

APPENDIX A
DRAFT CONTRACT

This Contract ("Contract") is made as of _2/23/2021 by and between Hunter Knepshield Company Inc. ("Contractor") and Region 4 Education Service Center ("Region 4 ESC") for the purchase of Modular Buildings, Portable Storage, and Relocatable Walkways.

RECITALS

WHEREAS, Region 4 ESC issued Request for Proposals Number R_21-05 for Modular Buildings, Portable Storage, and Relocatable Walkways ("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 Contract shall have the right to enter local "service" agreements with Participating Public Agencies accessing this Agreement, so long as the effective date of such agreement is prior to the expiration of this Agreement. All local agreements may have a full potential term (any combination of initial and renewal periods) not to exceed five (5) years.

- 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 Hunter Knepshield Company Inc.
Address 10 Hunters Trail , P.O. Box 499
City/State/Zip LaGrange, KY 40031
Telephone No. 502-225-9121
Email Address Knepjr@iglou.com
Printed Name Thomas Knepshield
Title Vice 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



Hunter Knepsield Company Products manufactures restroom, shower, classroom, military and concession buildings in multiple designs, textures and colors. The roof and walls are fabricated with steel wood and concrete to meet all local building codes and customized to match local architectural details. All HK buildings are designed to meet A.D.A. and to withstand heavy snow, high wind and category E seismic loads. All buildings are easy to maintain and withstand the rigors of vandalism. The buildings are prefabricated and delivered complete and ready-to- use, including plumbing and electrical where applicable. With satisfied customers nationwide, Hunter Knepsield Company is the leader in custom modular buildings.

1.ORDERING ADDRESS(ES): Hunter Knepsield Company Inc., P.O. Box 499 LaGrange KY 40031

2.ORDERING PROCEDURES: E-mail: knepjr@iglou.com, Fax: 502-225-9121

3.PAYMENT ADDRESS: Hunter Knepsield Company Inc., P.O. Box 499 LaGrange KY 40031

4. WARRANTY PROVISIONS: Hunter Knepsield Company provides a one (1) year warranty. The warranty is valid only when building is installed within the specified loadings. Furthermore, said warranty includes only the related material necessary for the construction and fabrication of said building components. All other non structural components will carry a one (1) year warranty. Hunter Knepsield Company warrants that all goods sold pursuant hereto will, when delivered, conform to specifications set forth above. Goods shall be deemed accepted and meeting specifications unless notice identifying the nature of any non-conformity is provided to Hunter Knepsield Company in writing within the specified warranty. Hunter Knepsield Company, at its option, will repair or replace the goods or issue credit for the customer provided Hunter Knepsield Company is first given the opportunity to inspect such goods. It is specifically understood that Hunter Knepsield Company's obligation here under is for credit, repair or replacement only, F.O.B. Hunter Knepsield Company's manufacturing plants, and does not include shipping, handling, installation or other incidental or consequential costs unless otherwise agreed to in writing by Hunter Knepsield Company.

This warranty shall not apply to:

1.Any goods which have been repaired or altered without Hunter Knepsield Company's express written consent, in such a way as in the reasonable judgment of Hunter Knepsield Company, to adversely affect the stability or reliability thereof.

2.To any goods which have been subject to misuse, negligence, acts of God or accidents.

3.To any goods which have not been installed to manufacturer's specifications and guidelines, improperly maintained, or used outside of the specifications for which such goods were designed.

5.TERMS AND CONDITIONS OF INSTALLATION (IF APPLICABLE): All prices subject to the "Conditions of Sale" listed on the Hunter Knepsield Company quotation form. Customers are responsible for marking exact location building is to be set; providing clear and level site, free of overhead and/or underground obstructions; and providing site accessible to normal lowboy highway trucks and sufficient area for the crane to install and other equipment to perform the contract requirements. Customer shall provide notice

in writing of low bridges, roadway width or grade, unimproved roads or any other possible obstacles to access. The Hunter Knepshield Company reserves the right to charge the customer for additional costs incurred for special equipment required to perform delivery and installation. Customers will negotiate installation on a project-by-project basis, which shall be priced as separate line items.

In the event delivery of the building/s ordered is/are not completed within 30 days of the agreed to schedule through no fault of Hunter Knepshield Company, an invoice for the full contract value (excluding shipping and installation costs) will be submitted for payment. In the event that the delivery is delayed more than 90 days after the agreed to schedule and through no fault of Hunter Knepshield Company, then in addition to the remedies above, a storage fee of 1-½% of contract price per month or any part of any month will be charged.

**Customer is responsible for all local permits and fees.

6.DELIVERY CHARGE: All prices F.O.B. origin prepaid and added to invoice.

7. PAYMENT TERMS: Customer is responsible for paying applicable sales tax direct to their state or submit copy of tax exempt certificate with order. Terms: 10% down with order., 40% upon receipt of shop drawings to, start production, 40% before shipping of product, and 10% net 30 after shipping. Service charge of 2% per month added to all unpaid bills after 30 days. Should collection be necessary, customer agrees to pay all costs, including attorney fees.

8.LIMITATION OF REMEDIES: In the event of any breach of any obligations hereunder; breach of any warranty regarding the goods, or any negligent act or omission of any party, the parties agree to submit all claims to binding arbitration. Any settlement reached shall include all reasonable costs including attorney fees. In no event shall Hunter Knepshield Company be subject to or liable for any incidental or consequential damages. Without limitation on the foregoing, in no event shall Hunter Knepshield Company be liable for damages in excess of the purchase price of the goods herein offered.

9.DELIVERY INFORMATION: All prices F.O.B. origin prepaid and added to invoice. F.O.B. 10 Hunters Trail, LaGrange, KY 40031.




Hunter Knepshield Company Modular Buildings

Offsite Construction for the Onsite Environment



Why Modular?

- ▶ THE MODULAR ADVANTAGE
 - ▶ MINIMAL SITE DISTURBANCE
 - ▶ REDUCED MAINTENANCE
 - ▶ ADA CODE COMPLIANT
 - ▶ SANITARY
 - ▶ FASTER THAN SITE BUILD
 - ▶ ARRIVE OPERATIONAL
 - ▶ ON-SITE CONSTRUCTION TIME REDUCED
- 

Modern Designs

Germantown, TN



Traditional Design

Waukegan, IL



Sports Buildings

Sanford, KY



Miami, FL



Miami, FL



Tamarac, FL



Park Entrance Buildings

Dover, DE



Special Construction Buildings

San Francisco, CA



Ticket buildings

Chicago, IL



Chicago, IL



08/30/2006

Coronado Island, CA



Buildings start with a I-beam reinforced Concrete Floor



Walls and Roof are built and assembled



Mechanical equipment is installed



Exterior finish and framing begin to take place.



Buildings are prepped and split into parts if necessary for shipping.



Building is offloaded on site and assembled if necessary.



Building is off loaded and assembled in one day and ready for utility connections.



Landscape and use.



Lexington, KY



Springfield, TN



St. Johns, FL



Louisville, KY





Designed to Work within the Environment

- ▶ Since 1967, Hunter Knepshield has provided quality services and competitive pricing to the parks and recreation industry with a complete range of modular public use buildings for parks and sporting venues. Standard or custom designed modular buildings for restrooms, concessions, shower, laundry, storage, shelter or combination structures are engineered to meet needs for functionality and low maintenance with fast installation. Manufactured in a quality-controlled factory environment with the latest construction techniques and tools, these facilities are delivered pre-wired, pre-plumbed and complete with an integral flooring system...ready for final hook-up.
- ▶ Hunter Knepshied' modular facilities are not only functional and durable, but they're also designed to work within the environment. Architecturally attractive with exterior materials that complement the environment, Hunter Knepshield buildings can blend in with the surroundings or make a statement with flair to create a memorable landmark. Inside, the Hunter Knepshield facilities are designed for easy maintenance with graffiti-resistant materials

Request for Taxpayer Identification Number and Certification

**Give Form to the
requester. Do not
send to the IRS.**

▶ Go to www.irs.gov/FormW9 for instructions and the latest information.

Print or type. See Specific Instructions on page 3.	<p>1 Name (as shown on your income tax return). Name is required on this line; do not leave this line blank. Hunter Kneppshield Company</p> <p>2 Business name/disregarded entity name, if different from above</p> <p>3 Check appropriate box for federal tax classification of the person whose name is entered on line 1. Check only one of the following seven boxes.</p> <p><input type="checkbox"/> Individual/sole proprietor or single-member LLC <input checked="" type="checkbox"/> C Corporation <input type="checkbox"/> S Corporation <input type="checkbox"/> Partnership <input type="checkbox"/> Trust/estate</p> <p><input type="checkbox"/> Limited liability company. Enter the tax classification (C=C corporation, S=S corporation, P=Partnership) ▶ _____</p> <p>Note: Check the appropriate box in the line above for the tax classification of the single-member owner. Do not check LLC if the LLC is classified as a single-member LLC that is disregarded from the owner unless the owner of the LLC is another LLC that is not disregarded from the owner for U.S. federal tax purposes. Otherwise, a single-member LLC that is disregarded from the owner should check the appropriate box for the tax classification of its owner.</p> <p><input type="checkbox"/> Other (see instructions) ▶ _____</p>	<p>4 Exemptions (codes apply only to certain entities, not individuals; see instructions on page 3):</p> <p>Exempt payee code (if any) _____</p> <p>Exemption from FATCA reporting code (if any) _____</p> <p><small>(Applies to accounts maintained outside the U.S.)</small></p>
	<p>5 Address (number, street, and apt. or suite no.) See instructions. 10 Hunters Trail</p> <p>6 City, state, and ZIP code LaGrange, KY 40031</p> <p>7 List account number(s) here (optional)</p>	<p>Requester's name and address (optional) OMNIA Partners 840 Crescent Centre Drive Suite 600 Franklin, TN 37067</p>

Part I Taxpayer Identification Number (TIN)

Enter your TIN in the appropriate box. The TIN provided must match the name given on line 1 to avoid backup withholding. For individuals, this is generally your social security number (SSN). However, for a resident alien, sole proprietor, or disregarded entity, see the instructions for Part I, later. For other entities, it is your employer identification number (EIN). If you do not have a number, see *How to get a TIN*, later.

Note: If the account is in more than one name, see the instructions for line 1. Also see *What Name and Number To Give the Requester* for guidelines on whose number to enter.

Social security number									
or									
Employer identification number									
6	1	-	0	6	6	8	6	0	7

Part II Certification

Under penalties of perjury, I certify that:

- The number shown on this form is my correct taxpayer identification number (or I am waiting for a number to be issued to me); and
- I am not subject to backup withholding because: (a) I am exempt from backup withholding, or (b) I have not been notified by the Internal Revenue Service (IRS) that I am subject to backup withholding as a result of a failure to report all interest or dividends, or (c) the IRS has notified me that I am no longer subject to backup withholding; and
- I am a U.S. citizen or other U.S. person (defined below); and
- The FATCA code(s) entered on this form (if any) indicating that I am exempt from FATCA reporting is correct.

Certification instructions. You must cross out item 2 above if you have been notified by the IRS that you are currently subject to backup withholding because you have failed to report all interest and dividends on your tax return. For real estate transactions, item 2 does not apply. For mortgage interest paid, acquisition or abandonment of secured property, cancellation of debt, contributions to an individual retirement arrangement (IRA), and generally, payments other than interest and dividends, you are not required to sign the certification, but you must provide your correct TIN. See the instructions for Part II, later.

Sign Here	Signature of U.S. person ▶	Date ▶ <u>2-21-2021</u>
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General Instructions

Section references are to the Internal Revenue Code unless otherwise noted.

Future developments. For the latest information about developments related to Form W-9 and its instructions, such as legislation enacted after they were published, go to www.irs.gov/FormW9.

Purpose of Form

An individual or entity (Form W-9 requester) who is required to file an information return with the IRS must obtain your correct taxpayer identification number (TIN) which may be your social security number (SSN), individual taxpayer identification number (ITIN), adoption taxpayer identification number (ATIN), or employer identification number (EIN), to report on an information return the amount paid to you, or other amount reportable on an information return. Examples of information returns include, but are not limited to, the following:

- Form 1099-DIV (dividends, including those from stocks or mutual funds)
- Form 1099-MISC (various types of income, prizes, awards, or gross proceeds)
- Form 1099-B (stock or mutual fund sales and certain other transactions by brokers)
- Form 1099-S (proceeds from real estate transactions)
- Form 1099-K (merchant card and third party network transactions)
- Form 1098 (home mortgage interest), 1098-E (student loan interest), 1098-T (tuition)
- Form 1099-C (canceled debt)
- Form 1099-A (acquisition or abandonment of secured property)

Use Form W-9 only if you are a U.S. person (including a resident alien), to provide your correct TIN.

If you do not return Form W-9 to the requester with a TIN, you might be subject to backup withholding. See What is backup withholding, later.



7145 West Tidwell Road ~ Houston, Texas 77092
(713)-462-7708
www.esc4.net

NOTICE TO OFFEROR
ADDENDUM NO. 1

Solicitation Number 21-05

Request for Proposal (“RFP”)
by Region 4 Education Service Center (“ESC”)
for Modular Buildings, Portable Storage, and Relocatable Walkways

This Addendum No. 1 amends the Request for Proposal (RFP) for Modular Buildings, Portable Storage, and Relocatable Walkways 21-05 (“Addendum”). To the extent of any discrepancy between the original RFP and this Addendum, this Addendum shall prevail.

Region 4 Education Service Center (“Region 4 ESC”) requests proposals from qualified suppliers with the intent to enter into a Contract for Modular Buildings, Portable Storage, and Relocatable Walkways. Addendum No. 1 is hereby issued as follows:

CLARIFICATIONS

1. The Submittal Deadline is extended via this Addendum.
2. The Questions Deadline is extended via this Addendum.
3. Questions received to this point are included in this Addendum under the Questions and Answers section.

CHANGES TO THE RFP

1. Page 1, Line 12:

Remove the submittal deadline and replace with the following:

*SUBMITTAL DEADLINE: **Tuesday February 9, 2021, 2:00 PM CENTRAL TIME***

2. Page 1, Paragraph 1:

Remove the first sentence and replace with the following:

Questions regarding this RFP must be submitted in writing to Crystal Wallace, Business Operations Specialist at questions@esc4.net no later than December 18, 2020.

All other items in Paragraph 1 shall remain.

3. Page 5, Section II. CALENDER OF EVENTS (ALL DATES ARE TENTATIVE AND SUBJECT TO CHANGE):

Remove the calendar of events and replace with the following:

<u>Event</u>	<u>Date</u>
<i>Issue RFP</i>	<i>December 3, 2020</i>
<i>Pre-proposal Conference</i>	<i>December 17, 2020</i>
<i>Deadline for receipt of questions via email</i>	<i>December 18, 2020</i>
<i>Issue Addenda (if required)</i>	<i>January 7, 2021</i>
<i>Proposal Due Date</i>	<i>February 9, 2021</i>
<i>Approval from Region 4 ESC</i>	<i>April 27, 2021</i>
<i>Contract Effective Date</i>	<i>July 1, 2021</i>

All other items on this page shall remain.

4. Page 6, Section III. INSTRUCTIONS TO OFFERORS, item 2:

Remove the first sentence and relace with the following:

2. Inquiries and Discrepancies: Questions regarding this solicitation must be submitted in writing to Crystal Wallace, Business Operations Specialist, at questions@esc4.net no later than December 18, 2020.

All other items in item 2 shall remain.

QUESTIONS AND ANSWERS

1. Question: Could you tell us where this project is located? City/State?

Answer: Region 4 Education Service Center) is located in Houston, Texas but this is to be a national contract serving multiple Participating Public Agencies across the country.

2. Question: What city is this project in?

Answer: See Answer to Question #1.

3. Question: Do you anticipate extending the bid due date?

Answer: See item #1 under Changes to the RFP in this Addendum.

4. Question: What additional details are you willing to provide, if any, beyond what is stated in bid documents concerning how you will identify the winning bid?

Answer: Any pertinent information is included in the RFP.

5. Question: Was this bid posted to the nationwide free bid notification website at [//www.mygovwatch.com/free](http://www.mygovwatch.com/free)?

Answer: Not by Region 4 Education Service Center.

6. Question: Other than your own website, where was this bid posted?

Answer: The only other known locations where this solicitation was advertised is: The OMNIA Partners site through a link that directs viewers to Region 4 Education Service Center's site (<https://www.omniapartners.com/publicsector/solicitations>) and in various newspapers across the country.

However, there are other third-party sites that often pick up and post public solicitations but which of those sites might have posted this solicitation is unknown.

7. Question: Please let us know whether you have received this email, and when and how answers will be provided.

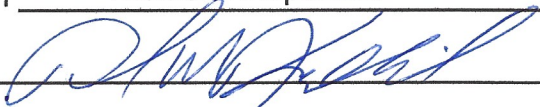
Answer: Any questions received in writing before the deadline are posted in a questions and answers document(s) and posted publicly to ensure all interested parties have the same information.

RECEIPT OF ADDENDUM NO. 1 ACKNOWLEDGEMENT

Offeror shall acknowledge this addendum by signing below and include in their proposal response.

Company Name Hunter Knepshield Company Inc.

Contact Person Thomas Knepshield

Signature 

Date 02/21/2021

Crystal Wallace
Region 4 Education Service Center
Business Operations Specialist



7145 West Tidwell Road ~ Houston, Texas 77092

(713)-462-7708

www.esc4.net

NOTICE TO OFFEROR

ADDENDUM NO. 2

Solicitation Number 21-05

Request for Proposal (“RFP”)
by Region 4 Education Service Center (“ESC”)
for Modular Buildings, Portable Storage, and Relocatable Walkways

This Addendum No. 2 amends the Request for Proposal (RFP) for Modular Buildings, Portable Storage, and Relocatable Walkways 21-05 (“Addendum”). To the extent of any discrepancy between the original RFP and this Addendum, this Addendum shall prevail.

Region 4 Education Service Center (“Region 4 ESC”) requests proposals from qualified suppliers with the intent to enter into a Contract for Modular Buildings, Portable Storage, and Relocatable Walkways. Addendum No. 2 is hereby issued as follows:

CLARIFICATIONS

1. The bound copies requirement are being removed via this Addendum.
2. Notary requirements are being removed via this Addendum.

CHANGES TO THE RFP

1. Page 7, Section 5:

To waive the bound copy requirement, remove Section 5. Proposal Format and replace with the following:

Proposal Format: Proposals must contain two (2) electronic copies on flash drives with signed copies of the solicitation. Offeror must also submit two (2) electronic proposals free of propriety information to be posted, if awarded a Contract. Offerors may also provide two (2) bound and signed original copies of the solicitation, however bound copies are not required.

Only sealed responses will be accepted. Faxed or electronically transmitted responses will not be accepted. Sealed responses may be submitted on any or all items, unless stated otherwise.

If bound copies are provided, responses should be provided in a three-ring binder or report cover using 8.5 x 11 paper clearly identified with the name of the Offeror's company and the solicitation name and number on both the outside front cover and vertical spine.

Tabs should be used to separate the proposal into sections. The following items identified must be included behind the tabs listed below. Each section should contain both the section of the RFP referenced and the Offeror's response to that section. Offerors falling to organize in the manner listed may be considered non-responsive and may not be evaluated.

2. Required Documents with Notary

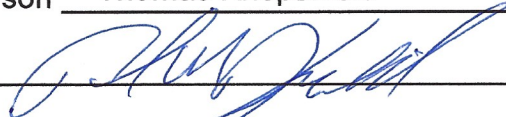
Any document requiring appearance before a notary shall be waived until a later date or upon Region 4 ESC request.

RECEIPT OF ADDENDUM NO. 2 ACKNOWLEDGEMENT

Offeror shall acknowledge this addendum by signing below and include in their proposal response.

Company Name Hunter Knepschild Company Inc.

Contact Person Thomas Knepschild

Signature  _____

Date 02/21/2021

Crystal Wallace
Region 4 Education Service Center
Business Operations Specialist



7145 West Tidwell Road ~ Houston, Texas 77092

(713)-462-7708

www.esc4.net

NOTICE TO OFFEROR

ADDENDUM NO. 3

Solicitation Number 21-05

Request for Proposal (“RFP”)
by Region 4 Education Service Center (“ESC”)
for Modular Buildings, Portable Storage, and Relocatable Walkways

This Addendum No. 3 amends the Request for Proposal (RFP) for Modular Buildings, Portable Storage, and Relocatable Walkways 21-05 (“Addendum”). To the extent of any discrepancy between the original RFP and this Addendum, this Addendum shall prevail.

Region 4 Education Service Center (“Region 4 ESC”) requests proposals from qualified suppliers with the intent to enter into a Contract for Modular Buildings, Portable Storage, and Relocatable Walkways. Addendum No. 3 is hereby issued as follows:

CLARIFICATIONS

1. The Submittal Deadline is extended via this Addendum.

CHANGES TO THE RFP

1. Page 1, Line 12:

Remove the submittal deadline and replace with the following:

*SUBMITTAL DEADLINE: **Tuesday February 16, 2021, 10:00 AM CENTRAL TIME***

2. Page 5, Section II. CALENDER OF EVENTS (ALL DATES ARE TENTATIVE AND SUBJECT TO CHANGE):

Remove the calendar of events and replace with the following:

<u>Event</u>	<u>Date</u>
<i>Issue RFP</i>	<i>December 3, 2020</i>
<i>Pre-proposal Conference</i>	<i>December 17, 2020</i>
<i>Deadline for receipt of questions via email</i>	<i>December 18, 2020</i>
<i>Issue Addenda (if required)</i>	<i>January 7, 2021</i>
<i>Proposal Due Date</i>	<i>February 16, 2021</i>
<i>Approval from Region 4 ESC</i>	<i>April 27, 2021</i>
<i>Contract Effective Date</i>	<i>July 1, 2021</i>

All other items on this page shall remain.

RECEIPT OF ADDENDUM NO. 3 ACKNOWLEDGEMENT

Offeror shall acknowledge this addendum by signing below and include in their proposal response.

Company Name Hunter Knepshield Company Inc.

Contact Person Thomas Knepshield

Signature 

Date 02/21/2021

Crystal Wallace
Region 4 Education Service Center
Business Operations Specialist



7145 West Tidwell Road ~ Houston, Texas 77092

(713)-462-7708

www.esc4.net

NOTICE TO OFFEROR

ADDENDUM NO. 4

Solicitation Number 21-05

Request for Proposal (“RFP”)
by Region 4 Education Service Center (“ESC”)
for Modular Buildings, Portable Storage, and Relocatable Walkways

This Addendum No. 4 amends the Request for Proposal (RFP) for Modular Buildings, Portable Storage, and Relocatable Walkways 21-05 (“Addendum”). To the extent of any discrepancy between the original RFP and this Addendum, this Addendum shall prevail.

Region 4 Education Service Center (“Region 4 ESC”) requests proposals from qualified suppliers with the intent to enter into a Contract for Modular Buildings, Portable Storage, and Relocatable Walkways. Addendum No. 4 is hereby issued as follows:

CLARIFICATIONS

1. The Submittal Deadline is extended via this Addendum.

CHANGES TO THE RFP

1. Page 1, Line 12:

Remove the submittal deadline and replace with the following:

SUBMITTAL DEADLINE: Tuesday February 23, 2021, 10:00 AM CENTRAL TIME

2. Page 5, Section II. CALENDER OF EVENTS (ALL DATES ARE TENTATIVE AND SUBJECT TO CHANGE):

Remove the calendar of events and replace with the following:

<u>Event</u>	<u>Date</u>
<i>Issue RFP</i>	<i>December 3, 2020</i>
<i>Pre-proposal Conference</i>	<i>December 17, 2020</i>
<i>Deadline for receipt of questions via email</i>	<i>December 18, 2020</i>
<i>Issue Addenda (if required)</i>	<i>January 7, 2021</i>
<i>Proposal Due Date</i>	<i>February 23, 2021</i>
<i>Approval from Region 4 ESC</i>	<i>April 27, 2021</i>
<i>Contract Effective Date</i>	<i>July 1, 2021</i>

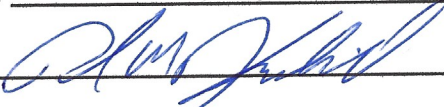
All other items on this page shall remain.

RECEIPT OF ADDENDUM NO. 4 ACKNOWLEDGEMENT

Offeror shall acknowledge this addendum by signing below and include in their proposal response.

Company Name Hunter Knepshield Company Inc.

Contact Person Thomas Knepshield

Signature 

Date 02/21/2021

Crystal Wallace
Region 4 Education Service Center
Business Operations Specialist



7145 West Tidwell Road ~ Houston, Texas 77092

(713)-462-7708

www.esc4.net

NOTICE TO OFFEROR

ADDENDUM NO. 5

Solicitation Number 21-05

Request for Proposal (“RFP”)
by Region 4 Education Service Center (“ESC”)
for Modular Buildings, Portable Storage, and Relocatable Walkways

This Addendum No. 5 amends the Request for Proposal (RFP) for Modular Buildings, Portable Storage, and Relocatable Walkways 21-05 (“Addendum”). To the extent of any discrepancy between the original RFP and this Addendum, this Addendum shall prevail.

Region 4 Education Service Center (“Region 4 ESC”) requests proposals from qualified suppliers with the intent to enter into a Contract for Modular Buildings, Portable Storage, and Relocatable Walkways. Addendum No. 5 is hereby issued as follows:

CLARIFICATIONS

1. The Submittal Deadline is extended via this Addendum.

CHANGES TO THE RFP

1. Page 1, Line 12:

Remove the submittal deadline and replace with the following:

SUBMITTAL DEADLINE: Tuesday March 2, 2021, 10:00 AM CENTRAL TIME

2. Page 5, Section II. CALENDER OF EVENTS (ALL DATES ARE TENTATIVE AND SUBJECT TO CHANGE):

Remove the calendar of events and replace with the following:

<u>Event</u>	<u>Date</u>
<i>Issue RFP</i>	<i>December 3, 2020</i>
<i>Pre-proposal Conference</i>	<i>December 17, 2020</i>
<i>Deadline for receipt of questions via email</i>	<i>December 18, 2020</i>
<i>Issue Addenda (if required)</i>	<i>January 7, 2021</i>
<i>Proposal Due Date</i>	<i>March 2, 2021</i>
<i>Approval from Region 4 ESC</i>	<i>April 27, 2021</i>
<i>Contract Effective Date</i>	<i>July 1, 2021</i>

All other items on this page shall remain.

RECEIPT OF ADDENDUM NO. 5 ACKNOWLEDGEMENT

Offeror shall acknowledge this addendum by signing below and include in their proposal response.

Company Name Hunter Knepshield Company Inc.

Contact Person Thomas Knepshield

Signature 

Date 03/01/2021

Crystal Wallace
Region 4 Education Service Center
Business Operations Specialist



7145 West Tidwell Road ~ Houston, Texas
77092 (713)-462-7708

www.esc4.net

NOTICE TO OFFEROR

ADDENDUM NO. 6

Solicitation Number 21-05

Request for Proposal (“RFP”)
by Region 4 Education Service Center (“ESC”)
for Modular Buildings, Portable Storage, and Relocatable Walkways

This Addendum No. 6 amends the Request for Proposal (RFP) for Modular Buildings, Portable Storage, and Relocatable Walkways 21-05 (“Addendum”). To the extent of any discrepancy between the original RFP and this Addendum, this Addendum shall prevail.

Region 4 Education Service Center (“Region 4 ESC”) requests proposals from qualified suppliers with the intent to enter into a Contract for Modular Buildings, Portable Storage, and Relocatable Walkways. Addendum 6 is hereby issued as follows:

CLARIFICATIONS

1. Due to the extreme weather conditions, the Submittal Deadline is being extended via Addendum.
2. Region 4 ESC keeps proposals locked which means proposals are not able to be checked to confirm receipt. As Region 4 ESC wants to ensure proper competition and that all proposals are received by the due date and time, Offeror(s) that chose to submit via mail should keep delivery receipts and confirmations from carriers.
3. Should there be any concerns, Offerors should confirm that they submitted proposals to the correct delivery address with proper labeling as indicated in the RFP.
 - a. Per paragraph 2 (page 1) of the RFP, submissions must be received by the Region 4 ESC office at: 7145 West Tidwell Road, Houston, TX 77092. Offerors may also put to the attention of Crystal Wallace to help ensure receipt. See the RFP for more details.
 - b. Per item 12 of Section III. Instruction to Offerors (page 9) of the RFP,

packages must be clearly identified, sealed and delivered to the Region 4 ESC office. Packages are to include who it is from, the company, the address, solicitation name and number, and due date and time. See the RFP for more details.

4. If Offerors wish to help ensure their proposals were received, they may reach out to questions@esc4.net after 2:00 PM Central Time on Tuesday, March 30, 2021. A response may not be provided, but e-mails will be read. However, it is imperative that Offerors are sending proposals to the correct address and labeled accordingly as if they are sent to an alternate location, they are at risk of having their proposals not accepted.
5. For Offerors that have already submitted a proposal, Acknowledgements of Addendum No. 6 (and as previously stated in a clarification Acknowledgement of Addendum No. 5), do not need to be included with an Offerors response. Region 4 ESC will request Addendum No. 5 and 6 acknowledgements from Offerors who have submitted. When requested by Region 4 ESC, Addendum No. 5 and 6 acknowledgements may be sent via e-mail.
6. For Offerors that have already submitted a proposal, the due date on the package label does not need to be changed.
7. As the Submittal Deadline is being further extended, the Approval from Region 4 ESC and Contract Effective Dates are also being changed via this Addendum.

CHANGES TO THE RFP

1. Page 1, Line 12:

Remove the submittal deadline and replace with the following:

SUBMITTAL DEADLINE: *Tuesday **March 30**, 2021, 2:00 PM CENTRAL TIME*

2. Page 5, Section II. CALENDER OF EVENTS (ALL DATES ARE TENTATIVE AND SUBJECT TO CHANGE):

Remove the calendar of events and replace with the following:

<i>Event</i>	<i>Date</i>
<i>Issue RFP</i>	<i>December 3, 2020</i>
<i>Pre-proposal Conference</i>	<i>December 17, 2020</i>
<i>Deadline for receipt of questions via email</i>	<i>December 18, 2020</i>
<i>Issue Addenda (if required)</i>	<i>January 7, 2021</i>
<i>Proposal Due Date</i>	<i>March 30, 2021</i>
<i>Approval from Region 4 ESC</i>	<i>June 29, 2021</i>
<i>Contract Effective Date</i>	<i>August 1, 2021</i>

All other items on this page shall remain.

RECEIPT OF ADDENDUM NO. 6 ACKNOWLEDGEMENT


Offeror shall acknowledge this addendum by signing below and include in their

Modular Buildings, Portable Storage, and Relocatable Walkways
Solicitation Number 21-05
Addendum No. 6

proposal response.

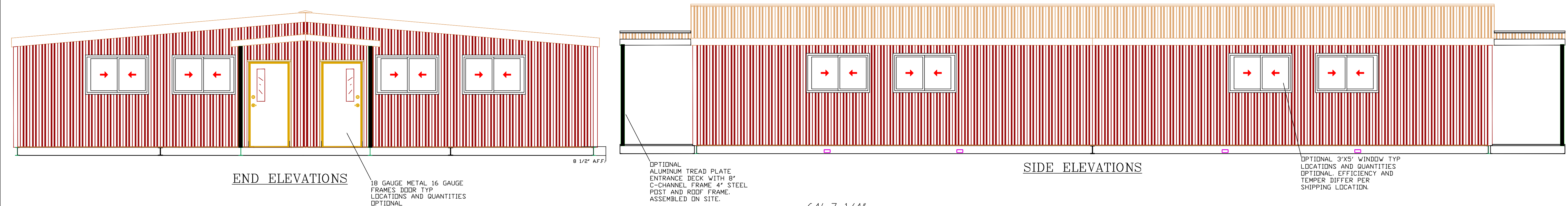
Company Name Hunter Knepshield Company, Inc.

Contact Person Thomas Knepshield

Signature  _____

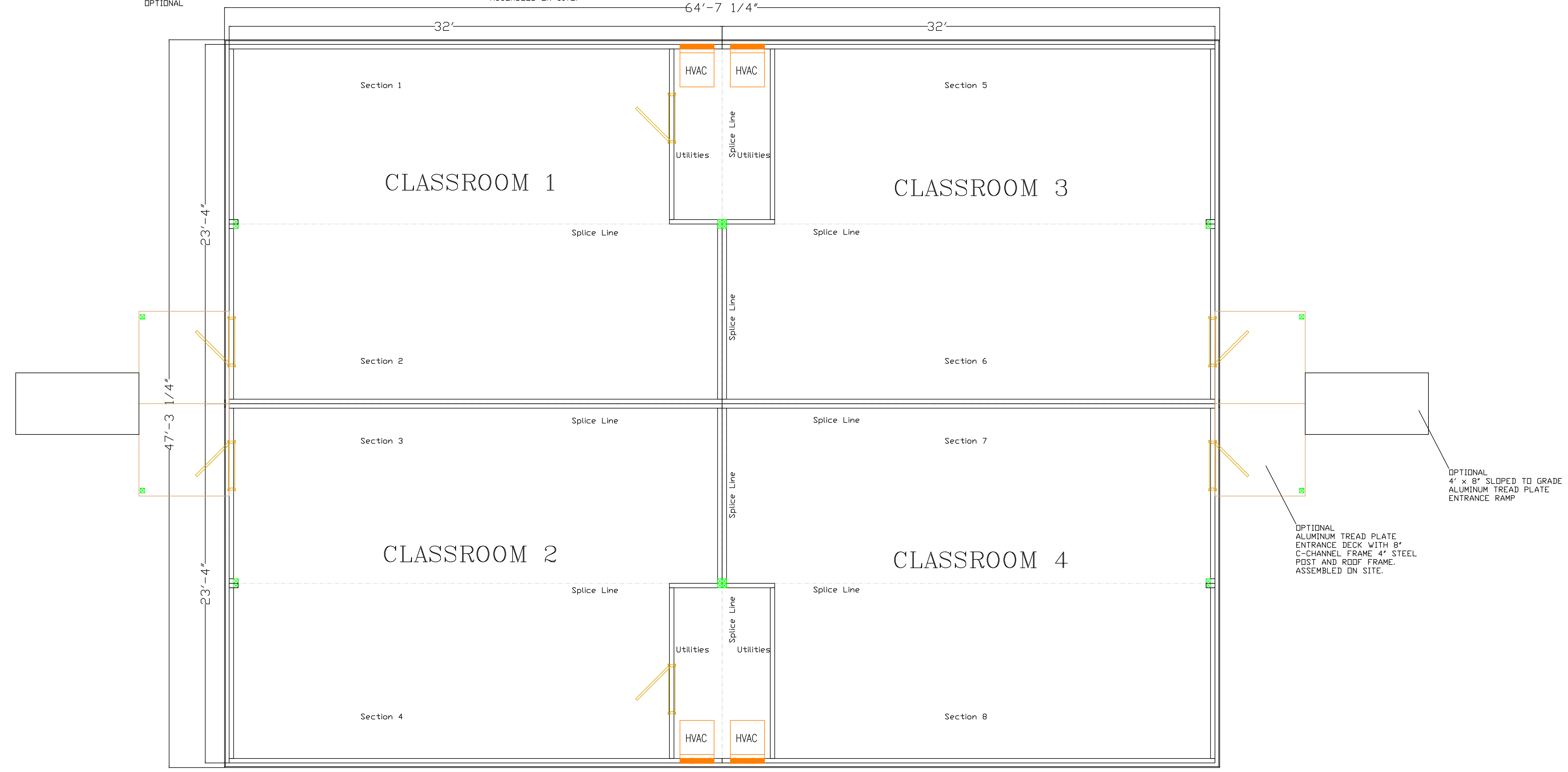
Date 3-29-2021

Crystal Wallace
Region 4 Education Service
Center Business Operations
Specialist

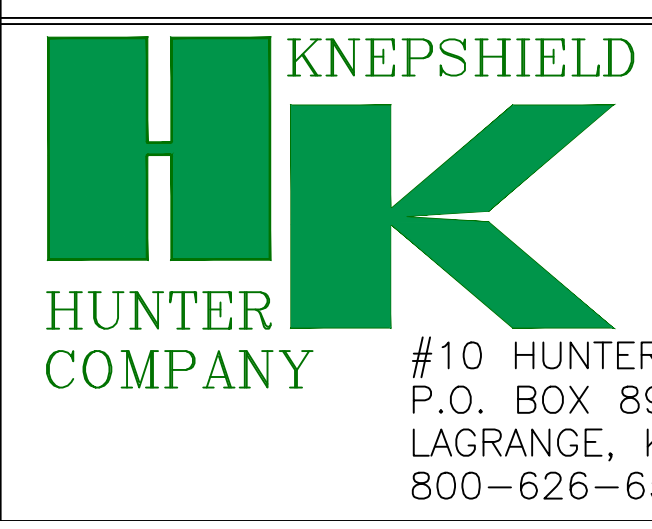


END ELEVATIONS

SIDE ELEVATIONS



PLAN VIEW



◇ SYMBOL: SUPPLIED BY MANUFACTURER AND INSTALLED BY OTHERS.
 ◆ SYMBOL: SUPPLIED AND INSTALLED BY OTHERS.

SHEET TITLE ELEVATIONS	
PROJECT NAME 48x64 CLASSROOM BUILDING NO RESTROOM	
PROJECT LOCATION VARIOUS LOCATIONS	

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IMPORTANT
 Note: It is the responsibility of the owner to verify that these plans meet or exceed all governing codes. It is also the responsibility of the owner to obtain plan approvals and all work permits by all governing agencies.

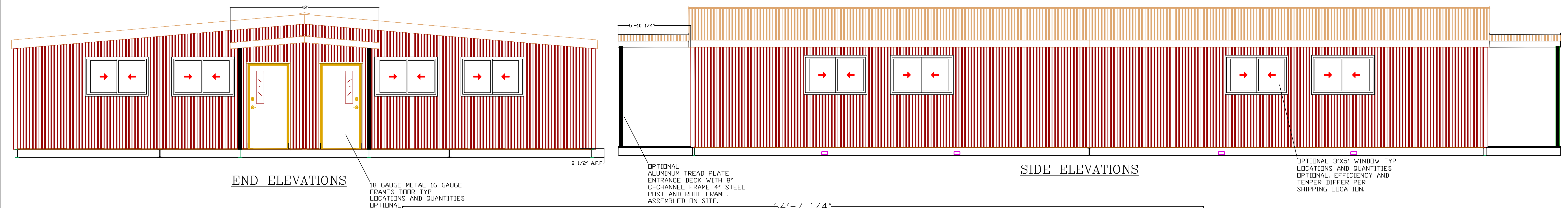
DRAWN	CHECKED	APPROVED	DATE	SCALE
TMKII	--		2/2/21	NTS

REVISIONS		
MARK	DESCRIPTION	DATE

FILE NAME 2QW00-4764CR
MODEL #
SERIAL #

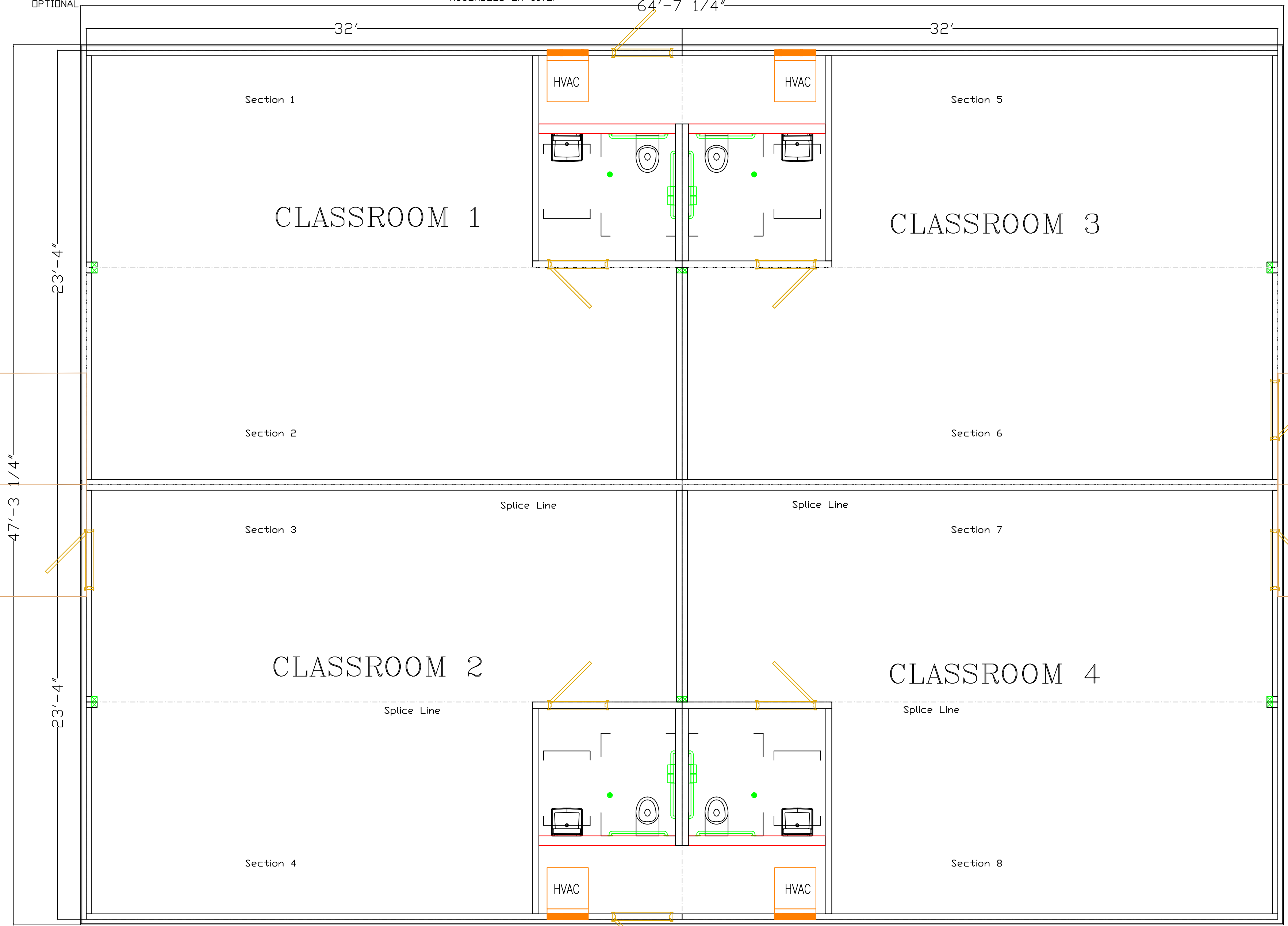
PROJECT ENGINEER

DRAWING NO.	
PKG. NO.	SHEET
	1
	OF

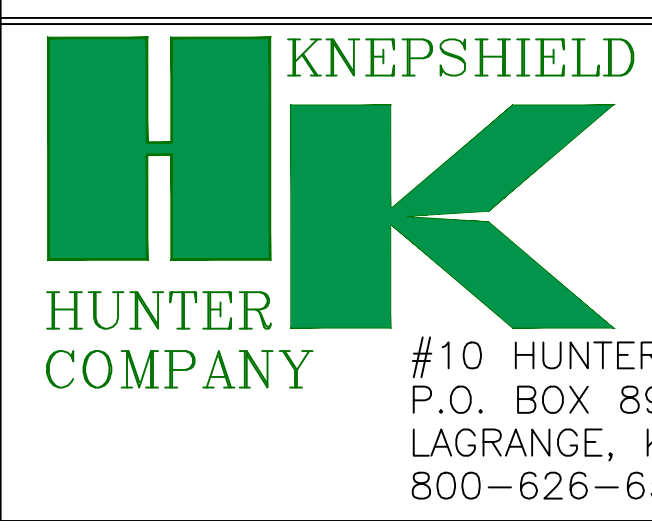


END ELEVATIONS

SIDE ELEVATIONS



PLAN VIEW



◇ SYMBOL: SUPPLIED BY MANUFACTURER AND INSTALLED BY OTHERS.
 ◆ SYMBOL: SUPPLIED AND INSTALLED BY OTHERS.

SHEET TITLE ELEVATIONS	
PROJECT NAME 48x64 CLASSROOM BUILDING NO RESTROOM	
PROJECT LOCATION VARIOUS LOCATIONS	

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IMPORTANT
Note: It is the responsibility of the owner to verify that these plans meet or exceed all governing codes. It is also the responsibility of the owner to obtain plan approvals and all work permits by all governing agencies.

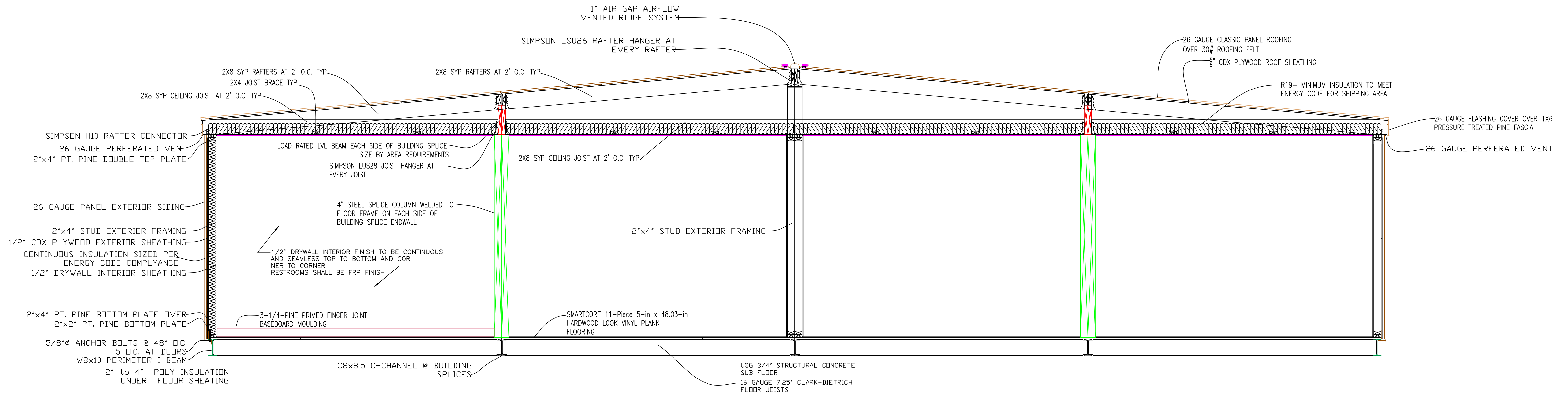
DRAWN	CHECKED	APPROVED	DATE	SCALE
TMKII	--		2/2/21	NTS

REVISIONS		
MARK	DESCRIPTION	DATE

FILE NAME 2QW44-4764CR
MODEL #
SERIAL #

PROJECT ENGINEER

DRAWING NO.	
PKG. NO.	SHEET
	2
	OF



1/2 BUILDING SECTION

HUNTER KNEPSHIELD COMPANY
 #10 HUNTER TRAIL
 P.O. BOX 899
 LAGRANGE, KY 40031
 800-626-6530

◇ SYMBOL: SUPPLIED BY MANUFACTURER AND INSTALLED BY OTHERS.
 ◇ SYMBOL: SUPPLIED AND INSTALLED BY OTHERS.

SHEET TITLE BUILDING SECTION	
PROJECT NAME 48x64 CLASSROOM BUILDING NO RESTROOM	
PROJECT LOCATION VARIOUS LOCATIONS	

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IMPORTANT
 Note: It is the responsibility of the owner to verify that these plans meet or exceed all governing codes. It is also the responsibility of the owner to obtain plan approvals and all work permits by all governing agencies.

DRAWN	CHECKED	APPROVED	DATE	SCALE
TMKII	--		2/2/21	NTS

REVISIONS		
MARK	DESCRIPTION	DATE

FILE NAME
2QW__-4764CR

MODEL #

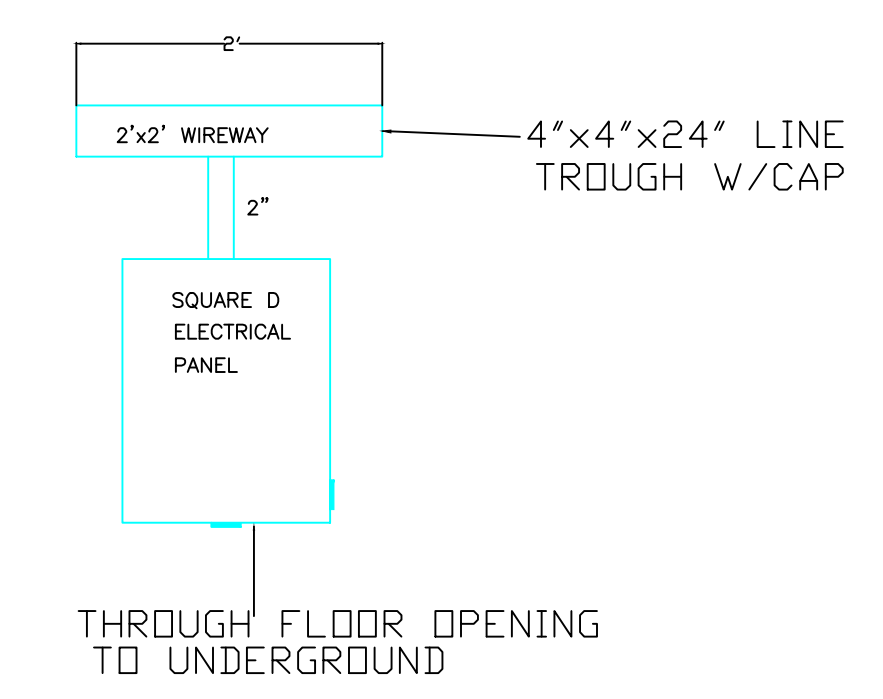
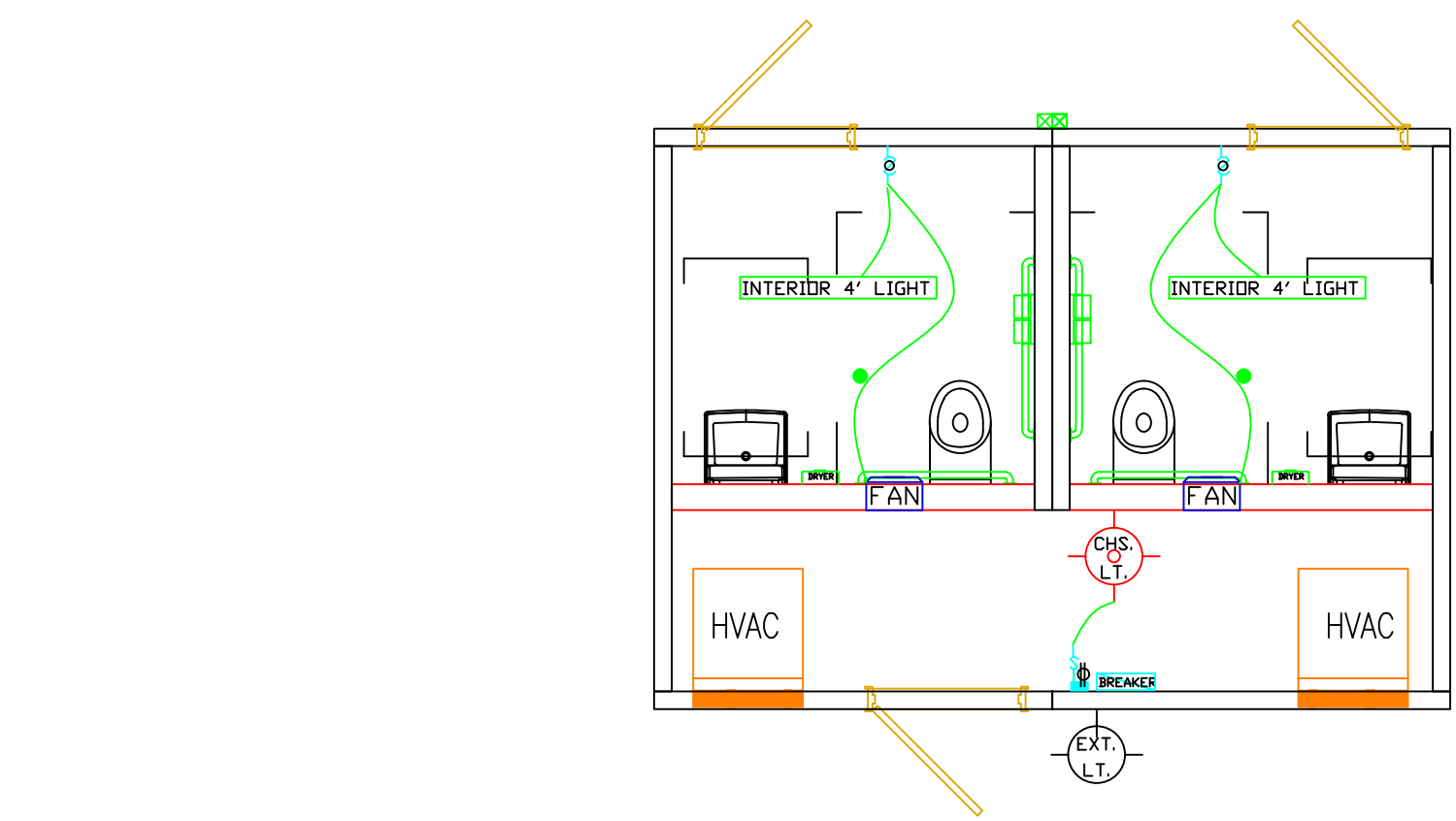
SERIAL #

PROJECT ENGINEER

DRAWING NO.

PKG. NO.

SHEET **3** OF



- GENERAL ELECTRICAL NOTES**
- A. Underground Sleeve: Per Local requirements.
 - B. Panel: 200 amp capacity, 30/40 breaker MINIMUM.
 - C. Conduit: Metallic throughout. EMT, FMC or MC cable.
 - D. Testing: Test in accordance with governing agency.
 - E. All Electrical work shall be performed in Accordance with the requirements of the National Electric Code (N.E.C.)
 - F. State Insignia Sticker located on side near electrical panel.
 - G. Grounding: A 5/8" X 8' grounding rod shall be installed either inside the form box or outside the building with grounding lugs and wire to the panel and the copper water supply. Grounding materials shall be supplied and installed by others to meet local requirements.

-NOTICE TO CONTRACTOR-
 THIS RESTROOM FACILITY HAS BEEN PREWIRED AND IS READY FOR HOOK-UP. THE CONTRACTOR IS REQUIRED TO FURNISH & INSTALL THE NECESSARY WIRING, CONDUIT, ETC. AS REQUIRED TO MAKE THE HOOK-UP BETWEEN THE ELECTRICAL PANEL AND THE ELECTRICAL SOURCE.

ELECTRICAL FIXTURE SCHEDULE

SYMBOLS	DESCRIPTION	MOUNTING HEIGHTS	UNIT KW	QUANTITY	
				NO-RR	RR
INTERIOR 4' LIGHT	LED WARELIGHT WRAP WL-WRAP4-LED-32W-40K-MV (OR APPROVED EQUAL).	+/- 8'-0" CEILING MOUNT	0.032	84	+4
EXTERIOR LIGHT	LED WARELIGHT WALL PACK WL-MWP-20W-50K-B-MV-PC (OR APPROVED EQUAL).	+/- 7' TO CENTER LINE	0.020	4	
DIS LT.	LED WARELIGHT VAPORPROOF JELLY JAR WL-14WJCMFG-40KMV (OR APPROVED EQUAL).	+/- 8'-0" CEILING MOUNT	0.014	4	
EMCY LT.	WARELIGHT LEDCXTEU2RW LED EXIT & EMERGENCY COMBO WITH BATTERY BACKUP (OR APPROVED EQUAL).	+/- 8' OVER DOOR	0.009	4	
EMCY LT.	WARELIGHT LEDR-2W LED THERMOPLASTIC EMERGENCY LIGHT WITH TWO ADJUSTABLE HEADS WITH BATTERY BACKUP (OR APPROVED EQUAL).	+/- 7'-6" ON WALL	0.006	4	
BREAKER	SQUARE D #HOM2040M200TC - 200 AMP PANEL W/ MAIN BREAKER & ISOLATED GROUNDING BAR. (OR APPROVED EQUAL).	ABOVE PLUMBING LINE ATTACHED TO PLYWOOD MOUNTED ON CHASE STUD WALL	NA	1	
⊕	LEVITON T5248-WCP - DUPLEX RECEPTACLE AMPER-RESISTANT DUPLEX OUTLET WITH EARS. 15 AMP, 125 VOLT, NEMA 5-15R, (OR APPROVED EQUAL).	18" TO CENTER	0	64	
⚡	LEVITON #54521-2W- SINGLE POLE AC SWITCH (COMMERCIAL SPEC GRADE) AND WALLPLATE. (OR APPROVED EQUAL).	+/- 42' TO CENTER LINE	NA	8	
⊕	THE LUTRON MAESTRO OCCUPANCY SENSING SWITCH MS-OPSSM-WH-3 MAESTRO 5-AMP MULTI-LOCATION DUAL VOLTAGE OCCUPANCY SENSING SWITCH (OR APPROVED EQUAL).	+/- 42' TO CENTER LINE	NA	4	
FAN	BROAN #RB110 BATHROOM FAN WITH UP TO 110 CFM AT 1.0 SONES, THE GRILLE SHALL BE TORSION (OR APPROVED EQUAL).	+/- 7'-0" TO CENTER LINE	0.034	4	
⌚	INTERMATIC OR TORK T101 ELECTROMECHANICAL TIME CLOCK 24 HOUR TIME SWITCH 40 AMP, 120 VAC (OR APPROVED EQUAL).	+/- 5' TO CENTER LINE	NA	2	
☞	EXCELL TA-ABS THIN AIR HANDS OFF AUTOMATIC HAND DRYER, WITH SURFACE MOUNT WHITE CAST COVER. (OR APPROVED EQUAL).	38" TO BLOWER SHOOT	0.950	4	
⚡	RHEEM TANKLESS ELECTRIC RTEX-08 8KW TANKLESS ELECTRIC WATER HEATER (OR APPROVED EQUAL).	+/-2'-0" IN WALL	8.000	2	
HVAC	GE AZ75H18DAC VERTICAL SERIES ZONELINE, 230V ELECTRIC.8.3/9.0 AMP. DUCTABLE, 10.0/10.0 (BTUH/Watt) 10.6/10.6 Indoor CFM 550/475/440 INSTALLED WITH RAVWP6 WALL PLENUM AND RAK163P2 DIGITAL PROGRAMMABLE THERMOSTAT. (OR APPROVED EQUAL).	+/- 2'-6" ABOVE FINISH FLOOR	9.000	4	

ELECTRICAL PLAN WITH RESTROOM OPTION

PANEL DIAGRAM



- ◇ SYMBOL: SUPPLIED BY MANUFACTURER AND INSTALLED BY OTHERS.
- ⊕ SYMBOL: SUPPLIED AND INSTALLED BY OTHERS.

SHEET TITLE ELECTRICAL	
PROJECT NAME 48x64 CLASSROOM BUILDING NO RESTROOM	
PROJECT LOCATION VARIOUS LOCATIONS	

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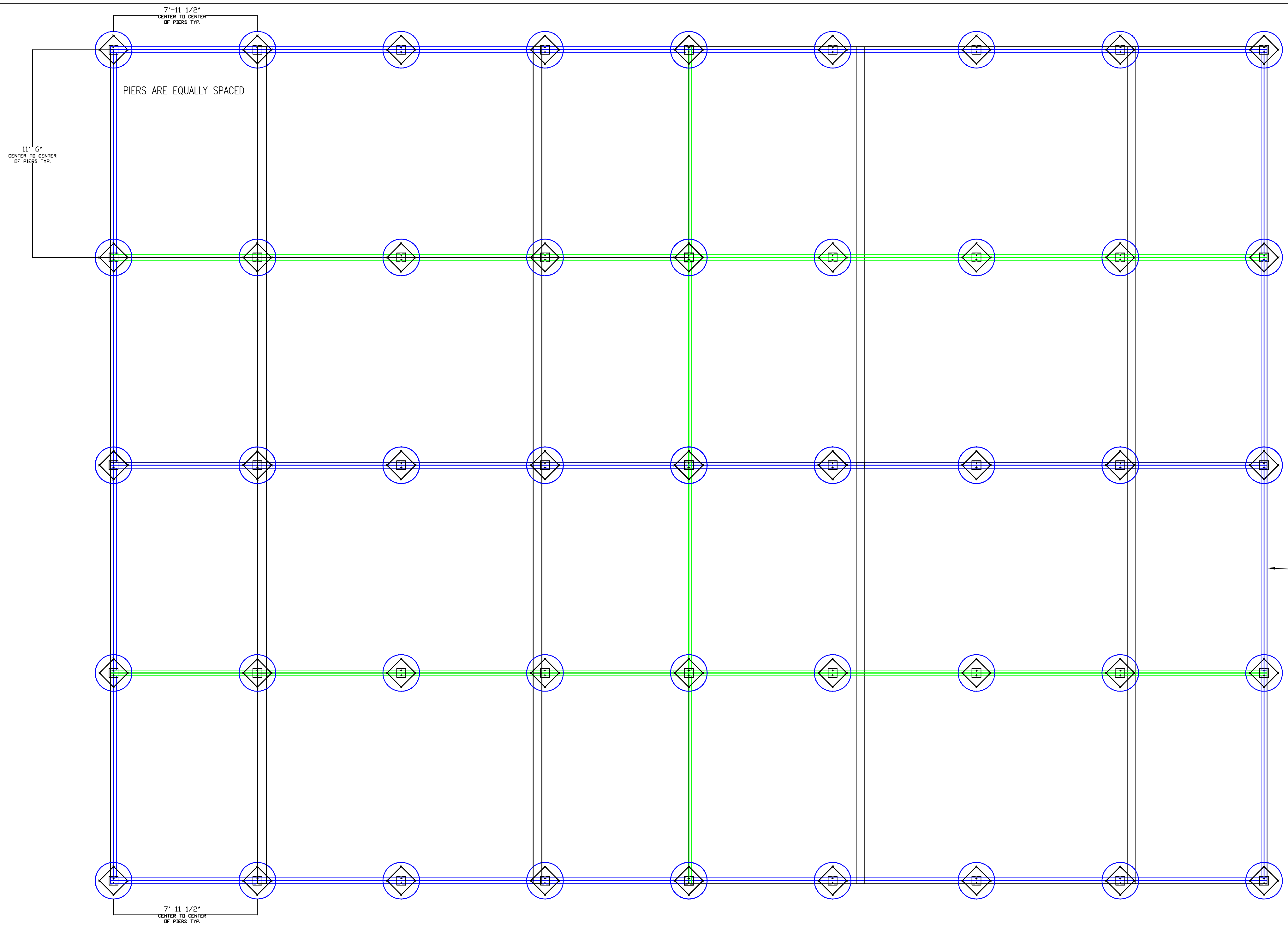
IMPORTANT
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DRAWN	CHECKED	APPROVED	DATE	SCALE
TMKII	--		2/2/21	NTS

REVISIONS		
MARK	DESCRIPTION	DATE

FILE NAME 2QW__-4764CR	PROJECT ENGINEER
MODEL #	
SERIAL #	

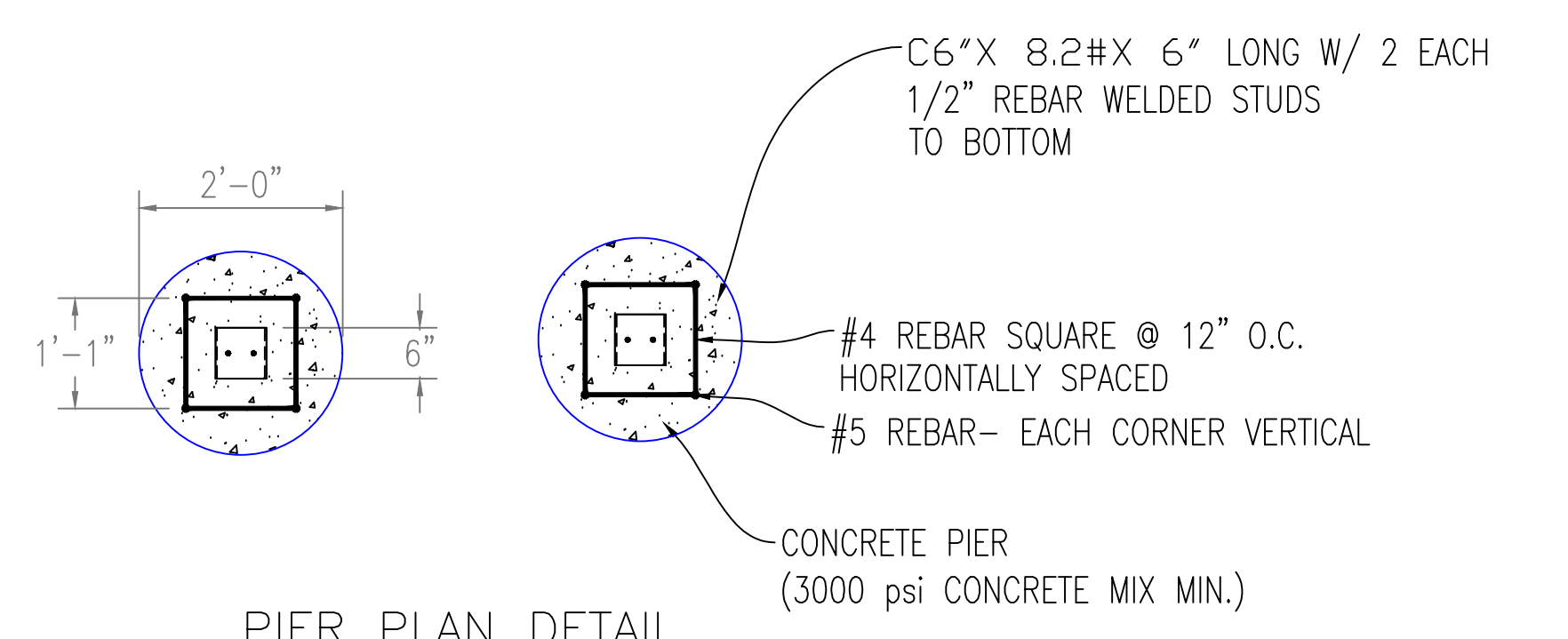
DRAWING NO.	
PKG. NO.	SHEET
	4
	OF



FOUNDATION PLAN

GENERAL FLOOR CONSTRUCTION NOTES:
 1. CONCRETE CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE AMERICAN CONCRETE INSTITUTE BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE
 2. EXPOSED SLAB CONCRETE SHALL BE NORMAL WEIGHT WITH A MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS OF 3500 psi.
 3. FLOOR SYSTEM: FACTORY INSTALLED, POURED IN PLACE WITH LIGHT BROOM FINISH.
 4. STRUCTURAL STEEL COMPONENTS SHALL BE PRIME PAINTED WITH A RUST INHIBITING PRIMER.

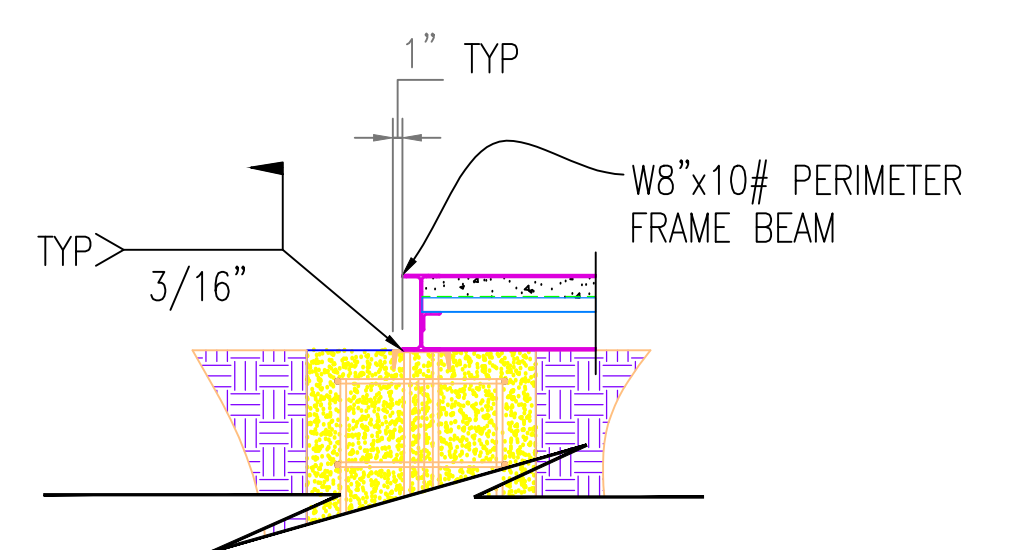
NOTE: GRADE BEAMS 18" WIDE TO 2' DEEP MIN. MAY BE USED WITH RATED MOUNTING SYSTEM. FOUNDATION ENGINEERING TO BE BASED ON SOIL CONDITIONS, FLOODPLAIN, AND ENVIRONMENTAL CONDITIONS.



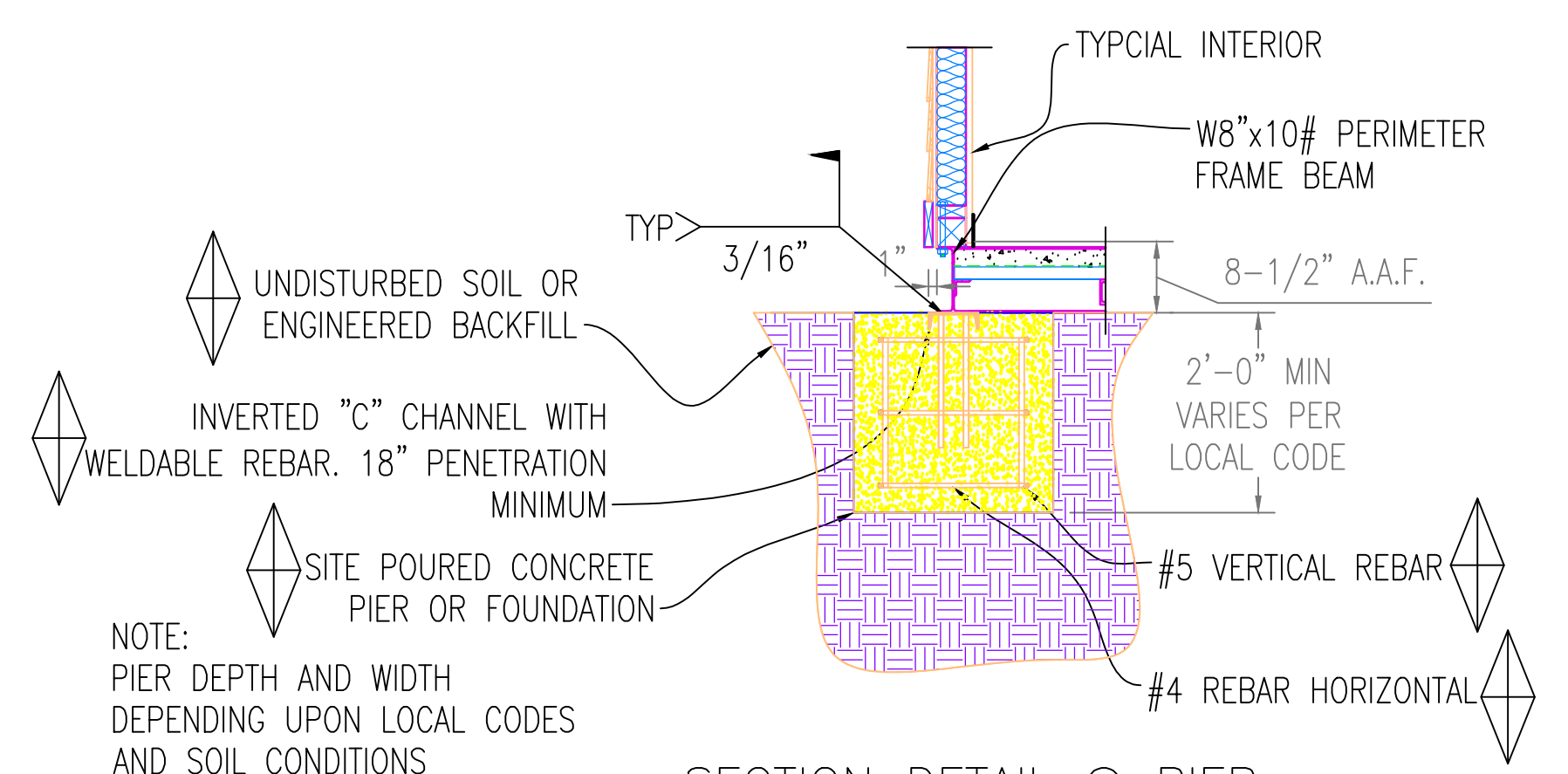
PIER PLAN DETAIL

NOTE: ALL MATERIALS BY OTHERS

W8"x10# PERIMETER FRAME BEAM

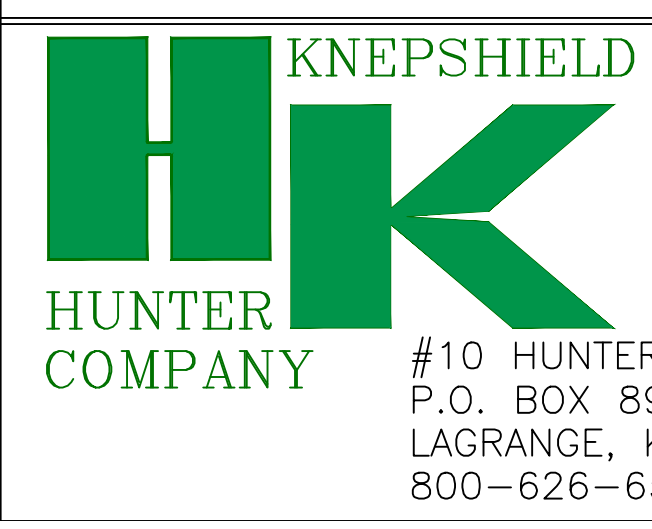


CONNECTION DETAIL @ PIER



SECTION DETAIL @ PIER

NOTE: PIER DEPTH AND WIDTH DEPENDING UPON LOCAL CODES AND SOIL CONDITIONS



◇ SYMBOL: SUPPLIED BY MANUFACTURER AND INSTALLED BY OTHERS.
 ◇ SYMBOL: SUPPLIED AND INSTALLED BY OTHERS.

