (11mm total thickness) consists of a recycled resilient sheet force reduction layer integrated with seamless, liquid applied, and self-leveling 2 mm polyurethane topcoat.

A durable protective color coat shall be applied to a thickness of approximately 7 mils. The finished product shall be a seamless surface heterogeneous resilient multipurpose synthetic flooring system. System shall comply with the following criteria. Colors to be selected from manufacturer's standard range.

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**SURFACING**

Properties	Standards	PolyTurf Plus Pad & Pour		
		Base Mat + Wear Coat +Top Coat		
<b>Base Mat Properties</b>				
Width		59"		
Length		82 lin. ft		
Weight		1.2 lb/sq ft		
Density	ASTM D297	.67 min (g/cm <sup>3</sup> )		
Tensile Strength	ASTM D412	88 psi (Die Cast C)		
Elongation	ASTM D412	48.5% (Die Cast C)		
Compression	ASTM F36	@50 psi 87%	@100 psi 91%	@200 psi 91%
Tear Strength	ASTM D624	30 PPI Die C		
Flexibility	ASTM F147	0-1		
Compression Set B	ASTM D395	37% (25% deflection 158°F/22hrs)		
Compression Set B	ASTM D395	26% (50% deflection 158°F/22hrs)		
<b>2mm Wear Coat Properties</b>				
Shore Hardness	Shore A	80		
Tensile Strength	ASTM D412	3200 psi		
Elongation	ASTM D412	340%		
Tear Strength	ASTM D624	360 PLI		
<b>Misc Technical</b>				
Fire Classification	ASTM E648	Class 1		
Environmental Certification	GreenGuard	GreenGuard Plus Certified		
<b>Sports Characteristics</b>				
Overall Thickness		12+2 (14mm)		
Shock Absorption	ASTM F2772	Class 3		
Ball Bounce	ASTM F2772	>90%		
Vertical Deformation	ASTM F2772	Passed		
Surface Finish Effect	ASTM F2772	Passed		
Installation with Multi-Poxy		98% Per ASTM F2170		

**Game Line Paint:**

As approved by the indoor resilient athletic surfacing manufacturer. Colors are to be selected from the manufacturer's standard range.

**PART 3 - EXECUTION**

3.1 **EXAMINATION**

- A. It is the responsibility of the general contractor/construction manager to ensure that project/site conditions are acceptable for the installation of the indoor resilient athletic flooring.
- B. Verify that the area in which the indoor resilient athletic surfacing will be installed is dry and weather tight. Verify that permanent heat, light and ventilation is installed and operable.
- C. Verify that all other work that could cause damage, dirt and dust or interrupt the normal pace of the indoor resilient athletic flooring installation is completed or suspended.
- D. Verify that there is a stable room temperature of at least 65°F.
- E. Verify that there are no foreign materials or objects on the subfloor and that the subfloor is clean and ready for installation.

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**SURFACING**

- F. Moisture content less than 98 % RH when tested per ASTM F2170. Follow Fieldturf Installation Recommendations.
- G. If both tests are performed, use the highest value. Do not average the results of the tests. Report all field test results in writing to the General Contractor, Architect, and End User prior to installation.
- H. Verify that the concrete subfloor surface pH level is within the 7 - 10 range.
- I. Document the results indicating the slab is within manufacturer's tolerances for slab deviation.

3.2 *PREPARATION OF SURFACES*

- A. Sand the entire surface of the concrete slab.
- B. Sweep the concrete slab so as to remove all dirt and dust. If a sweeping compound is to be used it must be a sweeping compound that does not contain oil or other items that may inhibit the adhesive bond.
- C. Slab must be dust free. In the event that dust impairs adhesive bond, priming the slab prior to application of adhesive may be necessary. Follow installation guidelines.

3.3 *INSTALLATION*

- A. The installation area shall be closed to all traffic and activity for a period to be set by the indoor resilient athletic surfacing installer. The indoor resilient athletic surfacing installation shall not begin until the installer is familiar with the existing conditions.
- B. All necessary precautions should be taken to minimize noise, smell, dust, the use of hazardous materials, and any other items that may inconvenience others.
- C. Install the indoor resilient athletic surfacing in strict accordance with the indoor resilient athletic surfacing manufacturer's written instructions.
- D. Paint game lines using approved game line paint primer and game line paint in strict accordance with the game line paint manufacturer's instructions.
- E. Install appropriate threshold plates or transition strips where necessary.
- F. Use only approved adhesive as recommended by the manufacturer.

3.4 *CLEANING*

- A. Remove all unused materials, tools, and equipment and dispose of any debris properly. Clean the indoor resilient athletic surfacing in accordance with the manufacturer's instructions.

3.5 *PROTECTION*

If required, protect the indoor resilient athletic surfacing from damage using coverings approved by the manufacturer until acceptance of work by the customer or their authorized representative.

3.6 *RELATED STANDARDS AND GUIDELINES*

- A. ASTM F2170 "Standard Test Method for Determining Relative Humidity In Concrete Floor Slabs Using In-Situ Probes"
- B. ASTM F710 "Standard Practice for Preparing Concrete Floors to Receive

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- Resilient Flooring”
- C. ACI 302.2R-06 “Guideline for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials”

**END OF SECTION**



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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

**PART 1 – GENERAL**

- 1.1 *SECTION INCLUDES*
- A. Supply and installation of the indoor resilient multipurpose surfacing
  - B. Application of the game lines
  - C. References for the construction and preparation of concrete slabs to receive resilient flooring.
- 1.2 *SUBMITTALS*
- A. Product Data:  
Manufacturer's promotional brochures, specifications and installation instructions
  - B. Samples:
    - 1. Submit for selection and approval three (3) sets of the indoor resilient multipurpose surfacing, manufacturer's brochures, samples or sample boards of all of the available colors, textures and styles.
    - 2. Submit color samples of all the available game line paint colors for selection and approval.
  - C. Closeout Submittals:
    - 1. Submit three (3) copies of the indoor resilient multipurpose surfacing and manufacturer's maintenance instructions.
    - 2. Submit three (3) copies of the material and installation warranties as specified.
- 1.3 *QUALITY ASSURANCE*
- A. Qualifications:
    - 1. The indoor resilient multipurpose surfacing shall have been actively marketed for a minimum of ten (10) years.
    - 2. The indoor resilient multipurpose surfacing shall be manufactured in an ISO 9001 certified plant.
    - 4. The indoor resilient multipurpose surfacing supplier shall be an established firm, experienced in the field, and appointed as a distributor by the manufacturer of the indoor resilient multipurpose surfacing.
    - 5. The installer of the indoor resilient multipurpose surfacing shall have a minimum of five (5) years of experience in the field installing indoor resilient multipurpose surfacing and have worked on at least five (5) projects of similar size, type and complexity.
  - B. Certifications:
    - 1. Installer to submit the indoor resilient athletic surfacing manufacturer's certification attesting that they are an approved installer of the indoor resilient multipurpose surfacing.
    - 2. The indoor resilient multipurpose surfacing manufacturer to submit official ISO 9001 certification for the facility in which the indoor resilient multipurpose surfacing is manufactured.
  - C. Testing:  
Tests shall be relative for multi-purpose use with certificates from independent testing resources to be made available upon request. Test

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### ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING

results shall be no more than 5 years old and performed according to ASTM standard testing procedures.

B. Certifications:

3. Installer to submit the indoor resilient athletic surfacing manufacturer's or distributor's certification attesting that they are an approved installer of the indoor resilient multipurpose surfacing.

C. Testing:

Tests shall be relative for multi-purpose use with certificates from independent testing resources to be made available upon request. Test results shall be no more than 5 years old and performed according to ASTM F2772 standard testing procedures for force reduction, ball bounce, vertical deformation, and surface finish effect.

#### 1.4 *DELIVERY, STORAGE AND HANDLING*

A. Delivery:

Material shall not be delivered until all related work is in place and finished and/or proper storage facilities and conditions can be provided and guaranteed stable according to Fieldturf® recommendations.

B. Storage:

Store the material in a secure, clean and dry location. Maintain temperature between 55° and 85° Fahrenheit.

#### 1.5 *PROJECT/SITE CONDITIONS*

A. It is the responsibility of the general contractor/construction manager to maintain project/site conditions acceptable for the installation of the indoor resilient multipurpose flooring.

B. The area in which the indoor resilient multipurpose surfacing will be installed shall be dry and weather tight. Permanent heat, light and ventilation shall be installed and operable.

C. All other trades shall have completed their work prior to the installation of the resilient athletic flooring. The general contractor or Construction Manager shall maintain a secure and clean working environment before, during and after the installation. Suspension of other trades' work may be authorized providing their work will not damage the new flooring.

D. Maintain a stable room temperature of at least 65°F for a minimum of one (1) week prior to, during, and thereafter installation.

E. An effective low-permeance vapor barrier is placed directly beneath the concrete subfloor. For "on" or "below grade" installations, it is recommended to provide a permanent vapor barrier resistant to long term hydrostatic pressure/moisture exposure. Protrusions should be sealed to prevent moisture migration into the slab. Moisture should not be allowed to enter the slab after the completed construction.

F. Concrete subfloor surface pH level within the 7 to 10 range dependent upon installation type.

G. Concrete subfloor should be no greater than 1/8" within a 10 ft diameter.

This tolerance can be measured in accordance with ASTM E1155.

A specified ( $F_F$ ) of 50 and an ( $F_L$ ) of 30 should reach this degree of floor

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

flatness and floor level. There is no numerical correlation between F numbers and the deviation from the straight edge, however the above specified numbers should achieve a flat floor with minimal deviation in the slab. Reference ACI 117 and ACI 302.1R. The general contractor should provide a certificate of compliance with the above recommendations.

- H. Concrete subfloor must be clean and free of all foreign materials or objects including, but not limited to, curing compounds and sealers.
- I. Fill cracks, grooves, voids, depressions, and other minor imperfections with Ardex (or equal) cement-based patching/leveling compounds. Follow the manufacturer’s directions. Moveable joints must be treated utilizing specific transition joint devices depending upon the architect’s recommendations. Follow current ASTM F710 guidelines for the preparation of concrete slabs to receive resilient flooring.
- J. Refer to ACI 302.2R “Guidelines for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials” for concrete design and construction.
- K. Concrete slab shall be fortified with continual steel reinforcement. Fiber reinforcement alone shall not be considered adequate fortification.

**1.6 WARRANTY**

**A. Materials:**

The indoor resilient athletic surfacing shall be covered by the manufacturer against product defects for 30 years and moisture warranty for 10 years. The manufacturer of the indoor resilient multipurpose surfacing must provide this warranty upon request.

**B. Installation:**

The installation of the indoor resilient multipurpose surfacing shall be covered against poor workmanship and faulty installation by a two (2) year written, limited warranty provided by the contractor performing/overseeing the installation.

**1.7 ADDITIONAL MATERIALS**

Furnish to the owner additional materials containing a total of at least 1% of each different color or design of the indoor resilient athletic surfacing used on the project.

**1.8 LEED™ CERTIFICATION**

The indoor resilient athletic surfacing should be able to help this facility to achieve points towards LEED™ certification.

LEED categories positively affected by the indoor resilient athletic surfacing:

Product Type			PU with Recycled Base Layer
<b>Building Reuse Maintain Interior Nonstructural Elements</b>	<b>MR 1.2</b>	Renovation	1
<b>Construction Waste Management</b>	<b>MR 2</b>	Renovation	2
<b>Recycled Content</b>	<b>MR 4</b>	New/Renovation	2
	<b>20% - 2 points</b>		
<b>Regional Materials</b>	<b>MR 5</b>	New/Renovation	2
	<b>20% - 2 points</b>		

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

Materials and Resources Rapidly Renewable Materials	MR 6	New/Renovation	1
Indoor Environmental Air Quality Low VOC Adhesives/Sealants	IEQ 4.1	New/Renovation	1
Low-emitting Materials Paints and Coatings	IEQ 4.2	New/Renovation	1

**PART 2 - PRODUCTS**

2.1 *MANUFACTURERS*

The basis of the design for the indoor resilient multipurpose surfacing is Polyturf Plus Pad and Pour as provided by Fieldturf or equal. Product shall be manufactured by an ISO 9001 company.

2.2 *MATERIALS.*

A.) Flooring System:

Polyturf Plus 12+2 (11 mm total thickness) consists of a recycled resilient sheet force reduction layer integrated with seamless, liquid applied, and self-leveling 2 mm polyurethane topcoat.

A durable protective color coat shall be applied to a thickness of approximately 7 mils. The finished product shall be a seamless surface heterogeneous resilient multipurpose synthetic flooring system. System shall comply with the following criteria. Colors to be selected from manufacturer's standard range.

Properties	Standards	PolyTurf Plus Pad & Pour		
		Base Mat + Wear Coat +Top Coat		
<b>Base Mat Properties</b>				
Width		59"		
Length		82 lin. ft		
Weight		1.2 lb/sq ft		
Density	ASTM D297	.67 min (g/cm <sup>3</sup> )		
Tensile Strength	ASTM D412	88 psi (Die Cast C)		
Elongation	ASTM D412	48.5% (Die Cast C)		
Compression	ASTM F36	@50 psi 87%	@100 psi 91%	@200 psi 91%
Tear Strength	ASTM D624	30 PPI Die C		
Flexibility	ASTM F147	0-1		
Compression Set B	ASTM D395	37% (25% deflection 158°F/22hrs)		
Compression Set B	ASTM D395	26% (50% deflection 158°F/22hrs)		
<b>2mm Wear Coat Properties</b>				
Shore Hardness	Shore A	80		
Tensile Strength	ASTM D412	3200 psi		
Elongation	ASTM D412	340%		
Tear Strength	ASTM D624	360 PLI		
<b>Misc Technical</b>				
Fire Classification	ASTM E648	Class 2		
Environmental Certification	GreenGuard	GreenGuard Plus Certified		
<b>Sports Characteristics</b>				
Overall Thickness		12+2 (14 mm)		
Shock Absorption	ASTM F2772	Class 3		
Ball Bounce	ASTM F2772	>90%		
Vertical Deformation	ASTM F2772	Passed		
Surface Finish Effect	ASTM F2772	Passed		
Installation with Tarkolay		100% Per ASTM F2170		

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**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING**

1. Game Line Paint:

As approved by the indoor resilient athletic surfacing manufacturer. Colors are to be selected from the manufacturer’s standard range.

B. Tarkolay – A high quality low permeance slip sheet vapor retarder designed to separate the installed system from the substrate below. Tarkolay as manufactured by FieldTurf USA, Inc. can be used below, on, or above grade substrates that experience elevated moisture conditions. Moisture tolerances shall not exceed 100% RH per ASTM F2170.

1. Physical properties of the vapor retarder shall conform to the following minimums:

Width	.....	6’6” (2 m)
Length	.....	147’7” (45 m) approx.
Total Thickness	.....	1.3 mm
Dimensional Stability	PASSED	.01% (EN 1434)
Permeance	Excellent	<0.20 (ASTM E96)

**PART 3 - EXECUTION**

3.1 *EXAMINATION*

- A. It is the responsibility of the general contractor/construction manager to ensure that project/site conditions are acceptable for the installation of the indoor resilient athletic flooring.
- B. Verify that the area in which the indoor resilient athletic surfacing will be installed is dry and weather tight. Verify that permanent heat, light and ventilation is installed and operable.
- C. Verify that all other work that could cause damage, dirt and dust or interrupt the normal pace of the indoor resilient athletic flooring installation is completed or suspended.
- D. Verify that there is a stable room temperature of at least 65°F.
- E. Verify that there are no foreign materials or objects on the subfloor and that the subfloor is clean and ready for installation.
- F. Moisture content less than 100 % RH when tested per ASTM F2170. Follow Fieldturf Installation Recommendations.
- G. Do not average the results of the tests. Report all field test results in writing to the General Contractor, Architect, and End User prior to installation.
- H. Verify that the concrete subfloor surface pH level is within the 7 - 10 range.
- I. Document the results indicating the slab is within manufacturer’s tolerances for slab deviation.

3.2 *PREPARATION OF SURFACES*

- A. Sand the entire surface of the concrete slab.
- B. Sweep the concrete slab so as to remove all dirt and dust. If a sweeping compound is to be used it must be a sweeping compound that does not contain oil or other items that may inhibit the adhesive bond.

## SECTION 09645

### ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC SURFACING

- C. Slab must be dust free. In the event that dust impairs adhesive bond, priming the slab prior to application of adhesive may be necessary. Follow installation guidelines.

#### 3.3 *INSTALLATION*

- A. The installation area shall be closed to all traffic and activity for a period to be set by the indoor resilient athletic surfacing installer. The indoor resilient athletic surfacing installation shall not begin until the installer is familiar with the existing conditions.
- B. All necessary precautions should be taken to minimize noise, smell, dust, the use of hazardous materials, and any other items that may inconvenience others.
- C. Install the indoor resilient athletic surfacing in strict accordance with the indoor resilient athletic surfacing manufacturer's written instructions.
- D. Paint game lines using approved game line paint primer and game line paint in strict accordance with the game line paint manufacturer's instructions.
- E. Install appropriate threshold plates or transition strips where necessary.
- F. Use only approved adhesive as recommended by the manufacturer.

#### 3.4 *CLEANING*

- A. Remove all unused materials, tools, and equipment and dispose of any debris properly. Clean the indoor resilient athletic surfacing in accordance with the manufacturer's instructions.

#### 3.5 *PROTECTION*

If required, protect the indoor resilient athletic surfacing from damage using coverings approved by the manufacturer until acceptance of work by the customer or their authorized representative.

#### 3.6 RELATED STANDARDS AND GUIDELINES

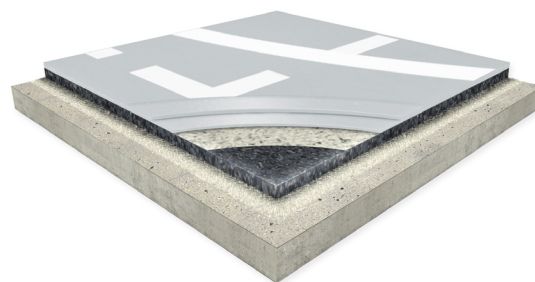
- A. ASTM F2170 "Standard Test Method for Determining Relative Humidity In Concrete Floor Slabs Using In-Situ Probes"
- B. ASTM F710 "Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring"
- C. ACI 302.2R-06 "Guideline for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials"

**END OF SECTION**

# POLYTURF PLUS

13+4 Pad and Pour

PolyTurf Plus Pad and Pour 13+4 is a seamless polyurethane sports surface that is designed for durability and spike resistance. This field-constructed system includes a 4 mm layer of polyurethane with a 7 mm recycled rubber base mat and a 6 mm foam pad underneath for comfort and shock absorption.



## Warranty Protection

- 30-year comprehensive product coverage plus 10-year moisture tolerance coverage. Refer to sample warranty document for complete coverage details.

## Environmental Facts and LEED

- For environmental facts and LEED credits, visit: [tarkettsportsindoor.com/en/specs-and-data/environmental-fact-sheets](http://tarkettsportsindoor.com/en/specs-and-data/environmental-fact-sheets) and [tarkettsportsindoor.com/en/specs-and-data/leed-information](http://tarkettsportsindoor.com/en/specs-and-data/leed-information).

## Maintenance Instructions

- For maintenance instructions, please refer to the PolyTurf Plus Pad and Pour maintenance guide at the following link: [tarkettsportsindoor.com/en/specs-and-data/care-and-maintenance](http://tarkettsportsindoor.com/en/specs-and-data/care-and-maintenance).

## Installation Methods

- Multi-Poxy Adhesive: installation using Tarkett's solvent-free Multi-Poxy adhesive, which allows moisture tolerance of up to 98% relative humidity per ASTM F2170.
- Beybond 50 Adhesive: installation using Beybond 50 two-part polyurethane adhesive, which allows moisture tolerance of up to 92% relative humidity per ASTM F2170.
- Tarkolay with Multi-Poxy: installation over Tarkolay moisture barrier using Tarkett's solvent-free Multi-Poxy adhesive, which allows moisture tolerance of up to 100% relative humidity per ASTM F2170.

## Sports Characteristics

Property	Standard	Value
Surface Finish Effect	ASTM F2772-11	Passed
Force Reduction	ASTM F3189	45.1 %

## Technical Characteristics

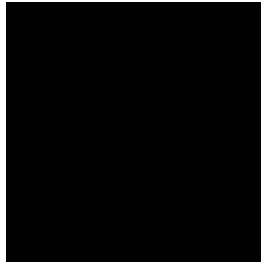
Property	Standard	Value
Reaction to Fire	ASTM E648	Class 1 (Radiant Panel)
Shore Hardness	—	80 (Shore A)
Tensile Strength	ASTM D412	3200 psi
Elongation	ASTM D412	340 %
Tear Strength	ASTM D624	360 PLI
Thickness	—	17.0 mm (0.669") (4 mm Polyurethane + 7 mm Rubber Base Mat + 6 mm Foam Pad)

Compatible substrates include: properly constructed and prepared concrete, wood, asphalt, and cementitious underlayments. Refer to current installation guidelines, ASTM F710, ACI 302.2R, and other industry standard recommendations for more information. Tarkett Sports reserves the right to modify these specifications without affecting their compliance with standards. Some results may vary in relation to certain flexibilities found within specified testing procedures and manufacturing tolerances.

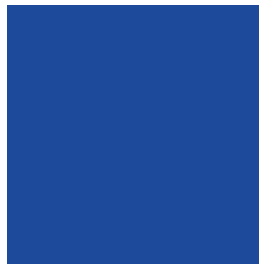
## Available Colors for PolyTurf Plus Pad and Pour 13+4



Beige\_1200-0133



Black\_1200-0091



Blue Blood\_1200-0184



Blue Chip\_1200-0063



Blue Jay\_1200-0125



Blue\_1200-0161



Boyden Green\_1200-0169



Bright Orange\_1200-0065



Bright Red\_1200-0044



Butterfield Yellow\_1200-0177



Chapel Hill Blue\_1200-0073



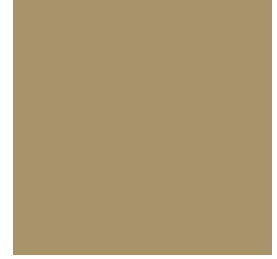
Classic Tan\_1200-0089



Dark Navy Blue\_1200-0081



Deep Blue\_1200-0111



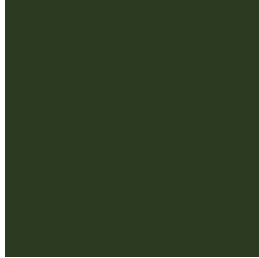
Desert\_1200-0015



Dolphin Grey\_1200-0004



Gallant Gold\_1200-0123



Garden Cucumber\_1200-0155



Garden Green\_1200-0062



Gauntlet Grey\_1200-0154



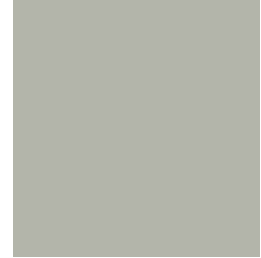
Gold\_1200-0043



Grass Green\_1200-0093



Green\_1200-0113



Grey Cloud\_1200-0085

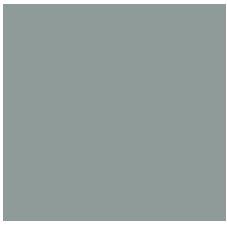


Grey Screen\_1200-0184

The colors presented here are representations only.

For information on obtaining individual color swatches, contact a local Tarkett Sports representative or call 888-364-6541.





Grey Smoke\_1200-0077



Grey\_1200-0060



Light Grey\_1200-0083



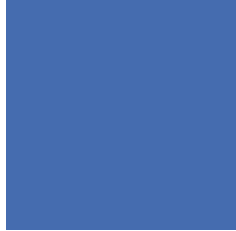
Mid Grey\_1200-0180



Midnight Blue\_1200-0181



Morning Fog\_1200-0066



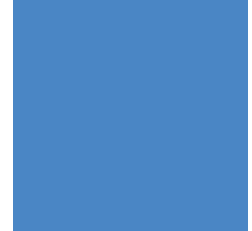
Ocean Blue\_1200-0011



Orange\_1200-0094



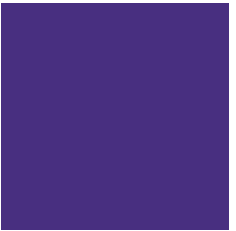
Pink Panther\_1200-0186



Pool Blue\_1200-0096



Purdue Gold\_1200-0162



Purple\_1200-0175



Real Red\_1200-0084



Red Theatre\_1200-0181



Royal Blue\_1200-0037



Sage Green\_1200-0006



Smoothie\_1200-0068



Southern Blue\_1200-0168



Storm Grey\_1200-0102



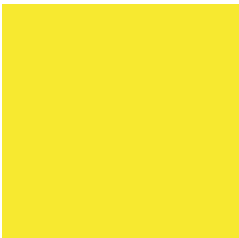
Sundried Tomato\_1200-0122



Tarkett Blue\_1200-0092



Tropical Green\_1200-0135



Vibrant Yellow\_1200-0149



White\_1200-0900



Yellow\_1200-0149

The colors presented here are representations only.

For information on obtaining individual color swatches, contact a local Tarkett Sports representative or call 888-364-6541.

## Game Line Colors



Blue



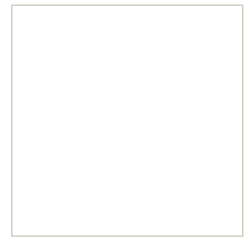
Yellow



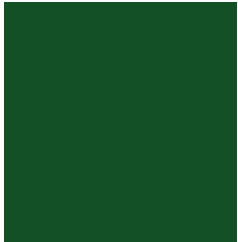
Orange



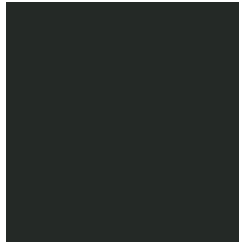
Aviation-Bright Red



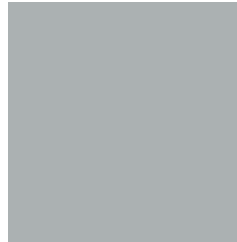
White



Green



Black



Grey

The colors presented here are representations only.

For information on obtaining individual color swatches, contact a local Tarkett Sports representative or call 888-364-6541.

**SECTION 09645**  
**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC**  
**SURFACING**

**PART 1 – GENERAL**

- 1.1 *SECTION INCLUDES*
- A. Supply and installation of the indoor resilient multipurpose surfacing
  - B. Application of the game lines
  - C. References for the construction and preparation of concrete slabs to receive resilient flooring.
- 1.2 *SUBMITTALS*
- A. Product Data:  
Manufacturer's promotional brochures, specifications and installation instructions
  - B. Samples:
    - 1. Submit for selection and approval three (3) sets of the indoor resilient multipurpose surfacing, manufacturer's brochures, samples or sample boards of all of the available colors, textures and styles.
    - 2. Submit color samples of all the available game line paint colors for selection and approval.
  - C. Closeout Submittals:
    - 1. Submit three (3) copies of the indoor resilient multipurpose surfacing and manufacturer's maintenance instructions.
    - 2. Submit three (3) copies of the material and installation warranties as specified.
- 1.3 *QUALITY ASSURANCE*
- A. Qualifications:
    - 1. The indoor resilient multipurpose surfacing shall have been actively marketed for a minimum of ten (10) years.
    - 2. The indoor resilient multipurpose surfacing shall be manufactured in an ISO 9001 certified plant.
    - 4. The indoor resilient multipurpose surfacing supplier shall be an established firm, experienced in the field, and appointed as a distributor by the manufacturer of the indoor resilient multipurpose surfacing.
    - 5. The installer of the indoor resilient multipurpose surfacing shall have a minimum of five (5) years of experience in the field installing indoor resilient multipurpose surfacing and have worked on at least five (5) projects of similar size, type and complexity.
  - B. Certifications:
    - 1. Installer to submit the indoor resilient athletic surfacing manufacturer's certification attesting that they are an approved installer of the indoor resilient multipurpose surfacing.
    - 2. The indoor resilient multipurpose surfacing manufacturer to submit official ISO 9001 certification for the facility in which the indoor resilient multipurpose surfacing is manufactured.

**SECTION 09645**  
**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC**  
**SURFACING**

C. Certifications:

3. Installer to submit the indoor resilient athletic surfacing manufacturer's or distributor's certification attesting that they are an approved installer of the indoor resilient multipurpose surfacing.

1.4 *DELIVERY, STORAGE AND HANDLING*

A. Delivery:

Material shall not be delivered until all related work is in place and finished and/or proper storage facilities and conditions can be provided and guaranteed stable according to Fieldturf<sup>®</sup> recommendations.

B. Storage:

Store the material in a secure, clean and dry location. Maintain temperature between 55° and 85° Fahrenheit.

1.5 *PROJECT/SITE CONDITIONS*

A. The area in which the indoor resilient multipurpose surfacing will be installed shall be dry and weather tight. Permanent heat, light and ventilation shall be installed and operable.

B. All other trades shall have completed their work prior to the installation of the resilient athletic flooring. The general contractor or Construction Manager shall maintain a secure and clean working environment before, during and after the installation. Suspension of other trades' work may be authorized providing their work will not damage the new flooring.

C. Maintain a stable room temperature of at least 65°F for a minimum of one (1) week prior to, during, and thereafter installation.

D. Concrete subfloor should be no greater than 1/8" within a 10 ft diameter.

1.6 *WARRANTY*

A. Materials:

The indoor resilient athletic surfacing shall be covered by the manufacturer against product defects for 30 years. The manufacturer of the indoor resilient multipurpose surfacing must provide this warranty upon request.

B. Installation:

The installation of the indoor resilient multipurpose surfacing shall be covered against poor workmanship and faulty installation by a two (2) year written, limited warranty provided by the contractor performing/overseeing the installation.

1.7 *ADDITIONAL MATERIALS*

Furnish to the owner additional materials containing a total of at least 1% of each different color or design of the indoor resilient athletic surfacing used on the project.

**SECTION 09645**  
**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC**  
**SURFACING**

**PART 2 - PRODUCTS**

2.1 *MANUFACTURERS*

The basis of the design for the indoor resilient multipurpose surfacing is Polyurf Plus Restart as provided by Fieldturf or equal. Product shall be manufactured by an ISO 9001 company.

2.2 *MATERIALS.*

A.) Flooring System:

Polyurf Plus 2mm over pour system.

A durable protective color coat shall be applied to a thickness of approximately 7 mils. The finished product shall be a seamless surface heterogeneous resilient multipurpose synthetic flooring system. System shall comply with the following criteria. Colors to be selected from manufacturer's standard range. Colors selected from standard range.

B. Game Line Paint:

As approved by the indoor resilient athletic surfacing manufacturer. Colors are to be selected from the manufacturer's standard range.

**PART 3 - EXECUTION**

3.1 *EXAMINATION*

- A. Verify that the area in which the indoor resilient athletic surfacing will be installed is dry and weather tight. Verify that permanent heat, light and ventilation is installed and operable.
- B. Verify that all other work that could cause damage, dirt and dust or interrupt the normal pace of the indoor resilient athletic flooring installation is completed or suspended.
- C. Verify that there is a stable room temperature of at least 65°F.
- D. Verify that there are no foreign materials or objects on the subfloor and that the subfloor is clean and ready for installation.
- E. Ambient relative humidity should range between 40%-65%.

3.2 *PREPARATION OF SURFACES*

- A. Sand the entire surface of the existing urethane and vacuum clean.
- B. Surface must be dust free and free of contaminants that may impair proper bonding.

3.3 *INSTALLATION*

- A. The installation area shall be closed to all traffic and activity for a period to be set by the indoor resilient athletic surfacing installer. The indoor resilient

**SECTION 09645**  
**ARCHITECTURAL SPECIFICATIONS FOR INDOOR RESILIENT ATHLETIC**  
**SURFACING**

athletic surfacing installation shall not begin until the installer is familiar with the existing conditions.

- B. All necessary precautions should be taken to minimize noise, smell, dust, the use of hazardous materials, and any other items that may inconvenience others.
- C. Install the indoor resilient athletic surfacing in strict accordance with the indoor resilient athletic surfacing manufacturer's written instructions.
- D. Paint game lines using approved game line paint primer and game line paint in strict accordance with the game line paint manufacturer's instructions.
- E. Install appropriate threshold plates or transition strips where necessary.
- F. Allow the new installation to cure for a minimum of 14 days prior to placement and operation of bleachers and/or other portable athletic equipment.

3.4 *CLEANING*

- A. Remove all unused materials, tools, and equipment and dispose of any debris properly. Clean the indoor resilient athletic surfacing in accordance with the manufacturer's instructions.

3.5 *PROTECTION*

If required, protect the indoor resilient athletic surfacing from damage using coverings approved by the manufacturer until acceptance of work by the customer or their authorized representative.

3.6 RELATED STANDARDS AND GUIDELINES

- A. ASTM F710 "Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring"

**END OF SECTION**



# TEST REPORT

DATE: 09-20-2018

Page 1 of 1

TEST NUMBER: 0250479

<b>CLIENT</b>	Tarkett Sports
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<b>TEST METHOD CONDUCTED</b>	ASTM D6007 Standard Test Method for Determining Formaldehyde Concentrations in Air from Wood Products Using a Small-Scale Chamber
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DESCRIPTION OF TEST SAMPLE	
<b>IDENTIFICATION</b>	Lumaflex
<b>CONSTRUCTION</b>	Birch Composite Plywood
<b>REFERENCE</b>	Invoice FieldTurf USA Inc./Tarkett Sports

## GENERAL PRINCIPLE

This test method covers a small scale procedure for measuring formaldehyde emission potential from wood products. The formaldehyde level is determined by collecting air-borne formaldehyde in a small distilled water reservoir within a closed desiccator. The quantity of formaldehyde is determined by a modification of the National Institute for Occupational Safety and Health (NIOSH) 3500 chromotropic acid test procedure. The sample was deconstructed according to CARB II requirements.

Wood products typically evaluated by this test method are made with urea-formaldehyde adhesives and include but are not limited to particleboard, hardwood, plywood and medium-density fiber-board.

## TEST RESULTS

	Formaldehyde	Lowest Calibrated Level	Blank Standard
Lumaflex Fit	<0.025 ppm	.025 ppm	<.025 ppm

## COMMENTS

This material, as received, would likely meet the requirements set forth under the CARB II program established by the California Air Resource Board.

MAXIMUM ALLOWABLE				
HWPW-VA	HWPW-CC	PB	MDF	tMDF
0.05	0.05	0.09	0.11	0.13

APPROVED BY:

This report is provided for the exclusive use of the client to whom it is addressed. It may be used in its entirety to gain product acceptance from duly constituted authorities. This report applies only to those samples tested and is not necessarily indicative of apparently identical of similar products. This report, or the name of Professional Testing Laboratory Inc. shall not be used under any circumstance in advertising to the general public.

## TEN-YEAR LIMITED MANUFACTURER'S WARRANTY

**WARRANTOR:** FieldTurf, USA Inc.  
175 N Industrial Boulevard NE  
Calhoun, Georgia 30701  
USA

**OWNER:** ("Insert Owner's Name and Address")

**SURFACE:** ClutchCourt Flexlock Panel  
("Surface")

### WARRANTY DESCRIPTION AND WARRANTY PERIODS:

**WARRANTY:** FieldTurf warrants to Owner, subject to the terms and conditions contained in this Warranty, that the above-described Surface is free from defects in materials and workmanship under normal use and service, so long as the Surface was installed in accordance with the drawings, plans and specifications for the Surface.

**WARRANTY PERIOD:** This Warranty shall be in force for a period of 120 months from the Effective Date as defined below.

**RESPONSE FOR WARRANTY REPAIRS:** FieldTurf agrees to perform all repairs required by this Warranty within a reasonable time upon receiving proper written notice from Owner as provided below and after FieldTurf carries out all inspections and tests, which it may deem necessary or advisable. Any required repair work shall be initiated by FieldTurf within a reasonable time from FieldTurf's receipt of Owner's written notice requesting such repairs.

**LIMITATIONS AND EXCLUSIONS:** This Warranty does not apply to any defect, failure, damage, or undue wear in or to the Surface caused by or connected with: (a) the installation process of the Surface on the Owner's base; (b) improper or insufficient design or engineering, or improper or insufficient project drawings, plans or specifications; (c) an inadequate or defective pre-existing base or surface; (d) the inherent characteristics of the earth or surface upon which the Surface is installed; (e) misuse, abuse, or deliberate acts of vandalism; (f) accident, negligence, or acts of God; (g) static or dynamic loads exceeding FieldTurf's recommendations; (h) use of improper cleaning methods; or (i) Owner's failure to care for and/or maintain the Surface in accordance with FieldTurf's written instructions and Owner's failure to properly control the indoor environment as per FieldTurf's recommendations and MFMA. FieldTurf does not warrant or guarantee the accuracy or sufficiency of any drawings, plans, or specifications not prepared by FieldTurf and which are used in connection with installing the Surface. This Warranty shall be of no force and effect if FieldTurf is not paid in full for the Surface and FieldTurf's obligations under this Warranty are expressly contingent upon FieldTurf being paid in full for the Surface.

This Warranty shall not apply to the Surface, or any part thereof, which has been repaired or altered without FieldTurf's prior written consent. No allowance or credit will be granted for any repairs or alterations to the Surface made by Owner except as authorized by this Warranty.

**THIS WARRANTY IS EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED, IMPLIED OR ARISING BY OPERATION OF LAW, INCLUDING (BUT NOT LIMITED TO) ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE AND OF ALL OTHER OBLIGATIONS OR LIABILITIES ON FIELDTURF'S PART. FIELDTURF USA, INC. SHALL NOT BE LIABLE FOR ANY DAMAGES UNDER TORT, CONTRACT OR STRICT**

For more information please contact the Indoor division of FieldTurf at 888-364-6541.



**LIABILITY AND/ OR INCIDENTAL, CONSEQUENTIAL, SPECIAL OR INDIRECT DAMAGES UNDER THIS WARRANTY.**

**FIELDTURF'S SOLE OBLIGATION UNDER THIS WARRANTY IS TO REPAIR OR REPLACE AT ITS SOLE DISCRETION ALL OR ANY PORTION OF THE SURFACE WHICH MAY BE DETERMINED TO BE DEFECTIVE. FIELDTURF'S LIABILITY FOR ANY SUCH REPAIR OR REPLACEMENT SHALL IN NO EVENT EXCEED THE AMOUNT OF THE PURCHASE PRICE ATTRIBUTABLE TO THE DEFECTIVE PORTION OF THE SURFACE WHICH IS REPAIRED OR REPLACED.**

**MAINTENANCE INSTRUCTIONS:** FieldTurf has made available or supplied Owner with a copy of the Maintenance Manual containing written instructions for the care and maintenance of the Surface. Owner acknowledges receipt of said Maintenance Manual and agrees to comply with and carry out the instructions contained in it as a condition of this Warranty. The terms of the Maintenance Manual are incorporated in this Warranty by reference. If a Maintenance Manual is not received by Owner at the time of issuance of this warranty, it is the owner's obligation to request and maintain record of receipt.

**CLAIMS:** All claims by Owner under this Warranty must be made in writing to the following address within thirty calendar days after Owner learns of any defect giving rise to the claim: FieldTurf USA, Inc. Indoor Division, 175 N Industrial Blvd. Calhoun, Georgia, 30701.

**INSPECTIONS AND TESTS:** FieldTurf shall be allowed to inspect the Surface during reasonable business hours regarding any claim, which Owner makes under this Warranty; to be present at and to analyze the results of all tests conducted by Owner or others; and to conduct such tests as FieldTurf in its discretion may deem advisable. Owner shall promptly furnish FieldTurf with a copy of all written reports of any tests performed by Owner or on Owner's behalf. FieldTurf shall not be responsible for any costs or expenses incurred by Owner or others with respect to such tests, except that FieldTurf shall pay for the costs of all tests and analyses conducted or directed by FieldTurf representatives.

**GOVERNING LAW AND CONSENT:** This Warranty shall be governed by and interpreted in accordance with the law of the State of Georgia.

**EFFECTIVE DATE:** The Effective Date of this Warranty is the \_\_\_\_\_ day of \_\_\_\_\_, 2014.

**OWNER'S NAME**

By: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

**FieldTurf USA, Inc.**

By: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

## TEN-YEAR LIMITED MANUFACTURER'S WARRANTY

**WARRANTOR:** FieldTurf, USA Inc.  
175 N Industrial Boulevard NE  
Calhoun, Georgia 30701  
USA

**OWNER:** ("Insert Owner's Name and Address")

**SURFACE:** ClutchCourt Performance Anchor  
("Surface")

### WARRANTY DESCRIPTION AND WARRANTY PERIODS:

**WARRANTY:** FieldTurf warrants to Owner, subject to the terms and conditions contained in this Warranty, that the above-described Surface is free from defects in materials and workmanship under normal use and service, so long as the Surface was installed in accordance with the drawings, plans and specifications for the Surface.

**WARRANTY PERIOD:** This Warranty shall be in force for a period of 120 months from the Effective Date as defined below.

**RESPONSE FOR WARRANTY REPAIRS:** FieldTurf agrees to perform all repairs required by this Warranty within a reasonable time upon receiving proper written notice from Owner as provided below and after FieldTurf carries out all inspections and tests, which it may deem necessary or advisable. Any required repair work shall be initiated by FieldTurf within a reasonable time from FieldTurf's receipt of Owner's written notice requesting such repairs.

**LIMITATIONS AND EXCLUSIONS:** This Warranty does not apply to any defect, failure, damage, or undue wear in or to the Surface caused by or connected with: (a) the installation process of the Surface on the Owner's base; (b) improper or insufficient design or engineering, or improper or insufficient project drawings, plans or specifications; (c) an inadequate or defective pre-existing base or surface; (d) the inherent characteristics of the earth or surface upon which the Surface is installed; (e) misuse, abuse, or deliberate acts of vandalism; (f) accident, negligence, or acts of God; (g) static or dynamic loads exceeding FieldTurf's recommendations; (h) use of improper cleaning methods; or (i) Owner's failure to care for and/or maintain the Surface in accordance with FieldTurf's written instructions and Owner's failure to properly control the indoor environment as per FieldTurf's recommendations and MFMA. FieldTurf does not warrant or guarantee the accuracy or sufficiency of any drawings, plans, or specifications not prepared by FieldTurf and which are used in connection with installing the Surface. This Warranty shall be of no force and effect if FieldTurf is not paid in full for the Surface and FieldTurf's obligations under this Warranty are expressly contingent upon FieldTurf being paid in full for the Surface.

This Warranty shall not apply to the Surface, or any part thereof, which has been repaired or altered without FieldTurf's prior written consent. No allowance or credit will be granted for any repairs or alterations to the Surface made by Owner except as authorized by this Warranty.

**THIS WARRANTY IS EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED, IMPLIED OR ARISING BY OPERATION OF LAW, INCLUDING (BUT NOT LIMITED TO) ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE AND OF ALL OTHER OBLIGATIONS OR LIABILITIES ON FIELDTURF'S PART. FIELDTURF USA, INC. SHALL NOT BE LIABLE FOR ANY DAMAGES UNDER TORT, CONTRACT OR STRICT**

For more information please contact the Indoor division of FieldTurf at 888-364-6541.

**LIABILITY AND/ OR INCIDENTAL, CONSEQUENTIAL, SPECIAL OR INDIRECT DAMAGES UNDER THIS WARRANTY.**

**FIELDTURF'S SOLE OBLIGATION UNDER THIS WARRANTY IS TO REPAIR OR REPLACE AT ITS SOLE DISCRETION ALL OR ANY PORTION OF THE SURFACE WHICH MAY BE DETERMINED TO BE DEFECTIVE. FIELDTURF'S LIABILITY FOR ANY SUCH REPAIR OR REPLACEMENT SHALL IN NO EVENT EXCEED THE AMOUNT OF THE PURCHASE PRICE ATTRIBUTABLE TO THE DEFECTIVE PORTION OF THE SURFACE WHICH IS REPAIRED OR REPLACED.**

**MAINTENANCE INSTRUCTIONS:** FieldTurf has made available or supplied Owner with a copy of the Maintenance Manual containing written instructions for the care and maintenance of the Surface. Owner acknowledges receipt of said Maintenance Manual and agrees to comply with and carry out the instructions contained in it as a condition of this Warranty. The terms of the Maintenance Manual are incorporated in this Warranty by reference. If a Maintenance Manual is not received by Owner at the time of issuance of this warranty, it is the owner's obligation to request and maintain record of receipt.

**CLAIMS:** All claims by Owner under this Warranty must be made in writing to the following address within thirty calendar days after Owner learns of any defect giving rise to the claim: FieldTurf USA, Inc. Indoor Division, 175 N Industrial Blvd. Calhoun, Georgia, 30701.

**INSPECTIONS AND TESTS:** FieldTurf shall be allowed to inspect the Surface during reasonable business hours regarding any claim, which Owner makes under this Warranty; to be present at and to analyze the results of all tests conducted by Owner or others; and to conduct such tests as FieldTurf in its discretion may deem advisable. Owner shall promptly furnish FieldTurf with a copy of all written reports of any tests performed by Owner or on Owner's behalf. FieldTurf shall not be responsible for any costs or expenses incurred by Owner or others with respect to such tests, except that FieldTurf shall pay for the costs of all tests and analyses conducted or directed by FieldTurf representatives.

**GOVERNING LAW AND CONSENT:** This Warranty shall be governed by and interpreted in accordance with the law of the State of Georgia.

**EFFECTIVE DATE:** The Effective Date of this Warranty is the \_\_\_\_\_ day of \_\_\_\_\_, 2014.

**OWNER'S NAME**

**FieldTurf USA, Inc.**

By: \_\_\_\_\_

By: \_\_\_\_\_

Title: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

Date: \_\_\_\_\_

## TEN-YEAR LIMITED MANUFACTURER'S WARRANTY

**WARRANTOR:** FieldTurf, USA Inc.  
175 N Industrial Boulevard NE  
Calhoun, Georgia 30701  
USA

**OWNER:** ("Insert Owner's Name and Address")

**SURFACE:** ClutchCourt Trainer 1  
("Surface")

### WARRANTY DESCRIPTION AND WARRANTY PERIODS:

**WARRANTY:** FieldTurf warrants to Owner, subject to the terms and conditions contained in this Warranty, that the above-described Surface is free from defects in materials and workmanship under normal use and service, so long as the Surface was installed in accordance with the drawings, plans and specifications for the Surface.

**WARRANTY PERIOD:** This Warranty shall be in force for a period of 120 months from the Effective Date as defined below.

**RESPONSE FOR WARRANTY REPAIRS:** FieldTurf agrees to perform all repairs required by this Warranty within a reasonable time upon receiving proper written notice from Owner as provided below and after FieldTurf carries out all inspections and tests, which it may deem necessary or advisable. Any required repair work shall be initiated by FieldTurf within a reasonable time from FieldTurf's receipt of Owner's written notice requesting such repairs.

**LIMITATIONS AND EXCLUSIONS:** This Warranty does not apply to any defect, failure, damage, or undue wear in or to the Surface caused by or connected with: (a) the installation process of the Surface on the Owner's base; (b) improper or insufficient design or engineering, or improper or insufficient project drawings, plans or specifications; (c) an inadequate or defective pre-existing base or surface; (d) the inherent characteristics of the earth or surface upon which the Surface is installed; (e) misuse, abuse, or deliberate acts of vandalism; (f) accident, negligence, or acts of God; (g) static or dynamic loads exceeding FieldTurf's recommendations; (h) use of improper cleaning methods; or (i) Owner's failure to care for and/or maintain the Surface in accordance with FieldTurf's written instructions and Owner's failure to properly control the indoor environment as per FieldTurf's recommendations and MFMA. FieldTurf does not warrant or guarantee the accuracy or sufficiency of any drawings, plans, or specifications not prepared by FieldTurf and which are used in connection with installing the Surface. This Warranty shall be of no force and effect if FieldTurf is not paid in full for the Surface and FieldTurf's obligations under this Warranty are expressly contingent upon FieldTurf being paid in full for the Surface.

This Warranty shall not apply to the Surface, or any part thereof, which has been repaired or altered without FieldTurf's prior written consent. No allowance or credit will be granted for any repairs or alterations to the Surface made by Owner except as authorized by this Warranty.

**THIS WARRANTY IS EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED, IMPLIED OR ARISING BY OPERATION OF LAW, INCLUDING (BUT NOT LIMITED TO) ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE AND OF ALL OTHER OBLIGATIONS OR LIABILITIES ON FIELDTURF'S PART. FIELDTURF USA, INC. SHALL NOT BE LIABLE FOR ANY DAMAGES UNDER TORT, CONTRACT OR STRICT**

For more information please contact the Indoor division of FieldTurf at 888-364-6541.

**LIABILITY AND/ OR INCIDENTAL, CONSEQUENTIAL, SPECIAL OR INDIRECT DAMAGES UNDER THIS WARRANTY.**

**FIELDTURF'S SOLE OBLIGATION UNDER THIS WARRANTY IS TO REPAIR OR REPLACE AT ITS SOLE DISCRETION ALL OR ANY PORTION OF THE SURFACE WHICH MAY BE DETERMINED TO BE DEFECTIVE. FIELDTURF'S LIABILITY FOR ANY SUCH REPAIR OR REPLACEMENT SHALL IN NO EVENT EXCEED THE AMOUNT OF THE PURCHASE PRICE ATTRIBUTABLE TO THE DEFECTIVE PORTION OF THE SURFACE WHICH IS REPAIRED OR REPLACED.**

**MAINTENANCE INSTRUCTIONS:** FieldTurf has made available or supplied Owner with a copy of the Maintenance Manual containing written instructions for the care and maintenance of the Surface. Owner acknowledges receipt of said Maintenance Manual and agrees to comply with and carry out the instructions contained in it as a condition of this Warranty. The terms of the Maintenance Manual are incorporated in this Warranty by reference. If a Maintenance Manual is not received by Owner at the time of issuance of this warranty, it is the owner's obligation to request and maintain record of receipt.

**CLAIMS:** All claims by Owner under this Warranty must be made in writing to the following address within thirty calendar days after Owner learns of any defect giving rise to the claim: FieldTurf USA, Inc. Indoor Division, 175 N Industrial Blvd. Calhoun, Georgia, 30701.

**INSPECTIONS AND TESTS:** FieldTurf shall be allowed to inspect the Surface during reasonable business hours regarding any claim, which Owner makes under this Warranty; to be present at and to analyze the results of all tests conducted by Owner or others; and to conduct such tests as FieldTurf in its discretion may deem advisable. Owner shall promptly furnish FieldTurf with a copy of all written reports of any tests performed by Owner or on Owner's behalf. FieldTurf shall not be responsible for any costs or expenses incurred by Owner or others with respect to such tests, except that FieldTurf shall pay for the costs of all tests and analyses conducted or directed by FieldTurf representatives.

**GOVERNING LAW AND CONSENT:** This Warranty shall be governed by and interpreted in accordance with the law of the State of Georgia.