SHEET TITLE FOUNDATIONS	
PROJECT NAME 24x64 CLASSROOM BUILDING NO RESTROOM	
PROJECT LOCATION VARIOUS LOCATIONS	

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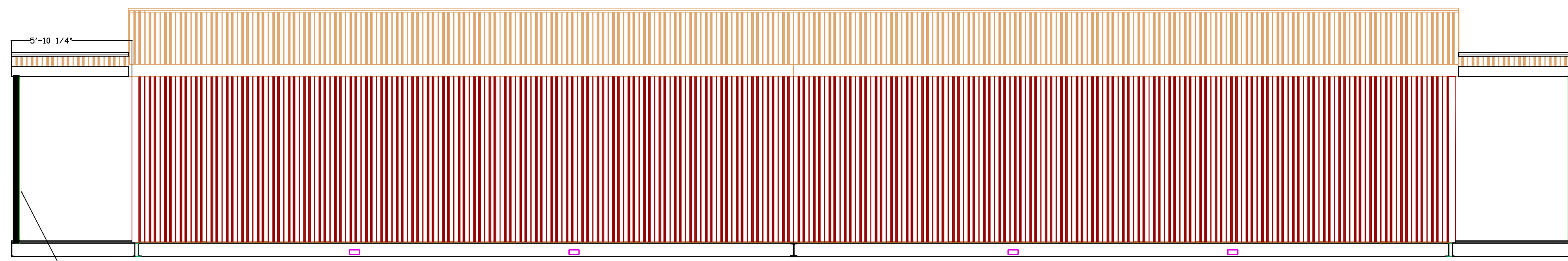
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TMKII	--		2/2/21	NTS

REVISIONS		
MARK	DESCRIPTION	DATE

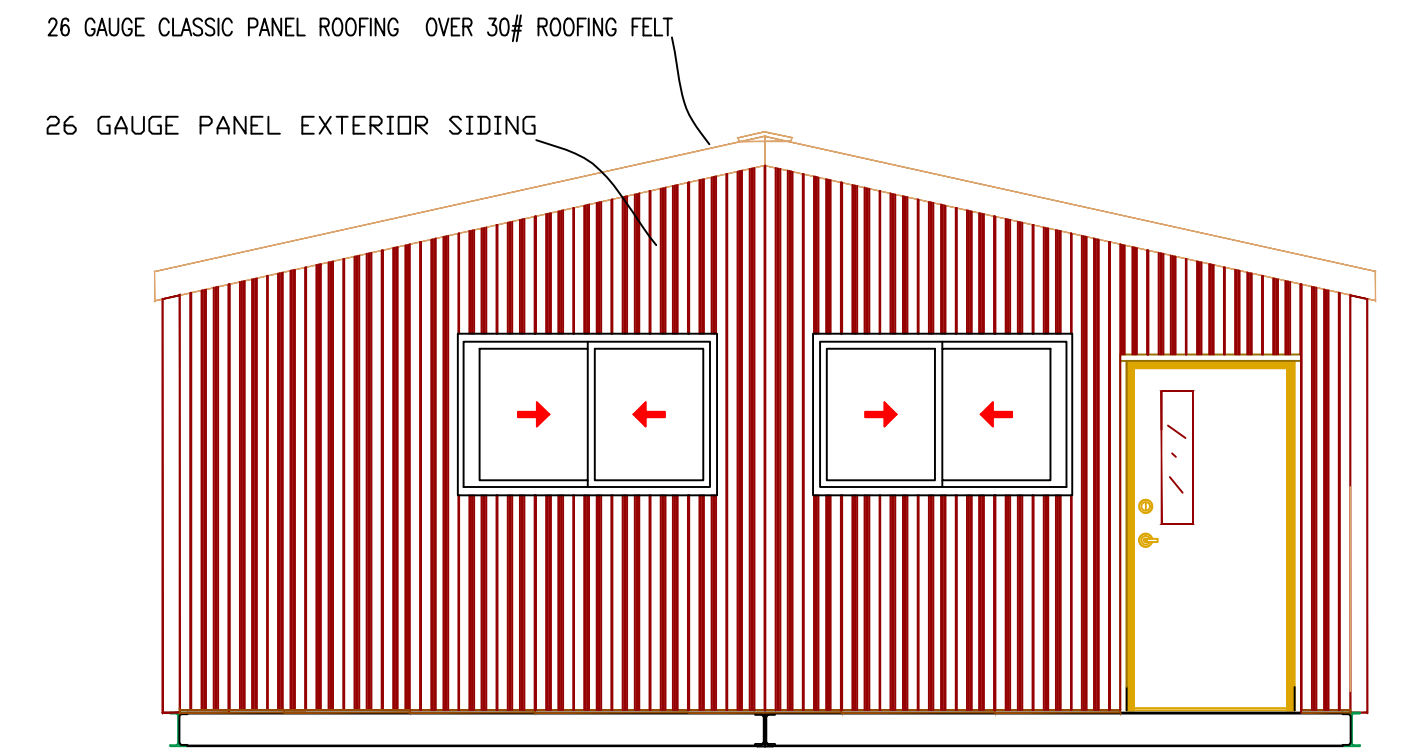
FILE NAME 2QW__-4764CR	PROJECT ENGINEER
MODEL #	
SERIAL #	

DRAWING NO.	
PKG. NO.	SHEET
	6
	OF

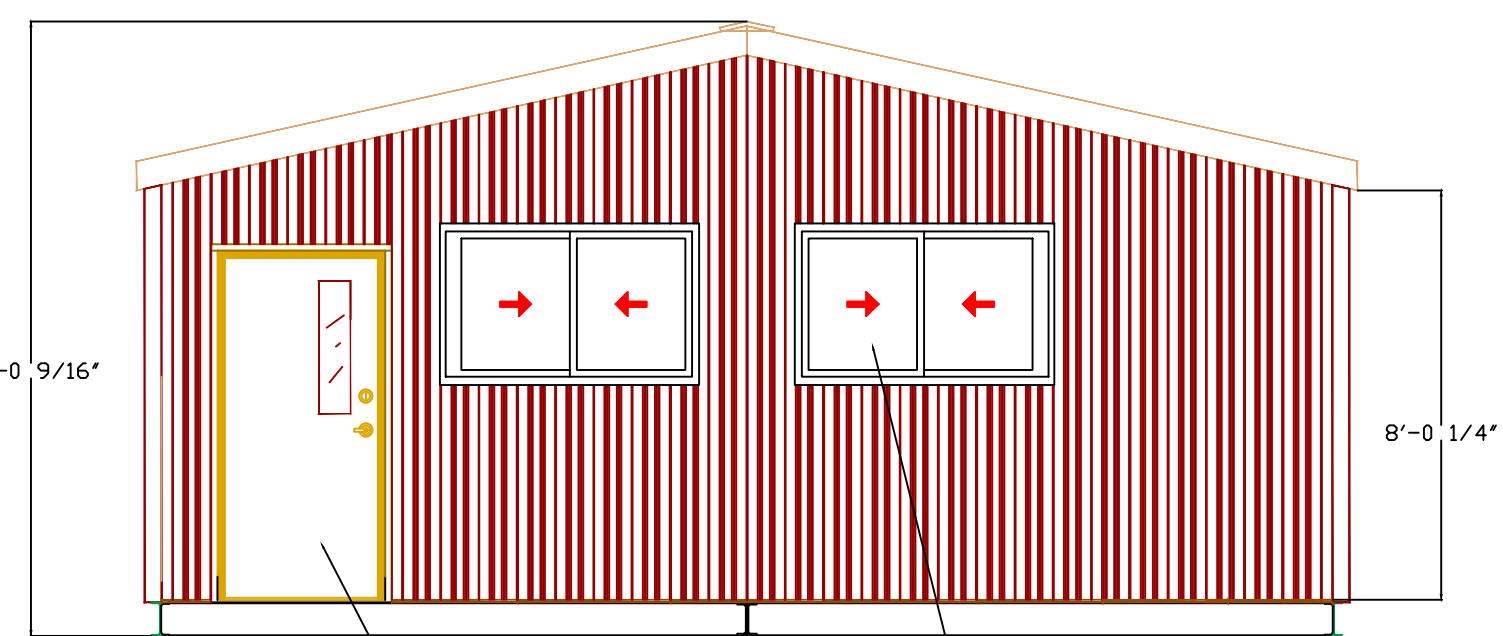


BACK ELEVATION

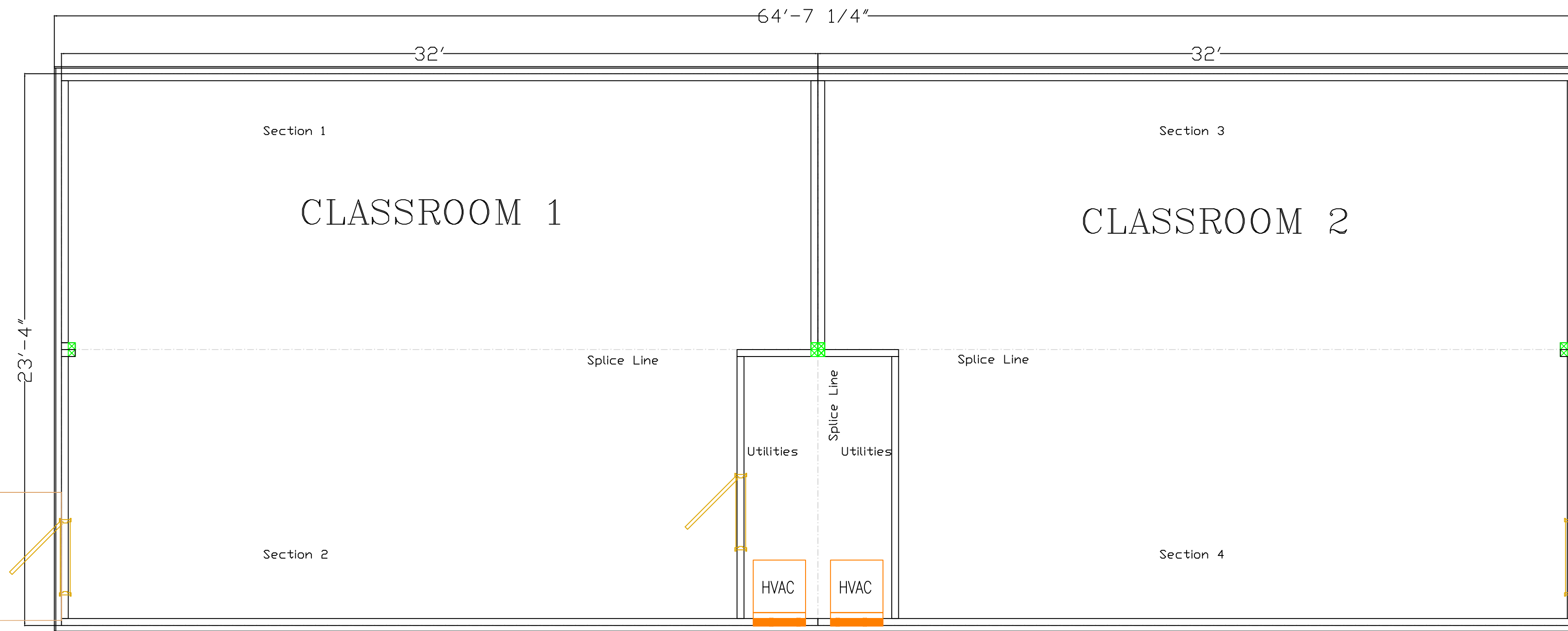
OPTIONAL ALUMINUM TREAD PLATE ENTRANCE DECK WITH 8" C-CHANNEL FRAME 4" STEEL POST AND ROOF FRAME. ASSEMBLED ON SITE.



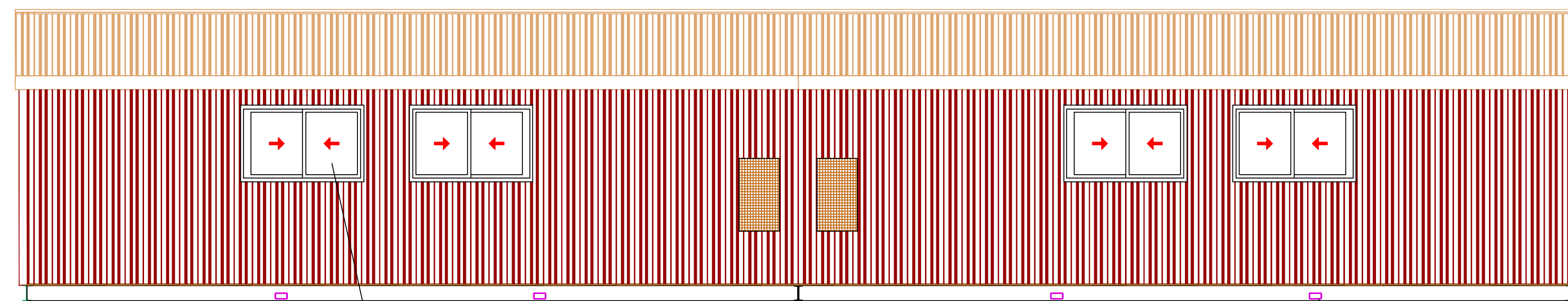
LEFT ELEVATION



RIGHT ELEVATION



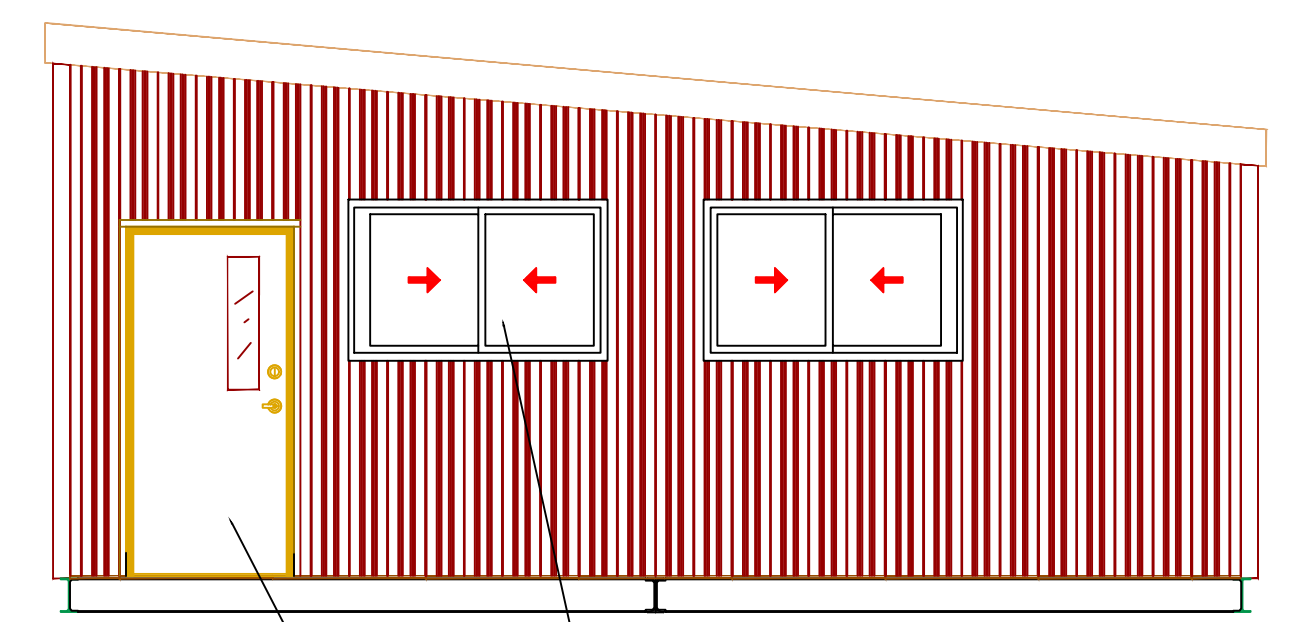
PLAN VIEW



FRONT ELEVATION

OPTIONAL 3'X5' WINDOW TYP

LIFTING POINTS TYP



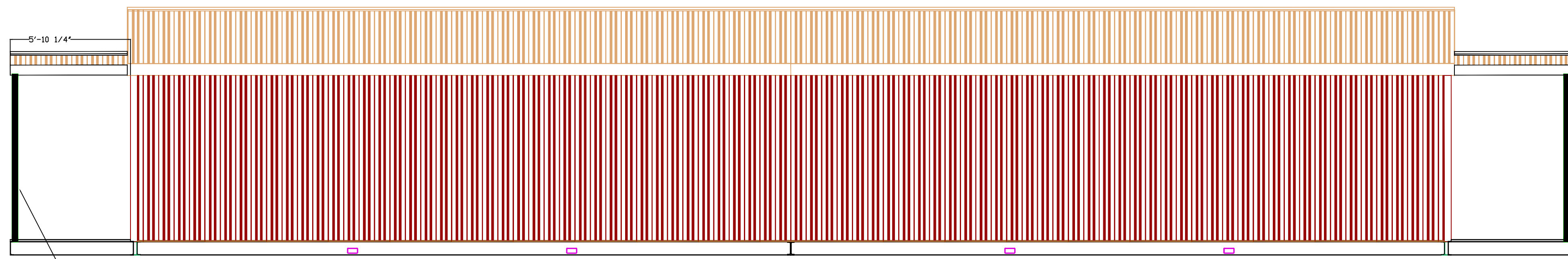
OPTIONAL ROOF FRAMING

OPTIONAL 3'X5' WINDOW TYP LOCATIONS AND QUANTITIES OPTIONAL EFFICIENCY AND TEMPER DIFFER PER SHIPPING LOCATION.

OPTIONAL ALUMINUM TREAD PLATE ENTRANCE DECK WITH 8" C-CHANNEL FRAME 4" STEEL POST AND ROOF FRAME. ASSEMBLED ON SITE.

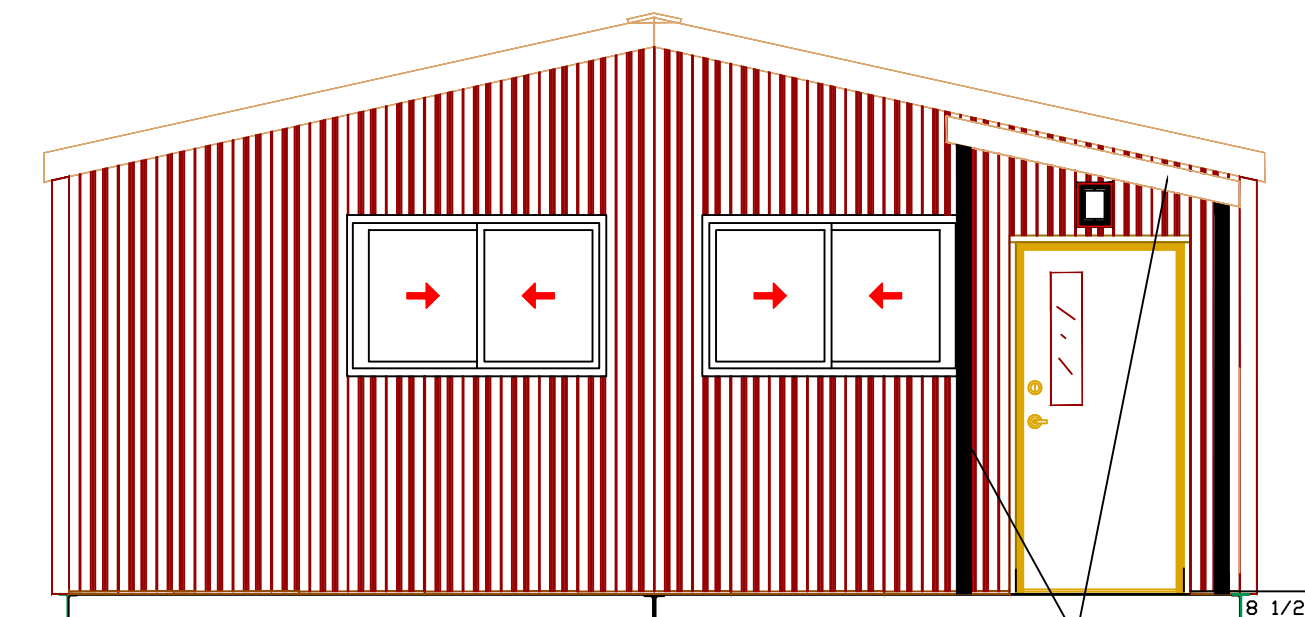
OPTIONAL 4' x 8' SLOPED TO GRADE ALUMINUM TREAD PLATE ENTRANCE RAMP

18 GAUGE METAL 16 GAUGE FRAMES DDDR TYP LOCATIONS AND QUANTITIES OPTIONAL



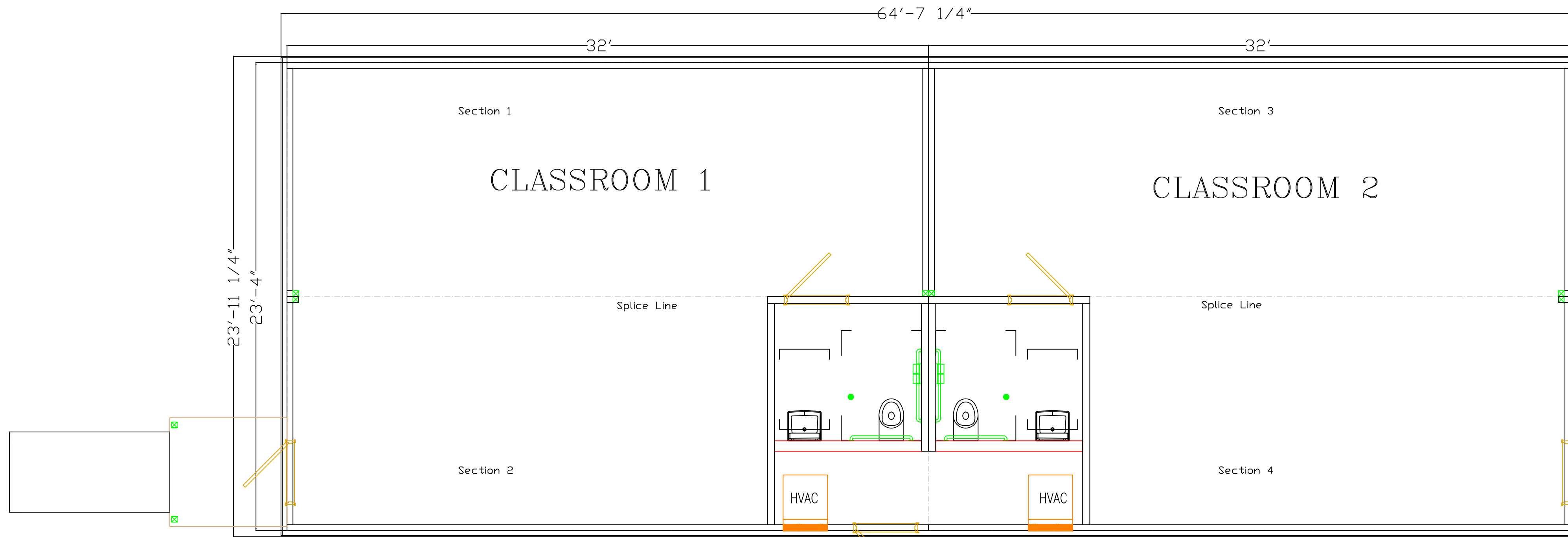
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2
1 BACK ELEVATION

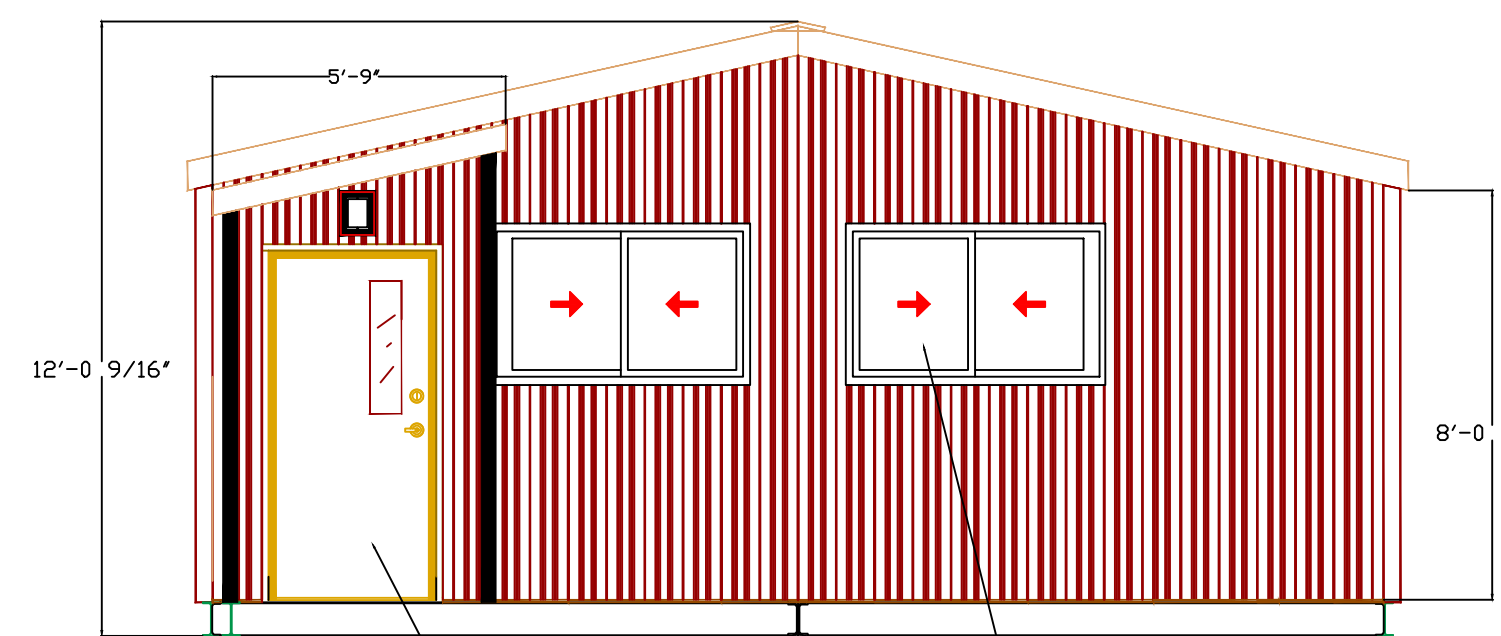


OPTIONAL ALUMINUM TREAD PLATE ENTRANCE DECK WITH 8" C-CHANNEL FRAME 4" STEEL POST AND ROOF FRAME. ASSEMBLED ON SITE.

LEFT ELEVATION



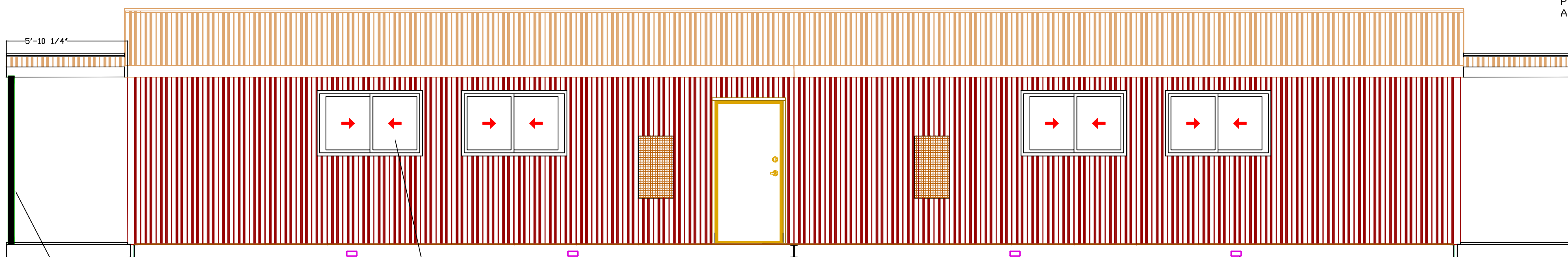
5
1 PLAN VIEW



18 GAUGE METAL DOOR LOCATIONS AND QUANTITY MAY BE CHANGED

OPTIONAL 3'X5' WINDOW TYP LOCATIONS AND QUANTITIES OPTIONAL EFFICIENCY AND TEMPER DIFFER PER SHIPPING LOCATION.

RIGHT ELEVATION

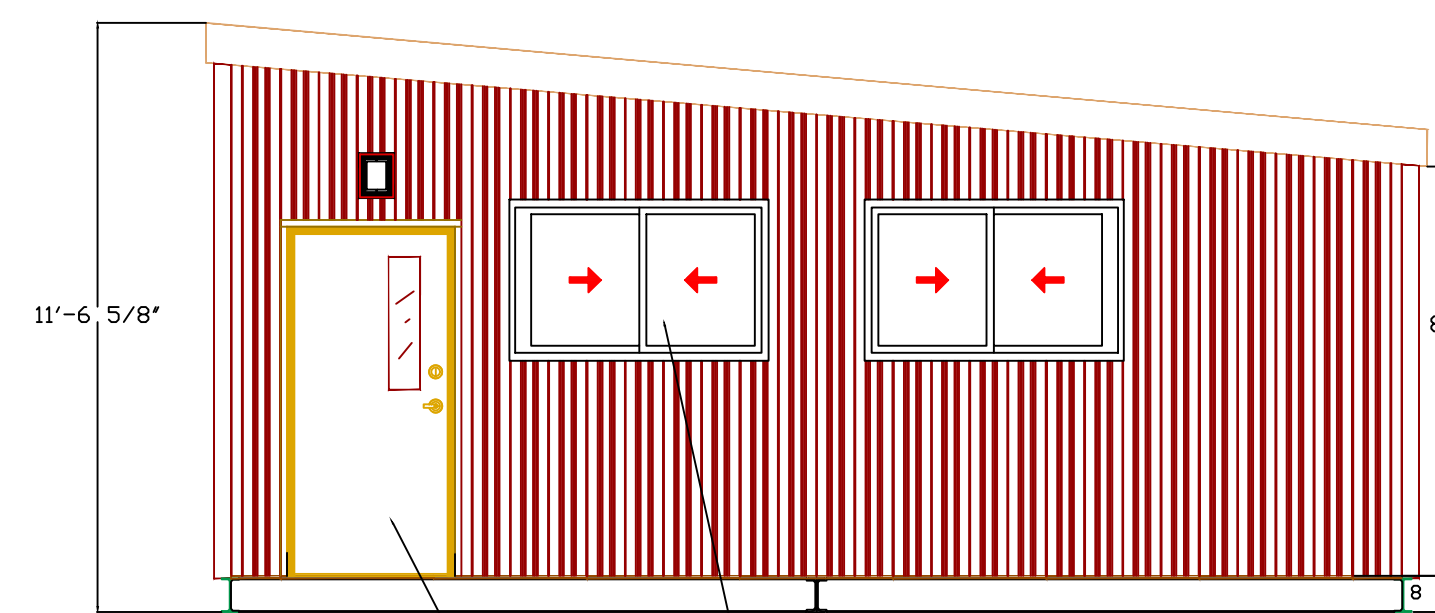


OPTIONAL ALUMINUM TREAD PLATE ENTRANCE DECK WITH 8" C-CHANNEL FRAME 4" STEEL POST AND ROOF FRAME. ASSEMBLED ON SITE.

OPTIONAL 3'X5' WINDOW TYP

FRONT ELEVATION

LIFTING POINTS TYP



OPTIONAL 3'X5' WINDOW TYP

18 GAUGE METAL DOOR

OPTIONAL ROOF FRAMING

OPTIONAL ALUMINUM TREAD PLATE ENTRANCE DECK WITH 8" C-CHANNEL FRAME 4" STEEL POST AND ROOF FRAME. ASSEMBLED ON SITE.

OPTIONAL 4' x 8' SLOPED TO GRADE ALUMINUM TREAD PLATE ENTRANCE RAMP



◇ SYMBOL: SUPPLIED BY MANUFACTURER AND INSTALLED BY OTHERS.
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SHEET TITLE
ELEVATIONS

PROJECT NAME
24x64 CLASSROOM BUILDING NO RESTROOM

PROJECT LOCATION
VARIOUS LOCATIONS

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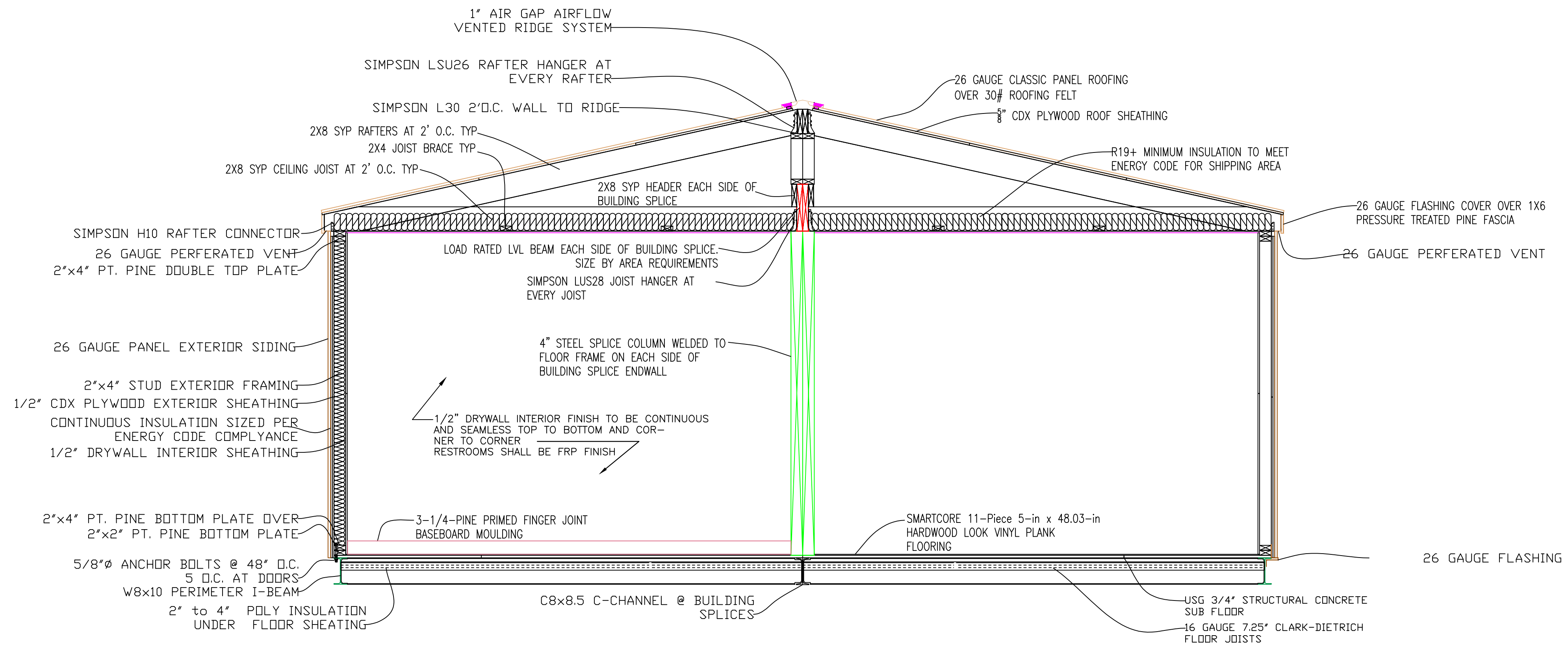
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TMKII	--		2/2/21	NTS

REVISIONS		
MARK	DESCRIPTION	DATE

FILE NAME	PROJECT ENGINEER	DRAWING NO.
QW22-2464CR		
MODEL #		
SERIAL #		
		PKG. NO.
		SHEET
		2
		OF



1
2 BUILDING SECTION

SHEET TITLE BUILDING SECTION
PROJECT NAME 24x64 CLASSROOM BUILDING NO RESTROOM
PROJECT LOCATION VARIOUS LOCATIONS

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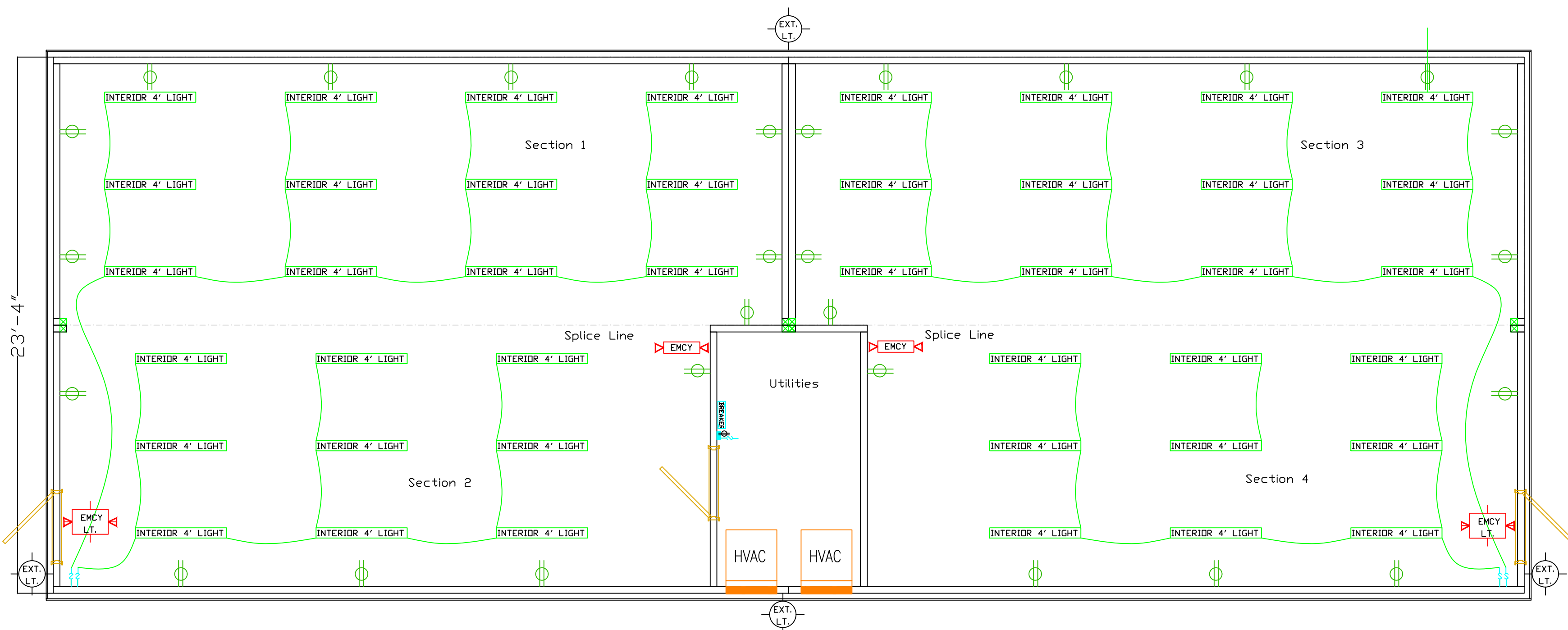
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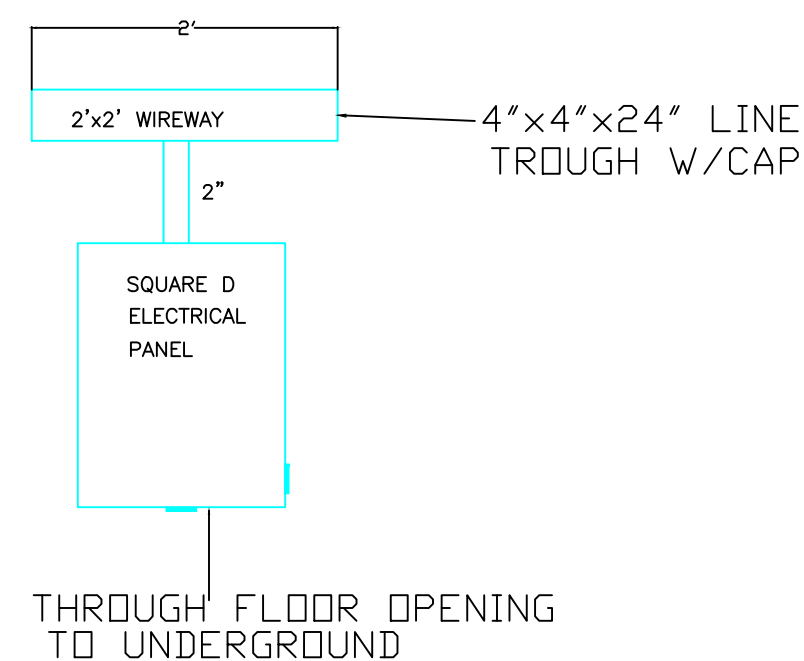
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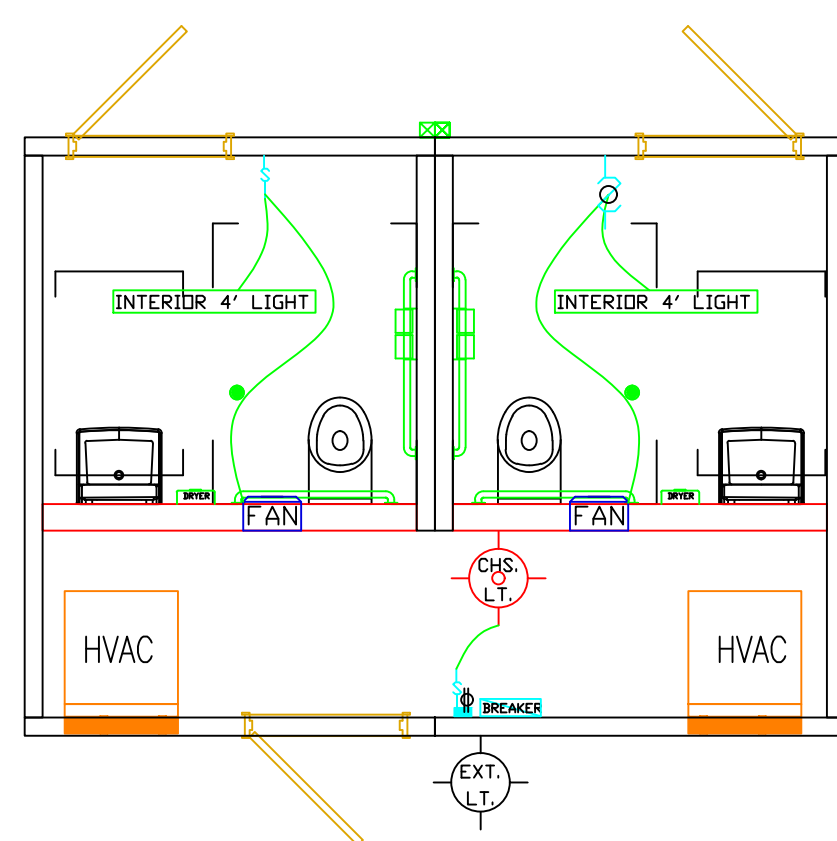
FILE NAME QW__-2464CR	PROJECT ENGINEER
MODEL #	
SERIAL #	



-NOTICE TO CONTRACTOR-
 THIS RESTROOM FACILITY HAS BEEN PREWIRED AND IS READY FOR HOOK-UP. THE CONTRACTOR IS REQUIRED TO FURNISH & INSTALL THE NECESSARY WIRING, CONDUIT, ETC. AS REQUIRED TO MAKE THE HOOK-UP BETWEEN THE ELECTRICAL PANEL AND THE ELECTRICAL SOURCE.



PANEL DIAGRAM



ELECTRICAL PLAN WITH RESTROOM OPTION

GENERAL ELECTRICAL NOTES

- A. Underground Sleeve: Per Local requirements.
- B. Panel: 200 amp capacity, 30/40 breaker MINIMUM.
- C. Conduit: Metallic throughout. EMT, FMC or MC cable.
- D. Testing: Test in accordance with governing agency.
- E. All Electrical work shall be performed in Accordance with the requirements of the National Electric Code (N.E.C.)
- F. State Insignia Sticker located on side near electrical panel.
- G. Grounding: A 5/8" X 8' grounding rod shall be installed either inside the form box or outside the building with grounding lugs and wire to the panel and the copper water supply. Grounding materials shall be supplied and installed by others to meet local requirements.

ELECTRICAL FIXTURE SCHEDULE

SYMBOLS	DESCRIPTION	MOUNTING HEIGHTS	UNIT KW	QUANTITY	
				ND-RR	RR
INTERIOR 4' LIGHT	LED WARELIGHT WRAP WL-WRAP4-LED-32W-40K-MV (OR APPROVED EQUAL).	+ - 8'-0" CEILING MOUNT	0.032	42	+2
EXT. LT.	LED WARELIGHT WALL PACK WL-MWP-20W-50K-B-MV-PC (OR APPROVED EQUAL).	+ - 7' TO CENTER LINE	0.020	4	
CHS. LT.	LED WARELIGHT VAPORPROOF JELLY JAR WL-14WJCMFG-40KMV (OR APPROVED EQUAL).	+ - 8'-0" CEILING MOUNT	0.014	1	
EMCY LT.	WARELIGHT LEDCXTEU2RW LED EXIT & EMERGENCY COMBO WITH BATTERY BACKUP (OR APPROVED EQUAL).	+ - 8' OVER DOOR	0.009	2	
EMCY	WARELIGHT: LEDR-2W LED THERMOPLASTIC EMERGENCY LIGHT WITH TWO ADJUSTABLE HEADS WITH BATTERY BACKUP (OR APPROVED EQUAL).	+ - 7'-6" ON WALL	0.006	2	
BREAKER	SQUARE D #HOM2040M200TC - 200 AMP PANEL W/ MAIN BREAKER & ISOLATED GROUNDING BAR. (OR APPROVED EQUAL).	ABOVE PLUMBING LINE ATTACHED TO PLYWOOD MOUNTED ON CHASE STUD WALL	NA	1	
⊕	LEVITON T5248-WCP - DUPLEX RECEPTACLE AMPER-RESISTANT DUPLEX OUTLET WITH EARS. 15 AMP, 125 VOLT, NEMA 5-15R, (OR APPROVED EQUAL).	18" TO CENTER	0	32	
⚡	LEVITON #54521-2W- SINGLE POLE AC SWITCH (COMMERCIAL SPEC GRADE) AND WALLPLATE. (OR APPROVED EQUAL).	+ - 42' TO CENTER LINE	NA	4	
⚡	THE LUTRON MAESTRO OCCUPANCY SENSING SWITCH MS-OP5M-WH-3 MAESTRO 5-AMP MULTI-LOCATION DUAL VOLTAGE OCCUPANCY SENSING SWITCH (OR APPROVED EQUAL).	+ - 42' TO CENTER LINE	NA	0	2
FAN	BROAN #RB110 BATHROOM FAN WITH UP TO 110 CFM AT 1.0 SONES, THE GRILLE SHALL BE TORSION (OR APPROVED EQUAL).	+ - 7'-0" TO CENTER LINE	0.034	2	
⌚	INTERMATIC OR TORK T101 ELECTROMECHANICAL TIME CLOCK 24 HOUR TIME SWITCH 40 AMP, 120 VAC (OR APPROVED EQUAL).	+ - 5' TO CENTER LINE	NA	1	
🧴	EXCELL TA-ABS THIN AIR HANDS OFF AUTOMATIC HAND DRYER, WITH SURFACE MOUNT WHITE CAST COVER. (OR APPROVED EQUAL).	38" TO BLOWER SHOOT	0.950	2	
🚿	RHEEM TANKLESS ELECTRIC RTEX-08 8KW TANKLESS ELECTRIC WATER HEATER (OR APPROVED EQUAL).	+ - 2'-0" IN WALL	8.000	1	
HVAC	GE AZ75H18DAC VERTICAL SERIES ZONELINE, 230V ELECTRIC. 8.3/9.0 AMP. DUCTABLE, 10.0/10.0 (BTUH/Watt) 10.6/10.6 Indoor CFM 550/475/440 INSTALLED WITH RAVWP6 WALL PLENUM AND RAK163P2 DIGITAL PROGRAMMABLE THERMOSTAT. (OR APPROVED EQUAL).	+ - 2'-6" ABOVE FINISH FLOOR	9.000	2	

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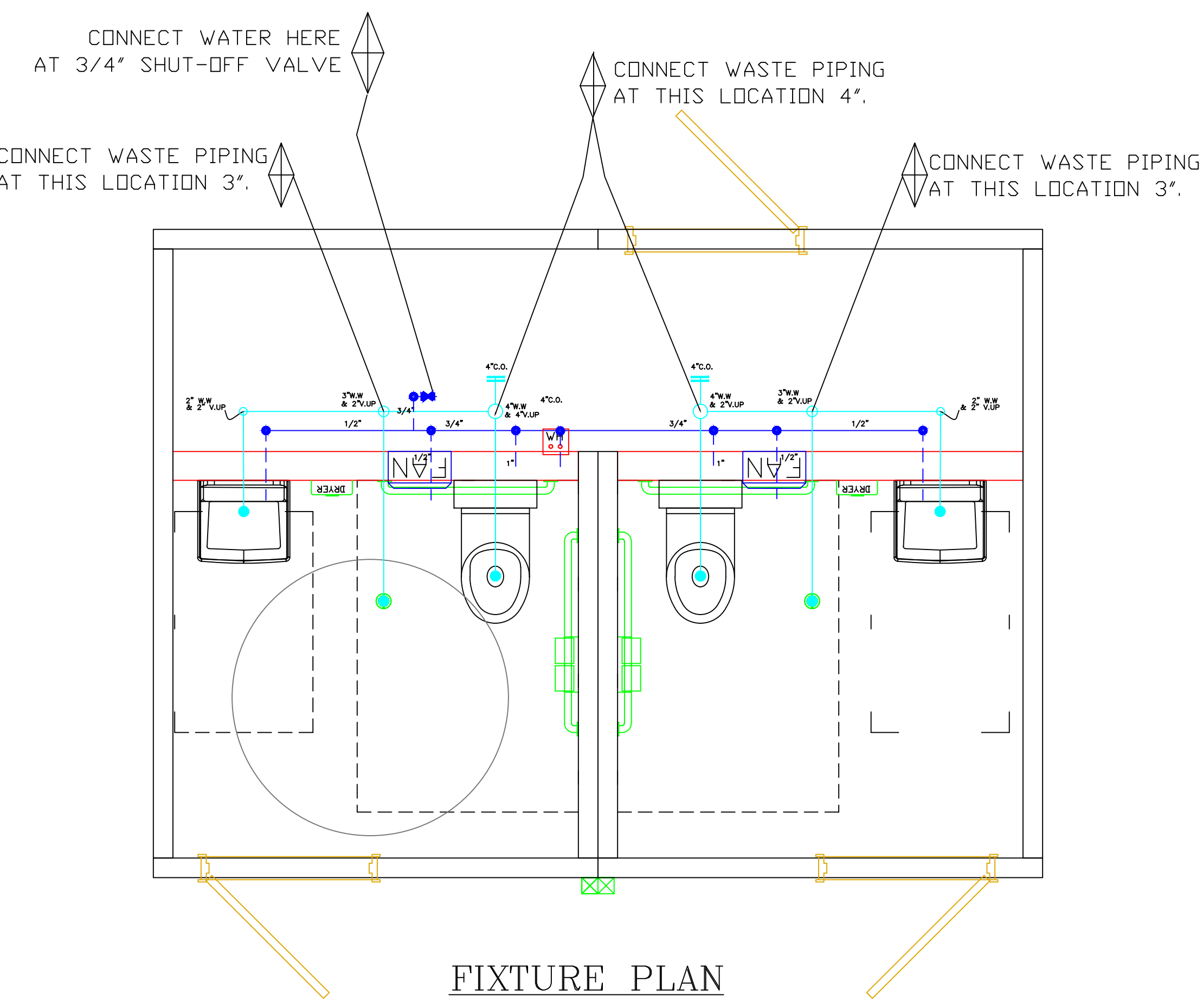
SHEET TITLE
 ELECTRICAL
PROJECT NAME
 24x64 CLASSROOM BUILDING NO RESTROOM
PROJECT LOCATION
 VARIOUS LOCATIONS

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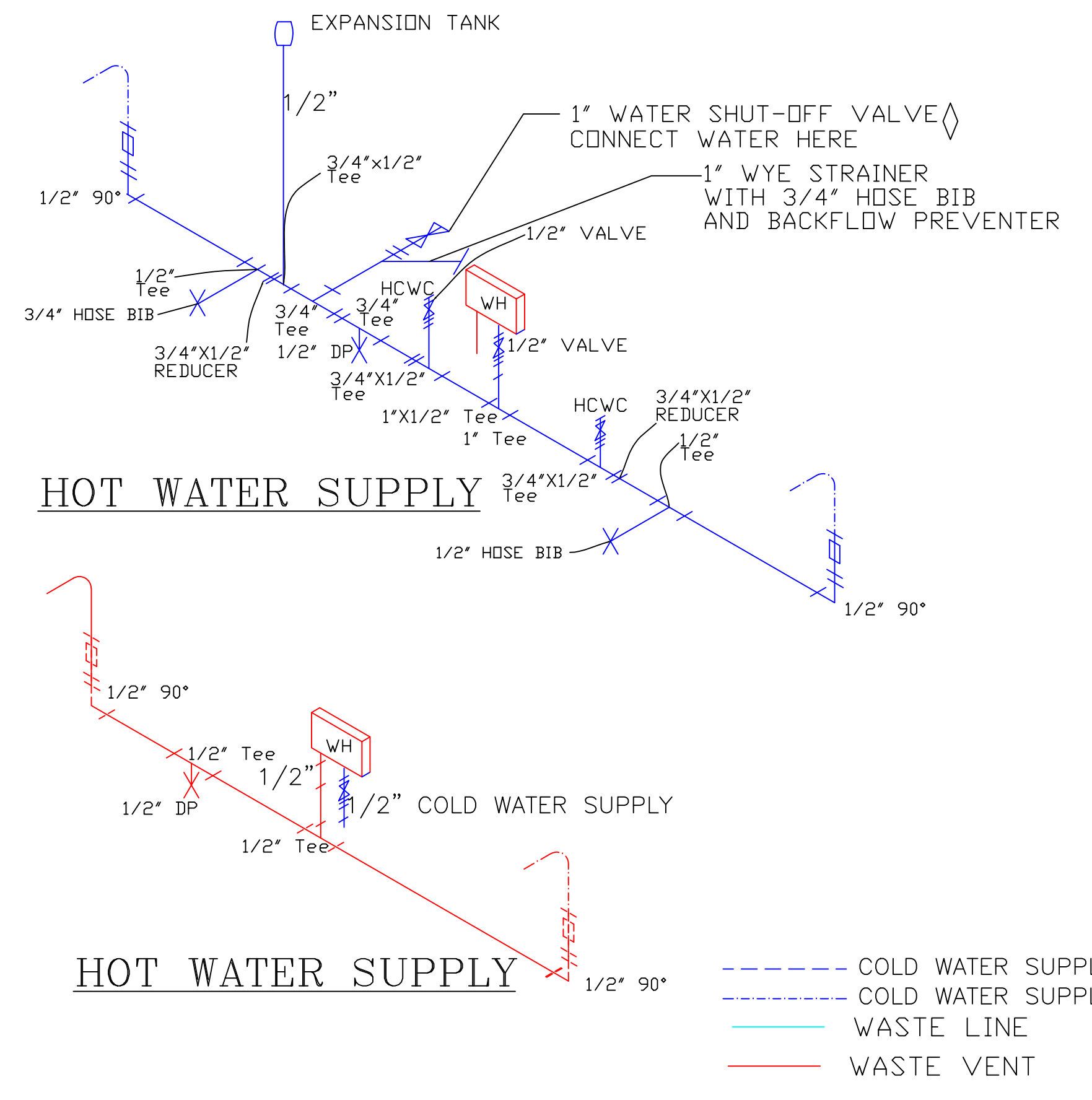
DRAWN	CHECKED	APPROVED	DATE	SCALE
TMKII	--		2/2/21	NTS

REVISIONS		
MARK	DESCRIPTION	DATE

FILE NAME	PROJECT ENGINEER	DRAWING NO.
QW__-2464CR		
MODEL #		
SERIAL #		
PKG. NO.	SHEET	
	4	
	OF	



FIXTURE PLAN



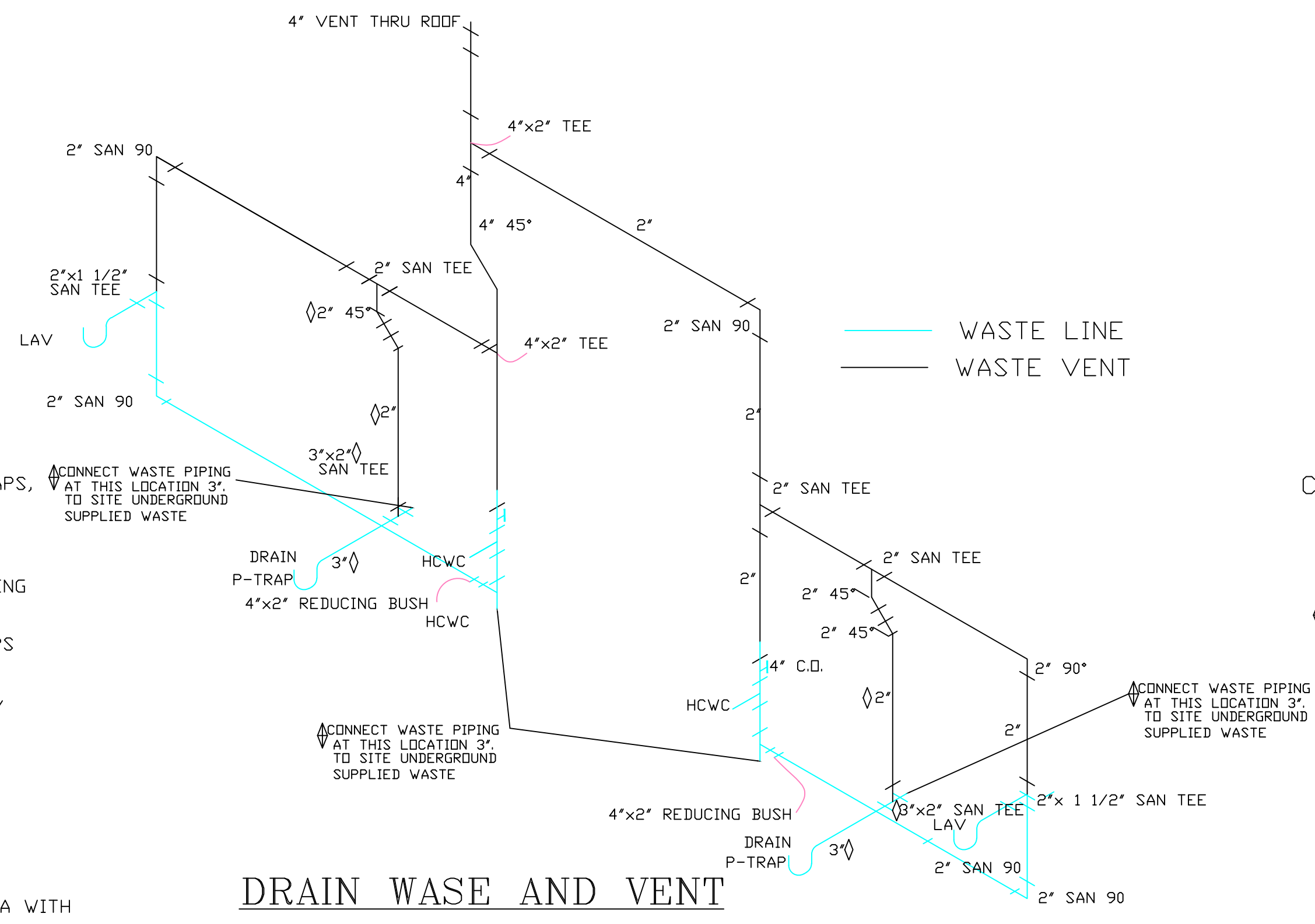
HOT WATER SUPPLY

HOT WATER SUPPLY

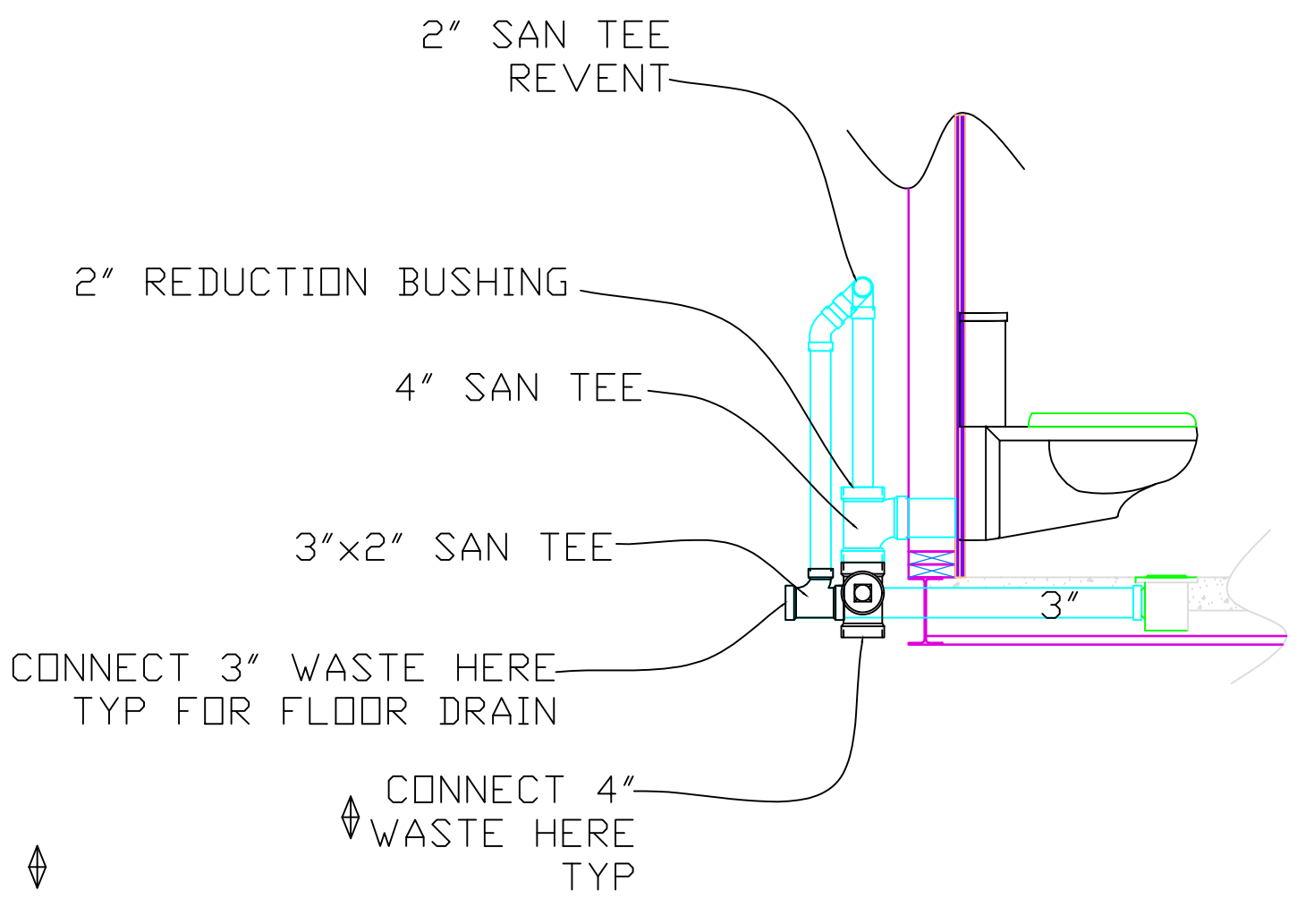
- - - COLD WATER SUPPLY (TYPE "L" HARD COPPER)
- - - COLD WATER SUPPLY (TYPE "L" SOFT COPPER)
- WASTE LINE
- WASTE VENT

PLUMBING FIXTURE SCHEDULE					
MARK	FIXTURE	C	H	W	DESCRIPTION
HCWC WC	WATER CLOSET	1'	-	4'	WATER CLOSET: AMERICAN STANDARD 2882108.020 BACK SPUD TANK TYPE VITREOUS CHINA WATER CLOSET 1.28 GAL FLUSH, ELONGATED BOWL, WALL MOUNTED WITH OPEN FRONT, WHITE SEAT. FURNISHED WITH WADE 311 ADJUSTABLE SIPHON JET CARRIER (OR APPROVED EQUALS). WATER CLOSETS TO BE INSTALLED AT HANDICAP HEIGHT.
LAV	LAVATORY	3/8'	3/8'	1-1/4'	LAVATORY: Z5344 20"x18" WALL HUNG LAVATORY WITH 4" CENTER FAUCET HUNG; W/ ZURN Z1231 CONCEALED CARRIER; ZURN Z86100 ZURN SINGLE BASIN PUSH BUTTON METERING FAUCET (COLD) FOR 4" CENTER HOLE LAV. LAVATORIES TO INCLUDE ZURN Z8743-PC 1-1/4" GRID DRAIN Z8700-B-D-PC 1-1/4" INLET OUTLET P-TRAP WITH TO BE INSTALLED AT HANDICAP HEIGHT.
●	FLOOR DRAIN	-	-	3'	FLOOR DRAIN: 3" WADE PRISON FLOOR DRAIN WITH INTEGRAL P-TRAP AND NICKEL HEAD AND HEAL-PROOF GRATE. GRATE IS INSTALLED WITH VANDAL PROOF SCREWS. (OR APPROVED EQUALS).
□	EXPANSION TANK	1/2'	-	-	EXPANSION TANK: WATTS INDUSTRIES DET-5 2-GAL. POTABLE WATER EXPANSION TANK WITH THERMALLY FUSED EPOXY LINER, FLEXIBLE BUTYL DIAPHRAGM AND FIELD ADJUSTABLE PRE-CHARGE.
↔	1" WYE STRAINER AND BACKFLOW PREVENTER	1'	-	-	MUELLER 3/4" BRONZE THREADED WYE STRAINER WITH HOSE BIB MODEL WOODFORD #24 WALL HYDRANT 1/2" ANTI-SIPHON VACUUM BREAKER & LOCK SHIELD (OR APPROVED EQUAL).
↔	1/2" HOSE BIB	3/4"	-	-	WOODFORD #24 WALL HYDRANT 1/2" ANTI-SIPHON VACUUM BREAKER & LOCK SHIELD (OR APPROVED EQUAL).
WH	WATER HEATER	1/2'	1/2'	-	RHEEM TANKLESS ELECTRIC RTEX-08 8KW TANKLESS ELECTRIC WATER HEATER (OR APPROVED EQUAL).

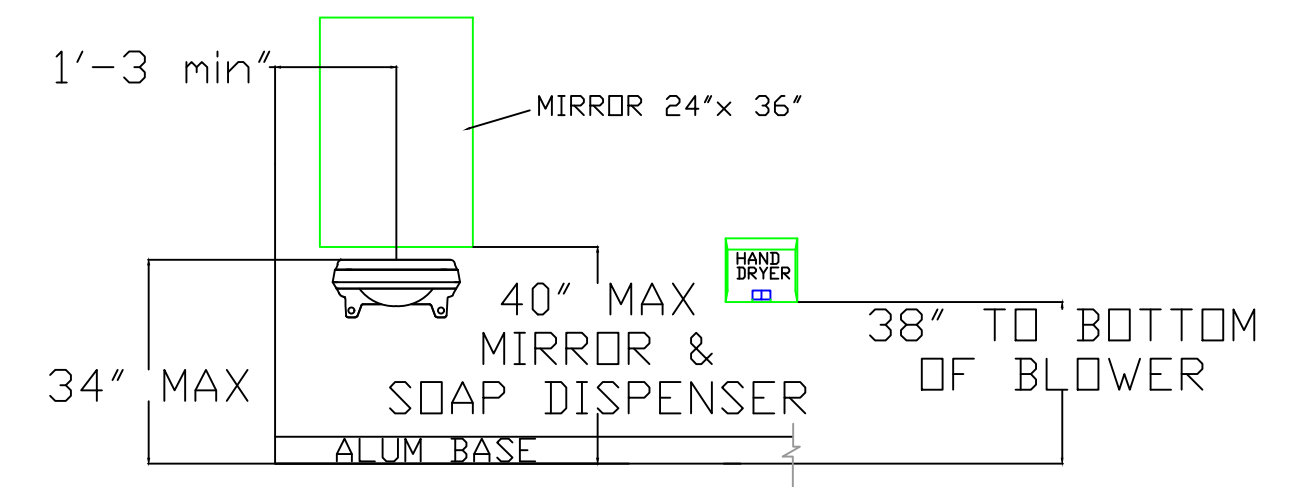
- GENERAL PLUMBING NOTES**
- CONTRACTOR SHALL FURNISH ALL ITEMS COMPLETE, INCLUDING VALVES, TRAPS, DRAINS, ETC. AS REQUIRED FOR COMPLETE SYSTEM OPERATION.
 - GRADE ALL WASTE PIPING TO DRAIN.
 - WASTE AND WATER PIPING TO BE INSTALLED IN ACCORDANCE WITH HEALTH DEPARTMENT REQUIREMENTS.
 - PROVIDE PVC-DWV PIPING FOR WASTE AND SOIL PIPING FOR BUILDING. PIPING SHALL MEET ASTM-D-2665.
 - WATER PIPING BELOW SLAB TO BE TYPE "L" COPPER, WATER PIPING ABOVE GROUND TO BE TYPE "L" COPPER W/ TYPE "L" COPPER FROM STRAIGHT STOPS TO LAVATORIES, PIPING BELOW GROUND SHALL BE SLEEVED IN SCHEDULE 40 P.V.C.
 - VENTS TO EXTEND 10' ABOVE FIN. ROOF AND SHALL BE FLASHED WITH POLY FLASHING.
 - THERE WILL BE ONE FACTORY INSTALLED FLOOR DRAIN LOCATED IN EACH RESTROOM. THE FLOOR DRAINS WILL STUB-OUT INTO THE FORM BOX AREA, LOCATED IN THE CHASE/UTILITY AREA. THE CONTRACTOR SHALL FURNISH AND INSTALL ALL THE NECESSARY PIPING, FITTINGS, ETC. AS REQUIRED FOR THE FIELD HOOK-UP.
 - ADDITIONAL OR DIFFERENT FITTINGS MAY BE REQUIRED TO COMPLETE A WORKING SYSTEM TO MEET CODE REQUIREMENTS.
 - ALL PIPING, VALVES, AND RISERS SHALL BE SUPPORTED IN THE CHASE AREA WITH METAL STRAPS AND/ OR HOLE STRAPS FASTENED TO THE 2"x STUD WALL.



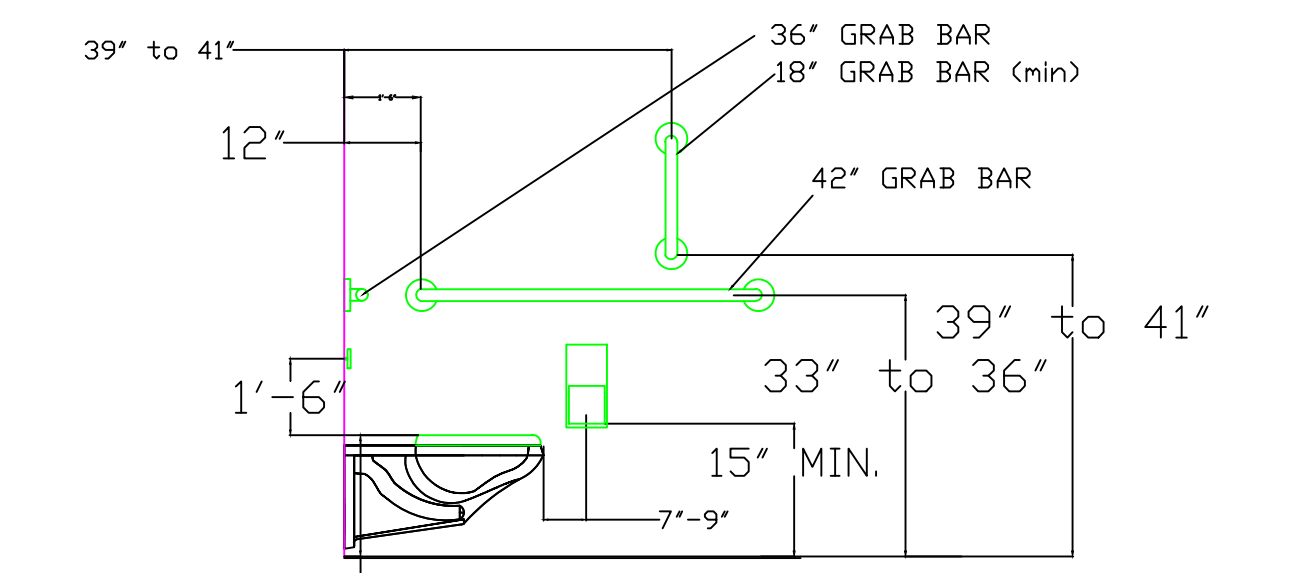
DRAIN WASE AND VENT



FIXTURE ELEVATIONS



-LAVATORY-



-WATER CLOSET-

#10 HUNTER TRAIL
P.O. BOX 899
LAGRANGE, KY 40031
800-626-6530

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SHEET TITLE PLUMBING	
PROJECT NAME 24x64 CLASSROOM BUILDING NO RESTROOM	
PROJECT LOCATION VARIOUS LOCATIONS	

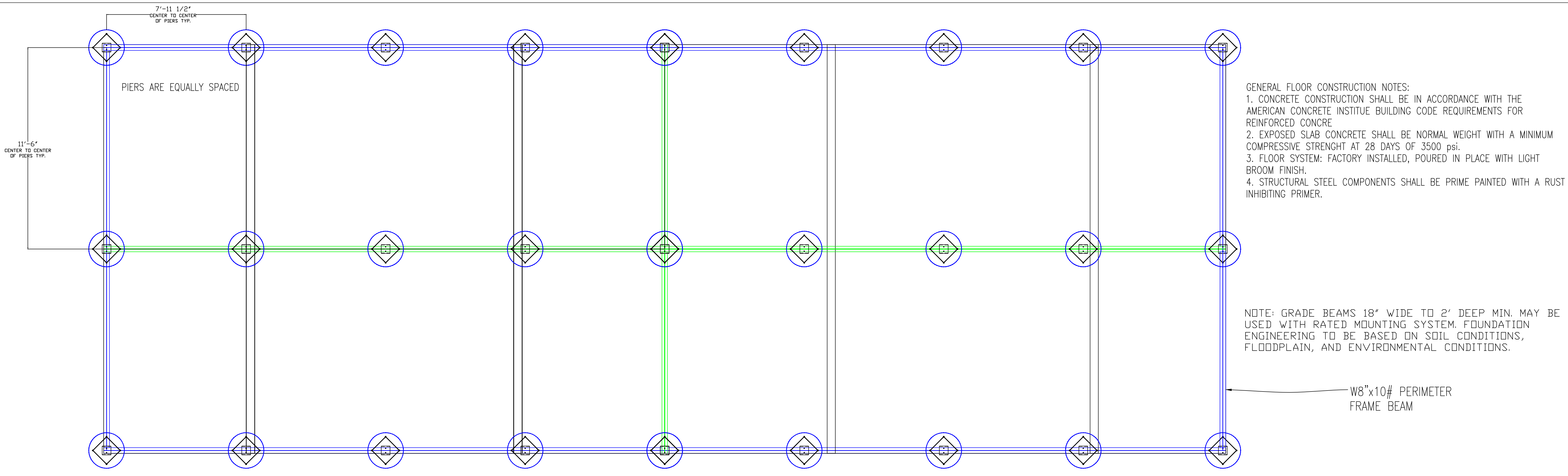
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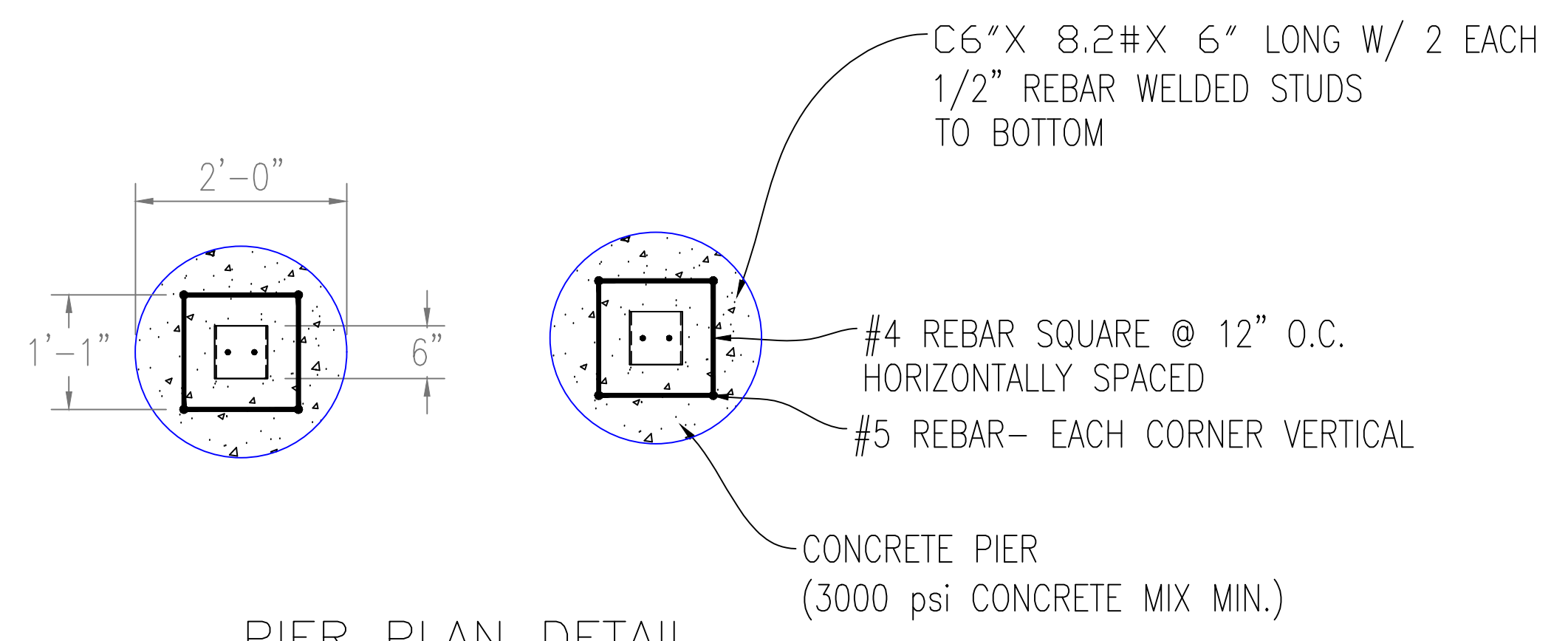
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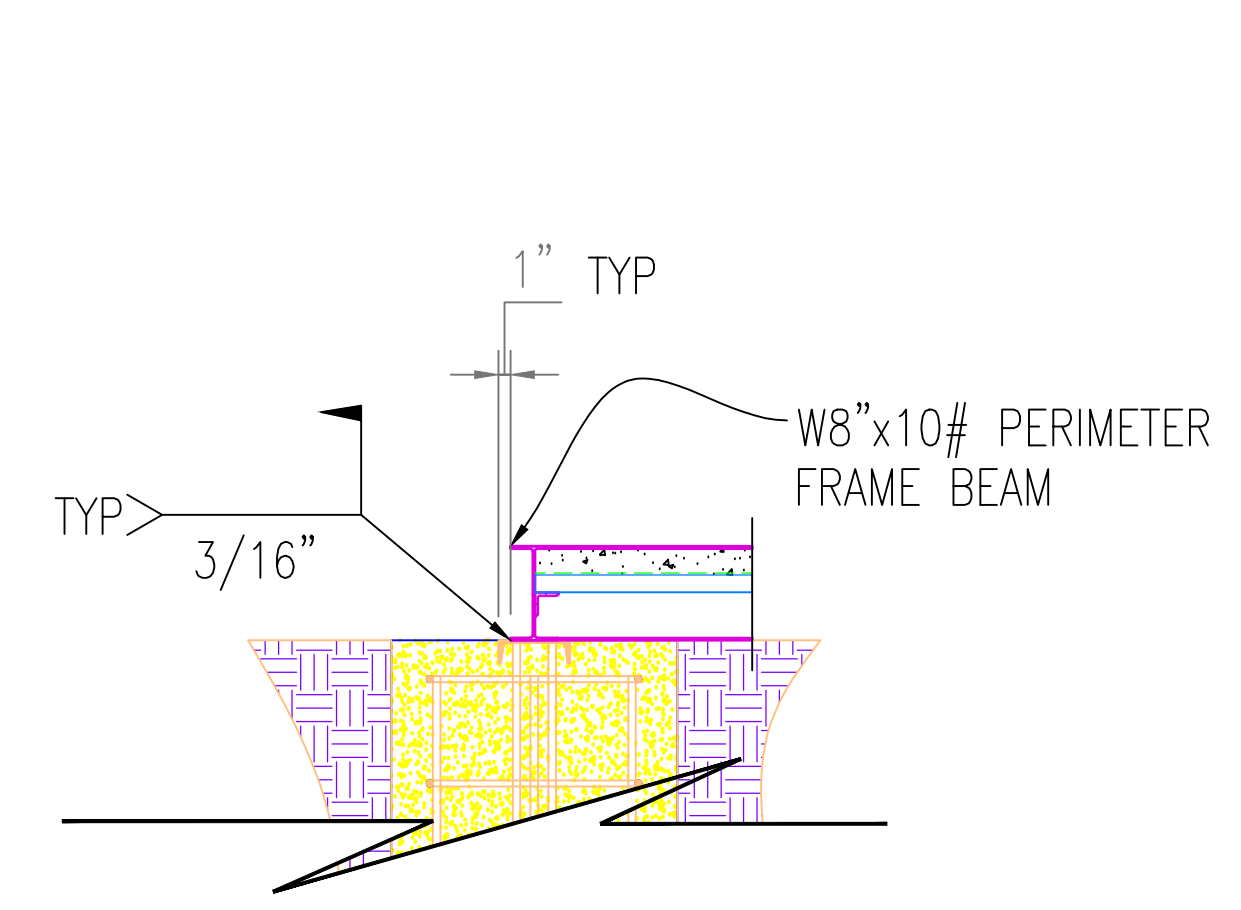
NOTE: GRADE BEAMS 18" WIDE TO 2' DEEP MIN. MAY BE USED WITH RATED MOUNTING SYSTEM. FOUNDATION ENGINEERING TO BE BASED ON SOIL CONDITIONS, FLOODPLAIN, AND ENVIRONMENTAL CONDITIONS.