**EFFECTIVE DATE:** The Effective Date of this Warranty is the \_\_\_\_\_ day of \_\_\_\_\_, 2014.

**OWNER'S NAME**

**FieldTurf USA, Inc.**

By: \_\_\_\_\_

By: \_\_\_\_\_

Title: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

Date: \_\_\_\_\_

## TEN-YEAR LIMITED MANUFACTURER'S WARRANTY

**WARRANTOR:** FieldTurf, USA Inc.  
175 N Industrial Boulevard NE  
Calhoun, Georgia 30701  
USA

**OWNER:** ("Insert Owner's Name and Address")

**SURFACE:** ClutchCourt Trainer 2  
("Surface")

### WARRANTY DESCRIPTION AND WARRANTY PERIODS:

**WARRANTY:** FieldTurf warrants to Owner, subject to the terms and conditions contained in this Warranty, that the above-described Surface is free from defects in materials and workmanship under normal use and service, so long as the Surface was installed in accordance with the drawings, plans and specifications for the Surface.

**WARRANTY PERIOD:** This Warranty shall be in force for a period of 120 months from the Effective Date as defined below.

**RESPONSE FOR WARRANTY REPAIRS:** FieldTurf agrees to perform all repairs required by this Warranty within a reasonable time upon receiving proper written notice from Owner as provided below and after FieldTurf carries out all inspections and tests, which it may deem necessary or advisable. Any required repair work shall be initiated by FieldTurf within a reasonable time from FieldTurf's receipt of Owner's written notice requesting such repairs.

**LIMITATIONS AND EXCLUSIONS:** This Warranty does not apply to any defect, failure, damage, or undue wear in or to the Surface caused by or connected with: (a) the installation process of the Surface on the Owner's base; (b) improper or insufficient design or engineering, or improper or insufficient project drawings, plans or specifications; (c) an inadequate or defective pre-existing base or surface; (d) the inherent characteristics of the earth or surface upon which the Surface is installed; (e) misuse, abuse, or deliberate acts of vandalism; (f) accident, negligence, or acts of God; (g) static or dynamic loads exceeding FieldTurf's recommendations; (h) use of improper cleaning methods; or (i) Owner's failure to care for and/or maintain the Surface in accordance with FieldTurf's written instructions and Owner's failure to properly control the indoor environment as per FieldTurf's recommendations and MFMA. FieldTurf does not warrant or guarantee the accuracy or sufficiency of any drawings, plans, or specifications not prepared by FieldTurf and which are used in connection with installing the Surface. This Warranty shall be of no force and effect if FieldTurf is not paid in full for the Surface and FieldTurf's obligations under this Warranty are expressly contingent upon FieldTurf being paid in full for the Surface.

This Warranty shall not apply to the Surface, or any part thereof, which has been repaired or altered without FieldTurf's prior written consent. No allowance or credit will be granted for any repairs or alterations to the Surface made by Owner except as authorized by this Warranty.

**THIS WARRANTY IS EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED, IMPLIED OR ARISING BY OPERATION OF LAW, INCLUDING (BUT NOT LIMITED TO) ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE AND OF ALL OTHER OBLIGATIONS OR LIABILITIES ON FIELDTURF'S PART. FIELDTURF USA, INC. SHALL NOT BE LIABLE FOR ANY DAMAGES UNDER TORT, CONTRACT OR STRICT**

For more information please contact the Indoor division of FieldTurf at 888-364-6541.

**LIABILITY AND/ OR INCIDENTAL, CONSEQUENTIAL, SPECIAL OR INDIRECT DAMAGES UNDER THIS WARRANTY.**

**FIELDTURF'S SOLE OBLIGATION UNDER THIS WARRANTY IS TO REPAIR OR REPLACE AT ITS SOLE DISCRETION ALL OR ANY PORTION OF THE SURFACE WHICH MAY BE DETERMINED TO BE DEFECTIVE. FIELDTURF'S LIABILITY FOR ANY SUCH REPAIR OR REPLACEMENT SHALL IN NO EVENT EXCEED THE AMOUNT OF THE PURCHASE PRICE ATTRIBUTABLE TO THE DEFECTIVE PORTION OF THE SURFACE WHICH IS REPAIRED OR REPLACED.**

**MAINTENANCE INSTRUCTIONS:** FieldTurf has made available or supplied Owner with a copy of the Maintenance Manual containing written instructions for the care and maintenance of the Surface. Owner acknowledges receipt of said Maintenance Manual and agrees to comply with and carry out the instructions contained in it as a condition of this Warranty. The terms of the Maintenance Manual are incorporated in this Warranty by reference. If a Maintenance Manual is not received by Owner at the time of issuance of this warranty, it is the owner's obligation to request and maintain record of receipt.

**CLAIMS:** All claims by Owner under this Warranty must be made in writing to the following address within thirty calendar days after Owner learns of any defect giving rise to the claim: FieldTurf USA, Inc. Indoor Division, 175 N Industrial Blvd. Calhoun, Georgia, 30701.

**INSPECTIONS AND TESTS:** FieldTurf shall be allowed to inspect the Surface during reasonable business hours regarding any claim, which Owner makes under this Warranty; to be present at and to analyze the results of all tests conducted by Owner or others; and to conduct such tests as FieldTurf in its discretion may deem advisable. Owner shall promptly furnish FieldTurf with a copy of all written reports of any tests performed by Owner or on Owner's behalf. FieldTurf shall not be responsible for any costs or expenses incurred by Owner or others with respect to such tests, except that FieldTurf shall pay for the costs of all tests and analyses conducted or directed by FieldTurf representatives.

**GOVERNING LAW AND CONSENT:** This Warranty shall be governed by and interpreted in accordance with the law of the State of Georgia.

**EFFECTIVE DATE:** The Effective Date of this Warranty is the \_\_\_\_\_ day of \_\_\_\_\_, 2014.

**OWNER'S NAME**

**FieldTurf USA, Inc.**

By: \_\_\_\_\_

By: \_\_\_\_\_

Title: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

Date: \_\_\_\_\_

## TEN-YEAR LIMITED MANUFACTURER'S WARRANTY

**WARRANTOR:** FieldTurf, USA Inc.  
175 N Industrial Boulevard NE  
Calhoun, Georgia 30701  
USA

**OWNER:** ("Insert Owner's Name and Address")

**SURFACE:** ClutchCourt Trainer 3  
("Surface")

### WARRANTY DESCRIPTION AND WARRANTY PERIODS:

**WARRANTY:** FieldTurf warrants to Owner, subject to the terms and conditions contained in this Warranty, that the above-described Surface is free from defects in materials and workmanship under normal use and service, so long as the Surface was installed in accordance with the drawings, plans and specifications for the Surface.

**WARRANTY PERIOD:** This Warranty shall be in force for a period of 120 months from the Effective Date as defined below.

**RESPONSE FOR WARRANTY REPAIRS:** FieldTurf agrees to perform all repairs required by this Warranty within a reasonable time upon receiving proper written notice from Owner as provided below and after FieldTurf carries out all inspections and tests, which it may deem necessary or advisable. Any required repair work shall be initiated by FieldTurf within a reasonable time from FieldTurf's receipt of Owner's written notice requesting such repairs.

**LIMITATIONS AND EXCLUSIONS:** This Warranty does not apply to any defect, failure, damage, or undue wear in or to the Surface caused by or connected with: (a) the installation process of the Surface on the Owner's base; (b) improper or insufficient design or engineering, or improper or insufficient project drawings, plans or specifications; (c) an inadequate or defective pre-existing base or surface; (d) the inherent characteristics of the earth or surface upon which the Surface is installed; (e) misuse, abuse, or deliberate acts of vandalism; (f) accident, negligence, or acts of God; (g) static or dynamic loads exceeding FieldTurf's recommendations; (h) use of improper cleaning methods; or (i) Owner's failure to care for and/or maintain the Surface in accordance with FieldTurf's written instructions and Owner's failure to properly control the indoor environment as per FieldTurf's recommendations and MFMA. FieldTurf does not warrant or guarantee the accuracy or sufficiency of any drawings, plans, or specifications not prepared by FieldTurf and which are used in connection with installing the Surface. This Warranty shall be of no force and effect if FieldTurf is not paid in full for the Surface and FieldTurf's obligations under this Warranty are expressly contingent upon FieldTurf being paid in full for the Surface.

This Warranty shall not apply to the Surface, or any part thereof, which has been repaired or altered without FieldTurf's prior written consent. No allowance or credit will be granted for any repairs or alterations to the Surface made by Owner except as authorized by this Warranty.

**THIS WARRANTY IS EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED, IMPLIED OR ARISING BY OPERATION OF LAW, INCLUDING (BUT NOT LIMITED TO) ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE AND OF ALL OTHER OBLIGATIONS OR LIABILITIES ON FIELDTURF'S PART. FIELDTURF USA, INC. SHALL NOT BE LIABLE FOR ANY DAMAGES UNDER TORT, CONTRACT OR STRICT**

For more information please contact the Indoor division of FieldTurf at 888-364-6541.



**LIABILITY AND/ OR INCIDENTAL, CONSEQUENTIAL, SPECIAL OR INDIRECT DAMAGES UNDER THIS WARRANTY.**

**FIELDTURF'S SOLE OBLIGATION UNDER THIS WARRANTY IS TO REPAIR OR REPLACE AT ITS SOLE DISCRETION ALL OR ANY PORTION OF THE SURFACE WHICH MAY BE DETERMINED TO BE DEFECTIVE. FIELDTURF'S LIABILITY FOR ANY SUCH REPAIR OR REPLACEMENT SHALL IN NO EVENT EXCEED THE AMOUNT OF THE PURCHASE PRICE ATTRIBUTABLE TO THE DEFECTIVE PORTION OF THE SURFACE WHICH IS REPAIRED OR REPLACED.**

**MAINTENANCE INSTRUCTIONS:** FieldTurf has made available or supplied Owner with a copy of the Maintenance Manual containing written instructions for the care and maintenance of the Surface. Owner acknowledges receipt of said Maintenance Manual and agrees to comply with and carry out the instructions contained in it as a condition of this Warranty. The terms of the Maintenance Manual are incorporated in this Warranty by reference. If a Maintenance Manual is not received by Owner at the time of issuance of this warranty, it is the owner's obligation to request and maintain record of receipt.

**CLAIMS:** All claims by Owner under this Warranty must be made in writing to the following address within thirty calendar days after Owner learns of any defect giving rise to the claim: FieldTurf USA, Inc. Indoor Division, 175 N Industrial Blvd. Calhoun, Georgia, 30701.

**INSPECTIONS AND TESTS:** FieldTurf shall be allowed to inspect the Surface during reasonable business hours regarding any claim, which Owner makes under this Warranty; to be present at and to analyze the results of all tests conducted by Owner or others; and to conduct such tests as FieldTurf in its discretion may deem advisable. Owner shall promptly furnish FieldTurf with a copy of all written reports of any tests performed by Owner or on Owner's behalf. FieldTurf shall not be responsible for any costs or expenses incurred by Owner or others with respect to such tests, except that FieldTurf shall pay for the costs of all tests and analyses conducted or directed by FieldTurf representatives.

**GOVERNING LAW AND CONSENT:** This Warranty shall be governed by and interpreted in accordance with the law of the State of Georgia.

**EFFECTIVE DATE:** The Effective Date of this Warranty is the \_\_\_\_\_ day of \_\_\_\_\_, 2014.

**OWNER'S NAME**

By: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

**FieldTurf USA, Inc.**

By: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

## MANUFACTURER'S LIMITED WARRANTY

**WARRANTOR:** FieldTurf, USA Inc.  
175 N Industrial Boulevard NE  
Calhoun, Georgia 30701  
USA

**OWNER:** ("Insert Owner's Name and Address")

**SURFACE:** Droptile  
("Surface")

### WARRANTY DESCRIPTION AND WARRANTY PERIODS:

**ARRANT** : FieldTurf warrants to Owner, subject to the terms and conditions contained in this Warranty, that the above-described Surface is free from defects in materials and workmanship under normal use and service, so long as the Surface was installed in accordance with the drawings, plans and specifications for the Surface.

**ARRANT PERIOD:** This Warranty shall be in force for a period of 15 years from the Effective Date as defined below.

**RESPONSE FOR WARRANT REPAIRS:** FieldTurf agrees to perform all repairs required by this Warranty within a reasonable time upon receiving proper written notice from Owner as provided below and after FieldTurf carries out all inspections and tests, which it may deem necessary or advisable. Any required repair work shall be initiated by FieldTurf within a reasonable time from FieldTurf's receipt of Owner's written notice requesting such repairs.

**LIMITATIONS AND EXCLUSIONS:** This Warranty does not apply to any defect, failure, damage, or undue wear in or to the Surface caused by or connected with: (a) the installation process of the Surface on the Owner's base; (b) improper or insufficient design or engineering, or improper or insufficient project drawings, plans or specifications; (c) an inadequate or defective pre-existing base or surface; (d) the inherent characteristics of the earth or surface upon which the Surface is installed; (e) misuse, abuse, or deliberate acts of vandalism; (f) accident, negligence, or acts of God; (g) static or dynamic loads exceeding FieldTurf's recommendations; (h) use of improper cleaning methods; or (i) Owner's failure to care for and maintain the Surface in accordance with FieldTurf's written instructions. FieldTurf does not warrant or guarantee the accuracy or sufficiency of any drawings, plans, or specifications not prepared by FieldTurf and which are used in connection with installing the Surface. This Warranty shall be of no force and effect if FieldTurf is not paid in full for the Surface and FieldTurf's obligations under this Warranty are expressly contingent upon FieldTurf being paid in full for the Surface. This Warranty shall not apply to the Surface, or any part thereof, which has been repaired or altered without FieldTurf's prior written consent. No allowance or credit will be granted for any repairs or alterations to the Surface made by Owner except as authorized by this Warranty.

**THIS WARRANT IS EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES EXPRESSED OR IMPLIED OR ARISING OUT OF THE OPERATION OF LAWS INCLUDING ( BUT NOT LIMITED TO) AN IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE AND OF ALL OTHER OBLIGATIONS OR LIABILITIES ON FIELDTURF'S PART.**

FIELDTURF SHALL NOT BE LIABLE FOR ANY DAMAGES UNDER TORT CONTRACT OR STRICT LIABILITY AND OR INCIDENTAL CONSEQUENTIAL SPECIAL OR INDIRECT DAMAGES UNDER THIS WARRANTY .

FIELDTURF'S SOLE OBLIGATION UNDER THIS WARRANTY IS TO REPAIR OR REPLACE AT ITS SOLE DISCRETION ALL OR AN PORTION OF THE SURFACE WHICH MAY BE DETERMINED TO BE DEFECTIVE. FIELDTURF'S LIABILITY FOR ANY SUCH REPAIR OR REPLACEMENT SHALL IN NO EVENT EXCEED THE AMOUNT OF THE PURCHASE PRICE ATTRIBUTABLE TO THE DEFECTIVE PORTION OF THE SURFACE WHICH IS REPAIRED OR REPLACED.

**MAINTENANCE INSTRUCTIONS:** FieldTurf has supplied Owner with a copy (attached) of the Maintenance Manual containing written instructions for the care and maintenance of the Surface. Owner acknowledges receipt of said Maintenance Manual and agrees to comply with and carry out the instructions contained in it as a condition of this Warranty. The terms of the Maintenance Manual are incorporated in this Warranty by reference.

**CLAIMS:** All claims by Owner under this Warranty must be made in writing to the following address within thirty calendar days after Owner learns of any defect giving rise to the claim: FieldTurf USA, Inc., Indoor Division, 175 N Industrial Blvd. Calhoun, Georgia, 30701.

**INSPECTIONS AND TESTS:** FieldTurf shall be allowed to inspect the Surface during reasonable business hours regarding any claim, which Owner makes under this Warranty; to be present at and to analyze the results of all tests conducted by Owner or others; and to conduct such tests as FieldTurf in its discretion may deem advisable. Owner shall promptly furnish FieldTurf with a copy of all written reports of any tests performed by Owner or on Owner's behalf. FieldTurf shall not be responsible for any costs or expenses incurred by Owner or others with respect to such tests, except that FieldTurf shall pay for the costs of all tests and analyses conducted or directed by FieldTurf representatives.

**EFFECTIVE DATE:** The Effective Date of this Warranty is the \_\_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_.

**OWNER'S NAME**

**FieldTurf USA, Inc.**

By: \_\_\_\_\_

By: \_\_\_\_\_

Title: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

Date: \_\_\_\_\_

## MANUFACTURER'S LIMITED WARRANTY

**WARRANTOR:** FieldTurf, USA Inc.  
175 N Industrial Boulevard NE  
Calhoun, Georgia 30701  
USA

**OWNER:** ("Insert Owner's Name and Address")

**SURFACE:** Droptile  
("Surface")

### WARRANTY DESCRIPTION AND WARRANTY PERIODS:

**ARRANT** : FieldTurf warrants to Owner, subject to the terms and conditions contained in this Warranty, that the above-described Surface is free from defects in materials and workmanship under normal use and service, so long as the Surface was installed in accordance with the drawings, plans and specifications for the Surface.

**ARRANT PERIOD:** This Warranty shall be in force for a period of 15 years from the Effective Date as defined below.

**RESPONSE FOR WARRANT REPAIRS:** FieldTurf agrees to perform all repairs required by this Warranty within a reasonable time upon receiving proper written notice from Owner as provided below and after FieldTurf carries out all inspections and tests, which it may deem necessary or advisable. Any required repair work shall be initiated by FieldTurf within a reasonable time from FieldTurf's receipt of Owner's written notice requesting such repairs.

**LIMITATIONS AND EXCLUSIONS:** This Warranty does not apply to any defect, failure, damage, or undue wear in or to the Surface caused by or connected with: (a) the installation process of the Surface on the Owner's base; (b) improper or insufficient design or engineering, or improper or insufficient project drawings, plans or specifications; (c) an inadequate or defective pre-existing base or surface; (d) the inherent characteristics of the earth or surface upon which the Surface is installed; (e) misuse, abuse, or deliberate acts of vandalism; (f) accident, negligence, or acts of God; (g) static or dynamic loads exceeding FieldTurf's recommendations; (h) use of improper cleaning methods; or (i) Owner's failure to care for and maintain the Surface in accordance with FieldTurf's written instructions. FieldTurf does not warrant or guarantee the accuracy or sufficiency of any drawings, plans, or specifications not prepared by FieldTurf and which are used in connection with installing the Surface. This Warranty shall be of no force and effect if FieldTurf is not paid in full for the Surface and FieldTurf's obligations under this Warranty are expressly contingent upon FieldTurf being paid in full for the Surface. This Warranty shall not apply to the Surface, or any part thereof, which has been repaired or altered without FieldTurf's prior written consent. No allowance or credit will be granted for any repairs or alterations to the Surface made by Owner except as authorized by this Warranty.

**THIS WARRANT IS EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES EXPRESSED OR IMPLIED OR ARISING OUT OF THE OPERATION OF LAWS INCLUDING ( BUT NOT LIMITED TO) AN IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE AND OF ALL OTHER OBLIGATIONS OR LIABILITIES ON FIELDTURF'S PART.**

FIELDTURF SHALL NOT BE LIABLE FOR ANY DAMAGES UNDER TORT CONTRACT OR STRICT LIABILITY AND OR INCIDENTAL CONSEQUENTIAL SPECIAL OR INDIRECT DAMAGES UNDER THIS WARRANTY .

FIELDTURF'S SOLE OBLIGATION UNDER THIS WARRANTY IS TO REPAIR OR REPLACE AT ITS SOLE DISCRETION ALL OR AN PORTION OF THE SURFACE WHICH MAY BE DETERMINED TO BE DEFECTIVE. FIELDTURF SHALL BE LIABLE FOR ANY SUCH REPAIR OR REPLACEMENT SHALL IN NO EVENT EXCEED THE AMOUNT OF THE PURCHASE PRICE ATTRIBUTABLE TO THE DEFECTIVE PORTION OF THE SURFACE WHICH IS REPAIRED OR REPLACED.

**MAINTENANCE INSTRUCTIONS:** FieldTurf has supplied Owner with a copy (attached) of the Maintenance Manual containing written instructions for the care and maintenance of the Surface. Owner acknowledges receipt of said Maintenance Manual and agrees to comply with and carry out the instructions contained in it as a condition of this Warranty. The terms of the Maintenance Manual are incorporated in this Warranty by reference.

**CLAIMS:** All claims by Owner under this Warranty must be made in writing to the following address within thirty calendar days after Owner learns of any defect giving rise to the claim: FieldTurf USA, Inc., Indoor Division, 175 N Industrial Blvd. Calhoun, Georgia, 30701.

**INSPECTIONS AND TESTS:** FieldTurf shall be allowed to inspect the Surface during reasonable business hours regarding any claim, which Owner makes under this Warranty; to be present at and to analyze the results of all tests conducted by Owner or others; and to conduct such tests as FieldTurf in its discretion may deem advisable. Owner shall promptly furnish FieldTurf with a copy of all written reports of any tests performed by Owner or on Owner's behalf. FieldTurf shall not be responsible for any costs or expenses incurred by Owner or others with respect to such tests, except that FieldTurf shall pay for the costs of all tests and analyses conducted or directed by FieldTurf representatives.

**EFFECTIVE DATE:** The Effective Date of this Warranty is the \_\_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_.

**OWNER'S NAME**

**FieldTurf USA, Inc.**

By: \_\_\_\_\_

By: \_\_\_\_\_

Title: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

Date: \_\_\_\_\_

# Tarkett Sports

## MANUFACTURER'S LIMITED WARRANTY

**WARRANTOR:** FieldTurf USA, Inc.  
175 N Industrial Boulevard NE  
Calhoun, Georgia 30701  
USA

**OWNER:** (“Insert Owner’s Name and Address”)

**PROJECT:** (“Insert Project Name and Address”)

**SURFACE:** DropTurf

FieldTurf warrants that if the **DropTurf** with attached pad (“Surface”) synthetic turf proves to be defective in material, resulting in premature wear, during normal and ordinary use of the Surface for the sporting activities provided herein, or for any other uses for which FieldTurf provides its written authorization, within one (1) year from the Effective Date (as indicated in this Warranty), FieldTurf shall either repair or replace the affected area of the Surface in accordance with the terms of this Warranty. FieldTurf’s sole liability under this Warranty shall be limited to either repair or replacement product (limited to materials) for the affected area of the Surface, at its sole discretion, and FieldTurf shall have no other obligations or liabilities with respect to defects of the Surface. FieldTurf will, at FieldTurf’s option, either repair or replace the affected area to the extent required to meet the Warranty period, but no cash refunds will be made. This Warranty shall commence upon the Date of Purchase indicated in this Warranty. This Warranty is limited to the remedies of repair or replacement, which shall constitute the exclusive remedies available under this Warranty; all other remedies or recourse which might otherwise be available are hereby waived by the Purchaser. FieldTurf will have no other obligations or liability for damages arising out of or in connection with the use or performance of the Surface, including, without limitation, damages for personal injury, economic losses and/or damages related to base/subgrade, utilities, business interruption, lost revenue, increased costs, and downtime costs. In no event shall FieldTurf be liable for indirect, special, consequential and/or incidental damages of any kind, no matter what the cause. This Warranty shall not come into effect, and FieldTurf shall have no obligations under this Warranty, unless and until FieldTurf is paid in full for the Surface to be warranted hereunder.

Any modification to the Surface may void this Warranty. Should the Surface be discontinued, FieldTurf will replace the defective material with a FieldTurf product of equal value. Any Surface repairs or replacements performed under the terms of this Warranty shall not lead to any extension whatsoever of the Warranty period. This Warranty is exclusive to the original Purchaser, is not transferable, and in lieu of all other warranties, expressed or implied, and all other remedies, guarantees and/or liabilities arising by law or otherwise. This Warranty covers first quality Surface only and does not extend to Surface sold as irregulars, seconds or through any means other than the original purchase. FieldTurf’s liability hereunder shall be limited to the original purchase price paid by Purchaser for the Surface.

### Other Exclusions

**EXCEPT AS EXPRESSLY SET FORTH IN THE MANUFACTURER’S LIMITED WARRANTY ABOVE, FIELDTURF DISCLAIMS ALL OTHER WARRANTIES OF ANY KIND, EXPRESS OR IMPLIED, IN FACT OR IN LAW, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.**

For more information please contact the Indoor division of FieldTurf at (888) 364-6541.

# Tarkett Sports

**THIS WARRANTY SHALL BECOME NULL AND VOID IF (A) THE PURCHASER FAILS TO MAINTAIN THE FIELD IN ACCORDANCE WITH THE FIELDTURF MAINTENANCE GUIDELINES AND SCHEDULE PROVIDED BY FIELDTURF THEREIN AND/OR (B) THE PURCHASER FAILS TO INSTALL, REMOVE AND/OR RE-INSTALL THE SURFACE IN ACCORDANCE WITH FIELDTURF'S RECOMMENDED INSTALLATION PROCEDURES.**

Furthermore, this Manufacturer's Limited Warranty **does not cover**:

1. Any part of the installation procedure. FieldTurf is not responsible for any labor costs incurred for installation of the Surface and/or repair or replacement of the Surface under this Warranty. This Warranty does not cover damage caused by improper installation, negligence, water intrusion and/or flooding, abrasion, extreme heat, impact, cutting, freight damage, alteration, or any wear or damage caused by Acts of God.
2. Damage resulting from accident, *force majeure*, misuse, intentional and unintentional abuse, neglect, repetitive use or repetitive activities, or from other than normal play and ordinary use of the Surface. For purposes of this Warranty, normal play and ordinary use shall mean usage up to 3,000 hours per year of regular play and utilization for the sporting activities provided herein; normal play and ordinary use also includes a reasonable number of users or participants, but does not include repetitive marching, repetitive training, high use areas and/or high-intensity drills on the same part of the field, all of which require frequent maintenance in accordance with FieldTurf Maintenance Guidelines and may require regular replacement.
3. Damage resulting from failure to maintain the Surface in accordance with FieldTurf's Maintenance Guidelines provided to the Purchaser, a copy of which has been made available to Purchaser. Purchaser shall keep a log of all maintenance performed on the Surface and supply FieldTurf with a copy upon request.
4. Damage resulting from the Purchaser's failure to install the Surface in accordance with FieldTurf's Recommended Installation Procedures, a copy of which has been made available to Purchaser.
5. Damage resulting from repair, attempted repair and/or maintenance by anyone other than FieldTurf or an authorized FieldTurf distributor or authorized FieldTurf maintainer.
6. Damage due to causes which include, but are not limited to, the application or use of chemicals and/or cleaning agents, adhesive backing, dirt, traffic, negligence, vandalism, fire, flood, windstorm, animals, improper care and Acts of God; damage resulting from the use of cleaning equipment, methods and/or materials that are not authorized by FieldTurf.
7. Failure and/or improper design of the base; depression of the soil, subsurface or other matter upon which the base or Product rests; and any and all resulting damage to the Product arising therefrom.
8. FieldTurf does not warrant the percolation rate, long term planarity and/or compaction of the base which the product is installed. **FIELDTURF DISCLAIMS ALL WARRANTIES AS TO THE BASE, EXPRESS OR IMPLIED, AND ANY AND ALL RESULTING DAMAGE TO THE PRODUCT ARISING THEREFROM.**
9. Damage resulting from the use of improper or inappropriate footwear such as metal cleats or long-spiked track shoes. Users and participants should wear standard molded cleats or other footwear appropriate for synthetic turf. The use of flat-soled shoes and/or other improper or inappropriate footwear may accelerate the wear of the Product.
10. Damage resulting from the use of the Product other than for the purpose for which it is intended.
11. Damage resulting from the use, placement and/or abrasion caused by athletic equipment and/or high-friction uses or activities.
12. Damage resulting from golf, shot put, javelin and/or discus activities.