FOUNDATION PLAN

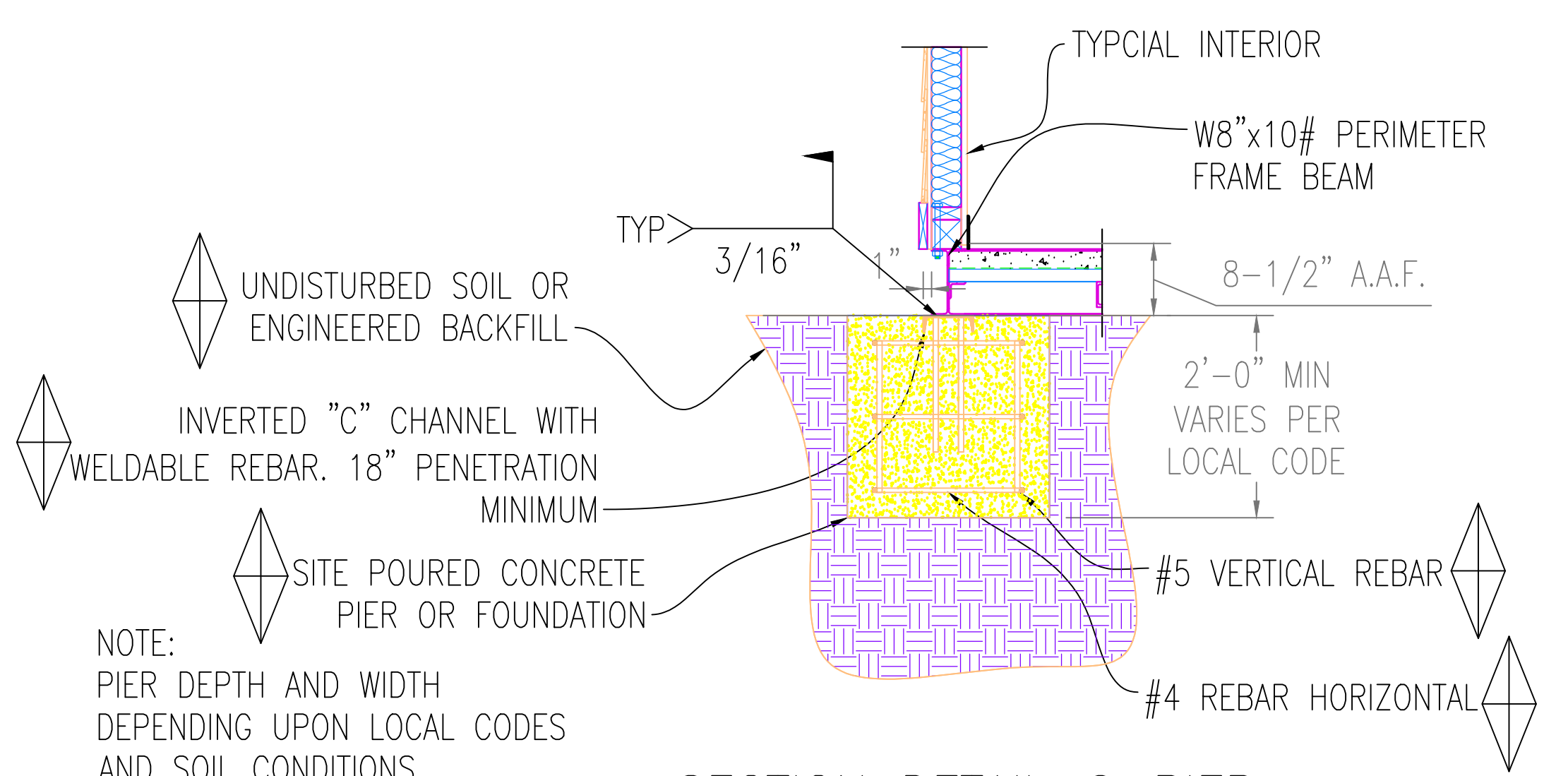


PIER PLAN DETAIL

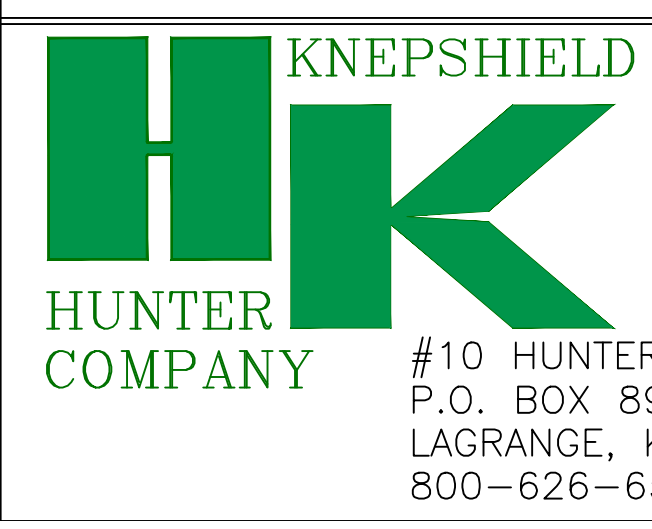
NOTE: ALL MATERIALS BY OTHERS



CONNECTION DETAIL @ PIER



SECTION DETAIL @ PIER



◇ SYMBOL: SUPPLIED BY MANUFACTURER AND INSTALLED BY OTHERS.
 ◆ SYMBOL: SUPPLIED AND INSTALLED BY OTHERS.

SHEET TITLE FOUNDATIONS				
PROJECT NAME 24x64 CLASSROOM BUILDING NO RESTROOM				
PROJECT LOCATION VARIOUS LOCATIONS				

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IMPORTANT
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DRAWN	CHECKED	APPROVED	DATE	SCALE
TMKII	--		2/2/21	NTS

REVISIONS		
MARK	DESCRIPTION	DATE

FILE NAME QW__-2464CR
MODEL #
SERIAL #

PROJECT ENGINEER

DRAWING NO.	
PKG. NO.	SHEET
	6
	OF



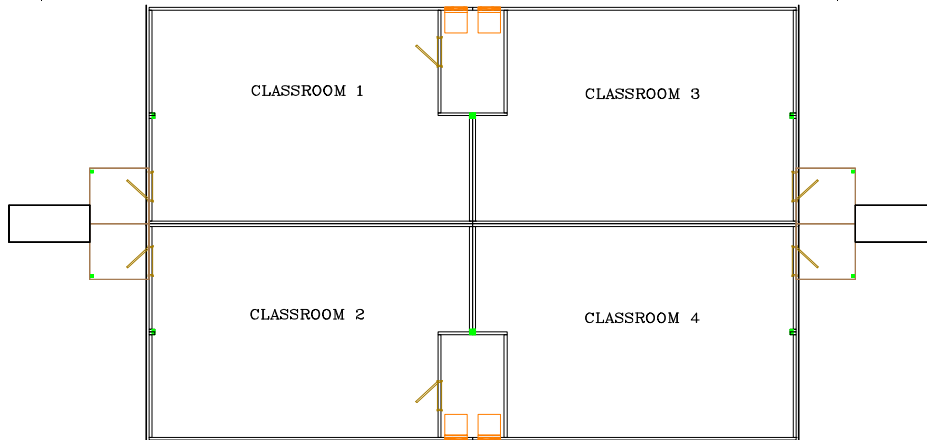
HUNTER KNEPSHIELD COMPANY

10 Hunters Trail
 P.O. Box 499
 LaGrange, Ky 40031
 Phone: (800) 626-6530
 Fax: (502) 225-9335
Knepir@iglou.com
www.HunterKnepsield.com

TO:	
AGENCY:	Region 4 Education Service Center
	7145 West Tidwell Road
	Houston, Texas 77092
PHONE:	(713)-462-7708
E-MAIL:	
PROJECT:	Solicitation Number 21-05 Modular Buildings, Portable Storage, and Relocatable Walkways
SHIP TO:	

DATE:	20-Feb-21
FOB:	SHIPPING POINT
VIA:	TRUCK
FREIGHT:	PREPAY ADD
VALID THRU:	21-Apr-21
QUOTE NO.	442471001

QUANTITY	ITEM NUMBER	QUOTATION	UNIT PRICE	EXTENDED PRICE
1	2QW00-4764CR	<p>47' x 64' CLASSROOM BUILDING NOT INCLUDING RESTROOMS BUILDING IS COMPLETE AND SUPPLIED IN 8 SECTIONS. FREIGHT INCLUDED.</p> <p>Price is delivered to Houston TX. If shipping location is greater than 1000 miles from Lagrange, KY plant add per mile for building. Supervision of installation (usually \$3,000.00) Add for additional egress windows. 3'x5' low E with screens. Additional 18 gauge public entrance door. Additional Hurricane zone rated public entrance door. Upgrade 18 gauge to Hurricane door add Add for optional roofed entrance Structural steel and aluminum treadplate deck Add for optional Structural steel and aluminum treadplate ramp. 9" to .5" 8' long.</p>	<p>\$594,207.00</p> <p>\$48.00 per mile \$1,500.00 per day \$1,725.00 each installed \$2,051.00 each installed \$2,996.00 each installed \$945.00 per door \$4,697.00 each (2 needed) \$2,273.00 each (2 needed)</p>	<p>\$594,207.00</p>



We accept ACH wire transfer or check payment.
 Delivery can begin 150-180 days after approved engineered drawings notice to proceed.
 Prices are based on our fixed margin which is calculated from time on the floor overhead and the amount of labor required. No discounts are required on this price schedule. This price structure margin is the same on all buildings produced and sold.
 Prices are subject to 2% increase per year starting July 1 2021 contract beginning date.

*IF DELIVERY IS INCLUDED: THE ABOVE QUOTATION IS BASED UPON SITE ACCESS FOR HEAVY EQUIPMENT AND NORMAL SOIL CONDITIONS OF 2000 PSF. IF DURING EXCAVATION OF FOUNDATIONS NECESSARY PER MANUFACTURERS SPECIFICATIONS, CONDITIONS EXCEED NORMAL OUR DRIVERS SHALL NOTIFY THE OWNER IMMEDIATELY. THIS SHALL INCLUDE ALL TYPES OF ROCK VEGETATION AND/OR ANY UNFORESEEN HAZARDS. THERE WILL BE ADDITIONAL CHARGES INCURRED TO CLEAR THE AREA AND/OR THE DELIVERY SO THAT INSTALLATION CAN BE COMPLETED. NO SOIL TESTS, LICENSES OR PERMITS INCLUDED. COPY OF TAX EXEMPT CERTIFICATES MUST ACCOMPANY ALL EXEMPT ORDERS.

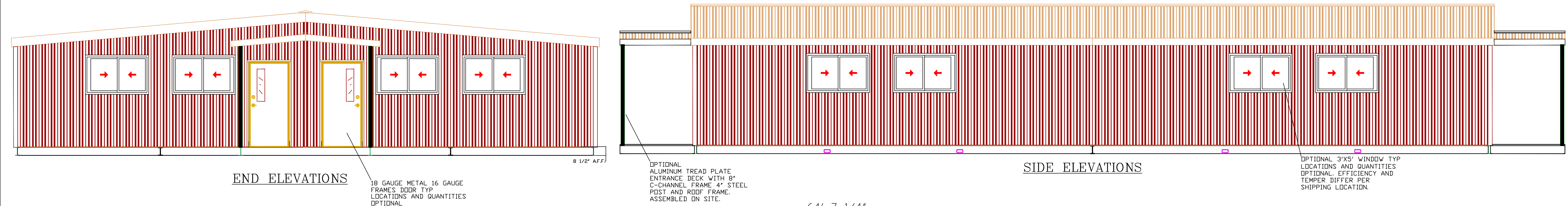
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 CUSTOMER IS RESPONSIBLE FOR PAYING APPLICABLE SALES TAX DIRECT O THEIR STATE, OR SUBMIT COPY OF TAX EXEMPT CERTIFICATE WITH ORDER.
TERMS: 10% DOWN WITH ORDER., 40% UPON RECEIPT OF SHOP DRAWINGS TO, START PRODUCTION, 40% BEFORE SHIPPING OF PRODUCT, AND 10% NET 30 AFTER SHIPPING.
 SERVICE CHARGE OF 2% PER MONTH ADDED TO ALL UNPAID BILLS AFTER 30 DAYS. SHOULD COLLECTION BE NECESSARY, CUSTOMER AGREES TO PAY ALL COSTS, INCLUDING ATTORNEY FEES.

 Authorized Signature Hunter Knepsield Co.

 Authorized Signature of Purchaser/DATE

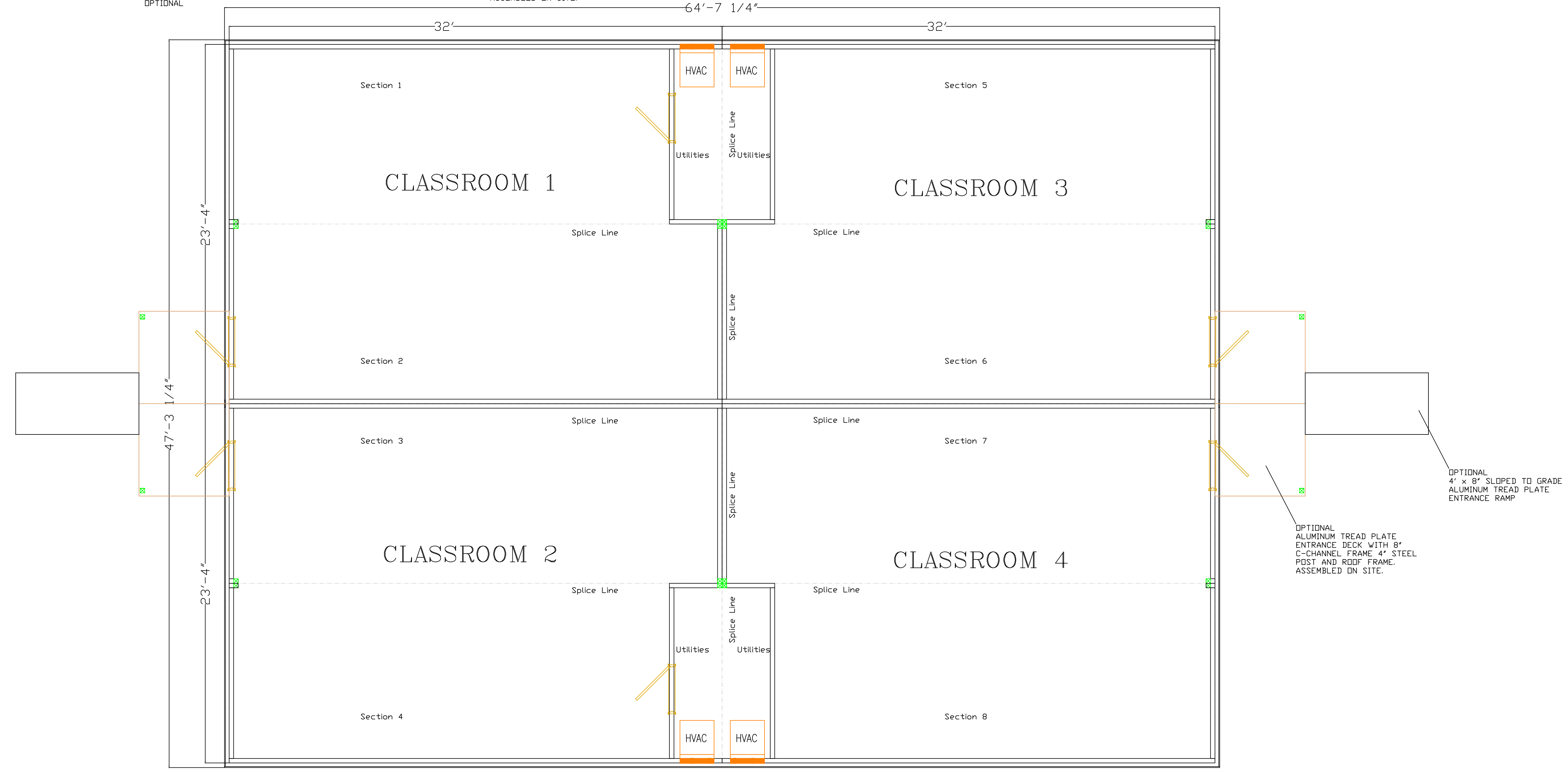
MATERIAL LIST
MODEL: 2QW00-4764CR
TYPE: DOUBLEWIDE BUILDING
DESCRIPTION: 47' x 64' CLASSROOM BUILDING NO RESTROOM

QUANTITY	ITEM NUMBER	BUILDING MATERIAL
1		STRUCTURAL STEEL REINFORCED FLOOR WITH STRUCTURAL CONCRETE FLOOR SHEATING
1	1840-1-3IPS	INTEGRAL P-TRAP CAST IRON DRAIN, NICKEL BRONZE STRAINER AND THREADED 3" SIDE OUTLET
1	PT2	SPF AND PINE WALL FRAMING
1	BCXFRPWF	RATED DRYWALL FLOOR TO CEILING
1	CLASSC	RATED DRYWALL CEILING
1	R13	KRAFT BACKED INSULATION R15
1	ALUMTRIM	ALUMINUM INTERIOR BASE AND CORNER MOLDING
1	2X6TGOA	SMARTCORE 11-Piece 5-in x 48.03-in HARDWOOD LOOK VINYL PLANK FLOORING
1	58CDXIR	5/8" CDX PLYWOOD ROOF DECK (FOR INSULATED ROOF)
1	26UPCF25	26 GAUGE PANEL METAL ROOF COLORFAST 25 STANDARD COLORS
1	RF30	30# ROOFING FELT:
1	2XOV	2" x 8" #2 SYP EXPOSED RAFTER FRAMING
1	2XIR	2" x 8" #2 SYP CEILING JOIST WITH RATED INSULATION (DOUBLEWIDE)
1	EXT1-2CDZBP	1/2" CDX EXTERIOR PLYWOOD SHEATHING, BUILDING PAPER 1/2" CONTINEOUS INSULATION
1	FCT118	26 GAUGE PANEL METAL ROOF COLORFAST 25 STANDARD COLORS
12	4X4STLPST	4" x4" x 1/4" A-500 GRADE "B" W/ BASE MOUNTING AND TOP CAP, PRIMED AND 2 COAT FINISH ANDERSON 400 SERIES CSMNTS, ALUM.,DBL. ROLL OUT, TMRPD LOW-E, W/BRASS HNDLE, AND INSECT SCRNI
16	1411827	3'x5'
4	STDRPE3068	18 GAUGE STEEL DOOR "PUBLIC ENTRANCE" WITH WINDOW AND HARDWARE
4	SDC3068	18 GAUGE STEEL DOOR WITH HARDWARE
PLUMBING NOT INCLUDED THIS MODEL		
ELECTRICAL		
2	HOM20-40M200TC	200 AMP SQUARE -D LOAD CENTER PANEL SYSTEM 20/40 CIRCUIT
48	SQDHOM-120	SQUARE D 20 AMP CIRCUIT BREAKERS
4	SQDHOM240	SQUARE D DOUBLE POLE 40 AMP CIRCUIT BREAKER
84	LVP 524-140-EBS-120-WET	LED WARELIGHT WRAP WL-WRAP4-LED-32W-40K-MV
6	WM25W27V50KD	WARELIGHT WALL PACK WL-MWP-20W-50K-B-MV-PC
4	XMLA-1-W-R-120-WL	WARELIGHT LEDCXTEU2RW LED EXIT & EMERGENCY COMBO
4	XMLA-1-W-R-120-ELCW	WARELIGHT: LEDR-2W LED THERMOPLASTIC EMERGENCY LIGHT
2	VX100DG	LED WARELIGHT VAPORPROOF JELLY JAR WL-14WJCMFG-
8	CS120BI	HUBBELL/BRYANT/LEVITON SINGLE POLE 20amp A/C SWITCH SS-STEEL COVER
1	1101	ELECTROMECHANICAL 24 HR. TIME, SAME ON OFF TIMES EACH DAY 120VAC 40 AMP INDOOR
64	LCT8888	LEVITON T5248-WCP - DUPLEX RECEPTACLE AMPER-RESISTANT DUPLEX OUTLET
2	GFR5352W	HUBBELL/BRYANT/LEVITON 20amp GFCI OUTLET-SS-STEEL COVER
HEATING AND AIR		
2	AZ75E18HDAC	GE VERTICAL SERIES ZONELINE 14,600/14,300 COOLING/BTUH 230V HEAT PUMP/ELECTRIC 38amp
REST ROOM SPECIALTIES NOT INCLUDED IN THIS MODEL		
MISCELLANEOUS ITEMS		
152	DRSHRINK	PREPARE FOR SHIPPING (LIN.FT.)
50	SSP	STAIN/SEALER/PAINT
1	ESTP	ENGINEERS SEAL
3	TPI	THIRD PARTY INSPECTION



END ELEVATIONS

SIDE ELEVATIONS



PLAN VIEW

HUNTER KNEPSHIELD COMPANY
 #10 HUNTER TRAIL
 P.O. BOX 899
 LAGRANGE, KY 40031
 800-626-6530

- ◇ SYMBOL: SUPPLIED BY MANUFACTURER AND INSTALLED BY OTHERS.
- ◊ SYMBOL: SUPPLIED AND INSTALLED BY OTHERS.

SHEET TITLE ELEVATIONS	
PROJECT NAME 48x64 CLASSROOM BUILDING NO RESTROOM	
PROJECT LOCATION VARIOUS LOCATIONS	

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DRAWN	CHECKED	APPROVED	DATE	SCALE
TMKII	--		2/2/21	NTS

REVISIONS		
MARK	DESCRIPTION	DATE

FILE NAME 2QW00-4764CR
MODEL #
SERIAL #

PROJECT ENGINEER

DRAWING NO.	
PKG. NO.	SHEET
	1
	OF



HUNTER KNEPSHIELD COMPANY

10 Hunters Trail
 P.O. Box 499
 LaGrange, Ky 40031
 Phone: (800) 626-6530
 Fax: (502) 225-9335
Knepir@iglou.com
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TO:	
AGENCY:	Region 4 Education Service Center
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	Houston, Texas 77092
PHONE:	(713)-462-7708
E-MAIL:	
PROJECT:	Solicitation Number 21-05 Modular Buildings, Portable Storage, and Relocatable Walkways
SHIP TO:	

DATE:	20-Feb-21
FOB:	SHIPPING POINT
VIA:	TRUCK
FREIGHT:	PREPAY ADD
VALID THRU:	21-Apr-21
QUOTE NO.:	442471001

QUANTITY	ITEM NUMBER	QUOTATION	UNIT PRICE	EXTENDED PRICE
1	2QW44-4764CR	<p>47' x 64' CLASSROOM BUILDING NOT INCLUDING RESTROOMS BUILDING IS COMPLETE AND SUPPLIED IN 8 SECTIONS. FREIGHT INCLUDED.</p> <p>Price is delivered to Houston TX. If shipping location is greater than 1000 miles from Lagrange, KY plant add per mile for building. Supervision of installation (usually \$3,000.00) Add for additional egress windows. 3'x5' low E with screens. Additional 18 gauge public entrance door. Additional Hurricane zone rated public entrance door. Upgrade 18 gauge to Hurricane door add Add for optional roofed entrance Structural steel and aluminum treadplate deck Add for optional Structural steel and aluminum treadplate ramp. 9" to .5" 8' long.</p>	<p>\$632,926.00</p> <p>\$48.00 per mile \$1,500.00 per day \$1,725.00 each installed \$2,051.00 each installed \$2,996.00 each installed \$945.00 per door \$4,697.00 each (2 needed) \$2,273.00 each (2 needed)</p>	\$632,926.00
		<p>We accept ACH wire transfer or check payment. Delivery can begin 150-180 days after approved engineered drawings notice to proceed. Prices are based on our fixed margin which is calculated from time on the floor overhead and the amount of labor required. No discounts are required on this price schedule. This price structure margin is the same on all buildings produced and sold. Prices are subject to 2% increase per year starting July 1 2021 contract beginning date.</p>		

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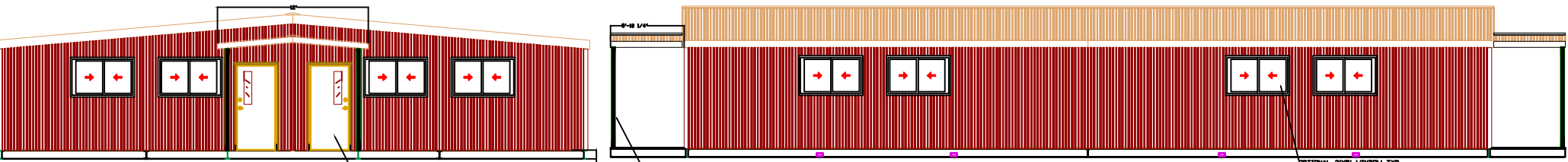
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 Authorized Signature Hunter KnepsShield Co.

 Authorized Signature of Purchaser/DATE

MATERIAL LIST
MODEL: 2QW44-4764CR
TYPE: DOUBLEWIDE BUILDING
DESCRIPTION: 47' x 64' CLASSROOM BUILDING WITH RESTROOMS

QUANTITY	ITEM NUMBER	BUILDING MATERIAL
1		STRUCTURAL STEEL REINFORCED FLOOR WITH STRUCTURAL CONCRETE FLOOR SHEATING
1	1840-1-3IPS	INTEGRAL P-TRAP CAST IRON DRAIN, NICKEL BRONZE STRAINER AND THREADED 3" SIDE OUTLET
1	PT2	SPF AND PINE WALL FRAMING
1	BCXFRPWF	RATED DRYWALL FLOOR TO CEILING AND CEILING
1	CLASSC	RATED DRYWALL CEILING
1	R13	KRAFT BACKED INSULATION R15
1	ALUMTRIM	3-1/4-PINE PRIMED FINGER JOINT BASEBOARD MOULDING
1	2X6TGOA	SMARTCORE 11-Piece 5-in x 48.03-in HARDWOOD LOOK VINYL PLANK FLOORING
1	58CDXIR	5/8" CDX PLYWOOD ROOF DECK (FOR INSULATED ROOF)
1	26UPCF25	26 GAUGE PANEL METAL ROOF COLORFAST 25 STANDARD COLORS
1	RF30	30# ROOFING FELT:
1	2XOV	2" x 8" #2 SYP EXPOSED RAFTER FRAMING
1	2XIR	2" x 8" #2 SYP CEILING JOIST WITH RATED INSULATION (DOUBLEWIDE)
1	EXT1-2CDZBP	1/2" CDX EXTERIOR PLYWOOD SHEATHING, BUILDING PAPER 1/2" CONTINEOUS INSULATION
1	FCT118	26 GAUGE PANEL METAL COLORFAST 25 STANDARD COLORS
12	4X4STLPST	4" x4" x 1/4" A-500 GRADE "B" W/ BASE MOUNTING AND TOP CAP, PRIMED AND 2 COAT FINISH ANDERSON 400 SERIES CSMNTS, ALUM.,DBL. ROLL OUT, TMRPD LOW-E, W/BRASS HNDLE, AND INSECT SCRIN
16	1411827	3'x5'
8	STDRPE3068	18 GAUGE STEEL DOOR "PUBLIC ENTRANCE" WITH WINDOW AND HARDWARE
2	SDC3068	18 GAUGE STEEL DOOR WITH HARDWARE
PLUMBING		
2	Z5344-Z86500	ZURN 20"x18" ADA VITREOUS CHINA LAVATORY
2	Z86100-MYCS	SINGLE BASIN METERING FAUCET (HOT/COLD) WITH MIXING YOKE FOR SINGLE HOLE LAV.
2	2093.100-250Y-M54	AMERICAN STANDARD GLENWALL TOILET EL WH PRESSURE ASSIST TANK TOILET WALL MT. V-HUB
1	POU55	240v 8.0KW POINT OF USE THERMOSTATIC WATER HEATER
2	9193060	WOODFORD #24 WALL HYDRANT 3/4" ANTI-SIPHON VACUUM BREAKER & LOCK SHIELD
1	DET-5	WATTS POTABLE WATER EXPANSION TANK. 3/4" MALE CONNECTION, 2.0 GAL TANK
1	PPC88882	WYE STRAINER WITH FILTER
1	PPC88884	PRESSURE GAUGE
ELECTRICAL		
1	HOM20-40M200TC	200 AMP SQUARE -D LOAD CENTER PANEL SYSTEM 20/40 CIRCUIT
48	SQDHOM-120	SQUARE D 20 AMP CIRCUIT BREAKERS
5	SQDHOM240	SQUARE D DOUBLE POLE 40 AMP CIRCUIT BREAKER
84	LVP 524-140-EBS-120-WET	LED WARELIGHT WRAP WL-WRAP4-LED-32W-40K-MV
6	WM25W27V50KD	WARELIGHT WALL PACK WL-MWP-20W-50K-B-MV-PC
4	XMLA-1-W-R-120-WL	WARELIGHT LEDCXTEU2RW LED EXIT & EMERGENCY COMBO
4	XMLA-1-W-R-120-ELCW	WARELIGHT: LEDR-2W LED THERMOPLASTIC EMERGENCY LIGHT
2	VX100DG	LED WARELIGHT VAPORPROOF JELLY JAR WL-14WJCMFG-
8	CS120BI	HUBBELL/BRYANT/LEVITON SINGLE POLE 20amp A/C SWITCH SS-STEEL COVER
1	1101	ELECTROMECHANICAL 24 HR. TIME, SAME ON OFF TIMES EACH DAY 120VAC 40 AMP INDOOR
4	MS-OPS2	LUTRON MAESTRO OCCUPANCY SENSING SWITCH MS-OPS5M-WH-3
64	LCT8888	LEVITON T5248-WCP - DUPLEX RECEPTACLE AMPER-RESISTANT DUPLEX OUTLET
1	GFR5352W	HUBBELL/BRYANT/LEVITON 20amp GFCI OUTLET-SS-STEEL COVER
4	443	BROAN DUCT KIT FOR QTE110
4	RB110	BROAN BATHROOM FAN 110 CFM
HEATING AND AIR		
4	AZ75E18HDAC	GE VERTICAL SERIES ZONELINE 14,600/14,300 COOLING/BTUH 230V HEAT PUMP/ELECTRIC 38amp
REST ROOM SPECIALTIES		
2	B-6806x36	GRAB BAR- 36" SS STEEL. 1-1/2" DIAMETER CONCEALED MOUNTING
2	B-6806x42	GRAB BAR- 42" SS STEEL. 1-1/2" DIAMETER CONCEALED MOUNTING
2	B-6806x24	GRAB BAR- 24" SS STEEL. 1-1/2" DIAMETER CONCEALED MOUNTING
2	B-1556 2436	FRAMELESS STAINLESS STEEL MIRROR 24"x36".
2	B-27460	DOUBLE TUMBLER ROLL TOILET TISSUE DISPENSER W/LOCK.
2	B-2112	SS STEEL SERFACE MOUNT SOAP DISPENSER FOR LIQUID SOAPS, LOTIONS, AND DETERGENTS.
2	XL-W	THIN-AIR HANDS OFF AUTOMATIC CAST COVER, SURFACE MOUNT WHITE HAND DRIER
MISCELLANEOUS ITEMS		
152	DRSHRINK	PREPARE FOR SHIPPING (LIN.FT.)
50	SSP	STAIN/SEALER/PAINT
1	ESTP	ENGINEERS SEAL
3	TPI	THIRD PARTY INSPECTION



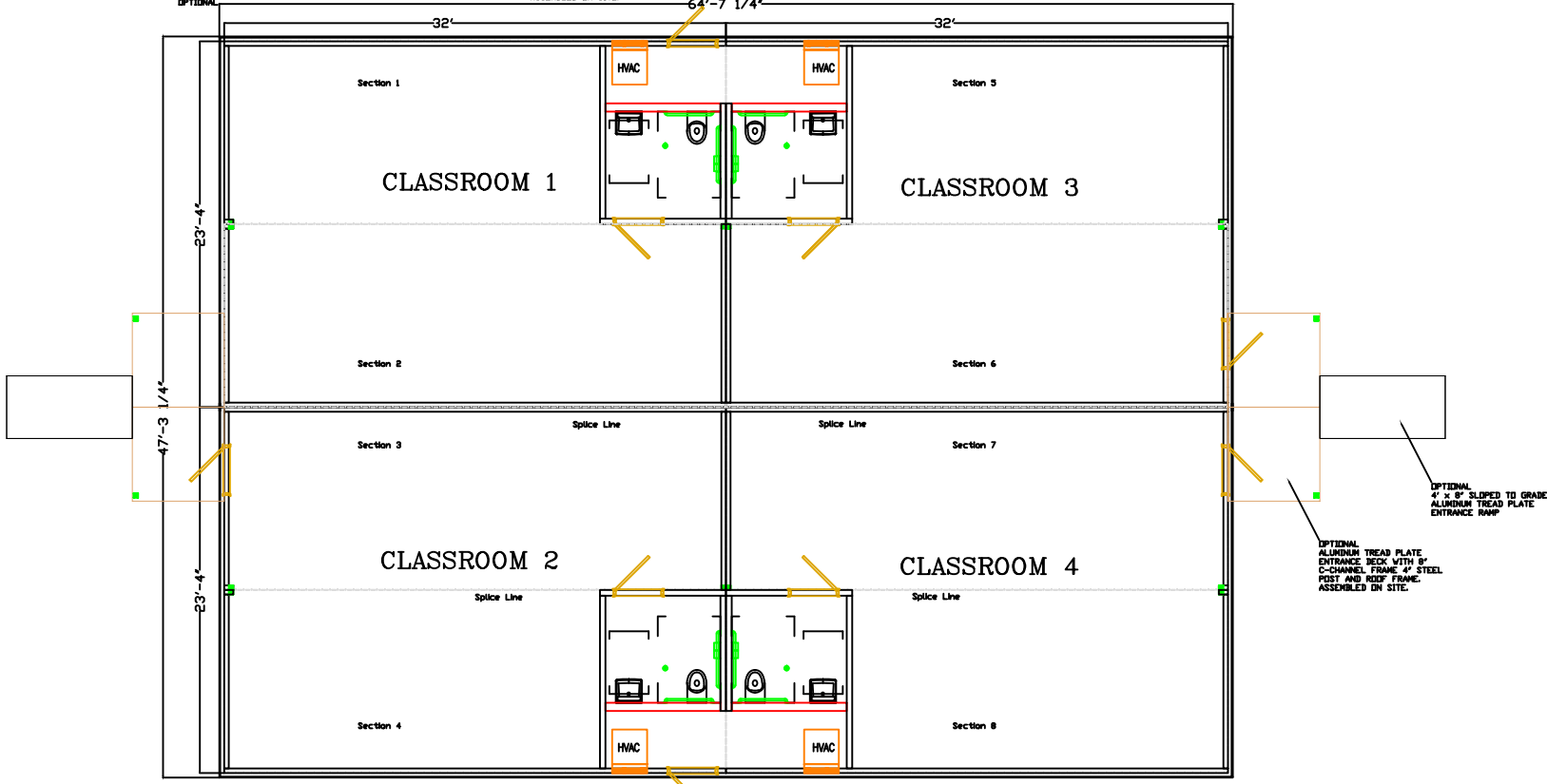
END ELEVATIONS

SIDE ELEVATIONS

18 GAUGE METAL 16 GAUGE FRAMES WITH TYP LOCATIONS AND QUANTITIES OPTIONAL

OPTIONAL ALUMINUM TREAD PLATE ENTRANCE DECK WITH 9\"/>

OPTIONAL 3'x2' WINDOW TYP LOCATIONS AND QUANTITIES OPTIONAL EFFICIENCY AND TEMPER DIFFER PER SHIPPING LOCATION



PLAN VIEW

OPTIONAL 4\"/>

OPTIONAL ALUMINUM TREAD PLATE ENTRANCE DECK WITH 9\"/>



#10 HUNTER TRAIL
P.O. BOX 899
LAGRANGE, KY 40031
800-626-6530

SYMBOL SUPPLIED BY MANUFACTURER AND INSTALLED BY OTHERS.
SYMBOL SUPPLIED AND INSTALLED BY OTHERS.

SHEET TITLE
ELEVATIONS

PROJECT NAME
48x64 CLASSROOM BUILDING NO RESTROOM

PROJECT LOCATION
VARIOUS LOCATIONS

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DRAWN	CHECKED	APPROVED	DATE	SCALE
TMKII	--		2/2/21	NTS

REVISIONS		
MARK	DESCRIPTION	DATE

FILE NAME
2QW44-4764CR

MODEL #

SERIAL #

PROJECT ENGINEER

DRAWING NO.

PKG. NO.

SHEET
2

OF



HUNTER KNEPSHIELD COMPANY

10 Hunters Trail
 P.O. Box 499
 LaGrange, Ky 40031
 Phone: (800) 626-6530
 Fax: (502) 225-9335
Knepir@iglou.com
www.HunterKnepsShield.com

TO:	
AGENCY:	Region 4 Education Service Center
	7145 West Tidwell Road
	Houston, Texas 77092
PHONE:	(713)-462-7708
E-MAIL:	
PROJECT:	Solicitation Number 21-05 Modular Buildings, Portable Storage, and Relocatable Walkways
SHIP TO:	

DATE:	20-Feb-21
FOB:	SHIPPING POINT
VIA:	TRUCK
FREIGHT:	PREPAY ADD
VALID THRU:	21-Apr-21
QUOTE NO.:	442471001

QUANTITY	ITEM NUMBER	QUOTATION	UNIT PRICE	EXTENDED PRICE
1	QW00-2464CR	<p>24' x 64' CLASSROOM BUILDING NOT INCLUDING RESTROOMS BUILDING IS COMPLETE AND SUPPLIED IN 4 SECTIONS. FREIGHT INCLUDED.</p> <p>Price is delivered to Houston TX. If shipping location is greater than 1000 miles from Lagrange, KY plant add per mile for building.</p> <p>Supervision of installation (usually \$3,000.00)</p> <p>Add for additional egress windows. 3'x5' low E with screens.</p> <p>Additional 18 gauge public entrance door.</p> <p>Additional Hurricane zone rated public entrance door.</p> <p>Upgrade 18 gauge to Hurricane door add</p> <p>Add for optional roofed entrance Structural steel and aluminum treadplate deck</p> <p>Add for optional Structural steel and aluminum treadplate ramp. 9" to .5" 8' long.</p>	<p>\$328,559.00</p> <p>\$24.00 per mile</p> <p>\$1,500.00 per day</p> <p>\$1,725.00 each installed</p> <p>\$2,051.00 each installed</p> <p>\$2,996.00 each installed</p> <p>\$945.00 per door</p> <p>\$4,697.00 each (2 needed)</p> <p>\$2,273.00 each (2 needed)</p>	<p>\$328,559.00</p>
		<p>We accept ACH wire transfer or check payment. Delivery can begin 120-150 days after approved engineered drawings notice to proceed. Prices are based on our fixed margin which is calculated from time on the floor overhead and the amount of labor required. No discounts are required on this price schedule. This price structure margin is the same on all buildings produced and sold. Prices are subject to 2% increase per year starting July 1 2021 contract beginning date.</p>		

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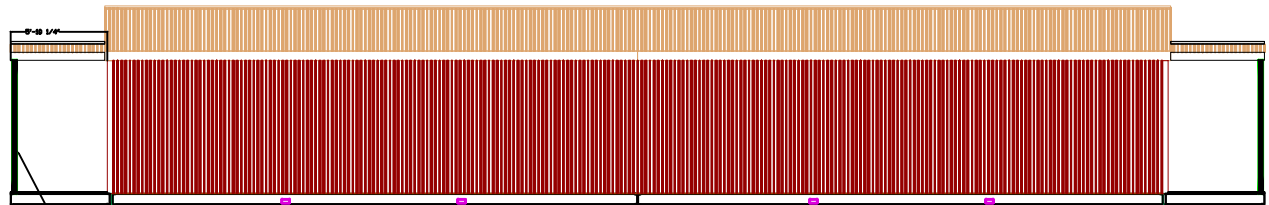
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TERMS: 10% DOWN WITH ORDER., 40% UPON RECEIPT OF SHOP DRAWINGS TO, START PRODUCTION, 40% BEFORE SHIPPING OF PRODUCT, AND 10% NET 30 AFTER SHIPPING.
 SERVICE CHARGE OF 2% PER MONTH ADDED TO ALL UNPAID BILLS AFTER 30 DAYS. SHOULD COLLECTION BE NECESSARY, CUSTOMER AGREES TO PAY ALL COSTS, INCLUDING ATTORNEY FEES.

 Authorized Signature Hunter KnepsShield Co.

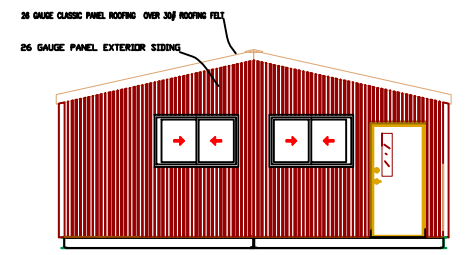
 Authorized Signature of Purchaser/DATE

MATERIAL LIST
MODEL: QW00-2464CR
TYPE: DOUBLEWIDE BUILDING
DESCRIPTION: 24' x 64' CLASSROOM BUILDING NO RESTROOM

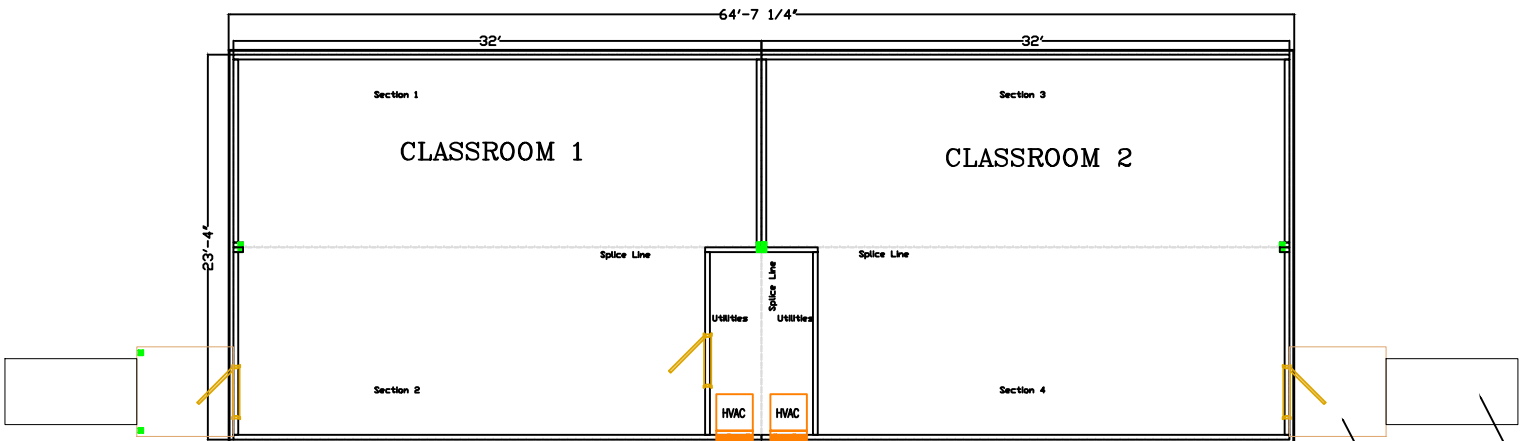
QUANTITY	ITEM NUMBER	BUILDING MATERIAL
1		STRUCTURAL STEEL REINFORCED FLOOR WITH STRUCTURAL CONCRETE FLOOR SHEATING
1	1840-1-3IPS	INTEGRAL P-TRAP CAST IRON DRAIN, NICKEL BRONZE STRAINER AND THREADED 3" SIDE OUTLET
1	PT2	SPF AND PINE WALL FRAMING
1	BCXFRPWF	RATED DRYWALL FLOOR TO CEILING
1	CLASSC	RATED DRYWALLCEILING
1	R13	KRAFT BACKED INSULATION R15
1	ALUMTRIM	3-1/4-PINE PRIMED FINGER JOINT BASEBOARD MOULDING
1	2X6TGOA	SMARTCORE 11-Piece 5-in x 48.03-in HARDWOOD LOOK VINYL PLANK FLOORING
1	58CDXIR	5/8" CDX PLYWOOD ROOF DECK (FOR INSULATED ROOF)
1	26UPCF25	26 GAUGE PANEL METAL ROOF COLORFAST 25 STANDARD COLORS
1	RF30	30# ROOFING FELT:
1	2XOV	2" x 8" #2 SYP EXPOSED RAFTER FRAMING
1	2XIR	2" x 8" #2 SYP CEILING JOIST WITH RATED INSULATION (DOUBLEWIDE)
1	EXT1-2CDZBP	1/2" CDX EXTERIOR PLYWOOD SHEATHING, BUILDING PAPER 1/2" CONTINEOUS INSULATION
1	FCT118	26 GAUGE PANEL METAL ROOF COLORFAST 25 STANDARD COLORS
6	4X4STLPST	4" x4" x 1/4" A-500 GRADE "B" W/ BASE MOUNTING AND TOP CAP, PRIMED AND 2 COAT FINISH ANDERSON 400 SERIES CSMNTS, ALUM.,DBL. ROLL OUT, TMRPD LOW-E, W/BRASS HNDLE, AND INSECT SCRNR
8	1411827	3'x5'
2	STDRPE3068	18 GAUGE STEEL DOOR "PUBLIC ENTRANCE" WITH WINDOW AND HARDWARE
2	SDC3068	18 GAUGE STEEL DOOR WITH HARDWARE
PLUMBING NOT INCLUDED IN THIS MODEL		
ELECTRICAL		
1	HOM20-40M200TC	200 AMP SQUARE -D LOAD CENTER PANEL SYSTEM 20/40 CIRCUIT
24	SQDHOM-120	SQUARE D 20 AMP CIRCUIT BREAKERS
2	SQDHOM240	SQUARE D DOUBLE POLE 40 AMP CIRCUIT BREAKER
42	LVP 524-140-EBS-120-WET	LED WARELIGHT WRAP WL-WRAP4-LED-32W-40K-MV
4	WM25W27V50KD	ED WARELIGHT WALL PACK WL-MWP-20W-50K-B-MV-PC
2	XMLA-1-W-R-120-WL	WARELIGHT LEDCXTEU2RW LED EXIT & EMERGENCY COMBO
2	XMLA-1-W-R-120-ELCW	WARELIGHT: LEDR-2W LED THERMOPLASTIC EMERGENCY LIGHT
1	VX100DG	LED WARELIGHT VAPORPROOF JELLY JAR WL-14WJCMFG-
4	CS120BI	HUBBELL/BRYANT/LEVITON SINGLE POLE 20amp A/C SWITCH SS-STEEL COVER
1	1101	ELECTROMECHANICAL 24 HR. TIME, SAME ON OFF TIMES EACH DAY 120VAC 40 AMP INDOOR
32	LCT8888	LEVITON T5248-WCP - DUPLEX RECEPTACLE AMPER-RESISTANT DUPLEX OUTLET
1	GFR5352W	HUBBELL/BRYANT/LEVITON 20amp GFCI OUTLET-SS-STEEL COVER
HEATING AND AIR		
2	AZ75E18HDAC	GE VERTICAL SERIES ZONELINE 14,600/14,300 COOLING/BTUH 230V HEAT PUMP/ELECTRIC 38amp
REST ROOM SPECIALTIES NOT INCLUDED IN THIS MODEL		
MISCELLANEOUS ITEMS		
152	DRSHRINK	PREPARE FOR SHIPPING (LIN.FT.)
50	SSP	STAIN/SEALER/PAINT
1	ESTP	ENGINEERS SEAL
1	TPI	THIRD PARTY INSPECTION



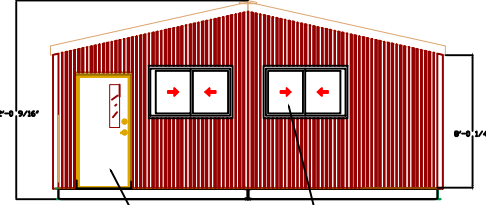
BACK ELEVATION



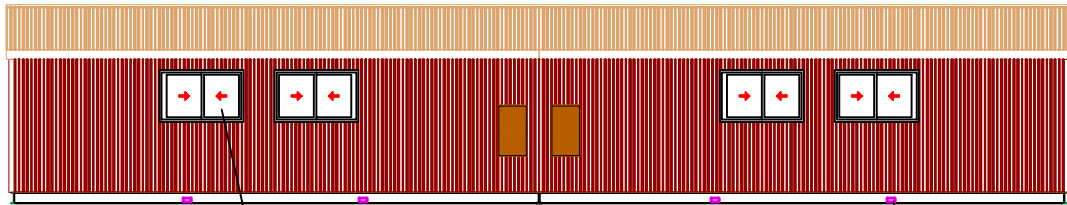
LEFT ELEVATION



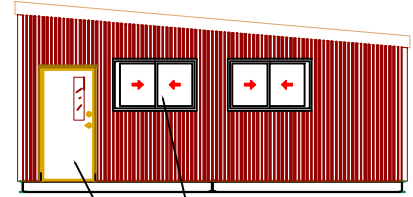
PLAN VIEW



RIGHT ELEVATION



FRONT ELEVATION



OPTIONAL ROOF FRAMING

26 GAUGE CLASIC PANEL ROOFING OVER 3/8" ROOFING FELT
26 GAUGE PANEL EXTERIOR SIDING

OPTIONAL ALUMINUM TREAD PLATE ENTRANCE DECK WITH 4" C-CHANNEL FRAME 4" STEEL POST AND ROOF FRAME ASSEMBLED ON SITE.

OPTIONAL 3"X3' WINDOW TYP LOCATIONS AND QUANTITIES OPTIONAL EFFICIENCY AND TEMPER BUFFER PER SHIPPING LOCATION

OPTIONAL 4' x 8' SLOPED TO GRADE ALUMINUM TREAD PLATE ENTRANCE RAMP

OPTIONAL 3'X3' WINDOW TYP

LIFTING POINTS TYP



#10 HUNTER TRAIL
P.O. BOX 899
LAGRANGE, KY 40031
800-626-6530

SYMBOL SUPPLIED BY MANUFACTURER AND INSTALLED BY OTHERS.
SYMBOL SUPPLIED AND INSTALLED BY OTHERS.

SHEET TITLE ELEVATIONS	
PROJECT NAME 24x64 CLASSROOM BUILDING NO RESTROOM	
PROJECT LOCATION VARIOUS LOCATIONS	

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DRAWN	CHECKED	APPROVED	DATE	SCALE
TMKII	--		2/2/21	NTS

REVISIONS		
MARK	DESCRIPTION	DATE

FILE NAME QW00-2464CR
MODEL #
SERIAL #

PROJECT ENGINEER

DRAWING NO.
PKG. NO.
SHEET 1
OF



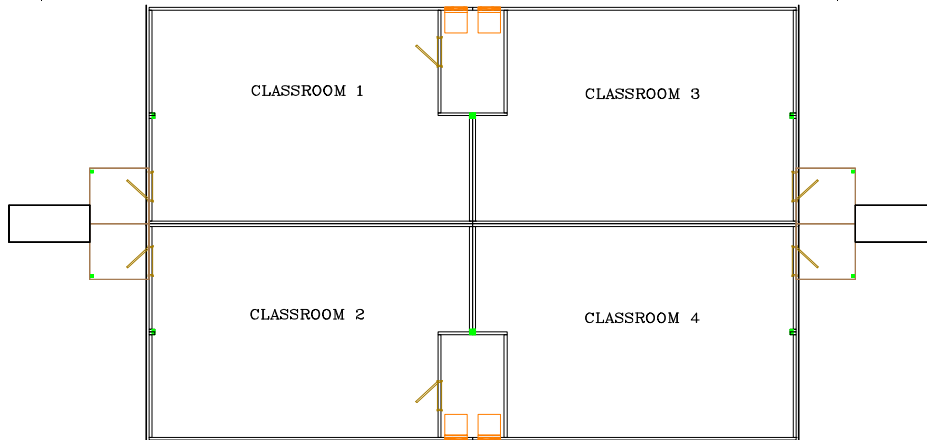
HUNTER KNEPSHIELD COMPANY

10 Hunters Trail
 P.O. Box 499
 LaGrange, Ky 40031
 Phone: (800) 626-6530
 Fax: (502) 225-9335
Knepir@iglou.com
www.HunterKnepsShield.com

TO:	
AGENCY:	Region 4 Education Service Center
	7145 West Tidwell Road
	Houston, Texas 77092
PHONE:	(713)-462-7708
E-MAIL:	
PROJECT:	Solicitation Number 21-05 Modular Buildings, Portable Storage, and Relocatable Walkways
SHIP TO:	

DATE:	20-Feb-21
FOB:	SHIPPING POINT
VIA:	TRUCK
FREIGHT:	PREPAY ADD
VALID THRU:	21-Apr-21
QUOTE NO.:	442471001

QUANTITY	ITEM NUMBER	QUOTATION	UNIT PRICE	EXTENDED PRICE
1	2QW00-4764CR	<p>47' x 64' CLASSROOM BUILDING NOT INCLUDING RESTROOMS BUILDING IS COMPLETE AND SUPPLIED IN 8 SECTIONS. FREIGHT INCLUDED.</p> <p>Price is delivered to Houston TX. If shipping location is greater than 1000 miles from Lagrange, KY plant add per mile for building. Supervision of installation (usually \$3,000.00) Add for additional egress windows. 3'x5' low E with screens. Additional 18 gauge public entrance door. Additional Hurricane zone rated public entrance door. Upgrade 18 gauge to Hurricane door add Add for optional roofed entrance Structural steel and aluminum treadplate deck Add for optional Structural steel and aluminum treadplate ramp. 9" to .5" 8' long.</p>	<p>\$594,207.00</p> <p>\$48.00 per mile \$1,500.00 per day \$1,725.00 each installed \$2,051.00 each installed \$2,996.00 each installed \$945.00 per door \$4,697.00 each (2 needed) \$2,273.00 each (2 needed)</p>	<p>\$594,207.00</p>



We accept ACH wire transfer or check payment.
 Delivery can begin 150-180 days after approved engineered drawings notice to proceed.
 Prices are based on our fixed margin which is calculated from time on the floor overhead and the amount of labor required. No discounts are required on this price schedule. This price structure margin is the same on all buildings produced and sold.
 Prices are subject to 2% increase per year starting July 1 2021 contract beginning date.

*IF DELIVERY IS INCLUDED: THE ABOVE QUOTATION IS BASED UPON SITE ACCESS FOR HEAVY EQUIPMENT AND NORMAL SOIL CONDITIONS OF 2000 PSF. IF DURING EXCAVATION OF FOUNDATIONS NECESSARY PER MANUFACTURERS SPECIFICATIONS, CONDITIONS EXCEED NORMAL OUR DRIVERS SHALL NOTIFY THE OWNER IMMEDIATELY. THIS SHALL INCLUDE ALL TYPES OF ROCK VEGETATION AND/OR ANY UNFORESEEN HAZARDS. THERE WILL BE ADDITIONAL CHARGES INCURRED TO CLEAR THE AREA AND/OR THE DELIVERY SO THAT INSTALLATION CAN BE COMPLETED. NO SOIL TESTS, LICENSES OR PERMITS INCLUDED. COPY OF TAX EXEMPT CERTIFICATES MUST ACCOMPANY ALL EXEMPT ORDERS.

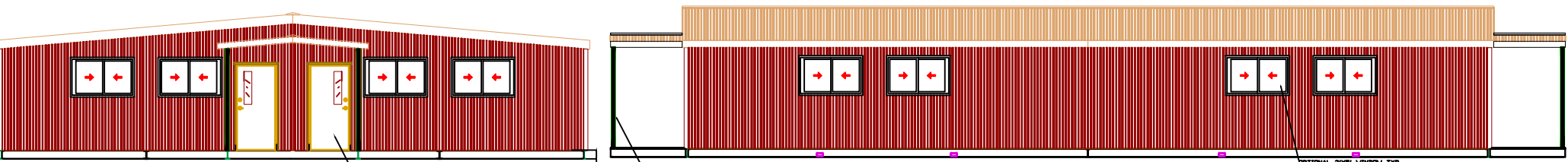
****NOTE: IF APPLICABLE SALES TAX IS NOT INCLUDED.**
 CUSTOMER IS RESPONSIBLE FOR PAYING APPLICABLE SALES TAX DIRECT O THEIR STATE, OR SUBMIT COPY OF TAX EXEMPT CERTIFICATE WITH ORDER.
TERMS: 10% DOWN WITH ORDER., 40% UPON RECEIPT OF SHOP DRAWINGS TO, START PRODUCTION, 40% BEFORE SHIPPING OF PRODUCT, AND 10% NET 30 AFTER SHIPPING.
 SERVICE CHARGE OF 2% PER MONTH ADDED TO ALL UNPAID BILLS AFTER 30 DAYS. SHOULD COLLECTION BE NECESSARY, CUSTOMER AGREES TO PAY ALL COSTS, INCLUDING ATTORNEY FEES.

 Authorized Signature Hunter KnepsShield Co.

 Authorized Signature of Purchaser/DATE

MATERIAL LIST
MODEL: 2QW00-4764CR
TYPE: DOUBLEWIDE BUILDING
DESCRIPTION: 47' x 64' CLASSROOM BUILDING NO RESTROOM

QUANTITY	ITEM NUMBER	BUILDING MATERIAL
1		STRUCTURAL STEEL REINFORCED FLOOR WITH STRUCTURAL CONCRETE FLOOR SHEATING
1	1840-1-3IPS	INTEGRAL P-TRAP CAST IRON DRAIN, NICKEL BRONZE STRAINER AND THREADED 3" SIDE OUTLET
1	PT2	SPF AND PINE WALL FRAMING
1	BCXFRPWF	RATED DRYWALL FLOOR TO CEILING
1	CLASSC	RATED DRYWALL CEILING
1	R13	KRAFT BACKED INSULATION R15
1	ALUMTRIM	ALUMINUM INTERIOR BASE AND CORNER MOLDING
1	2X6TGOA	SMARTCORE 11-Piece 5-in x 48.03-in HARDWOOD LOOK VINYL PLANK FLOORING
1	58CDXIR	5/8" CDX PLYWOOD ROOF DECK (FOR INSULATED ROOF)
1	26UPCF25	26 GAUGE PANEL METAL ROOF COLORFAST 25 STANDARD COLORS
1	RF30	30# ROOFING FELT:
1	2XOV	2" x 8" #2 SYP EXPOSED RAFTER FRAMING
1	2XIR	2" x 8" #2 SYP CEILING JOIST WITH RATED INSULATION (DOUBLEWIDE)
1	EXT1-2CDZBP	1/2" CDX EXTERIOR PLYWOOD SHEATHING, BUILDING PAPER 1/2" CONTINEOUS INSULATION
1	FCT118	26 GAUGE PANEL METAL ROOF COLORFAST 25 STANDARD COLORS
12	4X4STLPST	4" x4" x 1/4" A-500 GRADE "B" W/ BASE MOUNTING AND TOP CAP, PRIMED AND 2 COAT FINISH ANDERSON 400 SERIES CSMNTS, ALUM.,DBL. ROLL OUT, TMRPD LOW-E, W/BRASS HNDLE, AND INSECT SCRIN
16	1411827	3'x5'
4	STDRPE3068	18 GAUGE STEEL DOOR "PUBLIC ENTRANCE" WITH WINDOW AND HARDWARE
4	SDC3068	18 GAUGE STEEL DOOR WITH HARDWARE
PLUMBING NOT INCLUDED THIS MODEL		
ELECTRICAL		
2	HOM20-40M200TC	200 AMP SQUARE -D LOAD CENTER PANEL SYSTEM 20/40 CIRCUIT
48	SQDHOM-120	SQUARE D 20 AMP CIRCUIT BREAKERS
4	SQDHOM240	SQUARE D DOUBLE POLE 40 AMP CIRCUIT BREAKER
84	LVP 524-140-EBS-120-WET	LED WARELIGHT WRAP WL-WRAP4-LED-32W-40K-MV
6	WM25W27V50KD	WARELIGHT WALL PACK WL-MWP-20W-50K-B-MV-PC
4	XMLA-1-W-R-120-WL	WARELIGHT LEDCXTEU2RW LED EXIT & EMERGENCY COMBO
4	XMLA-1-W-R-120-ELCW	WARELIGHT: LEDR-2W LED THERMOPLASTIC EMERGENCY LIGHT
2	VX100DG	LED WARELIGHT VAPORPROOF JELLY JAR WL-14WJCMFG-
8	CS120BI	HUBBELL/BRYANT/LEVITON SINGLE POLE 20amp A/C SWITCH SS-STEEL COVER
1	1101	ELECTROMECHANICAL 24 HR. TIME, SAME ON OFF TIMES EACH DAY 120VAC 40 AMP INDOOR
64	LCT8888	LEVITON T5248-WCP - DUPLEX RECEPTACLE AMPER-RESISTANT DUPLEX OUTLET
2	GFR5352W	HUBBELL/BRYANT/LEVITON 20amp GFCI OUTLET-SS-STEEL COVER
HEATING AND AIR		
2	AZ75E18HDAC	GE VERTICAL SERIES ZONELINE 14,600/14,300 COOLING/BTUH 230V HEAT PUMP/ELECTRIC 38amp
REST ROOM SPECIALTIES NOT INCLUDED IN THIS MODEL		
MISCELLANEOUS ITEMS		
152	DRSHRINK	PREPARE FOR SHIPPING (LIN.FT.)
50	SSP	STAIN/SEALER/PAINT
1	ESTP	ENGINEERS SEAL
3	TPI	THIRD PARTY INSPECTION



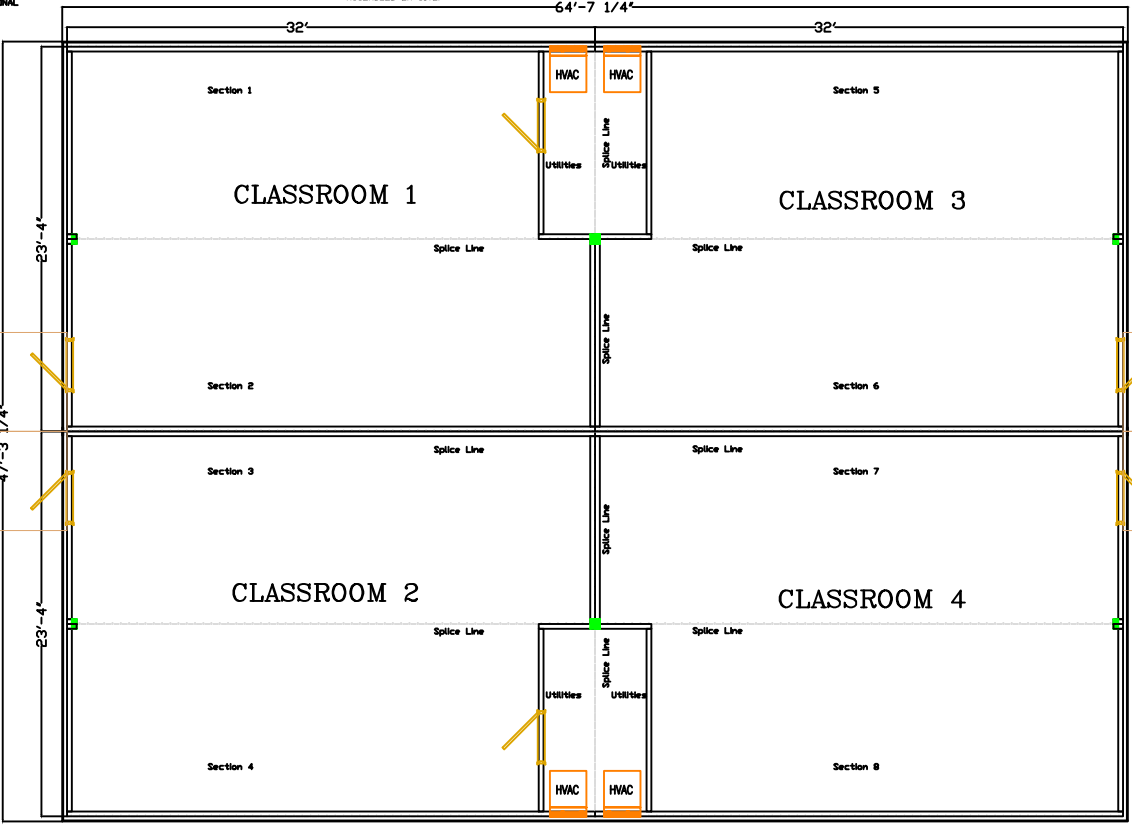
END ELEVATIONS

18 GAUGE METAL 16 GAUGE FRAMES WITH TYP LOCATIONS AND QUANTITIES OPTIONAL

SIDE ELEVATIONS

OPTIONAL 3'x2' WINDOW TYP LOCATIONS AND QUANTITIES OPTIONAL EFFICIENCY AND TEMPER DIFFER PER SHIPPING LOCATION

OPTIONAL ALUMINUM TREAD PLATE ENTRANCE DECK WITH 9" C-CHANNEL FRAME 4" STEEL POST AND ROOF FRAME ASSEMBLED ON SITE



PLAN VIEW

OPTIONAL 4" x 8" SLOPED TO GRADE ALUMINUM TREAD PLATE ENTRANCE RAMP

OPTIONAL ALUMINUM TREAD PLATE ENTRANCE DECK WITH 9" C-CHANNEL FRAME 4" STEEL POST AND ROOF FRAME ASSEMBLED ON SITE



#10 HUNTER TRAIL
P.O. BOX 899
LAGRANGE, KY 40031
800-626-6530

SYMBOL SUPPLIED BY MANUFACTURER AND INSTALLED BY OTHERS.
SYMBOL SUPPLIED AND INSTALLED BY OTHERS.

SHEET TITLE
ELEVATIONS

PROJECT NAME
48x64 CLASSROOM BUILDING NO RESTROOM

PROJECT LOCATION
VARIOUS LOCATIONS

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IMPORTANT!
Note it is the responsibility of the user to verify that these plans meet or exceed all governing codes. It is also the responsibility of the user to obtain plan approval and all work permits by all governing agencies.

DRAWN	CHECKED	APPROVED	DATE	SCALE
TMKII	--		2/2/21	NTS

REVISIONS		
MARK	DESCRIPTION	DATE

FILE NAME
2QW00-4764CR

MODEL #

SERIAL #

PROJECT ENGINEER

DRAWING NO.

PKG. NO. **1** OF

30S

Description: Push Plates



- Gauge - .050" (1.3mm)
- Materials - Aluminum, Brass, Bronze, Stainless Steel
- Finishes - US3, US4, US10, US10B, US26, US26D, US28, US32, US32D

- Options - May be ordered cut for cylinder (CFC) or engraved "PUSH"
- Fasteners - #6 x 5/8" OPH Tapping Screws
- Order - Provide plate number, size, and finish (i.e. 30S- 3 1/2" x 15" 32D)
- Note - Not Available BTB

Item #	Size (inches)	Size (mm)
30S/A30S	3 x 12	76 x 305
30S/A30S	3-1/2 x 15	89 x 381
30S/A30S	4 x 16	102 x 406
30S/A30S	6 x 16	152 x 406
30S/A30S	8 x 16	203 x 406



190S

Description: Door Protection Plates



- Certifications** - Meets ANSI A156.6 for J101 Metal Armor Plate, J102 Metal Kickplate, and J103 Metal Mop Plate
- Gauge** - 0.050" (1.3 mm)
- Materials** - Aluminum, Brass, Bronze, Stainless Steel
- Finishes** - US3, US4, US10, US10B, US28, US32, US32D
- Fasteners** - #6 X 5/8" truss head screws

- Options**
- UL, armor plate stamped
 - Self-adhesive tape available on all plates
 - Spanner head screws
 - Torx head screws
 - Round corners
 - Wrap around side and bottom return
 - 0.125" material

- NFPA Note**
- NFPA 80 Standards - 6.4.5 Protection Plates
 - 6.4.5.1 - Factory installed protection plates shall be installed in accordance with the listing of the door.
 - 6.4.5.2 - Field installed protection plates shall be labeled and installed in accordance with their listing.
 - 6.4.5.3 - Labeling shall not be required where the top of the protection plate is not more than 16" (406mm) above the bottom of the door.

- Bevel** - None
- Order**
- Furnish item #, height, width, and finish (i.e., 190S – 6" x 30", US32D).
 - Plates are sized on even inches. Odd size available and priced to next larger size.
 - May be ordered with counter sunk holes (specify "CSK") at extra charge.

Item #	B&S Gauge	US Gauge	Bevel	Fasteners	Quantity Bag	Quantity Case
190S	16	18	none	#6 x 5/8 truss head screws	1 each	---
193S	16	18	B3E	#6 x 5/8 truss head screws	1 each	---
194S	16	18	B4E	#6 x 5/8 truss head screws	1 each	---
196R	16	18	none	#6 x 5/8 truss head screws	1 each	---
198S	---	20	none	#6 x 5/8 truss head screws	1 each	---
199B	---	38	None	#6 x 5/8 truss head screws	1 each	---
220S	14	16	none	#6 x 5/8 truss head screws	1 each	---
223S	14	16	B3E	#6 x 5/8 truss head screws	1 each	---
224S	14	16	B4E	#6 x 5/8 truss	1 each	---

				head screws		
--	--	--	--	-------------	--	--



300D

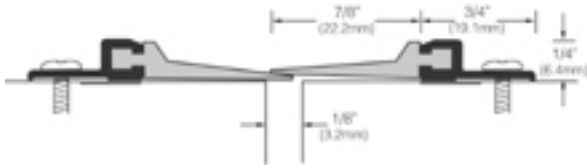
Description: Miscellaneous

Base Plate - 1 1/2" x 1 1/2" (38 x 38 mm) Cast Brass
 Overall Lengths Available - 25 1/2" (648 mm)
 - 30 1/2" (800 mm)

Material - Welded Steel Chain
 Finish - US26D
 Fasteners - #8 x 7/8" FHWS
 Note - Optional Grommet Nut Set available. Part #1-320-9801.

Fasteners	Box Qty.	Case Qty.
#8 x 7/8" FWS	5	50

Order (2) for set



756S

Description: Door Bottoms > Door Bottoms Sweeps

Application: Category J gaskets for use with Listed steel frames and/or classified steel covered composite, hollow metal doors rated up to 3 hrs; wood and plastic covered fire doors rated up to and including 1 1/2 hrs; and wood core doors rated for 20 minutes.

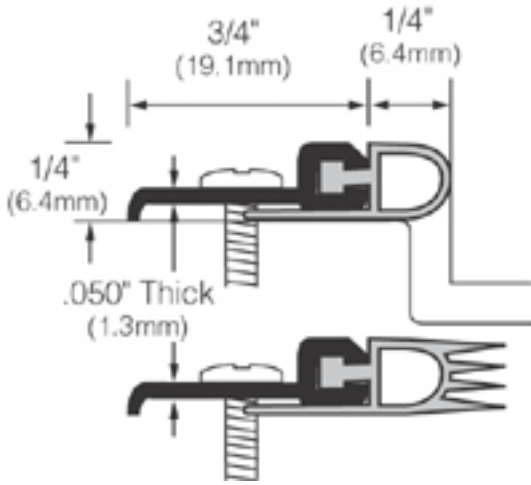
"The clearance between the door and the frame and between the meeting edges of doors swinging in pairs shall be 1/8" ± 1/16" (3.18mm ± 1.59mm) for steel doors and shall not exceed 1/8" for wood doors."



Finishes - MIL, DBA, GLD
 Insert - V=Vinyl

Categories - H, J
 Fasteners - #6 x 5/8" Pan head sheet metal screws
 Options - Order 2 for a set

891S



- Finishes - MIL, DBA, GLD
- Inserts - V=Vinyl
 - N=Neoprene, EDPM or TPE
 - S=Silicone
 - F=Vinyl with Fins

891S

Description: Weatherstripping > Jamb Weatherstrip 1

Application: Category J gaskets for use with Listed steel frames and/or classified steel covered composite, hollow metal doors rated up to 3 hrs; wood and plastic covered fire doors rated up to and including 1 1/2 hrs; and wood core doors rated for 20 minutes.



- Category - H, J
- Fasteners - #6 x 5/8" Pan head sheet metal screws

Regular Arm Installation
See Page 2

Left Hand Door - LH
Right Hand Reverse - RHR

CAUTION An incorrectly installed or improperly adjusted door closer can cause property damage or personal injury. These installation instructions should be followed to avoid the possibility of misapplication or misadjustment. **CAUTION**

Regular Arm Installation
See Page 2

Right Hand Door - RH
Left Hand Reverse - LHR

Parallel Arm Installation
See Pages 3 & 4

Left Hand Door - LH
Right Hand Reverse - RHR

NOTE: For special applications, a separate door and frame preparation template is packed with these instructions. Use this instruction sheet for installation sequence and closer adjustments only.

- Dimensions are based on standard doors and frames with 1/8" clearance, 5/8" stops, and square edge doors.
- Door and frame must be properly reinforced.
- Non-Handed Door Closers.

Parallel Arm Installation
See Pages 3 & 4

Right Hand Door - RH
Left Hand Reverse - LHR

Top Jamb Installation
See Page 5

Left Hand Door - LH
Right Hand Reverse - RHR

NOTE: For Top Jamb Application

A longer connecting rod is required for reveals greater than 4" (102mm)

Top Jamb Installation
See Page 5

Right Hand Door - RH
Left Hand Reverse - LHR

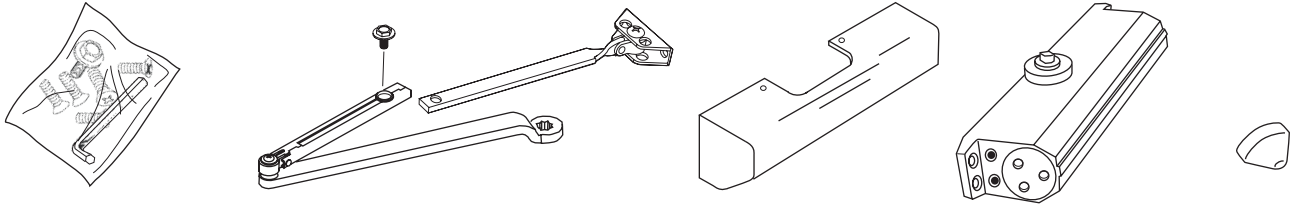
• These door closers should **NOT** be installed on the exposed side (weather side) of exterior doors.

<p>TOOLS REQUIRED</p>	<p>METAL</p> <p>#7 1/4" - 20</p>	<p>WOOD</p> <p>3/16"</p>	<p>Self Drilling Screws Wood and Metal</p> <p>For wood, drill 3/16" hole</p> <p>Machine Screws</p> <p>#7 Drill, 1/4" - 20 Tap</p>	<p>Sleeve Nut and Bolt</p> <p>Drill 9/32" thru from Closer Side 3/8" Drill other Side</p> <p>Check building and fire codes to see if your application requires the use of sleeve nuts and bolts.</p>
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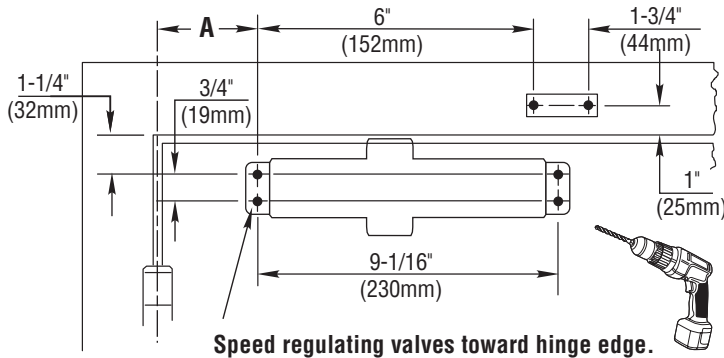
COMPONENT PARTS

Labels: LATCH VALVE, POWER ADJUSTMENT SHAFT, BACKCHECK VALVE, CLOSER BODY, SWEEP VALVE, PARALLEL ARM BRACKET, MAIN ARM, REGULAR ARM/TOP JAMB SHOE, FOREARM SCREW, CONNECTING ROD, CLOSER ARM, INSERT CUTOUT, CLOSER COVER, SCREW PACK, PINION CAP

1. PARTS



2. MARK AND DRILL HOLES (Right Hand Shown)

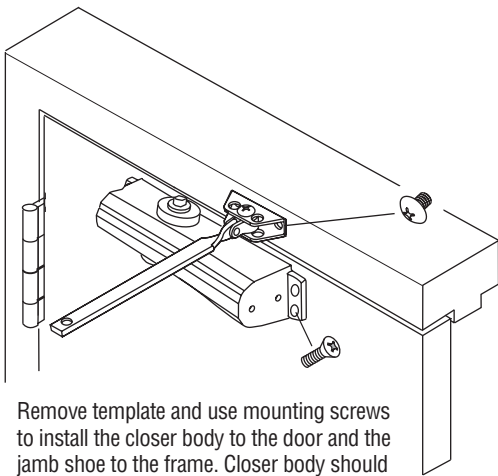


Door Opening	Dimension "A"
To 100	$\frac{7"}{178\text{mm}}$
101 to 120	$\frac{6"}{152\text{mm}}$
121 to *180	$\frac{3-1/2"}{89\text{mm}}$

*Door/Wall/Hardware/Jamb conditions permitting

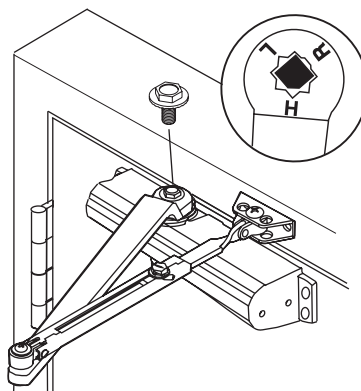
Select hand of door and degree of door opening. Fold template on the corresponding line for desired degree of door opening and hand. Match this line with the hinge edge of door and attach template to door. Be sure frame line on template lines up with the bottom edge of frame face. Mark, prep and drill/tap 1/4" - 20 holes for closer body and jamb shoe mounting screws.

3. INSTALL CLOSER



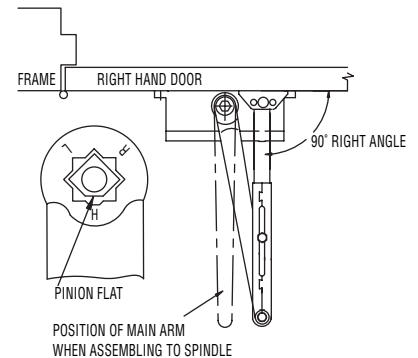
Remove template and use mounting screws to install the closer body to the door and the jamb shoe to the frame. Closer body should be oriented so that the speed regulating valves are toward the hinge stile of door.

4. INSTALL MAIN ARM



Orient main arm so that the "H", located on the main arm, lines up with the flat on the spindle. Press arm down on spindle and secure with spindle bolt.

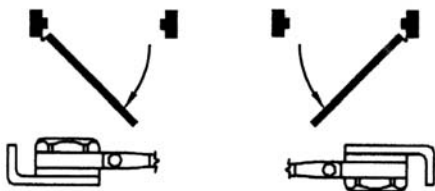
5. INSTALL MAIN ARM AND CONNECTING ROD



Slide connecting rod into forearm of main arm. Rotate main arm until connecting rod is at a 90° angle to frame. While holding arm in this position, tighten down forearm screw.

6. OPTIONAL HOLD-OPEN ARM

Identify direction of hold-open nut according to hand of door and mount arm.



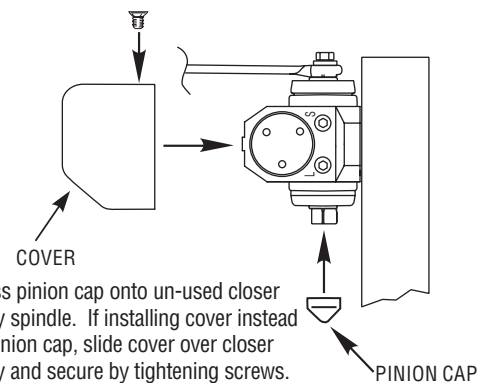
Adjust by loosening hold-open nut, then open door to desired position and tighten hold-open nut securely.

7. ADJUSTMENTS

See Adjustments on Page 6 for setting Spring Power, Sweep Speed, Latch Speed, and Backcheck.

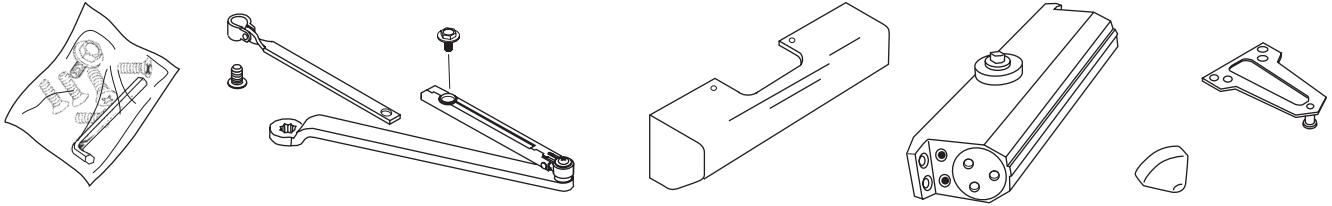
NOTE: Do not fully unscrew valves or hydraulic fluid will leak and closer will no longer be functional.

8. INSTALL COVER / PINION CAP

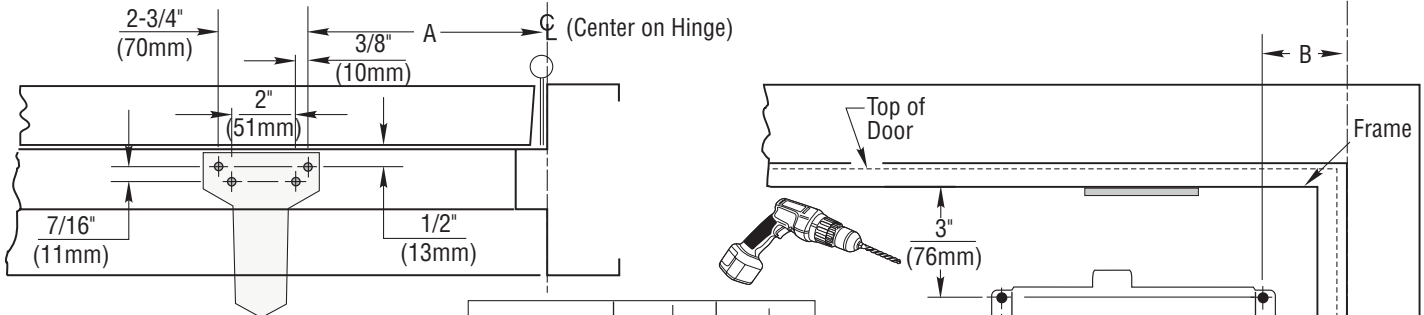


Press pinion cap onto un-used closer body spindle. If installing cover instead of pinion cap, slide cover over closer body and secure by tightening screws.

1. PARTS



2. MARK AND DRILL HOLES (Right Hand Shown)



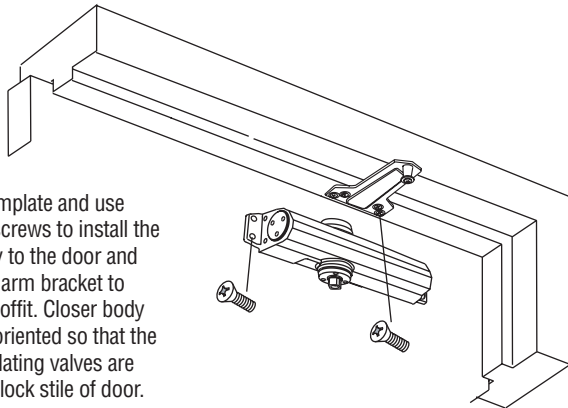
Select hand of door and the degree of door opening. Fold template on the corresponding line for desired degree and hand. Fold or cut upper corner illustrated on template and align template with the hinge edge of door. At the "Frame Stop Line" fold toward you and attach template to door. Mark, prep and drill/tap 1/4"-20 holes for closer body and parallel arm bracket mounting screws.

Door Opening	A	B
To 100	9-1/4" (235mm)	7-5/8" (194mm)
101 to 130	7-3/4" (197mm)	6-1/8" (156mm)
Over 131	5-3/4" (146mm)	4-1/8" (105mm)

Speed regulating valves toward lock stile.

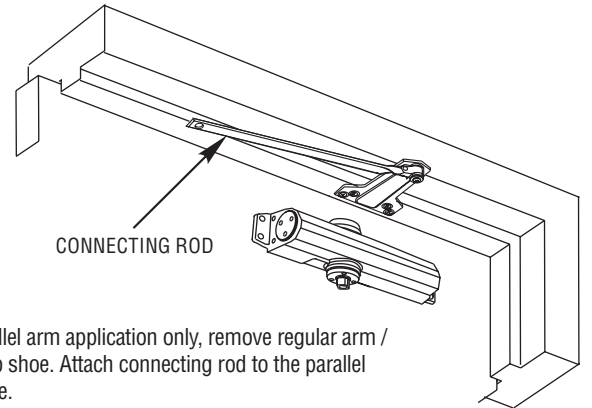
3. INSTALL CLOSER

Remove template and use mounting screws to install the closer body to the door and the parallel arm bracket to the frame soffit. Closer body should be oriented so that the speed regulating valves are toward the lock stile of door.

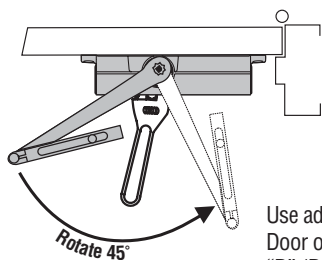


4. INSTALL CONNECTING ROD

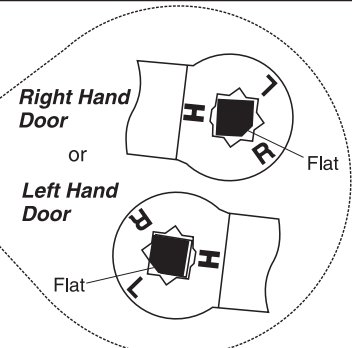
For parallel arm application only, remove regular arm / top jamb shoe. Attach connecting rod to the parallel arm plate.



5. INSTALL MAIN ARM

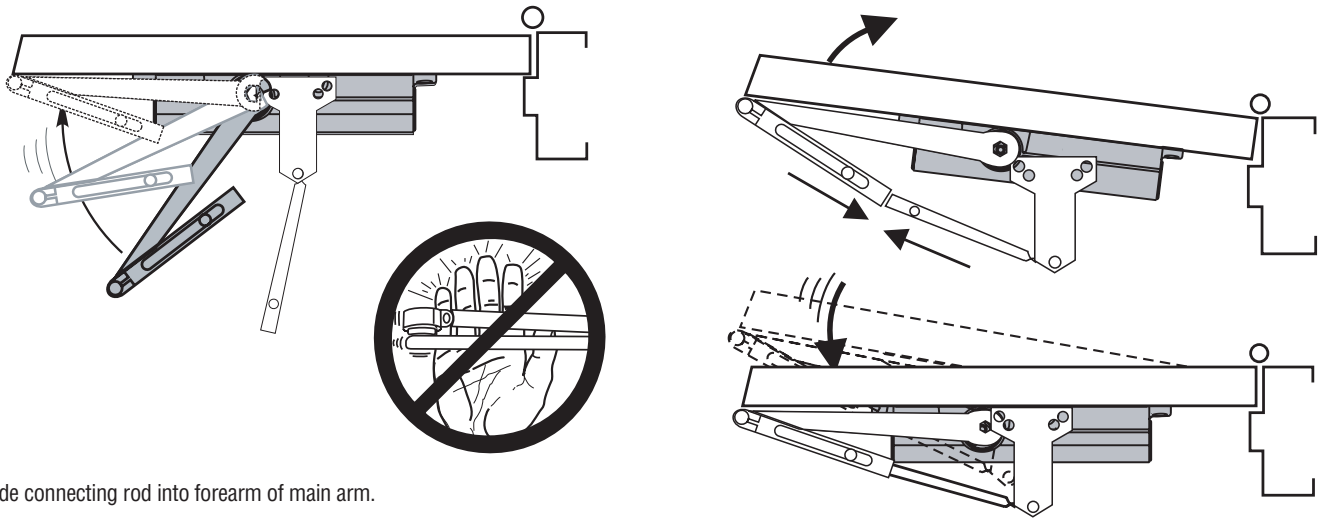


Use adjustable wrench to rotate spindle 45° counterclockwise for Right Hand Door or clockwise for Left Hand Door. Place main arm on spindle so that the "R" (Right Hand Door) or "L" (Left Hand Door) lines up with the spindle flat. Secure main arm and spindle by tightening spindle bolt.



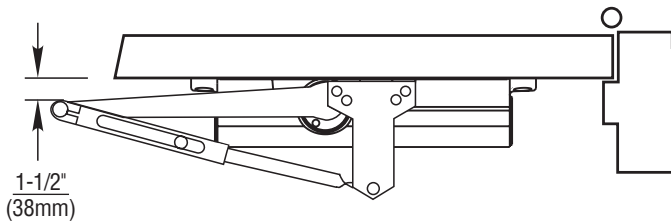
6. INSTALL MAIN ARM AND CONNECTING ROD

a)



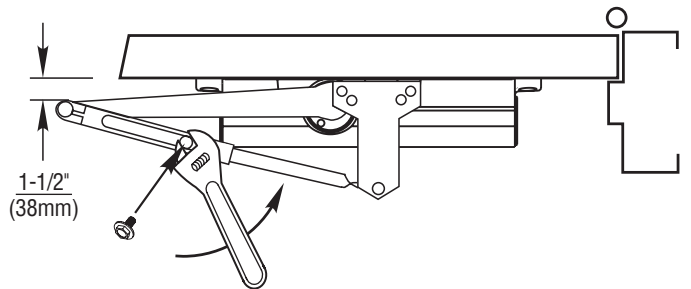
Slide connecting rod into forearm of main arm.

b)



Rotate main arm until the pivot point is 1-1/2" from door surface.

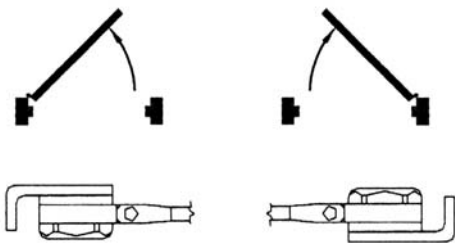
c)



While holding arm in this position, tighten down forearm screw.

7. OPTIONAL HOLD-OPEN ARM

Identify direction of hold-open nut according to hand of door and mount arm.



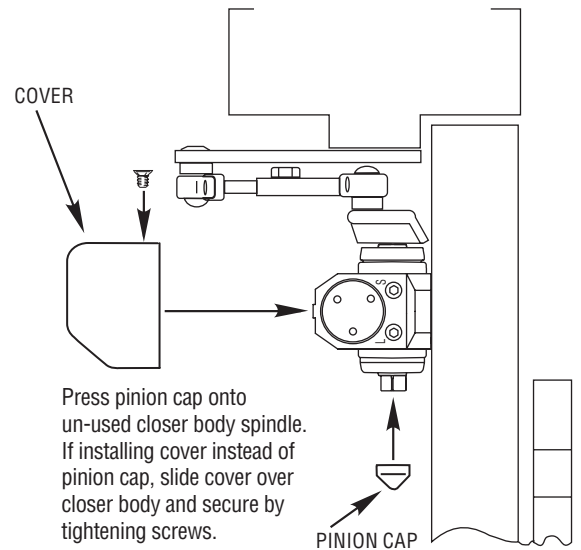
Adjust by loosening hold-open nut, then open door to desired position and tighten hold-open nut securely.

8. ADJUSTMENTS

See Adjustments on Page 6 for setting Spring Power, Sweep Speed, Latch Speed, and Backcheck.

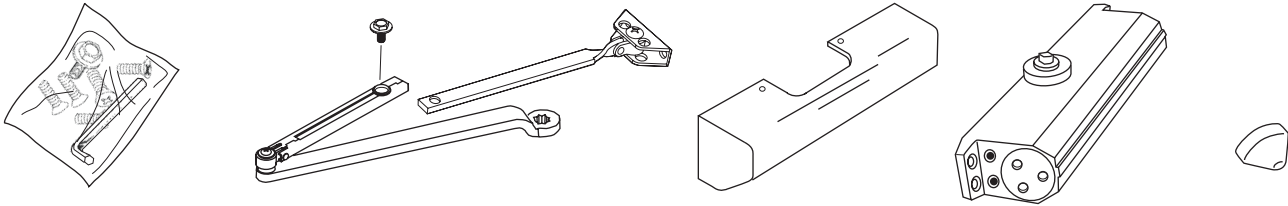
NOTE: Do not fully unscrew valves or hydraulic fluid will leak and closer will no longer be functional.

9. INSTALL COVER / PINION CAP

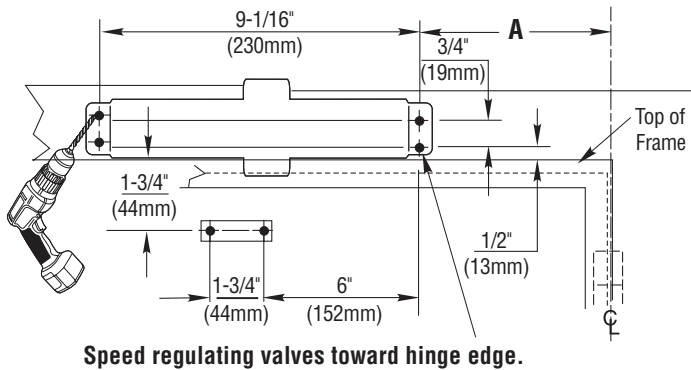


Press pinion cap onto un-used closer body spindle. If installing cover instead of pinion cap, slide cover over closer body and secure by tightening screws.

1. PARTS



2. MARK AND DRILL HOLES (Right Hand Shown)



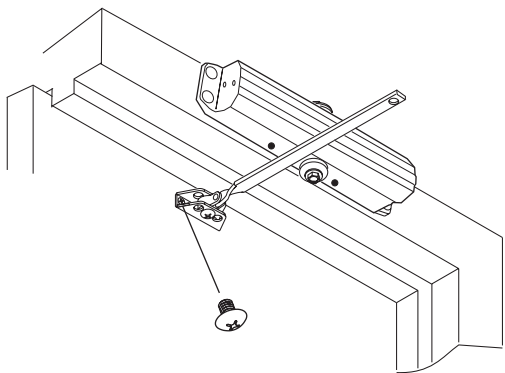
Door Opening	Dimension "A"
To 100	7-1/2" (191mm)
101 to 120	6" (152mm)
121 to *180	3-1/2" (89mm)

*Door/Wall/Hardware/Jamb conditions permitting

A longer connecting rod is required for reveals greater than 4" (102mm)

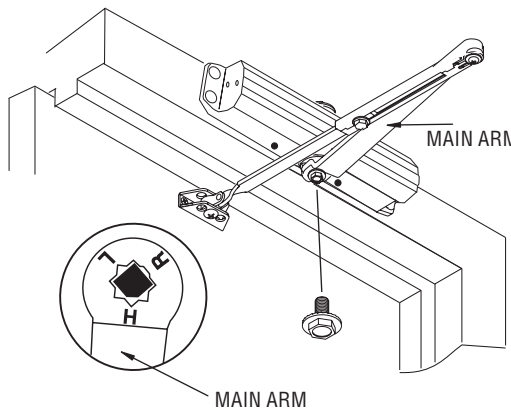
Select hand of door and the degree of door opening. Separate template sections "A" and "B". Fold template on the corresponding line for desired degree and hand. Match this line with the hinge edge of door and attach template to door. Be sure "Frame" line on template lines up with the top edge of door. Using a square, project "Closer Projection Line" on section "A" of template onto frame and use to align and attach section "B". Be sure to align bottom edge of section "B" with edge of frame. Mark, prep and drill/tap 1/4" - 20 holes for connecting rod shoe and closer body mounting screws.

3. INSTALL CLOSER



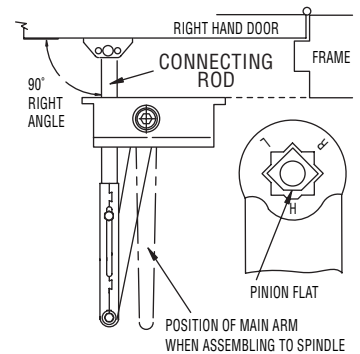
Remove template and use mounting screws to install the closer body to the top jamb and the connecting rod shoe to the door. Closer body should be oriented so that the speed regulating valves are toward the hinge stile of door.

4. INSTALL MAIN ARM



Orient main arm so that the "H", located on the main arm, lines up with the flat on the spindle. Press arm down on spindle and secure with spindle bolt.

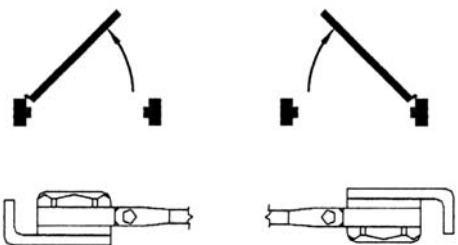
5. INSTALL MAIN ARM AND CONNECTING ROD



Slide connecting rod into forearm of main arm. Rotate main arm until connecting rod is at a 90° angle to frame. While holding arm in this position, tighten down forearm screw.

6. OPTIONAL HOLD-OPEN ARM

Identify direction of hold-open nut according to hand of door and mount arm.



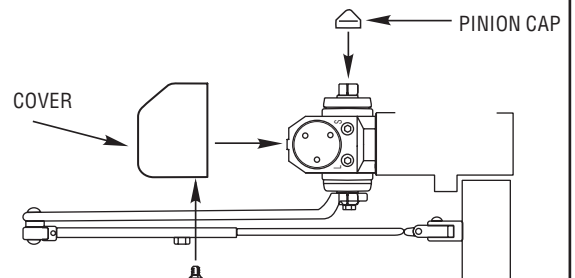
Adjust by loosening hold-open nut, then open door to desired position and tighten hold-open nut securely.

7. ADJUSTMENTS

See Adjustments on Page 6 for setting Spring Power, Sweep Speed, Latch Speed, and Backcheck.

NOTE: Do not fully unscrew valves or hydraulic fluid will leak and closer will no longer be functional.

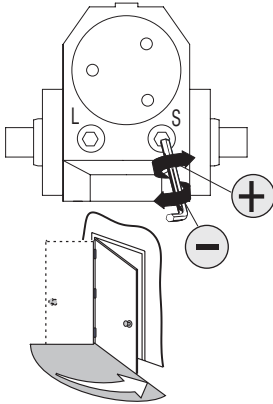
8. INSTALL COVER / PINION CAP



Press pinion cap onto un-used closer body spindle. If installing cover instead of pinion cap, slide cover over closer body and secure by tightening screws.

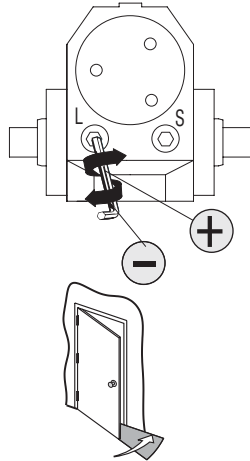
ADJUSTMENTS (USE 5/32" HEX WRENCH FOR THESE ADJUSTMENTS)

SWEEP SPEED



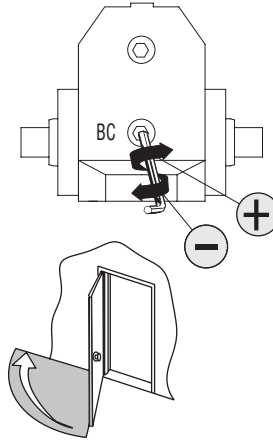
Note: Adjust closing time speed to between 3 and 7 seconds from 90° to 0°. Greater closing times may be required for elderly or handicapped.

LATCH SPEED



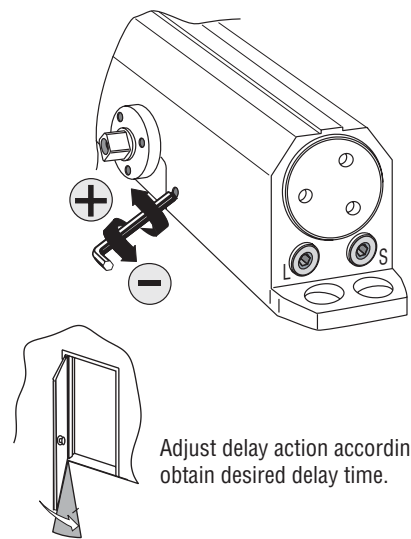
Adjust latch speed so door completely closes and latches.

BACKCHECK



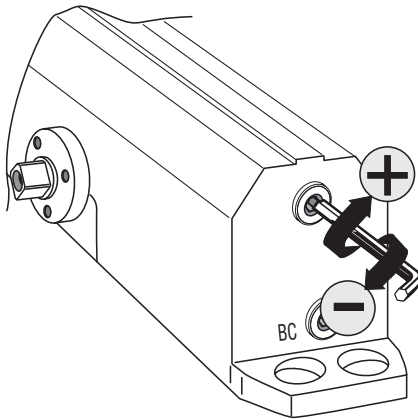
Adjust backcheck accordingly to prevent excessive opening speed.

OPTIONAL DELAY ACTION



Adjust delay action accordingly to obtain desired delay time.

SPRING POWER ADJUST (Sizing in accordance to BHMA/ANSI 156.4)



(Use 5/32" Hex Wrench for this adjustment)

TABLE OF SIZES

Closer is shipped set to size 3. To change the closer size, use a hex wrench to rotate the spring power adjust. Follow the chart to make the correct numbers of 360° turns to set the closer size appropriately for the door application.

The number of turns is an approximation and does not account for environmental or door hardware affects.

Approx. 5 turns to increase / decrease one size.

cw = clockwise
ccw = counterclockwise

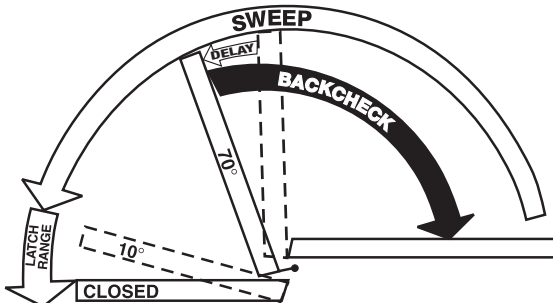
Exterior (and Vestibule) Door Width

		Minimum Door Width (24")			
		24" - 30"	36" - 42"	48" - 54"	60" - 66"
		(610mm)	(762mm)	(914mm)	(1067mm)
Regular Arm & Top Jamb	Size 3 (0)				
	Size 4 (5cw)				
Parallel Arm	Size 3 (5cw)				
	Size 4 (10cw)				

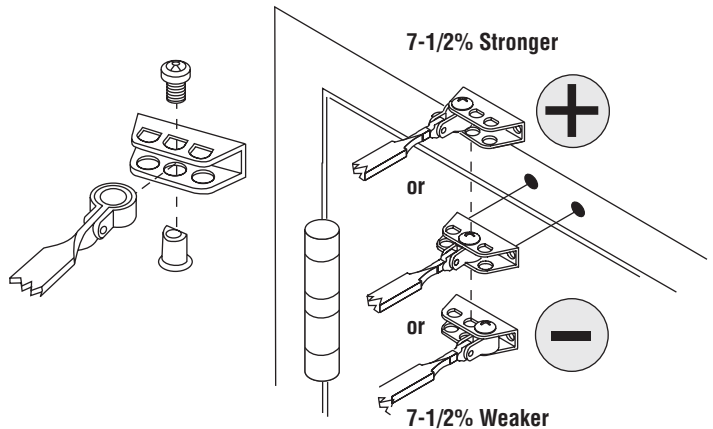
Interior Door Width

		Minimum Door Width (24")					
		24" - 30"	34" - 38"	42" - 46"	50" - 54"	58" - 62"	66" - 70"
		(610mm)	(762mm)	(865mm)	(965mm)	(1219mm)	(1372mm)
Regular Arm & Top Jamb	Size 1 (10ccw)						
	Size 2 (5ccw)						
Parallel Arm	Size 1 (5ccw)						
	Size 2 (0)						

ADJUSTMENT DIAGRAM



ARM PLACEMENT IN SHOE





5300 Series

Description: 5300 Series



Applications	- Heavy Duty Commercial
Certifications	- BHMA Certified ANSI A156.4 Grade 1 - ADA Compliant ANSI A117.1 Accessibility Code only for adjustable sizes 1 to 4 - UL/cUL Listed for up to 3 hours - UL10C Positive Pressure Rated - UL10B Neutral Pressure Rated
Material - Body	- Aluminum
Material - Cover	- Traditional Full Plastic Cover and Pinion Cap
Springs	- Double heat treated Steel, tempered springs - Precision machined, heat treated Steel piston - Triple heat treated Steel spindle
Valves	- Adjustable latching and sweep speed valve - Adjustable backcheck valve - Delayed action valve - Optional

Handing	- Non-Handed
Arms & Brackets	- Slide Adjustable Arm - Tri-Pack - Regular, Top Jamb, and Parallel Arms
Arms - Optional	- Hold Open Arm - Extra Heavy Duty Hold Open Stop Arm - Extra Heavy Duty Stop Arm - Extra Heavy Duty Arm - Extra Heavy Duty Hold Open Arm - Extra Heavy Duty Cushion Stop Arm - Extra Heavy Duty Hold Open Cushion Stop Arm
Fasteners	- Self tapping wood and machine screws - Sex nuts and bolts
Door Thickness	- 1 3/4" - 1-3/8" - 2-1/4" Optional
Painted Finishes	- Aluminum, Bronze, Dark Bronze, Gold

Exterior (and Vestibule) Door Width

		Minimum Door Width (24")			
		24" - 30"	36" - 42"	48"	
Regular Arm & Top Jamb	Size 3	Size 4	Size 5	Size 6	
Parallel Arm	Size 3	Size 4	Size 5		

Interior Door Width

		Minimum Door Width (24")					
		24" - 30"	34" - 38"	48" - 54"	60"		
Regular Arm & Top Jamb	Size 1	Size 2	Size 3	Size 4	Size 5	Size 6	
Parallel Arm	Size 1	Size 2	Size 3	Size 4	Size 5		

(Sizing in accordance to BHMA/ANSI 156.4)

Door Closer ANSI Reference Sheet

Closer Series	Function	Cross Reference #	PT4 Options
5100	Regular Arm Mount	C02011	A, B, C, D, H
	Top Jamb Arm Mount	C02041	A, B, C, D, H
	Parallel Arm Mount	C02021	A, B, C, D, H
Note* Standard tri pack arms include C02011, C02041 & C02021			
Note* Delayed Action optional w/ the 5100 closer series			
	Heavy Duty Parallel Arm Mount	C02021	A, B, C, D, H
	Hold Open Parallel Arm Mount	C02061	A, B, C, D, H
	Bracket Mounting	C02031	A, B, C, D, F, H
5200	Regular Arm Mount	C02011	A, B, C, D, H
	Top Jamb Arm Mount	C02041	A, B, C, D, H
	Parallel Arm Mount	C02021	A, B, C, D, H
Note* Standard tri pack arms include C02011, C02041 & C02021			
Note* Delayed Action optional w/ the 5200 closer series			
	Heavy Duty Parallel Arm Mount	C02021	A, B, C, D, H
	Hold Open Parallel Arm Mount	C02061	A, B, C, D, H
	Bracket Mounting	C02031	A, B, C, D, F, H
5300	Regular Arm Mount	C02011	A, B, C, D, H
	Top Jamb Arm Mount	C02041	A, B, C, D, H
	Parallel Arm Mount	C02021	A, B, C, D, H
Note* Standard tri pack arms include C02011, C02041 & C02021			
Note* Delayed Action optional w/ the 5300 closer series			
	Heavy Duty Parallel Arm Mount	C02021	A, B, C, D, H
	Hold Open Parallel Arm Mount	C02061	A, B, C, D, H
	Bracket Mounting	C02031	A, B, C, D, F, H
5400	Regular Arm Mount	C03012	A
	Top Jamb Arm Mount	C03042	A
	Parallel Arm Mount	C03022	A
Note* Standard tri pack arms include C03012, C03042 & C03022			
Note* Backcheck optional w/ the 5400 closer series			



Hager Companies, Inc
139 Victor Street
Saint Louis, MO 63104

HAGER TEST REPORT NO.: CL05003

EVALUATION OF

**Hager Companies
5300 Series Door Closer - Size 1-4**

TEST PARAMETERS:

This report covers tests and/or evaluations performed using the following standard(s) as a guideline:
ANSI/BHMA A156.4-2000 American National Standard for Door Controls – Closers.
Testing was conducted by Intertek Testing Services NA, Inc., at their Middleton, WI facility.

ENGINEERING REVIEW PROCESS:

The Hager 5300 Series size 2-6 door closer was previously tested by ITS in accordance with ANSI/BHMA A156.4-2000, "American National Standard for Door Controls – Closers" and found to be BHMA compliant. Results are found in Hager Test Report CL04010.

In order to assess mechanical differences between the 5300 Series size 1-4 and the 5300 Series size 2-6, customer-supplied technical drawings and specifications of each model are reviewed by ITS. In order to validate adjustable size range, the 5300 Series size 1-4 model is tested to ANSI/BHMA A156.4-2000 section 6.16 "Test for Range of Multiple Sizes".

CONCLUSION:

It is determined that the Hager 5300 Series size 1-4 door closer is similar, with minor variations, to the 5300 Series size 2-6 door closer. These variations will not significantly affect the performance of this closer, with the exception of adjustable size range.

This report summary was prepared as an account of work performed by a Third-Party Nationally Recognized Testing Laboratory. The information included in this report is certified extracts from the original test records, as contained in the permanent records of Hager Companies, Inc. Copies of the original third-party test reports are available upon request.



Hager Companies, Inc
139 Victor Street
Saint Louis, MO 63104

HAGER TEST REPORT NO.: CL04010

EVALUATION OF

**Hager Companies
5300 Series Door Closer - Size 2-6**

TEST PARAMETERS:

This report covers tests and/or evaluations performed using the following standard(s) as a guideline:
ANSI/BHMA A156.4-2000 American National Standard for Door Controls – Closers.
Testing was conducted by Intertek Testing Services NA, Inc., at their Middleton, WI facility.

DESCRIPTION OF TEST SAMPLES:

Samples were identified as Model 5300 Grade 1 Closer with backcheck.
Samples were received in good condition on 11/12/2004.

TEST DATES: 01/18/05 – 04/12/05

RESULTS: COMPLIANT

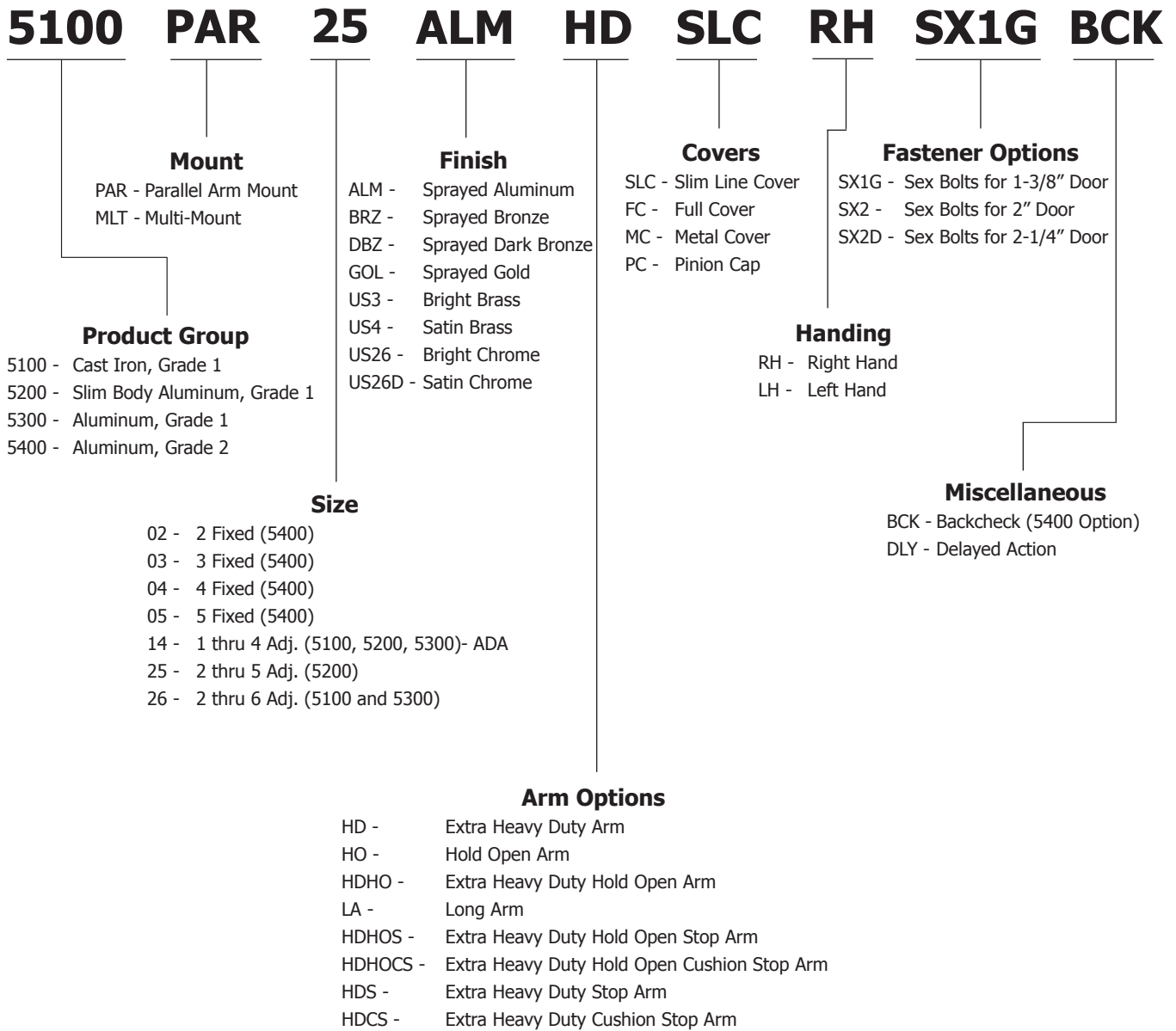
The testing results of specific subsections are summarized below.

Subsection	Test Description	Test Results
5.1	Initial Static Test	Compliant
5.2	First Cycle Test	Compliant
5.3	Second Cycle Test	Compliant

This report summary was prepared as an account of work performed by a Third-Party Nationally Recognized Testing Laboratory. The information included in this report is certified extracts from the original test records, as contained in the permanent records of Hager Companies, Inc. Copies of the original third-party test reports are available upon request.



HOW TO ORDER



Example of how to order:
 5100P14ALMHDHOS



Baron
Steel Doors & Frames

ASSA ABLOY

Baron Door and Frame Service Center Program

Your One Stop for Service and Value



ASSA ABLOY, the global leader
in door opening solutions

Baron

Steel Doors & Frames

ASSA ABLOY

Door Series

Baron's complete line of steel doors for commercial, institutional and industrial applications satisfies your requirements durability, security, aesthetics or fire protection. Stocked at the Southeast Service Center with NAAMM and Steelcraft locations, these doors are cold rolled or galvanized and prime painted at the price you need.

Available Features:

- Gauge: 18 / 20 gauge cold rolled steel or 18 gauge galvanized
- Core: Honeycomb / Polystyrene
- Listing: 3 Hour fire rating (18 gauge) and 1-1/2 hour fire rating (20 gauge) standard (ITS/WHI)
- Sizes: From 2'0" x 6'8" to 4'0" x 8'0"
- Options: Available with a wide range of glass lights, louvers, and hardware preps
6-Panel design available
- Hinge Location: NAAMM locations (5-10 equal; 38" strike center line) - handed
Steelcraft locations - non-handed



Door Construction:

Inverted Top and Bottom Channels for additional stability and protection

Interlocking Seam enhances structural rigidity and durability

Beveled Lock Edge – the contractor's preference for easy field installation (handed doors)

Non-handed - square hinge and lock edge

Heavy Gauge Closer Reinforcement in all doors exceeds the Steel Door Institute recommendations

Hinge reinforcements with dimpled construction provides easy conversion from standard weight to heavy weight hinges

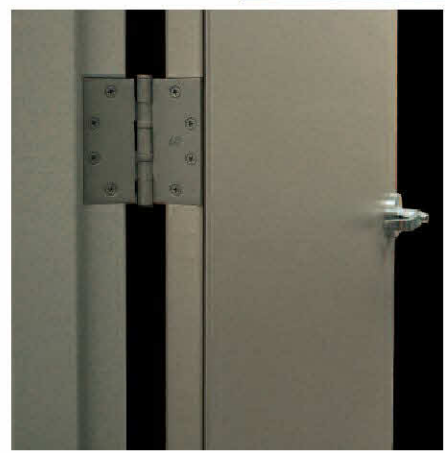
Code Compliance and Physical Performance:

Level 'A' grade in tested in accordance with ANSI A250.4 test procedures

Meets or exceeds ANSI/SDI A250.6

Meets the requirements of ANSI A250.8

Listed for fire door installations requiring positive or negative pressure testing (UBC-7-2-97, UL10B, and UL 10C) in sizes to 4080 singles and 8080 pairs





Frame Series

Baron steel frames are manufactured to provide value to any job regardless of size. Stocked at the Southeast Service Center with NAAMM and Steelcraft locations, our drywall frames are cold rolled. Standard for masonry frames are galvaneal. Both are prime painted at the price you demand.

Features:

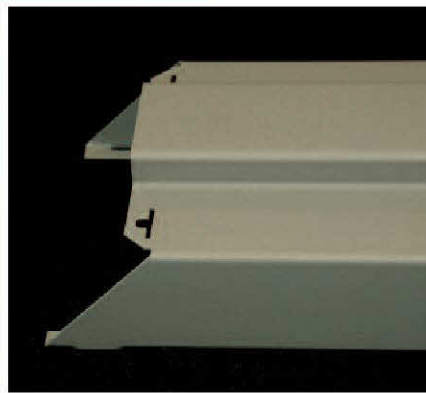
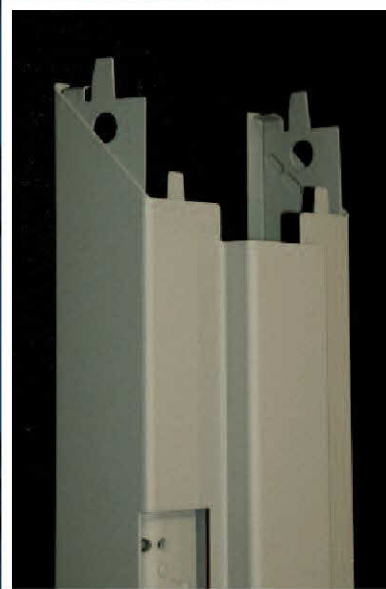
Gauge:	16
Profiles:	Masonry-Standard Profile (A40 galvaneal) Drywall - Cold Rolled Steel
Strike Prep:	4-7/8"
Anchors:	Wood Stud, Steel Stud, Masonry, Existing Openings
Hinge Location:	NAAMM/Steelcraft
Unequal rabbet design	
Prime Painted	
1-1/2 Hour rating - drywall (ITS/WHI)	
3-Hour fire rating - masonry (ITS/WHI)	

Frame Construction:

Depth:	Masonry: 5-3/4", 7-3/4", 8-3/4" Drywall: 4-3/4", 5-5/8", 5-7/8", 7-1/8", 8-1/4"
Jamb:	6'8", 7'0", 8'0"
Head:	2'0", 2'4", 2'6", 2'8", 3'0", 3'4", 3'6", 3'8", 4'0", 6'0"
Face:	2", 4"

Knock Down for easy installation
Service Center welding available if needed

Hinge reinforcements with dimpled construction provides easy conversion from standard weight to heavy weight hinges





Cylinders, Keys and Key Control



Commercial Cylinders

There are Schlage cylinders suitable for all commercial applications.

Interchangeable core cylinders offer fast changeover when keys are lost.

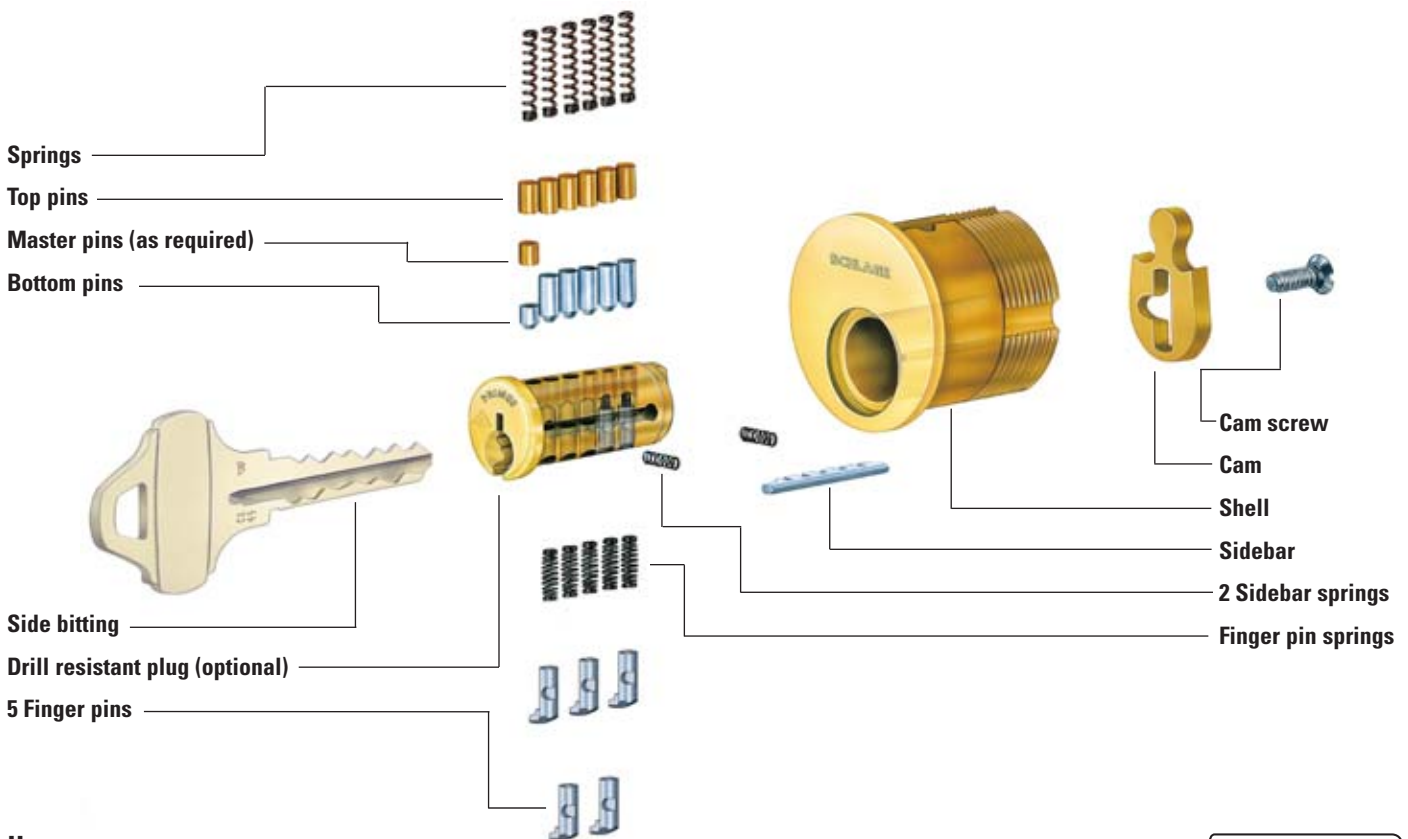
Primus cylinders are recommended where positive key control is required, such as airports, hospitals, schools, universities and research facilities.

Everest keyways (standard) are recommended for all 21st century key systems because of their flexibility, stronger keys and patent life.

Classic keyways are used in Schlage's installed base of fine 20th century key systems.

INDEX	
Authorization Forms	28
Bulk Pack Cylinder Kits	27
Cylinder Choices	5
Cylinders for Schlage Locks	6 - 9
Cylinders for Cabinet Locks & Padlocks	10
Cylinders for Exit Devices, Alum. Doors	11, 15, 19
Cylinders for Other Manufacturers' Locks	20, 21
Everest and Classic Comparison	3
Interchangeable Core, Full Size	12 - 15
Interchangeable Core, Small Format	16 - 19
Key Blanks	22, 24, 26
Keyways	23, 25, 26
Multiple Tailpiece Cylinder	27
Primus ID Cards, Sales Aids & Forms	28
Primus Security Levels	29
Service Equipment & Tools	27
Special Cams	20
Specifications	1
Terminology	2

Exploded View - Everest Primus Mortise Cylinder



Specifications

Key Control Patents:

Everest cylinders and keys are covered by one or more of the following U.S. utility and design patents:

5,715,717

5,809,816

D370,168

D370,169

D368,845

For international Patent coverage information, please contact Schlage Commercial Customer Service.

Materials:

Cylinder plug and shell are brass unless otherwise specified. Bottom pins, finger pins, sidebar, and keys are nickel silver. Top pins and master pins are brass.

Standard Conventional Keying:

Everest

Everest products are available to Commercial customers. When no other keyway is specified on an Commercial customer's order, Schlage supplies Everest keyways in a C123 keyway for stock products and in a C145 keyway for master keyed products. All Everest conventional cylinders have six standard pins and a check pin.

Classic

Classic products are supplied upon request to Commercial customers and are the standard keyway for Residential customers. C keyway is the default for stock products and E keyway is supplied for master keyed products.

Primus

Primus products are available to qualifying Commercial customers. All Primus cylinders have six standard pins and five finger pins.

Keys

Classic cylinders are supplied with two 5-pin keys unless otherwise specified. All Everest and Primus pinned cylinders are supplied with two 6-pin keys, except certain stocking levels of Primus which are supplied less key blanks (LKB) for security reasons.

Keying Options:

Interchangeable core cylinders. Master keying, grand master keying, and construction keying. Construction master keying is not available for Primus cylinders, however, construction cores can be furnished if the job is interchangeable core.

Warranty:

Three-year limited for keys and cylinders.

Software:

All Schlage cylinders and keys can be used in conjunction with SITEMASTER 200® key control management software for highly effective key control.



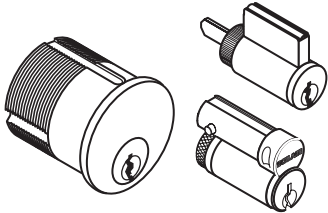
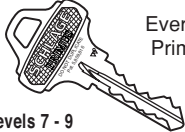
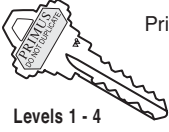
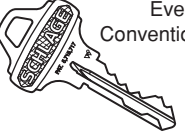
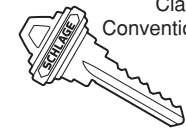
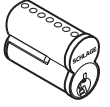
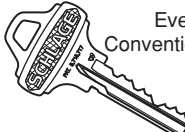
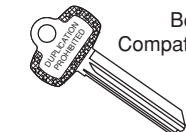
Certifications

UL / cUL:

20-500 Series Primus cylinders are UL437 Listed Locking Cylinders.

Schlage Cylinder Terminology

Over the last few years Schlage has introduced a variety of new keyways and cylinder types. This chart illustrates our cylinder terms and how they are related. The definitions below provide additional information.

			Keyway Type	
Cylinder Category	Mechanism	Key Control	EVEREST® Keyways	CLASSIC Keyways
Full Size Cylinders and Cores 	PRIMUS. High Security & Geographical Exclusivity	Adds Patented Restricted Duplication Even to Open Keyways	 Everest Primus Levels 7 - 9	 Primus Levels 1 - 4
	Conventional (Non-Primus)	Open and Restricted Keyways	 Everest Conventional	 Classic Conventional
Small Format (Best Style) Interchangeable Core 	Conventional (Non-Primus)	Open and Restricted Keyways	 Everest Conventional	 Best® Compatible

Keyways

Everest

Cylinders and keys which incorporate all new keyways with the patented undercut groove on the right side of the key section. C Family is the name of the open family of keyways. B Family (for SFIC) and D Family keyways are restricted.



Classic

Schlage pin tumbler keyways which existed before Everest keyways. Obverse is the name of the open family of keyways (C, E, etc.) and there are three other families of restricted keyways: Reverse, Numbered and Quad.

Cylinder Mechanisms

Primus Cylinders

Schlage's high security sidebar cylinder mechanism. Schlage patented* key control, geographical exclusivity, and pick resistance are standard. UL437 drill resistance is optional. Primus keys operate conventional cylinders.



Conventional Cylinders

Normal, standard cylinders.

Key Control

Restricted Keyways

Special non-stock keyways set aside for limited use and a higher degree of key control. A letter of authorization from the end user is required to process orders for keys, blanks and cylinders.



Open Keyways

Standard keyways available without any ordering formalities. C Family (Everest Conventional) and Obverse (Classic Conventional) keyways are open. All others are restricted.

Cylinder Category

Small Format Interchangeable Core (SFIC)

A core completely interchangeable with Best, Falcon, etc. No Primus version exists. Pins, springs, keys and keyways are based on a plug diameter smaller than the standard 1/2".



Full Size

Pertaining to cylinders (including interchangeable cores), keys and keyways based on the industry standard plug diameter of about 1/2".

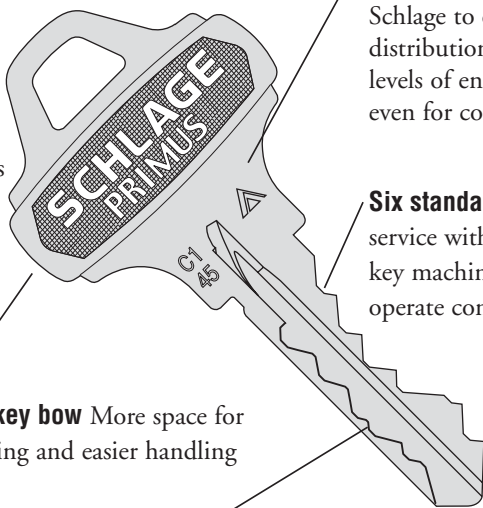


Everest and Classic Comparison

Everest: The Top Choice For All New Key Systems

15% Thicker Key for added strength

Traceability
Primus and restricted keys are marked with ID number



Strong patent protection by multiple utility and design patents, allowing Schlage to control key blank distribution and provide varying levels of enforceable key control, even for conventional Everest keys

Six standard key cuts for easy dealer service with standard pin kits and key machines. Primus keys can operate conventional cylinders

25% Larger key bow More space for special stamping and easier handling

Primus side biting factory cut to provide geographical exclusivity for end users or dealers and operate pick-resistant secondary locking mechanism

HIGH SECURITY

Everest Primus

Patent protected keys with exclusive side biting and positive key control

MEDIUM SECURITY

Everest Restricted Conventional

Patented keys with a high level of key control in a mid-priced cylinder

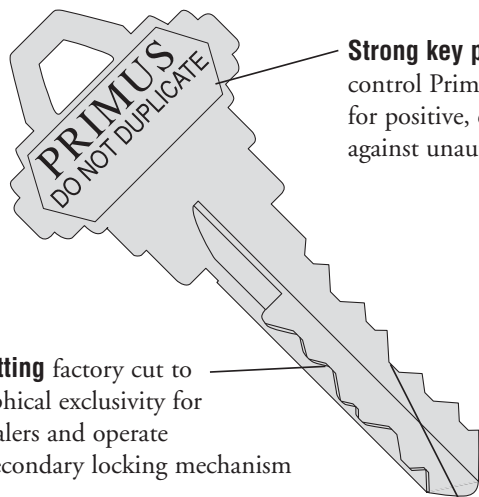
BASIC SECURITY

Everest Open Conventional

Patented keys sold exclusively through commercial dealers

Classic: Maintain and Upgrade Older Key Systems

Primus side biting factory cut to provide geographical exclusivity for end users or dealers and operate pick-resistant secondary locking mechanism



Strong key protection by Schlage to control Primus key blank distribution for positive, enforceable protection against unauthorized key duplication

Five or six standard key cuts for easy dealer service with standard pin kits and key machines. Primus keys can operate conventional cylinders.

HIGH SECURITY

Classic Primus

Restricted keys with exclusive side biting and positive key control

BASIC SECURITY

Classic Conventional

Keys for standard commercial and residential security

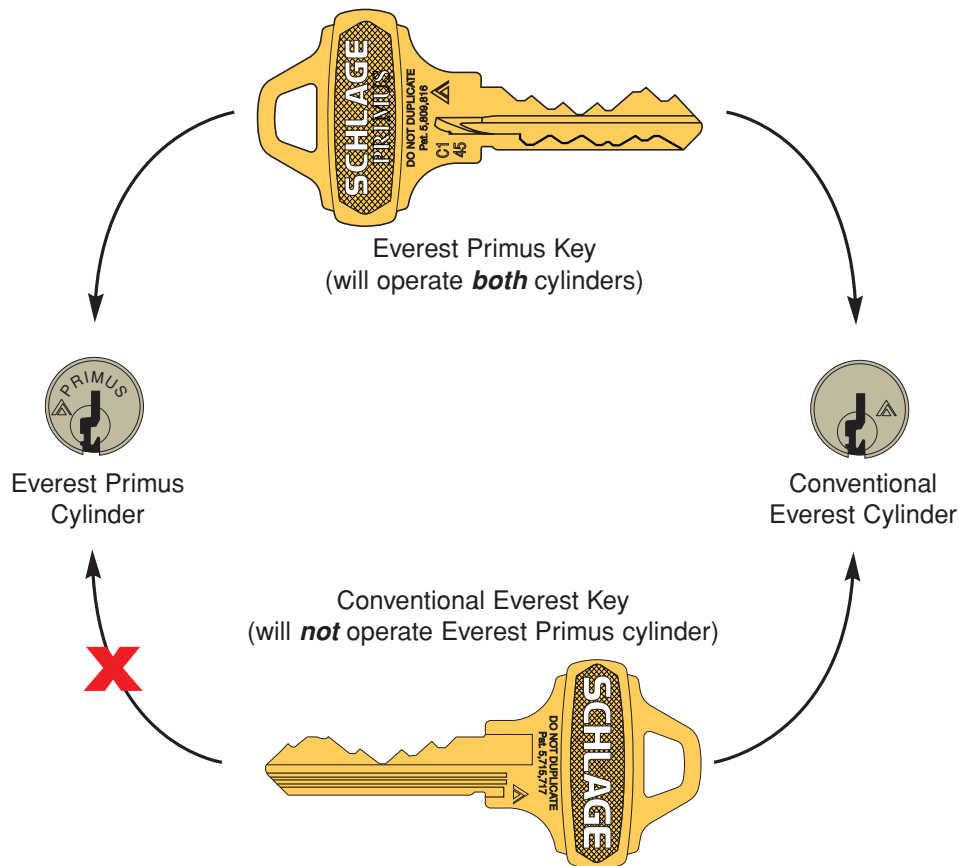


Flexibility

Unlike many other brands of high security cylinders, Schlage can easily integrate Primus UL437 Listed cylinders, Primus Controlled Access cylinders, and Schlage conventional cylinders all into the same key system, and this happens with no adverse effect on keying capacity!

Primus keys will operate conventional cylinders but conventional keys will not operate Primus cylinders. You can secure exterior doors and sensitive areas with Primus cylinders and use conventional cylinders on the remaining doors. This cuts the cost of the overall job.

Security can be tailored to meet the exact needs of each door without sacrificing the convenience of having a single building master key.



Note: Everest Primus keys are compatible with Everest C Family Open *or* Everest D Family Restricted key systems.

Performance Features

The Schlage Primus High Security cylinder is precision built to extremely close tolerances and the highest standards of quality. These “dual-locking” cylinders consist of two independent locking mechanisms operated by a single, specially designed Primus key. In addition to a standard 6-pin mechanism there is a locking sidebar which is independently controlled by a set of five finger pins that interface with the side biting on the patented* Primus key. Each finger pin must be lifted *and swiveled* to the right orientation.

Primus cylinders are offered in two different versions. The 20-500 High Security series is UL Listed and the 20-700 Controlled Access series offers the same key control and pick resistance when UL Listed cylinders are not necessary. Both series can be combined into the same master key system, along with Schlage conventional cylinders. For added flexibility, all Primus cylinders can be retrofitted into existing Schlage locks as well as many other manufacturers’ products.

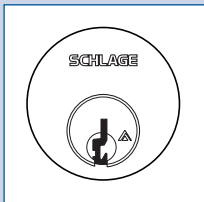
*Patented key protection applies to Everest Primus only.

Choose the Right Cylinder for Each Application

Conventional (Standard) Cylinders

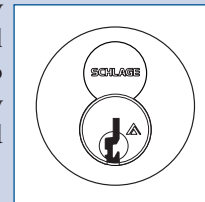
Schlage's high quality conventional cylinders provide the standard, normal level of security and functionality for Schlage locks. Using only solid brass bar stock plugs and shells, phosphor bronze springs, nickel silver keys and bottom pins, ensures long life and ease of operation.

6-pin Everest cylinders in C123 keyway with two patented keys are standard for stock. C145 is standard for new master key systems.



Interchangeable Core (IC) Cylinders

For use where fast rekeying by non-technical personnel is desired, Schlage Primus and conventional interchangeable cores offer a great blend of security and convenience. The special control key for the system is all you need to remove the old core and install a new one. The core itself can be rekeyed with standard Schlage pin kits.



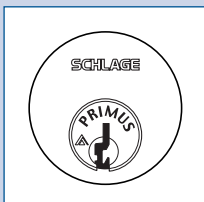
Unlike some other brands, Schlage interchangeable cores can always be integrated into existing systems with no adverse effect on the key system.

IC locks are especially well suited to chain stores and restaurants where frequent employee turnover requires immediate rekeying by store management, and hardware such as exit devices, which are labor-intensive to rekey.

Primus® High Security Cylinders

Primus high security cylinders are available to add patented* key control and varying degrees of geographical exclusivity to most Schlage 6-pin key systems, whether using Everest or Classic keyways.

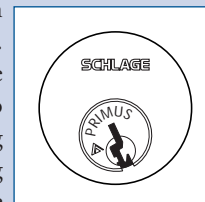
In addition to a conventional pin tumbler mechanism, Primus cylinders incorporate a patented* finger pin and sidebar design providing a "dual-locking" cylinder that is highly pick-proof. Resistance to drilling and other physical attack is optional by specifying 20-500 Series UL437 Listed cylinders.



*Patented key protection applies to Everest Primus only.

Primus® Lockout Cylinders

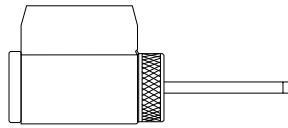
Available in rim and mortise cylinders only, Lockout cylinders are designed for doors where it is frequently desirable to disable all keys from operating the lock temporarily. The special *lockout key* can be removed while the plug is turned to the 11 o'clock position, preventing all normal operating keys, including master keys, from fully entering the cylinder.



Suggested applications for lockout cylinders include laboratories, dark rooms, clean rooms, and exterior doors to dormitories.

Schlage will not master key lockout cylinders.

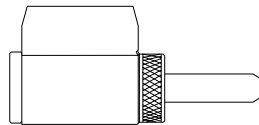
Cylinders for Schlage Locksets



Cylinders for A-Series Knobs

Number	Description
21-002	6-Pin conventional cylinder (standard, non-Orbit)
21-002-122	6-Pin conventional cylinder (standard, Orbit design only)
20-724	Primus cylinder, non-Orbit
20-724-122	Primus cylinder, Orbit design only
20-524	Primus UL437 Listed high security cylinder, non-Orbit
20-524-122	Primus UL437 Listed high security cylinder, Orbit design only
21-003	Conventional hotel function (A85) with indicator, non-Orbit
21-003-168	Conventional hotel function (A85) with indicator, Orbit only

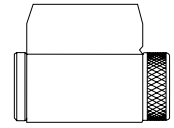
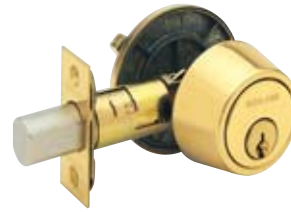
Available 606 and 626 finish only.



Cylinders for AL-Series Levers

Number	Description
21-020	6-Pin conventional cylinder (standard)
20-728	Primus cylinder
20-528	Primus UL437 Listed high security cylinder
21-021	Conventional hotel function (AL85) with occupancy indicator

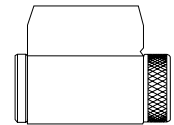
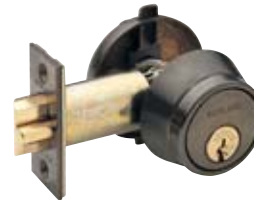
Available 606 and 626 finish only.



Cylinders for BC100-Series (Order tailpiece and housing separately.)

Number	Description
22-002	Conventional cylinder only
20-729	Primus cylinder only
20-529	Primus UL437 Listed high security cylinder only
22-073	Dummy cyl. with collar, adapter ring, inside rose and screws

Available 606 and 626 finish only.



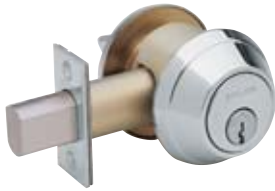
Cylinders for B250-Series (Order tailpieces separately.)

This table also applies to discontinued B100, B200 and B400-Series deadlocks, and the top cylinders of H and S200-Series interconnected locksets.

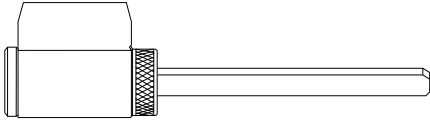
Number	Description
22-002	6-Pin conventional cylinder only
20-729	Primus cylinder only
20-529	Primus UL437 Listed high security cylinder only
22-019	6-Pin conventional cylinder in outside housing
20-730	Primus cylinder in outside housing
20-530	Primus UL437 Listed high security cylinder in outside housing
22-015	Dummy cyl. with collar, adapter ring, inside rose and screws

Cylinder itself available 606 and 626 finish only. Housing is available in B250, H, and S200-Series finishes.

Cylinders for Schlage Locksets



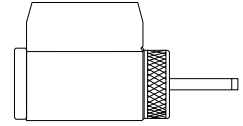
B600-Series - Conventional Cylinder
B700-Series - Primus Cylinder
B800-Series - UL437 Listed Primus Cylinder



Cylinders for B600/700/800-Series Deadlocks (Housing not included)

Lockset Function	Cylinder Number	Door Thickness	Cylinder Mechanism
B660, B663	22-644	1 3/8" - 2 1/2"	Conventional
B661, B664	22-642	1 3/8" - 2"	
	22-643	2" - 2 1/2"	
B662	22-645	1 3/8" - 2"	
B760, B763	20-744	1 3/8" - 2 1/2"	Primus
B761, B764	20-742	1 3/8" - 2"	
	20-743	2" - 2 1/2"	
B762	20-745	1 3/8" - 2"	
	20-746	2" - 2 1/2"	
B860, B863	20-544	1 3/8" - 2 1/2"	Primus UL437 Listed
B861, B864	20-542	1 3/8" - 2"	
	20-543	2" - 2 1/2"	
B862	20-545	1 3/8" - 2"	
	20-546	2" - 2 1/2"	

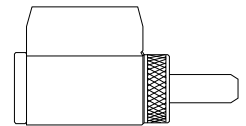
Available 606 and 626 finish only.



Cylinders for D-Series Knobs

Number	Description
23-001	6-Pin conventional cylinder (standard)
20-748	Primus cylinder
20-548	Primus UL437 Listed high security cylinder
23-003	Conventional hotel function (D85) with occupancy indicator
21-002	6-Pin conventional cylinder, 2" - 2 1/2" thick door
20-724	Primus cylinder, 2" - 2 1/2" thick door
20-524	Primus UL437 Listed high security cylinder, 2" - 2 1/2" door
23-003-098	Conventional hotel function (D85) w/indicator, 2" - 2 1/2" door

Available 606 and 626 finish only.

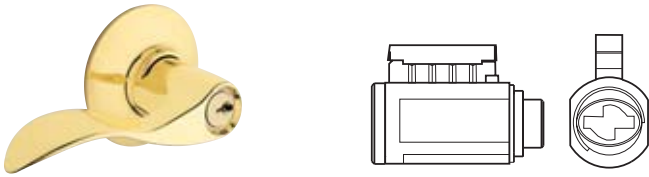


Cylinders for D-Series Levers (old style)

Number	Description
23-013	6-Pin conventional cylinder (standard)
20-750	Primus cylinder
20-550	Primus UL437 Listed high security cylinder
23-014	Conventional hotel function (D85) with occupancy indicator

Available 606 and 626 finish only.

Cylinders for Schlage Locksets



Cylinders for F-Series Knobs and Levers

Number	Description
29-016	Bell, Georgian and Plymouth knobs
29-017	Orbit knob
29-018	Accent and Flair levers

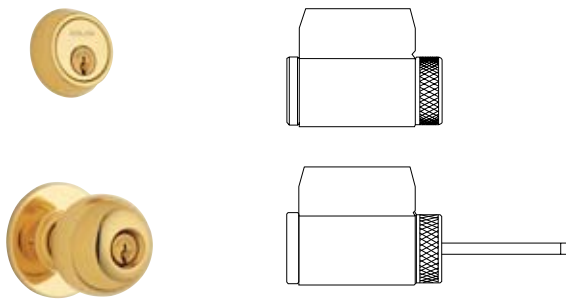
Available 429 (to match 626) and 430 (to match 606) finish. 5-pin C keyway only. Cylinder plug and shell are zinc.



Cylinders for S-Series Levers

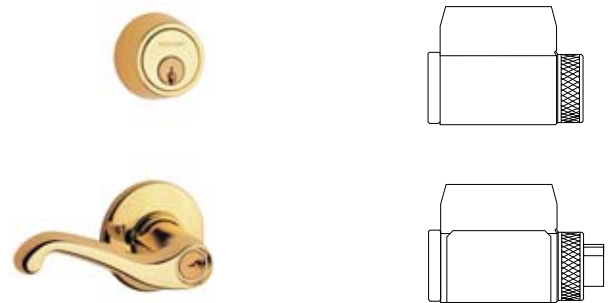
Number	Description
21-028	Conventional cylinder
20-752	Primus cylinder
20-552	Primus UL437 Listed high security cylinder only

Available 606 and 626 finish. Cylinders include S605-192.



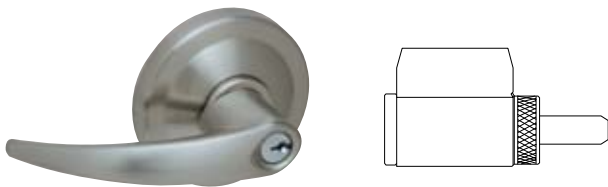
Cylinders for H-Series Interconnected Locksets

Description	Cylinder
Top cylinder (deadlock)	See B200/400-Series deadlock cylinder table
Bottom cylinder (knob)	See A-Series knob cylinder table



Cylinders for S200-Series Interconnected Locksets

Description	Cylinder
Top cylinder (deadlock)	See B200/400-Series deadlock cylinder table
Bottom cylinder (lever)	See S-Series lever cylinder table

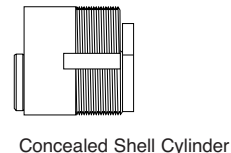
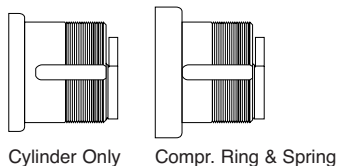


Cylinders for ND-Series Locksets

Number	Description
23-065	6-Pin conventional cylinder (standard)
20-765	Primus cylinder
20-565	Primus UL437 Listed high security cylinder
23-000	Hotel function (conventional cylinder)

Available 606 and 626 finish only.

Cylinders for Schlage Locksets



Blocking Rings

Cylinders for Schlage L-Series Mortise Locks

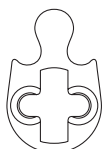
Design	Function	Cylinder Mechanism				
		Conventional	Primus	Primus UL437	Primus Lockout	Primus UL437 Lockout
<p>L & N Escutcheons (cylinders and spring only)</p>	All Except Below	30-021	20-793	20-593	20-717**	20-517**
	L9060P Outside	26-021	20-701	20-501	20-715**	20-515**
	L9485, L9486 Hotel Functions	30-022*	N/A	N/A	N/A	N/A
<p>L Escutcheon with concealed shell cylinder (C suffix)</p>	All Except Below	30-004	20-789	20-589	N/A	N/A
	L9060P Outside	26-023	N/A	N/A	N/A	N/A
	L9485, L9486 Hotel Functions	30-005*	N/A	N/A	N/A	N/A
<p>Sectional Trim (cylinder with compression ring & spring)</p>	All Except Below	30-001	20-787	20-587	20-717	20-517
	L9060P Outside	20-001	20-700	20-500	20-715	20-515
	L9485, L9486 Hotel Functions	30-002*	N/A	N/A	N/A	N/A

* Specify door hand for hotel function cylinders.

** Discard compression ring for Lockout cylinders with escutcheon trim.

- Notes
1. Available 605, 606, 609, 610, 611, 612, 613, 625, 626, 629, and 630 finish. Concealed shell cylinders available 606 and 626 only.
 2. To differentiate between Classic and Everest, specify keyway. Example: C or CP (Classic), C123 (Everest). Everest C123 keyway standard.
 3. 1 1/8" length standard. Optional lengths available in 1/8" (4mm) increments up to 1 3/4" (44mm).
 4. To order less Schlage logo, specify with K510-612 faceplate.
 5. Lockout keys must be ordered separately and lockout cylinders will not be master keyed by Schlage.
 6. Specify LKB if 0-bitted Primus cylinders are required less key blanks.

Cam for All Functions Except L9060 Outside



L583-254
Classic Conventional



L583-153
Everest & Primus

Cam for L9060 Outside



B502-191
Classic Conventional



B502-948
Everest & Primus

Cabinet Locks and Padlocks

CL-Series Cabinet Locks

CL1000

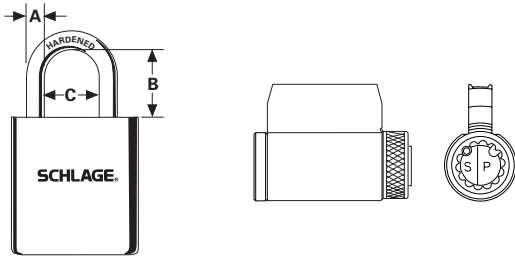
CL2009



Application	Bolt	Complete Lock			Cylinder Only		
		Conventional	Primus	Primus UL	Conventional	Primus	Primus UL
Door	1" (std)	CL1000PB	CL1740PB	CL1540PB	20-172	20-772	20-572
Drawer	3/4"	CL2009PB	CL2749PB	CL2549PB	20-174	20-774	20-574

Available 605 and 626 finish.
Everest C123 keyway standard.

PL-Series Padlocks



Padlock Series	Shackle Dimensions			Complete Padlock			Cylinder Only		
	A	B	C	Conventional	Primus	Primus UL	Conventional	Primus	Primus UL
PL1000 1 3/4" x 2 1/8" x 3/4"	5/16"	1 1/8"	3/4"	PL1001	PL1741	PL1541	47-410	47-740	47-540
	5/16"	2"	3/4"	PL1002	PL1742	PL1542			
	5/16"	3"	3/4"	PL1003	PL1743	PL1543			
PL2000 2" x 2 1/8" x 3/4"	3/8"	1 1/8"	3/4"	PL2001	PL2741	PL2541			
	3/8"	2"	3/4"	PL2002	PL2742	PL2542			
	3/8"	3"	3/4"	PL2003	PL2743	PL2543			
PL3000 2 1/4" x 2 3/8" x 7/8"	7/16"	1 1/8"	15/16"	PL3001	PL3741	PL3541			
	7/16"	2"	15/16"	PL3002	PL3742	PL3542			

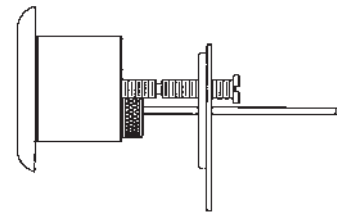
Available 606 finish only.
Everest C123 keyway standard.



Cylinders for Exit Devices, Aluminum Doors, etc.

Rim Cylinders

Number	Description	Tail Piece
20-022	Conventional cylinder	Horizontal
20-021	Conventional cylinder	Vertical
20-710	Primus cylinder	Horizontal
20-709	Primus cylinder	Vertical
20-716	Primus lockout cylinder	Horizontal
20-510	Primus UL437 Listed cylinder	Horizontal
20-509	Primus UL437 Listed cylinder with	Vertical
20-516	Primus UL437 Listed lockout cylinder	Horizontal



Available 605, 606, 609, 610, 611, 612, 613, 616, 625 and 626 finish.

**Cylinders for Adams Rite MS, 4500 and 4700 Series
Lori 4500 Series and Corbin Russwin DL3000 Series**

Number	Description
26-072	Conventional cylinder only
20-013	Conventional cylinder with 3/8" blocking ring
20-706	Primus cylinder with 3/8" blocking ring
20-506	Primus UL437 Listed cylinder with 3/8" blocking ring
20-718	Primus lockout cylinder
20-518	Primus UL437 Listed lockout cylinder



B502-292
Cam for Classic
Conventional



B502-944
Cam for Everest
& Primus

These cylinders include set screw pack B220-050 for Adams Rite locks.

Cylinders for Adams Rite 4070 Series

Number	Description
26-073	Conventional cylinder only
20-708	Primus cylinder only
20-508	Primus UL437 Listed cylinder only



B502-380
Cam for Classic
Conventional



B502-945
Cam for Everest
& Primus

- Notes
1. Mortise cylinders available 605, 606, 609, 610, 611, 612, 613, 616, 625, 626, 629, and 630 finish.
 2. To differentiate between Classic and Everest, specify keyway. Example: C or CP (Classic), C123 (Everest). Everest C123 keyway standard.
 3. 1 1/8" length standard. Optional lengths available in 1/8" (4mm) increments up to 1 3/4" (44mm).
 4. To order less Schlage logo, specify with K510-612 faceplate.
 5. Lockout keys must be ordered separately and lockout cylinders will not be master keyed by Schlage.
 6. Specify LKB if 0-bitted Primus cylinders are required less key blanks.

Full Size Interchangeable Core Availability

A-Series
ORBIT DESIGN



ND-Series Lever
ALL DESIGNS



AL-Series
SATURN DESIGN



H-Series Knob
ORBIT DESIGN



BC100-Series
B250-Series



L-Series
ALL DESIGNS
EXCEPT CONCEALED



B600 / 700-Series



S-Series
ALL DESIGNS
EXCEPT FLAIR



D-Series Knob
ORBIT DESIGN



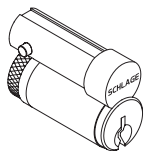
S200-Series
ALL DESIGNS FOR S210.

ALL EXCEPT FLAIR FOR
OTHER FUNCTIONS





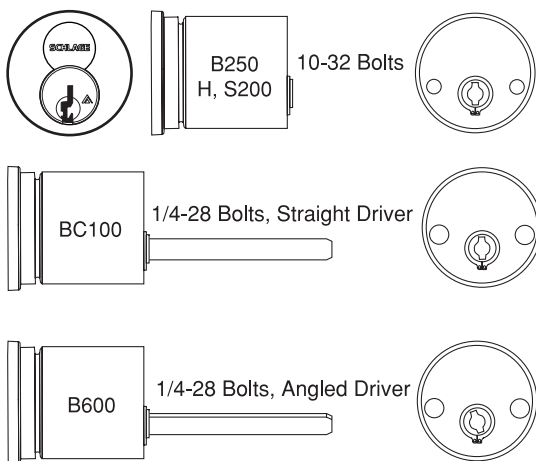
Full Size Interchangeable Core Cylinders for Schlage Locksets



Full Size Core Only

Number	Mechanism
23-030	Conventional core
30-120	Conventional core for hotel function (specify hand)
20-740	Primus core (not available in hotel function)

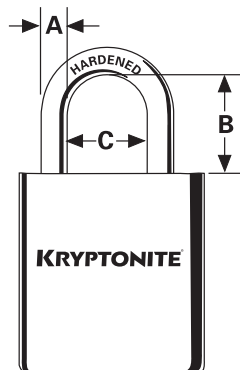
Available 606 and 626 finish only. **Order control keys separately.**



Full Size IC Housings for Bored Deadlocks, Less Core

Lockset Series	Description	Number	Specify Finish
BC100-Series	Outside	B220-203	605, 609, 612, 613, 625, 626
	Inside	B220-201	See Note Below
B250, H, S200-Series	Outside	22-061	605, 606, 609, 610, 611, 612, 613, 616, 625, 626
	Inside of B252	22-062	
B600 / 700-Series	Outside	B610-027	605, 606, 609, 612, 613, 625, 626
	Inside	B610-028	See Note Below

Specify finish of B610-031 inside snap-on faceplate ordered separately for BC162 and B662/762.

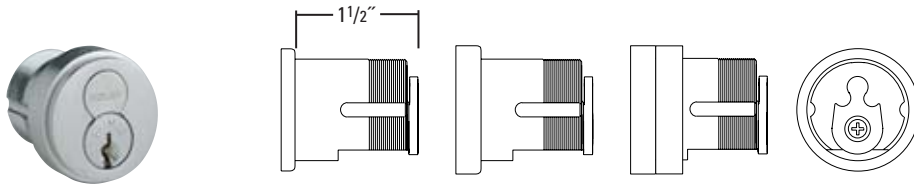


Interchangeable Core Padlocks



Padlock Series	Shackle Dimensions			Padlock with Core	
	A	B	C	Conventional	Primus
PL4000 2" x 2 1/4" x 7/8"	3/8"	1 1/8"	3/4"	PL4001	PL4741
	3/8"	2"	3/4"	PL4002	PL4742
	3/8"	3"	3/4"	PL4003	PL4743



Full Size Interchangeable Core Mortise Cylinders



Cylinders for Schlage L-Series Mortise Locks

Design	Function	Core Mechanism		
		Conventional	Primus	Housing Less Core
 <p>L & N Escutcheons (cylinders with compression ring)</p>	All Except Below	30-008	20-798	30-007
	L9060P Outside	30-030	20-782	30-032 + 36-083
	L9485P, L9486P Hotel Functions	30-010*	N/A	30-007
 <p>Sectional Trim (cylinder with compression ring, spring and 3/8" blocking ring). L9060 requires 1/2" blocking ring.</p>	All Except Below	30-138	20-776	30-137
	L9060P Outside	30-030 + 36-083 + 35-082-030	20-783	30-032 + 36-083 + 36-082-050
	L9485P, L9486P Hotel Functions	30-140*	N/A	30-137

* Hotel function cores are handed. Specify hand of door.



L583-255
Cam for All Functions
Except L9060 Outside



K510-680
Cam for
L9060 Outside

Mortise Cylinders with Straight Cam for Exit Devices

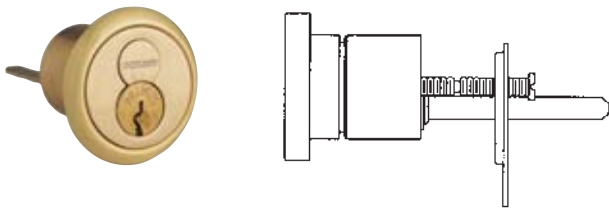
Number	Core Mechanism	Collar
26-091	Conventional core	Compression ring & spring
20-061		3/8" blocking rings + compression ring & spring
20-763	Primus core	Compression ring & spring
20-771		3/8" blocking rings + compression ring & spring
20-059	Housing less core	None
26-064		Compression ring & spring
26-094		3/8" blocking rings + compression ring & spring



K510-730
Straight Cam,
Other Applications

- Notes
1. Available 605, 606, 609, 610, 612, 613, 625, and 626 finish. Cores furnished 606 and 626 only.
 2. To differentiate between Classic and Everest, specify keyway. Example: C or CP (Classic), C123 (Everest). Everest C123 keyway standard.
 3. All cylinders are 1 1/2" long.
 4. Specify LKB if 0-bitted Primus cylinders are required less key blanks.