For more information please contact the Indoor division of FieldTurf at (888) 364-6541.

# Tarkett Sports

13. Damage, melting and/or shrinking of the Product resulting from heat reflection, open flames, fireworks, welding and/or sources of extreme heat.
14. Damage caused by movement of the Product due to improper installation or improper securing of the edges of the Product.
15. Damage resulting from the handling, shipping or transportation of the Product.
16. Fuzzing, shedding or damage to the Product due to improper use and/or maintenance of the Product.
17. Damage resulting from the storage of drums, lumber and any other objects that may damage the Product.
18. Damage resulting from loads exceeding 3 PSI.
19. Damage resulting from high pressure water spray exceeding 300 PSI.
20. Damage caused by vehicle traffic of any kind.
21. Any additional warranties and/or promises offered by a third party. No unauthorized person, fabricator, installer, agent or employee of FieldTurf is entitled to assume any liability on behalf of FieldTurf relating to the sale of the Surface or has the authority to increase or alter the obligations or limitations of this Warranty.

The following conditions are not a manufacturing defect and not covered by this Warranty: soiling or staining, water marks, mold and mildew. All synthetic turf is subject to normal wear and tear, which is not a manufacturing defect and is not covered by this Warranty. In addition to the other factors listed in this Warranty, wear and tear depends on, without limitation, the construction of synthetic turf (fiber face weight, stitch rate, fiber pile height and gauge, and maintenance of the field) and the intensity of use of the synthetic turf. The Surface will retain at least fifty percent (50%) of its pile height during the Warranty period and will be stable to light fading with the maximum fading of the Surface during the Warranty period not to exceed fifteen percent (15%) of color loss annually based upon an acceptable grey scale. This Warranty does not cover slight variations or gradations of color within the Surface and/or face distortion.

FieldTurf disclaims all liability for incidental and consequential damages for breach of any express or implied warranty, including any implied warranty of merchantability, with respect to the Surface. In the event that the Surface is used for purposes other than approved sporting activities or any other uses for which FieldTurf gives its written authorization, it being understood that FieldTurf has tested the Surface for use in connection with these sporting activities and may not have tested it for other uses, FieldTurf shall not be responsible for any and all damages incurred and the Manufacturer's Limited Warranty, as well as all legal warranties, shall become null and void. Any Surface repairs or replacements performed under the terms of this Warranty shall not extend the term of this Warranty.

FieldTurf will not be responsible for any costs and/or expenses incurred by the Purchaser and/or others due to testing, consultation or inspection of the Surface.

The Purchaser must promptly inspect the Surface upon delivery of the Surface. The Purchaser must notify FieldTurf in writing of any defect in the Surface prior to installation of the Surface, in which case the installation shall immediately be stopped until FieldTurf has the opportunity to review the claim of defect. In the event of a latent defect after installation of the Surface, the Purchaser must notify FieldTurf in writing as soon as practicable of any such defect, but not later than thirty (30) days within the date on which Purchaser knows or should have known of the defect.

For more information please contact the Indoor division of FieldTurf at (888) 364-6541.



# Tarkett Sports

**CLAIMS:** All claims by Owner under this Warranty must be made in writing to the following address within thirty calendar days after Owner learns of any defect giving rise to the claim: FieldTurf USA, Inc. Indoor Division, 175 N Industrial Blvd. Calhoun, Georgia, 30701.

**GOVERNING LAW AND CONSENT:** This Warranty shall be governed by and interpreted in accordance with the law of the State of Georgia.

**EFFECTIVE DATE:** The Effective Date of this Warranty is the \_\_\_\_\_ day of \_\_\_\_\_, 2020.

**OWNER'S NAME**

**FieldTurf USA, Inc.**

By: \_\_\_\_\_

By: \_\_\_\_\_

Title: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

Date: \_\_\_\_\_

# Tarkett Sports

## MANUFACTURER'S LIMITED WARRANTY

**WARRANTOR:** FieldTurf USA, Inc.  
175 N Industrial Boulevard NE  
Calhoun, Georgia 30701  
USA

**OWNER:** (“Insert Owner’s Name and Address”)

**PROJECT:** (“Insert Project Name and Address”)

**SURFACE:** DropTurf

FieldTurf warrants that if the **DropTurf** with attached pad (“Surface”) synthetic turf proves to be defective in material, resulting in premature wear, during normal and ordinary use of the Surface for the sporting activities provided herein, or for any other uses for which FieldTurf provides its written authorization, within two (2) years from the Effective Date (as indicated in this Warranty), FieldTurf shall either repair or replace the affected area of the Surface in accordance with the terms of this Warranty and the following pro-rated schedule:

- Year 1: One hundred percent (100%) of the repair or replacement cost
- Year 2: Seventy-five percent (75%) of the repair or replacement cost

FieldTurf’s sole liability under this Warranty shall be limited to either repair or replacement product (limited to materials) for the affected area of the Surface, at its sole discretion, and FieldTurf shall have no other obligations or liabilities with respect to defects of the Surface. FieldTurf will, at FieldTurf’s option, either repair or replace the affected area to the extent required to meet the Warranty period, but no cash refunds will be made. This Warranty shall commence upon the Date of Purchase indicated in this Warranty. This Warranty is limited to the remedies of repair or replacement, which shall constitute the exclusive remedies available under this Warranty; all other remedies or recourse which might otherwise be available are hereby waived by the Purchaser. FieldTurf will have no other obligations or liability for damages arising out of or in connection with the use or performance of the Surface, including, without limitation, damages for personal injury, economic losses and/or damages related to base/subgrade, utilities, business interruption, lost revenue, increased costs, and downtime costs. In no event shall FieldTurf be liable for indirect, special, consequential and/or incidental damages of any kind, no matter what the cause. This Warranty shall not come into effect, and FieldTurf shall have no obligations under this Warranty, unless and until FieldTurf is paid in full for the Surface to be warranted hereunder.

Any modification to the Surface may void this Warranty. Should the Surface be discontinued, FieldTurf will replace the defective material with a FieldTurf product of equal value. Any Surface repairs or replacements performed under the terms of this Warranty shall not lead to any extension whatsoever of the Warranty period. This Warranty is exclusive to the original Purchaser, is not transferable, and in lieu of all other warranties, expressed or implied, and all other remedies, guarantees and/or liabilities arising by law or otherwise. This Warranty covers first quality Surface only and does not extend to Surface sold as irregulars, seconds or through any means other than the original purchase. FieldTurf’s liability hereunder shall be limited to the original purchase price paid by Purchaser for the Surface.

### Other Exclusions

For more information please contact the Indoor division of FieldTurf at (888) 364-6541.

# Tarkett Sports

EXCEPT AS EXPRESSLY SET FORTH IN THE MANUFACTURER'S LIMITED WARRANTY ABOVE, FIELDTURF DISCLAIMS ALL OTHER WARRANTIES OF ANY KIND, EXPRESS OR IMPLIED, IN FACT OR IN LAW, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

**THIS WARRANTY SHALL BECOME NULL AND VOID IF (A) THE PURCHASER FAILS TO MAINTAIN THE FIELD IN ACCORDANCE WITH THE FIELDTURF MAINTENANCE GUIDELINES AND SCHEDULE PROVIDED BY FIELDTURF THEREIN AND/OR (B) THE PURCHASER FAILS TO INSTALL, REMOVE AND/OR RE-INSTALL THE SURFACE IN ACCORDANCE WITH FIELDTURF'S RECOMMENDED INSTALLATION PROCEDURES.**

Furthermore, this Manufacturer's Limited Warranty **does not cover**:

1. Any part of the installation procedure. FieldTurf is not responsible for any labor costs incurred for installation of the Surface and/or repair or replacement of the Surface under this Warranty. This Warranty does not cover damage caused by improper installation, negligence, water intrusion and/or flooding, abrasion, extreme heat, impact, cutting, freight damage, alteration, or any wear or damage caused by Acts of God.
2. Damage resulting from accident, *force majeure*, misuse, intentional and unintentional abuse, neglect, repetitive use or repetitive activities, or from other than normal play and ordinary use of the Surface. For purposes of this Warranty, normal play and ordinary use shall mean usage up to 3,000 hours per year of regular play and utilization for the sporting activities provided herein; normal play and ordinary use also includes a reasonable number of users or participants, but does not include repetitive marching, repetitive training, high use areas and/or high-intensity drills on the same part of the field, all of which require frequent maintenance in accordance with FieldTurf Maintenance Guidelines and may require regular replacement.
3. Damage resulting from failure to maintain the Surface in accordance with FieldTurf's Maintenance Guidelines provided to the Purchaser, a copy of which has been made available to Purchaser. Purchaser shall keep a log of all maintenance performed on the Surface and supply FieldTurf with a copy upon request.
4. Damage resulting from the Purchaser's failure to install the Surface in accordance with FieldTurf's Recommended Installation Procedures, a copy of which has been made available to Purchaser.
5. Damage resulting from repair, attempted repair and/or maintenance by anyone other than FieldTurf or an authorized FieldTurf distributor or authorized FieldTurf maintainer.
6. Damage due to causes which include, but are not limited to, the application or use of chemicals and/or cleaning agents, adhesive backing, dirt, traffic, negligence, vandalism, fire, flood, windstorm, animals, improper care and Acts of God; damage resulting from the use of cleaning equipment, methods and/or materials that are not authorized by FieldTurf.
7. Failure and/or improper design of the base; depression of the soil, subsurface or other matter upon which the base or Product rests; and any and all resulting damage to the Product arising therefrom.
8. FieldTurf does not warrant the percolation rate, long term planarity and/or compaction of the base which the product is installed. **FIELDTURF DISCLAIMS ALL WARRANTIES AS TO THE BASE, EXPRESS OR IMPLIED, AND ANY AND ALL RESULTING DAMAGE TO THE PRODUCT ARISING THEREFROM.**
9. Damage resulting from the use of improper or inappropriate footwear such as metal cleats or long-spiked track shoes. Users and participants should wear standard molded cleats or other footwear appropriate for synthetic turf. The use of flat-soled shoes and/or other improper or inappropriate footwear may accelerate the wear of the Product.
10. Damage resulting from the use of the Product other than for the purpose for which it is intended.

For more information please contact the Indoor division of FieldTurf at (888) 364-6541.

# Tarkett Sports

11. Damage resulting from the use, placement and/or abrasion caused by athletic equipment and/or high-friction uses or activities.
12. Damage resulting from golf, shot put, javelin and/or discus activities.
13. Damage, melting and/or shrinking of the Product resulting from heat reflection, open flames, fireworks, welding and/or sources of extreme heat.
14. Damage caused by movement of the Product due to improper installation or improper securing of the edges of the Product.
15. Damage resulting from the handling, shipping or transportation of the Product.
16. Fuzzing, shedding or damage to the Product due to improper use and/or maintenance of the Product.
17. Damage resulting from the storage of drums, lumber and any other objects that may damage the Product.
18. Damage resulting from loads exceeding 3 PSI.
19. Damage resulting from high pressure water spray exceeding 300 PSI.
20. Damage caused by vehicle traffic of any kind.
21. Any additional warranties and/or promises offered by a third party. No unauthorized person, fabricator, installer, agent or employee of FieldTurf is entitled to assume any liability on behalf of FieldTurf relating to the sale of the Surface or has the authority to increase or alter the obligations or limitations of this Warranty.

The following conditions are not a manufacturing defect and not covered by this Warranty: soiling or staining, water marks, mold and mildew. All synthetic turf is subject to normal wear and tear, which is not a manufacturing defect and is not covered by this Warranty. In addition to the other factors listed in this Warranty, wear and tear depends on, without limitation, the construction of synthetic turf (fiber face weight, stitch rate, fiber pile height and gauge, and maintenance of the field) and the intensity of use of the synthetic turf. The Surface will retain at least fifty percent (50%) of its pile height during the Warranty period and will be stable to light fading with the maximum fading of the Surface during the Warranty period not to exceed fifteen percent (15%) of color loss annually based upon an acceptable grey scale. This Warranty does not cover slight variations or gradations of color within the Surface and/or face distortion.

FieldTurf disclaims all liability for incidental and consequential damages for breach of any express or implied warranty, including any implied warranty of merchantability, with respect to the Surface. In the event that the Surface is used for purposes other than approved sporting activities or any other uses for which FieldTurf gives its written authorization, it being understood that FieldTurf has tested the Surface for use in connection with these sporting activities and may not have tested it for other uses, FieldTurf shall not be responsible for any and all damages incurred and the Manufacturer's Limited Warranty, as well as all legal warranties, shall become null and void. Any Surface repairs or replacements performed under the terms of this Warranty shall not extend the term of this Warranty.

FieldTurf will not be responsible for any costs and/or expenses incurred by the Purchaser and/or others due to testing, consultation or inspection of the Surface.

The Purchaser must promptly inspect the Surface upon delivery of the Surface. The Purchaser must notify FieldTurf in writing of any defect in the Surface prior to installation of the Surface, in which case the installation shall immediately be stopped until FieldTurf has the opportunity to review the claim of defect. In the event of a latent defect after installation of the Surface, the Purchaser must notify

For more information please contact the Indoor division of FieldTurf at (888) 364-6541.

# Tarkett Sports

FieldTurf in writing as soon as practicable of any such defect, but not later than thirty (30) days within the date on which Purchaser knows or should have known of the defect.

**CLAIMS:** All claims by Owner under this Warranty must be made in writing to the following address within thirty calendar days after Owner learns of any defect giving rise to the claim: FieldTurf USA, Inc. Indoor Division, 175 N Industrial Blvd. Calhoun, Georgia, 30701.

**GOVERNING LAW AND CONSENT:** This Warranty shall be governed by and interpreted in accordance with the law of the State of Georgia.

**EFFECTIVE DATE:** The Effective Date of this Warranty is the \_\_\_\_\_ day of \_\_\_\_\_, 2020.

**OWNER'S NAME**

**FieldTurf USA, Inc.**

By: \_\_\_\_\_

By: \_\_\_\_\_

Title: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

Date: \_\_\_\_\_

# Tarkett Sports

## MANUFACTURER'S LIMITED WARRANTY

**WARRANTOR:** FieldTurf USA, Inc.  
175 N Industrial Boulevard NE  
Calhoun, Georgia 30701  
USA

**OWNER:** (“Insert Owner’s Name and Address”)

**PROJECT:** (“Insert Project Name and Address”)

**SURFACE:** DropTurf

FieldTurf warrants that if the **DropTurf** with attached pad (“Surface”) synthetic turf proves to be defective in material, resulting in premature wear, during normal and ordinary use of the Surface for the sporting activities provided herein, or for any other uses for which FieldTurf provides its written authorization, within five (5) years from the Effective Date (as indicated in this Warranty), FieldTurf shall either repair or replace the affected area of the Surface in accordance with the terms of this Warranty and the following pro-rated schedule:

- Year 1: One hundred percent (100%) of the repair or replacement cost
- Year 2: Seventy-five percent (75%) of the repair or replacement cost
- Year 3: Fifty percent (50%) of the repair or replacement cost
- Year 4: Twenty-five percent (25%) of the repair or replacement cost
- Year 5: Five percent (5%) of the repair or replacement cost

FieldTurf’s sole liability under this Warranty shall be limited to either repair or replacement product (limited to materials) for the affected area of the Surface, at its sole discretion, and FieldTurf shall have no other obligations or liabilities with respect to defects of the Surface. FieldTurf will, at FieldTurf’s option, either repair or replace the affected area to the extent required to meet the Warranty period, but no cash refunds will be made. This Warranty shall commence upon the Date of Purchase indicated in this Warranty. This Warranty is limited to the remedies of repair or replacement, which shall constitute the exclusive remedies available under this Warranty; all other remedies or recourse which might otherwise be available are hereby waived by the Purchaser. FieldTurf will have no other obligations or liability for damages arising out of or in connection with the use or performance of the Surface, including, without limitation, damages for personal injury, economic losses and/or damages related to base/subgrade, utilities, business interruption, lost revenue, increased costs, and downtime costs. In no event shall FieldTurf be liable for indirect, special, consequential and/or incidental damages of any kind, no matter what the cause. This Warranty shall not come into effect, and FieldTurf shall have no obligations under this Warranty, unless and until FieldTurf is paid in full for the Surface to be warranted hereunder.

Any modification to the Surface may void this Warranty. Should the Surface be discontinued, FieldTurf will replace the defective material with a FieldTurf product of equal value. Any Surface repairs or replacements performed under the terms of this Warranty shall not lead to any extension whatsoever of the Warranty period. This Warranty is exclusive to the original Purchaser, is not transferable, and in lieu of all other warranties, expressed or implied, and all other remedies, guarantees and/or liabilities arising by law or otherwise. This Warranty covers first quality Surface only and does not extend to Surface sold as irregulars, seconds or through any means other than the original purchase. FieldTurf’s liability hereunder shall be limited to the original purchase price paid by Purchaser for the Surface.

For more information please contact the Indoor division of FieldTurf at (888) 364-6541.

# Tarkett Sports

## Other Exclusions

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**THIS WARRANTY SHALL BECOME NULL AND VOID IF (A) THE PURCHASER FAILS TO MAINTAIN THE FIELD IN ACCORDANCE WITH THE FIELDTURF MAINTENANCE GUIDELINES AND SCHEDULE PROVIDED BY FIELDTURF THEREIN AND/OR (B) THE PURCHASER FAILS TO INSTALL, REMOVE AND/OR RE-INSTALL THE SURFACE IN ACCORDANCE WITH FIELDTURF'S RECOMMENDED INSTALLATION PROCEDURES.**

Furthermore, this Manufacturer's Limited Warranty **does not cover:**

1. Any part of the installation procedure. FieldTurf is not responsible for any labor costs incurred for installation of the Surface and/or repair or replacement of the Surface under this Warranty. This Warranty does not cover damage caused by improper installation, negligence, water intrusion and/or flooding, abrasion, extreme heat, impact, cutting, freight damage, alteration, or any wear or damage caused by Acts of God.
2. Damage resulting from accident, *force majeure*, misuse, intentional and unintentional abuse, neglect, repetitive use or repetitive activities, or from other than normal play and ordinary use of the Surface. For purposes of this Warranty, normal play and ordinary use shall mean usage up to 3,000 hours per year of regular play and utilization for the sporting activities provided herein; normal play and ordinary use also includes a reasonable number of users or participants, but does not include repetitive marching, repetitive training, high use areas and/or high-intensity drills on the same part of the field, all of which require frequent maintenance in accordance with FieldTurf Maintenance Guidelines and may require regular replacement.
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5. Damage resulting from repair, attempted repair and/or maintenance by anyone other than FieldTurf or an authorized FieldTurf distributor or authorized FieldTurf maintainer.
6. Damage due to causes which include, but are not limited to, the application or use of chemicals and/or cleaning agents, adhesive backing, dirt, traffic, negligence, vandalism, fire, flood, windstorm, animals, improper care and Acts of God; damage resulting from the use of cleaning equipment, methods and/or materials that are not authorized by FieldTurf.
7. Failure and/or improper design of the base; depression of the soil, subsurface or other matter upon which the base or Product rests; and any and all resulting damage to the Product arising therefrom.
8. FieldTurf does not warrant the percolation rate, long term planarity and/or compaction of the base which the product is installed. **FIELDTURF DISCLAIMS ALL WARRANTIES AS TO THE BASE, EXPRESS OR IMPLIED, AND ANY AND ALL RESULTING DAMAGE TO THE PRODUCT ARISING THEREFROM.**
9. Damage resulting from the use of improper or inappropriate footwear such as metal cleats or long-spiked track shoes. Users and participants should wear standard molded cleats or other footwear appropriate for synthetic turf. The use of flat-soled shoes and/or other improper or inappropriate footwear may accelerate the wear of the Product.

For more information please contact the Indoor division of FieldTurf at (888) 364-6541.

# Tarkett Sports

10. Damage resulting from the use of the Product other than for the purpose for which it is intended.
11. Damage resulting from the use, placement and/or abrasion caused by athletic equipment and/or high-friction uses or activities.
12. Damage resulting from golf, shot put, javelin and/or discus activities.
13. Damage, melting and/or shrinking of the Product resulting from heat reflection, open flames, fireworks, welding and/or sources of extreme heat.
14. Damage caused by movement of the Product due to improper installation or improper securing of the edges of the Product.
15. Damage resulting from the handling, shipping or transportation of the Product.
16. Fuzzing, shedding or damage to the Product due to improper use and/or maintenance of the Product.
17. Damage resulting from the storage of drums, lumber and any other objects that may damage the Product.
18. Damage resulting from loads exceeding 3 PSI.
19. Damage resulting from high pressure water spray exceeding 300 PSI.
20. Damage caused by vehicle traffic of any kind.
21. Any additional warranties and/or promises offered by a third party. No unauthorized person, fabricator, installer, agent or employee of FieldTurf is entitled to assume any liability on behalf of FieldTurf relating to the sale of the Surface or has the authority to increase or alter the obligations or limitations of this Warranty.

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FieldTurf disclaims all liability for incidental and consequential damages for breach of any express or implied warranty, including any implied warranty of merchantability, with respect to the Surface. In the event that the Surface is used for purposes other than approved sporting activities or any other uses for which FieldTurf gives its written authorization, it being understood that FieldTurf has tested the Surface for use in connection with these sporting activities and may not have tested it for other uses, FieldTurf shall not be responsible for any and all damages incurred and the Manufacturer's Limited Warranty, as well as all legal warranties, shall become null and void. Any Surface repairs or replacements performed under the terms of this Warranty shall not extend the term of this Warranty.

FieldTurf will not be responsible for any costs and/or expenses incurred by the Purchaser and/or others due to testing, consultation or inspection of the Surface.

The Purchaser must promptly inspect the Surface upon delivery of the Surface. The Purchaser must notify FieldTurf in writing of any defect in the Surface prior to installation of the Surface, in which case

For more information please contact the Indoor division of FieldTurf at (888) 364-6541.



# Tarkett Sports

the installation shall immediately be stopped until FieldTurf has the opportunity to review the claim of defect. In the event of a latent defect after installation of the Surface, the Purchaser must notify FieldTurf in writing as soon as practicable of any such defect, but not later than thirty (30) days within the date on which Purchaser knows or should have known of the defect.

**CLAIMS:** All claims by Owner under this Warranty must be made in writing to the following address within thirty calendar days after Owner learns of any defect giving rise to the claim: FieldTurf USA, Inc. Indoor Division, 175 N Industrial Blvd. Calhoun, Georgia, 30701.

**GOVERNING LAW AND CONSENT:** This Warranty shall be governed by and interpreted in accordance with the law of the State of Georgia.

**EFFECTIVE DATE:** The Effective Date of this Warranty is the \_\_\_\_\_ day of \_\_\_\_\_, 2020.

**OWNER'S NAME**

**FieldTurf USA, Inc.**

By: \_\_\_\_\_

By: \_\_\_\_\_

Title: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

Date: \_\_\_\_\_

## MANUFACTURER'S LIMITED WARRANTY

**WARRANTOR:** FieldTurf, USA Inc.  
175 N Industrial Boulevard NE  
Calhoun, Georgia 30701  
USA

**OWNER:** ("Insert Owner's Name and Address")

**SURFACE:** DropTurf  
("Surface")

### WARRANTY DESCRIPTION AND WARRANTY PERIODS:

**ARRANT** : FieldTurf warrants to Owner, subject to the terms and conditions contained in this Warranty, that the above-described Surface is free from defects in materials and workmanship under normal use and service, so long as the Surface was installed in accordance with the drawings, plans and specifications for the Surface.

**ARRANT PERIOD:** This Warranty shall be in force for a period of 5 years from the Effective Date as defined below.

**RESPONSE FOR WARRANT REPAIRS:** FieldTurf agrees to perform all repairs required by this Warranty within a reasonable time upon receiving proper written notice from Owner as provided below and after FieldTurf carries out all inspections and tests, which it may deem necessary or advisable. Any required repair work shall be initiated by FieldTurf within a reasonable time from FieldTurf's receipt of Owner's written notice requesting such repairs.