Full Size Interchangeable Core Cylinders for Exit Devices, Aluminum Doors, etc.



Interchangeable Core Rim Cylinders for Exit Devices

Number	Core Mechanism
20-057	Conventional core
20-757	Primus core
20-079	Housing only, less core

Available 605, 606, 609, 610, 612, 613, 625 and 626 finish.



**Cylinders for Adams Rite MS and 4700 Series
Lori 4500 Series and Corbin Russwin DL3000 Series**

Number	Core Mechanism	Collar
26-098	Conventional core	Compression ring & spring
20-062	Conventional core	3/16" + 3/8" blocking rings
20-766	Primus core	3/16" + 3/8" blocking rings
20-060	Housing less core	None

These cylinders include set screw pack B220-050 for Adams Rite locks.



K510-711
Adams Rite
MS Cam

Cylinders for Adams Rite 4070 Series Deadlocks

Number	Core Mechanism	Collar
20-091	Conventional core	3/16" + 3/8" blocking rings
20-722	Primus core	3/16" + 3/8" blocking rings
20-090	Housing less core	None



B520-378
Adams Rite
4070 Cam

- Notes
1. Mortise cylinders available 605, 606, 609, 610, 612, 613, 625, and 626 finish. Cores furnished 606 and 626 only.
 2. To differentiate between Classic and Everest, specify keyway. Example: C or CP (Classic), C123 (Everest).
 3. All cylinders are 1 1/2" long.
 4. Specify LKB if 0-bitted Primus cylinders are required less key blanks.

Small Format (Best Style) Interchangeable Core Availability

AL-Series
SATURN DESIGN



ND-Series Lever
ALL DESIGNS



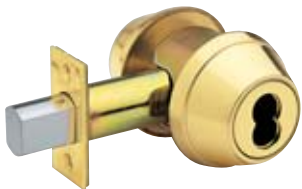
BC100-Series



L400-Series



B600 / 700-Series



L9000-Series
ALL DESIGNS



**KC 11-Series, KC 21-Series,
KC 41-Series Padlocks**



KC215-Series



**KC 72-Series, KC 82-Series,
KC 92-Series Padlocks**





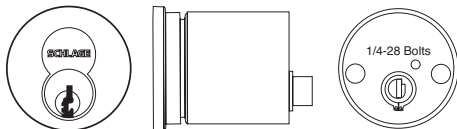
Small Format Interchangeable Core Cylinders for Schlage Locksets



Small Format Core Only

Number	Mechanism
80-036	7-pin Everest B Family restricted keyway core uncombined
80-037	7-pin Everest B Family restricted keyway core combined
80-043	6-pin Best keyway core, uncombined
80-033	7-pin Best keyway core, uncombined

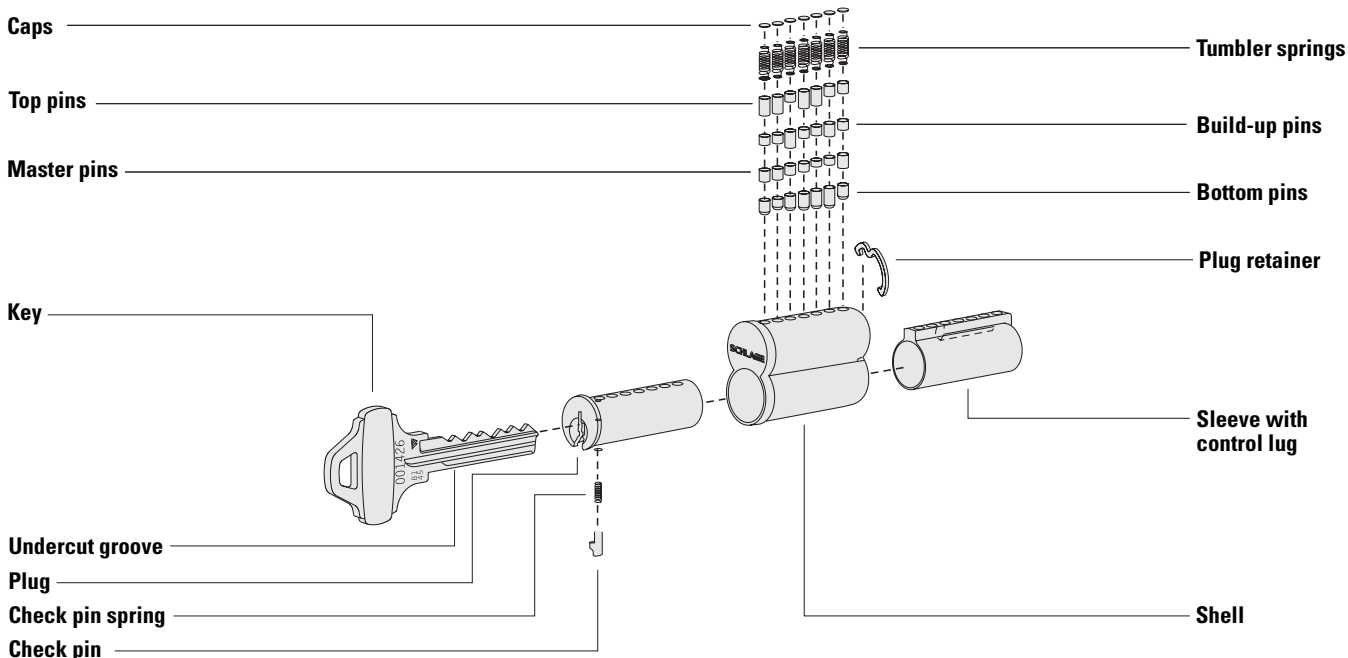
- Notes
1. Available 606 and 626 finish only.
 2. Suffix keyway, e.g. 80-036 B235, 80-043 AB, etc.
 3. Proper authorization required for Everest cores. Order control keys separately.
 4. 80-043 and 80-033 available in Best A, D, E, F, G, H, J, K, L and M keyways. Suffix "B" to keyway letter, e.g. AB, DB, etc.



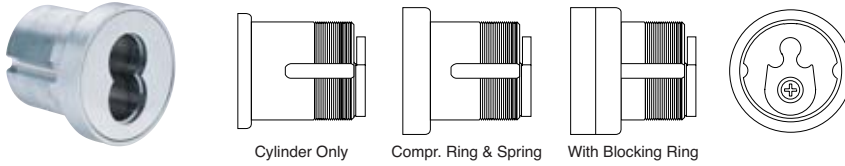
Small Format IC Housings for Commercial Deadlocks, Less Core

Lockset Series	Description	Number	Specify Finish
BC100-Series	Outside	B610-282	605, 609, 612, 613, 625, 626
	Inside	B610-281	See Note Below
B600-Series	Outside	B610-282	605, 606, 609, 612, 613, 625, 626
	Inside	B610-281	See Note Below

Tailpieces not included.
Specify finish of B610-014 snap-on faceplate ordered separately for inside of BC162 and B662.



Small Format Interchangeable Core Mortise Cylinders

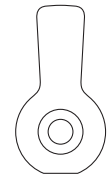


Cylinders for Schlage L-Series Mortise Locks

	Design	Function	Cylinder Mechanism			
			Everest Restricted (GD Suffix)	Keyed Construction (HD Suffix)	Disposable Construction (BDC Suffix)	Housing Less Core (BD Suffix)
	L & N Escutcheons (cylinders with compression ring and spring)	All except L9060 Outside	80-308	80-138	80-115	80-108
		L9060 Outside	80-304	80-134	80-112	80-104
	Sectional Trim (Cylinder with compression ring, spring, and 1/4" blocking ring)	All* except L9060 Outside	80-301	80-131	80-109	80-101
		L9060 Outside	80-304 + 36-082-050	80-134 36-082-050	80-112 36-082-050	80-104 36-082-050



L583-255
Cam for All Functions Except L9060 Outside



K510-680
Cam for L9060 Outside

Notes 1. Available 605, 606, 612, 613, 625, and 626 finish. Cores furnished 606 and 626 only.
2. All cylinders are 1 3/8" long.

Mortise Cylinders with Straight Cam for Exit Devices

Number	Core Type
80-302	Everest restricted core
80-110	Disposable constr. core
80-132	Keyed constr. core
80-102	Housing less core



K510-730
Straight Cam,
Other Applications

Furnished with compression ring, spring and 1/4" blocking ring

Notes 1. Available 605, 606, 612, 613, 625, and 626 finish. Cores furnished 606 and 626 only.
2. All cylinders are 1 3/8" long.



Small Format Interchangeable Core Cylinders for Exit Devices, Aluminum Doors, etc.



Interchangeable Core Rim Cylinders for Exit Devices

Number	Core Mechanism
80-329	Everest restricted keyway core
80-159	Keyed construction core
80-116	Disposable construction core
80-129	Less core

Available 605, 606, 609, 610, 612, 613, 625 and 626 finish.



**Cylinders for Adams Rite MS and 4700 Series,
Lori 4500 Series and Corbin Russwin DL3000 Series.**

Number	Core Type
80-303	Everest restricted core
80-111	Disposable constr. core
80-133	Keyed constr. core
80-103	Housing less core



K510-711
Adams Rite
MS Cam

Furnished with compression ring, spring and 7/16" blocking ring.
These cylinders include set screw pack B220-050 for Adams Rite locks.

Cylinders for Adams Rite 4070 Series Deadlocks

Number	Core Type
80-305	Everest restricted core
80-113	Disposable constr. core
80-135	Keyed constr. core
80-105	Housing less core

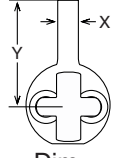

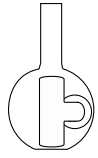
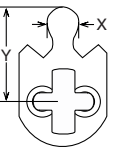
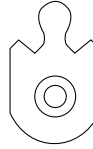

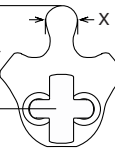

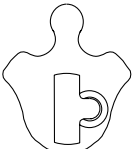
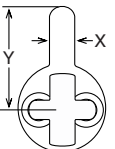

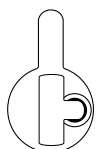


B520-378
Adams Rite
4070 Cam

Furnished with compression ring, spring and 1/4" blocking ring

- Notes 1. Available 605, 606, 612, 613, 625, and 626 finish. Cores furnished 606 and 626 only.
2. All cylinders are 1 3/8" long.

Cams for Schlage Mortise Cylinders in Other Manufacturers' Mortise Locks

	Classic Conventional	Interchangeable Core	Everest & Primus Non-IC
	20-001 26-021	20-061, 20-771, 26-090, 26-090, 26-091, 26-093, 26-094, 80-102, 80-110, 80-132, 80-302	20-001 Everest 20-500 and 20-700 Primus
Corbin Russwin® DL4000 Series (Old Corbin 420 and Russwin 1503)	B520-295  Dim. X = .155 Y = .775	B520-254 	B520-366 
Corbin Russwin® ML2200 Series (Old Corbin 7000-9000 and Russwin 4000-5000) All functions except ML2255 and ML2242 inside (see straight cam)	B520-233  Dim. X = .232 Y = .729	B520-253 	B520-309 
Corbin Russwin A65 ML2200 master ring deadbolt functions manufactured before 6/10/93 and old Russwin cast iron residential locks	B520-223  Dim. X = .235 Y = .729	B520-360 	B520-367 
Yale® 2160 Arrow® #004 Sargent® 13-0660 All functions except 16 inside and 50 outside	B520-256  Dim. X = .186 Y = .718	B520-296 	B520-329 

The following complete cylinders are available. Specify the desired cam from the correct column above:

Cylinder Mechanism

- Conventional cylinder
- Primus cylinder
- Primus UL437 Listed cylinder
- Full size IC with conventional core
- Full size IC with Primus core
- Full size IC housing less core
- SFIC with Everest core
- SFIC with keyed construction core
- SFIC with disposable construction core
- SFIC housing less core

Collar

- compression ring and spring
- compression ring and spring
- compression ring and spring
- compression ring, spring, 3/8" blocking ring
- compression ring, spring, 3/8" blocking ring
- compression ring, spring, 3/8" blocking ring
- compression ring, spring, 1/4" blocking ring
- compression ring, spring, 1/4" blocking ring
- compression ring, spring, 1/4" blocking ring
- compression ring, spring, 1/4" blocking ring

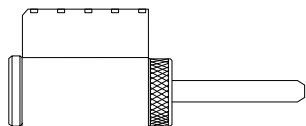
How to Order

- 20-001 x cam number
- 20-700 x cam number
- 20-500 x cam number
- 20-061 x cam number
- 20-771 x cam number
- 26-094 x cam number
- 80-302 x cam number
- 80-132 x cam number
- 80-110 x cam number
- 80-102 x cam number

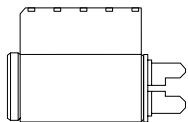
Other manufacturers' registered trade names are for identification and reference only.

Cylinders for Other Manufacturers' Products

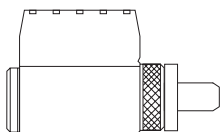
Corbin Russwin CL3400, CL3600 Series



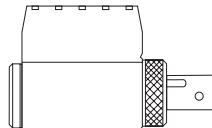
Corbin Russwin CK4200, UT5200 Series



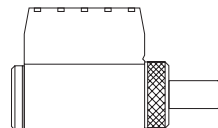
Sargent 7L, 8L, 10 Line Levers



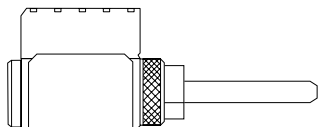
Sargent 7, 8, 9 Line Knobs



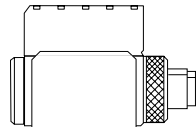
Sargent 6 Line (Except B Knobs)



Yale 5300LN, 5400LN, 6400LN Levers



Yale 5300, 5400, 6200 Knobs



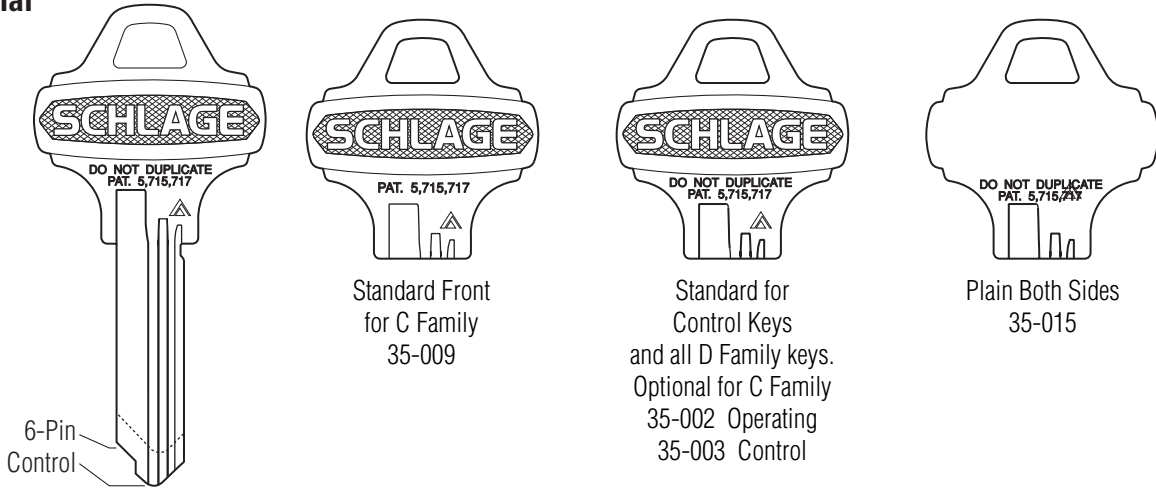
Conventional Cylinder	Primus	Primus UL437	Description
24-139	20-739	20-539	Corbin Russwin CL3400, CL3600
24-127	20-727	20-527	Corbin Russwin CK4200, UT5200
24-126	20-726	20-526	Sargent 6 Line (Except B Knobs)
24-120	20-720	20-520	Sargent 7, 8, 9 Line Knobs
24-119	20-719	20-519	Sargent 7L, 10, 65 Line Levers
24-123	20-723	20-523	Yale 5300, 5400, 6200 Knobs
24-147	20-747	20-547	Yale 5300LN, 5400LN, 6400LN Levers

Other manufacturers' registered trade names are for identification and reference only.

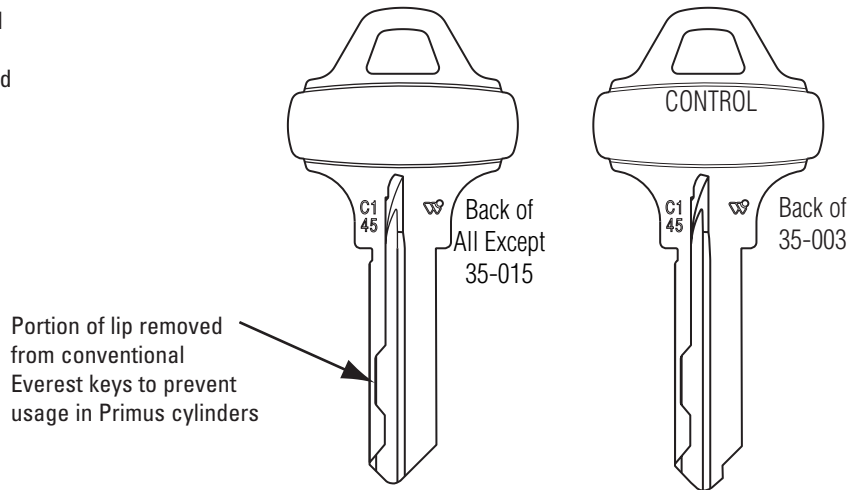
Everest Full Size Key Blanks

Numbers shown are for key blanks. For cut keys, change "35" prefix to "48" for change keys and "49" for master keys. Suffix key section, e.g. 35-009 C123. See facing page for available key sections.

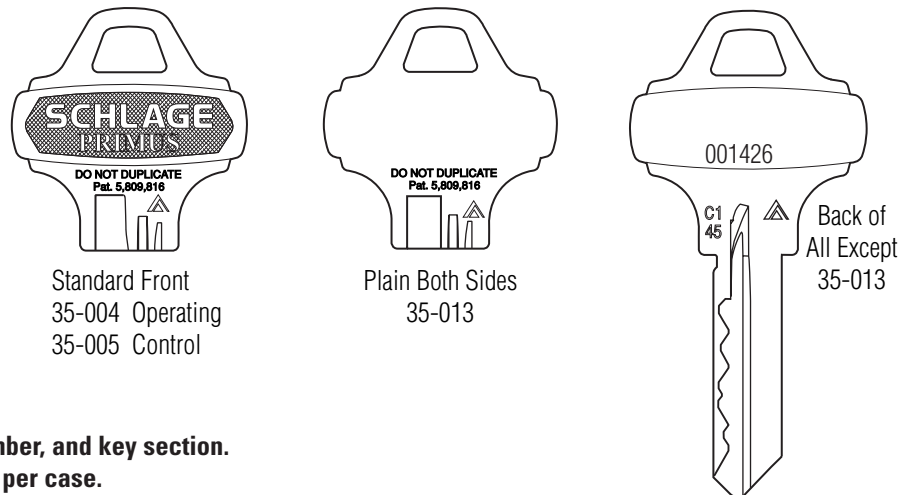
Conventional



Everest conventional keys are available with and without DO NOT DUPLICATE. Specify plain bow keys for applications when keys must be stamped with additional information such as special die stamps, serial numbering, etc.



Primus



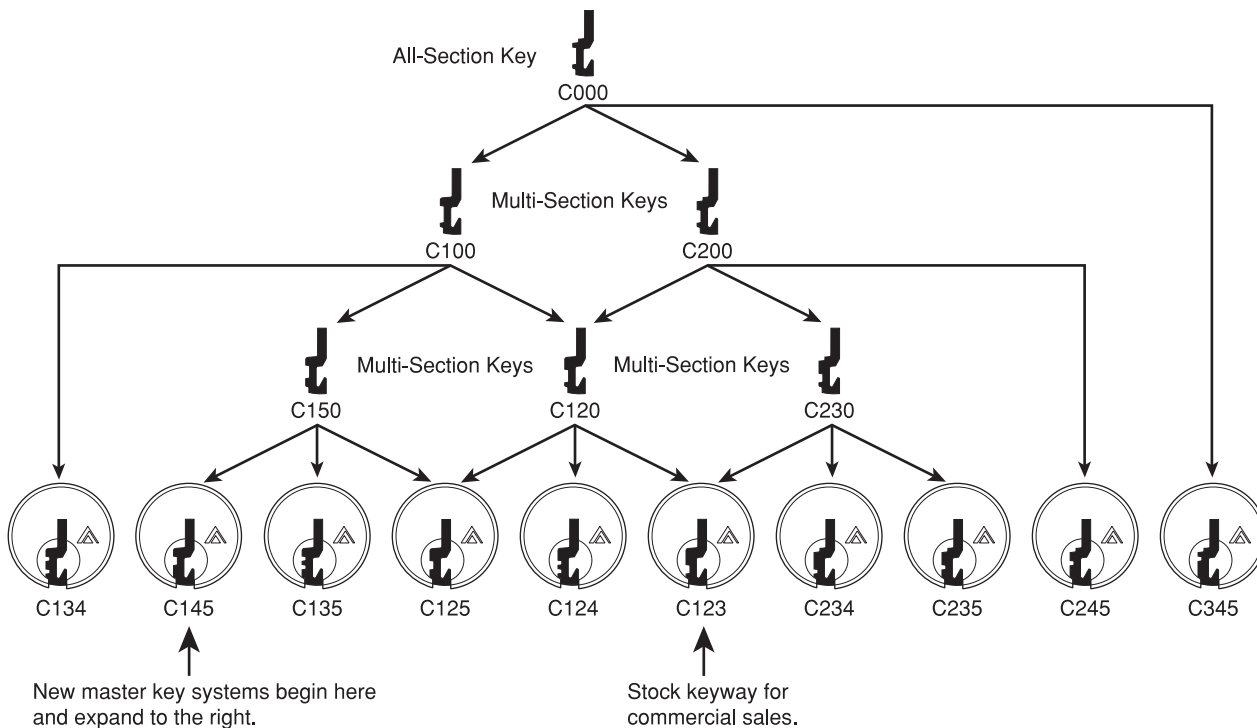
To order, specify quantity, 6-digit ID number, and key section. Key blanks are packed 50 per box, 1000 per case.

Specify Control Keys in Architectural Specifications and on Purchase Orders.

Everest Keyways for New Key Systems

C Family Keyways

for Everest conventional cylinders and Primus Levels 7, 8, and 9



By definition, all Primus keys are restricted. Primus keys are downward compatible to operate Schlage *conventional* cylinders with compatible keyways. Key blanks for Schlage Everest *conventional* cylinders with C Family keyways (above) are openly available to locksmiths and contract hardware dealers but not normally found in retail stores that duplicate keys.

D Family Restricted Keyways (not shown)

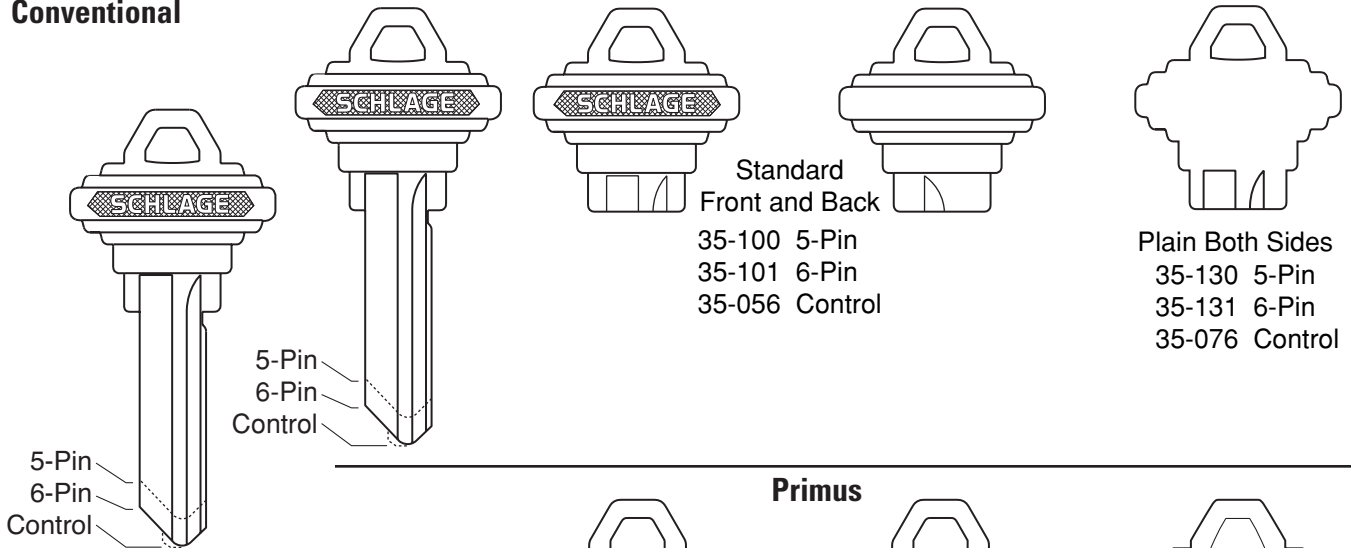
D Family keyways are end user restricted keyways. They are not stocked by locksmiths or other dealers. Conventional (non-Primus) cylinders with D Family restricted keyways offer economical patent protection but no geographical exclusivity. All orders for D Family keys and blanks require a letter of authorization from the end user.

Primus cylinders with D Family keyways are only available at Level 9 where product is shipped directly to the end user or his designated agent. Primus cylinders add the geographical exclusivity of the side biting as well as the high security features of the finger pin and sidebar mechanism.

Classic Key Blanks

Numbers shown are for key blanks. For cut keys, change "35" prefix to "48" for change keys and "49" for master keys. Suffix key section, e.g. 35-101 E. See facing page for available key sections.

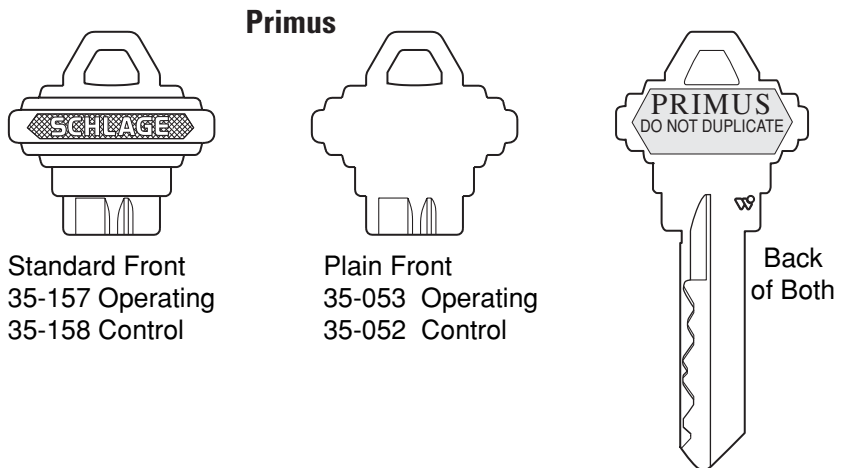
Conventional



Standard Bow

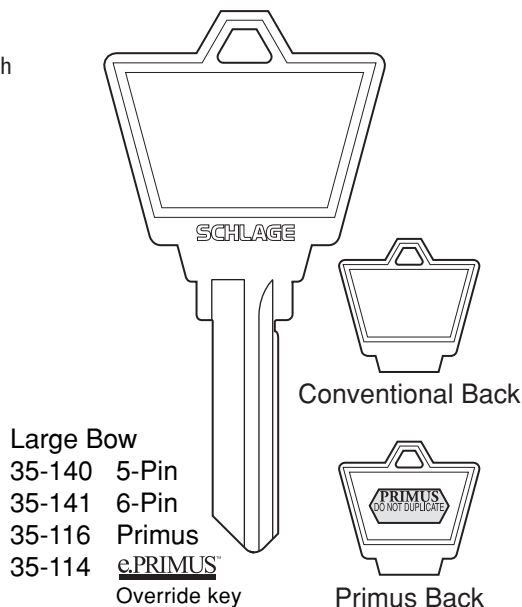
To order conventional key blanks with DO NOT DUPLICATE, specify XQ06-878.

Specify plain bow keys for applications when keys must be stamped with additional information such as special die stamps, serial numbering, etc.



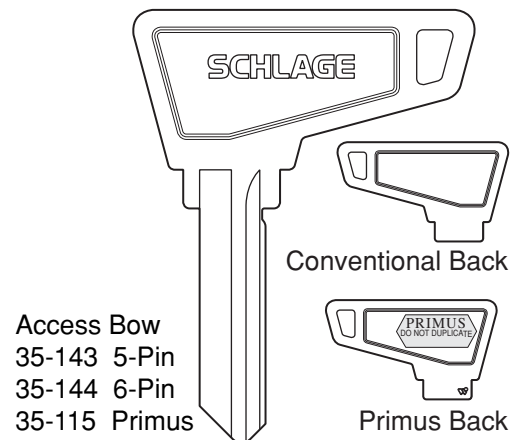
Large Bow

Ideal for special keys which must be visibly distinctive within a key system, or for very specialized marking.



Access Bow

Conforms to California Title 24 for handicap access.



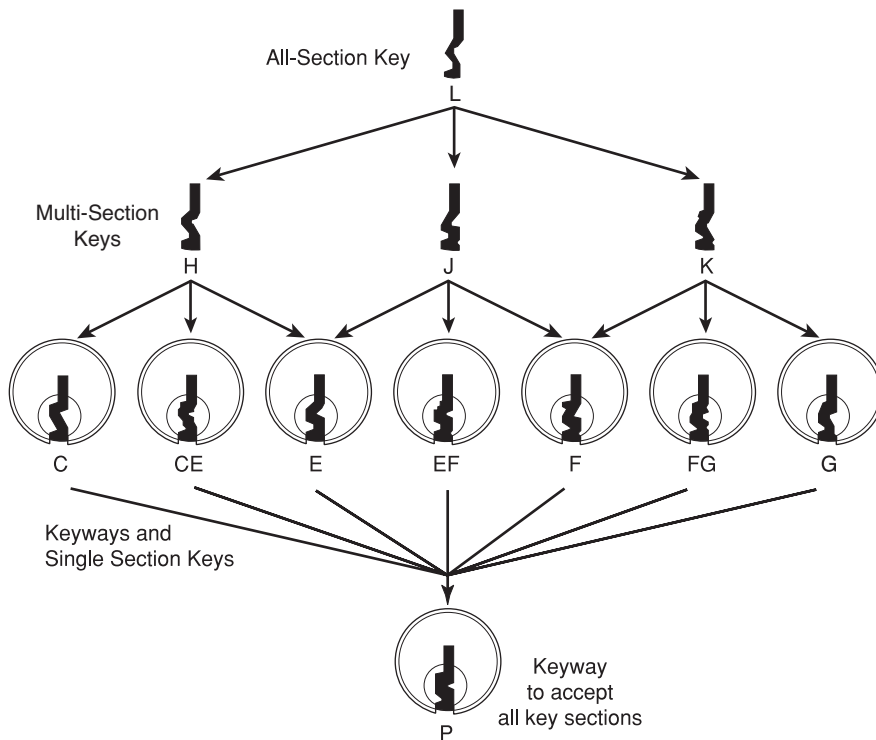
Specify Control Keys in Architectural Specifications and on Purchase Orders.



Classic Keyways for Older Key Systems

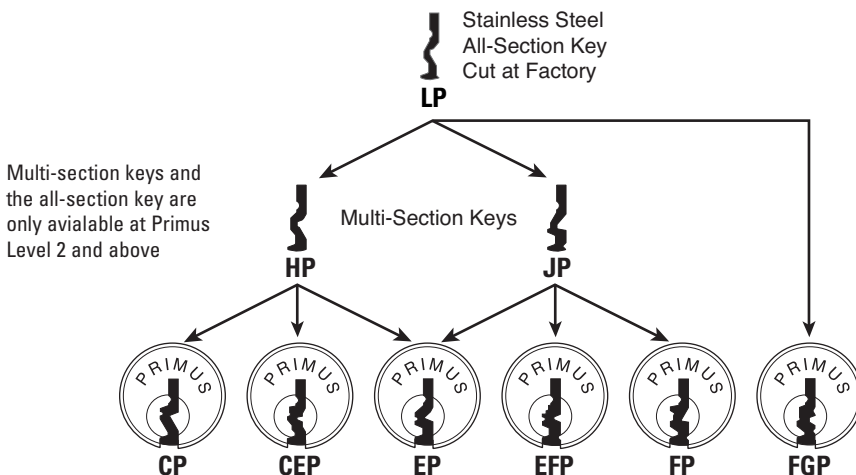
Obverse Keyways

for Classic Conventional cylinders



Obverse Keyways

for Classic Primus cylinders
Levels 1 through 4



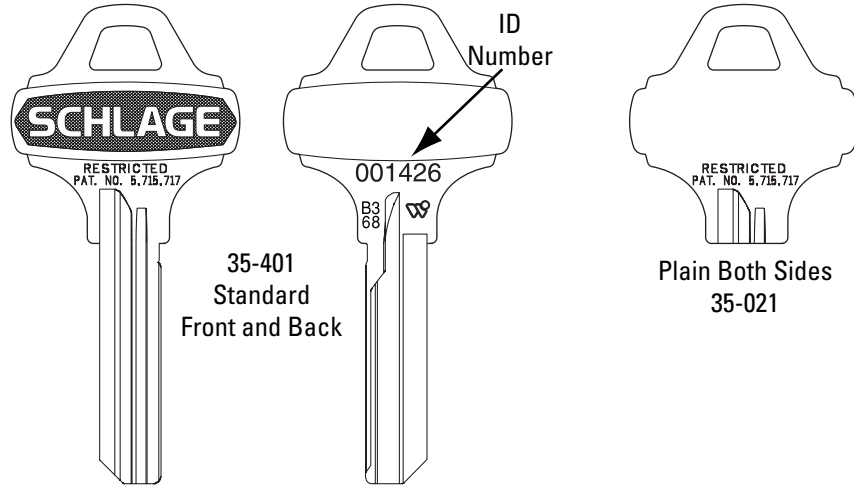
Restricted Keyways (not shown)

By definition, all Primus keys are restricted. They are downward compatible to operate Schlage conventional cylinders with corresponding keyways. Schlage Classic conventional cylinders may have keyways which are openly available as shown above, or they may be restricted (without patent protection) and require a letter of authorization from the end user. Not all Classic restricted keyways are Primus compatible.

Small Format Interchangeable Core Key Blanks

**For cut keys, change "35" prefix to "48" for change keys and "49" for master keys.
Suffix key section, e.g. 35-009 C123. All keyways are restricted so they are not published.**

**Everest B Family
Patented
Restricted
Key Blanks**



B235 Dealer Keyway

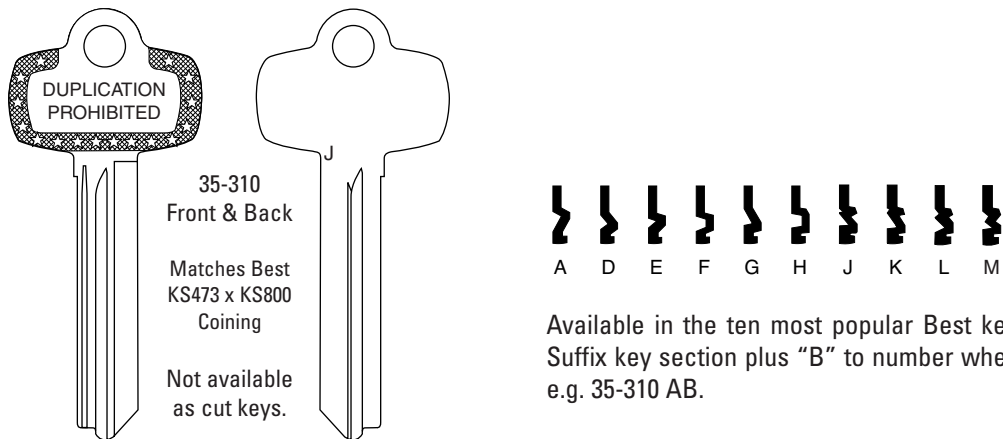
Available to locksmiths and service-oriented contract hardware dealers, this keyway is controlled similar to Primus Levels 1+ and 7. Each dealer signs a contract agreeing to certain key control procedures and agreeing not to duplicate keys marked with another dealer's ID number.

The dealer cuts all B235 keys and cannot sell key blanks to the end user. If the end user needs to cut keys, B Family end user keyways (below) should be furnished instead of B235. Contact your Schlage commercial wholesaler or local IR Security & Safety Consultants office for further information.

B Family End User Keyways

The B Family end user restricted keyways are not stocked by locksmiths or other dealers. They are drop shipped directly to the end user and offer economical patent protection but no geographical exclusivity. All orders for B Family keys and blanks require a letter of authorization from the end user.

**Best® Type
Key Blanks**



Available in the ten most popular Best key sections. Suffix key section plus "B" to number when ordering, e.g. 35-310 AB.

To order, specify quantity and key section. Include 6-digit ID number for Everest B Family. Key blanks are packed 50 per box, 1000 per case.

Cylinder Service Equipment and Tools



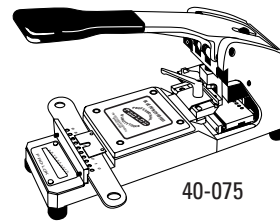
40-119



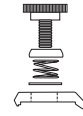
40-070

Pin Kits

- 40-119 For full size conventional cylinders
Contains bottom, top and master pins, springs, cap pins, cap pin springs, caps, follower, tweezers, key gauge, shims, cap removal tool.
- 40-070 Primus finger pin kit
Contains finger pins, sidebars, springs and plug holder.
- 40-129 SFIC wooden pin kit for A2 System
Contains all pins and springs, key gauge, tweezers, capping tool, capping block, ejector tool.



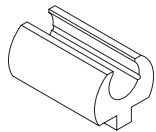
40-075



40-074

Blue Punch Key Machine

- 40-075 Classic Obverse and Everest C Family keys only (Conventional and Primus)
- 40-071 Everest B Family small format IC keys only
- 40-074 Upgrade jaw kit adds Everest C Family capability to Blue Punch machines with serial numbers below 990358, made before July 1999.



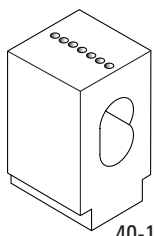
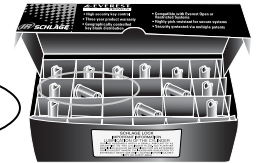
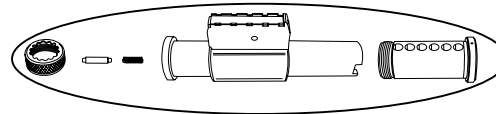
40-066

Full Size Cylinder Tools

- 40-066 Primus plug holder
- 40-116 Shell loading tool
- M204-200 Pin tweezers
- M540-056 Cylinder cap removal tool

Bulk Pack Cylinder Kit

Bulk Packs are 10-packs that contain the components you need to quickly build 10 cylinders. All shells are pre-loaded with top pins and springs.



40-137



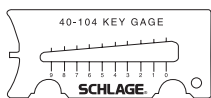
40-136



40-138

Small Format IC Tools (included in 40-129 kit)

- 40-137 Capping block
- 40-136 Ejector tool
- 40-138 Capping tool



Key Gauge

- 40-104 Full size keys
- 40-128 A2 System SFIC keys

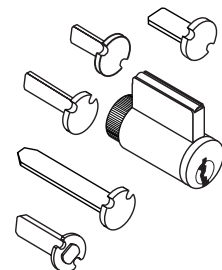
Classic Conventional	Everest Conventional	Primus	Description
09-409	09-751	09-764	Key-in-knob / lever
09-412	09-754	09-767	Mortise (specify length)
09-410	09-752	09-765	Rim
09-411	09-753	09-766	Full size interchangeable core

Specify keyway and finish.
Keys and tailpieces/cams must be ordered separately.

Multiple Tailpiece Cylinders

Reduce cylinder inventory by stocking these cylinders packed with tailpieces to fit these locks:

- A-Series (all designs)
 - AL-Series
 - D-Series knobs
 - D-Series levers
 - H-Series knobs (all designs)
 - ND-Series levers
- 40-100 Conventional
 - 40-700 Primus
 - 40-500 Primus UL



- Notes
1. Available 606 or 626 finish.
 2. Specify keyway to distinguish between Everest and Classic. Example: C or CP (Classic) vs. C123 (Everest). Available in all full size keyways.
 3. Cylinders are only available 0-bitted.
 4. Not available for hotel function cylinders with occupancy indicator.
 5. Primus key blanks must be ordered separately. Conventional cylinders include two key blanks.

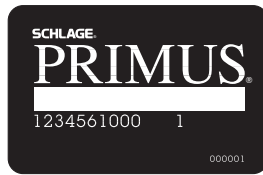
Primus I.D. Cards

Primus I.D. cards are used as authorization credentials for Primus Level 1, 1+, 2, and 8 keys. Cards have a signature panel on the back and are issued by the servicing locksmith or dealer who directly supports the system owner. The owner must present the I.D. card to obtain duplicate keys or additions to his system. The signature will be validated by the dealer.

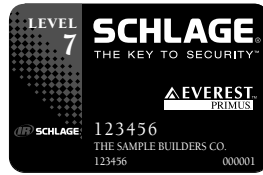
Primus Cards

Level	Number
1	40-061
1 Plus	40-065
2	40-062
7 & 8	40-060

Classic Primus Level 1 I.D. Card



Everest Primus I.D. Card



Primus & Everest Sales Aids



Cylinder Demo Kits (Cutaway cylinders included)

- 40-077 Everest conventional, Primus and SFIC demo kit
- 40-146 Classic conventional and Primus demo kit

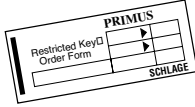


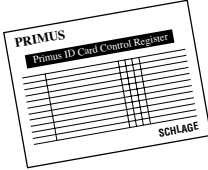
Cutaway Cylinders

- 40-073 Everest conventional
- 40-093 Everest Primus
- 40-072 Classic Primus

Classic Primus Dealer Advertising

- 40-141 Primus bumper sticker
- 40-142 Primus baseball cap
- 40-143 Primus dealer window decal
- 40-144 Primus dealer uniform patch

Primus Authorization Forms

Number	Description
MS-E110 	Primus Restricted Key Order Form This form is a three-part imprintable form used to record and track the issuance of Primus keys.
MS-E120 	Primus Face Sheet Form This form must accompany all Level 3, 4 and 9 orders and provides the factory with a customer authorized signature which is compared to the signature on file, a Primus reference number (for additions to an existing Primus system) and shipping instructions for that order.
MS-E130 	Primus Signature Card Form This form is used as a permanent record against which the signature of individuals authorized to obtain service and support for their Primus System is validated. This form must accompany all new Level 3, 4 and 9 factory orders.
MS-E160 	Primus I.D. Card Control Register This form is used by locksmiths and dealers to account for the issuance of Primus I.D. Cards.

Contact Schlage Commercial Customer Service to order these forms, or visit www.schlagelock.com.

Security Levels

The Primus system features multiple levels of security. Primus systems with Classic keyways (Levels 1 through 4) are ideal for upgrading older key systems. All new systems should be specified with Everest keyways (Levels 7 - 9) for maximum patent life, durability, and master keying capacity. Each level requires an appropriate I.D. card and/or signature verification for key duplication. All levels utilize patent* protected Primus cylinders and keys to protect against unauthorized duplication. To select the proper level of security, consideration should be given to the overall key control, convenience and service required for the installation.



Level One

One standard side biting is allocated for Level One systems. Level One locksmiths are permitted to stock Level One Primus cylinders and keys on a local basis. The end user is assigned an I.D. card by the locksmith which must be presented to obtain additional keys.

Level One Plus

Primus Level One Plus combines the convenience of locally stocked keys and cylinders with the security of multiple side bittings distributed on a limited basis. Level One Plus key blanks are sold to a wholesaler on a nationwide exclusive basis. These blanks are distributed through select locksmiths who are assigned unique ID numbers. Level One Plus locksmiths are only able to stock and duplicate keys with their own I.D. number on them. End users are issued an I.D. card which must be presented to the originating locksmith to obtain additional keys.

Level Two

Level Two systems provide local service and inventory of Primus products, but on a more restricted basis. Level Two offers the end user a special side biting which is exclusive to a contract hardware dealer within his time zone. The Primus Level Two dealer cuts all keys and performs all keying services after validating the Primus I.D. card and verifying the customer signature.

Level Three

At Level Three the Schlage factory maintains control of the Primus key authorizations. For systems with fewer than 60 cylinders, Schlage assigns the side biting from a small pool of combinations that may be repeated locally. For systems over 60 cylinders, the side biting is assigned to each installation based on the first two digits of the zip code. Authorized signatures are verified by the Schlage factory with each order for key blanks, duplicate keys or additions to a factory master keyed system.

Level Four

As with Level Three, the factory maintains control of Primus Level Four key authorizations. Side bittings are assigned on either a time zone or nationwide basis, depending on the end user's purchase commitment. Authorized signatures are verified by the Schlage factory with each order for key blanks, duplicate keys or additions to a factory master keyed system.



Everest Primus does not have an equivalent level to the Classic Level One. Users seeking restricted key systems should consider an Everest Restricted key system. Everest Restricted key systems provide key control via a factory verified letter of authorization containing a shipping address for all keys and key blanks.

Level Seven - Wholesaler/Locksmith

Similar to Level One Plus, Level Seven offers key blanks with side bittings that are distributed on a limited basis. Level Seven key blanks are sold to a wholesaler on a nationwide exclusive basis. These blanks are distributed through select locksmiths who are assigned unique I.D. numbers. Level One Plus locksmiths are only able to stock and duplicate keys with their own I.D. number on them. End users are issued an I.D. card which must be presented to the originating locksmith to obtain additional keys.

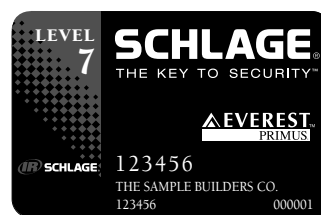
Level Eight - Servicing Dealer

Level Eight systems combine the durability and patent protection of Everest C Family keyways with the security controls of Classic Primus Level Two. Level Eight offers any servicing dealer approved by Schlage a time zone exclusive side biting. The dealer cuts all keys and performs all keying services after validating the customer signature on the I.D. card.

Level Nine - End User

Level Nine combines the end user features of Classic Primus Level Three and Level Four. For Level Nine systems with fewer than 60 cylinders, Schlage assigns the side bittings randomly from a small pool of factory controlled combinations. Systems over 60 cylinders are assigned exclusive side bittings based on the first two digits of the zip code. For very large systems, time zone or nationwide exclusive side biting exclusivity is also available based on the end user's purchase commitment. Authorized signatures are verified by the Schlage factory with each order for key blanks, duplicate keys or additions to a factory master keyed system.

*Patented key protection applies to Everest Primus only.





Ingersoll Rand's Security Technologies Sector is a leading global provider of products and services that make environments safe, secure and productive. The Sector's market-leading products include electronic and biometric access control systems; time and attendance and personnel scheduling systems; mechanical locks and portable security, door closers and exit devices, steel doors and frames, architectural hardware and technologies and services for global security markets.

SCHLAGE
111 Congressional Blvd., Suite 200
Carmel, IN 46032
800-847-1864
800-452-0663 Fax

www.schlage.com www.ingersollrand.com

2500 Series Lever

Grade 2 Cylindrical Lever



Applications:

- Standard duty commercial
- Standard door prep - 2-1/8" (54 mm) diameter (cross bore)
- Latch hole - 1" (25 mm) diameter (edge bore)

Notes:

- Interchangeable Cores are sold separately
- No exposed mounting screws
- Non-handed
- Standard cylinder or Small Format Interchangeable Core housing available
- Blank plate projection is 13/16" (21 mm) for function 25



PRODUCT SPECIFICATIONS

CERTIFICATIONS:

- ADA Compliant ANSI A117.1 Accessibility Code
- UL/cUL Listed for all functions up to 3 hours "A" label single doors
- UL10C Positive Pressure Rated
- UL10B Neutral Pressure Rated
- Meets BHMA A156.2 test standards

EXPOSED TRIM:

- Wrought brass, bronze, and stainless steel
- Lever is zinc based, plated to match BHMA symbols

LOCK CHASSIS:

- Heavy gauge steel, zinc dichromated for corrosion resistance
- Removable thru-bolts
- Failure to install thru-bolts and removable screw posts voids BHMA certification, UL rating, and warranty
- Non-Clutching levers

ROSE DIAMETER:

- 3-11/32" (85 mm)

KEYS:

- Two operating keys supplied per lock

CYLINDERS/CORES:

- Brass, keyed different - C keyway
- Other keying options, including keyed 6-pin, available from the factory
- Drilled 6-pin, keyed 5-pin
- Small Format Interchangeable Core housing available
- SFIC uncombined or combined, brass 6- or 7-pin sold separately

DOOR THICKNESS:

- 1-3/8" - 2" (35 mm - 51 mm)

BACKSET:

- 2-3/4" (70 mm) standard
- 2-3/8" (60 mm) optional

LATCHBOLT:

- 1/2" (13 mm) throw, stainless steel
- 1-1/8" x 2-1/4" (29 mm x 57 mm) faceplate for 2-3/4" (70 mm) backset
- 1" x 2-1/4" (25 mm x 57 mm) faceplate for 2-3/8" backset
- Deadlocking latchbolt prevents manipulation when door is closed; keyed functions only

STRIKES:

- ANSI 4-7/8" x 1-1/4" (32 mm x 124 mm) strike standard
- Optional strikes available

FINISHES:

- US3, US10B, US26D

FUNCTIONS:

- 10 - Passage, 17 - Dummy, 25 - Exit, 27 BTB Dummy, 40 - Privacy, 50 - Office, 53 - Entry, 70 - Classroom, 80 - Storeroom

WARRANTY:

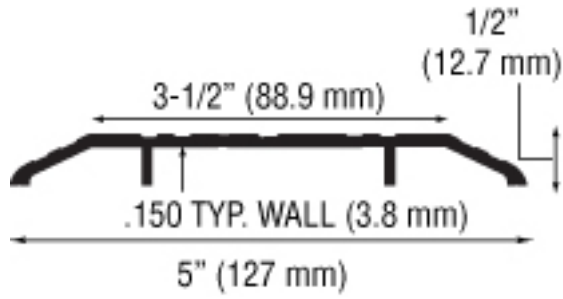
- One-year

LEVER OPTIONS:

- Archer, Withnell levers

OPTIONS:

- Lead lined
- Tactile warning



412S

Description: Thresholds > Saddle Thresholds 2

Application: Category J gaskets for use with Listed steel frames and/or classified steel covered composite, hollow metal doors rated up to 3 hrs; wood and plastic covered fire doors rated up to and including 1 1/2 hrs; and wood core doors rated for 20 minutes.



Finishes	- MIL, DBA, GLD, MIB, 32D
Width	- 5" (127 mm)
Height	- 1/2" (12.7 mm)

Fasteners	- #10 x 1 1/2" wood screws; other screw types and anchors available upon request
Options	- Available with Sure-Step non-slip abrasive coating

ECBB1101NRP

Five Knuckle
Ball Bearing
Standard Weight

Description:

- ANSI A2112 (Brass)
- ANSI A5112 (Stainless steel)
- Two ball bearings
- Non-removable pin with button tip and plug
- Only available in 4-1/2" x 4-1/2" (114 mm x 114 mm)
- Fasteners are AMS x 1/2 WS
- For use on medium weight doors or doors requiring medium frequency service
- Available with 316SS



PRODUCT SPECIFICATIONS

FASTENERS:

- All machine and half wood

MATERIAL:

- Brass w/ Stainless Steel pin ANSI A2112
- Stainless Steel with Stainless Steel pin ANSI A5112

FINISHES:

- US15, US26, US26D, US32D, 32D (316SS)

2500 Series Lever

Grade 2 Cylindrical Lever



Applications:

- Standard duty commercial
- Standard door prep - 2-1/8" (54 mm) diameter (cross bore)
- Latch hole - 1" (25 mm) diameter (edge bore)

Notes:

- Interchangeable Cores are sold separately
- No exposed mounting screws
- Non-handed
- Standard cylinder or Small Format Interchangeable Core housing available
- Blank plate projection is 13/16" (21 mm) for function 25



PRODUCT SPECIFICATIONS

CERTIFICATIONS:

- ADA Compliant ANSI A117.1 Accessibility Code
- UL/cUL Listed for all functions up to 3 hours "A" label single doors
- UL10C Positive Pressure Rated
- UL10B Neutral Pressure Rated
- Meets BHMA A156.2 test standards

EXPOSED TRIM:

- Wrought brass, bronze, and stainless steel
- Lever is zinc based, plated to match BHMA symbols

LOCK CHASSIS:

- Heavy gauge steel, zinc dichromated for corrosion resistance
- Removable thru-bolts
- Failure to install thru-bolts and removable screw posts voids BHMA certification, UL rating, and warranty
- Non-Clutching levers

ROSE DIAMETER:

- 3-11/32" (85 mm)

KEYS:

- Two operating keys supplied per lock

CYLINDERS/CORES:

- Brass, keyed different - C keyway
- Other keying options, including keyed 6-pin, available from the factory
- Drilled 6-pin, keyed 5-pin
- Small Format Interchangeable Core housing available
- SFIC uncombined or combined, brass 6- or 7-pin sold separately

DOOR THICKNESS:

- 1-3/8" - 2" (35 mm - 51 mm)

BACKSET:

- 2-3/4" (70 mm) standard
- 2-3/8" (60 mm) optional

LATCHBOLT:

- 1/2" (13 mm) throw, stainless steel
- 1-1/8" x 2-1/4" (29 mm x 57 mm) faceplate for 2-3/4" (70 mm) backset
- 1" x 2-1/4" (25 mm x 57 mm) faceplate for 2-3/8" backset
- Deadlocking latchbolt prevents manipulation when door is closed; keyed functions only

STRIKES:

- ANSI 4-7/8" x 1-1/4" (32 mm x 124 mm) strike standard
- Optional strikes available

FINISHES:

- US3, US10B, US26D

FUNCTIONS:

- 10 - Passage, 17 - Dummy, 25 - Exit, 27 BTB Dummy, 40 - Privacy, 50 - Office, 53 - Entry, 70 - Classroom, 80 - Storeroom

WARRANTY:

- One-year

LEVER OPTIONS:

- Archer, Withnell levers

OPTIONS:

- Lead lined
- Tactile warning

3100 Series

Grade 1 Deadlock

Applications:

- Auxiliary and primary locking
- Non-handed
- Conventional cylinder or Small Format Interchangeable Core housing available



PRODUCT SPECIFICATIONS

CERTIFICATIONS:

- BHMA Certified ANSI A156.5 Grade 1
- ANSI A250.13 Severe Windstorm Resistant Component
- UL/cUL Listed for all functions up to 3 hours for "A" single doors
- UL10B Neutral Pressure Rated
- UL10C Positive Pressure Rated
- ADA - Thumbturn

EXPOSED TRIM:

- Wrought brass or bronze

MECHANISM:

- Steel, zinc dichromate plating

KEYS:

- Two operating keys supplied per lock

CYLINDERS:

- Brass - Keyed Different - C Keyway
- Other keying options, including keyed 6-pin, available from the factory
- SFIC uncombined or combined, brass 6- or 7-pin sold separately
- Drilled 6-pin, Keyed 5-pin - Standard

DOOR THICKNESS:

- 1-3/4" - 2" (45 mm - 51 mm) - Standard
- 2-1/4" (57 mm) available for conventional cylinder - Must specify

BACKSET:

- 2-3/4" (70 mm) - Standard
- 2-3/8" (60 mm) - Optional

LATCHBOLT:

- 1" (25 mm) Throw - Brass with concealed hardened steel roller to prevent sawing or cutting
- 1-1/8" x 2-1/4" (29 mm x 57 mm) square corner faceplate

STRIKES:

- 3930 Square Corner, 1-1/8" x 2-3/4" (70 mm) with dustbox - Standard
- 3929 ASA Deadbolt Strike - Optional

STANDARD DOOR PREP:

- Cylinder hole: 2-1/8" (54 mm) diameter (cross bore)
- Latch hole: 1" (25 mm) diameter (edge bore)

FINISHES:

- US3, US4, US10, US10B, US26, US26D

FUNCTIONS:

- 14 - Double Cylinder, 15 - Cylinder x Thumbturn, 18 - Classroom

OPTIONS:

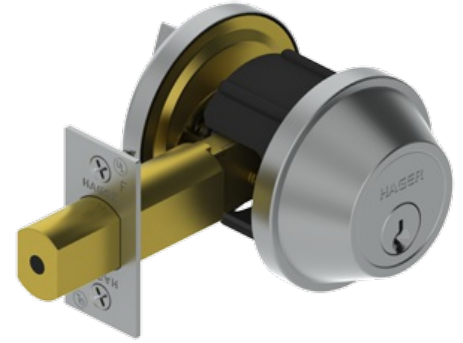
- Split finish
- Additional deadbolts and strikes available

3200 Series

Grade 2 Deadlock

Applications:

- Auxiliary and primary locking
- Non-handed
- Conventional cylinder or Small Format Interchangeable Core housing available



PRODUCT SPECIFICATIONS

CERTIFICATIONS:

- BHMA Certified ANSI A156.5 Grade 2
- ANSI A250.13 Severe Windstorm Resistant Component
- UL/cUL Listed for all functions up to 3 hours for "A" label single doors
- UL10C Positive Pressure Rated
- UL10B Neutral Pressure Rated
- ADA - Thumbturn
- Lifetime warranty

EXPOSED TRIM:

- Wrought brass, stainless steel or bronze

MECHANISM:

- Steel, zinc dichromate plating

KEYS:

- Two operating keys supplied per lock

CYLINDERS:

- Brass
- Keyed Different - C Keyway
- Other keying options, including keyed 6-pin, available from the factory
- SFIC uncombined or combined, brass 6- or 7-pin sold separately
- Drilled 6-pin, keyed 5-pin - Standard
- Small Format Interchangeable Core housing available

DOOR THICKNESS:

- 1-3/8" - 1-3/4" (35 mm - 45 mm) - Standard
- 1-3/4" (35 mm) Only - 3214 SFIC and 3216
- 2" - 2-1/4" (51 mm - 57 mm) available for conventional cylinder - Must specify

BACKSET:

- 2-3/4" (70 mm) - Standard
- 2-3/8" (60 mm) - Optional
- 2-3/8" - 2-3/4" (60mm - 70mm) adjustable backset supplied with 3220 and 3221 (not available on 3214 or 3215)

LATCHBOLT:

- 1" (25 mm) Throw - Brass with concealed hardened steel roller to prevent sawing or cutting
- 2-1/4" x 1-1/8" (57 mm x 29 mm) square corner faceplate

STRIKES:

- 3930 Square Corner, 1-1/8" x 2-3/4" (29 mm x 70 mm) with dustbox - Standard
- 3929 ASA Deadbolt Strike - Optional

STANDARD DOOR PREP:

- Cylinder hole: 2-1/8" (54 mm) diameter (cross bore)
- Latch hole: 1" (25 mm) diameter (edge bore)

FINISHES:

- US3, US4, US10, US10B, US26D, US32, US32D

FUNCTIONS:

- 14 - Double Cylinder, 15 - Cylinder x Thumbturn,
- 16 - Thumbturn x Occupancy Indicator
- 20 - Thumbturn only w/ blank plate, 21 - Thumbturn Only (Replaced 3219),
- 22 - Retrofit Kit for use w/ 3221 or 3219

OPTIONS:

- Split finish
- Additional deadbolts and strikes available

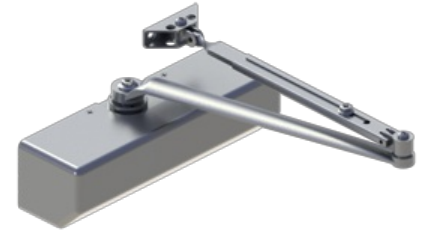
5300 Series

Grade 1 Heavy Duty Surface Door Closer

Ideal for schools, hospitals, and other high-use environments

Notes:

- Standard package contains 5301 closer body, 5302 closer cover, 5303 main arm assembly, 5304 standard screw pack, 5900 parallel arm bracket, and 5902 SNB screw pack for 1-3/4" (44 mm) door
- Full rack and pinion operation
- Precision machined, heat treated steel piston
- Triple heat treated steel spindle



PRODUCT SPECIFICATIONS

SIZE:

- 1-6 adjustable

CERTIFICATIONS:

- BHMA Certified ANSI A156.4, adjustable sizes 2 to 6 - Standard
- ADA Compliant ANSI A117.1 Accessibility Code
- UL/cUL Listed for up to 3 hours
- UL10C Positive Pressure Rated
- UL10B Neutral Pressure Rated
- Lifetime warranty

MATERIAL:

- Aluminum alloy
- The recommended temperatures for prolonged closer use is between -40° F (-42° C) and 150° F (66° C)

COVER:

- Full plastic cover and pinion cap

SPRINGS:

- Double heat treated steel, tempered springs

VALVES:

- Adjustable latching and sweep speed valves
- Adjustable backcheck valve - Standard
- Delayed action valve - Optional
- Staked valves - Standard

HANDING:

- Non-handed

ARMS & BRACKETS:

- Slide Adjustable Arm
- Tri-Pack - regular, top jamb, and parallel arms - Standard
- 15% power adjustment in standard arm for regular and top jamb mount

FASTENERS:

- Self-reaming, self-tapping wood and machine screws
- Sex nuts and bolts

DOOR THICKNESS

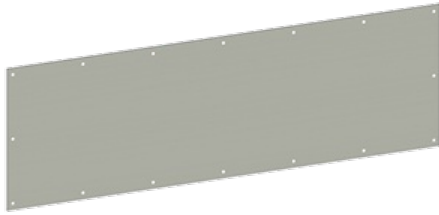
- 1-3/4" (44 mm)
- 1-3/8" - 2-1/4" (36 mm - 57 mm) Optional

FINISHES:

- ALM, BRZ, DBZ, GOL
- Rust inhibiting primer - Standard

190S

Door Protection Plate
0.050" gauge with no bevel



NFPA Notes:

- NFPA 80 Standards
- 6.4.5 Protection Plates 6.4.5.1
- Factory installed protection plates shall be installed in accordance with the listing of the door. 6.4.5.2
- Field installed protection plates shall be labeled and installed in accordance with their listing. 6.4.5.3
- Labeling shall not be required where the top of the protection plate is not more than 16" (406mm) above the bottom of the door.



PRODUCT SPECIFICATIONS

GAUGE:

- 0.050" (1 mm)

MATERIALS:

- Aluminum, Brass, Bronze, Stainless Steel

FINISHES:

- US3, US4, US10, US10B, US28, US32, US32D

BEVEL:

- None

ORDER:

- Furnish item #, height, width, and finish (i.e., 190S – 6" x 30", US32D).
- Plates are sized on even inches. Odd size available and priced to next larger size.
- May be ordered with counter sunk holes (specify "CSK") at extra charge.

OPTIONS:

- UL listed for US32 and US32D (must specify UL stamp)
- Self-adhesive tape available on all plates
- Spanner head screws
- Torx head screws
- Round corners
- Wrap around side and bottom return
- 0.125" material

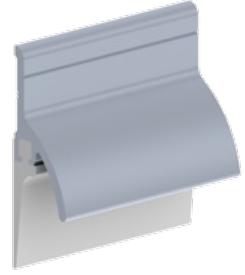
CERTIFICATION:

- Meets ANSI A156.6 for J101 Metal Armor Plate, J102 Metal Kickplate, and J103 Metal Mop Plate

PRODUCT SIZE OPTIONS

ITEM #	B&S GAUGE	US GAUGE	BEVEL	FASTENERS	QUANTITY BAG	QUANTITY CASE
190S	16	18	none	#6 x 5/8 truss head screws	1 each	---
193S	16	18	B3E	#6 x 5/8 truss head screws	1 each	---
194S	16	18	B4E	#6 x 5/8 truss head screws	1 each	---
196R	16	18	none	#6 x 5/8 truss head screws	1 each	---
198S	---	20	none	#6 x 5/8 truss head screws	1 each	---
199B	---	38	none	#6 x 5/8 truss head screws	1 each	---
220S	14	16	none	#6 x 5/8 truss head screws	1 each	---
223S	14	16	B3E	#6 x 5/8 truss head screws	1 each	---
224S	14	16	B4E	#6 x 5/8 truss head screws	1 each	---

770S Door Bottom Sweeps



Notes:

- MIL finish weatherstripping is supplied with zinc plated screws
- Brass weatherstripping is supplied with brass screws
- Color anodized weatherstripping is supplied with screws plated to match
- Stainless steel weatherstripping is supplied with stainless steel screws



PRODUCT SPECIFICATIONS

FINISHES:

- MIL, DBA, GLD

INSERTS:

- B=Nylon Brush
- V=Vinyl

CATEGORY:

- J

FASTENERS:

- #6 x 5/8" Pan head sheet metal screws furnished with mortise types.

SIZE:

- Width: 19/32" (15 mm) Strip height: 7/8" (22 mm)

412S 5" Saddle Threshold



Application:

- Available with Sure-Step non-slip abrasive coating



PRODUCT SPECIFICATIONS

- | | |
|--|---|
| <p>FINISHES:</p> <ul style="list-style-type: none">- MIL, DBA, GLD, MIB <p>WIDTH:</p> <ul style="list-style-type: none">- 5" (127 mm) <p>HEIGHT:</p> <ul style="list-style-type: none">- 1/2" (12.7 mm) | <p>FASTENERS:</p> <ul style="list-style-type: none">- #10 x 1-1/2" sheet metal screws, other screw types and anchors available upon request <p>NOTES:</p> <ul style="list-style-type: none">- MIL finish thresholds are supplied with zinc plated screws- Brass thresholds are supplied with brass screws- Color anodized thresholds are supplied with screws plated to match- Stainless steel thresholds are supplied with stainless steel screws |
|--|---|



Meets ANSI/BHMA A156.16, L12231,

25 Screen Door Pull

- Cast aluminum or epoxy-coated aluminum
- Also used as a window lift, drawer or utility pull

Dimensions

Length 4-7/8"

Projection 1-5/32"

Mounting holes 4-1/8" center to center

Finishes

Ives Number	A3	A92	A-W	A-B
BHMA	666	673		

CS115 Crash Stop

- Specially designed for full-size exterior doors.
- Tear resistant, grey vinyl cover.
- Heavy duty compression spring assembled to both ends of chain and end brackets.
- Packed with sheet metal screws.
- Cast Brass brackets with solid, welded steel chain.
- Optional sex bolt mounting available in US26D (626) only.



Meets ANSI/BHMA A156.16, L12231,

Dimensions

Bracket Size: 1-9/16" x 1-9/16"

Available Lengths:

20-1/2" – Recommended for 30" Door Width (Product No. CS115-20)

25-1/2" – Recommended for 36" Door Width (Product No. CS115-25)

30-1/2" – Recommended for 42" Door Width (Product No. CS115-30)

Finishes

Ives Number	US10B	US26D
BHMA	613	626

A
Hinges & Pivots

B
Pulls & Plates

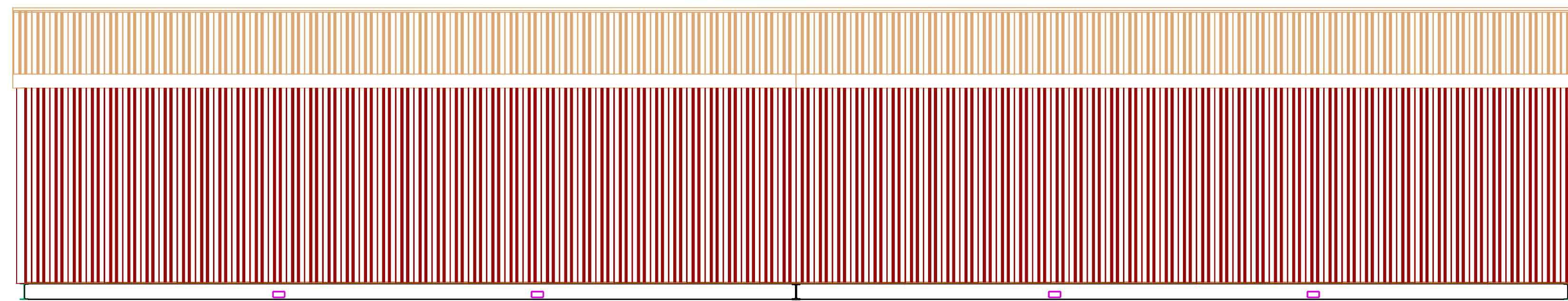
C
Flush Bolts & Coordinators

D
Latches, Catches & Bolts

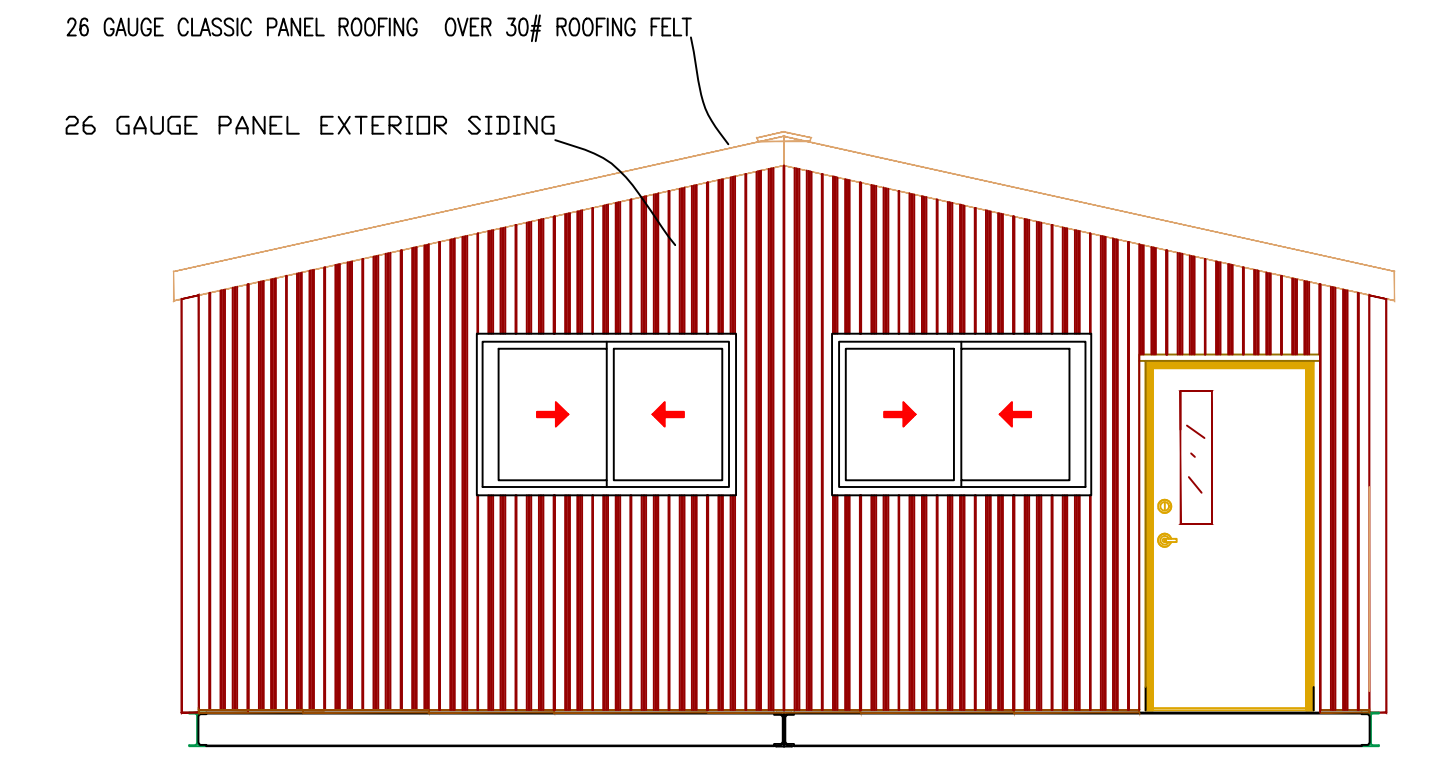
E
Stops

F10
Exterior Hardware

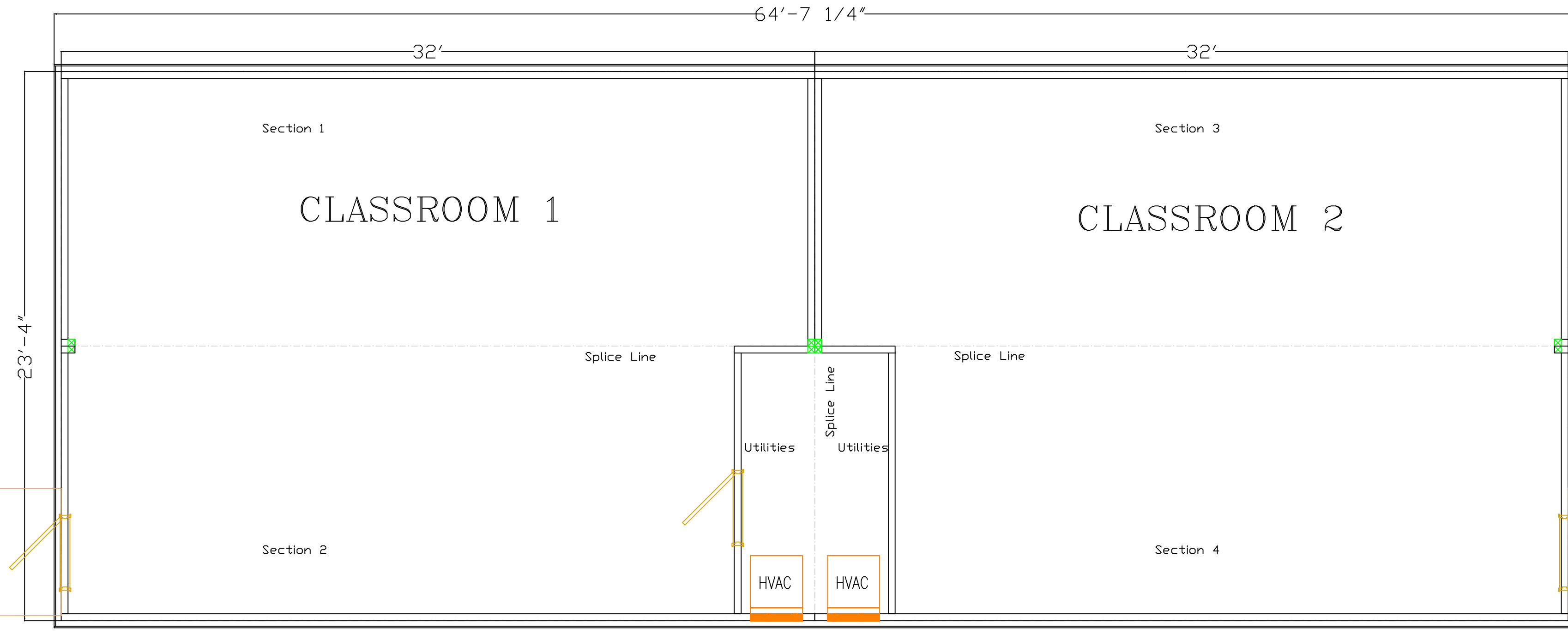
G
Miscellaneous Hardware



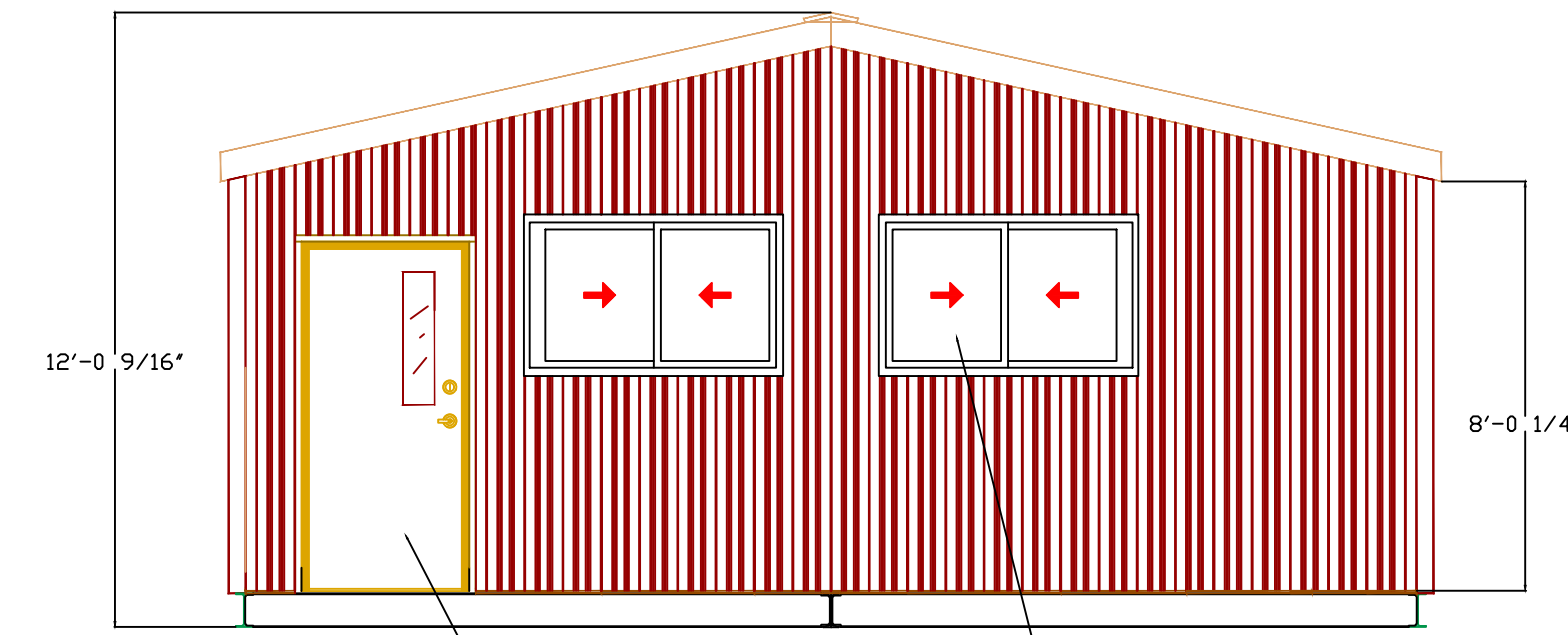
BACK ELEVATION



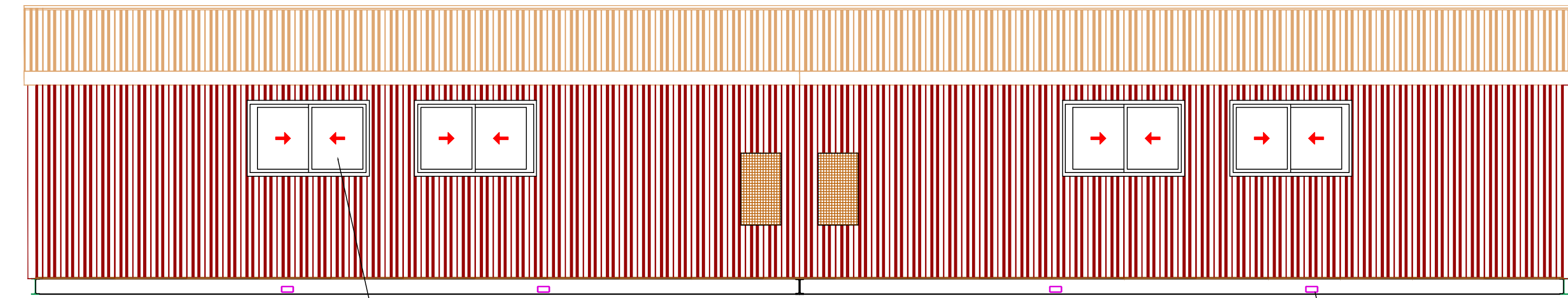
LEFT ELEVATION



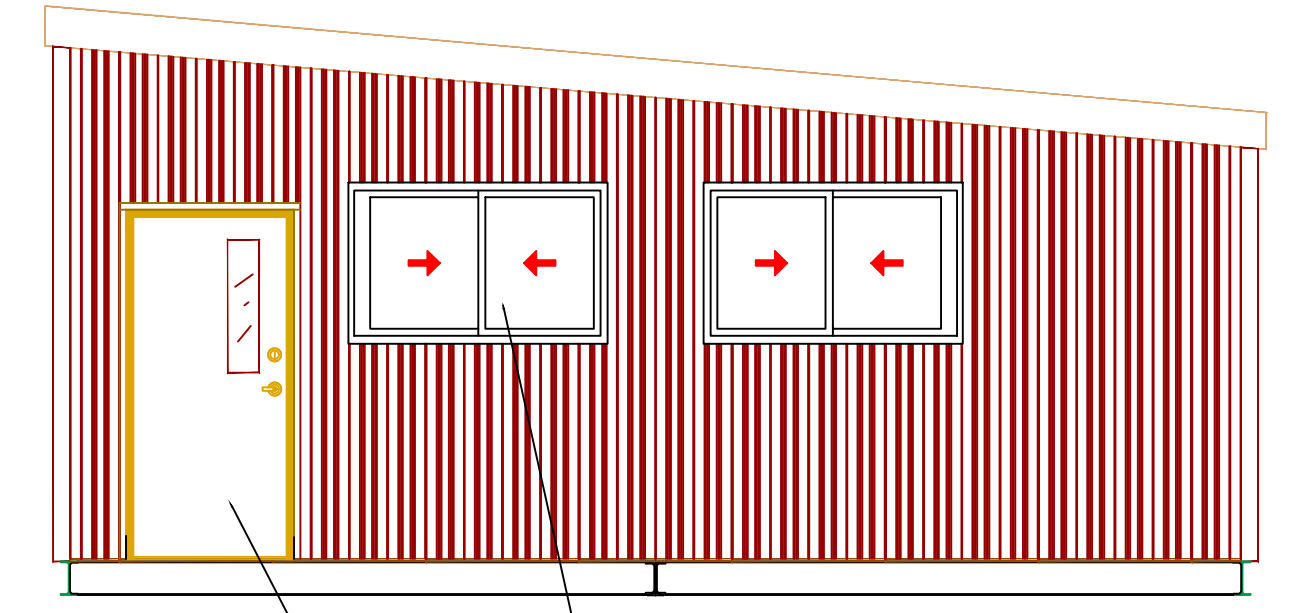
5/1 PLAN VIEW



RIGHT ELEVATION



1/1 FRONT ELEVATION



6/1 OPTIONAL ROOF FRAMING

OPTIONAL ALUMINUM TREAD PLATE ENTRANCE DECK WITH 8" C-CHANNEL FRAME 4" STEEL POST AND ROOF FRAME. ASSEMBLED ON SITE.

OPTIONAL 4' x 8' SLOPED TO GRADE ALUMINUM TREAD PLATE ENTRANCE RAMP

OPTIONAL 3'x5' WINDOW TYP LOCATIONS AND QUANTITIES OPTIONAL EFFICIENCY AND TEMPER DIFFER PER SHIPPING LOCATION.

18 GAUGE METAL 16 GAUGE FRAMES DOOR TYP LOCATIONS AND QUANTITIES OPTIONAL



#10 HUNTER TRAIL
P.O. BOX 899
LAGRANGE, KY 40031
800-626-6530

◇ SYMBOL: SUPPLIED BY MANUFACTURER AND INSTALLED BY OTHERS.
◊ SYMBOL: SUPPLIED AND INSTALLED BY OTHERS.

SHEET TITLE ELEVATIONS	
PROJECT NAME 24x64 CLASSROOM BUILDING NO RESTROOM	
PROJECT LOCATION VARIOUS LOCATIONS	

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IMPORTANT
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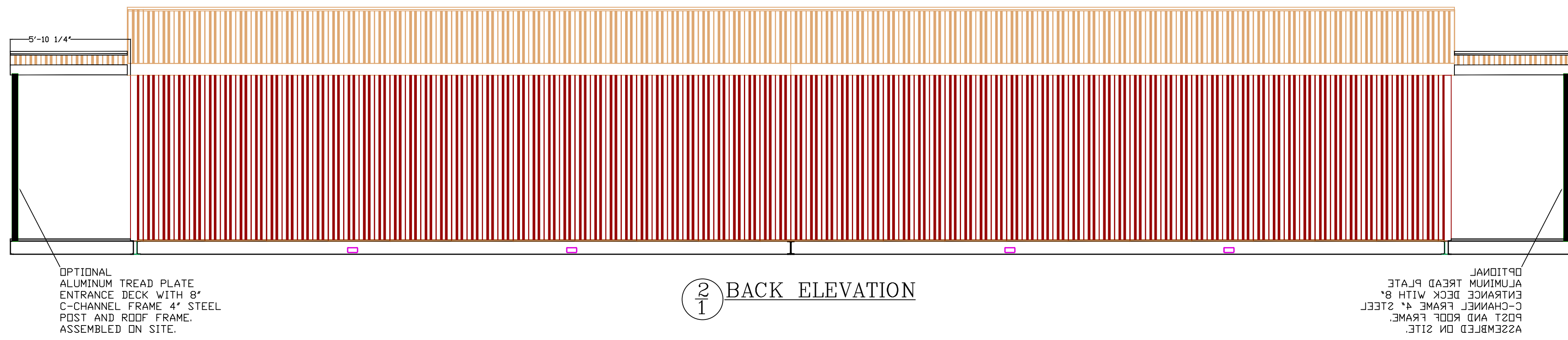
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TMKII	--		2/2/21	NTS

REVISIONS		
MARK	DESCRIPTION	DATE

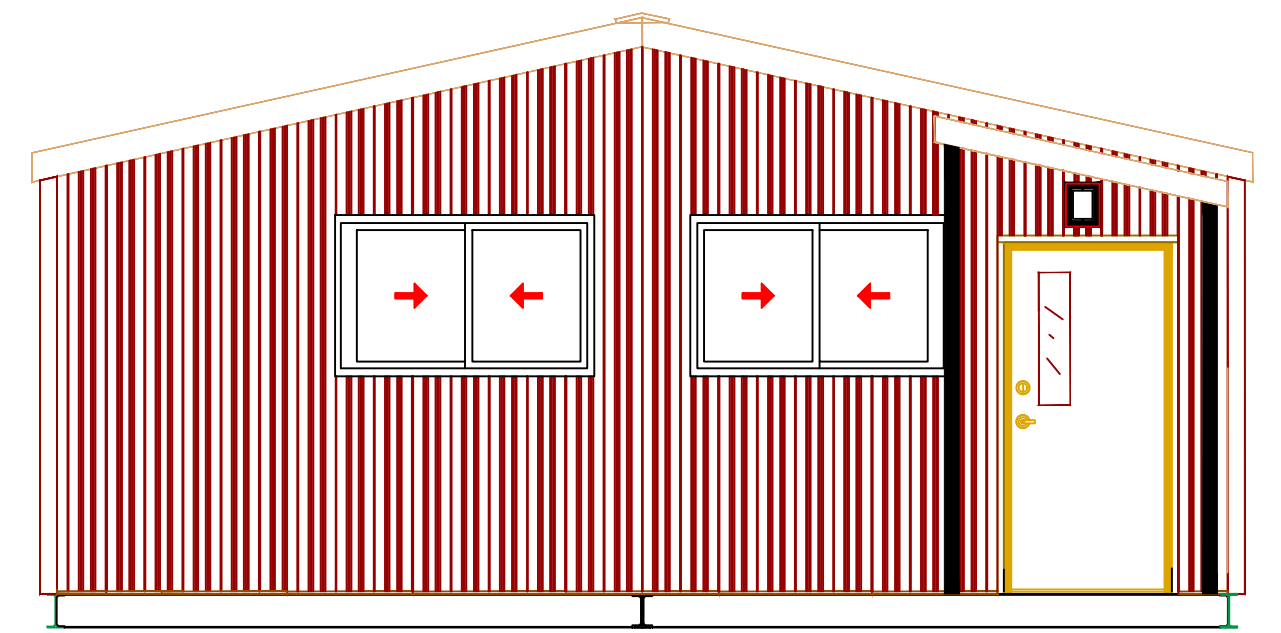
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MODEL #
SERIAL #

PROJECT ENGINEER

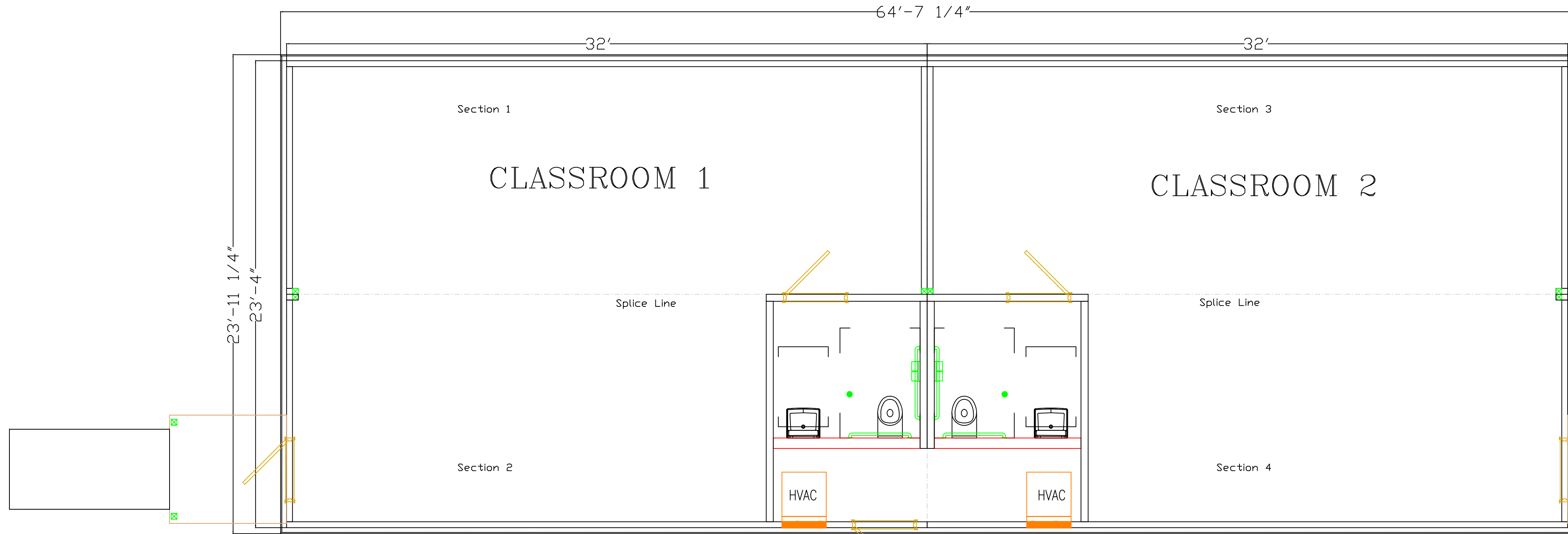
DRAWING NO.	
PKG. NO.	SHEET
	1
	OF



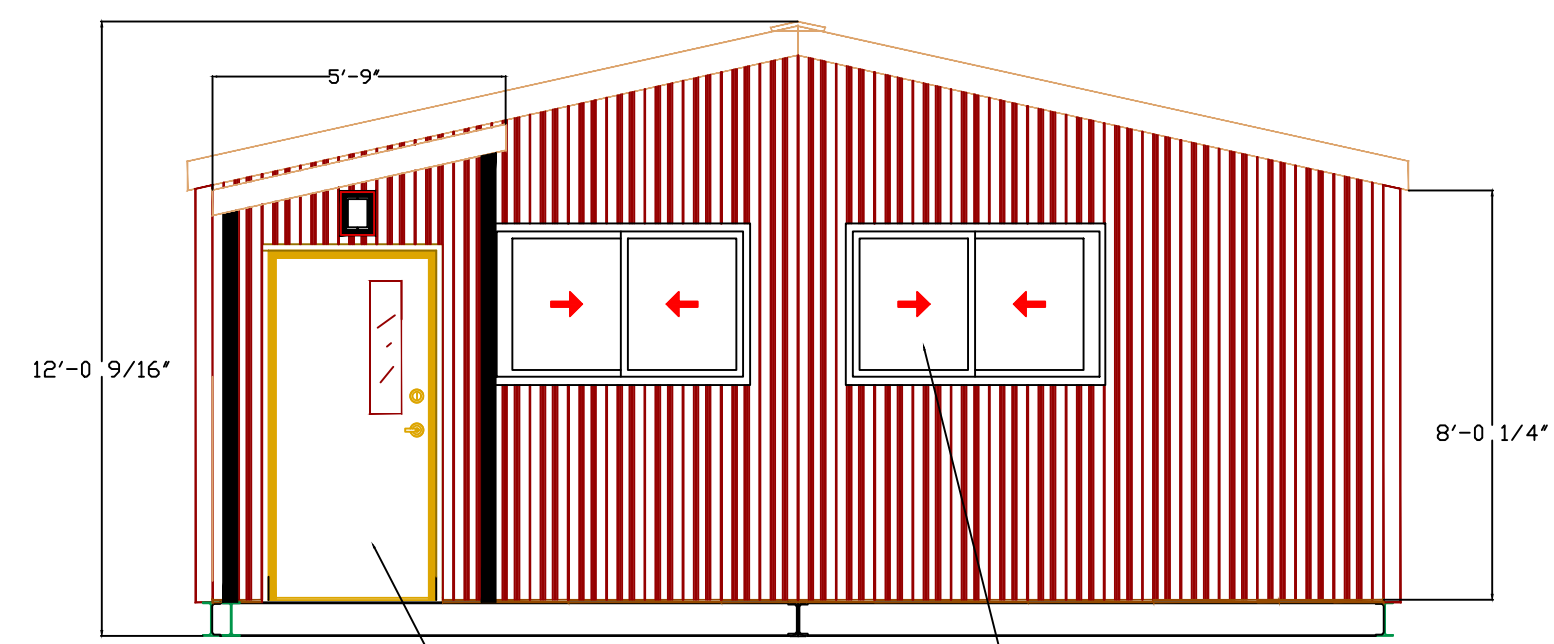
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1 BACK ELEVATION



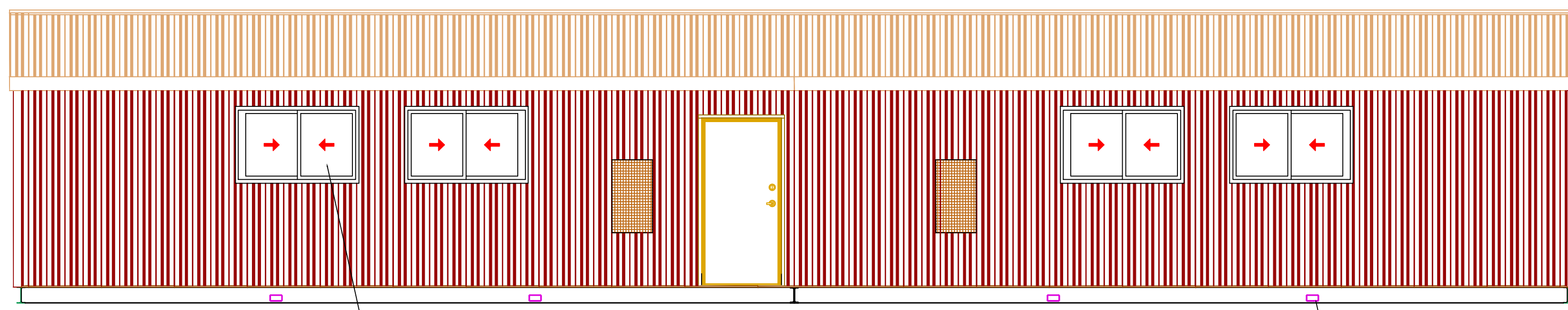
LEFT ELEVATION



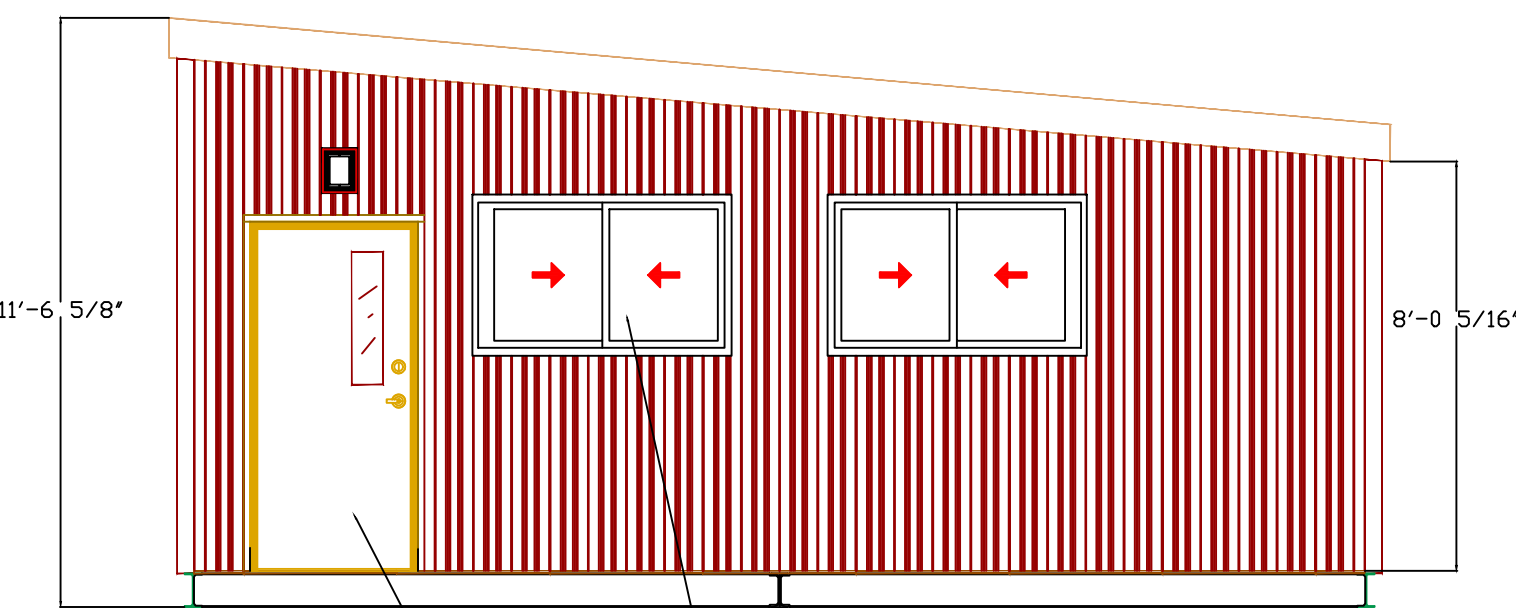
5
1 PLAN VIEW



RIGHT ELEVATION



1
1 FRONT ELEVATION



OPTIONAL ROOF FRAMING

OPTIONAL ALUMINUM TREAD PLATE ENTRANCE DECK WITH 8' C-CHANNEL FRAME 4' STEEL POST AND ROOF FRAME. ASSEMBLED ON SITE.

OPTIONAL 4' x 8' SLOPED TO GRADE ALUMINUM TREAD PLATE ENTRANCE RAMP

OPTIONAL 3'x5' WINDOW TYP LOCATIONS AND QUANTITIES OPTIONAL EFFICIENCY AND TEMPER DIFFER PER SHIPPING LOCATION.

18 GAUGE METAL DOOR LOCATIONS AND QUANTITY MAY BE CHANGED

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REVISIONS		
MARK	DESCRIPTION	DATE

FILE NAME	DW22-2464CR
MODEL #	
SERIAL #	

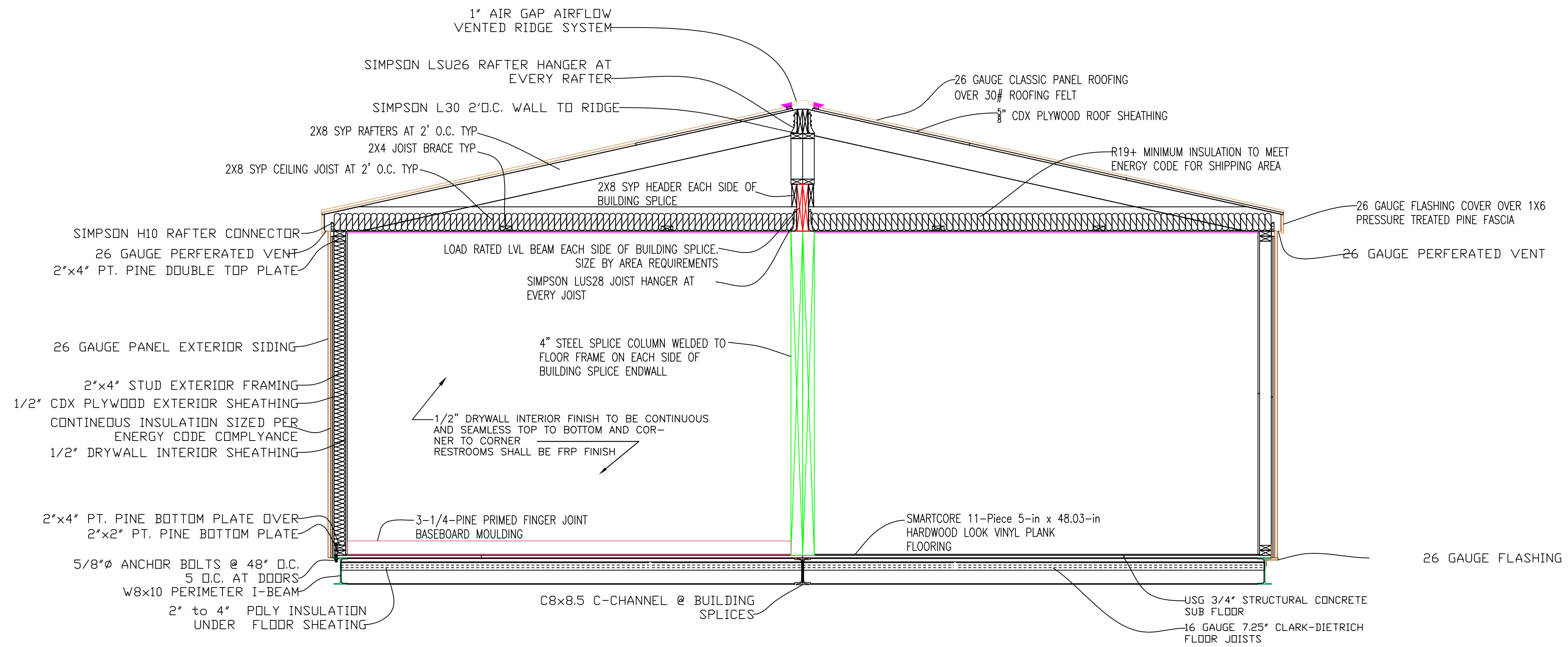
PROJECT ENGINEER	
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DRAWING NO.	
PKG. NO.	SHEET
	2
	OF

HUNTER KNEPSHIELD COMPANY
#10 HUNTER TRAIL
P.O. BOX 899
LAGRANGE, KY 40031
800-626-6530

◇ SYMBOL: SUPPLIED BY MANUFACTURER AND INSTALLED BY OTHERS.
◇ SYMBOL: SUPPLIED AND INSTALLED BY OTHERS.

SHEET TITLE	ELEVATIONS
PROJECT NAME	24x64 CLASSROOM BUILDING NO RESTROOM
PROJECT LOCATION	VARIOUS LOCATIONS



1
2 BUILDING SECTION

SHEET TITLE BUILDING SECTION
PROJECT NAME 24x64 CLASSROOM BUILDING NO RESTROOM
PROJECT LOCATION VARIOUS LOCATIONS

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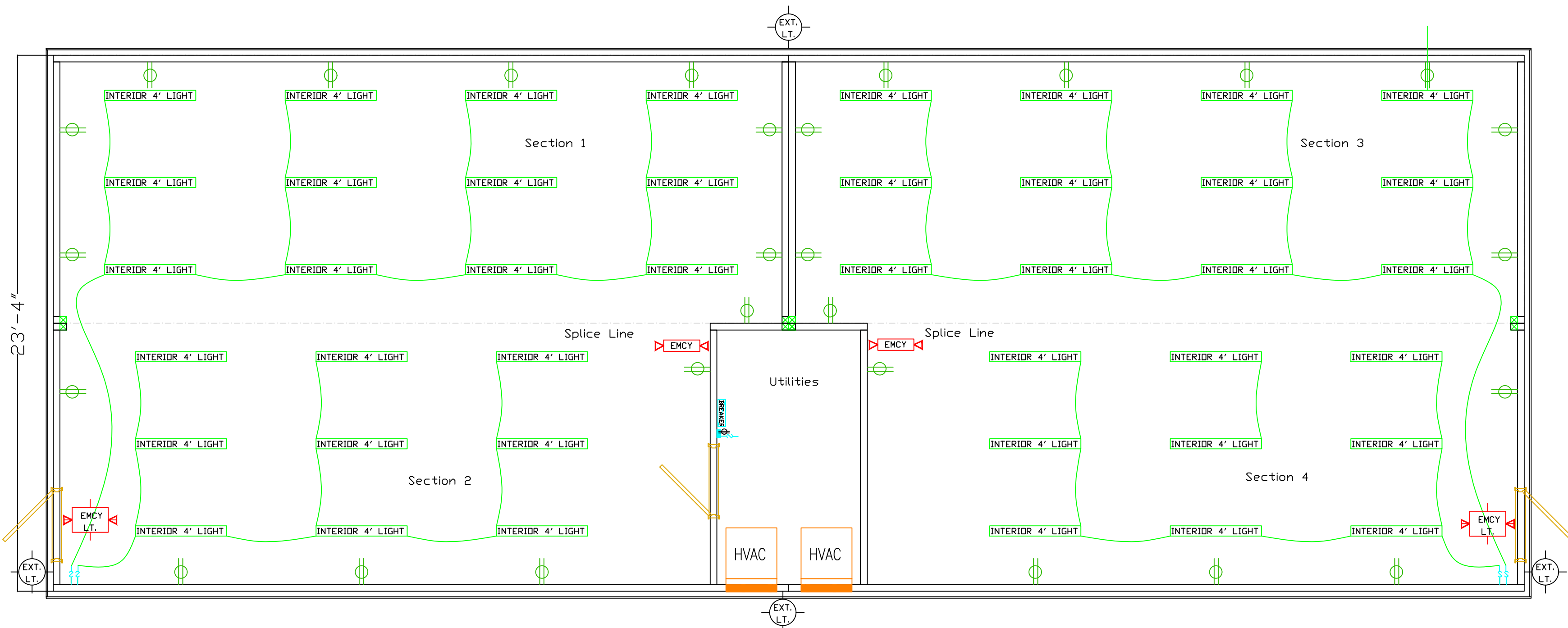
IMPORTANT

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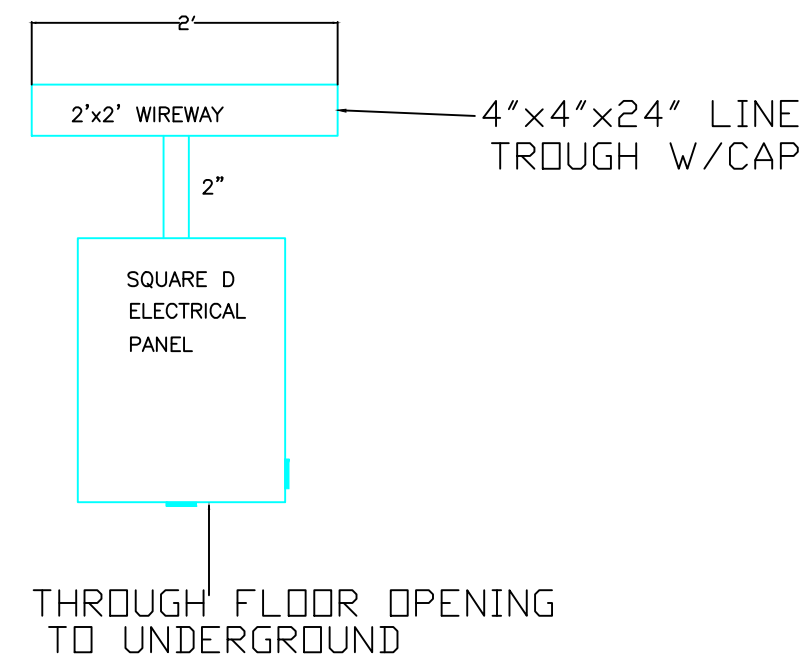
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MARK	DESCRIPTION	DATE

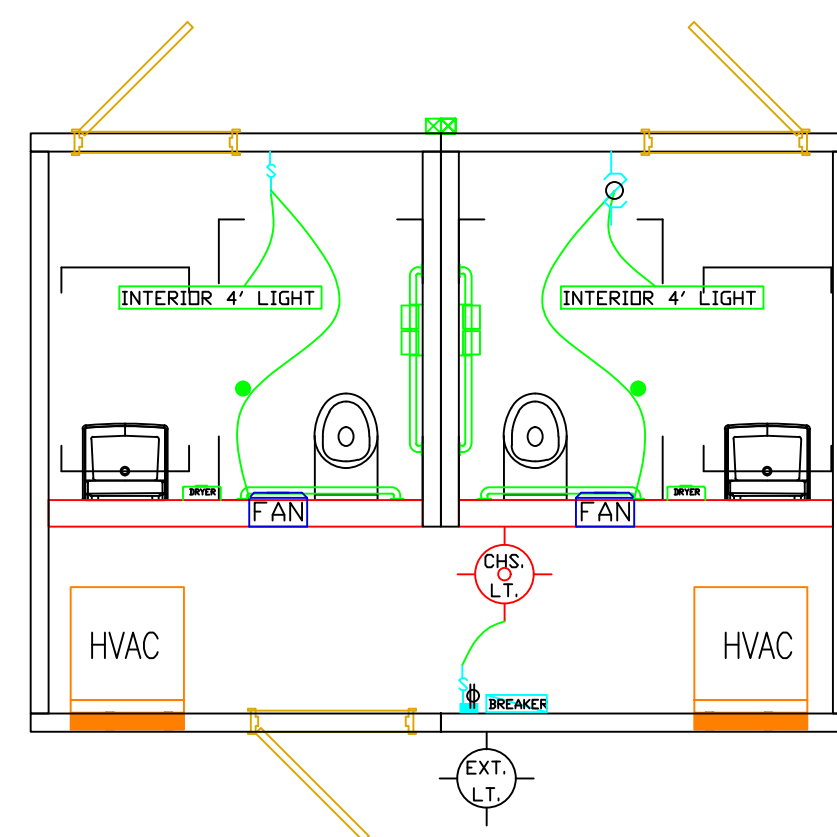
FILE NAME DW22-2464CR	PROJECT ENGINEER
MODEL #	
SERIAL #	



-NOTICE TO CONTRACTOR-
 THIS RESTROOM FACILITY HAS BEEN PREWIRED AND IS READY FOR HOOK-UP. THE CONTRACTOR IS REQUIRED TO FURNISH & INSTALL THE NECESSARY WIRING, CONDUIT, ETC. AS REQUIRED TO MAKE THE HOOK-UP BETWEEN THE ELECTRICAL PANEL AND THE ELECTRICAL SOURCE.



PANEL DIAGRAM



ELECTRICAL PLAN WITH RESTROOM OPTION

GENERAL ELECTRICAL NOTES

- A. Underground Sleeve: Per Local requirements.
- B. Panel: 200 amp capacity, 30/40 breaker MINIMUM.
- C. Conduit: Metallic throughout. EMT, FMC or MC cable.
- D. Testing: Test in accordance with governing agency.
- E. All Electrical work shall be performed in Accordance with the requirements of the National Electric Code (N.E.C.)
- F. State Insignia Sticker located on side near electrical panel.
- G. Grounding: A 5/8" X 8' grounding rod shall be installed either inside the form box or outside the building with grounding lugs and wire to the panel and the copper water supply. Grounding materials shall be supplied and installed by others to meet local requirements.

ELECTRICAL FIXTURE SCHEDULE

SYMBOLS	DESCRIPTION	MOUNTING HEIGHTS	UNIT KW	QUANTITY	
				ND-RR	RR
INTERIOR 4' LIGHT	LED WARELIGHT WRAP WL-WRAP4-LED-32W-40K-MV (OR APPROVED EQUAL).	+ - 8'-0" CEILING MOUNT	0.032	42	+2
EXTERIOR LIGHT	LED WARELIGHT WALL PACK WL-MWP-20W-50K-B-MV-PC (OR APPROVED EQUAL).	+ - 7' TO CENTER LINE	0.020	3	
CHS LT	LED WARELIGHT VAPORPROOF JELLY JAR WL-14WJCMFG-40KMW (OR APPROVED EQUAL).	+ - 8'-0" CEILING MOUNT	0.014	1	
EMCY LT	WARELIGHT LEDCXTEU2RW LED EXIT & EMERGENCY COMBO WITH BATTERY BACKUP (OR APPROVED EQUAL).	+ - 8' OVER DOOR	0.009	2	
EMCY LT	WARELIGHT: LEDR-2W LED THERMOPLASTIC EMERGENCY LIGHT WITH TWO ADJUSTABLE HEADS WITH BATTERY BACKUP (OR APPROVED EQUAL).	+ - 7'-6" ON WALL	0.006	2	
BREAKER	SQUARE D #HOM2040M200TC - 200 AMP PANEL W/ MAIN BREAKER & ISOLATED GROUNDING BAR. (OR APPROVED EQUAL).	ABOVE PLUMBING LINE ATTACHED TO PLYWOOD MOUNTED ON CHASE STUD WALL	NA	1	
ϕ	LEVITON T5248-WCP - DUPLEX RECEPTACLE AMPER-RESISTANT DUPLEX OUTLET WITH EARS. 15 AMP, 125 VOLT, NEMA 5-15R, (OR APPROVED EQUAL).	18" TO CENTER	0	32	
⚡	LEVITON #54521-2W- SINGLE POLE AC SWITCH (COMMERCIAL SPEC GRADE) AND WALLPLATE. (OR APPROVED EQUAL).	+ - 42' TO CENTER LINE	NA	4	
MAESTRO	THE LUTRON MAESTRO OCCUPANCY SENSING SWITCH MS-OP55M-WH-3 MAESTRO 5-AMP MULTI-LOCATION DUAL VOLTAGE OCCUPANCY SENSING SWITCH (OR APPROVED EQUAL).	+ - 42' TO CENTER LINE	NA	0	2
FAN	BROAN #RB110 BATHROOM FAN WITH UP TO 110 CFM AT 1.0 SONES, THE GRILLE SHALL BE TORSION (OR APPROVED EQUAL).	+ - 7'-0" TO CENTER LINE	0.034		2
T101	INTERMATIC OR TORK T101 ELECTROMECHANICAL TIME CLOCK 24 HOUR TIME SWITCH 40 AMP, 120 VAC (OR APPROVED EQUAL).	+ - 5' TO CENTER LINE	NA	1	
TA-ABS	EXCELL TA-ABS THIN AIR HANDS OFF AUTOMATIC HAND DRYER, WITH SURFACE MOUNT WHITE CAST COVER. (OR APPROVED EQUAL).	38" TO BLOWER SHOOT	0.950		2
RHEEM	RHEEM TANKLESS ELECTRIC RTEX-08 8KW TANKLESS ELECTRIC WATER HEATER (OR APPROVED EQUAL).	+ - 2'-0" IN WALL	8.000		1
HVAC	GE AZ75H18DAC VERTICAL SERIES ZONELINE, 230V ELECTRIC. 8.3/9.0 AMP. DUCTABLE, 10.0/10.0 (BTUH/Watt) 10.6/10.6 Indoor CFM 550/475/440 INSTALLED WITH RAVWP6 WALL PLENUM AND RAK163P2 DIGITAL PROGRAMMABLE THERMOSTAT. (OR APPROVED EQUAL).	+ - 2'-6" ABOVE FINISH FLOOR	9.000		2

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 800-626-6530

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SHEET TITLE ELECTRICAL	
PROJECT NAME 24x64 CLASSROOM BUILDING NO RESTROOM	
PROJECT LOCATION VARIOUS LOCATIONS	

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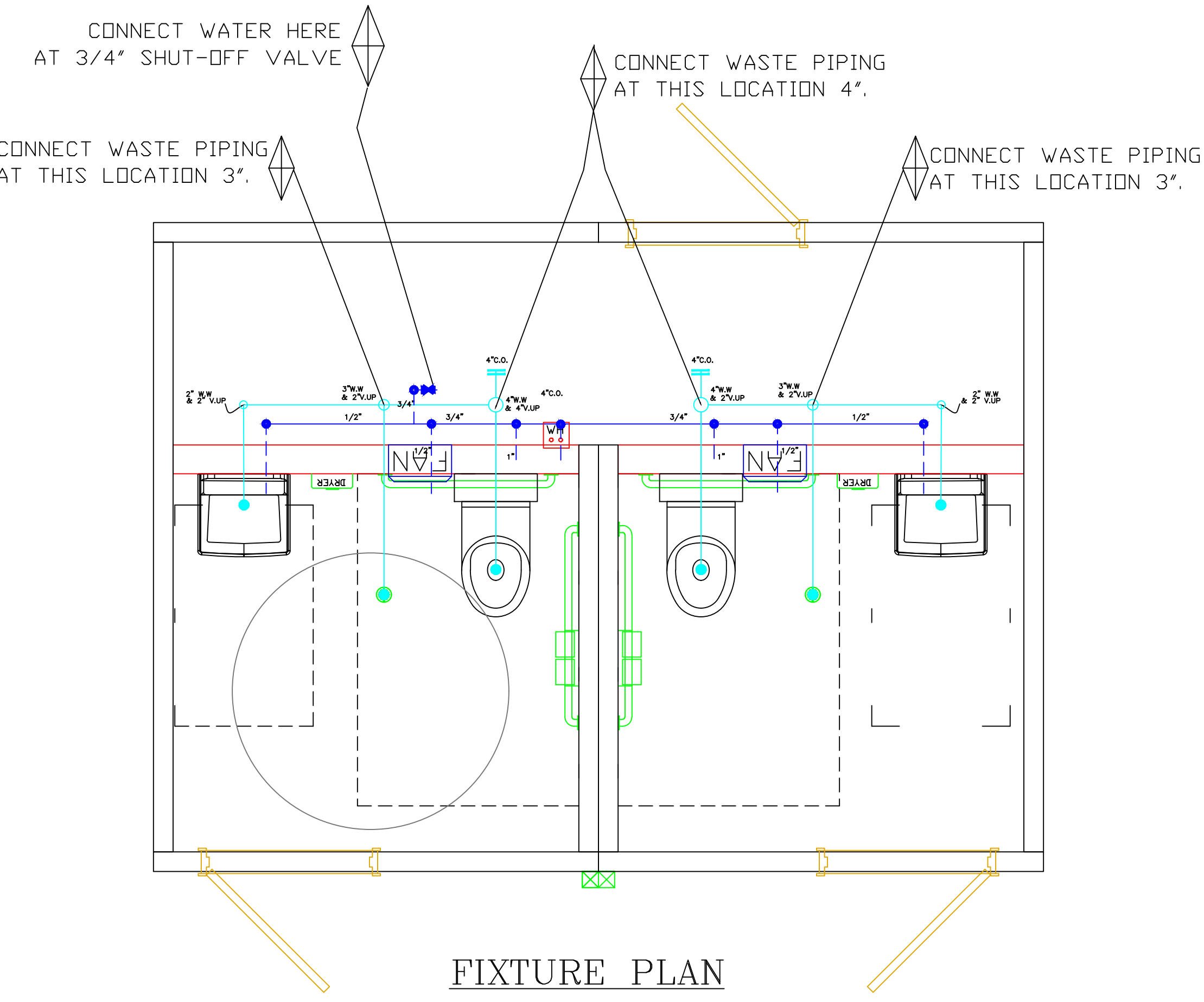
IMPORTANT
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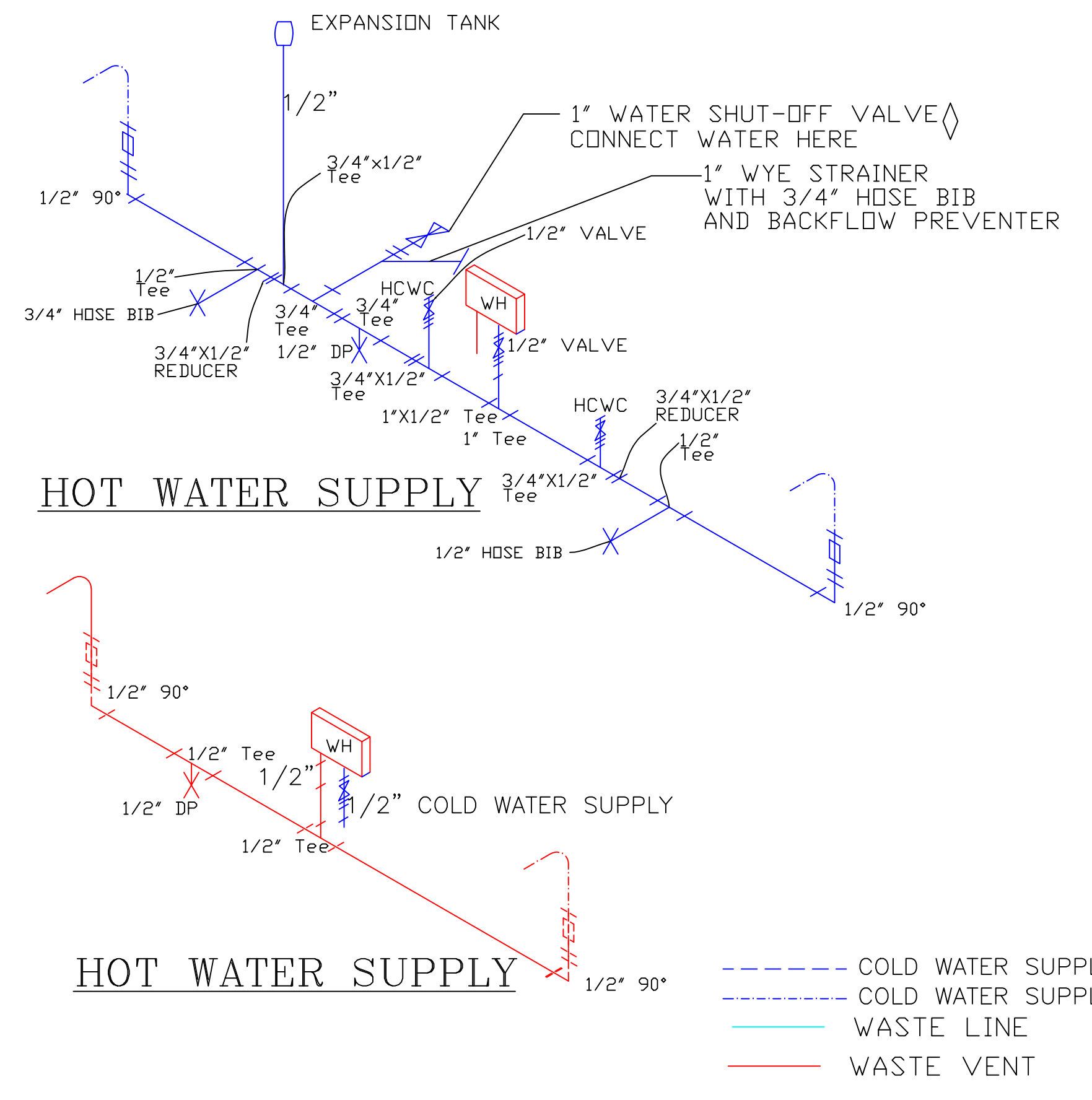
REVISIONS		
MARK	DESCRIPTION	DATE

FILE NAME DW00-2464CR	PROJECT ENGINEER
MODEL #	
SERIAL #	

DRAWING NO.	
PKG. NO.	SHEET
	4
	OF



FIXTURE PLAN

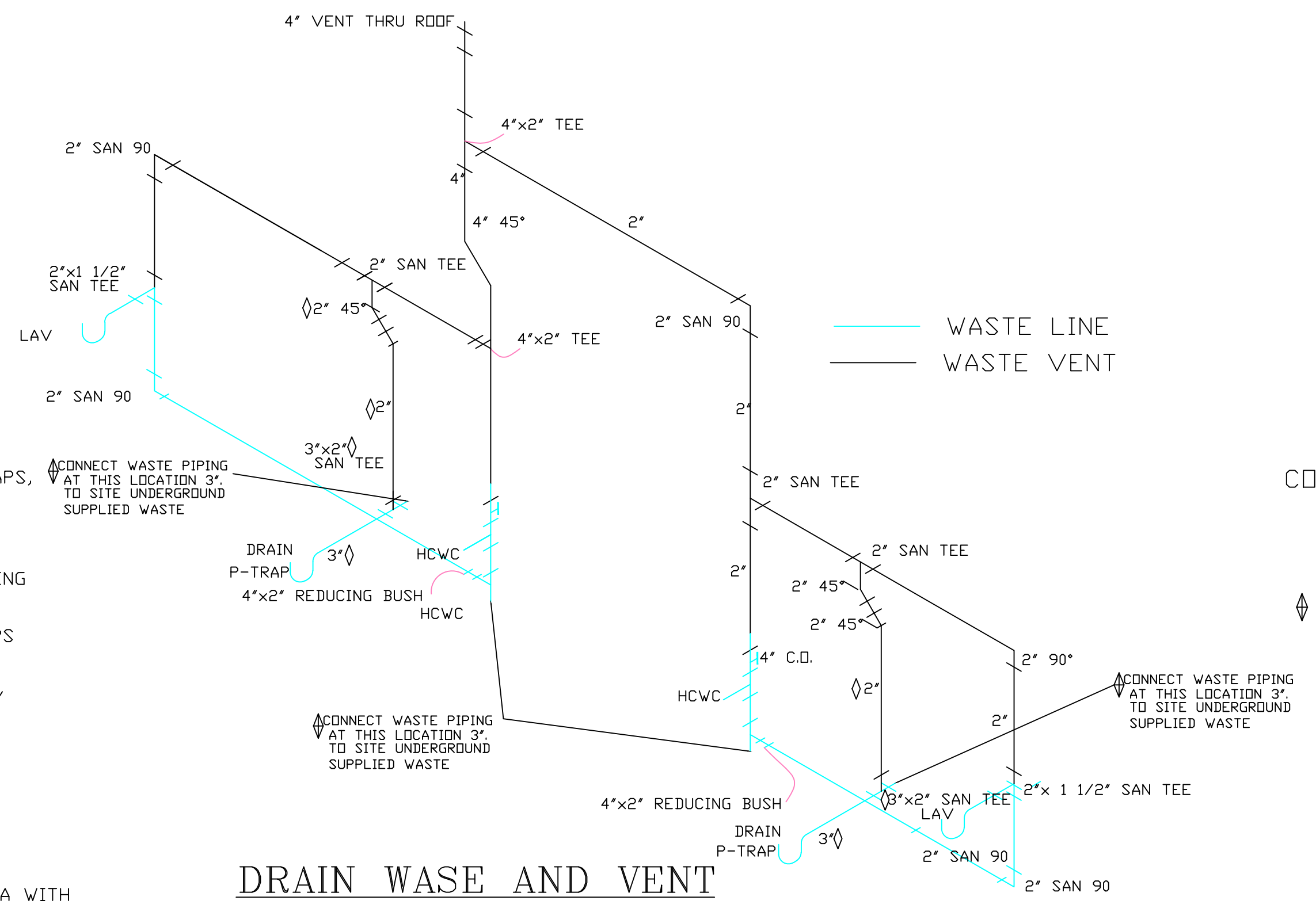


HOT WATER SUPPLY

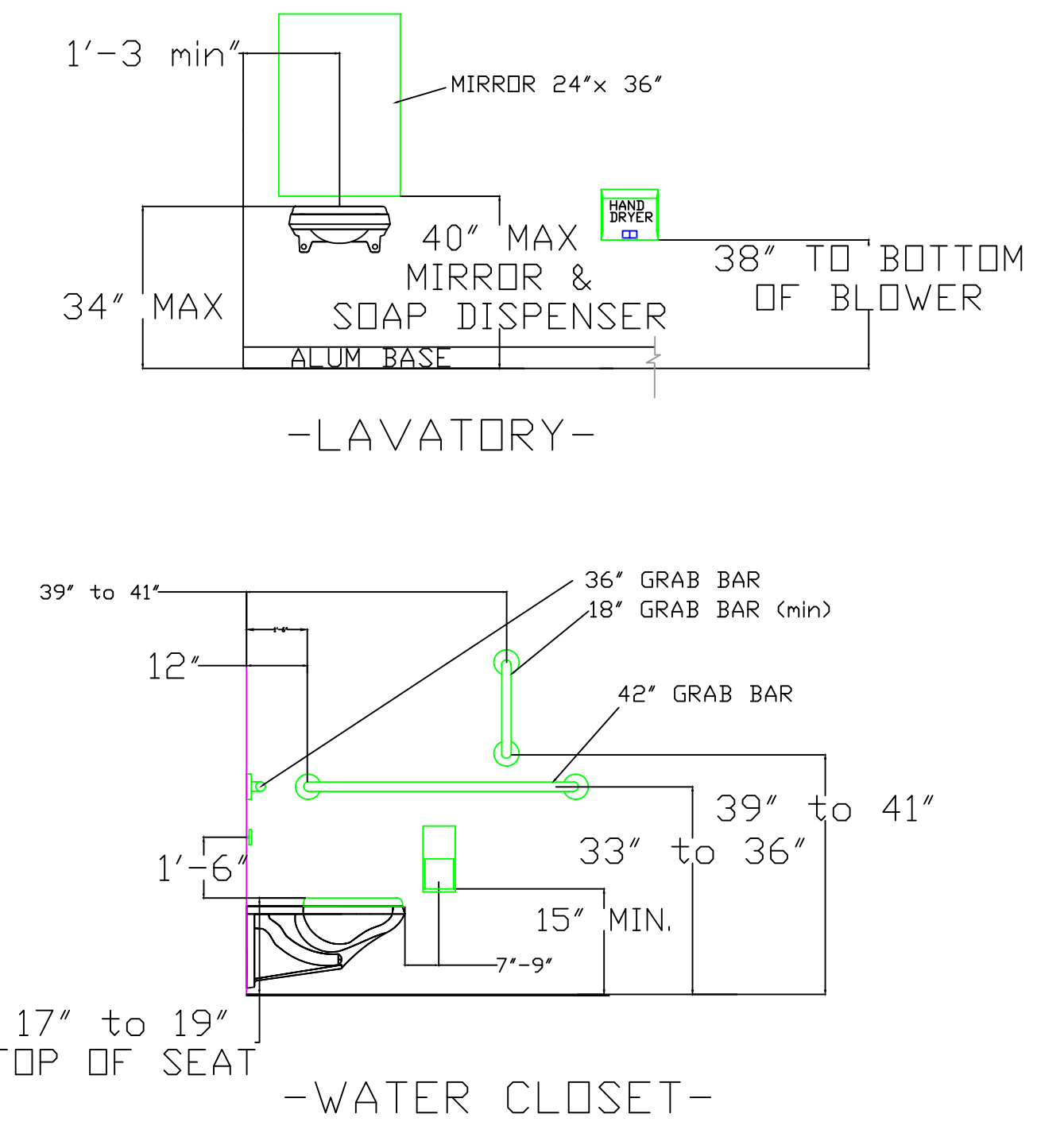
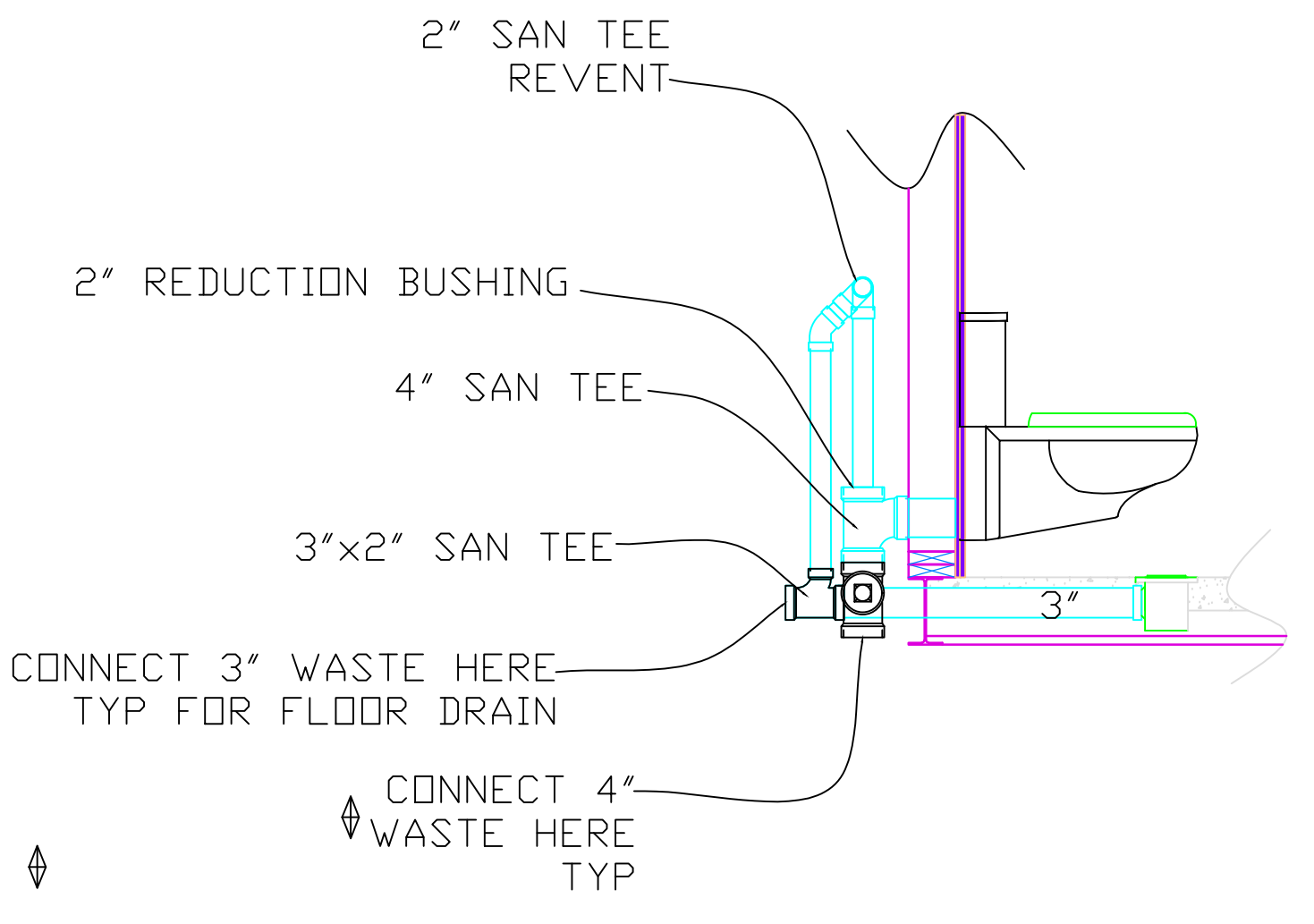
--- COLD WATER SUPPLY (TYPE "L" HARD COPPER)
 --- COLD WATER SUPPLY (TYPE "L" SOFT COPPER)
 --- WASTE LINE
 --- WASTE VENT

PLUMBING FIXTURE SCHEDULE					
MARK	FIXTURE	C	H	W	DESCRIPTION
HCWC WC	WATER CLOSET	1'	-	4'	WATER CLOSET: AMERICAN STANDARD 2882108.020 BACK SPUD TANK TYPE VITREOUS CHINA WATER CLOSET 1.28 GAL FLUSH, ELONGATED BOWL, WALL MOUNTED WITH OPEN FRONT, WHITE SEAT. FURNISHED WITH WADE 311 ADJUSTABLE SIPHON JET CARRIER (OR APPROVED EQUALS). WATER CLOSETS TO BE INSTALLED AT HANDICAP HEIGHT.
LAV	LAVATORY	3/8'	3/8'	1-1/4'	LAVATORY: Z5344 20"x18" WALL HUNG LAVATORY WITH 4" CENTER FAUCET HUNG; W/ ZURN Z1231 CONCEALED CARRIER; ZURN Z86100 ZURN SINGLE BASIN PUSH BUTTON METERING FAUCET (COLD) FOR 4" CENTER HOLE LAV. LAVATORIES TO INCLUDE ZURN Z8743-PC 1-1/4" GRID DRAIN Z8700-B-D-PC 1-1/4" INLET OUTLET P-TRAP WITH TO BE INSTALLED AT HANDICAP HEIGHT.
●	FLOOR DRAIN	-	-	3'	FLOOR DRAIN: 3" WADE PRISON FLOOR DRAIN WITH INTEGRAL P-TRAP AND NICKEL HEAD AND HEAL-PROOF GRATE. GRATE IS INSTALLED WITH VANDAL PROOF SCREWS. (OR APPROVED EQUALS).
□	EXPANSION TANK	1/2'	-	-	EXPANSION TANK: WATTS INDUSTRIES DET-5 2-GAL. POTABLE WATER EXPANSION TANK WITH THERMALLY FUSED EPOXY LINER, FLEXIBLE BUTYL DIAPHRAGM AND FIELD ADJUSTABLE PRE-CHARGE.
↔	1" WYE STRAINER AND BACKFLOW PREVENTER	1'	-	-	MUELLER 3/4" BRONZE THREADED WYE STRAINER WITH HOSE BIB MODEL WOODFORD #24 WALL HYDRANT 1/2" ANTI-SIPHON VACUUM BREAKER & LOCK SHIELD (OR APPROVED EQUAL).
↔	1/2" HOSE BIB	3/4"	-	-	WOODFORD #24 WALL HYDRANT 1/2" ANTI-SIPHON VACUUM BREAKER & LOCK SHIELD (OR APPROVED EQUAL).
WH	WATER HEATER	1/2'	1/2'	-	RHEEM TANKLESS ELECTRIC RTEX-08 8KW TANKLESS ELECTRIC WATER HEATER (OR APPROVED EQUAL).

- GENERAL PLUMBING NOTES**
- CONTRACTOR SHALL FURNISH ALL ITEMS COMPLETE, INCLUDING VALVES, TRAPS, DRAINS, ETC. AS REQUIRED FOR COMPLETE SYSTEM OPERATION.
 - GRADE ALL WASTE PIPING TO DRAIN.
 - WASTE AND WATER PIPING TO BE INSTALLED IN ACCORDANCE WITH HEALTH DEPARTMENT REQUIREMENTS.
 - PROVIDE PVC-DWV PIPING FOR WASTE AND SOIL PIPING FOR BUILDING. PIPING SHALL MEET ASTM-D-2665.
 - WATER PIPING BELOW SLAB TO BE TYPE "L" COPPER, WATER PIPING ABOVE GROUND TO BE TYPE "L" COPPER W/ TYPE "L" COPPER FROM STRAIGHT STOPS TO LAVATORIES, PIPING BELOW GROUND SHALL BE SLEEVED IN SCHEDULE 40 P.V.C.
 - VENTS TO EXTEND 10' ABOVE FIN. ROOF AND SHALL BE FLASHED WITH POLY FLASHING.
 - THERE WILL BE ONE FACTORY INSTALLED FLOOR DRAIN LOCATED IN EACH RESTROOM. THE FLOOR DRAINS WILL STUB-OUT INTO THE FORM BOX AREA, LOCATED IN THE CHASE/UTILITY AREA. THE CONTRACTOR SHALL FURNISH AND INSTALL ALL THE NECESSARY PIPING, FITTINGS, ETC. AS REQUIRED FOR THE FIELD HOOK-UP.
 - ADDITIONAL OR DIFFERENT FITTINGS MAY BE REQUIRED TO COMPLETE A WORKING SYSTEM TO MEET CODE REQUIREMENTS.
 - ALL PIPING, VALVES, AND RISERS SHALL BE SUPPORTED IN THE CHASE AREA WITH METAL STRAPS AND/ OR HOLE STRAPS FASTENED TO THE 2"x STUD WALL.



DRAIN WASTE AND VENT



FIXTURE ELEVATIONS

KNEPSHIELD
HUNTER COMPANY
 #10 HUNTER TRAIL
 P.O. BOX 899
 LAGRANGE, KY 40031
 800-626-6530

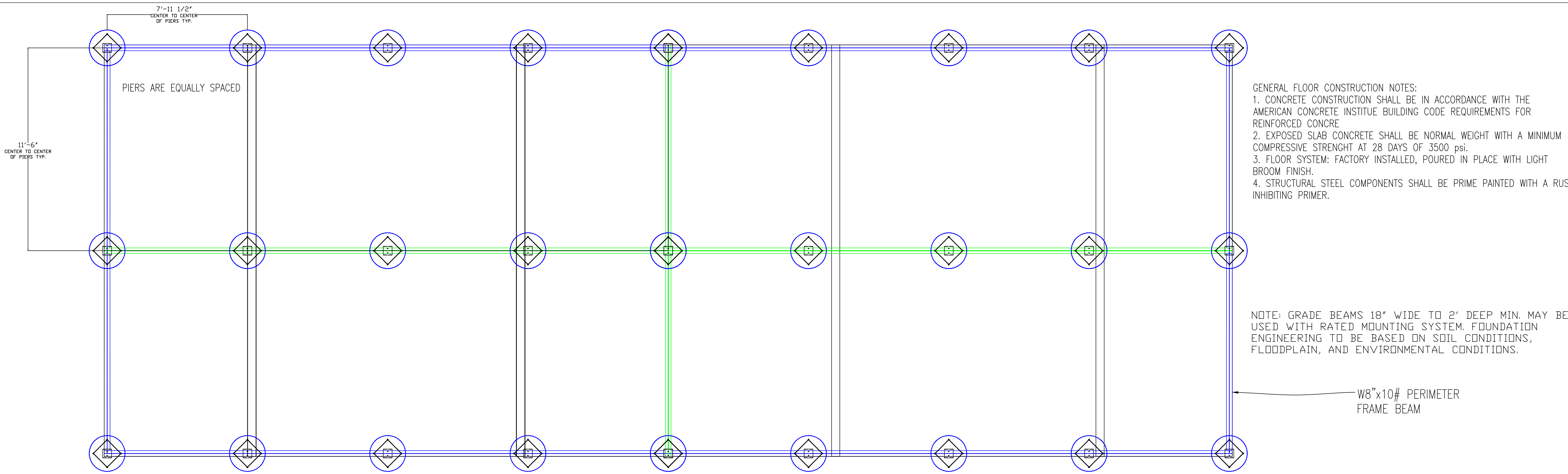
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SHEET TITLE PLUMBING	
PROJECT NAME 24x64 CLASSROOM BUILDING NO RESTROOM	
PROJECT LOCATION VARIOUS LOCATIONS	

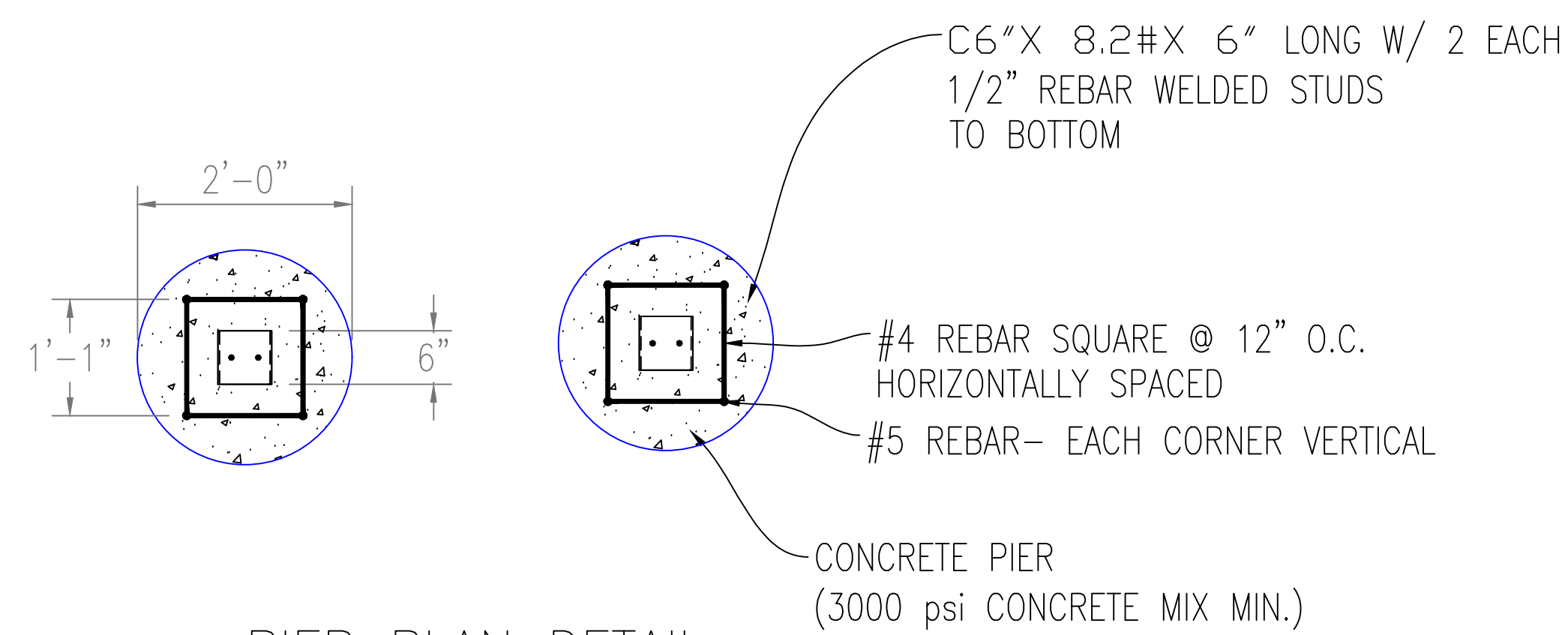
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DRAWN	CHECKED	APPROVED	DATE	SCALE	
TMKII	--		2/2/21	NTS	

REVISIONS		
MARK	DESCRIPTION	DATE

FILE NAME DW22-2464CR	PROJECT ENGINEER	DRAWING NO. _____
MODEL #		PKG. NO. _____
SERIAL #		SHEET 5
		OF _____

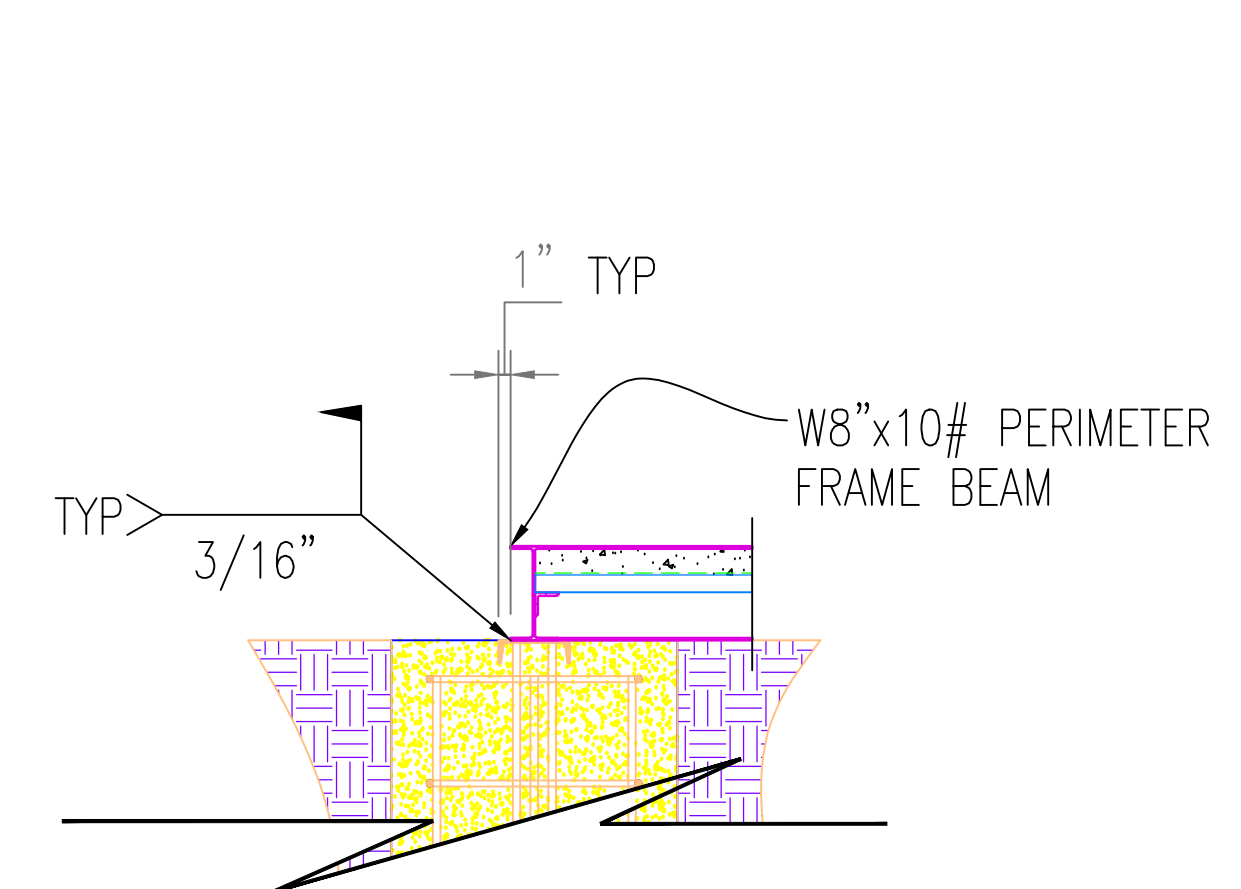


FOUNDATION PLAN

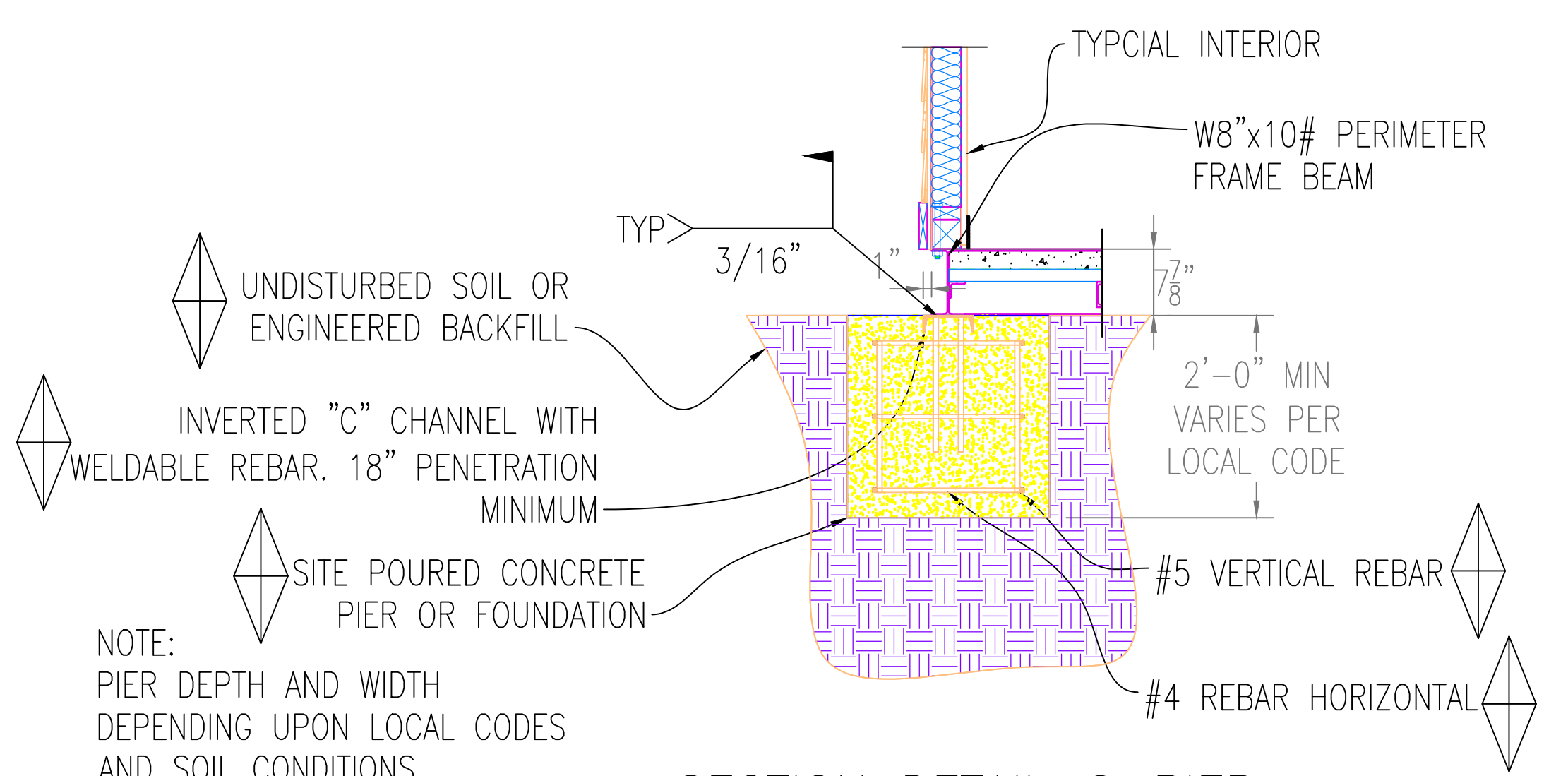


PIER PLAN DETAIL

NOTE: ALL MATERIALS BY OTHERS

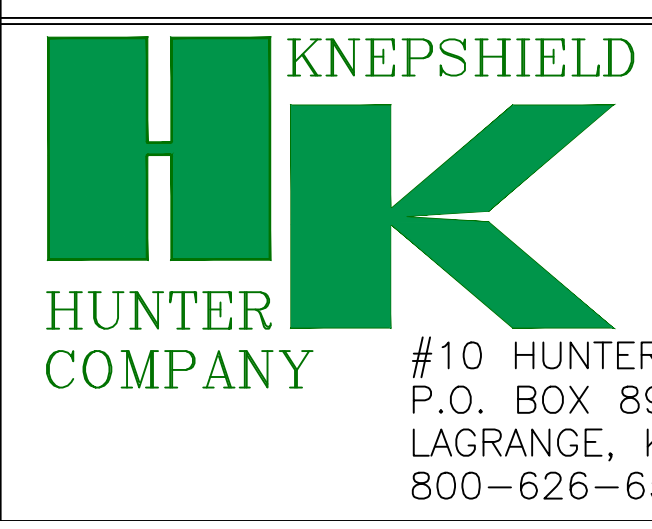


CONNECTION DETAIL @ PIER



SECTION DETAIL @ PIER

NOTE: PIER DEPTH AND WIDTH DEPENDING UPON LOCAL CODES AND SOIL CONDITIONS



◇ SYMBOL: SUPPLIED BY MANUFACTURER AND INSTALLED BY OTHERS.
 ◇ SYMBOL: SUPPLIED AND INSTALLED BY OTHERS.