**LIMITATIONS AND EXCLUSIONS:** This Warranty does not apply to any defect, failure, damage, or undue wear in or to the Surface caused by or connected with: (a) the installation process of the Surface on the Owner's base; (b) improper or insufficient design or engineering, or improper or insufficient project drawings, plans or specifications; (c) an inadequate or defective pre-existing base or surface; (d) the inherent characteristics of the earth or surface upon which the Surface is installed; (e) misuse, abuse, or deliberate acts of vandalism; (f) accident, negligence, or acts of God; (g) static or dynamic loads exceeding FieldTurf's recommendations; (h) use of improper cleaning methods; or (i) Owner's failure to care for and maintain the Surface in accordance with FieldTurf's written instructions. FieldTurf does not warrant or guarantee the accuracy or sufficiency of any drawings, plans, or specifications not prepared by FieldTurf and which are used in connection with installing the Surface. This Warranty shall be of no force and effect if FieldTurf is not paid in full for the Surface and FieldTurf's obligations under this Warranty are expressly contingent upon FieldTurf being paid in full for the Surface. This Warranty shall not apply to the Surface, or any part thereof, which has been repaired or altered without FieldTurf's prior written consent. No allowance or credit will be granted for any repairs or alterations to the Surface made by Owner except as authorized by this Warranty.

**THIS WARRANT IS EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES EXPRESSED OR IMPLIED OR ARISING OUT OF THE OPERATION OF LAWS INCLUDING ( BUT NOT LIMITED TO) AN IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE AND OF ALL OTHER OBLIGATIONS OR LIABILITIES ON FIELDTURF'S PART.**

**FIELDTURF SHALL NOT BE LIABLE FOR ANY DAMAGES UNDER TORT CONTRACT OR STRICT LIABILITY AND OR INCIDENTAL CONSEQUENTIAL SPECIAL OR INDIRECT DAMAGES UNDER THIS WARRANTY .**

**FIELDTURF'S SOLE OBLIGATION UNDER THIS WARRANTY IS TO REPAIR OR REPLACE AT ITS SOLE DISCRETION ALL OR AN PORTION OF THE SURFACE WHICH MAY BE DETERMINED TO BE DEFECTIVE. FIELDTURF SHALL BE LIABLE FOR ANY SUCH REPAIR OR REPLACEMENT SHALL IN NO EVENT EXCEED THE AMOUNT OF THE PURCHASE PRICE ATTRIBUTABLE TO THE DEFECTIVE PORTION OF THE SURFACE WHICH IS REPAIRED OR REPLACED.**

**MAINTENANCE INSTRUCTIONS:** FieldTurf has supplied Owner with a copy (attached) of the Maintenance Manual containing written instructions for the care and maintenance of the Surface. Owner acknowledges receipt of said Maintenance Manual and agrees to comply with and carry out the instructions contained in it as a condition of this Warranty. The terms of the Maintenance Manual are incorporated in this Warranty by reference.

**CLAIMS:** All claims by Owner under this Warranty must be made in writing to the following address within thirty calendar days after Owner learns of any defect giving rise to the claim: FieldTurf USA, Inc., Indoor Division, 175 N Industrial Blvd. Calhoun, Georgia, 30701.

**INSPECTIONS AND TESTS:** FieldTurf shall be allowed to inspect the Surface during reasonable business hours regarding any claim, which Owner makes under this Warranty; to be present at and to analyze the results of all tests conducted by Owner or others; and to conduct such tests as FieldTurf in its discretion may deem advisable. Owner shall promptly furnish FieldTurf with a copy of all written reports of any tests performed by Owner or on Owner's behalf. FieldTurf shall not be responsible for any costs or expenses incurred by Owner or others with respect to such tests, except that FieldTurf shall pay for the costs of all tests and analyses conducted or directed by FieldTurf representatives.

**EFFECTIVE DATE:** The Effective Date of this Warranty is the \_\_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_.

**OWNER'S NAME**

**FieldTurf USA, Inc.**

By: \_\_\_\_\_

By: \_\_\_\_\_

Title: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

Date: \_\_\_\_\_

## MANUFACTURER'S LIMITED WARRANTY

**WARRANTOR:** FieldTurf, USA Inc.  
175 N Industrial Boulevard NE  
Calhoun, Georgia 30701  
USA

**OWNER:** ("Insert Owner's Name and Address")

**SURFACE:** Dropzone  
("Surface")

### WARRANTY DESCRIPTION AND WARRANTY PERIODS:

**ARRANT** : FieldTurf warrants to Owner, subject to the terms and conditions contained in this Warranty, that the above-described Surface is free from defects in materials and workmanship under normal use and service, so long as the Surface was installed in accordance with the drawings, plans and specifications for the Surface.

**ARRANT PERIOD:** This Warranty shall be in force for a period of 36 months from the Effective Date as defined below.

**RESPONSE FOR WARRANT REPAIRS:** FieldTurf agrees to perform all repairs required by this Warranty within a reasonable time upon receiving proper written notice from Owner as provided below and after FieldTurf carries out all inspections and tests, which it may deem necessary or advisable. Any required repair work shall be initiated by FieldTurf within a reasonable time from FieldTurf's receipt of Owner's written notice requesting such repairs.

**LIMITATIONS AND EXCLUSIONS:** This Warranty does not apply to any defect, failure, damage, or undue wear in or to the Surface caused by or connected with: (a) the installation process of the Surface on the Owner's base; (b) improper or insufficient design or engineering, or improper or insufficient project drawings, plans or specifications; (c) an inadequate or defective pre-existing base or surface; (d) the inherent characteristics of the earth or surface upon which the Surface is installed; (e) misuse, abuse, or deliberate acts of vandalism; (f) accident, negligence, or acts of God; (g) static or dynamic loads exceeding FieldTurf's recommendations; (h) use of improper cleaning methods; or (i) Owner's failure to care for and maintain the Surface in accordance with FieldTurf's written instructions. FieldTurf does not warrant or guarantee the accuracy or sufficiency of any drawings, plans, or specifications not prepared by FieldTurf and which are used in connection with installing the Surface. This Warranty shall be of no force and effect if FieldTurf is not paid in full for the Surface and FieldTurf's obligations under this Warranty are expressly contingent upon FieldTurf being paid in full for the Surface. This Warranty shall not apply to the Surface, or any part thereof, which has been repaired or altered without FieldTurf's prior written consent. No allowance or credit will be granted for any repairs or alterations to the Surface made by Owner except as authorized by this Warranty.

**THIS WARRANT IS EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES EXPRESSED OR IMPLIED OR ARISING OUT OF THE OPERATION OF LAWS INCLUDING ( BUT NOT LIMITED TO) AN IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE AND OF ALL OTHER OBLIGATIONS OR LIABILITIES ON FIELDTURF'S PART.**

FIELDTURF SHALL NOT BE LIABLE FOR ANY DAMAGES UNDER TORT CONTRACT OR STRICT LIABILITY AND OR INCIDENTAL CONSEQUENTIAL SPECIAL OR INDIRECT DAMAGES UNDER THIS WARRANTY .

FIELDTURF'S SOLE OBLIGATION UNDER THIS WARRANTY IS TO REPAIR OR REPLACE AT ITS SOLE DISCRETION ALL OR AN PORTION OF THE SURFACE WHICH MAY BE DETERMINED TO BE DEFECTIVE. FIELDTURF SHALL BE LIABLE FOR ANY SUCH REPAIR OR REPLACEMENT SHALL IN NO EVENT EXCEED THE AMOUNT OF THE PURCHASE PRICE ATTRIBUTABLE TO THE DEFECTIVE PORTION OF THE SURFACE WHICH IS REPAIRED OR REPLACED.

**MAINTENANCE INSTRUCTIONS:** FieldTurf has supplied Owner with a copy (attached) of the Maintenance Manual containing written instructions for the care and maintenance of the Surface. Owner acknowledges receipt of said Maintenance Manual and agrees to comply with and carry out the instructions contained in it as a condition of this Warranty. The terms of the Maintenance Manual are incorporated in this Warranty by reference.

**CLAIMS:** All claims by Owner under this Warranty must be made in writing to the following address within thirty calendar days after Owner learns of any defect giving rise to the claim: FieldTurf USA, Inc., Indoor Division, 175 N Industrial Blvd. Calhoun, Georgia, 30701.

**INSPECTIONS AND TESTS:** FieldTurf shall be allowed to inspect the Surface during reasonable business hours regarding any claim, which Owner makes under this Warranty; to be present at and to analyze the results of all tests conducted by Owner or others; and to conduct such tests as FieldTurf in its discretion may deem advisable. Owner shall promptly furnish FieldTurf with a copy of all written reports of any tests performed by Owner or on Owner's behalf. FieldTurf shall not be responsible for any costs or expenses incurred by Owner or others with respect to such tests, except that FieldTurf shall pay for the costs of all tests and analyses conducted or directed by FieldTurf representatives.

**EFFECTIVE DATE:** The Effective Date of this Warranty is the \_\_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_.

**OWNER'S NAME**

**FieldTurf USA, Inc.**

By: \_\_\_\_\_

By: \_\_\_\_\_

Title: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

Date: \_\_\_\_\_

### Manufacturer's Limited Warranty

FieldTurf warrants that if the **FieldTurf EasyField** ("Product") for multi-sport use synthetic turf proves to be defective in material or initial installation workmanship, resulting in premature wear, during normal and ordinary use of the Product for the sporting activities provided herein, or for any other uses for which FieldTurf provides its written authorization, within one (1) year from the Date of Purchase (as indicated in this Warranty), FieldTurf shall either repair or replace the affected area of the Product in accordance with the terms of this Warranty. FieldTurf's sole liability under this Warranty shall be limited to either repair or replacement of the affected area of the Product, at its sole discretion, and FieldTurf shall have no other obligations or liabilities with respect to defects of the Product. FieldTurf will, at FieldTurf's option, either repair or replace the affected area to the extent required to meet the Warranty period, but no cash refunds will be made. This Warranty shall commence upon the Date of Purchase indicated in this Warranty. This Warranty is limited to the remedies of repair or replacement, which shall constitute the exclusive remedies available under this Warranty; all other remedies or recourse which might otherwise be available are hereby waived by the Purchaser. FieldTurf will have no other obligations or liability for damages arising out of or in connection with the use or performance of the Product, including, without limitation, damages for personal injury, economic losses and/or damages related to base/subgrade, utilities, business interruption, lost revenue, increased costs, and downtime costs. In no event shall FieldTurf be liable for indirect, special, consequential and/or incidental damages of any kind, no matter what the cause. This Warranty shall not come into effect, and FieldTurf shall have no obligations under this Warranty, unless and until FieldTurf is paid in full for the Product to be warranted hereunder.

Any modification to the Product may void this warranty. Should the Product be discontinued, FieldTurf will replace the defective material with a FieldTurf product of equal value. Any product repairs or replacements performed under the terms of this warranty shall not lead to any extension whatsoever of the warranty period. This warranty is exclusive to the original purchaser, is not transferable, and in lieu of all other warranties, expressed or implied, and all other remedies, guarantees and/or liabilities arising by law or otherwise.

### Other Exclusions

**EXCEPT AS EXPRESSLY SET FORTH IN THE MANUFACTURER'S LIMITED WARRANTY ABOVE, FIELDTURF DISCLAIMS ALL OTHER WARRANTIES OF ANY KIND, EXPRESS OR IMPLIED, IN FACT OR IN LAW, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.**

**THIS WARRANTY SHALL BECOME NULL AND VOID IF (A) THE PURCHASER FAILS TO MAINTAIN THE FIELD IN ACCORDANCE WITH THE FIELDTURF MAINTENANCE GUIDELINES AND SCHEDULE PROVIDED BY FIELDTURF THEREIN AND/OR (B) THE PURCHASER FAILS TO INSTALL, REMOVE AND/OR RE-INSTALL THE PRODUCT IN ACCORDANCE WITH FIELDTURF'S RECOMMENDED INSTALLATION PROCEDURES.**

Furthermore, this Manufacturer's Limited Warranty **does not cover**:

1. Any part of the installation procedure by the Purchaser and/or end user. FieldTurf is not responsible for any labor costs incurred for installation of the Product. This warranty does not cover damage caused by improper installation, negligence, water intrusion and/or flooding, abrasion, extreme heat, impact, cutting, freight damage, alteration, or any wear or damage caused by Acts of God.
2. Damage resulting from accident, *force majeure*, misuse, intentional and unintentional abuse, and neglect or from other than normal play and ordinary use of the Product. For purposes of this Warranty, normal play and ordinary use shall mean usage up to 3,000 hours per year of regular play and utilization for the sporting activities provided herein; normal play and ordinary use also includes a reasonable number of users or participants, but does not include repetitive marching, repetitive training or high-intensity drills on the same part of the field, especially in the areas of, but not limited to, home plate, pitcher's mound, base areas, base paths, soccer penalty mark/spot areas, goal areas, sideline areas and lacrosse crease areas, all of which require frequent maintenance in accordance with FieldTurf Maintenance Guidelines and may require regular replacement.
3. Damage resulting from failure to maintain the Product in accordance with FieldTurf's Maintenance Guidelines provided to the Purchaser, a copy of which has been made available to Purchaser. Purchaser shall keep a log of all maintenance performed on the Product and supply FieldTurf with a copy upon request.



**Manufacturer's Limited Warranty**

4. Damage resulting from the Purchaser's failure to install, remove and/or re-install the Product in accordance with FieldTurf's Recommended Installation Procedures, a copy of which has been made available to Purchaser. Purchaser shall limit Product conversions, including installation, removal and re-installation to a reasonable and suitable number of conversions, in the sole discretion of FieldTurf, as the failure of Purchaser to limit all such Product conversions to a reasonable and suitable number may cause damage to the Product, which is not covered under this Warranty. Purchaser shall keep a log of all Product conversions.
5. Damage resulting from repair, attempted repair and/or maintenance by anyone other than FieldTurf or an authorized FieldTurf distributor or authorized FieldTurf maintainer.
6. Damage due to causes which include, but are not limited to, the application of chemicals and/or cleaning agents, adhesive backing, dirt, traffic, negligence, vandalism, fire, flood, windstorm, animals, improper care and Acts of God.
7. Failure and/or improper design of the base; depression of the soil, subsurface or other matter upon which the base or Product rests; and any and all resulting damage to the Product arising therefrom.
8. FieldTurf does not warrant the percolation rate, long term planarity and/or compaction of the base which the product is installed. **FIELDTURF DISCLAIMS ALL WARRANTIES AS TO THE BASE, EXPRESS OR IMPLIED, AND ANY AND ALL RESULTING DAMAGE TO THE PRODUCT ARISING THEREFROM.**
9. Damage resulting from the use of improper footwear such as long-spiked track shoes, regular and repeated use of steel cleats, and flat-soled shoes. Standard molded soccer or football cleats are recommended.
10. Damage resulting from the inadequate installation, improper maintenance and/or other failure of any third party shock pad or underlayment pad installed beneath the Product, including, but not limited to, detachment of the Product caused by expansion and/or contraction of the third party shock pad or underlayment pad.
11. Any additional warranties and/or promises offered by a third party. No unauthorized person, fabricator, installer, agent or employee of FieldTurf is entitled to assume any liability on behalf of FieldTurf relating to the sale of the Product or has the authority to increase or alter the obligations or limitations of this warranty.

All synthetic turf is subject to normal wear and tear, which is not a manufacturing defect and is not covered by this Warranty. In addition to the other factors listed in this Warranty, wear and tear depends on, without limitation, the construction of synthetic turf (fiber face weight, stitch rate, fiber pile height and gauge, and maintenance of the field) and the intensity of use of the synthetic turf. The Product will be stable to light fading with the maximum fading of the Product during the Warranty period not to exceed fifteen percent (15%) of color loss annually based upon an acceptable grey scale. This Warranty does not cover slight variations or gradations of color within the Product and/or face distortion.

FieldTurf disclaims all liability for incidental and consequential damages for breach of any express or implied warranty, including any implied warranty of merchantability, with respect to the Product. In the event that the Product is used for purposes other than the sporting activities provided herein or any other uses for which FieldTurf gives its written authorization, it being understood that FieldTurf has tested the Product for use in connection with these sporting activities and may not have tested it for other uses, FieldTurf shall not be responsible for any and all damages incurred and the Manufacturer's Limited Warranty, as well as all legal warranties, shall become null and void. Any Product repairs or replacements performed under the terms of this Warranty shall not extend the term of this Warranty.

<i>Name of Purchaser:</i>	<b>CLIENT NAME</b>	<i>Sporting Activities:</i>	Multi-Sport Use
<i>Date of Completion:</i>		<i>Installed by:</i>	FieldTurf USA, Inc.
<i>Location:</i>		<i>City:</i>	
<i>Address:</i>		<i>Zip:</i>	
<i>State:</i>		<i>Fax/email:</i>	
<i>Tel:</i>			
<i>Signature:</i>		<i>Name :</i>	Darren Gill

**This warranty is insured by a third party.**

For more information please contact Customer Service at FieldTurf at the number listed below.  
7445 Côte-de-Liesse Road Suite 200, Montreal, QC, Canada H4T 1G2 • Toll Free: 1-800-724-2969 •





**Manufacturer's Limited Warranty**

*Date:* February 22, 2022

*Reference:* 8800

**This warranty is insured by a third party.**

For more information please contact Customer Service at FieldTurf at the number listed below.

7445 Côte-de-Liesse Road Suite 200, Montreal, QC, Canada H4T 1G2 • Toll Free: 1-800-724-2969 •





# HEALTHIER CHOICE<sup>®</sup>

100% HIGH DENSITY MEMORY FOAM CARPET CUSHION

## Limited Lifetime Warranty

This **limited warranty** is non-transferrable and is offered to the original purchaser ("Purchaser") of Healthier Choice Residential Cushion by Healthier Choice Flooring LLC ("Manufacturer") for use in the owner-occupied residence of the Purchaser.

### **Cushion Warranty:**

Healthier Choice Residential Cushion is warranted for a lifetime to the Purchaser (the "Limited Warranty Period") to perform and be free from defects in manufacturing, materials and workmanship.

The Manufacturer further warrants that the cushion will act as a spill-proof moisture barrier preventing normal residential spills from penetrating the cushion when installed according to the manufacturer's specifications. This excludes water or other liquids or accumulations of water or other liquids caused by flood, fire, natural disaster, owner negligence or neglect, frozen or broken pipes, or similar events which result in damage or are subject to insurance coverage.

The Manufacturer further warrants that the product will not crush or lose more than one fourth of its original thickness on average over an area of no less than 3' x 6'.

### **Carpet Texture Retention Warranty:**

The Manufacturer further warrants carpet texture retention for carpet installed over Healthier Choice Residential Cushion for one additional term beyond the term of the original, explicit, and written carpet mill texture retention warranty. This additional term of carpet texture retention warranty provided by The Manufacturer shall begin on the first day following the end of the first term as provided by the carpet mill and continue for a period equal to the length of the first term ("Texture Retention Warranty Term"), effectively doubling the warranty term for texture retention on carpet installed over Healthier Choice Residential Cushion.

The Manufacturer warrants that carpet installed over Healthier Choice Residential Carpet Cushion will not exhibit significant loss of texture from foot traffic during the Texture Retention Warranty Term, when used in an owner-occupied residence in a proper indoor installation. Proper installation requires trained installers following the Carpet & Rug Institute Residential Installation Standard CRI-105. If an explicit written Carpet Texture Retention Warranty is not provided by the carpet mill, the Manufacturer does not provide a Carpet Texture Retention Warranty.

### **Cushion Warranty Service:**

Should your new Healthier Choice Carpet Cushion fail to provide satisfactory service under your new wall to wall carpet, the Manufacturer will replace it, free of charge, with a new carpet cushion of equal or greater value, excluding labor charges.

### **Carpet Warranty Service:**

If carpet installed over Healthier Choice Residential Cushion shows significant appearance loss due to texture changes from foot traffic within the Texture Retention Warranty Term as a result of yarn tufts losing their twist, and the carpet's appearance cannot be restored, the Manufacturer will arrange a credit equal to the cost of the carpet material only and only for the affected area or room. The credit will be issued to the Healthier Choice-approved retailer, as a percentage of the retailer's replacement cost of new carpet of the same or comparable quality.

The credit will be good only toward the purchase of any comparable carpet. This warranty provides no cash payments.

*(NOTE: The texture and appearance of any carpet will change to some degree in heavy traffic areas in all installations. Such appearance changes are normal and are not covered by this warranty, which is intended to protect the Purchaser from excessive carpet appearance change.)*

# Double-Term Carpet Texture Retention Warranty

## Areas of exclusion:

This **LIMITED WARRANTY** applies only to properly installed wall-to-wall residential carpet installations used under normal residential foot traffic use and conditions. The carpet manufacturers' complete recommendations and warranty instructions must be complied with at all times. This warranty excludes all carpet manufacturing defects or improper carpet installation procedures that may cause carpet failure after installation. Also excluded are manufacturing defects such as but not limited to secondary backing delamination, carpet face yarn fiber slippage, pilling, fuzzing and carpet tuft pulls in traffic areas. Edge ravel from improper carpet seam installation procedures and lack of proper carpet stretch-in, inadequate seam sealing, etc., are also not included in this warranty. Failure to comply with carpet manufacturers' care and maintenance warranty procedures and CRI 105 will also void this warranty.

The Healthier Choice Residential Lifetime Cushion Warranty will become void if the cushion shows signs of improper handling or if it is ripped or torn. Improper maintenance or inadequate care could void all or part of the texture retention warranty coverage. Carpet installed outdoors or in areas subject to other than ordinary shoe traffic is excluded from this warranty. Pile distortion or compression caused by furniture, including impressions left by legs of furniture, is not covered by this warranty. Minor indentations, stains, or soil do not constitute structural damage or deterioration requiring replacement under the warranty. Areas subject to roller or wheeled traffic are not covered by this warranty. Warranties are not applicable to carpet or cushion sold as off-quality, second-quality, used or sold as discontinued, excess, or discounted inventory or at discounted pricing. This warranty applies only in the United States and Canada.

## Warranty Requirements:

In order to maintain and protect the coverage under the terms of this warranty, the Purchaser must do the following:

1. Maintain proof of purchase such as a bill, invoice, or statement from the retailer, showing the date and price paid for the carpet and Healthier Choice Residential Cushion, excluding labor.
2. Ensure that the carpet and cushion are installed according to the guidelines outlined in the Carpet and Rug Institute Residential Installation Standard CRI-105.
3. Maintain and be able to show proof of periodic cleaning by the hot-water extraction method by a professional cleaning service or do-it-yourself system, using equipment certified under the Carpet and Rug Institute's Seal of Approval program. Visit [www.carpet-rug.org](http://www.carpet-rug.org) for a listing of approved products.

Maintain proof of such cleaning in the form of a bill, invoice, or statement showing cleaning service (or do-it-yourself equipment rental). To maintain the Texture Retention warranty requires a minimum of one cleaning every two years. Depending on local factors, more frequent cleaning may be advisable. Please refer to the cleaning recommendations made by the Carpet and Rug Institute at [www.carpet-rug.org](http://www.carpet-rug.org).

Contact IICRC (Institute of Inspection, Cleaning and Restoration Certification) at 1-800-835-4624 for more information on carpet cleaning professionals. Although steam cleaning is a homeowner obligation, it is also a procedure that will help protect your carpet investment and keep your carpet looking better longer.

## Warranty Service:

In the event of a problem that is or may be covered by this warranty, The Manufacturer reserves the right to have one of its authorized agents inspect the affected area prior to repair, removal, or replacement. Failure to follow this requirement will void this warranty.

Notice of a claim under this warranty must be made by the original purchaser and accompanied by the original receipt or invoice. **THIS EXPRESS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, WITHOUT LIMITATION, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. IN NO EVENT WILL THE MANUFACTURER BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES OF ANY KIND, INCLUDING, BUT NOT LIMITED TO, ANY DAMAGES TO CARPET** not explicitly covered in this limited warranty, whether such damages are claimed on account of breach of warranty, breach of contract, negligence or strict/product liability, including, without limitation, damage to property or other economic losses.

Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

For warranty service, write to : **HEALTHIER CHOICE FLOORING, LLC**  
401 Jones Street  
Dalton, GA 30720

## MANUFACTURER'S LIMITED WARRANTY

**WARRANTOR:** FieldTurf, USA Inc.  
175 N Industrial Boulevard NE  
Calhoun, Georgia 30701  
USA

**OWNER:** ("Insert Owner's Name and Address")

**SURFACE:** LinoSport  
("Surface")

### WARRANTY DESCRIPTION AND WARRANTY PERIODS:

**LIMITED PRODUCT DEFECT WARRANTY:** FieldTurf USA, Inc. ("FieldTurf") warrants to Owner, subject to the terms and conditions contained in this Warranty, that the above-described Surface is free from defects in materials and workmanship under normal use and service, as long as the Surface was installed in accordance with the drawings, plans and specifications for the Surface. The Limited Product Defect Warranty shall be in force for a period of ten (10) years from the Effective Date as defined below.

**RESPONSE FOR WARRANTY REPAIRS:** FieldTurf agrees to perform all repairs required by this Warranty within a reasonable time upon receiving proper written notice from Owner as provided below and after FieldTurf carries out all inspections and tests, which it may deem necessary or advisable. Any required repair work shall be initiated by FieldTurf within a reasonable time after FieldTurf's receipt of Owner's written notice requesting such repairs. FieldTurf's sole liability under this Warranty shall be limited to either repair or replacement of the affected area of the Surface, at its sole discretion, and FieldTurf shall have no other obligations or liabilities with respect to defects of the Surface.

**LIMITATIONS AND EXCLUSIONS:** This Warranty does not apply to any defect, failure, damage, and/or accelerated, undue or excessive wear in or to the Surface caused by or connected with: (a) the installation process of the Surface on the Owner's base; (b) improper or insufficient design or engineering, or improper or insufficient project drawings, plans or specifications; (c) an inadequate or defective pre-existing base or surface; (d) the inherent characteristics of the earth or surface upon which the Surface is installed; (e) misuse, abuse, or deliberate acts of vandalism; (f) accident, negligence, or acts of God; (g) static or dynamic loads exceeding FieldTurf's recommendations; (h) use of improper cleaning methods; (i) the introduction or accumulation of moisture around or under the Surface; (j) Owner's failure to care for and maintain the Surface in accordance with FieldTurf's Maintenance Manual and other written instructions; or (k) use which is not generally accepted as a typical use of the Surface. FieldTurf does not warrant or guarantee the accuracy or sufficiency of any drawings, plans, or specifications not prepared by FieldTurf and which are used in connection with installing the Surface. This Warranty shall be of no force and effect if FieldTurf is not paid in full for the Surface and FieldTurf's obligations under this Warranty are expressly contingent upon FieldTurf being paid in full for the Surface.