SHEET TITLE		FOUNDATIONS	
PROJECT NAME		24x64 CLASSROOM BUILDING NO RESTROOM	
PROJECT LOCATION		VARIOUS LOCATIONS	

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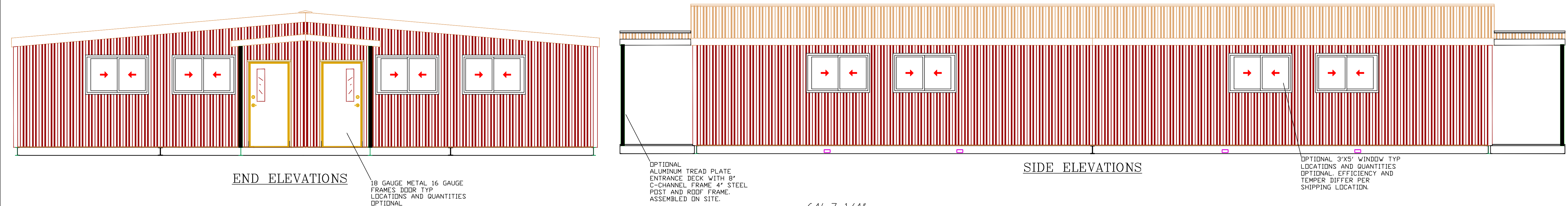
IMPORTANT
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DRAWN	CHECKED	APPROVED	DATE	SCALE
TMKII	--		2/2/21	NTS

REVISIONS		
MARK	DESCRIPTION	DATE

FILE NAME	DW00-2464CR
MODEL #	
SERIAL #	
PROJECT ENGINEER	

DRAWING NO.	
PKG. NO.	SHEET
	6
	OF

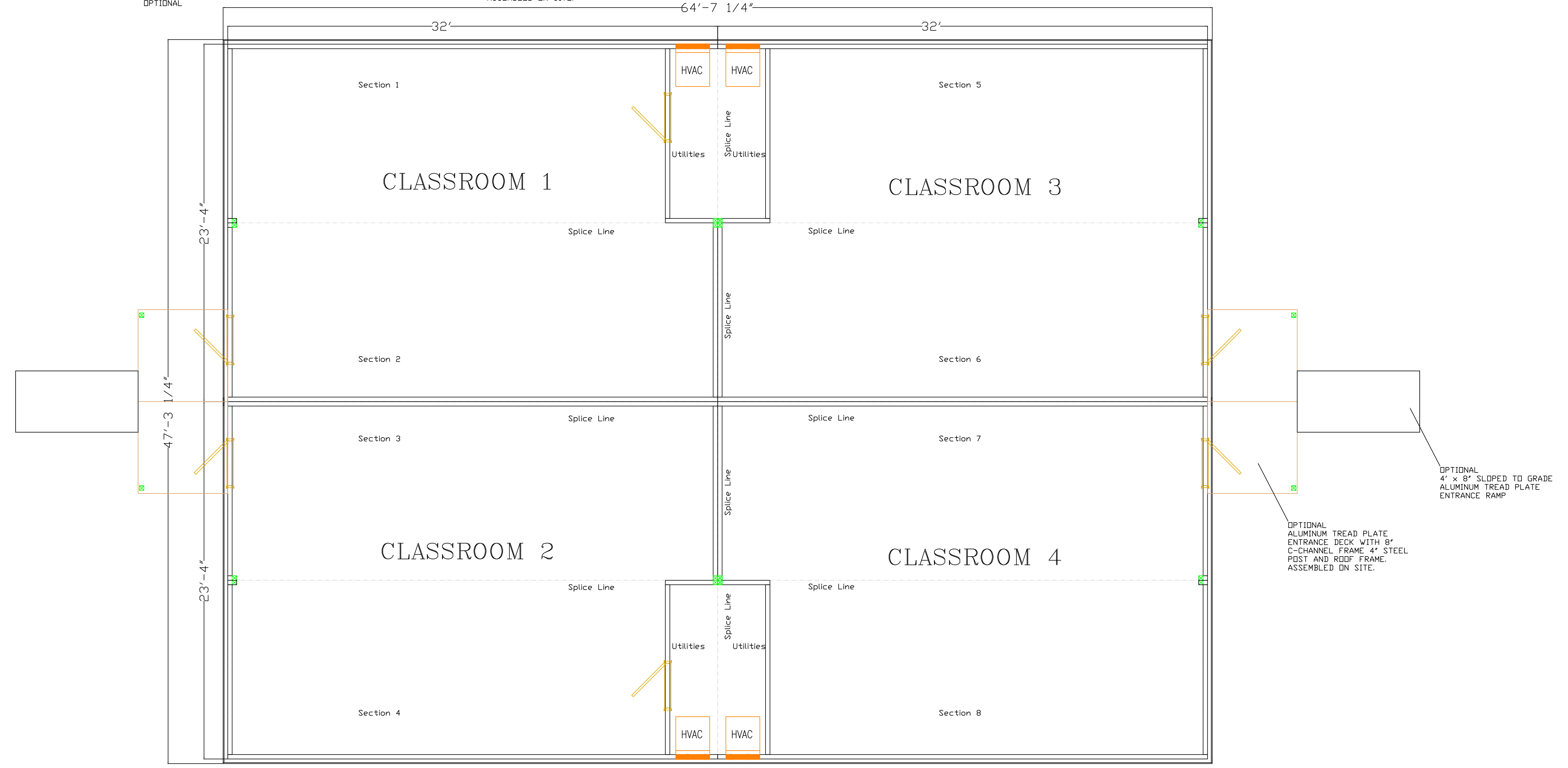


END ELEVATIONS

18 GAUGE METAL 16 GAUGE FRAMES DOOR TYP LOCATIONS AND QUANTITIES OPTIONAL

SIDE ELEVATIONS

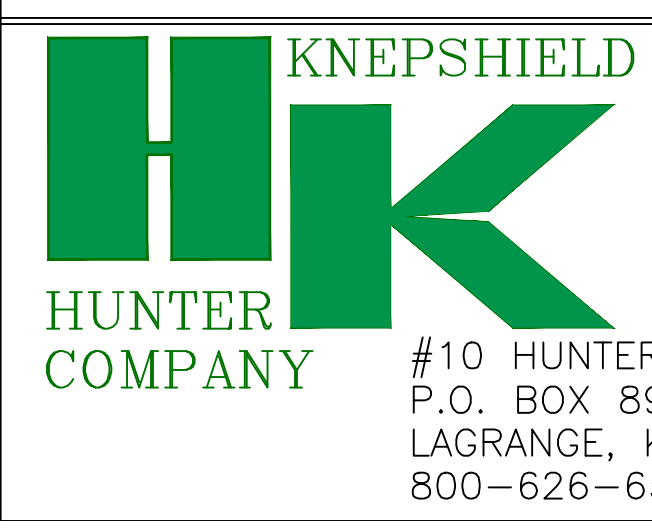
OPTIONAL 3'X5' WINDOW TYP LOCATIONS AND QUANTITIES OPTIONAL. EFFICIENCY AND TEMPER DIFFER PER SHIPPING LOCATION.



PLAN VIEW

OPTIONAL 4' x 8' SLOPED TO GRADE ALUMINUM TREAD PLATE ENTRANCE RAMP

OPTIONAL ALUMINUM TREAD PLATE ENTRANCE DECK WITH 8\"/>



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SHEET TITLE ELEVATIONS	
PROJECT NAME 48x64 CLASSROOM BUILDING NO RESTROOM	
PROJECT LOCATION VARIOUS LOCATIONS	

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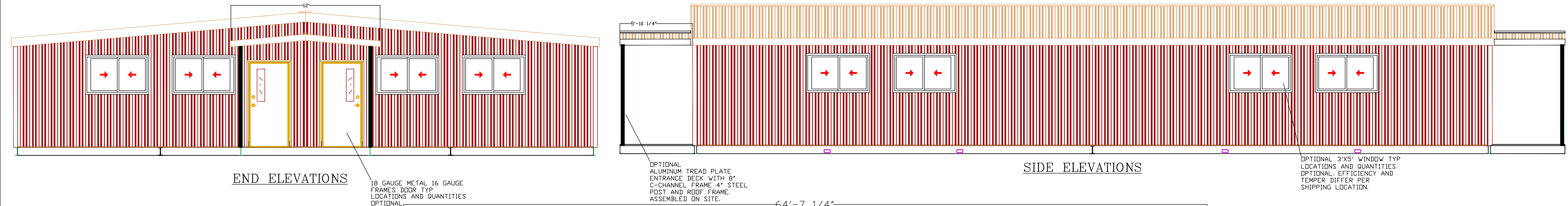
DRAWN	CHECKED	APPROVED	DATE	SCALE
TMKII	--		2/2/21	NTS

REVISIONS		
MARK	DESCRIPTION	DATE

FILE NAME DW00-4764CR
MODEL #
SERIAL #

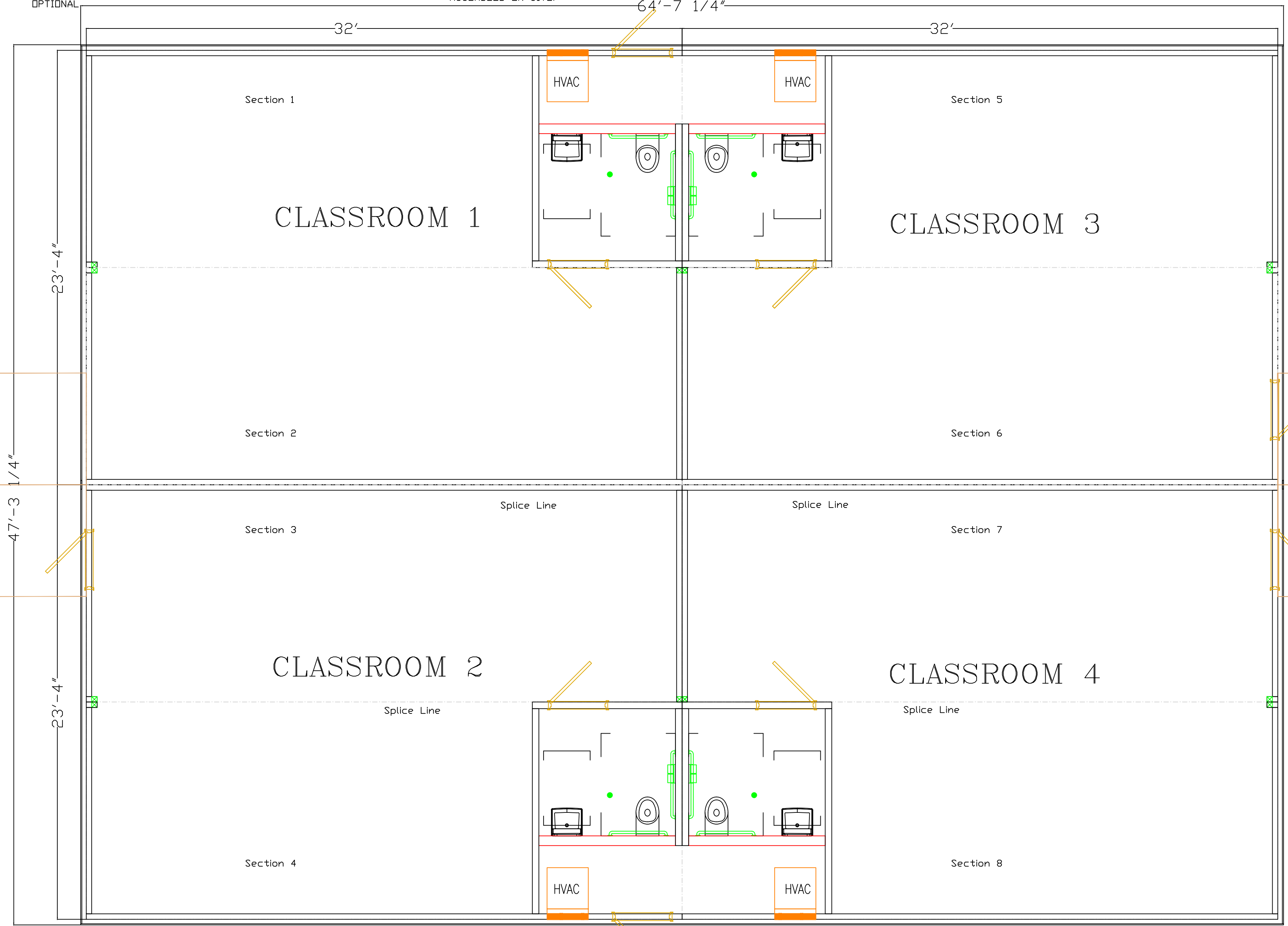
PROJECT ENGINEER

DRAWING NO.	
PKG. NO.	SHEET
	1
	OF

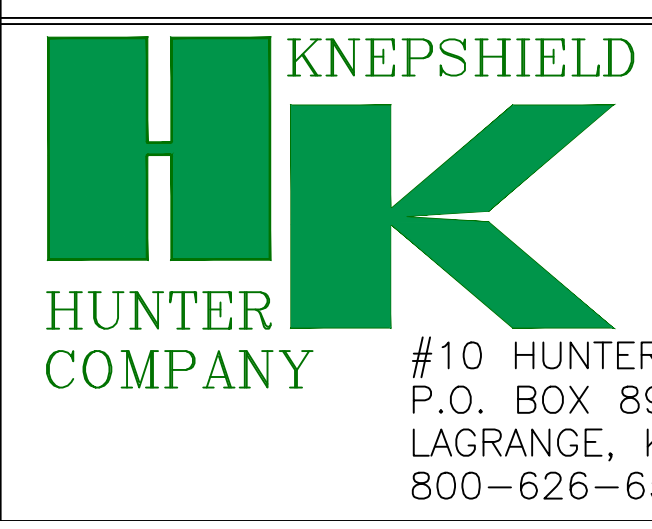


END ELEVATIONS

SIDE ELEVATIONS



PLAN VIEW



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#10 HUNTER TRAIL
 P.O. BOX 899
 LAGRANGE, KY 40031
 800-626-6530

SHEET TITLE
 ELEVATIONS
PROJECT NAME
 48x64 CLASSROOM BUILDING NO RESTROOM
PROJECT LOCATION
 VARIOUS LOCATIONS

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TMKII	--		2/2/21	NTS

REVISIONS		
MARK	DESCRIPTION	DATE

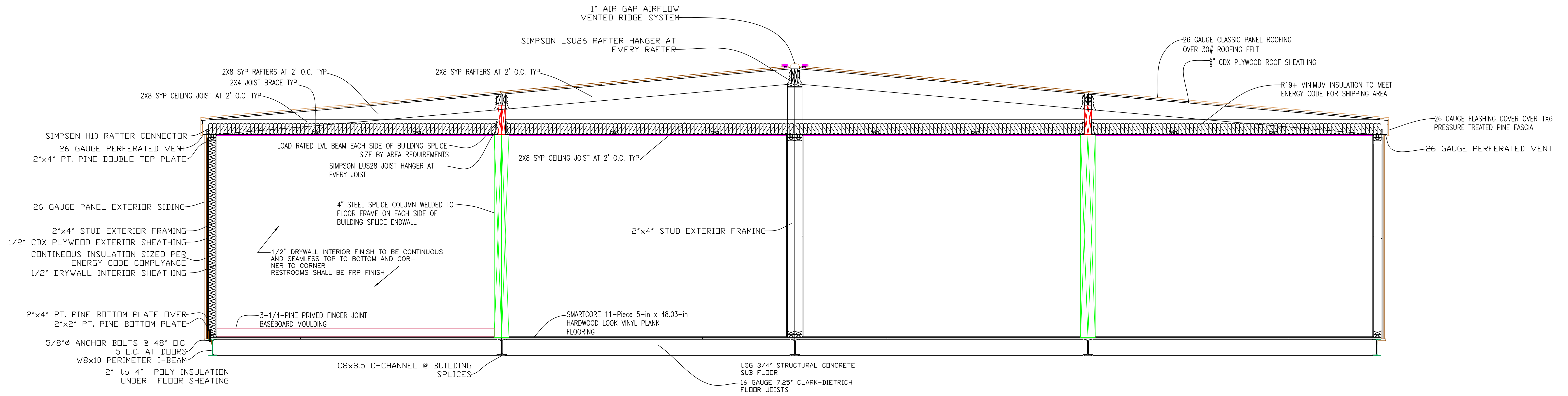
FILE NAME
 DW22-4764CR
MODEL #
SERIAL #

PROJECT ENGINEER

DRAWING NO.

PKG. NO.

SHEET
 2
OF



1/2 BUILDING SECTION

HUNTER KNEPSHIELD COMPANY
 #10 HUNTER TRAIL
 P.O. BOX 899
 LAGRANGE, KY 40031
 800-626-6530

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SHEET TITLE BUILDING SECTION	
PROJECT NAME 48x64 CLASSROOM BUILDING NO RESTROOM	
PROJECT LOCATION VARIOUS LOCATIONS	

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REVISIONS		
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FILE NAME
DW00-4764CR

MODEL #

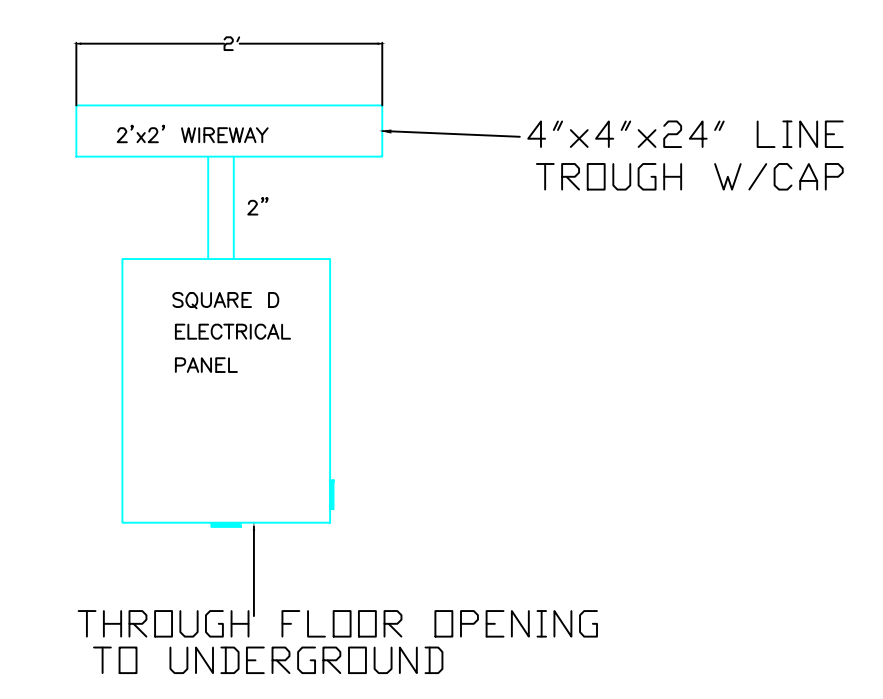
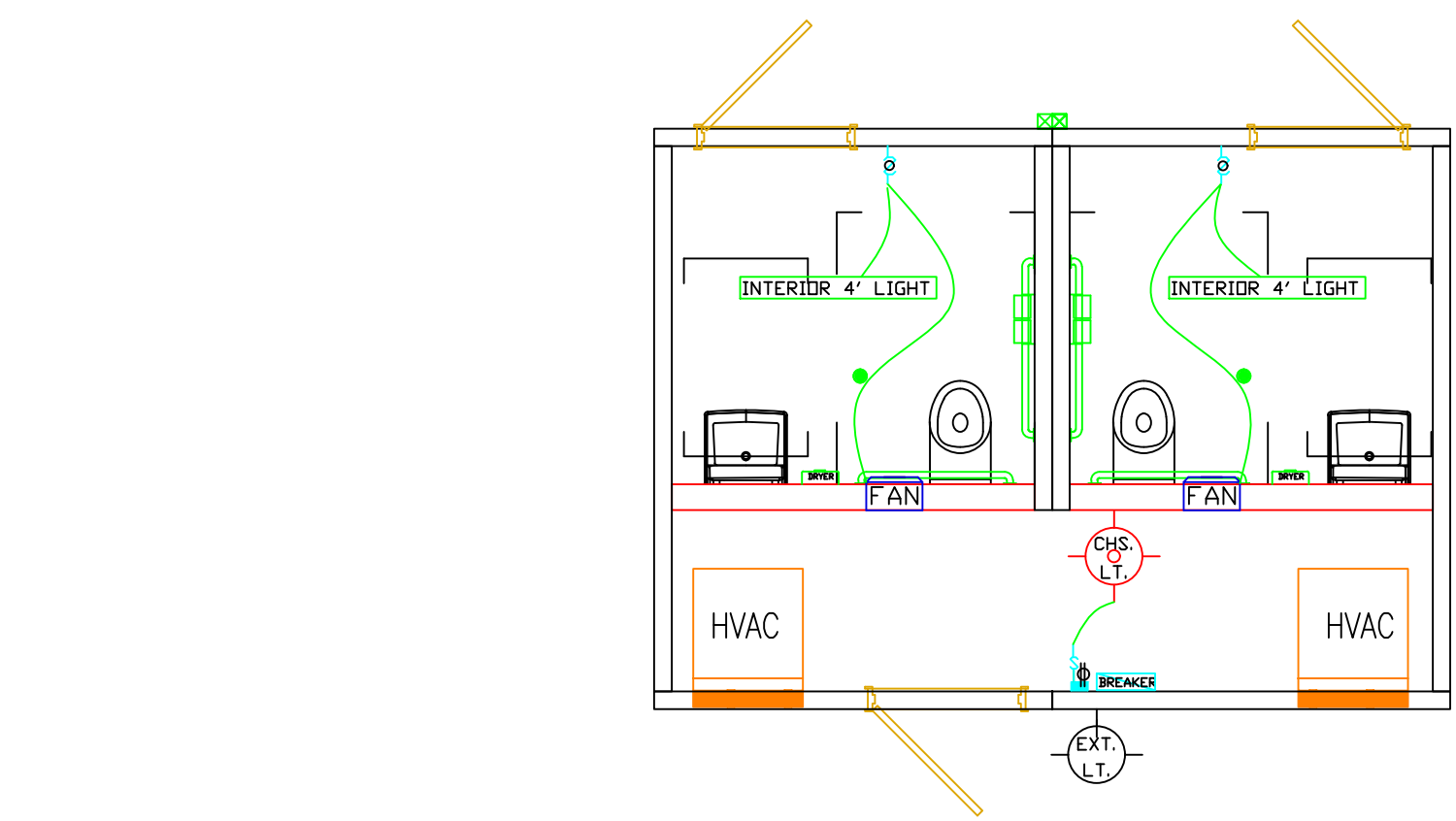
SERIAL #

PROJECT ENGINEER

DRAWING NO.

PKG. NO.

SHEET **3** OF



- GENERAL ELECTRICAL NOTES**
- A. Underground Sleeve: Per Local requirements.
 - B. Panel: 200 amp capacity, 30/40 breaker MINIMUM.
 - C. Conduit: Metallic throughout. EMT, FMC or MC cable.
 - D. Testing: Test in accordance with governing agency.
 - E. All Electrical work shall be performed in Accordance with the requirements of the National Electric Code (N.E.C.)
 - F. State Insignia Sticker located on side near electrical panel.
 - G. Grounding: A 5/8" X 8' grounding rod shall be installed either inside the form box or outside the building with grounding lugs and wire to the panel and the copper water supply. Grounding materials shall be supplied and installed by others to meet local requirements.

-NOTICE TO CONTRACTOR-
 THIS RESTROOM FACILITY HAS BEEN PREWIRED AND IS READY FOR HOOK-UP. THE CONTRACTOR IS REQUIRED TO FURNISH & INSTALL THE NECESSARY WIRING, CONDUIT, ETC. AS REQUIRED TO MAKE THE HOOK-UP BETWEEN THE ELECTRICAL PANEL AND THE ELECTRICAL SOURCE.

ELECTRICAL FIXTURE SCHEDULE

SYMBOLS	DESCRIPTION	MOUNTING HEIGHTS	UNIT KW	QUANTITY	
				NO-RR	RR
INTERIOR 4' LIGHT	LED WARELIGHT WRAP WL-WRAP4-LED-32W-40K-MV (OR APPROVED EQUAL).	+/- 8'-0" CEILING MOUNT	0.032	84	+4
EXTERIOR LIGHT	LED WARELIGHT WALL PACK WL-MWP-20W-50K-B-MV-PC (OR APPROVED EQUAL).	+/- 7' TO CENTER LINE	0.020	3	
DIS LT	LED WARELIGHT VAPORPROOF JELLY JAR WL-14WJCMFG-40KMV (OR APPROVED EQUAL).	+/- 8'-0" CEILING MOUNT	0.014	4	
EMCY LT	WARELIGHT LEDCXTEU2RW LED EXIT & EMERGENCY COMBO WITH BATTERY BACKUP (OR APPROVED EQUAL).	+/- 8' OVER DOOR	0.009	4	
EMCY LT	WARELIGHT LEDR-2W LED THERMOPLASTIC EMERGENCY LIGHT WITH TWO ADJUSTABLE HEADS WITH BATTERY BACKUP (OR APPROVED EQUAL).	+/- 7'-6" ON WALL	0.006	4	
BREAKER	SQUARE D #HOM2040M200TC - 200 AMP PANEL W/ MAIN BREAKER & ISOLATED GROUNDING BAR. (OR APPROVED EQUAL).	ABOVE PLUMBING LINE ATTACHED TO PLYWOOD MOUNTED ON CHASE STUD WALL	NA	1	
⊕	LEVITON T5248-WCP - DUPLEX RECEPTACLE AMPER-RESISTANT DUPLEX OUTLET WITH EARS. 15 AMP, 125 VOLT, NEMA 5-15R, (OR APPROVED EQUAL).	18" TO CENTER	0	64	
⚡	LEVITON #54521-2W- SINGLE POLE AC SWITCH (COMMERCIAL SPEC GRADE) AND WALLPLATE. (OR APPROVED EQUAL).	+/- 42' TO CENTER LINE	NA	8	
⊕	THE LUTRON MAESTRO OCCUPANCY SENSING SWITCH MS-OPSSM-WH-3 MAESTRO 5-AMP MULTI-LOCATION DUAL VOLTAGE OCCUPANCY SENSING SWITCH (OR APPROVED EQUAL).	+/- 42' TO CENTER LINE	NA	4	
FAN	BROAN #RB110 BATHROOM FAN WITH UP TO 110 CFM AT 1.0 SONES, THE GRILLE SHALL BE TORSION (OR APPROVED EQUAL).	+/- 7'-0" TO CENTER LINE	0.034	4	
⌚	INTERMATIC OR TORK T101 ELECTROMECHANICAL TIME CLOCK 24 HOUR TIME SWITCH 40 AMP, 120 VAC (OR APPROVED EQUAL).	+/- 5' TO CENTER LINE	NA	2	
☞	EXCELL TA-ABS THIN AIR HANDS OFF AUTOMATIC HAND DRYER, WITH SURFACE MOUNT WHITE CAST COVER. (OR APPROVED EQUAL).	38" TO BLOWER SHOOT	0.950	4	
⚡	RHEEM TANKLESS ELECTRIC RTEX-08 8KW TANKLESS ELECTRIC WATER HEATER (OR APPROVED EQUAL).	+/- 2'-0" IN WALL	8.000	2	
HVAC	GE AZ75H18DAC VERTICAL SERIES ZONELINE, 230V ELECTRIC. 8.3/9.0 AMP. DUCTABLE, 10.0/10.0 (BTUH/Watt) 10.6/10.6 Indoor CFM 550/475/440 INSTALLED WITH RAVWP6 WALL PLENUM AND RAK163P2 DIGITAL PROGRAMMABLE THERMOSTAT. (OR APPROVED EQUAL).	+/- 2'-6" ABOVE FINISH FLOOR	9.000	4	

ELECTRICAL PLAN WITH RESTROOM OPTION

PANEL DIAGRAM



◇ SYMBOL: SUPPLIED BY MANUFACTURER AND INSTALLED BY OTHERS.
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SHEET TITLE ELECTRICAL	
PROJECT NAME 48x64 CLASSROOM BUILDING NO RESTROOM	
PROJECT LOCATION VARIOUS LOCATIONS	

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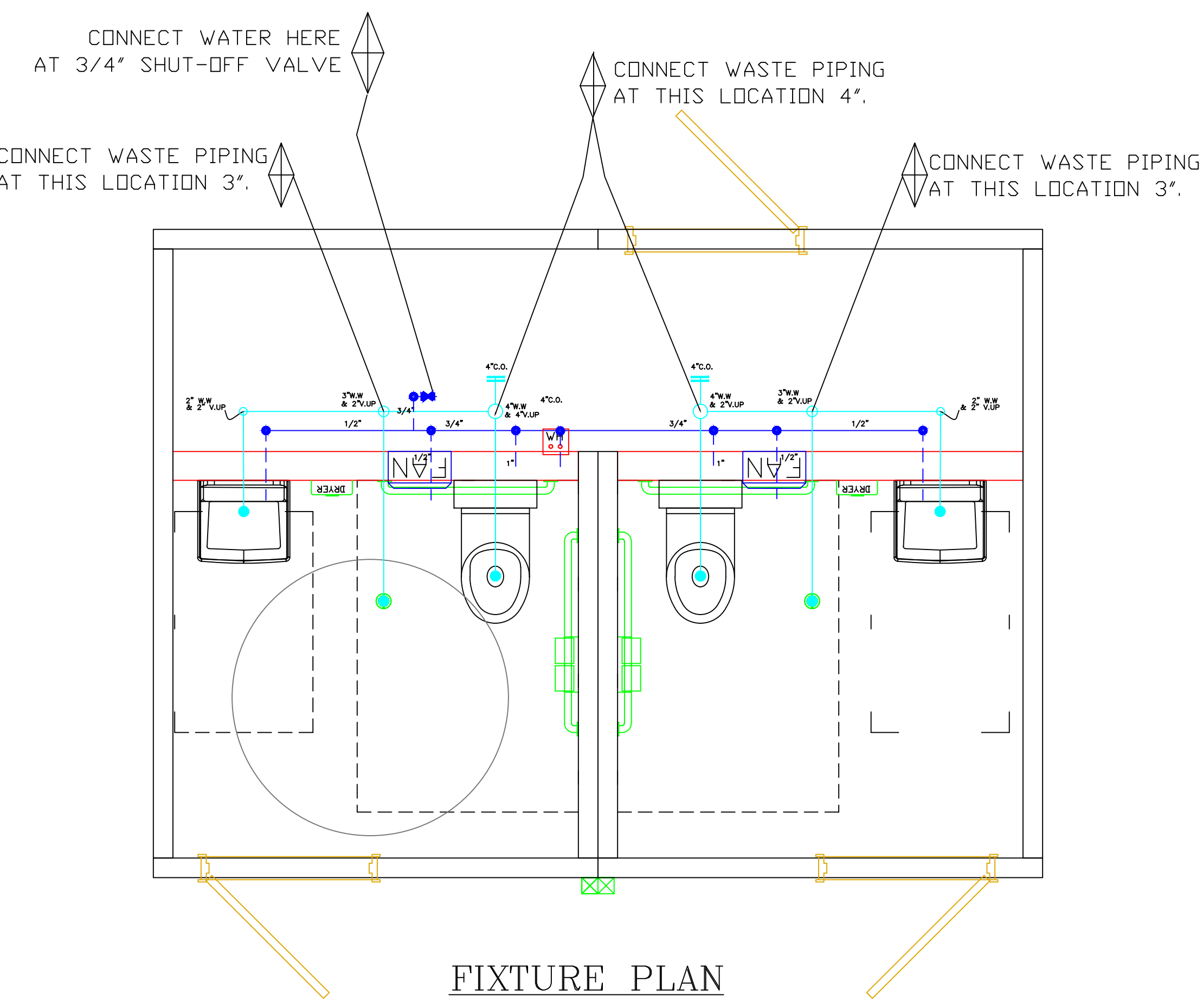
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DRAWN	CHECKED	APPROVED	DATE	SCALE
TMKII	--		2/2/21	NTS

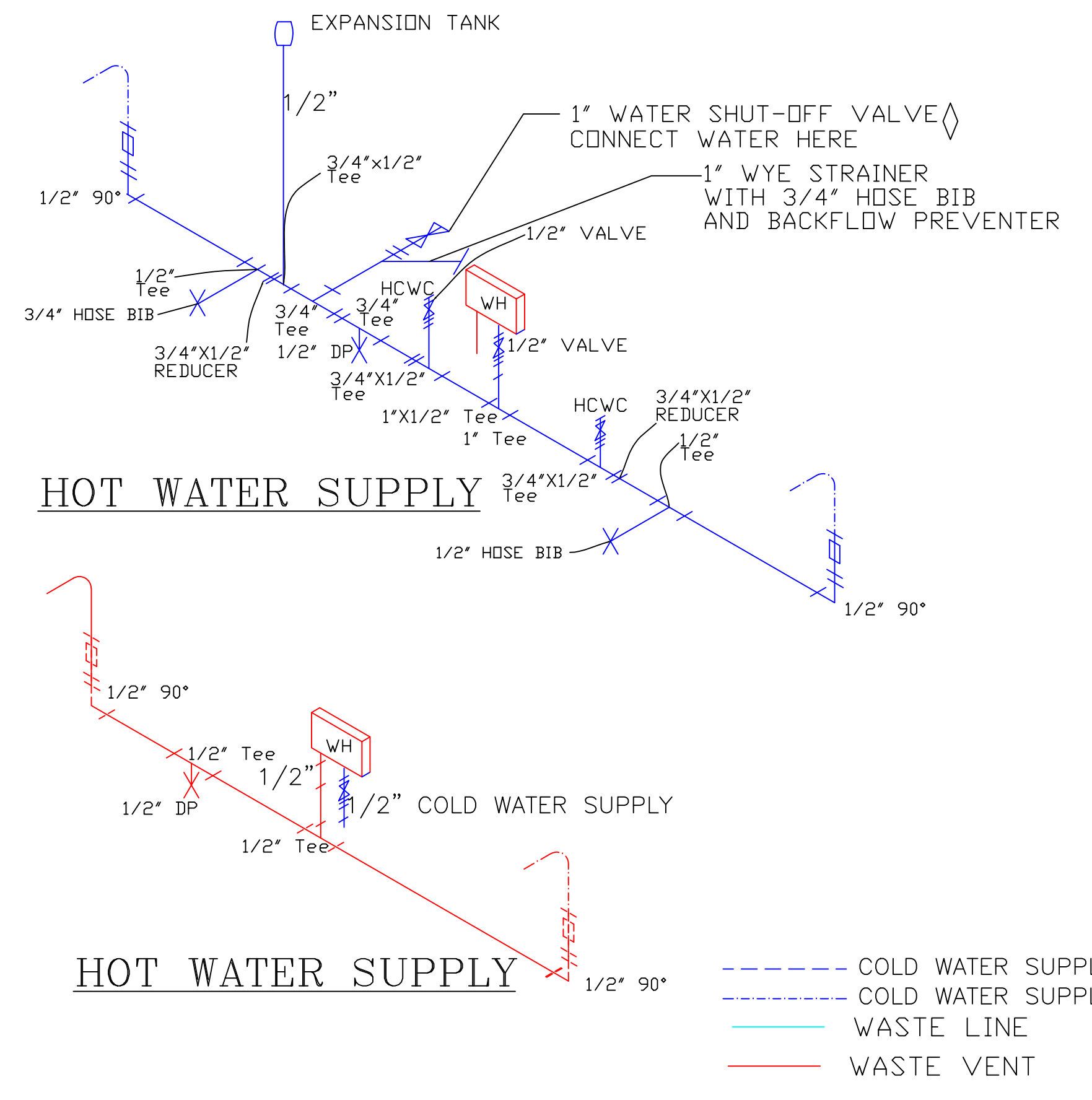
REVISIONS		
MARK	DESCRIPTION	DATE

FILE NAME DW22-4764CR	PROJECT ENGINEER
MODEL #	
SERIAL #	

DRAWING NO.	
PKG. NO.	SHEET
	4
	OF



FIXTURE PLAN



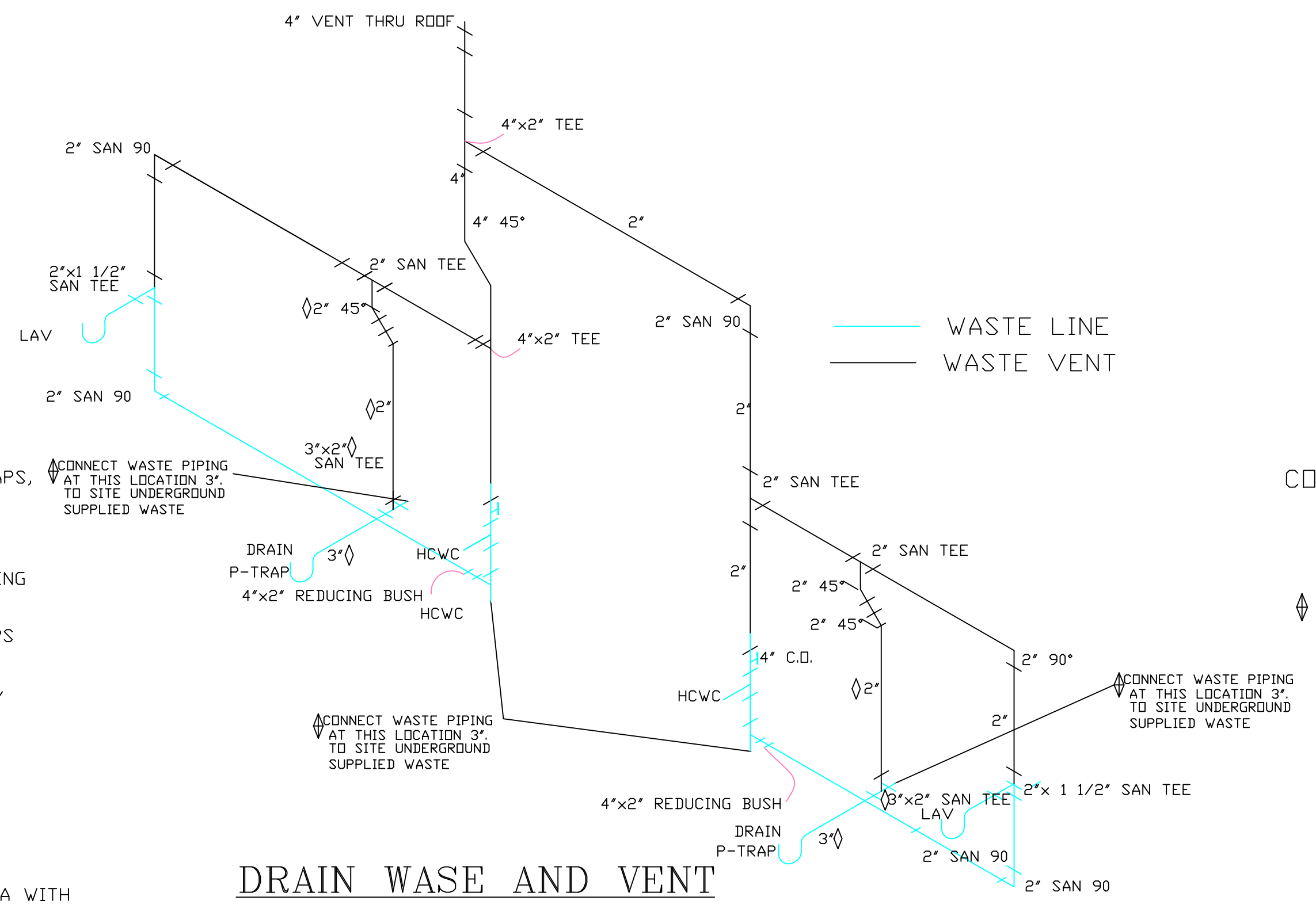
HOT WATER SUPPLY

HOT WATER SUPPLY

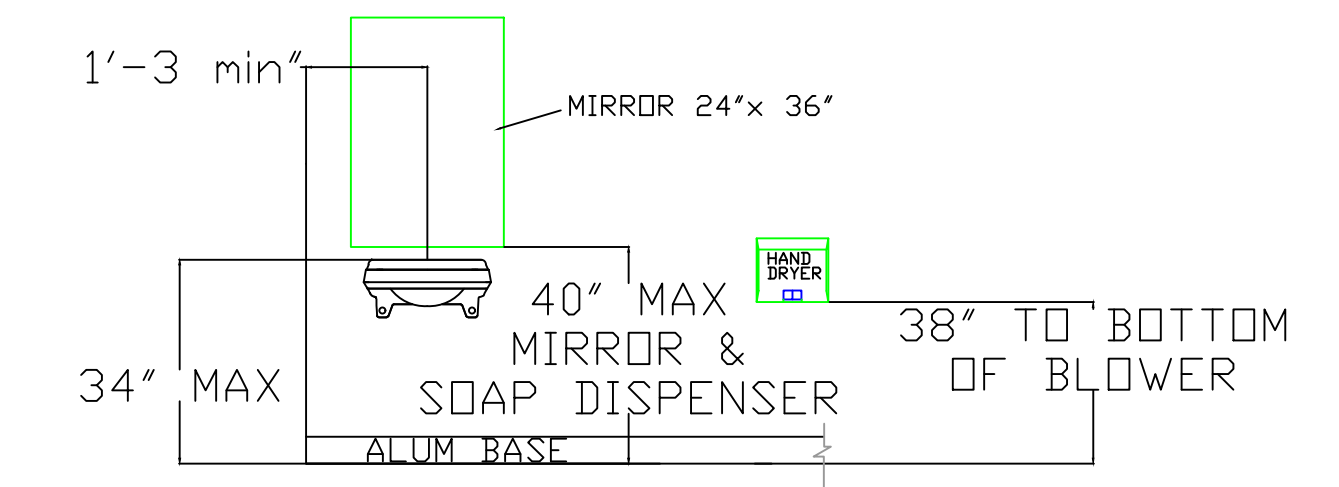
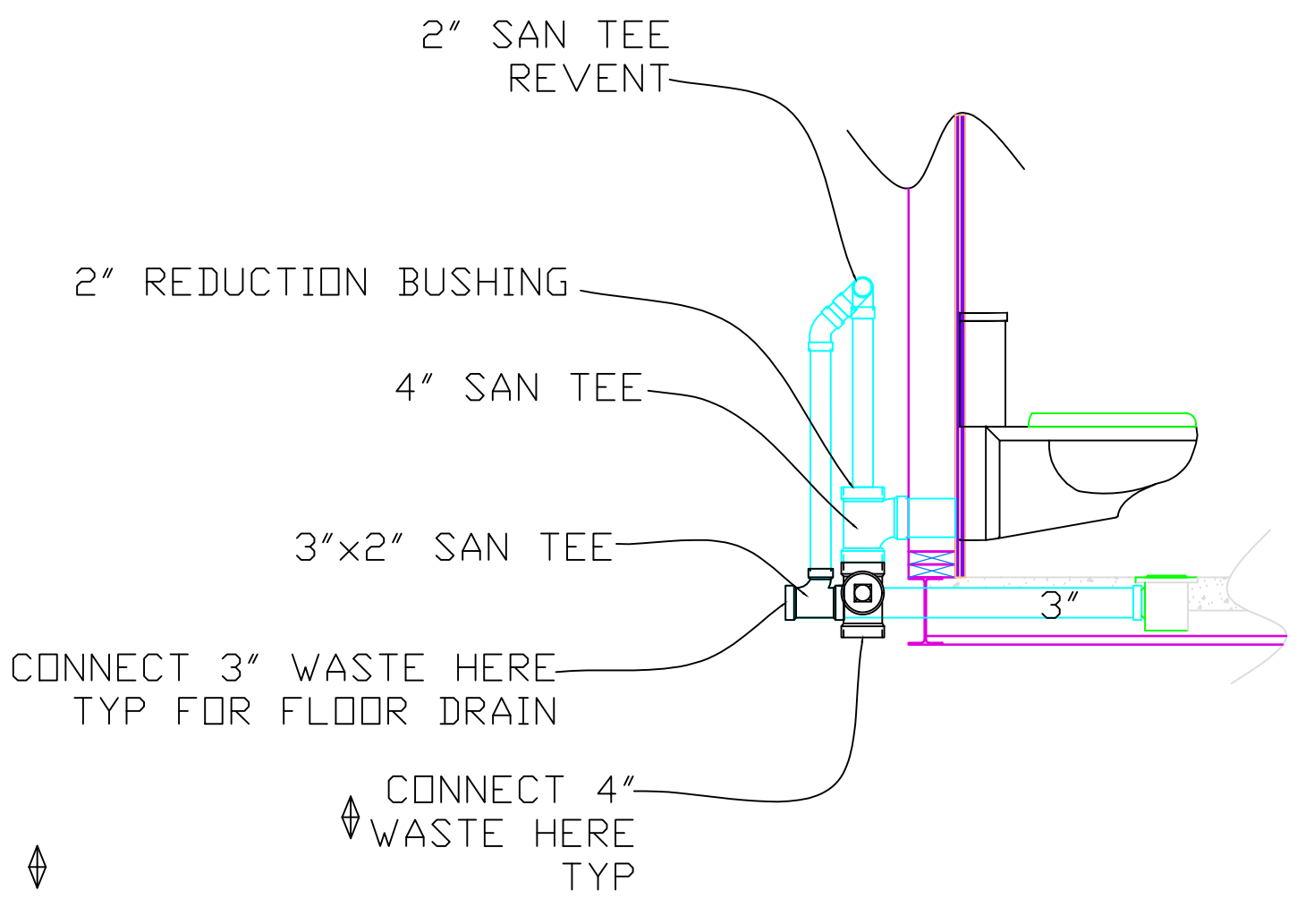
- - - COLD WATER SUPPLY (TYPE "L" HARD COPPER)
- - - COLD WATER SUPPLY (TYPE "L" SOFT COPPER)
- WASTE LINE
- WASTE VENT

PLUMBING FIXTURE SCHEDULE					
MARK	FIXTURE	C	H	W	DESCRIPTION
HCWC WC	WATER CLOSET	1'	-	4'	WATER CLOSET: AMERICAN STANDARD 2882108.020 BACK SPUD TANK TYPE VITREOUS CHINA WATER CLOSET 1.28 GAL FLUSH, ELONGATED BOWL, WALL MOUNTED WITH OPEN FRONT, WHITE SEAT. FURNISHED WITH WADE 311 ADJUSTABLE SIPHON JET CARRIER (OR APPROVED EQUALS). WATER CLOSETS TO BE INSTALLED AT HANDICAP HEIGHT.
LAV	LAVATORY	3/8'	3/8'	1-1/4'	LAVATORY: Z5344 20"x18" WALL HUNG LAVATORY WITH 4" CENTER FAUCET HUNG; W/ ZURN Z1231 CONCEALED CARRIER; ZURN Z86100 ZURN SINGLE BASIN PUSH BUTTON METERING FAUCET (COLD) FOR 4" CENTER HOLE LAV. LAVATORIES TO INCLUDE ZURN Z8743-PC 1-1/4" GRID DRAIN Z8700-B-D-PC 1-1/4" INLET OUTLET P-TRAP WITH TO BE INSTALLED AT HANDICAP HEIGHT.
●	FLOOR DRAIN	-	-	3'	FLOOR DRAIN: 3" WADE PRISON FLOOR DRAIN WITH INTEGRAL P-TRAP AND NICKEL HEAD AND HEAL-PROOF GRATE. GRATE IS INSTALLED WITH VANDAL PROOF SCREWS. (OR APPROVED EQUALS).
□	EXPANSION TANK	1/2'	-	-	EXPANSION TANK: WATTS INDUSTRIES DET-5 2-GAL. POTABLE WATER EXPANSION TANK WITH THERMALLY FUSED EPOXY LINER, FLEXIBLE BUTYL DIAPHRAGM AND FIELD ADJUSTABLE PRE-CHARGE.
↔	1" WYE STRAINER AND BACKFLOW PREVENTER	1'	-	-	MUELLER 3/4" BRONZE THREADED WYE STRAINER WITH HOSE BIB MODEL WOODFORD #24 WALL HYDRANT 1/2" ANTI-SIPHON VACUUM BREAKER & LOCK SHIELD (OR APPROVED EQUAL).
↔	1/2" HOSE BIB	3/4"	-	-	WOODFORD #24 WALL HYDRANT 1/2" ANTI-SIPHON VACUUM BREAKER & LOCK SHIELD (OR APPROVED EQUAL).
WH	WATER HEATER	1/2'	1/2'	-	RHEEM TANKLESS ELECTRIC RTEX-08 8KW TANKLESS ELECTRIC WATER HEATER (OR APPROVED EQUAL).

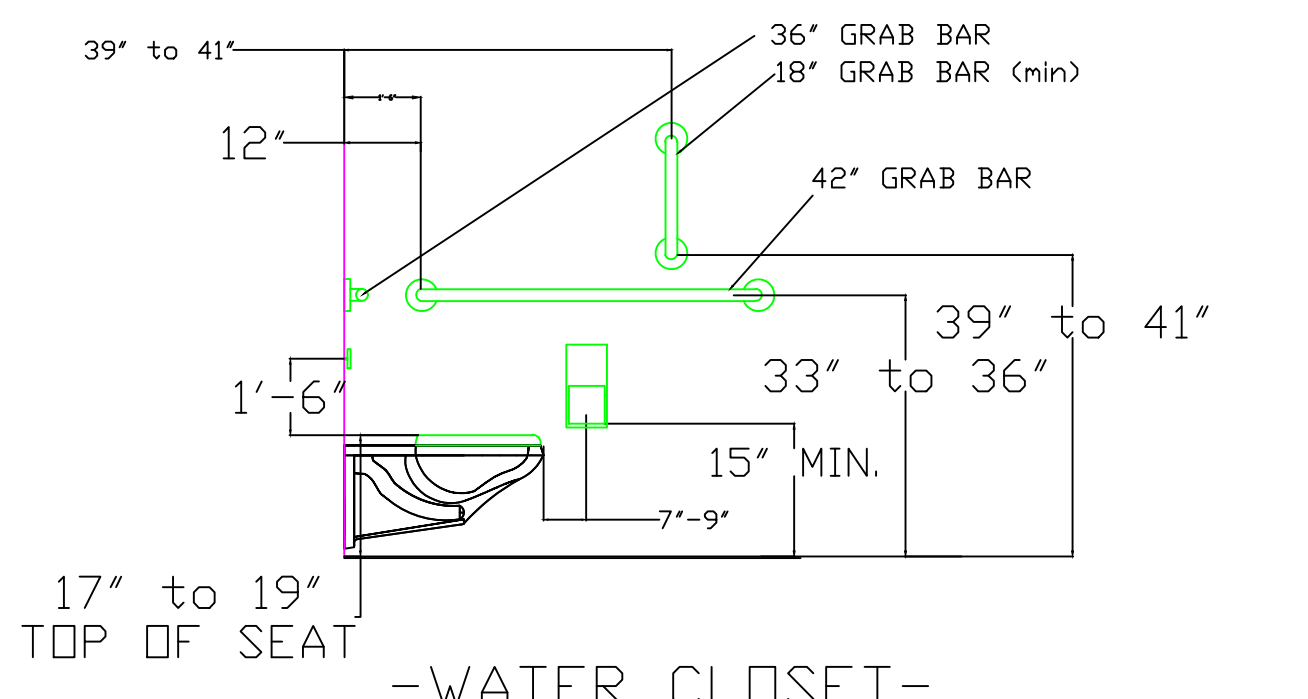
- GENERAL PLUMBING NOTES**
- CONTRACTOR SHALL FURNISH ALL ITEMS COMPLETE, INCLUDING VALVES, TRAPS, DRAINS, ETC. AS REQUIRED FOR COMPLETE SYSTEM OPERATION.
 - GRADE ALL WASTE PIPING TO DRAIN.
 - WASTE AND WATER PIPING TO BE INSTALLED IN ACCORDANCE WITH HEALTH DEPARTMENT REQUIREMENTS.
 - PROVIDE PVC-DWV PIPING FOR WASTE AND SOIL PIPING FOR BUILDING. PIPING SHALL MEET ASTM-D-2665.
 - WATER PIPING BELOW SLAB TO BE TYPE "L" COPPER, WATER PIPING ABOVE GROUND TO BE TYPE "L" COPPER W/ TYPE "L" COPPER FROM STRAIGHT STOPS TO LAVATORIES, PIPING BELOW GROUND SHALL BE SLEEVED IN SCHEDULE 40 P.V.C.
 - VENTS TO EXTEND 10' ABOVE FIN. ROOF AND SHALL BE FLASHED WITH POLY FLASHING.
 - THERE WILL BE ONE FACTORY INSTALLED FLOOR DRAIN LOCATED IN EACH RESTROOM. THE FLOOR DRAINS WILL STUB-OUT INTO THE FORM BOX AREA, LOCATED IN THE CHASE/UTILITY AREA. THE CONTRACTOR SHALL FURNISH AND INSTALL ALL THE NECESSARY PIPING, FITTINGS, ETC. AS REQUIRED FOR THE FIELD HOOK-UP.
 - ADDITIONAL OR DIFFERENT FITTINGS MAY BE REQUIRED TO COMPLETE A WORKING SYSTEM TO MEET CODE REQUIREMENTS.
 - ALL PIPING, VALVES, AND RISERS SHALL BE SUPPORTED IN THE CHASE AREA WITH METAL STRAPS AND/ OR HOLE STRAPS FASTENED TO THE 2"x STUD WALL.



DRAIN WASTE AND VENT



-LAVATORY-



-WATER CLOSET-

FIXTURE ELEVATIONS

HUNTER COMPANY
#10 HUNTER TRAIL
P.O. BOX 899
LAGRANGE, KY 40031
800-626-6530

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SHEET TITLE PLUMBING	
PROJECT NAME 24x64 CLASSROOM BUILDING NO RESTROOM	
PROJECT LOCATION VARIOUS LOCATIONS	

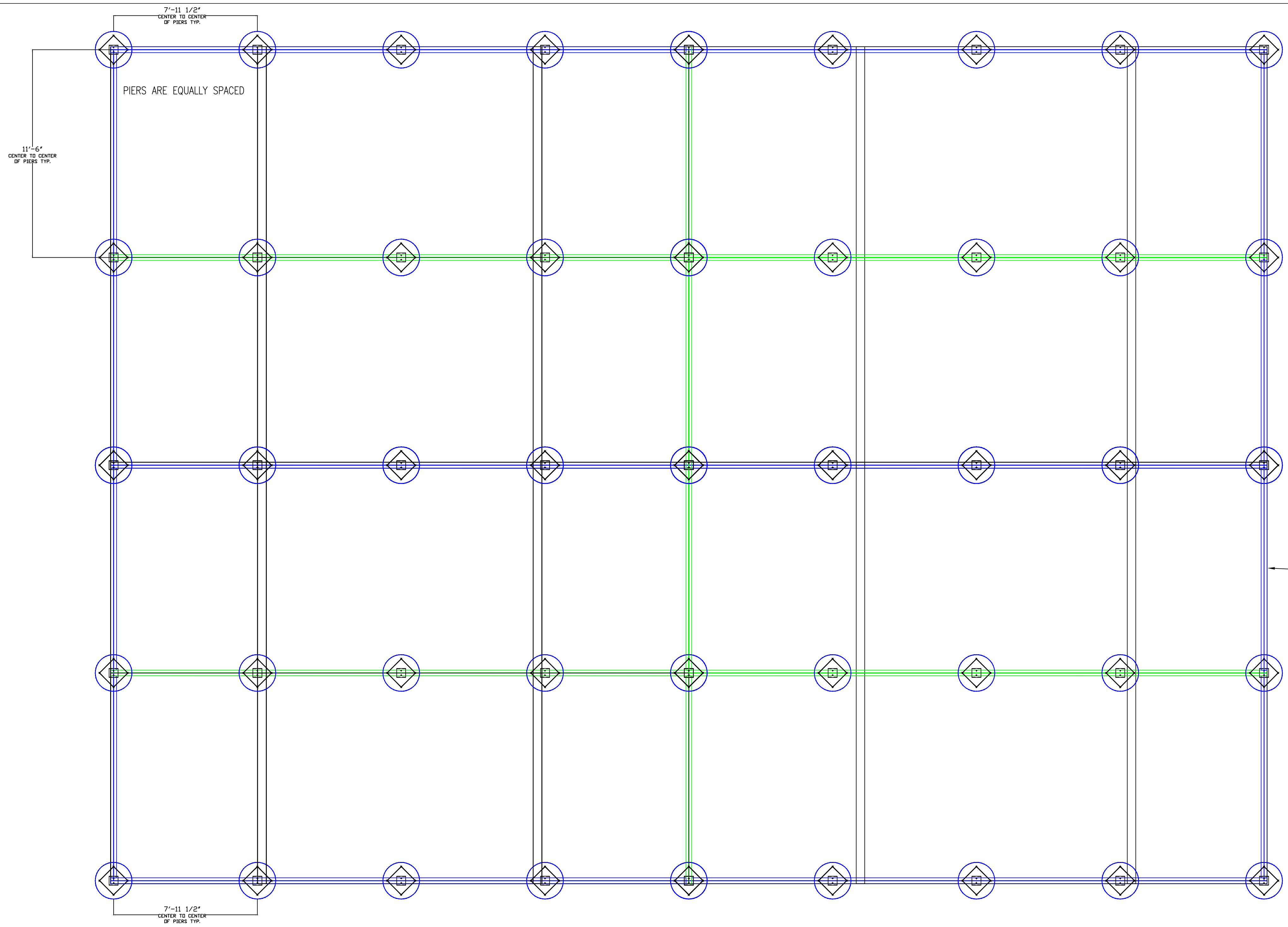
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TMKII	--		2/2/21	NTS

REVISIONS		
MARK	DESCRIPTION	DATE

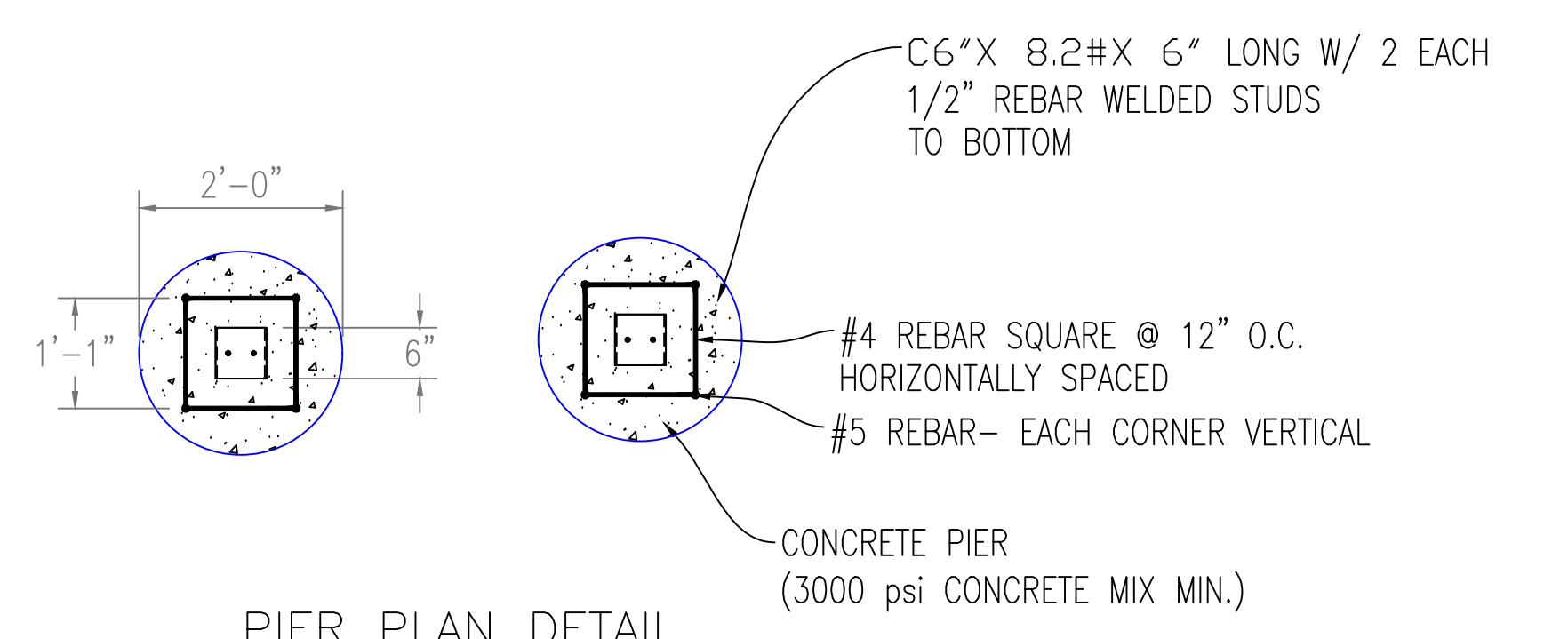
FILE NAME DW22-4764CR	PROJECT ENGINEER	DRAWING NO.	
MODEL #		PKG. NO.	SHEET
SERIAL #			5
			OF



FOUNDATION PLAN

GENERAL FLOOR CONSTRUCTION NOTES:
 1. CONCRETE CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE AMERICAN CONCRETE INSTITUTE BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE
 2. EXPOSED SLAB CONCRETE SHALL BE NORMAL WEIGHT WITH A MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS OF 3500 psi.
 3. FLOOR SYSTEM: FACTORY INSTALLED, POURED IN PLACE WITH LIGHT BROOM FINISH.
 4. STRUCTURAL STEEL COMPONENTS SHALL BE PRIME PAINTED WITH A RUST INHIBITING PRIMER.

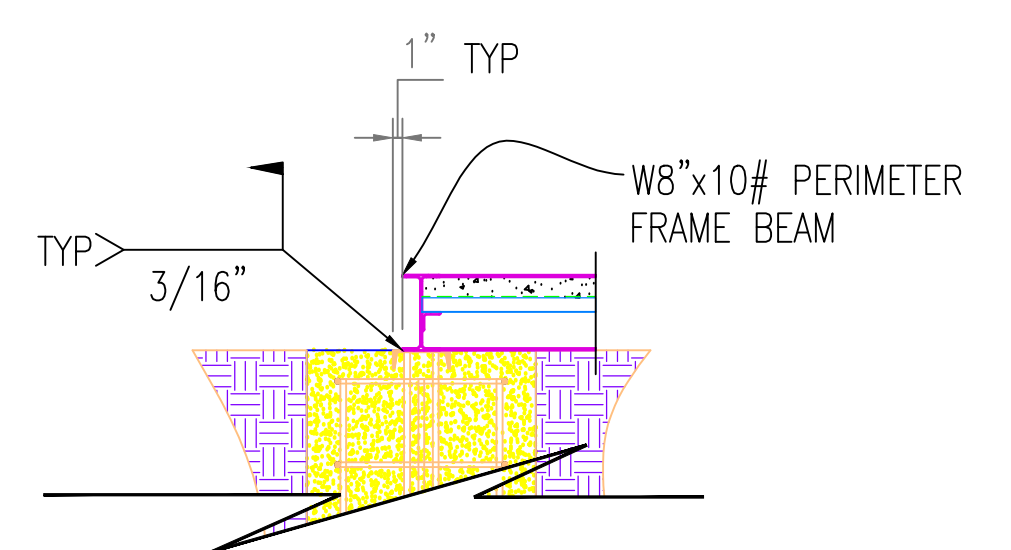
NOTE: GRADE BEAMS 18" WIDE TO 2' DEEP MIN. MAY BE USED WITH RATED MOUNTING SYSTEM. FOUNDATION ENGINEERING TO BE BASED ON SOIL CONDITIONS, FLOODPLAIN, AND ENVIRONMENTAL CONDITIONS.



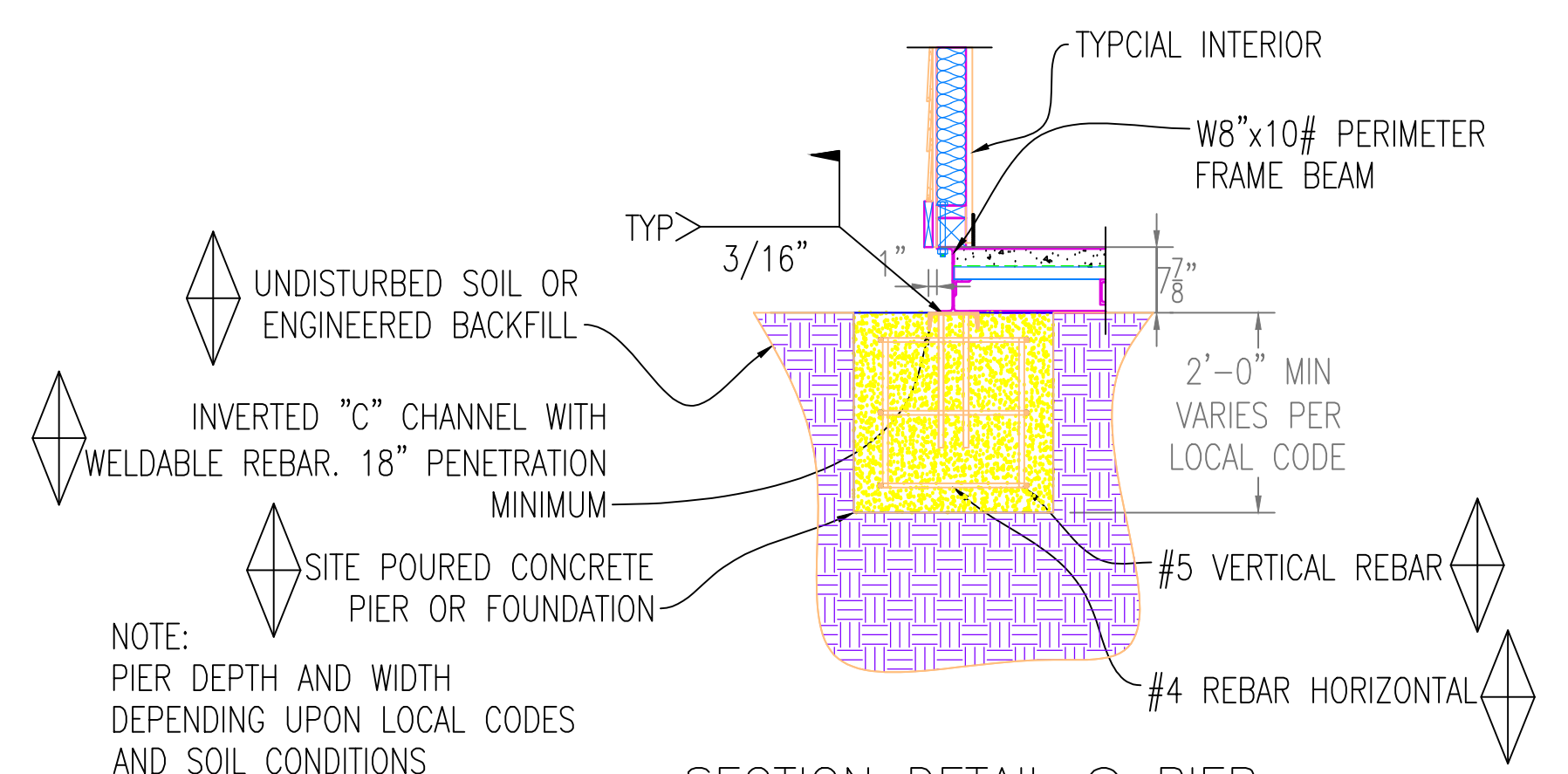
PIER PLAN DETAIL

NOTE: ALL MATERIALS BY OTHERS

W8"x10# PERIMETER FRAME BEAM

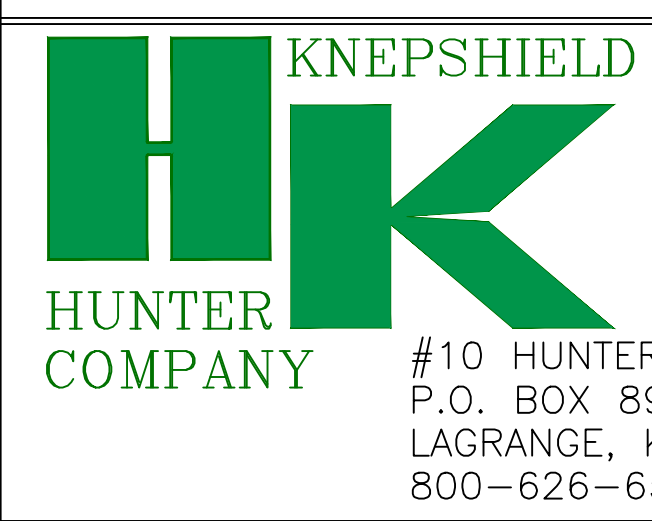


CONNECTION DETAIL @ PIER



SECTION DETAIL @ PIER

NOTE: PIER DEPTH AND WIDTH DEPENDING UPON LOCAL CODES AND SOIL CONDITIONS



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SHEET TITLE FOUNDATIONS	
PROJECT NAME 24x64 CLASSROOM BUILDING NO RESTROOM	
PROJECT LOCATION VARIOUS LOCATIONS	

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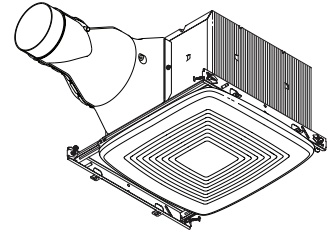
DRAWN	CHECKED	APPROVED	DATE	SCALE
TMKII	--		2/2/21	NTS

REVISIONS		
MARK	DESCRIPTION	DATE

FILE NAME DW00-4764CR	PROJECT ENGINEER
MODEL #	
SERIAL #	

DRAWING NO.	
PKG. NO.	SHEET
	6
	OF

ULTRA PRO™ SERIES FANS MODELS RB80, RB110



Quick Installation and Quiet Operation

FEATURES

UltraQuick™ Installation Technology

- Unique telescoping mounting frame fits through retrofit drywall opening to allow easy installation from the room side. No attic access needed!
- Captive mounting frame screws allow for easy new construction installation
- Mounting frame positioning tabs provide easy vertical positioning for new construction
- Works with any type of joist or truss system
- Duct connector and electrical knockout plate mount to outside or inside of housing, providing flexibility for new construction and retrofit applications
- Easy to insert and remove snap-in housing and blower

QStream™ Sound Technology

- Airflow-smoothing baffles reduce turbulence

QFlow™ Damper Technology

- When fan is on, damper position in the airstream is minimized to reduce static pressure and noise
- When fan is off, damper provides a tight seal to prevent back drafts

Blower

- Plug-in, permanently lubricated motor, engineered for continuous use

Housing

- Height allows for installation in 2" x 8" (nominal) construction

Grille

- Polymeric construction, innovative design

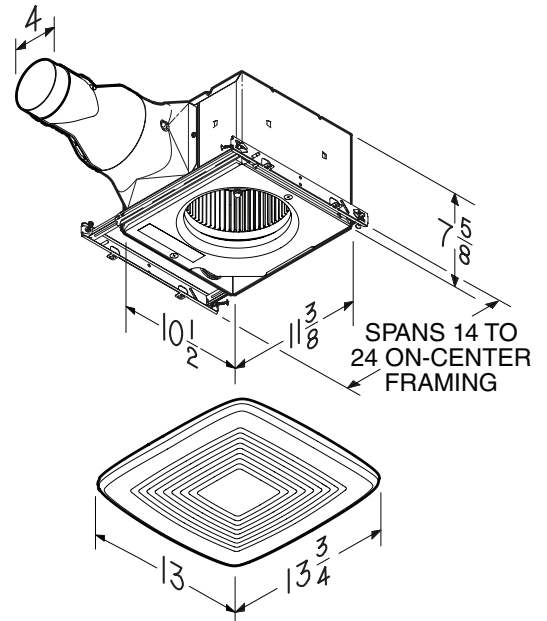
U.L. Listed for use over bathtubs and showers when connected to a GFCI-protected branch circuit (ceiling mount only)

Use an ON/OFF switch, timer, or speed control to operate this ventilator. Use of speed control other than the Broan 78V and 78W may cause a motor humming noise.

3 Year Warranty

Broan-NuTone LLC Hartford, Wisconsin www.broan.com 800-558-1711

DIMENSIONS (Inches)



REFERENCE	QTY.	REMARKS	Project
			Location
			Architect
			Engineer
			Contractor
			Submitted by Date



PERFORMANCE SPECIFICATIONS ULTRA PRO™ SERIES FANS

HVI PERFORMANCE

Model	0.1 Ps - Static Pressure (inH2O)				0.25 Ps
	Airflow (CFM)	Sound (Sones)	Power (Watts)	Efficacy (CFM/Watt)	Airflow (CFM)
RB80	80	< 0.3	27.4	2.9	60
RB110	110	0.6	29.8	3.6	91



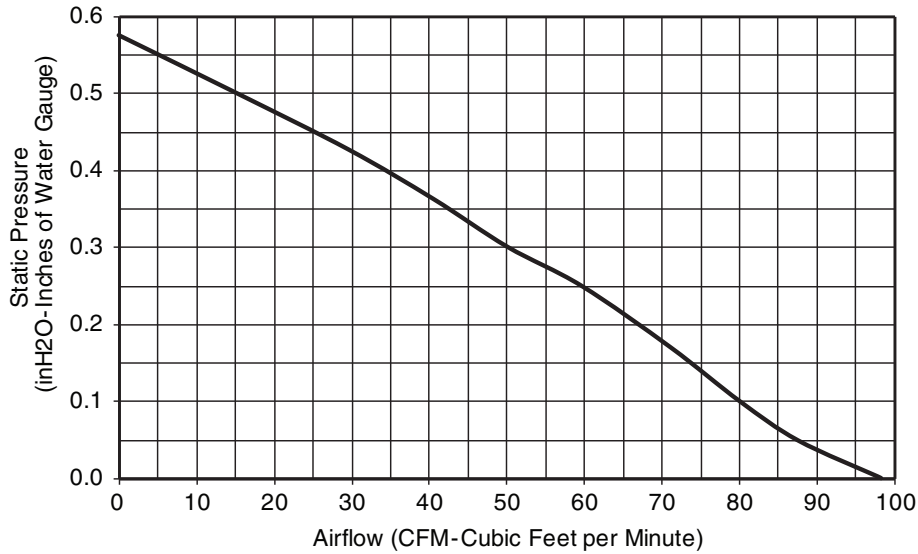
HVI-2100 CERTIFIED RATINGS comply with new testing technologies and procedures prescribed by the Home Ventilating Institute, for off-the-shelf products, as they are available to consumers. Product performance is rated at 0.1 in. static pressure, based on tests conducted in a state-of-the-art test laboratory. Sones are a measure of humanly-perceived loudness, based on laboratory measurements.

ELECTRICAL & WEIGHT

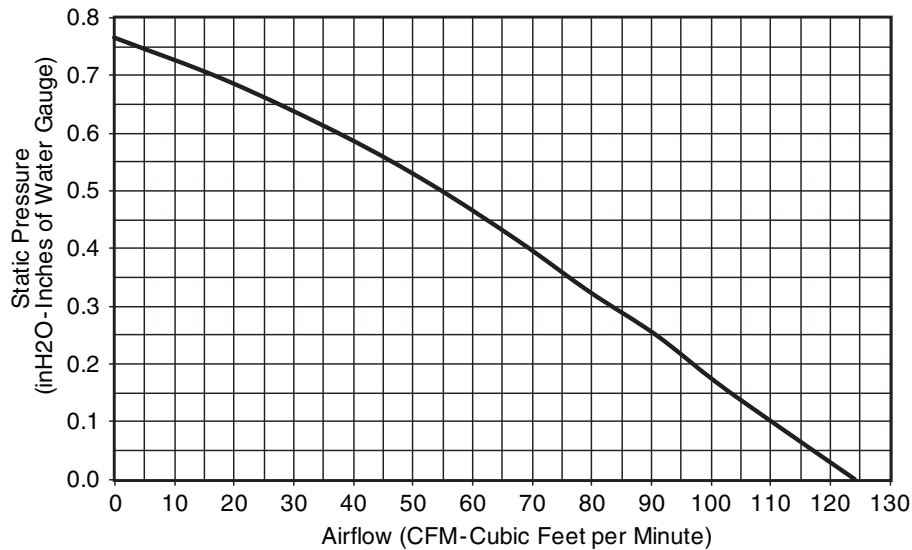
Model	Volts	Hz	Amps	Shipping Weight (lbs.)
RB80	120	60	0.3	12.0
RB110	120	60	0.3	12.0



Model RB80



Model RB110



LEDCXTEU All LED Exit & Emergency Combo

Project:	
Type:	
Catalog #:	

STANDARD



OPTIONAL

ILLUMINATION

- Long lasting, efficient ultra-bright white LED lamp heads.
- 1 watt (8 LEDs x 0.125 watt) per head
- High-performance chrome-plated metalized reflector and plastic lens for optimal light distribution.
- Adjustable LED lamp heads provides optimal center-to-center spacing. Optional high-lumen heads are available for increased center-to-center spacing.
- Long-life, energy efficient Red or Green LED exit sign illumination.

ELECTRICAL

- Dual 120/277 voltage.
- Charge rate/power "ON" LED indicator light and push to test switch for mandated code compliance testing.
- 9.6V Long-life, maintenance-free, rechargeable NiCd battery.
- Internal solid-state transfer switch automatically connects the internal battery to LED board and LED lamp heads for minimum 90-minute emergency illumination.
- Fully automatic solid-state, two-rate charger initiates battery charging to recharge a discharged battery in 24 hours.

MOUNTING

- EZ-snap mounting canopy included for top or end mount.
- Universal K/O pattern on back plate for wall mount.

HOUSING

- Injection-molded, engineering-grade, 5VA flame retardant, high-impact resistant, thermoplastic in white or black finish.
- EZ snap-out Chevron directional indicators.



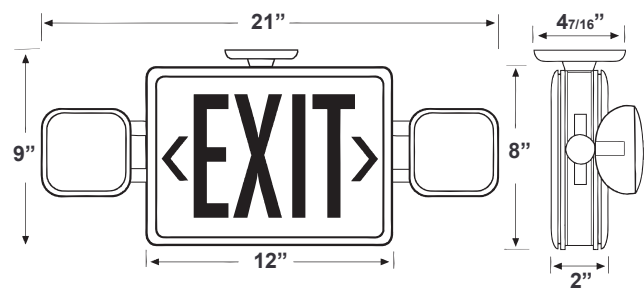
OPTIONS

- HL: 12-LED heads provide increased center-to-center spacing. (1.5 watt (8 LEDs x 0.125 watt) per head)
- SDT: Self-diagnostic test feature performs monthly, biannually, and annually tests to ensure reliable operation and to meet electrical and life safety codes.

WARRANTY/LISTING

- Five year warranty on all electronics and housing. Battery pro-rated for five years.
- Meets UL924, NFPA 101 Life Safety Code, NEC, OSHA, Local and State Codes.
- UL listed for damp locations. (0°C – 40°C)

DIMENSIONS



Sample Part Number: **LEDCXTEU-1-R-W**

ORDERING INFORMATION

Special voltage and SALIDA face plate options available.

Model	No. of faces	Letter Color	Housing Color	Options
LEDCXTEU	1 Single Face	R Red	W White	RC Remote Capacity
	2 Universal Single/Double Face	G Green	B Black	HL High Lumen SDT Self-diagnostics



WAREHOUSE-LIGHTING.COM

Warehouse-Lighting.com
2750 South 163rd St
New Berlin, WI 53151

Warehouse-Lighting.com
Phone: 888-454-4480
info@warehouse-lighting.com

LEDCXTEU All LED Exit & Emergency Combo

Project:	
Type:	
Catalog #:	

ELECTRICAL INFORMATION

Catalog Number	Input Watts (W)		Input Amps (A)	
	120V	277V	120V	277V
LEDCXTE-RED	3.7	3.8	0.040	0.020
LEDCXTE-GREEN/RC	3.0	3.2	0.030	0.014
LEDCXTE-RED-RC	3.4	3.6	0.033	0.015
LEDCXTE-RED/GREEN-SDT/RC-SDT	5.2	5.7	0.046	0.022

CENTER-TO-CENTER SPACING GUIDELINES

Consult factory for details.