This Warranty shall not apply to the Surface, or any part thereof, which has been repaired or altered without FieldTurf's prior written consent. No allowance or credit will be granted for any repairs or alterations to the Surface made by Owner except as authorized by this Warranty.

**THIS WARRANTY IS EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED, IMPLIED OR ARISING BY OPERATION OF LAW, INCLUDING (BUT NOT LIMITED TO) ANY**

For more information please contact the Indoor division of FieldTurf at 888-364-6541.

**IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE AND OF ALL OTHER OBLIGATIONS OR LIABILITIES ON FIELDTURF'S PART. FIELDTURF USA, INC. SHALL NOT BE LIABLE FOR ANY DAMAGES UNDER TORT, CONTRACT OR STRICT LIABILITY AND/ OR INCIDENTAL, CONSEQUENTIAL, SPECIAL OR INDIRECT DAMAGES UNDER THIS WARRANTY.**

**FIELDTURF'S SOLE OBLIGATION UNDER THIS WARRANTY IS TO REPAIR OR REPLACE AT ITS SOLE DISCRETION ALL OR ANY PORTION OF THE SURFACE WHICH MAY BE DETERMINED TO BE DEFECTIVE. FIELDTURF'S LIABILITY FOR ANY SUCH REPAIR OR REPLACEMENT SHALL IN NO EVENT EXCEED THE AMOUNT OF THE PURCHASE PRICE ATTRIBUTABLE TO THE DEFECTIVE PORTION OF THE SURFACE WHICH IS REPAIRED OR REPLACED.**

**MAINTENANCE INSTRUCTIONS:** FieldTurf has made available or supplied Owner with a copy of the Maintenance Manual containing written instructions for the care and maintenance of the Surface. Owner acknowledges receipt of said Maintenance Manual and agrees to comply with and carry out the instructions contained in it as a condition of this Warranty. The terms of the Maintenance Manual are incorporated in this Warranty by reference. If a Maintenance Manual is not received by Owner at the time of issuance of this warranty, it is the owner's obligation to request and maintain record of receipt.

**CLAIMS:** All claims by Owner under this Warranty must be made in writing to the following address within thirty calendar days after Owner learns of any defect giving rise to the claim: FieldTurf USA, Inc. Indoor Division, 175 N Industrial Blvd. Calhoun, Georgia, 30701.

**INSPECTIONS AND TESTS:** FieldTurf shall be allowed to inspect the Surface during reasonable business hours regarding any claim, which Owner makes under this Warranty; to be present at and to analyze the results of all tests conducted by Owner or others; and to conduct such tests as FieldTurf in its discretion may deem advisable. Owner shall promptly furnish FieldTurf with a copy of all written reports of any tests performed by Owner or on Owner's behalf. FieldTurf shall not be responsible for any costs or expenses incurred by Owner or others with respect to such tests, except that FieldTurf shall pay for the costs of all tests and analyses conducted or directed by FieldTurf representatives.

**GOVERNING LAW AND CONSENT:** This Warranty shall be governed by and interpreted in accordance with the law of the State of Georgia.

**EFFECTIVE DATE:** The Effective Date of this Warranty is the \_\_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_.

**OWNER'S NAME**

**FieldTurf USA, Inc.**

By: \_\_\_\_\_

By: \_\_\_\_\_

Title: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

Date: \_\_\_\_\_

# Tarkett Sports

## TEN-YEAR LIMITED MANUFACTURER'S WARRANTY

**WARRANTOR:** FieldTurf USA, Inc.  
175 N. Industrial Blvd. N.E.  
Calhoun, Georgia  
30701

**OWNER:** (“Insert Owner’s Name and Address”)

**PRODUCT:** **CLUTCH COURT**

**WARRANTY:** FieldTurf warrants to Owner, subject to the terms and conditions contained in this Warranty, that the above-described Surface is free from defects in materials and workmanship under normal use and service, so long as the Surface was installed in accordance with the drawings, plans and specifications for the Surface.

**WARRANTY PERIOD:** This Warranty shall be in force for a period of 120 months from the Effective Date as defined below.

**RESPONSE FOR WARRANTY REPAIRS:** FieldTurf agrees to perform all repairs required by this Warranty within a reasonable time upon receiving proper written notice from Owner as provided below and after FieldTurf carries out all inspections and tests, which it may deem necessary or advisable. Any required repair work shall be initiated by FieldTurf within a reasonable time from FieldTurf’s receipt of Owner’s written notice requesting such repairs.

**LIMITATIONS AND EXCLUSIONS:** This Warranty does not apply to any defect, failure, damage, or undue wear in or to the Surface caused by or connected with:

- (a) the installation process of the Surface on the Owner’s base; (b) improper or insufficient design or engineering, or improper or insufficient project drawings, plans or specifications; (c) an inadequate or defective pre-existing base or surface; (d) the inherent characteristics of the earth or surface upon which the Surface is installed; (e) misuse, abuse, or deliberate acts of vandalism; (f) accident, negligence, or acts of God; (g) static or dynamic loads exceeding FieldTurf’s recommendations; (h) use of improper cleaning methods; or (i) Owner’s failure to care for and maintain the Surface in accordance with FieldTurf’s written instructions. Owner’s failure to properly control the indoor environment as per FieldTurf’s recommendations and MFMA guidelines. FieldTurf does not warrant or guarantee the accuracy or sufficiency of any drawings, plans, or specifications not prepared by FieldTurf and which are used in connection with installing the Surface. This Warranty shall be of no force and effect if FieldTurf is not paid in full for the Surface and FieldTurf’s obligations under this Warranty are expressly contingent upon FieldTurf being paid in full for the Surface.

This Warranty shall not apply to the Surface, or any part thereof, which has been repaired or altered without FieldTurf’s prior written consent. No allowance or credit will be granted for any repairs or alterations to the Surface made by Owner except as authorized by this Warranty.

**THIS WARRANTY IS EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED, IMPLIED OR ARISING BY OPERATION OF LAW, INCLUDING (BUT NOT LIMITED TO) ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE AND OF ALL OTHER OBLIGATIONS OR LIABILITIES ON FIELDTURF’S PART. FIELDTURF SHALL NOT BE LIABLE FOR ANY DAMAGES UNDER TORT, CONTRACT OR**

# Tarkett Sports

**STRICT LIABILITY AND/ OR INCIDENTAL, CONSEQUENTIAL, SPECIAL OR INDIRECT DAMAGES UNDER THIS WARRANTY.**

**FIELDTURF'S SOLE OBLIGATION UNDER THIS WARRANTY IS TO REPAIR OR REPLACE AT ITS SOLE DISCRETION ALL OR ANY PORTION OF THE SURFACE WHICH MAY BE DETERMINED TO BE DEFECTIVE. FIELDTURF'S LIABILITY FOR ANY SUCH REPAIR OR REPLACEMENT SHALL IN NO EVENT EXCEED THE AMOUNT OF THE PURCHASE PRICE ATTRIBUTABLE TO THE DEFECTIVE PORTION OF THE SURFACE WHICH IS REPAIRED OR REPLACED.**

**MAINTENANCE INSTRUCTIONS:** FieldTurf has supplied Owner with a copy (attached) of the Maintenance Manual containing written instructions for the care and maintenance of the Surface. Owner acknowledges receipt of said Maintenance Manual and agrees to comply with and carry out the instructions contained in it as a condition of this Warranty. The terms of the Maintenance Manual are incorporated in this Warranty by reference.

**CLAIMS:** All claims by Owner under this Warranty must be made in writing to the following address within thirty calendar days after Owner learns of any defect giving rise to the claim: FieldTurf Inc., Indoor Division, 8088 Montview Road, Montreal, Quebec, H4P 2L7.

**INSPECTIONS AND TESTS:** FieldTurf shall be allowed to inspect the Surface during reasonable business hours regarding any claim, which Owner makes under this Warranty; to be present at and to analyze the results of all tests conducted by Owner or others; and to conduct such tests as FieldTurf in its discretion may deem advisable. Owner shall promptly furnish FieldTurf with a copy of all written reports of any tests performed by Owner or on Owner's behalf. FieldTurf shall not be responsible for any costs or expenses incurred by Owner or others with respect to such tests, except that FieldTurf shall pay for the costs of all tests and analyses conducted or directed by FieldTurf representatives.

**GOVERNING LAW AND CONSENT** - This Warranty shall be construed in accordance with the law of the Province of Quebec without reference to choice of law provisions. The parties consent to the exclusive jurisdiction and venue of the courts of Quebec.

**LANGUAGE-** The undersigned acknowledge that they have requested that this Warranty and all related documents be drawn up in English. Les soussignés reconnaissent avoir exigé que cette convention, ainsi que tous les documents qui s'y rattachent, soient rédigés en anglais seulement.

**EFFECTIVE DATE:** The Effective Date of this Warranty is the \_\_\_\_ day of \_\_\_\_\_, 2021.

**FieldTurf Inc.**

By: \_\_\_\_\_

Signature: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

Enclosed: Instructions for Care and Maintenance of your Product

# Tarkett Sports

## MANUFACTURER'S LIMITED WARRANTY

**WARRANTOR:** FieldTurf USA, Inc.  
175 N Industrial Boulevard NE  
Calhoun, Georgia 30701  
USA

**OWNER:** (“Insert Owner’s Name and Address”)

**SURFACE:** DanceFloor  
 (“Surface”)

### WARRANTY DESCRIPTION AND WARRANTY PERIODS:

**LIMITED PRODUCT DEFECT WARRANTY:** FieldTurf USA, Inc. (“FieldTurf”) warrants to Owner, subject to all terms and conditions contained in this Warranty, that the above-described Surface is free from defects in materials under normal use and service, as long as the Surface was installed in accordance with the Installation Systems section of this Warranty, FieldTurf installation guidelines, and drawings, plans and specifications for the Surface. The Limited Product Defect Warranty shall be in force for a period of ten (10) years from the Effective Date as defined below.

**LIMITED WEAR WARRANTY:** FieldTurf warrants to Owner, subject to all terms and conditions contained in this Warranty, that there will be no wear-through of the Surface’s wear layer under normal use and service, as long as the Surface was installed in accordance with the Installation Systems section of this Warranty, FieldTurf installation guidelines, and drawings, plans and specifications for the Surface. For purposes of the Limited Wear Warranty, “wear-through” refers to the top layer of the Surface and means a complete loss of the wear-layer so that the printed layer (pattern or color) is materially changed or affected. The Limited Wear Warranty only shall be in force for a period of ten (10) years from the Effective Date.

**RESPONSE FOR WARRANTY REPAIRS:** FieldTurf agrees to perform all repairs required by this Warranty within a reasonable time upon receiving proper written notice from Owner as provided below and after FieldTurf carries out all inspections and tests, which it may deem necessary or advisable. Any required repair work shall be initiated by FieldTurf within a reasonable time after FieldTurf’s receipt of Owner’s written notice requesting such repairs. FieldTurf’s sole liability under this Warranty shall be limited to either repair or replacement of the affected area of the Surface, at its sole discretion, and FieldTurf shall have no other obligations or liabilities with respect to defects of the Surface.

**LIMITATIONS AND EXCLUSIONS:** This Warranty does not apply to any defect, failure, damage, and/or accelerated, undue or excessive wear in or to the Surface caused by or connected with: (a) the installation process of the Surface on the Owner’s subfloor surface; (b) improper or insufficient design or engineering, or improper or insufficient project drawings, plans or specifications; (c) an inadequate or defective pre-existing subfloor or surface; (d) the inherent characteristics of the earth and/or surface upon which the Surface is installed; (e) misuse, abuse, or deliberate acts of vandalism; (f) accident, negligence, or acts of God; (g) static or dynamic loads exceeding FieldTurf’s recommendations; (h) use of improper cleaning methods; (i) the introduction or accumulation of moisture around or under the Surface beyond the tolerances permitted by FieldTurf’s installation guidelines; (j) high moisture and/or other adverse conditions; (k) Owner’s failure to care for and maintain the Surface in accordance with FieldTurf’s Maintenance Manual and other written instructions; (l) use which is not generally accepted as a typical use of the Surface; (m) improper installation; (n) improper protection from excessive loads; and/or (o) floods and/or other events introducing water to the Surface.

# Tarkett Sports

Furthermore, this Warranty **does not cover nor will be FieldTurf be liable for** (1) damages due to personal injury; (2) change of the Surface appearance due to excessive ultraviolet (UV) exposure and/or or heat; (3) damage due to unpredictable and/or unknown causes;(4) damage and/or performance reductions due to improper control of atmospheric soiling and/or contamination; (5) stains and/or discoloration of the Surface; and (6) costs associated with the temporary and/or permanent closing of the facility in which the Surface was installed. FieldTurf does not warrant or guarantee the accuracy or sufficiency of any drawings, plans, or specifications not prepared by FieldTurf and which are used in connection with installing the Surface. This Warranty shall be of no force and effect if FieldTurf is not paid in full for the Surface and FieldTurf's obligations under this Warranty are expressly contingent upon FieldTurf being paid in full for the Surface.

This Warranty shall not apply to the Surface, or any part thereof, which has been repaired or altered without FieldTurf's prior written consent. No allowance or credit will be granted for any repairs or alterations to the Surface made by Owner except as authorized by this Warranty.

**THIS WARRANTY IS EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED, IMPLIED OR ARISING BY OPERATION OF LAW, INCLUDING (BUT NOT LIMITED TO) ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE AND OF ALL OTHER OBLIGATIONS OR LIABILITIES ON FIELDTURF'S PART. FIELDTURF USA, INC. SHALL NOT BE LIABLE FOR ANY DAMAGES UNDER TORT, CONTRACT OR STRICT LIABILITY AND/ OR INCIDENTAL, CONSEQUENTIAL, SPECIAL OR INDIRECT DAMAGES UNDER THIS WARRANTY.**

**FIELDTURF'S SOLE OBLIGATION UNDER THIS WARRANTY IS TO REPAIR OR REPLACE AT ITS SOLE DISCRETION ALL OR ANY PORTION OF THE SURFACE WHICH MAY BE DETERMINED TO BE DEFECTIVE. FIELDTURF'S LIABILITY FOR ANY SUCH REPAIR OR REPLACEMENT SHALL IN NO EVENT EXCEED THE AMOUNT OF THE PURCHASE PRICE ATTRIBUTABLE TO THE DEFECTIVE PORTION OF THE SURFACE WHICH IS REPAIRED OR REPLACED.**

**MAINTENANCE INSTRUCTIONS:** FieldTurf has made available or supplied Owner with a copy of the Maintenance Manual containing written instructions for the care and maintenance of the Surface. Owner acknowledges receipt of said Maintenance Manual and agrees to comply with and carry out the instructions contained in it as a condition of this Warranty. The terms of the Maintenance Manual are incorporated in this Warranty by reference. If a Maintenance Manual is not received by Owner at the time of issuance of this warranty, it is the owner's obligation to request and maintain record of receipt.

**CLAIMS:** All claims by Owner under this Warranty must be made in writing to the following address within thirty calendar days after Owner learns of any defect giving rise to the claim: FieldTurf USA, Inc. Indoor Division, 175 N Industrial Blvd. Calhoun, Georgia, 30701.

**INSPECTIONS AND TESTS:** FieldTurf shall be allowed to inspect the Surface during reasonable business hours regarding any claim, which Owner makes under this Warranty; to be present at and to analyze the results of all tests conducted by Owner or others; and to conduct such tests as FieldTurf in its discretion may deem advisable. Owner shall promptly furnish FieldTurf with a copy of all written reports of any tests performed by Owner or on Owner's behalf. FieldTurf shall not be responsible for any costs or expenses incurred by Owner or others with respect to such tests, except that FieldTurf shall pay for the costs of all tests and analyses conducted or directed by FieldTurf representatives.

**INSTALLATION SYSTEMS:** FieldTurf provides specific installation systems to accommodate a variety of building conditions. It is critical that care is taken by both the owner and the contractor (and other interested parties) performing the work to understand the benefits and limitations of each system and select the appropriate system. All concrete slabs should be carefully inspected for typical, predictable and acceptable conditions, especially as it concerns moisture testing. Existing buildings and structures that are remodeled may not contain effective vapor retarders/barriers, exhibit poor drainage and/or other conditions that allow the introduction of moisture. All FieldTurf installation systems are based on



# Tarkett Sports

typical, predictable and acceptable concrete conditions. For fully adhered systems and GreenLay products, concrete must maintain conditions consistent with FieldTurf's written tolerances, as outlined in FieldTurf's installation guidelines. FieldTurf does not warrant against the loss of bond or all other adverse effects upon any installation system where conditions exceed FieldTurf's written tolerances; this includes, but is not limited to, the presence and/or accumulation of standing water on the surface of the concrete slab or over other installation systems, including moisture mitigation products that FieldTurf does not provide. In the event of a claim hereunder, FieldTurf reserves the right to perform its own inspections during normal business hours, in its sole discretion, to determine the validity of the claim. FieldTurf does not warrant against the effect of high moisture conditions and/or other adverse conditions existing within any and all building materials, components, elements and conditions.

All FieldTurf installation systems require the ability to bond directly to concrete or approved alternative subfloor surface. Sealers, existing adhesives and/or any other contaminants may affect the performance of any FieldTurf installation system. Strict adherence to ASTM F710 is required. The use of solvents to remove existing adhesives is prohibited. FieldTurf does not warrant against any damage caused by the existence and/or application of moisture mitigation systems without FieldTurf's express written approval and consent. FieldTurf expressly excludes from this Warranty the movement of joints and the development of cracks, divots, scratches and gouges in the subfloor surface.

The bridging of moving joints is expressly prohibited with the exception of FieldTurf installation systems incorporating Tarkolay products provided those joints are properly prepared.

Projects must be registered using FieldTurf's specific warranty registration form within thirty (30) days of substantial completion of the installation of the Surface. A sample warranty may be provided upon request, but the Warranty will not be issued by FieldTurf without timely submittal of FieldTurf's warranty registration form; all FieldTurf registration forms must include evidence of moisture testing and written evidence of inspections, both of which must be acceptable to FieldTurf, along with the FieldTurf installation system type used. FieldTurf does not validate moisture testing information and does not interpret such testing, but is collected for data and reference purposes. FieldTurf does not interpret existing conditions. PH testing is required and must also meet and remain within FieldTurf's written tolerances.

**GOVERNING LAW AND CONSENT:** This Warranty shall be governed by and interpreted in accordance with the law of the State of Georgia.

**EFFECTIVE DATE:** The Effective Date of this Warranty is the \_\_\_\_\_ day of \_\_\_\_\_, 2018.

**OWNER'S NAME**

**FieldTurf USA, Inc.**

By: \_\_\_\_\_

By: \_\_\_\_\_

Title: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

Date: \_\_\_\_\_

# Tarkett Sports

## MANUFACTURER'S LIMITED WARRANTY

**ARRANTOR:** FieldTurf USA, Inc.  
175 N Industrial Boulevard NE  
Calhoun, Georgia 30701  
USA

**OWNER:** ("Insert Owner's Name and Address")

**SURFACE:** Polyturf Plus Pad and Pour  
("Surface")

### ARRANT DESCRIPTION AND WARRANTY PERIODS:

**LIMITED PRODUCT DEFECT WARRANTY :** FieldTurf USA, Inc. ("FieldTurf") warrants to Owner, subject to all terms and conditions contained in this Warranty, that the above-described Surface is free from defects in materials and workmanship under normal use and service, as long as the Surface was installed in accordance with the Installation Systems section of this Warranty, FieldTurf installation guidelines, and drawings, plans and specifications for the Surface. The Limited Product Defect Warranty shall be in force for a period of thirty (30) years from the Effective Date as defined below. For purposes of this Warranty, the following occurrences may be defects and included in the coverage of this Warranty, subject to all terms and conditions of the Warranty:

- 1) Manufacturing defects;
- 2) Delamination of the Surface layers;
- 3) Deterioration of the recycled rubber base mat layer;
- 4) Reversion or re-liquefying of the urethane layers; or
- 5) Separation of the seams within the base mat layer.

**LIMITED MOISTURE WARRANTY :** FieldTurf warrants to Owner, subject to the terms and conditions contained in this Warranty, that the above-described Surface shall be free from defects caused by subfloor moisture, as long as the Surface was installed in accordance with the Installation Systems section of this Warranty, FieldTurf installation guidelines, and the building or structure in which the Surface is installed maintains a relative humidity ("RH") level (according to ASTM F2170) and moisture content ("MC") (according to ASTM F2659) as provided in the Installation Systems section of this Warranty, at all times during the Warranty period. This Limited Moisture Warranty shall be in force for a period of ten (10) years from the Effective Date as defined below.

**RESPONSE FOR WARRANTY REPAIRS:** FieldTurf agrees to perform all repairs required by this Warranty within a reasonable time upon receiving proper written notice from Owner as provided below and after FieldTurf carries out all inspections and tests, which it may deem necessary or advisable. Any required repair work shall be initiated by FieldTurf within a reasonable time after FieldTurf's receipt of Owner's written notice requesting such repairs. FieldTurf's sole liability under this Warranty shall be limited to either repair or replacement of the affected area of the Surface, at its sole discretion, and FieldTurf shall have no other obligations or liabilities with respect to defects of the Surface.

**LIMITATIONS AND EXCLUSIONS:** This Warranty does not apply to any defect, failure, damage, and/or accelerated, undue or excessive wear in or to the Surface caused by or connected with: (a) the installation process of the Surface on the Owner's subfloor surface; (b) improper or insufficient design or engineering, or improper or insufficient project drawings, plans or specifications; (c) an inadequate or defective pre-existing subfloor or surface; (d) the inherent characteristics of the earth and/or surface upon which the Surface is installed; (e) misuse, abuse, or deliberate acts of vandalism; (f) accident, negligence, or acts of God; (g) static or dynamic loads exceeding FieldTurf's recommendations; (h)

For more information please contact the Indoor division of FieldTurf at (888) 364-6541.

# Tarkett Sports

use of improper cleaning methods; (i) the introduction or accumulation of moisture around or under the Surface beyond the tolerances permitted by FieldTurf's installation guidelines; (j) high moisture and/or other adverse conditions; (k) Owner's failure to care for and maintain the Surface in accordance with FieldTurf's Maintenance Manual and other written instructions; (l) use which is not generally accepted as a typical use of the Surface; (m) improper installation; (n) improper protection from excessive loads; and/or (o) floods and/or other events introducing water to the Surface.

Furthermore, this Warranty **does not cover nor will be FieldTurf be liable for** (1) damages due to personal injury; (2) change of the Surface appearance due to excessive ultraviolet (UV) exposure and/or heat; (3) damage due to unpredictable and/or unknown causes; (4) damage and/or performance reductions due to improper control of atmospheric soiling and/or contamination; (5) stains and/or discoloration of the Surface; and (6) costs associated with the temporary and/or permanent closing of the facility in which the Surface was installed. FieldTurf does not warrant or guarantee the accuracy or sufficiency of any drawings, plans, or specifications not prepared by FieldTurf and which are used in connection with installing the Surface. This Warranty shall be of no force and effect if FieldTurf is not paid in full for the Surface and FieldTurf's obligations under this Warranty are expressly contingent upon FieldTurf being paid in full for the Surface.

This Warranty shall not apply to the Surface, or any part thereof, which has been repaired or altered without FieldTurf's prior written consent. No allowance or credit will be granted for any repairs or alterations to the Surface made by Owner except as authorized by this Warranty.

**THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES EXPRESSED OR IMPLIED ARISING OUT OF THE OPERATION OF LAWN INCLUDING (BUT NOT LIMITED TO) AN IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE AND OF ALL OTHER OBLIGATIONS OR LIABILITIES ON FIELDTURF'S PART. FIELDTURF USA INC. SHALL NOT BE LIABLE FOR ANY DAMAGES UNDER TORT CONTRACT OR STRICT LIABILITY AND OR INCIDENTAL CONSEQUENTIAL SPECIAL OR INDIRECT DAMAGES UNDER THIS WARRANTY .**

**FIELDTURF'S SOLE OBLIGATION UNDER THIS WARRANTY IS TO REPAIR OR REPLACE AT ITS SOLE DISCRETION ALL OR AN PORTION OF THE SURFACE WHICH MAY BE DETERMINED TO BE DEFECTIVE. FIELDTURF'S LIABILITY FOR ANY SUCH REPAIR OR REPLACEMENT SHALL IN NO EVENT EXCEED THE AMOUNT OF THE PURCHASE PRICE ATTRIBUTABLE TO THE DEFECTIVE PORTION OF THE SURFACE WHICH IS REPAIRED OR REPLACED.**

**MAINTENANCE INSTRUCTIONS:** FieldTurf has made available or supplied Owner with a copy of the Maintenance Manual containing written instructions for the care and maintenance of the Surface. Owner acknowledges receipt of said Maintenance Manual and agrees to comply with and carry out the instructions contained in it as a condition of this Warranty. The terms of the Maintenance Manual are incorporated in this Warranty by reference. If a Maintenance Manual is not received by Owner at the time of issuance of this warranty, it is the owner's obligation to request and maintain record of receipt.

**CLAIMS:** All claims by Owner under this Warranty must be made in writing to the following address within thirty calendar days after Owner learns of any defect giving rise to the claim: FieldTurf USA, Inc. Indoor Division, 175 N Industrial Blvd. Calhoun, Georgia, 30701.

**INSPECTIONS AND TESTS:** FieldTurf shall be allowed to inspect the Surface during reasonable business hours regarding any claim, which Owner makes under this Warranty; to be present at and to analyze the results of all tests conducted by Owner or others; and to conduct such tests as FieldTurf in its discretion may deem advisable. Owner shall promptly furnish FieldTurf with a copy of all written reports of any tests performed by Owner or on Owner's behalf. FieldTurf shall not be responsible for any costs or expenses incurred by Owner or others with respect to such tests, except that FieldTurf shall pay for the costs of all tests and analyses conducted or directed by FieldTurf representatives.

For more information please contact the Indoor division of FieldTurf at (888) 364-6541.

# Tarkett Sports

**INSTALLATION STEMS:** FieldTurf provides specific installation systems to accommodate a variety of building conditions. It is critical that care is taken by both the owner and the contractor (and other interested parties) performing the work to understand the benefits and limitations of each system and select the appropriate system. All concrete slabs should be carefully inspected for typical, predictable and acceptable conditions, especially as it concerns moisture testing. Existing buildings and structures that are remodeled may not contain effective vapor retarders/barriers, exhibit poor drainage and/or other conditions that allow the introduction of moisture. All FieldTurf installation systems are based on typical, predictable and acceptable concrete conditions. For fully adhered and Tarkolay installations, concrete must maintain conditions consistent with FieldTurf's written tolerances, as outlined in FieldTurf's installation guidelines. FieldTurf does not warrant against the loss of bond or all other adverse effects upon any installation system where conditions exceed FieldTurf's written tolerances; this includes, but is not limited to, the presence and/or accumulation of standing water on the surface of the concrete slab or over other installation systems, including moisture mitigation products that FieldTurf does not provide. In the event of a claim hereunder, FieldTurf reserves the right to perform its own inspections during normal business hours, in its sole discretion, to determine the validity of the claim. FieldTurf does not warrant against the effect of high moisture conditions and/or other adverse conditions existing within any and all building materials, components, elements and conditions.

All FieldTurf installation systems require the ability to bond directly to concrete or approved alternative subfloor surface. Sealers, existing adhesives and/or any other contaminants may affect the performance of any FieldTurf installation system whether fully adhered or not. Strict adherence to ASTM F710 is required. The use of solvents to remove existing adhesives is prohibited. FieldTurf does not warrant against any damage caused by the existence and/or application of moisture mitigation systems without FieldTurf's express written approval and consent. FieldTurf expressly excludes from this Warranty the movement of joints and the development of cracks, divots, scratches and gouges in the subfloor surface.

The bridging of moving joints is expressly prohibited with the exception of FieldTurf installation systems incorporating Tarkolay products provided those joints are properly prepared.

Projects must be registered using FieldTurf's specific warranty registration form within thirty (30) days of substantial completion of the installation of the Surface. A sample warranty may be provided upon request, but the Warranty will not be issued by FieldTurf without timely submittal of FieldTurf's warranty registration form; all FieldTurf registration forms must include evidence of moisture testing and written evidence of inspections, both of which must be acceptable to FieldTurf, along with the FieldTurf installation system type used. FieldTurf does not validate moisture testing information and does not interpret such testing, but is collected for data and reference purposes. FieldTurf does not interpret existing conditions. PH testing is required and must also meet and remain within FieldTurf's written tolerances.

Installation Systems Moisture Tolerances Applicable to this Warranty:

- 1.) Full spread with Beybond 50 with a maximum tolerance of 92% RH per ASTM F2170 and 5% MC per ASTM F2659 (Surface and Probe)
- 2.) Full spread with Multi-Poxy with a maximum tolerance of 98% RH per ASTM F2170 and 6% per ASTM F2659 (Surface and Probe)
- 3.) Tarkolay with Multi-Poxy which does not require moisture testing and is the only system recommended to bridge properly prepared moving joints or minor cracks.

**GOVERNING LA AND CONSENT:** This Warranty shall be governed by and interpreted in accordance with the law of the State of Georgia.

**EFFECTIVE DATE:** The Effective Date of this Warranty is the \_\_\_\_\_ day of \_\_\_\_\_, 2019.

For more information please contact the Indoor division of FieldTurf at (888) 364-6541.

# Tarkett *Sports*

FieldTurf USA Inc.

By: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

*End of Document*

SAMPLE

# Tarkett Sports

## MANUFACTURER'S LIMITED WARRANTY

**ARRANTOR:** FieldTurf USA, Inc.  
175 N Industrial Boulevard NE  
Calhoun, Georgia 30701  
USA

**OWNER:** ("Insert Owner's Name and Address")

**SURFACE:** Polyturf Plus Pad and Pour  
("Surface")

### ARRANT DESCRIPTION AND WARRANTY PERIODS:

**LIMITED PRODUCT DEFECT WARRANTY :** FieldTurf USA, Inc. ("FieldTurf") warrants to Owner, subject to all terms and conditions contained in this Warranty, that the above-described Surface is free from defects in materials under normal use and service, as long as the Surface was installed in accordance with the Installation Systems section of this Warranty, FieldTurf installation guidelines, and drawings, plans and specifications for the Surface. The Limited Product Defect Warranty shall be in force for a period of thirty (30) years from the Effective Date as defined below. For purposes of this Warranty, the following occurrences may be defects and included in the coverage of this Warranty, subject to all terms and conditions of the Warranty:

- 1) Manufacturing defects;
- 2) Delamination of the Surface layers;
- 3) Deterioration of the recycled rubber base mat layer;
- 4) Reversion or re-liquefying of the urethane layers; or
- 5) Separation of the seams within the base mat layer.

**RESPONSE FOR WARRANTY REPAIRS:** FieldTurf agrees to perform all repairs required by this Warranty within a reasonable time upon receiving proper written notice from Owner as provided below and after FieldTurf carries out all inspections and tests, which it may deem necessary or advisable. Any required repair work shall be initiated by FieldTurf within a reasonable time after FieldTurf's receipt of Owner's written notice requesting such repairs. FieldTurf's sole liability under this Warranty shall be limited to either repair or replacement of the affected area of the Surface, at its sole discretion, and FieldTurf shall have no other obligations or liabilities with respect to defects of the Surface.

**LIMITATIONS AND EXCLUSIONS:** This Warranty does not apply to any defect, failure, damage, and/or accelerated, undue or excessive wear in or to the Surface caused by or connected with: (a) the installation process of the Surface on the Owner's subfloor surface; (b) improper or insufficient design or engineering, or improper or insufficient project drawings, plans or specifications; (c) an inadequate or defective pre-existing subfloor or surface; (d) the inherent characteristics of the earth and/or surface upon which the Surface is installed; (e) misuse, abuse, or deliberate acts of vandalism; (f) accident, negligence, or acts of God; (g) static or dynamic loads exceeding FieldTurf's recommendations; (h) use of improper cleaning methods; (i) the introduction or accumulation of moisture around or under the Surface beyond the tolerances permitted by FieldTurf's installation guidelines; (j) high moisture and/or other adverse conditions; (k) Owner's failure to care for and maintain the Surface in accordance with FieldTurf's Maintenance Manual and other written instructions; (l) use which is not generally accepted as a typical use of the Surface; (m) improper installation; (n) improper protection from excessive loads; and/or (o) floods and/or other events introducing water to the Surface.

For more information please contact the Indoor division of FieldTurf at (888) 364-6541.

# Tarkett Sports

Furthermore, this Warranty **does not cover nor will be FieldTurf be liable for** (1) damages due to personal injury; (2) change of the Surface appearance due to excessive ultraviolet (UV) exposure and/or or heat; (3) damage due to unpredictable and/or unknown causes;(4) damage and/or performance reductions due to improper control of atmospheric soiling and/or contamination; (5) stains and/or discoloration of the Surface; and (6) costs associated with the temporary and/or permanent closing of the facility in which the Surface was installed. FieldTurf does not warrant or guarantee the accuracy or sufficiency of any drawings, plans, or specifications not prepared by FieldTurf and which are used in connection with installing the Surface. This Warranty shall be of no force and effect if FieldTurf is not paid in full for the Surface and FieldTurf's obligations under this Warranty are expressly contingent upon FieldTurf being paid in full for the Surface.

This Warranty shall not apply to the Surface, or any part thereof, which has been repaired or altered without FieldTurf's prior written consent. No allowance or credit will be granted for any repairs or alterations to the Surface made by Owner except as authorized by this Warranty.

**THIS WARRANT IS EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES EXPRESSED OR IMPLIED ARISING OUT OF THE OPERATION OF LA INCLUDING ( BUT NOT LIMITED TO) AN IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE AND OF ALL OTHER OBLIGATIONS OR LIABILITIES ON FIELDTURF'S PART. FIELDTURF USA INC. SHALL NOT BE LIABLE FOR ANY DAMAGES UNDER TORT CONTRACT OR STRICT LIABILITY AND OR INCIDENTAL CONSEQUENTIAL SPECIAL OR INDIRECT DAMAGES UNDER THIS WARRANT .**

**FIELDTURF'S SOLE OBLIGATION UNDER THIS WARRANTY IS TO REPAIR OR REPLACE AT ITS SOLE DISCRETION ALL OR AN PORTION OF THE SURFACE WHICH MAY BE DETERMINED TO BE DEFECTIVE. FIELDTURF'S LIABILITY FOR ANY SUCH REPAIR OR REPLACEMENT SHALL IN NO EVENT EXCEED THE AMOUNT OF THE PURCHASE PRICE ATTRIBUTABLE TO THE DEFECTIVE PORTION OF THE SURFACE WHICH IS REPAIRED OR REPLACED.**

**MAINTENANCE INSTRUCTIONS:** FieldTurf has made available or supplied Owner with a copy of the Maintenance Manual containing written instructions for the care and maintenance of the Surface. Owner acknowledges receipt of said Maintenance Manual and agrees to comply with and carry out the instructions contained in it as a condition of this Warranty. The terms of the Maintenance Manual are incorporated in this Warranty by reference. If a Maintenance Manual is not received by Owner at the time of issuance of this warranty, it is the owner's obligation to request and maintain record of receipt.

**CLAIMS:** All claims by Owner under this Warranty must be made in writing to the following address within thirty calendar days after Owner learns of any defect giving rise to the claim: FieldTurf USA, Inc. Indoor Division, 175 N Industrial Blvd. Calhoun, Georgia, 30701.

**INSPECTIONS AND TESTS:** FieldTurf shall be allowed to inspect the Surface during reasonable business hours regarding any claim, which Owner makes under this Warranty; to be present at and to analyze the results of all tests conducted by Owner or others; and to conduct such tests as FieldTurf in its discretion may deem advisable. Owner shall promptly furnish FieldTurf with a copy of all written reports of any tests performed by Owner or on Owner's behalf. FieldTurf shall not be responsible for any costs or expenses incurred by Owner or others with respect to such tests, except that FieldTurf shall pay for the costs of all tests and analyses conducted or directed by FieldTurf representatives.

**INSTALLATION SYSTEMS:** FieldTurf provides specific installation systems to accommodate a variety of building conditions. It is critical that care is taken by both the owner and the contractor (and other interested parties) performing the work to understand the benefits and limitations of each system and select the appropriate system. All concrete slabs should be carefully inspected for typical, predictable and acceptable conditions, especially as it concerns moisture testing. Existing buildings and structures that are remodeled may not contain effective vapor retarders/barriers, exhibit poor drainage and/or other conditions that allow the introduction of moisture. All FieldTurf installation systems are based on

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# Tarkett Sports

typical, predictable and acceptable concrete conditions. For fully adhered systems and GreenLay products, concrete must maintain conditions consistent with FieldTurf's written tolerances, as outlined in FieldTurf's installation guidelines. FieldTurf does not warrant against the loss of bond or all other adverse effects upon any installation system where conditions exceed FieldTurf's written tolerances; this includes, but is not limited to, the presence and/or accumulation of standing water on the surface of the concrete slab or over other installation systems, including moisture mitigation products that FieldTurf does not provide. In the event of a claim hereunder, FieldTurf reserves the right to perform its own inspections during normal business hours, in its sole discretion, to determine the validity of the claim. FieldTurf does not warrant against the effect of high moisture conditions and/or other adverse conditions existing within any and all building materials, components, elements and conditions.

All FieldTurf installation systems require the ability to bond directly to concrete or approved alternative subfloor surface. Sealers, existing adhesives and/or any other contaminants may affect the performance of any FieldTurf installation system. Strict adherence to ASTM F710 is required. The use of solvents to remove existing adhesives is prohibited. FieldTurf does not warrant against any damage caused by the existence and/or application of moisture mitigation systems without FieldTurf's express written approval and consent. FieldTurf expressly excludes from this Warranty the movement of joints and the development of cracks, divots, scratches and gouges in the subfloor surface.

The bridging of moving joints is expressly prohibited with the exception of FieldTurf installation systems incorporating Tarkolay products provided those joints are properly prepared.

Projects must be registered using FieldTurf's specific warranty registration form within thirty (30) days of substantial completion of the installation of the Surface. A sample warranty may be provided upon request, but the Warranty will not be issued by FieldTurf without timely submittal of FieldTurf's warranty registration form; all FieldTurf registration forms must include evidence of moisture testing and written evidence of inspections, both of which must be acceptable to FieldTurf, along with the FieldTurf installation system type used. FieldTurf does not validate moisture testing information and does not interpret such testing, but is collected for data and reference purposes. FieldTurf does not interpret existing conditions. PH testing is required and must also meet and remain within FieldTurf's written tolerances.

**GOVERNING LA AND CONSENT:** This Warranty shall be governed by and interpreted in accordance with the law of the State of Georgia.

**EFFECTIVE DATE:** The Effective Date of this Warranty is the \_\_\_ day of \_\_\_\_.

FieldTurf USA Inc.

By:

Title:

Date:

For more information please contact the Indoor division of FieldTurf at (888) 364-6541.



# Tarkett Sports

## MANUFACTURER'S LIMITED WARRANTY

**ARRANTOR:** FieldTurf USA, Inc.  
175 N Industrial Boulevard NE  
Calhoun, Georgia 30701  
USA

**OWNER:** ("Insert Owner's Name and Address")

**SURFACE:** OMNISPORTS  
("Surface")

### ARRANT DESCRIPTION AND WARRANTY PERIODS:

**LIMITED PRODUCT DEFECT WARRANTY :** FieldTurf USA, Inc. ("FieldTurf") warrants to Owner, subject to all terms and conditions contained in this Warranty, that the above-described Surface is free from defects in materials and workmanship under normal use and service, as long as the Surface was installed in accordance with the Installation Systems section of this Warranty, FieldTurf installation guidelines, and drawings, plans and specifications for the Surface. The Limited Product Defect Warranty shall be in force for a period of twenty five (25) years from the Effective Date as defined below.

**LIMITED WEAR WARRANTY :** FieldTurf warrants to Owner, subject to all terms and conditions contained in this Warranty, that there will be no wear-through of the Surface's wear layer under normal use and service, as long as the Surface was installed in accordance with the Installation Systems section of this Warranty, FieldTurf installation guidelines, and drawings, plans and specifications for the Surface. For purposes of the Limited Wear Warranty, "wear-through" refers to the top layer of the Surface and means a complete loss of the wear-layer so that the printed layer (pattern or color) is materially changed or affected. The Limited Wear Warranty only shall be in force for a period of twenty five (25) years from the Effective Date.

**LIMITED MOISTURE WARRANTY :** FieldTurf warrants to Owner, subject to the terms and conditions contained in this Warranty, that the above-described Surface shall be free from defects caused by subfloor moisture, as long as the Surface was installed in accordance with the Installation Systems section of this Warranty, FieldTurf installation guidelines, and the building or structure in which the Surface is installed maintains a relative humidity ("RH") level (according to ASTM F2170) and moisture content ("MC") (according to ASTM F2659) as provided in the Installation Systems section of this Warranty, at all times during the Warranty period. This Limited Moisture Warranty shall be in force for a period of twenty five (25) years from the Effective Date as defined below.

**RESPONSE FOR WARRANTY REPAIRS:** FieldTurf agrees to perform all repairs required by this Warranty within a reasonable time upon receiving proper written notice from Owner as provided below and after FieldTurf carries out all inspections and tests, which it may deem necessary or advisable. Any required repair work shall be initiated by FieldTurf within a reasonable time after FieldTurf's receipt of Owner's written notice requesting such repairs. FieldTurf's sole liability under this Warranty shall be limited to either repair or replacement of the affected area of the Surface, at its sole discretion, and FieldTurf shall have no other obligations or liabilities with respect to defects of the Surface.

**LIMITATIONS AND EXCLUSIONS:** This Warranty does not apply to any defect, failure, damage, and/or accelerated, undue or excessive wear in or to the Surface caused by or connected with: (a) the installation process of the Surface on the Owner's subfloor surface; (b) improper or insufficient design or engineering, or improper or insufficient project drawings, plans or specifications; (c) an inadequate

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or defective pre-existing subfloor or surface; (d) the inherent characteristics of the earth and/or surface upon which the Surface is installed; (e) misuse, abuse, or deliberate acts of vandalism; (f) accident, negligence, or acts of God; (g) static or dynamic loads exceeding FieldTurf's recommendations; (h) use of improper cleaning methods; (i) the introduction or accumulation of moisture around or under the Surface beyond the tolerances permitted by FieldTurf's installation guidelines; (j) high moisture and/or other adverse conditions; (k) Owner's failure to care for and maintain the Surface in accordance with FieldTurf's Maintenance Manual and other written instructions; (l) use which is not generally accepted as a typical use of the Surface; (m) improper installation; (n) improper protection from excessive loads; and/or (o) floods and/or other events introducing water to the Surface.

Furthermore, this Warranty **does not cover nor will be FieldTurf be liable for** (1) damages due to personal injury; (2) change of the Surface appearance due to excessive ultraviolet (UV) exposure and/or heat; (3) damage due to unpredictable and/or unknown causes; (4) damage and/or performance reductions due to improper control of atmospheric soiling and/or contamination; (5) stains and/or discoloration of the Surface; and (6) costs associated with the temporary and/or permanent closing of the facility in which the Surface was installed; (7) damage caused by appliances, furnishings, and/or equipment. FieldTurf does not warrant or guarantee the accuracy or sufficiency of any drawings, plans, or specifications not prepared by FieldTurf and which are used in connection with installing the Surface. This Warranty shall be of no force and effect if FieldTurf is not paid in full for the Surface and FieldTurf's obligations under this Warranty are expressly contingent upon FieldTurf being paid in full for the Surface.

This Warranty shall not apply to the Surface, or any part thereof, which has been repaired or altered without FieldTurf's prior written consent. No allowance or credit will be granted for any repairs or alterations to the Surface made by Owner except as authorized by this Warranty.

**THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES EXPRESSED OR IMPLIED ARISING OUT OF THE OPERATION OF THE SURFACE INCLUDING (BUT NOT LIMITED TO) AN IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE AND OF ALL OTHER OBLIGATIONS OR LIABILITIES ON FIELDTURF'S PART. FIELDTURF USA INC. SHALL NOT BE LIABLE FOR ANY DAMAGES UNDER TORT CONTRACT OR STRICT LIABILITY AND OR INCIDENTAL CONSEQUENTIAL SPECIAL OR INDIRECT DAMAGES UNDER THIS WARRANTY.**

**FIELDTURF'S SOLE OBLIGATION UNDER THIS WARRANTY IS TO REPAIR OR REPLACE AT ITS SOLE DISCRETION ALL OR AN PORTION OF THE SURFACE WHICH MAY BE DETERMINED TO BE DEFECTIVE. FIELDTURF'S LIABILITY FOR ANY SUCH REPAIR OR REPLACEMENT SHALL IN NO EVENT EXCEED THE AMOUNT OF THE PURCHASE PRICE ATTRIBUTABLE TO THE DEFECTIVE PORTION OF THE SURFACE WHICH IS REPAIRED OR REPLACED. REPLACEMENT MATERIALS WILL BE SELECTED FROM THE MOST CURRENT PRODUCT RANGE OF THIS SERIES AND COLORS.**

**MAINTENANCE INSTRUCTIONS:** FieldTurf has made available or supplied Owner with a copy of the Maintenance Manual containing written instructions for the care and maintenance of the Surface. Owner acknowledges receipt of said Maintenance Manual and agrees to comply with and carry out the instructions contained in it as a condition of this Warranty. The terms of the Maintenance Manual are incorporated in this Warranty by reference. If a Maintenance Manual is not received by Owner at the time of issuance of this warranty, it is the owner's obligation to request and maintain record of receipt.

**CLAIMS:** All claims by Owner under this Warranty must be made in writing to the following address within thirty calendar days after Owner learns of any defect giving rise to the claim: FieldTurf USA, Inc. Indoor Division, 175 N Industrial Blvd. Calhoun, Georgia, 30701.

For more information please contact the Indoor division of FieldTurf at (888) 364-6541.

# Tarkett Sports

**INSPECTIONS AND TESTS:** FieldTurf shall be allowed to inspect the Surface during reasonable business hours regarding any claim, which Owner makes under this Warranty; to be present at and to analyze the results of all tests conducted by Owner or others; and to conduct such tests as FieldTurf in its discretion may deem advisable. Owner shall promptly furnish FieldTurf with a copy of all written reports of any tests performed by Owner or on Owner's behalf. FieldTurf shall not be responsible for any costs or expenses incurred by Owner or others with respect to such tests, except that FieldTurf shall pay for the costs of all tests and analyses conducted or directed by FieldTurf representatives.

**INSTALLATION STEMS:** FieldTurf provides specific installation systems to accommodate a variety of building conditions. It is critical that care is taken by both the owner and the contractor (and other interested parties) performing the work to understand the benefits and limitations of each system and select the appropriate system. All concrete slabs should be carefully inspected for typical, predictable and acceptable conditions, especially as it concerns moisture testing. Existing buildings and structures that are remodeled may not contain effective vapor retarders/barriers, exhibit poor drainage and/or other conditions that allow the introduction of moisture. All FieldTurf installation systems are based on typical, predictable and acceptable concrete conditions. For fully adhered, GreenLay, and Tarkolay installations, concrete must maintain conditions consistent with FieldTurf's written tolerances, as outlined in FieldTurf's installation guidelines. FieldTurf does not warrant against the loss of bond or all other adverse effects upon any installation system where conditions exceed FieldTurf's written tolerances; this includes, but is not limited to, the presence and/or accumulation of standing water on the surface of the concrete slab or over other installation systems, including moisture mitigation products that FieldTurf does not provide. In the event of a claim hereunder, FieldTurf reserves the right to perform its own inspections during normal business hours, in its sole discretion, to determine the validity of the claim. FieldTurf does not warrant against the effect of high moisture conditions and/or other adverse conditions existing within any and all building materials, components, elements and conditions.

All FieldTurf installation systems require the ability to bond directly to concrete or approved alternative subfloor surface. Sealers, existing adhesives and/or any other contaminants may affect the performance of any FieldTurf installation system whether fully adhered or not. Strict adherence to ASTM F710 is required. The use of solvents to remove existing adhesives is prohibited. FieldTurf does not warrant against any damage caused by the existence and/or application of moisture mitigation systems without FieldTurf's express written approval and consent. FieldTurf expressly excludes from this Warranty the movement of joints and the development of cracks, divots, scratches and gouges in the subfloor surface.

The bridging of moving joints is expressly prohibited with the exception of FieldTurf installation systems incorporating Tarkolay products provided those joints are properly prepared.

Projects must be registered using FieldTurf's specific warranty registration form within thirty (30) days of substantial completion of the installation of the Surface. A sample warranty may be provided upon request, but the Warranty will not be issued by FieldTurf without timely submittal of FieldTurf's warranty registration form; all FieldTurf registration forms must include evidence of moisture testing and written evidence of inspections, along with the FieldTurf installation system type used. FieldTurf does not validate moisture testing information and does not interpret such testing, but is collected for data and reference purposes only. FieldTurf does not interpret existing conditions. PH testing is required and must also meet and remain within FieldTurf's written tolerances.

Duration of warranty: Warranty term obligations will be prorated after 15 years from submitted warranty date.

Post 15 years, warranty cost/values presented by FieldTurf USA, Inc. will be reduced as follows:

- 1.) 0-15 Years: 100%
- 2.) 15-20 Years: Reduced by 50%
- 3.) 20-25 Years: Reduced by 75%

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# Tarkett Sports

Installation Systems Moisture Tolerances Applicable to this Warranty:

- 1.) Full spread with Multi-Set Acrylic Adhesive with a maximum tolerance of 83% RH per ASTM F2170 and 4% MC per ASTM F2659 (Surface and Probe)
- 2.) Full spread with HS Sport Spray Adhesive with a maximum tolerance of 90% RH per ASTM F2170 and 4.5% MC per ASTM F2659 (Surface and Probe)
- 3.) GreenLay with TarkoTape and Multi-Poxy with a maximum tolerance of 92% RH per ASTM F2170 and 5% MC per ASTM F2659 (Surface and Probe)
- 4.) Full spread with Multi-Poxy with a maximum tolerance of 98% RH per ASTM F2170 and 6% per ASTM F2659 (Surface and Probe)
- 5.) Tarkolay with Multi-Poxy which does not require moisture testing and is the only system recommended to bridge properly prepared moving joints or minor cracks.

**GOVERNING LA AND CONSENT:** This Warranty shall be governed by and interpreted in accordance with the law of the State of Georgia.

**EFFECTIVE DATE:** The Effective Date of this Warranty is the \_\_\_\_\_ day of \_\_\_\_\_, 2016.

FieldTurf USA Inc.

By: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

*End of Document*

# Tarkett Sports

## MANUFACTURER'S LIMITED WARRANTY

**WARRANTOR:** FieldTurf USA, Inc.  
175 N Industrial Boulevard NE  
Calhoun, Georgia 30701  
USA

**OWNER:** (“Insert Owner’s Name and Address”)

**SURFACE:** OMNISPORTS  
 (“Surface”)

### WARRANTY DESCRIPTION AND WARRANTY PERIODS:

**LIMITED PRODUCT DEFECT WARRANTY:** FieldTurf USA, Inc. (“FieldTurf”) warrants to Owner, subject to all terms and conditions contained in this Warranty, that the above-described Surface is free from defects in materials and workmanship under normal use and service, as long as the Surface was installed in accordance with the Installation Systems section of this Warranty, FieldTurf installation guidelines, and drawings, plans and specifications for the Surface. The Limited Product Defect Warranty shall be in force for a period of fifteen (15) years from the Effective Date as defined below.

**LIMITED WEAR WARRANTY:** FieldTurf warrants to Owner, subject to all terms and conditions contained in this Warranty, that there will be no wear-through of the Surface’s wear layer under normal use and service, as long as the Surface was installed in accordance with the Installation Systems section of this Warranty, FieldTurf installation guidelines, and drawings, plans and specifications for the Surface. For purposes of the Limited Wear Warranty, “wear-through” refers to the top layer of the Surface and means a complete loss of the wear-layer so that the printed layer (pattern or color) is materially changed or affected. The Limited Wear Warranty only shall be in force for a period of fifteen (15) years from the Effective Date.

**LIMITED MOISTURE WARRANTY:** FieldTurf warrants to Owner, subject to the terms and conditions contained in this Warranty, that the above-described Surface shall be free from defects caused by subfloor moisture, as long as the Surface was installed in accordance with the Installation Systems section of this Warranty, FieldTurf installation guidelines, and the building or structure in which the Surface is installed maintains a relative humidity (“RH”) level (according to ASTM F2170) as provided in the Installation Systems section of this Warranty, at all times during the Warranty period. This Limited Moisture Warranty shall be in force for a period of ten (10) years from the Effective Date as defined below.

**RESPONSE FOR WARRANTY REPAIRS:** FieldTurf agrees to perform all repairs required by this Warranty within a reasonable time upon receiving proper written notice from Owner as provided below and after FieldTurf carries out all inspections and tests, which it may deem necessary or advisable. Any required repair work shall be initiated by FieldTurf within a reasonable time after FieldTurf’s receipt of Owner’s written notice requesting such repairs. FieldTurf’s sole liability under this Warranty shall be limited to either repair or replacement of the affected area of the Surface, at its sole discretion, and FieldTurf shall have no other obligations or liabilities with respect to defects of the Surface.

**LIMITATIONS AND EXCLUSIONS:** This Warranty does not apply to any defect, failure, damage, and/or accelerated, undue or excessive wear in or to the Surface caused by or connected with: (a) the installation process of the Surface on the Owner’s subfloor surface; (b) improper or insufficient design or engineering, or improper or insufficient project drawings, plans or specifications; (c) an inadequate or defective pre-existing subfloor or surface; (d) the inherent characteristics of the earth and/or surface

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# Tarkett Sports

upon which the Surface is installed; (e) misuse, abuse, or deliberate acts of vandalism; (f) accident, negligence, or acts of God; (g) static or dynamic loads exceeding FieldTurf's recommendations; (h) use of improper cleaning methods; (i) the introduction or accumulation of moisture around or under the Surface beyond the tolerances permitted by FieldTurf's installation guidelines; (j) high moisture and/or other adverse conditions; (k) Owner's failure to care for and maintain the Surface in accordance with FieldTurf's Maintenance Manual and other written instructions; (l) use which is not generally accepted as a typical use of the Surface; (m) improper installation; (n) improper protection from excessive loads; and/or (o) floods and/or other events introducing water to the Surface.

Furthermore, this Warranty **does not cover nor will be FieldTurf be liable for** (1) damages due to personal injury; (2) change of the Surface appearance due to excessive ultraviolet (UV) exposure and/or heat; (3) damage due to unpredictable and/or unknown causes; (4) damage and/or performance reductions due to improper control of atmospheric soiling and/or contamination; (5) stains and/or discoloration of the Surface; and (6) costs associated with the temporary and/or permanent closing of the facility in which the Surface was installed. FieldTurf does not warrant or guarantee the accuracy or sufficiency of any drawings, plans, or specifications not prepared by FieldTurf and which are used in connection with installing the Surface. This Warranty shall be of no force and effect if FieldTurf is not paid in full for the Surface and FieldTurf's obligations under this Warranty are expressly contingent upon FieldTurf being paid in full for the Surface.

This Warranty shall not apply to the Surface, or any part thereof, which has been repaired or altered without FieldTurf's prior written consent. No allowance or credit will be granted for any repairs or alterations to the Surface made by Owner except as authorized by this Warranty.

**THIS WARRANTY IS EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED, IMPLIED OR ARISING BY OPERATION OF LAW, INCLUDING (BUT NOT LIMITED TO) ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE AND OF ALL OTHER OBLIGATIONS OR LIABILITIES ON FIELDTURF'S PART. FIELDTURF USA, INC. SHALL NOT BE LIABLE FOR ANY DAMAGES UNDER TORT, CONTRACT OR STRICT LIABILITY AND/ OR INCIDENTAL, CONSEQUENTIAL, SPECIAL OR INDIRECT DAMAGES UNDER THIS WARRANTY.**

**FIELDTURF'S SOLE OBLIGATION UNDER THIS WARRANTY IS TO REPAIR OR REPLACE AT ITS SOLE DISCRETION ALL OR ANY PORTION OF THE SURFACE WHICH MAY BE DETERMINED TO BE DEFECTIVE. FIELDTURF'S LIABILITY FOR ANY SUCH REPAIR OR REPLACEMENT SHALL IN NO EVENT EXCEED THE AMOUNT OF THE PURCHASE PRICE ATTRIBUTABLE TO THE DEFECTIVE PORTION OF THE SURFACE WHICH IS REPAIRED OR REPLACED.**

**MAINTENANCE INSTRUCTIONS:** FieldTurf has made available or supplied Owner with a copy of the Maintenance Manual containing written instructions for the care and maintenance of the Surface. Owner acknowledges receipt of said Maintenance Manual and agrees to comply with and carry out the instructions contained in it as a condition of this Warranty. The terms of the Maintenance Manual are incorporated in this Warranty by reference. If a Maintenance Manual is not received by Owner at the time of issuance of this warranty, it is the owner's obligation to request and maintain record of receipt.

**CLAIMS:** All claims by Owner under this Warranty must be made in writing to the following address within thirty calendar days after Owner learns of any defect giving rise to the claim: FieldTurf USA, Inc. Indoor Division, 175 N Industrial Blvd. Calhoun, Georgia, 30701.

**INSPECTIONS AND TESTS:** FieldTurf shall be allowed to inspect the Surface during reasonable business hours regarding any claim, which Owner makes under this Warranty; to be present at and to analyze the results of all tests conducted by Owner or others; and to conduct such tests as FieldTurf in its discretion may deem advisable. Owner shall promptly furnish FieldTurf with a copy of all written reports of any tests performed by Owner or on Owner's behalf. FieldTurf shall not be responsible for

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# Tarkett Sports

any costs or expenses incurred by Owner or others with respect to such tests, except that FieldTurf shall pay for the costs of all tests and analyses conducted or directed by FieldTurf representatives.

**INSTALLATION SYSTEMS:** FieldTurf provides specific installation systems to accommodate a variety of building conditions. It is critical that care is taken by both the owner and the contractor (and other interested parties) performing the work to understand the benefits and limitations of each system and select the appropriate system. All concrete slabs should be carefully inspected for typical, predictable and acceptable conditions, especially as it concerns moisture testing. Existing buildings and structures that are remodeled may not contain effective vapor retarders/barriers, exhibit poor drainage and/or other conditions that allow the introduction of moisture. All FieldTurf installation systems are based on typical, predictable and acceptable concrete conditions. For fully adhered systems and GreenLay products, concrete must maintain conditions consistent with FieldTurf's written tolerances, as outlined in FieldTurf's installation guidelines. FieldTurf does not warrant against the loss of bond or all other adverse effects upon any installation system where conditions exceed FieldTurf's written tolerances; this includes, but is not limited to, the presence and/or accumulation of standing water on the surface of the concrete slab or over other installation systems, including moisture mitigation products that FieldTurf does not provide. In the event of a claim hereunder, FieldTurf reserves the right to perform its own inspections during normal business hours, in its sole discretion, to determine the validity of the claim. FieldTurf does not warrant against the effect of high moisture conditions and/or other adverse conditions existing within any and all building materials, components, elements and conditions.

All FieldTurf installation systems require the ability to bond directly to concrete or approved alternative subfloor surface. Sealers, existing adhesives and/or any other contaminants may affect the performance of any FieldTurf installation system. Strict adherence to ASTM F710 is required. The use of solvents to remove existing adhesives is prohibited. FieldTurf does not warrant against any damage caused by the existence and/or application of moisture mitigation systems without FieldTurf's express written approval and consent. FieldTurf expressly excludes from this Warranty the movement of joints and the development of cracks, divots, scratches and gouges in the subfloor surface.

The bridging of moving joints is expressly prohibited with the exception of FieldTurf installation systems incorporating Tarkolay products provided those joints are properly prepared.

Projects must be registered using FieldTurf's specific warranty registration form within thirty (30) days of substantial completion of the installation of the Surface. A sample warranty may be provided upon request, but the Warranty will not be issued by FieldTurf without timely submittal of FieldTurf's warranty registration form; all FieldTurf registration forms must include evidence of moisture testing and written evidence of inspections, both of which must be acceptable to FieldTurf, along with the FieldTurf installation system type used. FieldTurf does not validate moisture testing information and does not interpret such testing, but is collected for data and reference purposes. FieldTurf does not interpret existing conditions. PH testing is required and must also meet and remain within FieldTurf's written tolerances.

Installation Systems Moisture Tolerances Applicable to this Warranty:

- 1.) Full spread with Multi-Set Acrylic Adhesive with a moisture tolerance of eighty-three percent (83%) RH per ASTM F2170.
- 2.) Full spread with HS Sport Spray Adhesive with a moisture tolerance of ninety percent (90%) RH per ASTM F2170.
- 3.) GreenLay with TarkoTape and Multi-Poxy with a moisture tolerance of ninety-two percent (92%) RH per ASTM F2170.
- 4.) Full spread with Multi-Poxy with a moisture tolerance of ninety-eight percent (98%) RH per ASTM F2170.
- 5.) Tarkolay with Multi-Poxy which does not require moisture testing and is the only system recommended to bridge properly prepared moving joints or minor cracks.

For more information please contact the Indoor division of FieldTurf at (888) 364-6541.

# Tarkett Sports

**GOVERNING LAW AND CONSENT:** This Warranty shall be governed by and interpreted in accordance with the law of the State of Georgia.

**EFFECTIVE DATE:** The Effective Date of this Warranty is the \_\_\_\_\_ day of \_\_\_\_\_, 2016.

**OWNER'S NAME**

**FieldTurf USA, Inc.**

By: \_\_\_\_\_

By: \_\_\_\_\_

Title: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

Date: \_\_\_\_\_

SAMPLE



# Tarkett Sports

## MANUFACTURER'S LIMITED WARRANTY

**ARRANTOR:** FieldTurf USA, Inc.  
175 N Industrial Boulevard NE  
Calhoun, Georgia 30701  
USA

**OWNER:** ("Insert Owner's Name and Address")

**SURFACE:** OMNISPORTS HPL SYSTEM  
("Surface")

### ARRANT DESCRIPTION AND WARRANTY PERIODS:

**LIMITED PRODUCT DEFECT WARRANTY :** FieldTurf USA, Inc. ("FieldTurf") warrants to Owner, subject to all terms and conditions contained in this Warranty, that the above-described Surface is free from defects in materials and workmanship under normal use and service, as long as the Surface was installed in accordance with the Installation Systems section of this Warranty, FieldTurf installation guidelines, and drawings, plans and specifications for the Surface. The Limited Product Defect Warranty shall be in force for a period of fifteen (15) years from the Effective Date as defined below.

**LIMITED WEAR WARRANTY :** FieldTurf warrants to Owner, subject to all terms and conditions contained in this Warranty, that there will be no wear-through of the Surface's wear layer under normal use and service, as long as the Surface was installed in accordance with the Installation Systems section of this Warranty, FieldTurf installation guidelines, and drawings, plans and specifications for the Surface. For purposes of the Limited Wear Warranty, "wear-through" refers to the top layer of the Surface and means a complete loss of the wear-layer so that the printed layer (pattern or color) is materially changed or affected. The Limited Wear Warranty only shall be in force for a period of fifteen (15) years from the Effective Date.

**LIMITED MOISTURE WARRANTY :** FieldTurf warrants to Owner, subject to the terms and conditions contained in this Warranty, that the above-described Surface shall be free from defects caused by subfloor moisture, as long as the Surface was installed in accordance with the Installation Systems section of this Warranty, FieldTurf installation guidelines, and the building or structure in which the Surface is installed maintains a relative humidity ("RH") level (according to ASTM F2170) and moisture content ("MC") (according to ASTM F2659) as provided in the Installation Systems section of this Warranty, at all times during the Warranty period. This Limited Moisture Warranty shall be in force for a period of fifteen (15) years from the Effective Date as defined below.

**RESPONSE FOR WARRANTY REPAIRS:** FieldTurf agrees to perform all repairs required by this Warranty within a reasonable time upon receiving proper written notice from Owner as provided below and after FieldTurf carries out all inspections and tests, which it may deem necessary or advisable. Any required repair work shall be initiated by FieldTurf within a reasonable time after FieldTurf's receipt of Owner's written notice requesting such repairs. FieldTurf's sole liability under this Warranty shall be limited to either repair or replacement of the affected area of the Surface, at its sole discretion, and FieldTurf shall have no other obligations or liabilities with respect to defects of the Surface.

**LIMITATIONS AND EXCLUSIONS:** This Warranty does not apply to any defect, failure, damage, and/or accelerated, undue or excessive wear in or to the Surface caused by or connected with: (a) the installation process of the Surface on the Owner's subfloor surface; (b) improper or insufficient design or engineering, or improper or insufficient project drawings, plans or specifications; (c) an inadequate or defective pre-existing subfloor or surface; (d) the inherent characteristics of the earth and/or surface

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# Tarkett Sports

upon which the Surface is installed; (e) misuse, abuse, or deliberate acts of vandalism; (f) accident, negligence, or acts of God; (g) static or dynamic loads exceeding FieldTurf's recommendations; (h) use of improper cleaning methods; (i) the introduction or accumulation of moisture around or under the Surface beyond the tolerances permitted by FieldTurf's installation guidelines; (j) high moisture and/or other adverse conditions; (k) Owner's failure to care for and maintain the Surface in accordance with FieldTurf's Maintenance Manual and other written instructions; (l) use which is not generally accepted as a typical use of the Surface; (m) improper installation; (n) improper protection from excessive loads; and/or (o) floods and/or other events introducing water to the Surface.

Furthermore, this Warranty **does not cover nor will be FieldTurf be liable for** (1) damages due to personal injury; (2) change of the Surface appearance due to excessive ultraviolet (UV) exposure and/or heat; (3) damage due to unpredictable and/or unknown causes; (4) damage and/or performance reductions due to improper control of atmospheric soiling and/or contamination; (5) stains and/or discoloration of the Surface; and (6) costs associated with the temporary and/or permanent closing of the facility in which the Surface was installed. FieldTurf does not warrant or guarantee the accuracy or sufficiency of any drawings, plans, or specifications not prepared by FieldTurf and which are used in connection with installing the Surface. This Warranty shall be of no force and effect if FieldTurf is not paid in full for the Surface and FieldTurf's obligations under this Warranty are expressly contingent upon FieldTurf being paid in full for the Surface.

This Warranty shall not apply to the Surface, or any part thereof, which has been repaired or altered without FieldTurf's prior written consent. No allowance or credit will be granted for any repairs or alterations to the Surface made by Owner except as authorized by this Warranty.

**THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES EXPRESSED OR IMPLIED ARISING OUT OF THE OPERATION OF LAWS INCLUDING ( BUT NOT LIMITED TO) AN IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE AND OF ALL OTHER OBLIGATIONS OR LIABILITIES ON FIELDTURF'S PART. FIELDTURF USA INC. SHALL NOT BE LIABLE FOR ANY DAMAGES UNDER TORT CONTRACT OR STRICT LIABILITY AND OR INCIDENTAL CONSEQUENTIAL SPECIAL OR INDIRECT DAMAGES UNDER THIS WARRANTY .**

**FIELDTURF'S SOLE OBLIGATION UNDER THIS WARRANTY IS TO REPAIR OR REPLACE AT ITS SOLE DISCRETION ALL OR AN PORTION OF THE SURFACE WHICH MAY BE DETERMINED TO BE DEFECTIVE. FIELDTURF'S LIABILITY FOR ANY SUCH REPAIR OR REPLACEMENT SHALL IN NO EVENT EXCEED THE AMOUNT OF THE PURCHASE PRICE ATTRIBUTABLE TO THE DEFECTIVE PORTION OF THE SURFACE WHICH IS REPAIRED OR REPLACED.**

**MAINTENANCE INSTRUCTIONS:** FieldTurf has made available or supplied Owner with a copy of the Maintenance Manual containing written instructions for the care and maintenance of the Surface. Owner acknowledges receipt of said Maintenance Manual and agrees to comply with and carry out the instructions contained in it as a condition of this Warranty. The terms of the Maintenance Manual are incorporated in this Warranty by reference. If a Maintenance Manual is not received by Owner at the time of issuance of this warranty, it is the owner's obligation to request and maintain record of receipt.

**CLAIMS:** All claims by Owner under this Warranty must be made in writing to the following address within thirty calendar days after Owner learns of any defect giving rise to the claim: FieldTurf USA, Inc. Indoor Division, 175 N Industrial Blvd. Calhoun, Georgia, 30701.

**INSPECTIONS AND TESTS:** FieldTurf shall be allowed to inspect the Surface during reasonable business hours regarding any claim, which Owner makes under this Warranty; to be present at and to analyze the results of all tests conducted by Owner or others; and to conduct such tests as FieldTurf in its discretion may deem advisable. Owner shall promptly furnish FieldTurf with a copy of all written reports of any tests performed by Owner or on Owner's behalf. FieldTurf shall not be responsible for

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any costs or expenses incurred by Owner or others with respect to such tests, except that FieldTurf shall pay for the costs of all tests and analyses conducted or directed by FieldTurf representatives.

**INSTALLATION SYSTEMS:** FieldTurf provides specific installation systems to accommodate a variety of building conditions. It is critical that care is taken by both the owner and the contractor (and other interested parties) performing the work to understand the benefits and limitations of each system and select the appropriate system. All concrete slabs should be carefully inspected for typical, predictable and acceptable conditions, especially as it concerns moisture testing. Existing buildings and structures that are remodeled may not contain effective vapor retarders/barriers, exhibit poor drainage and/or other conditions that allow the introduction of moisture. All FieldTurf installation systems are based on typical, predictable and acceptable concrete conditions. For fully adhered, GreenLay, and Tarkolay installations, concrete must maintain conditions consistent with FieldTurf's written tolerances, as outlined in FieldTurf's installation guidelines. FieldTurf does not warrant against the loss of bond or all other adverse effects upon any installation system where conditions exceed FieldTurf's written tolerances; this includes, but is not limited to, the presence and/or accumulation of standing water on the surface of the concrete slab or over other installation systems, including moisture mitigation products that FieldTurf does not provide. In the event of a claim hereunder, FieldTurf reserves the right to perform its own inspections during normal business hours, in its sole discretion, to determine the validity of the claim. FieldTurf does not warrant against the effect of high moisture conditions and/or other adverse conditions existing within any and all building materials, components, elements and conditions.

All FieldTurf installation systems require the ability to bond directly to concrete or approved alternative subfloor surface. Sealers, existing adhesives and/or any other contaminants may affect the performance of any FieldTurf installation system whether fully adhered or not. Strict adherence to ASTM F710 is required. The use of solvents to remove existing adhesives is prohibited. FieldTurf does not warrant against any damage caused by the existence and/or application of moisture mitigation systems without FieldTurf's express written approval and consent. FieldTurf expressly excludes from this Warranty the movement of joints and the development of cracks, divots, scratches and gouges in the subfloor surface.

The bridging of moving joints is expressly prohibited with the exception of FieldTurf installation systems incorporating Tarkolay products provided those joints are properly prepared.

Projects must be registered using FieldTurf's specific warranty registration form within thirty (30) days of substantial completion of the installation of the Surface. A sample warranty may be provided upon request, but the Warranty will not be issued by FieldTurf without timely submittal of FieldTurf's warranty registration form; all FieldTurf registration forms must include evidence of moisture testing and written evidence of inspections, both of which must be acceptable to FieldTurf, along with the FieldTurf installation system type used. FieldTurf does not validate moisture testing information and does not interpret such testing, but is collected for data and reference purposes. FieldTurf does not interpret existing conditions. PH testing is required and must also meet and remain within FieldTurf's written tolerances.

Installation Systems Moisture Tolerances Applicable to this Warranty: Omnisports HPL System

- 1.) Full spread with Multi-Poxy with a maximum tolerance of 98% RH per ASTM F2170 and 6% per ASTM F2659 (Surface and Probe)
- 2.) Tarkolay with Multi-Poxy which does not require moisture testing and is the only system recommended to bridge properly prepared moving joints or minor cracks.

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**GOVERNING LAW AND CONSENT:** This Warranty shall be governed by and interpreted in accordance with the law of the State of Georgia.

**EFFECTIVE DATE:** The Effective Date of this Warranty is the \_\_\_\_\_ day of \_\_\_\_\_, 2016.

**FieldTurf USA Inc.**

By: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

*End of Document*

# Tarkett Sports

## MANUFACTURER'S LIMITED WARRANTY

**ARRANTOR:** FieldTurf USA, Inc.  
175 N Industrial Boulevard NE  
Calhoun, Georgia 30701  
USA

**OWNER:** ("Insert Owner's Name and Address")

**SURFACE:** OMNISPORTS HPL S STEM  
("Surface")

### ARRANT DESCRIPTION AND WARRANTY PERIODS:

**LIMITED PRODUCT DEFECT WARRANTY :** FieldTurf USA, Inc. ("FieldTurf") warrants to Owner, subject to all terms and conditions contained in this Warranty, that the above-described Surface is free from defects in materials and workmanship under normal use and service, as long as the Surface was installed in accordance with the Installation Systems section of this Warranty, FieldTurf installation guidelines, and drawings, plans and specifications for the Surface. The Limited Product Defect Warranty shall be in force for a period of fifteen (15) years from the Effective Date as defined below.

**LIMITED WEAR WARRANTY :** FieldTurf warrants to Owner, subject to all terms and conditions contained in this Warranty, that there will be no wear-through of the Surface's wear layer under normal use and service, as long as the Surface was installed in accordance with the Installation Systems section of this Warranty, FieldTurf installation guidelines, and drawings, plans and specifications for the Surface. For purposes of the Limited Wear Warranty, "wear-through" refers to the top layer of the Surface and means a complete loss of the wear-layer so that the printed layer (pattern or color) is materially changed or affected. The Limited Wear Warranty only shall be in force for a period of fifteen (15) years from the Effective Date.

**RESPONSE FOR WARRANTY REPAIRS:** FieldTurf agrees to perform all repairs required by this Warranty within a reasonable time upon receiving proper written notice from Owner as provided below and after FieldTurf carries out all inspections and tests, which it may deem necessary or advisable. Any required repair work shall be initiated by FieldTurf within a reasonable time after FieldTurf's receipt of Owner's written notice requesting such repairs. FieldTurf's sole liability under this Warranty shall be limited to either repair or replacement of the affected area of the Surface, at its sole discretion, and FieldTurf shall have no other obligations or liabilities with respect to defects of the Surface.

**LIMITATIONS AND EXCLUSIONS:** This Warranty does not apply to any defect, failure, damage, and/or accelerated, undue or excessive wear in or to the Surface caused by or connected with: (a) the installation process of the Surface on the Owner's subfloor surface; (b) improper or insufficient design or engineering, or improper or insufficient project drawings, plans or specifications; (c) an inadequate or defective pre-existing subfloor or surface; (d) the inherent characteristics of the earth and/or surface upon which the Surface is installed; (e) misuse, abuse, or deliberate acts of vandalism; (f) accident, negligence, or acts of God; (g) static or dynamic loads exceeding FieldTurf's recommendations; (h) use of improper cleaning methods; (i) the introduction or accumulation of moisture around or under the Surface beyond the tolerances permitted by FieldTurf's installation guidelines; (j) high moisture and/or other adverse conditions; (k) Owner's failure to care for and maintain the Surface in accordance with FieldTurf's Maintenance Manual and other written instructions; (l) use which is not generally accepted as a typical use of the Surface; (m) improper installation; (n) improper protection from excessive loads; and/or (o) floods and/or other events introducing water to the Surface.

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other conditions that allow the introduction of moisture. All FieldTurf installation systems are based on typical, predictable and acceptable concrete conditions. For fully adhered systems and GreenLay products, concrete must maintain conditions consistent with FieldTurf's written tolerances, as outlined in FieldTurf's installation guidelines. FieldTurf does not warrant against the loss of bond or all other adverse effects upon any installation system where conditions exceed FieldTurf's written tolerances; this includes, but is not limited to, the presence and/or accumulation of standing water on the surface of the concrete slab or over other installation systems, including moisture mitigation products that FieldTurf does not provide. In the event of a claim hereunder, FieldTurf reserves the right to perform its own inspections during normal business hours, in its sole discretion, to determine the validity of the claim. FieldTurf does not warrant against the effect of high moisture conditions and/or other adverse conditions existing within any and all building materials, components, elements and conditions.

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**GOVERNING LA AND CONSENT:** This Warranty shall be governed by and interpreted in accordance with the law of the State of Georgia.

**EFFECTIVE DATE:** The Effective Date of this Warranty is the \_\_\_ day of \_\_\_\_\_, \_\_\_\_.

**FieldTurf USA Inc.**

By:

Title:

Date:

*End of Document*

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