REMOTE LAMP COMPATIBILITY

	Maximum Wattage Allowed
LEDCXTEU-RC	3

	Maximum Wattage Allowed
LEDCXTEU-RCSDT	3

Remote Head Family	Total Wattage
RHLED1-CLPCXTE	1
RHLED2-CLPCXTE	2
RHLED1-WP-CLPCXTE	1
RHLED2-WP-CLPCXTE	2
RHLED1-CLPCXTE-HL	1.5
RHLED2-CLPCXTE-HL	3
RHLED1-WP-CLPCXTE-HL	1.5
RHLED2-WP-CLPCXTE-HL	3

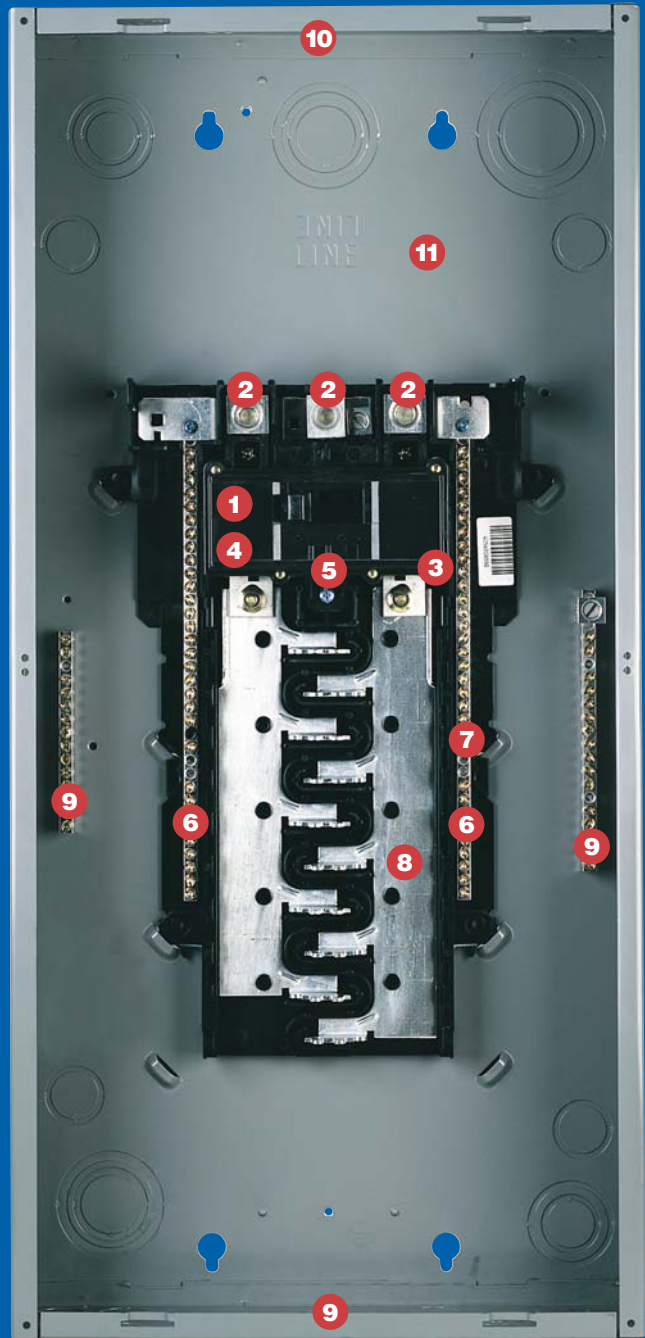
Remote Head Family	Total Wattage
RHLED1SDT-CLPCXTE	1
RHLED2SDT-CLPCXTE	2
RHLED1SDT-WP-CLPCXTE	1
RHLED2SDT-WP-CLPCXTE	2
RHLED1SDT-CLPCXTE-HL	1.5
RHLED2SDT-CLPCXTE-HL	3
RHLED1SDT-WP-CLPCXTE-HL	1.5
RHLED2SDT-WP-CLPCXTE-HL	3

Homeline® Load Centers and Circuit Breakers

Features that outclass
the competition



The quality you expect from Square D®, the industry leader, is built into all Homeline® Load Centers. One example is our exclusive Qwik-Open® Circuit Breakers, which have given homeowners a new standard for reliable, fast-acting circuit protection. In addition, our commitment to technological leadership has brought a new level of electrical safety to the residential market, with innovative solutions such as Surgebreaker® Plus Whole House Surge Protection and Arc-D-tect® Arc Fault Circuit Interrupters. From leading innovations in circuit protection and exclusive features to a comprehensive selection of options and accessories, Homeline Load Centers are the smart choice for value-minded contractors, remodelers, builders and homeowners. Feature for feature, Homeline panels outclass the competition.



Homeline Load Center Features

1. Panels are available as either main breaker or main lugs.
2. Straight-in wiring mains design helps reduce the need to bend service cable, cutting waste and saving installation time.
3. Convertible mains let you meet changing job site requirements fast by field converting between main breaker and main lugs. For maximum flexibility our “universal mains” panels are provided without mains, allowing you to add a field-installed main circuit breaker or main lugs kit to meet either application.
4. Standard 22,000/10,000 ampere short circuit current rating on main breaker – provides increased high fault current protection when needed, without changing the entire panel.
5. Panel interiors are easily removed for paint or theft protection. Single, captive screw can't be lost; interior mounts quickly and easily (indoor only).
6. Split branch neutral, with up to 50% more terminations than required, reduces clutter and simplifies wiring.
7. Combination slot/square-drive neutral, ground and cover screws let you use either a standard flat-blade screwdriver or a square-head driver for reduced slippage and improved torque.
8. Bus and interior assembly is among the most rugged in the industry.
9. Three ground bar mounting locations (left, right and bottom) let you pick the easiest spot to wire.
10. Tangential main service knockouts eliminate the need for costly service conduit offset, simplifying and speeding installation.
11. Complete load center rotates for top or bottom feed to meet job site requirements and reduce service cable waste.
12. Automatic flush adjustment cover (below) speeds installation, especially on uneven wall surfaces.



Combination flush/surface covers

Homeline indoor covers for 8 circuit and larger panels are combination flush/surface to meet all mounting situations.

Floating, spring-mounted trim provides automatic flush adjustment to ensure proper breaker and trim alignment without manual adjustment to speed final installation.

Covers are included with the load center for purchasing convenience, and individually packaged to reduce the chance of shipping damage, making them easier to store between rough-in and trim-out. Covers now include provisions for a door lock, and the trim has the top two branch circuit twistouts removed to make it easier to remove remaining twistouts.



Rainproof enclosures

Homeline Load Centers are available in a full line of NEMA Type 3R rainproof enclosures, with Square D type rain-tight bolted (RB) hub for fast and convenient top-feed conduit connection. Side-opening devices feature a stainless steel door latch and center mounting on back.

Complete line of accessories

A complete line of Homeline Load Center accessories maximizes application flexibility. From ground bar kits to bolt-on rainproof hubs, filler plates, door locks, and more, Homeline Load Centers satisfy almost any installation requirement.

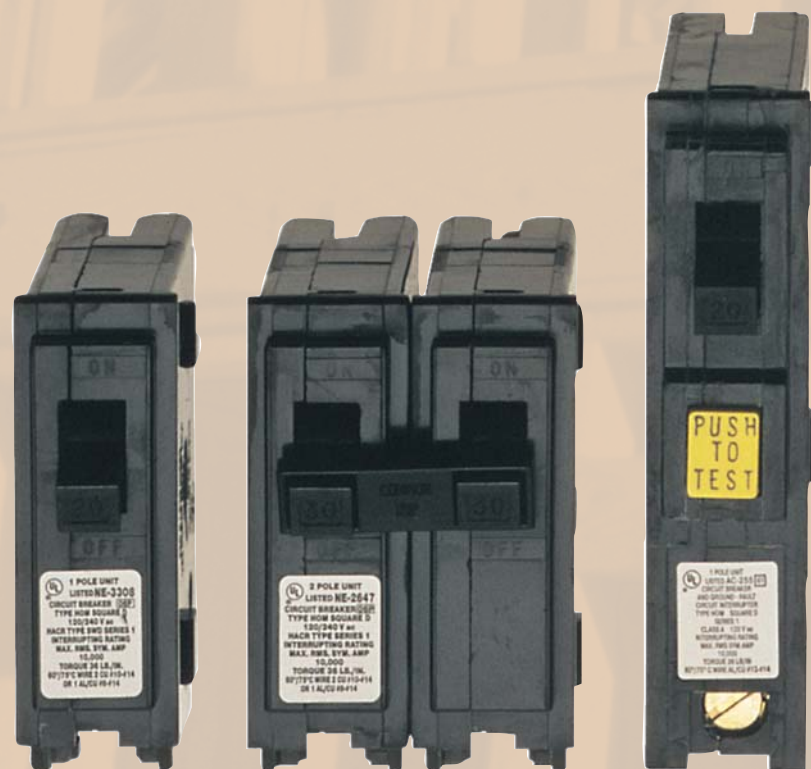


**Homeline®
Arc-D-tect® Arc
Fault Circuit
Interrupter**



The advanced technology of the exclusive Square D Arc-D-tect AFCI provides the highest level of circuit protection available today. These circuit interrupters are specifically designed to detect dangerous low-level arc faults and provide traditional overload and short circuit protection as well. This single-pole breaker installs as easily as our GFCI breaker and offers the same high level of reliability.

**No other name in
circuit protection is more
trusted for reliability and
performance than Square D®.
Our products have
revolutionized the industry
and continue to make the
residential use of electricity
safe and convenient for
millions of people every day.**



Homeline Circuit Breaker and Surgebreaker® Features

Unsurpassed Qwik-Open® Protection

Homeline Circuit Breakers provide the high level of protection you expect from Square D. Single pole 15A and 20A Qwik-Open breakers trip within 1/60th of a second – faster than the blink of an eye. When it comes to electrical protection, fast response is critical.

Ground Fault Protection

Square D introduced the first ground fault circuit interrupter (GFCI) in 1967. It was such a good idea, electrical codes now require ground fault protection for bathrooms, pools, spas and other applications. We've continued that leadership, expanding our offering through two-pole 60A circuit breakers for whirl-pool and hot tub applications.

Surgebreaker Secondary Surge Arrester

The Surgebreaker secondary surge arrester plugs on like a circuit breaker to help protect the home's electrical

system and hardwired appliances from surges up to 20,000 volts. Downstream point-of-use surge suppressors normally only handle surges up to 6,000 volts, and only protect the products plugged directly into them. For complete protection of sensitive electronics like computers, you need both levels of protection.

Surgebreaker Plus Multi-path Surge Arrester

The latest innovation in surge protection from Square D, the Surgebreaker Plus, provides whole house protection for up to four telephone lines, two coax cable lines and is hard-wired to protect the entire panel and home wiring.

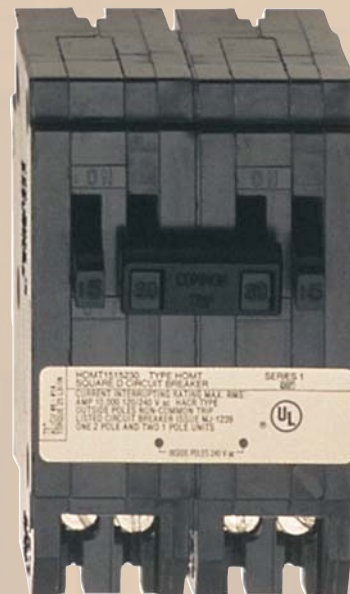
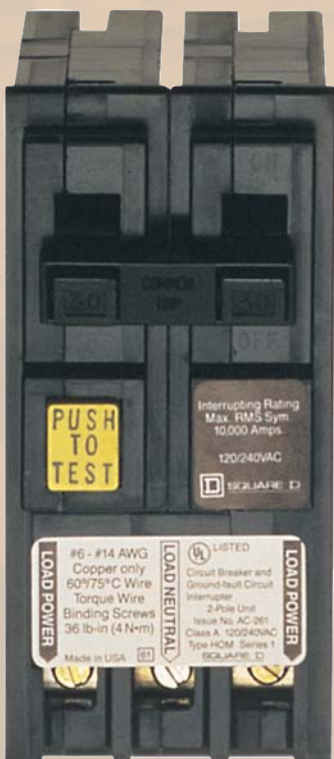
USE CIRCUIT BREAKERS PROPERLY

Electrical protection requires that circuit breakers be used properly.

Only breakers marked on the load center label or wiring diagram should be used to maintain the integrity and safety intended.

That's why Homeline Load Centers are marked to accept only genuine Homeline Circuit Breakers.

Homeline Circuit Breakers should only be used in equipment marked to accept them. Any other use may void your warranty, reduce protection, increase liability risks and violate the National Electrical Code.



SINGLE PHASE LOAD CENTERS – INDOOR MAIN LUGS

Mains Rating	Branch Spaces	Max Branch Circuits	Load Center & Cover Catalog Number F = Flush, S = Surface	Ground Bar
Fixed Main Lugs				
70	2	4	HOM24L70 (F/S)	PK3GTA1
100	6	12	HOM612L100 (F/S)	PK7GTA
125	4	8	HOM48L125GC	Included
Convertible Main Lugs				
125	8	16	HOM816L125C	PK15GTA
	8	16	HOM816L125TC	Included
	12	12	HOM12L125C	PK15GTA
	12	24	HOM1224L125TC	Included
	16	24	HOM1624L125C	PK15GTA
	20	20	HOM20L125C	
	20	24	HOM2024L125TC	Included
	24	24	HOM24L125TC	
150	30	30	HOM30L150C	PK23GTA
200	16	32	HOM1632L200TC	Included
	16	32	HOM1632L200TCFT	
	20	40	HOM2040L200TC	PK23GTA
	30	30	HOM30L200C	
	30	40	HOM3040L200TC	
40	40	HOM40L200C	PK23GTA	
225	42	42	HOM42L225C	PK23GTA

SINGLE PHASE LOAD CENTERS – INDOOR MAIN BREAKER

Mains Rating	Branch Spaces	Max Branch Circuits	Load Center & Cover Catalog Number F = Flush, S = Surface	Ground Bar
Convertible Main Breaker				
100	8	16	HOM816M100C	PK15GTA
	8	16	HOM816M100TC	Included
	12	12	HOM12M100C	PK15GTA
	12	24	HOM1224M100TC	Included
	20	20	HOM20M100C	PK15GTA
24	24	HOM24M100C		
125	30	30	HOM30M100C	PK23GTA
	12	24	HOM1224M125C	PK15GTA
	12	24	HOM1224M125TC	Included
	24	24	HOM24M125C	PK15GTA
150	30	30	HOM30M125C	PK23GTA
	16	32	HOM1632M150TC	Included
	20	30	HOM2030M150TC	
200	30	30	HOM30M150C	PK23GTA
	12	24	HOM1224M200TC	Included
	16	32	HOM1632M200TC	
	20	40	HOM2040M200C	PK23GTA
	20	40	HOM2040M200TC	Included
	30	30	HOM30M200C	PK23GTA
	30	40	HOM3040M200TC	Included
	40	40	HOM40M200C	
	42	42	HOM42M200C	PK23GTA
	225	42	42	HOM42M225C
Universal Mains – No Main Circuit Breaker or Main Lugs				
200	16	32	HOM1632U200TC	Included
	20	40	HOM2040U200TC	
	30	40	HOM3040U200TC	

SINGLE PHASE LOAD CENTERS – OUTDOOR

Mains Rating	Branch Spaces	Max Branch Circuits	Load Center Catalog Number	Ground Bar
Fixed Main Lugs				
70	2	4	HOM24L70RB	PK4GTA
100	6	12	HOM612L100RB	PK7GTA
125	4	8	HOM48L125GRB	Included
Convertible Main Lugs				
125	8	16	HOM816L125RB	PK15GTA
	12	12	HOM12L125RB	
	12	24	HOM1224L125RB	
	20	20	HOM20L125RB	
200	12	12	HOM12L200RB	PK23GTA
	20	40	HOM2040L200RB	
	30	30	HOM30L200RB	
	40	40	HOM40L200RB	
Convertible Main Breaker				
100	8	16	HOM816M100RB	PK15GTA
	12	12	HOM12M100RB	PK12GTA
	20	20	HOM20M100RB	PK15GTA
125	24	24	HOM24M125RB	
150	30	30	HOM30M150RB	PK23GTA
200	20	40	HOM2040M200RB	
	30	30	HOM30M200RB	
	30	40	HOM3040M200RB	
	40	40	HOM40M200RB	
225	16	24	HOM1624M225RB	
Feed Thru Lugs				
150	8	16	HOM816M150FTRB	PK15GTA-L
200	8	16	HOM816M200FTRB	
Universal Mains				
200	8	16	HOM816U200FTRB	PK15GTA-L

BRANCH CIRCUIT BREAKERS 10,000 AIR

Ampere Rating	One Pole	Two Pole Common Trip
15	HOM115	HOM215
20	HOM120	HOM220
25	HOM125	HOM225
30	HOM130	HOM230
35		HOM235
40	HOM140	HOM240
45		HOM245
50	HOM150	HOM250
60		HOM260
70		HOM270
80		HOM280
90		HOM290
100		HOM2100
110		HOM2110
125		HOM2125
150		HOM2150BB
175		HOM2175BB
200		HOM2200BB

GROUND FAULT CIRCUIT INTERRUPTERS 10,000 AIR

Ampere Rating	One Pole	Two Pole
15	HOM115GFI	HOM215GFI
20	HOM120GFI	HOM220GFI
30		HOM230GFI
40		HOM240GFI
50		HOM250GFI

ARC FAULT CIRCUIT INTERRUPTERS 10,000 AIR

Ampere Rating	One Pole
15	HOM115AFI
20	HOM120AFI

SURGEBREAKER® PLUS WHOLE HOUSE SURGE PROTECTOR

Type	Catalog Number
Indoor	SDSB1175C

TANDEM CIRCUIT BREAKERS

Ampere Rating	One Pole
15 & 15	HOMT1515
15 & 20	HOMT1520
20 & 20	HOMT2020
30 & 15	HOMT3015
30 & 20	HOMT3020

QUAD TANDEM CIRCUIT BREAKERS

Ampere Rating		Catalog Number
One Pole	Two Pole	
(2) 15	15	HOMT1515215
(2) 15	20	HOMT1515220
(2) 15	25	HOMT1515225
(2) 15	30	HOMT1515230
(2) 15	40	HOMT1515240
(2) 15	50	HOMT1515250
(2) 20	20	HOMT2020220
(2) 20	25	HOMT2020225
(2) 20	30	HOMT2020230
(2) 20	40	HOMT2020240
(2) 20	50	HOMT2020250

MAIN CIRCUIT BREAKER KITS

Main Circuit Breaker Rating (A)	Use With Convertible Load Center Mains Rating	22,000 AIR Main Circuit Breaker	Lug Wire Size AWG/kcmil Al or Cu
QOM1 Frame Size			
50	100-125	QOM50VH	#12-2/0
60	100-125	QOM60VH	
70	100-125	QOM70VH	
80	100-125	QOM80VH	
90	100-125	QOM90VH	
100	100-125	QOM100VH	
110	125	QOM110VH	
125	125	QOM125VH	
QOM2 Frame Size			
100	150-225	QOM2100VH	#4-300
125	150-225	QOM2125VH	
150	150-225	QOM2150VH	
175	200-225	QOM2175VH	
200	200-225	QOM2200VH	
225	225	QOM2225VH	

Square D® Homeline® Load Centers and Circuit Breakers are part of a comprehensive family of circuit protection solutions. Like all Square D products from Schneider Electric, these innovative protective devices come built for easy installation and reliable operation. And they're designed to stand the test of time.

For more information on our circuit protection products or other solutions, please call your local Square D distributor or sales office. Or visit our website at www.SquareD.com.



Generator Panel

If you live where power outages are frequent, or potentially dangerous, the Square D generator panel is the ideal way to safely connect specific circuits in the home to an alternate power source.



Metering Equipment

From individual meter sockets to multi-metering, Square D provides a broad line of products designed to meet most utility requirements and fit most applications. Choose from ring or ringless type in a range of ampacities.



Light Duty Enclosed Switch

The Square D light duty enclosed switch is ideal for home applications in disconnecting power to a workshop, hobby room, furnace or garage.



Air Conditioning Disconnects

Square D air conditioning disconnects are used to provide overcurrent protection and a convenient shut-off for air conditioning compressors. They can also be used for other single-phase, two-wire disconnect applications such as swimming pools and pump houses. These disconnects are available in a variety of configurations, including molded case switches, pullout, fused and not-fused. An exclusive mounting bracket also is available to simplify installation onto stucco or lapped-siding projects.

National Electrical Code is a registered trademark of the National Fire Protection Association.

Schneider Electric North American Operating Division

1415 S. Roselle Road
Palatine, IL 60067
Tel: 847-397-2600

Project: _____

Location: _____

Product Type: _____

Contact/Phone: _____

Model #: _____

T100 Series

The T100 Series Mechanical Time Switches are heavy-duty switches that have the highest horsepower ratings in the industry for industrial, commercial and residential applications.

Features

- Provides direct 24-Hour control of most loads
- Control electrical loads up to 40 Amps
- 1 to 12 ON/OFF operations each day
- Minimum ON/OFF times of 1 hour
- Manual override
- All models equipped with one ON and one OFF tripper

Ratings

Enclosure Type:	See table
Knockouts:	Combination 1/2" - 3/4" nominal knockouts, one on back and on each side, and two on bottom
Switch Type:	See table
Switch Rating:	Each Pole 40 Amp Resistive, 120-480 VAC 40 Amp Tungsten, Inductive or 1000 VA Pilot Duty, 120-277 VAC 2 HP (24 FLA) 120 VAC 5 HP (28 FLA) 240 VAC single-phase
Power Input:	3 W Maximum
Operating Temperature:	-40°F to 130°F (-40°C to 54°C)
Shipping Weight:	Type 1 - 3 lbs. (1.4 kg) Type 3R - 4 lbs. (1.8 kg)
Warranty:	Limited 1 year



Model with Type 1 Steel Enclosure	Model with Type 3R Steel Enclosure	Model with Type 3R Plastic Enclosure	Model with Plastic Type 3R Enclosure with See Through Cover	Switch Type	Clock Motor Volts	Hz	Amps/ Pole	HP Rating
T101	T101R	T101P	T101PCD82	SPST	125	60	40	2
T102	T102R	T102P	-	SPST	208-277	60	40	5
T103	T103R	T103P	T103PCD82	DPST	125	60	40	2
T104	T104R	T104P	T104PCD82	DPST	208-277	60	40	5
T104-50	-	-	-	DPST	208-277	50	40	5
T101B**	-	-	-	SPST	125	60	40	2
T105	-	-	-	1NO/1NC*	125	60	40	2
N/A	T106R	-	-	1NO/1NC*	208-277	60	40	5

*Can be wired SPDT

**Separate Clock Motor Terminals

T100 Series



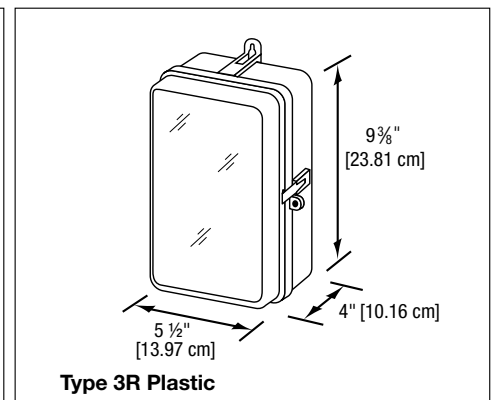
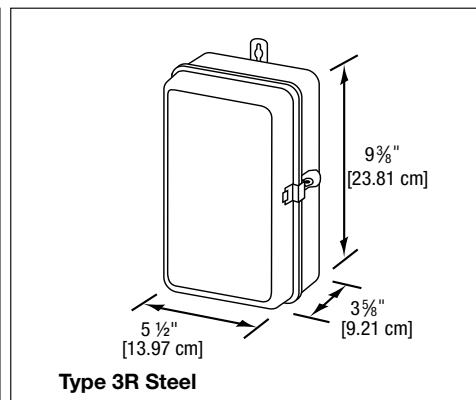
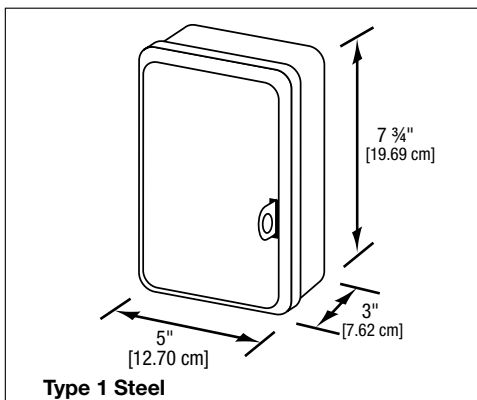
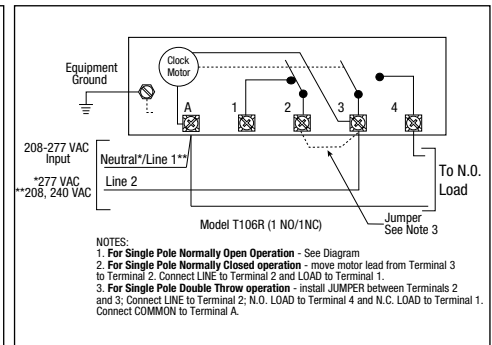
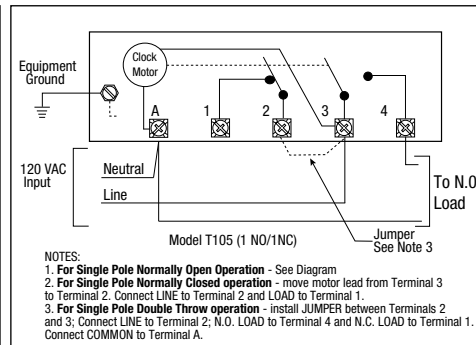
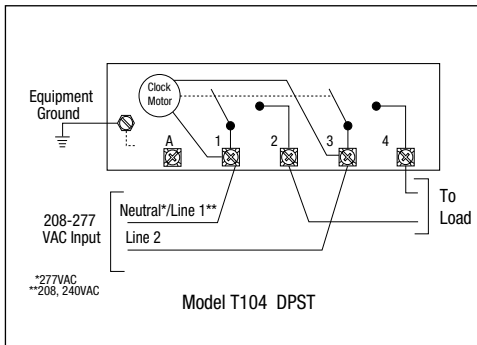
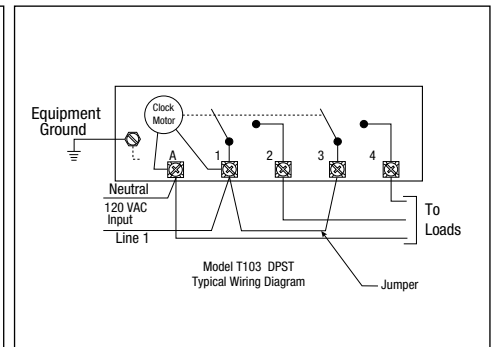
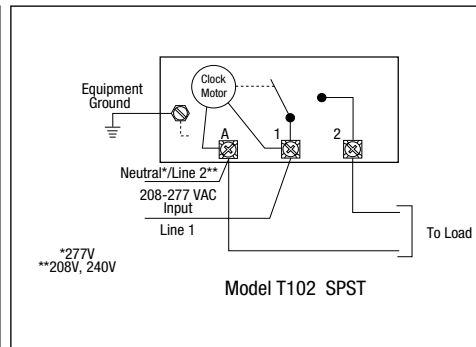
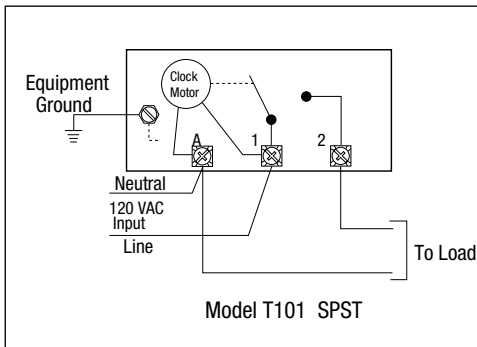
Specification

The time switch shall be of the 24-Hour dial type, capable of permitting up to 12 ON/OFF operations each day. The time switch shall provide a minimum ON/OFF time of 1 hour. The time switch shall be powered by _____ (125)(208-277) VAC, _____ (50)(60) Hz power supply. The time switch motor shall be a synchronous motor, which shall be designed to withstand a minimum of 6000 volt transients. The time switch motor shall be connected to the supply terminals with ring-type connectors and shall not require more than 3 Watts to operate the time switch. The time switch mechanism shall be a snap-in design to provide ease of mechanism removal from the enclosure. The time switch enclosure shall be a _____ (Type 1 steel)(Type 3R steel)(Type 3R plastic with see through cover) lockable enclosure. The time switch enclosure shall provide a minimum of 31 cubic inches of wiring space and provide a non-removable cover, which shall swing open a full 180 degrees. The time switch shall provide clear terminal identification on a see-through non-curling terminal insulator. A visual indicator shall be provided in the time switch for inspecting clock motor operation. The time switch contact blades shall be a one piece design with welded silver alloy contacts and shall be designed to provide wiping action on contacts during operation to ensure reliable load switching. Terminal connections shall be made using teeter-type terminal screws to provide secure connections for wire sizes up to #8 AWG. Switch configuration shall be _____ (SPST)(DPST) (1NO/1NC) with a switch rating each pole:

- 40 Amp Resistive, 120-480 VAC
- 40 Amp Tungsten, Inductive or 1000 VA Pilot Duty each pole, 120-277 VAC
- 2 HP (24 FLA), 120 VAC
- 5 HP (28 FLA), 240 VAC

The time switch shall be Agency Listed under Clock Operated Switches and shall be Intermatic model _____ (See Model Numbers Listed).

Diagrams



ThinAir® HAND DRYER



MODELS: TA - ABS SB -VOLTAGE (See Chart)



TA-SB
Brushed Stainless Steel



TA-ABS
White Polymer (ABS)



TA-SB
Brushed Stainless Steel

PERFORMANCE

TESTED TO **PCR** GUIDELINES **DRY TIME: 14 SECONDS*** **ENERGY PER USE: 3.7 Wh***

Wattage: 950 Watts (Heat On) - 300 Watts (Heat Off)

Certifications:



CONSTRUCTION

- A. All covers will be fastened to a base plate by one chrome plated tamper-proof bolt. The cover shall be composed of:
 - ABS** – White polymer with SanaFor™ antimicrobial additive.
 - SB** – Brushed Stainless Steel.
- B. Base plate shall be equipped with (3) 7/8" (22 mm) diameter knockouts, one of which is located on the right side and suitable for use with surface conduit.
- C. All internal parts shall be coated according to Underwriters' Laboratories, Inc. requirements.
- D. Entire mechanism shall be internally grounded, per UL requirements.
- E. Accessories (optional)
 - Microban® Antimicrobial Wall Guards:**
89W (White), 89B (Black), 89S (Brushed Stainless Steel)

MECHANISM

- A. Motor shall be a thermally protected, series commutated, through-flow discharge vacuum motor/blower (~½ hp / high-30,000 rpm, low-20,000 rpm) which provides air velocity of up to 16,000 LFM (linear feet per minute) at the air outlet. Includes a washable metal mesh filter for more reliable performance.
- B. Heating element (550 W) is constructed of Nichrome wire and mounted inside the blower housing behind air baffle, thereby being vandal resistant. It shall be protected by an automatic resetting thermostat, which shall open whenever air flow is cut off and shall close when flow of air is resumed. It shall produce an air temperature of up to 141°F (61°C) at a 72°F (22°C) ambient room temperature at the outlet and 101°F (38°C) at the hands (4 inches [102 mm] below air outlet).
- C. Control assembly is activated by an infrared optical sensor located next to the air outlet. The dryer shall operate as long as hands are under the air outlet. Control includes a speed and sound control mechanism, adjustable heat control with High, Medium, Low and Off settings and a filter sensor which is activated should the filter become clogged. There is a 35-second lockout feature if hands are not removed. Sensor equipped with externally visible Red LED light that can flash error codes to assist in troubleshooting.

LIMITED WARRANTY

The dryer shall be guaranteed to be free from defects for a period of five (5) years. Warranty shall include labor performed at factory as well as the repair or exchange of defective parts, at manufacturer's option.

QUANTITY RECOMMENDATIONS

One dryer for every two washbasins is sufficient for most applications. If restroom traffic is unusually heavy, we suggest one dryer per washbasin in small installations and two dryers for every three washbasins in larger installations. When a 54" washfountain is used, we suggest four to five dryers.

ADA COMPLIANCE

ADA guidelines state that fixtures mounted above 27" must not protrude more than 4" from the wall.

4"



Maximum: 48"
Recommended: 37"

37"



UL Environment published the first global Product Category Rules (PCR) for Hand Dryers and Excel Dryer is proud to have been selected to chair the project. The PCR created evaluation methods through industry consensus that compare products' environmental impact and performance. Third party testing results then enable specifiers and buyers to make a true apples-to-apples comparison of products and more informed decisions.

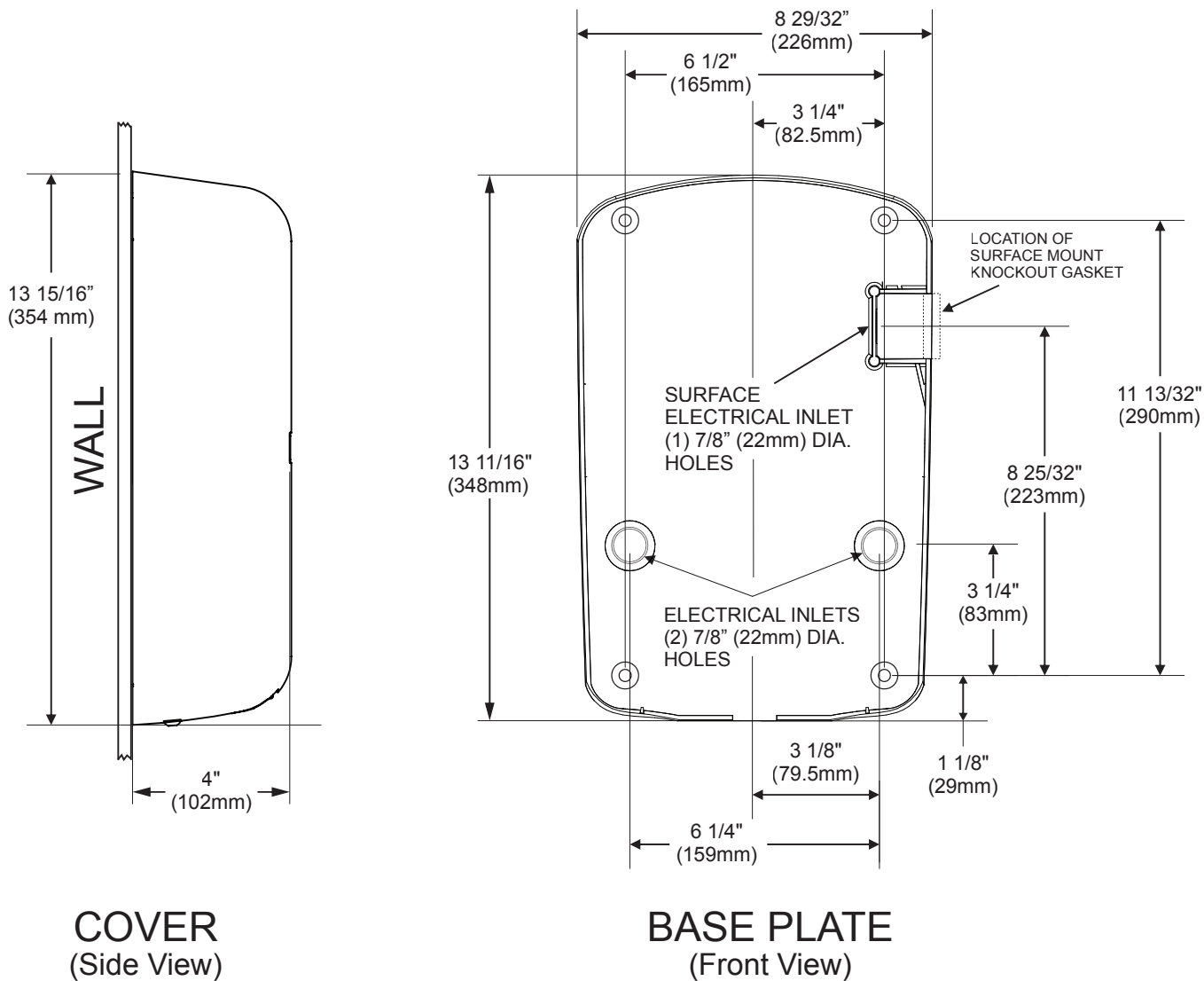
FOR ARCHITECT/ENGINEER APPROVAL

Job Name	Date
Model Specified	Quantity
Voltage Specified	
Customer/Wholesaler	
Contractor	
Architect	

ThinAir® HAND DRYER



MODELS: TA - ABS SB -VOLTAGE (See Chart)



COVER
(Side View)

BASE PLATE
(Front View)

OVERALL DIMENSIONS

Width: 9 5/32" (233 mm) Height: 13 15/16" (354 mm) Depth: 4" (102 mm)

WEIGHT

TA-ABS: 8 lbs. (3.6 kgs.) TA-SB: 10 lbs. (4.5 kgs.)

ELECTRICAL

Units are Single Phase; 950 Watts or as low as 300 Watts (without heat) and available as specified in:

VOLTS	AMPS	WATTS	NO HEAT AMPS	NO HEAT WATTS	HERTZ	
110-120V	7-7.7A	770-915W	3-3.2A	310-370W	50/60 Hz	
208-277V	3.6-4A	735-950W	1.5-1.9A	300-375W	50/60 Hz	
230V	3.9A	890W	1.7A	375W	50 Hz	

ACTIVATION

Automatic Sensor Activated

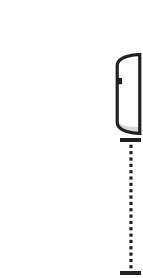
MOUNTING

Surface-Mounted

SUGGESTED MOUNTING HEIGHTS

from floor to bottom of dryer:

Men	45" (114 cm)
Women	43" (109 cm)
Teenagers	41" (104 cm)
Small Children	35" (89 cm)
Accessible	37" (94 cm)



*Dry time and energy use testing performed by SGS International on standard Thin Air Hand Dryers to 0.25g or less of residual moisture, pursuant to the UL Environment Global Product Category Rules (PCR) for Hand Dryers.

LED Vaporproof Jelly Jar

Ceiling Mount



Product Description:

LED Vaporproof Jelly Jars are designed to replace 100-watt incandescent and 23-watt CFL fixtures with high-quality, long-lasting illumination over doorways, scaffolding, construction sites, fire hydrants and emergency call stations. The lamps are IP66 rated against ingress of dust and pressurized water in harsh environments, and suitable for inverted mounting. They have an L70 lifetime of 50,000 hours.

Features:

- Efficacy exceeding 80 lm/W allows replacement of 100W incandescent or 23W CFL
- Wide operating temperature of -30°F-104°F
- 70 CRI min
- Universal 120-277V power supply
- Power Factor > 0.9; THD < 25%
- Rated for 50,000-hour L70lifetime at TM-21 standards, 25°C

Construction:

- Die-cast housing, durable powder coat finish
- IP66 rated
- Suitable for inverted mounting
- Multiple conduit entries for easy wiring
- Flat polycarbonate lens allows for lower mounting heights

Model Selection

Rated Power	Model No.	Lumen	Mounting	CCT	Input Voltage	Cover
LED VaporProof Jelly Jar(individual driver)						
14W	WL-14WJ-CMFG-40KMV	1160	Ceiling mount	4000K	120-277V	Frosted Glass

Email Address: info@warehouse-lighting.com
 Phone: 888-454-4480

LED Vaporproof Jelly Jar

Dimension



Specifications

Item	Specification	
General Performance	Power Consumption(w)	14W
	Lumens Delivered(lm)	1160lm
	Efficacy(lm/w)	75
	Color Temperature	4000K
	Lifetime(hours)	50,000
	Spacing Criteria	Available Upon Request
	Color Consistency	Proprietary binning for uniform color
	Power Factor	0.9
	Input voltage	110-277V standard
Physical	Housing	Aluminum
	Mounting	Ceiling mount
	Working Temperature	-40 to 55°C
Application	Certification	FCC, ETL
	Material usage	RoHS compliant; no mercury
	Environment	Wet locations
	Warranty	5 years limited

Email Address: info@warehouse-lighting.com

Phone: 888-454-4480



WL-MWP-20W-50K-B-MV-PC
WL-MWP-20W-50K-W-MV-PC

Note:
 20W = Rating Power
 B= LED manufacturer, lumileds 2835
 F = Cover type, frosted cover
 A2 = Version number
 a = Housing colors, can be W=White, B=Bronze
 b= Photocell, can be P or blank
 c= CCT,40=4000K,45=4500K,50=5000K,57=5700K

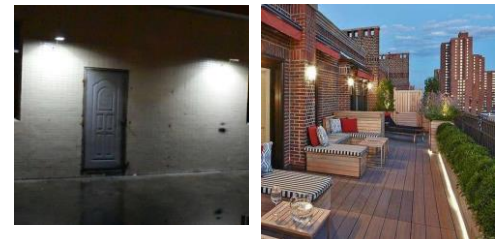


Advantage:

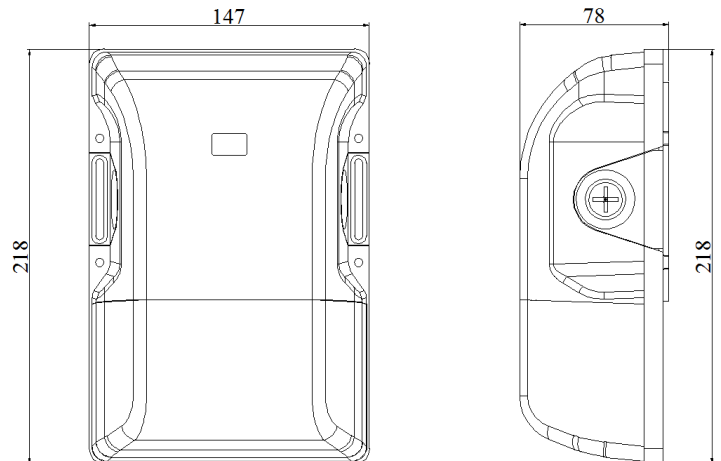
- ETL cETL DLC certificate
- Internal driver, Input voltage 100-277VAC
- No UV or IR in the beam
- Easy to install and operate
- Energy saving, long lifespan
- Instant start, NO humming
- Green and eco-friendly without mercury.

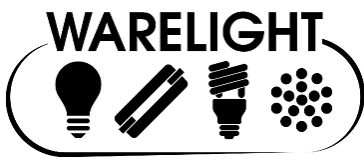
Application:

- ◆ entrance lighting, courtyard lighting
- ◆ Industrial lighting, Outdoor landscape lighting;
- ◆ Building, The hotel;
- ◆ Wall lighting area and so on.



Dimensions





TECHNICAL DATA SHEET

Product Specifications

Product name	LED Wall Pack Light
Part No	WL-MWP-20W-50K-B-MV-PC
Dimension	218*147*78 mm

Technical Characteristic

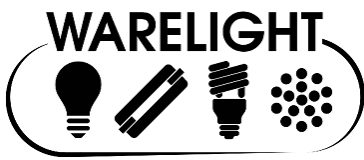
Color temperature	4000K,4500K,5000K,5700K
CRI	>80
Lumen	2500-2850LM
Lumen Efficacy	125-135lm/W
Input Power	20W
Viewing Angle	100°
Input Voltage	100-277VAC 50/60Hz
Driver model	China Brand Driver
PF	>0.9

Materials

LED Brand	lumileds
LED Type	SMD2835 (0.5W)
LED QTY	60PCS
Housing	Aluminum
Housing color	Black/Brown/White/Customized
Optional Accessory	Photocell (Option)

Others

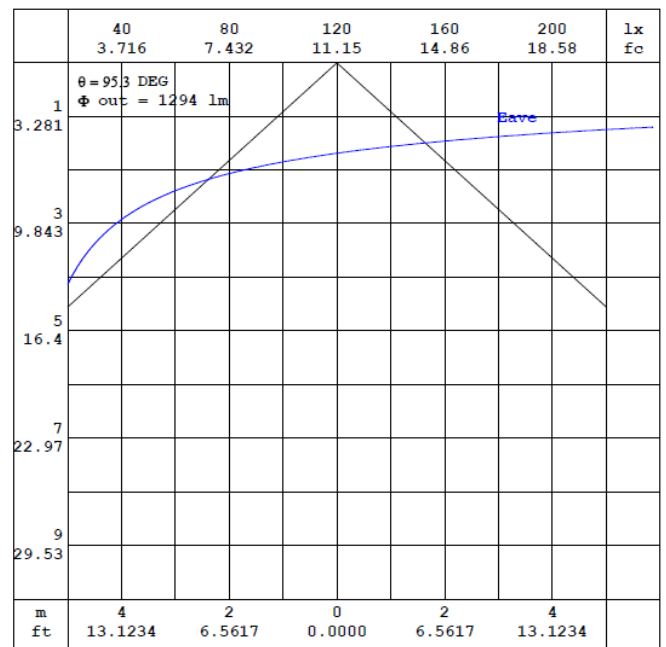
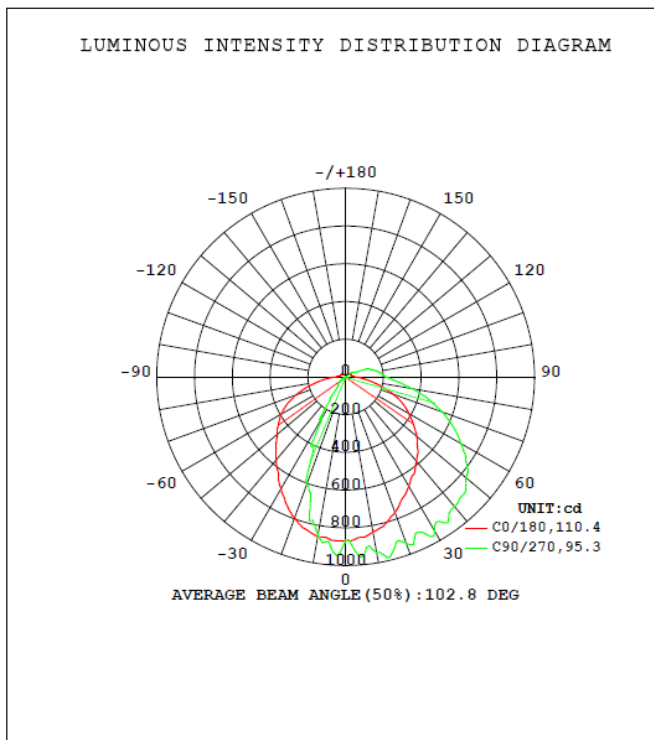
Operating Temperature	-20°C TO 45°C
Operating Humidity	20%-90% RH
Storage Temperature	-30°C TO 80°C
Storage Humidity	10%-95%
Application	Indoor / Outdoor
Safety Certification	ETL cETL DLC
Warranty Time	5 Years



TECHNICAL DATA SHEET

Light Distribution Testing Parameters

DATA OF LAMP		PHOTOMETRIC DATA Eff: 130.33 lm/W			
MODEL		I _{max} (cd)	983.1	S/MH (C0/180)	1.18
NOMINAL POWER (W)	20	LOR (%)	100.0	S/MH (C90/270)	0.76
RATED VOLTAGE (V)	120	TOTAL FLUX (lm)	2584.0	η UP, DN (C0-180)	8.0, 63.8
NOMINAL FLUX (lm)	2583.99	CIE CLASS	DIRECT	η UP, DN (C180-360)	1.6, 26.6
LAMPS INSIDE	1	η up (%)	9.6	CIBSE SHR NOM	1.00
TEST VOLTAGE (V)	120.0	η down (%)	90.4	CIBSE SHR MAX	1.15

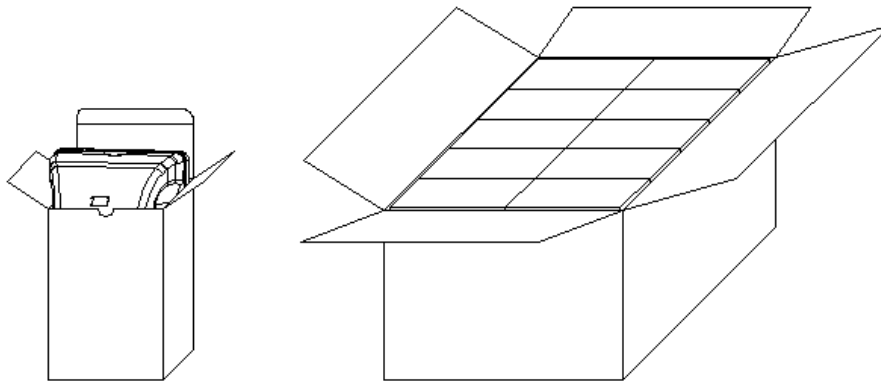


Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

Package

Lamps Net Weight: 0.9kg / pcs

	Size	Qty/Carton	Weight/Carton
Outer box	460 X 325 X 245 mm	10	9.5 kg
Inner box	154 X 88 X 225 mm	1	0.9 Kg



Notice For User

- ◆ Please turn off power before install or change assembly parts.
- ◆ The input voltage and lamps should be matched, after connecting the power line, Please make sure the wiring section is insulated.
- ◆ No-professionals, must not install and disassemble the lamps.

Trouble Shootings

Troubles	Check points
Flickering of the light	Turn off the power and turn on again in 3 minutes. If same phenomena occur, then call agencies
Out of working	Please check the connection



PROJECT NAME: _____ CATALOG NUMBER: _____
NOTES: _____ FIXTURE SCHEDULE: _____



Applications:

- Offices
- Hallways
- Multipurpose Rooms
- Conference Rooms
- Restrooms

Specifications

Dimensions: in
2FT
Length: 24.4"
Width: 5.3"
Depth: 2.1"
Weight: 2.65 lbs
4FT
Length: 47.6"
Width: 5.3"
Depth: 2.1"
Weight: 3.75 lbs

LED WARELIGHT WRAP

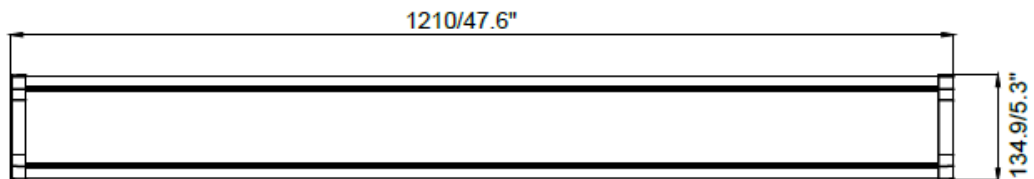
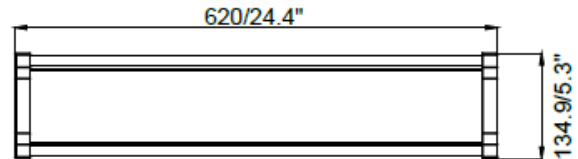
WareLight LED Wrap fixtures are designed to save energy and meet low light egress requirements. The fixture is optimal for stairways, restrooms, and other lower traffic areas. They are designed with high efficacy LED drivers to get the most energy savings when compared to fluorescent fixtures.

FEATURES:

- Wattage available: 20W, 32W and 40W
- Includes 1 foot linking cable and end to end linking connector allowing fixtures to be connected
- Voltage: 120-277
- CCT: 4000K
- Efficacy: 108 LPW
- CRI: >80
- Lifetime: 80000 Hours
- Warranty: 5 years
- UL 1598 suitable for damp locations
- UL 8750 LED equipment in Lighting Products
- Temperature Rated at (-20°C to +45°C)(-4°F to 113°F)

Mounting options:

- Surface mounting



Warehouse-Lighting.com
2750 South 163rd St
New Berlin, WI 53151

Warehouse-Lighting.com
Phone: 888-454-4480
info@warehouse-lighting.com



LED WARELIGHT WRAP LIGHTS

Series and Length	LED	Wattage	CCT Temperature	Multi-Volt
WL-WRAP2- WL-WRAP4- WL-WRAP4-	LED-	20W- 32W- 40W-	4000K-	MV

Performance and Certification Information (120v)

Series	Wattage	Lumens
WL-WRAP2-LED-20W-40K-MV	20W	2160
WL-WRAP4-LED-32W-40K-MV	32W	3456
WL-WRAP4-LED-40W-40K-MV	40W	4320

Linking Cable, Linking Connector and Lens Remover



Fixtures with Linking Cable



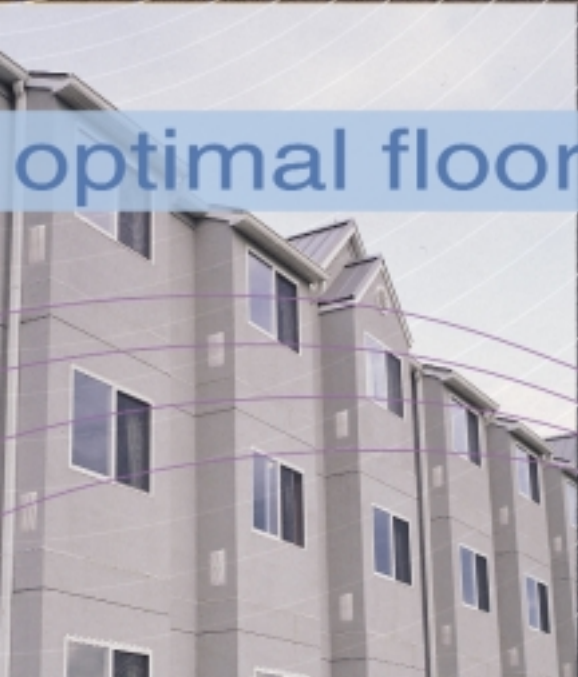
Architects and Engineers Design Data Manual



electronic temperature limiting

heating
and cooling
capabilities

optimal floor space



Featuring The NEW 7500 Series



We bring good things to life.

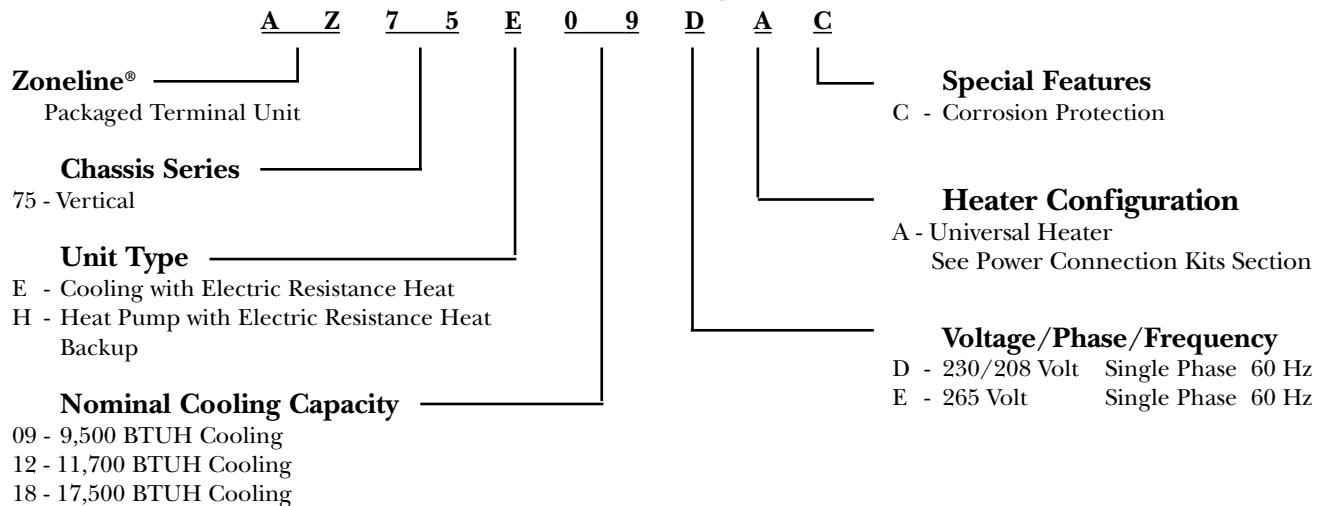
Specifications

Features	ELECTRIC RESISTANCE HEAT			HEAT PUMPS		
	AZ75E09DAC	AZ75E12DAC	AZ75E18DAC	AZ75H09DAC	AZ75H12DAC	AZ75H18DAC
BTUH	9,500/9,300	11,700/11,500	17,500/17,200	9,500/9,300	11,700/11,500	17,500/17,200
E.E.R. (BTUH/Watt)	10.5/10.5	10.7/10.7	10.0/10.0	10.5/10.5	10.7/10.7	10.0/10.0
Dehumidification (pints/hr.)	2.7	3.6	5.0	2.7	3.6	5.0
Universal Heater (kW)	2.55/3.45/5.0	2.55/3.45/5.0	2.55/3.45/5.0	2.55/3.45/5.0	2.55/3.45/5.0	2.55/3.45/5.0
Heating Cap (BTUH)				8,400/8,200	10,900/10,700	15,700/15,500
COP @ 47°				3.6	3.3/3.3	3.1
Voltage (V)	230/208	230/208	230/208	230/208	230/208	230/208
Unit Width (in.)	23-1/8	23-1/8	23-1/8	23-1/8	23-1/8	23-1/8
Unit Depth (in.)	23-1/8	23-1/8	23-1/8	23-1/8	23-1/8	23-1/8
Unit Height (in.)	32-1/4	32-1/4	32-1/4	32-1/4	32-1/4	32-1/4
Indoor CFM (Hi/Lo) 0° ESP	310/260	375/315	550/475	310/260	375/315	550/475

Zoneline® Vertical Unit Nomenclature

The Zoneline vertical unit is identified by a model number defining the type of unit, cooling capacity, and electrical information. When specifying or ordering the Zoneline Vertical unit the use of this nomenclature will assure receiving the correct unit.

Example



Other components are necessary for a complete installation - see System Essential Components section.

Table of Contents

Mini-Specs/Nomenclature	2
Table of Contents	3
Introduction	4
GE Zoneline Vertical Packaged Terminal Unit	5
Features and Benefits	6-9
System Essential Components	9-12
Accessory List/Unit Specifications	13
Air Flow Table/Dip Switches/Terminal Block - Line Art	14
Required Accessories Line Art/Expanded View	15
Utility Closet and Dimensions	16
Suggested Bid Form Specifications	17-18
Warranty	19

Important Notice

Equipment used as a primary source for heating or cooling is an integral part of the building in which it is installed. Proper application is essential for satisfactory performance over a wide range of operating conditions. It is strongly recommended that a professional engineer determine proper application.

If this unit is a replacement unit, its specifications and performance may differ from those of the unit it is replacing. For that reason, we again strongly recommend that a professional engineer determine proper application.

Introduction

Today, guests in lodging properties, assisted living facilities and apartments desire rooms with a more home-like appearance. They expect the comforts they are accustomed to, whether they spend one night or many years. Toward that end, many lodging properties provide refrigerators, microwave ovens and remote control televisions. Many assisted living facilities provide full-size kitchen appliances in each individual apartment. All of these improvements are an attempt to improve the comfort and satisfaction of the occupant by providing a more home-like environment.

Upgrading the air conditioning and heating provides another opportunity to enhance guest comfort. Years ago, an acceptable means of creating a comfortable environment was to install a window air conditioner and an electric heater mounted on the wall. The GE Zoneline was the first packaged terminal air conditioner introduced to the market, and it led the way in improving comfort and efficiency. And they are still used extensively as an alternative to large, expensive central systems.

However, there are some inherent issues with packaged terminal units. First, since all of the components are contained in the chassis, the compressor and fan sounds can be heard in the room. In addition, since the units are usually mounted under the window there are limitations to furniture placement and curtains cannot hang to the floor. Finally, some people find the controls difficult to adjust for the desired temperature.

The Vertical Packaged Terminal Air Conditioner

To address these issues, GE is introducing the new vertical Zoneline. It is still a through-the-wall, packaged terminal unit, but instead of being 42" wide and installed in the middle of the room, it has a vertical configuration and is installed in a closet-like corner enclosure. The GE Zoneline Vertical Packaged Terminal Air Conditioner (ZVAC) is approximately 24" x 24" and has a top air discharge that is ducted into a single room or multiple rooms. It is controlled by a wall-mounted thermostat similar to those found in most homes.

Because the new ZVAC is installed in a closet, it provides a more home-like appearance to the room as well as quieter operation. And guests prefer the wall thermostat because it provides more precise settings. Since the vertical Zoneline is not installed under a window in the middle of the room, curtains can hang all the way to the floor, and more versatile room designs are possible. Because the unit is ducted, it can serve a single room or multiple rooms.

The GE Zoneline Vertical Packaged Terminal Air Conditioner is a great option to standard PTACs for cooling and heating a variety of rooms. It provides the costs benefit of packaged terminal units with the aesthetics, quieter operation and flexibility of a central system.



The GE Zonline® Vertical Packaged Terminal Air Conditioner

The GE Zonline vertical air conditioner is available in 9,500 BTUH, 11,700 BTUH or 17,500 BTUH cooling capacity with either resistance heat or heat pump units with resistance heat backup. Each cooling capacity is available in a dual rated unit that operates on either 230 volts or 208 volts and in a unit designed to operate on 265 (277) volts. All units are equipped with a 3-element universal heater that provides 2.55 kW or 3.45 kW or 5.0 kW when connected with the appropriate 9-pin power connection kit to 230-volt or 265-(277) volt power. The dual rated 230/208-volt unit will produce 2.09 kW or 2.82 kW or 4.09 kW when connected to 208-volt power. See page 12 for information on the power connection kits.

The ZVAC has a number of features that help distinguish it as the leader in the vertical unit industry. Each feature is discussed in detail in the Features and Benefits section.

- Excellent efficiency and dehumidification
- Unique sleeve design for easier installation and service
- Three-way slide-out chassis for installation flexibility
- Electronic Temperature Limiting (requires room air temperature sensor accessory - RAVRMS)
- Freeze Sentinel™ (requires room air temperature sensor accessory - RAVRMS)
- Constant ON fan (required in nursing homes in some states)
- Permanently Lubricated Fan Motors
- Standard Size Air Filter
- Central Desk Control
- Occupancy Sensor Interface
- HI and LOW fan speeds controlled by remote thermostat
- 3-Speed Indoor Fan Motor for selectable HI and LOW speeds
- Corrosion Protection Treatment Standard
- Slinger Ring Condensate Removal
- Indoor Frost Control
- Automatic Compressor Random Restart
- Compressor Restart Delay
- Quick Heat Recovery (On Heat Pump Units)
- Extended Heat Pump Operation
- Reverse Cycle Heat Pump Defrost
- Warranty (including both parts and labor)

System Essential Components

Each unit consists of the following components: (Each component is discussed in the Essential Components section)

- Installation platform (field fabricated)
- Wall plenum
- Exterior grille
- Unit including sleeve and front panel
- Power connection kit
- Return air grille or access panel or louvered closet door
- Remote thermostat
- Standard size filter (field supplied)
- Optional: Room Air Temperature Sensor
- Ductwork (field supplied) and supply registers (field supplied)

Note: Components noted as “field fabricated” or “field supplied” are not provided or offered by GE. These must be fabricated or purchased locally.

Features and Benefits

Excellent efficiency and dehumidification

GE recognizes the importance of energy efficiency and dehumidification in an air conditioning system. The ZVAC unit is rated in accordance with ARI (Air Conditioning and Refrigerating Institute) Standard 310/380-93 which uses EER (Energy Efficiency Rating) as a means of reporting the relative cooling efficiency of the unit.

EER is the rating system used for Packaged Terminal Air Conditioners and Heat Pumps.

The moisture removal capability of the ZVAC unit - 2.7 pints per hour for the 9,500 BTUH unit, 3.6 pints per hour for the 11,700 BTUH unit, and 5.0 pints per hour for the 17,500 BTUH unit - is as much as 28% better than some other vertical units.

The GE Zoneline Vertical Packaged Terminal Heat Pump has outstanding COP ratings. The measurement of the efficiency of the heat pump output, when compared to electric resistance heat, is called the Coefficient of Performance (COP). This number provides a basis not only for comparing the heat pump output to electric resistance heat, but also the ability to directly compare heat pumps with the same range of capacity to one another.

Unique Sleeve Design

The ZVAC case is installed on a field supplied platform and attached to the wall plenum with screws to support platform with field supplied screws. See page 10 for platform construction details.

The chassis slides into the sleeve, allowing for easy removal of the unit for servicing and cleaning without the need to remove condensate lines.

Three-Way Slide-Out Chassis

The case is designed to allow the installation of the chassis from the front or either side of the case. This provides greater flexibility in building and room design and unit placement. If access to the front of the unit is restricted by a wall or furniture placement, the chassis can slide in from either side of the case. If an alcove or offset is designed into the building facade, the three-way slide-out chassis enables the unit to be easily installed and removed for service.

Electronic Temperature Limiting

Although the vertical unit is controlled by a wall mounted thermostat, there may be a need to prevent the temperature from being set to extreme energy wasting settings. The ZVAC unit has seven independent programmable heating and cooling temperature limits. A wide selection of limits eliminates the need to reset the limits seasonally. The Temperature Limiting feature requires the use of the optional room air temperature sensor, model RAVRMS. Designed to be mounted on the wall of the unit enclosure closet, the Room Air Temperature Sensor allows any compatible thermostat to be used with the unit and provide Temperature Limiting.

The limits are set by dip switches located on the ZVAC unit and are not accessible by the room occupant. Location of the dip switches and the temperature settings are shown on page 14.

If GE thermostat RAK147P2, for use with heat pump units, or RAK163P2, for use with resistance heat units, is used with the unit, the room sensor kit is not needed since Temperature Limiting is incorporated in these thermostats.

Cooling Temperature Limits degrees F.

Min	60°	64°	66°	68°	70°	72°	74°	76°
Max	85°	85°	85°	85°	85°	85°	85°	85°

Heating Temperature Limits degrees F.

Min	60°	60°	60°	60°	60°	60°	60°	60°
Max	85°	80°	78°	76°	74°	72°	70°	65°

Freeze Sentinel™

To prevent damage to plumbing and room furnishings by freezing temperatures, the ZVAC unit can provide Freeze Sentinel which turns the resistance heaters on at 41° F, warms the indoor air to 46° F, and shuts the heater off. The Freeze Sentinel feature requires the use of the optional Room Air Temperature Sensor, model RAVRMS.

Designed to be mounted on the wall of the unit enclosure closet, the Room Air Temperature Sensor allows any compatible thermostat to be used with the unit and provide Freeze Sentinel protection. The Freeze Sentinel protection is automatic with the installation of the RAVRMS.

Even if the unit is connected to a Central Desk Control system or a Room Occupancy Sensor system, and the unit is turned off by the controlling system, Freeze Sentinel is still active to provide protection. It may be defeated by switching the unit's ON/OFF switch to the OFF position, removing the power supply to the unit or putting #2 dip switch in UP position.

If GE thermostat RAK147P2, for use with heat pump units, or RAK163P2, for use with resistance heat units, is used with the unit, the room sensor kit is not needed since Freeze Sentinel is incorporated in these thermostats.

Constant ON fan

Some localities may require the indoor fan on Packaged Terminal Air Conditioners to operate at all times, even when the wall primary control would normally turn the unit off. To accommodate this requirement and provide the feature for use by anyone wanting to operate the unit in this manner, GE has provided a switch on the ZVAC that will allow this mode of fan operation.

If the controlling dip switch is set in the UP setting, the fan will run unless the unit's ON/OFF switch is set to the OFF position or power is removed from the unit.

Permanently Lubricated Fan Motors

The ZVAC has two permanently lubricated, totally enclosed fan motors. The motors are permanently lubricated to reduce maintenance and totally enclosed to keep dirt and water out of the motor windings.

Standard Size Air Filter

A number of filters, providing varying degrees of filtering efficiency are available on the market today. GE has designed the ZVAC to accommodate a number of filter placement options. All of the options designed for the unit use a standard size 20" x 20" x 1" filter. Since the filter is field supplied, GE has allowed the owner or property manager to decide which type of filter to use with the unit. A different size filter may also be used in a field supplied frame installed in a return air grille mounted in the closet enclosure door or wall. *If a different size filter is used, it must be at least 20" x 20" x 1" and provide no more restriction to air flow than the standard 20" x 20" x 1" filter.*

The unit must not be operated without a filter in place, even during construction.

GE has provided three filter placement options to provide design and installation flexibility. A filter bracket is provided in the front panel of the ZVAC case, which allows the use of a louvered closet door. The bracket is mounted to allow the filter to be inserted from the top of the bracket rather than sliding in from the side, where the enclosure wall may interfere with filter removal.

An access panel, accessory model number RAVRG1, for the closet enclosure is the second filter placement option. The access panel requires a 28 1/4" wide by 48 1/4" high cutout in the unit closet enclosure wall and provides access to the unit for servicing and removal. The bottom of the access panel should be at least 1" below the unit support platform to allow for easy removal of the ZVAC unit.

The third filter placement option provided by GE is incorporated in a return air grille, accessory model number RAVRG2, designed to be mounted in a flat closet access door. The door must have a minimum clear opening of 24" to allow for installation and removal of the unit. GE recommends a 28" wide door. A 20 3/8" wide by 20 3/8" high cutout is required in the door to accommodate the grille and filter bracket.

Only one filter is to be used in the installation. Multiple filters will reduce the air flow and affect unit performance. A clean filter is essential to efficient unit operation. The filter should be checked at least every 30 days and replaced if dirty.

Central Desk Control

Terminals are provided on the unit to allow a Central Desk Control system to be interfaced with the unit. The most common installation of this type of system is a switch mounted at the registration desk; and, upon guest check-in, a switch is activated to allow the air conditioner to operate.

Likewise, when the guest checks out, the device is switched to the "OFF" setting so the unit will not operate when the room is not rented. In some resort areas, devices are connected to sliding glass doors, and opening the doors causes a contact to close, turning the air conditioner off. This prevents the unit from running and wasting energy with the sliding glass open.

Important CDC Notes:

- 1) The unit requires the use of a normally open switch. Closing the circuit interrupts power to the unit.
- 2) Both wires comprising the circuit must connect to the CDC terminals on the unit and to the controlling switch. **Do not use a common buss (at the unit or at the switch panel) in the wiring.**
- 3) A 24-volt transformer is contained within the ZVAC unit. **No external voltage may be applied to the unit through the CDC terminals.**
- 4) Minimum wire size for CDC wiring:

Wire Size # AWG	Maximum Allowable Length
#22	600 Ft.
#20	900 Ft.
#18	1500 Ft.
#16	2000 Ft.

Occupancy Sensor Interface

The ZVAC is equipped with a terminal connection to allow it to interface with a motion sensor and a door sensor to allow a room occupancy detection system to be connected to the unit. Various companies market and install room occupancy systems as a means of reducing the operating cost of the unit. GE does not market or install these systems but provides the interface terminals on the unit and logic within the microprocessor controls to permit these systems to be installed at a minimum cost to the property owner.

HIGH and LOW Fan Speeds

If the ZVAC is connected to a wall thermostat without the ability to provide two fan speeds, the fan speed will be determined by connecting the wire controlling the fan to either the Low Speed Fan terminal or the High Speed Fan terminal on the unit.

3-Speed Indoor Fan Motor for selectable HIGH and LOW speeds

Since the ZVAC discharge air may be routed through duct work for air distribution into the room and into other rooms, the units are equipped with a 3-speed fan to provide greater air movement, to compensate for the additional duct length. GE recommends an HVAC engineer be consulted to determine the best fan speed for the application.

A switch on the unit allows the selection of the medium fan speed to be used as either LOW speed, in which case the high fan speed becomes HIGH, or the medium speed may be designated as the HIGH speed, in which case the low fan speed is utilized as LOW.

For example, on the nominal 9500 BTUH unit, the three fan speeds provide either 275 CFM on the lowest fan speed, 300 CFM on the medium fan speed, and 325 CFM on the highest fan speed.

Selecting the medium speed as the high speed setting would provide 275 CFM on LOW speed and 300 CFM on HIGH speed. Selecting the medium speed as the low speed setting would provide 300 CFM on LOW speed and 325 CFM on HIGH speed.

Higher CFMs tend to increase the operating sound level, both from fan noise and from the air noise in the duct. Higher CFMs also reduce the dehumidification rate of the unit, while lower CFMs provide quieter operation and better dehumidification. However, if the CFMs are not high enough to adequately move the air through the duct system, the unit will not be able to provide a comfortable room.

Corrosion Protection Treatment (Standard)

All ZVAC units are protected against damage from seacoast area corrosion. Components that are in contact with the salt air have special coatings or are made of non-corroding materials to help withstand the corrosive effects of the environment. This protection includes the use of totally enclosed fan motors with painted casings, a special coating on the outdoor coil, use of stainless steel screws and brackets, and additional paint on components like the base pan.



Slinger Ring Condensate Removal

Condensate water removed from the indoor air is dispersed into the air stream by the outdoor fan slinger ring and deposited on the hot outdoor coil. The water helps cool the refrigerant in the outdoor coil and increases the efficiency of the air conditioner.

Indoor Coil Frost Control

Under certain operating conditions, frost can form on the indoor coil of an air conditioner, reducing air flow, and causing a lack of cooling complaint. In order to prevent frost from forming, the ZVAC has an automatic frost control on the indoor coil. When frost begins to form on the coil, the compressor stops until the coil temperature increases and the frost dissipates.

At this time, the compressor resumes operation and cooling continues. The indoor fan remains running during the time the compressor is off to help warm the coil with room temperature air.

Automatic Compressor Random Restart

In the event of a power interruption, all compressors attempting to restart immediately when power is restored can result in a power surge that can cause another power failure. The microprocessor in the ZVAC unit has a random restart logic system that prevents all compressors from restarting at the same instant.

Compressor Restart Delay

ZVAC units are designed to provide a minimum of three minutes of compressor off time to allow refrigerant pressures to equalize before attempting to restart. Attempting to restart against a high head pressure shortens compressor and overload protector life.

The units are also designed to provide a minimum of three minutes of compressor run time to prevent short cycling from disturbing the room occupant.

Quick Heat Recovery (On Heat Pump Units)

Heat pumps save money compared to electric resistance heat, but if the unit cannot provide room occupant comfort, the savings may be of questionable benefit. GE has years of experience with designing Zoneline heat pumps to solve the problem of guest complaints.

The heat pump unit incorporates a two-stage heat/one-stage cooling thermostat that utilizes the resistance heat to bring the room temperature to within 2°F. of the thermostat set point before initiating heat pump operation. This method addresses the two major complaints about heat pump operation: taking too long to warm the room and low discharge air temperature. Full electric resistance heat is utilized when the unit is first turned on or when the unit is operating in heat pump mode and the temperature in the room falls more than 2°F. below the thermostat set point.

Extended Heat Pump Operation/Reverse Cycle Defrost

Heat exists in the outdoor air at temperatures even below 0°F. Many central systems, with larger outdoor coils, operate in the heat pump mode down to temperatures in the mid-teens or even to single-digit temperatures. Central systems are able to operate this low because of the larger outdoor coil area and because central system heat pumps have a reverse cycle defrost mode that melts accumulated frost off the outdoor coil.

Typical vertical packaged terminal heat pump units terminate heat pump operation and switch to more expensive resistance heat at outdoor temperatures in the 40°F. to 45°F. range. They must terminate heat pump operation before a frost build-up occurs on the outdoor coil since they have no way of eliminating the frost.

GE has offered a reverse cycle defrost system, like the central systems, on the regular Zonline Packaged Terminal Heat Pump since 1987 providing the owners with the savings realized by the ability to operate in heat pump mode to lower outdoor temperatures. GE has adapted the reverse cycle heat pump defrost system to the ZVAC for greater savings in heat pump mode.

The ZVAC will provide heat pump savings down to a 25°F. outdoor temperature. At temperatures below 25°F., the unit will automatically switch to electric heat. When the outdoor temperature rises to 32°F., the unit will automatically switch back to heat pump operation. As long as the heat pump output is able to maintain the room temperature within 2°F. of the thermostat set point, the unit will run in heat pump mode down to 25°F. outdoor air temperature. The resistance heater and the heat pump do not operate simultaneously.

If the outdoor temperature is above 25°F. and if the room temperature falls more than 2°F. below the set point, the thermostat automatically switches the unit to resistance heat.

If frost develops on the outdoor coil at temperatures above 25°F., the unit initiates the reverse cycle defrost operation to warm the outdoor coil and allow the unit to resume heat pump operation.

Prior to initiating the defrost sequence, the electric heaters will be energized to bring the room to the thermostat set point. Immediately after the defrost is completed, the electric heaters are energized to bring the room back to room temperature. The defrost sequence is terminated when the outdoor coil reaches 68°F. or when nine minutes has elapsed.

Concealed Manual Vent Control

Open ventilation doors on GE Vertical Zonline Packaged Terminal Air Conditioners and Heat Pumps allow outside air to enter the room through a screen-covered opening in the weather barrier that separates the indoor and outdoor sections of the unit. For each cfm of air to enter the room, an equal amount of air must be removed through exhaust fans in the bathroom or roof tops. Outside ambient air entering the room through this screened vent opening is not conditioned. This unconditioned air becomes mixed with the conditioned air that is circulated by the ZVAC indoor fan. This air mixture generates an additional heat load/heat loss that causes the unit to run longer and may translate into higher operating costs.

A concealed lever located behind the front cover of the ZVAC is used to open and close the vent door. Zonline vent openings are not intended to be the source of make-up air for building ventilation systems due to the additional heating or cooling loads generated.

Ventilation CFM at various ESP points:

static pressure	Ventilation (CFM)					
	9000btu		12000btu		18000btu	
inch water	208V	230V	208V	230V	208V	230V
0.0	62	66	66	70	79	83
0.1	55	59	56	58	77	79
0.2	49	50	50	52	76	76
0.3	46	48	44	46	70	72
0.4	35	38	36	40	63	64

Warranty (including both parts and labor)

GE has provided the most comprehensive warranty available, without additional charge, on a vertical packaged terminal unit.

The entire warranty covering the ZVAC unit is printed on the back cover of this manual but the highlights are:

Full One-Year Warranty - covering any part that fails as a result of a defect in materials or workmanship - parts, labor, and on-site service free of charge.

Full Additional Four-Year Warranty - covering any part of the sealed refrigerating system (Compressor, condenser, evaporator, and all connecting tubing) that fails due to a defect in materials or workmanship - parts, labor, and on-site service free of charge.

Limited Parts Warranty for 2nd - 5th Year - covering fan motors, switches, heater, heater protectors, compressor overload, solenoids, circuit boards, auxiliary controls, thermistors, frost controls, capacitors and resistors. This is a limited warranty and does not include labor or cartage.

System Essential Components and Installation

Each Zonline Vertical Packaged Terminal Air Conditioner or heat pump requires an installation platform, wall plenum, exterior grille, chassis including case, power connection kit, remote thermostat, filter and a return air grille, ductwork and supply registers.

The installation platform, ductwork and supply registers are field supplied. Each of the other components is ordered separately. The wall plenum, exterior grille and power connection kit are specifically designed to interface with the GE ZVAC unit and must be purchased from the same source as the unit.

The remote thermostat and the return air grille are offered as accessories by GE, but may be purchased from a source other than GE. If a non-GE thermostat or return air grille is used, they must have the minimum requirements to work properly with the unit. The filter is a standard 20" x 20" x 1" filter available where air conditioner filters are sold. The room temperature sensor is an optional GE accessory available from the same source as the unit.

Wall Plenum

Since the unit itself does not install in the wall opening, the use of a plenum is necessary to contain and separate the outdoor air paths. The plenum must be able to hold water in the bottom without leaking into the wall cavity. It also must have a “splitter” to separate the outdoor air paths and prevent the discharge air from being drawn back into the unit.



The wall plenum is the first component to be installed. The wall opening location for the plenum needs to extend 1" below the top of the Installation Platform. Since the platform must be a minimum of 8" off the floor, the cutout for the plenum must be a minimum of 7" plus the thickness of the platform base, off the interior finished floor. GE offers four plenums, and the choice of the correct plenum is determined by the thickness of the building exterior wall. Each of the plenums is 19 3/4" wide by 32" high and require a 20" wide by 32 1/4" high cutout in the wall.

The plenum is to be installed square and level in the opening and secured to the wall construction with screws or nails in the sides located a minimum of 2" from the bottom of the plenum. No nails or screws may be used in the bottom or top of the plenum to ensure against water entering the wall cavity.

The plenum is not load bearing, so a proper header needs to be installed above the plenum the same as over any window opening in the wall. If the building construction is brick, concrete block, or other non self-supporting material, a lintel must be installed over the plenum opening. The plenum must be caulked to the wall, both to the outdoor wall face and to the interior wall, along all four sides to prevent air and water infiltration. The installation of flashing, with a 45° drip lip, is recommended under the plenum.

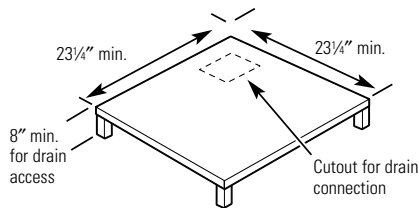
Wall plenum models:

- RAVWP6 - For installations with walls up to 6" thick
- RAVWP8 - For installations with walls up to 8" thick
- RAVWP12 - For installations with walls up to 12" thick
- RAVWP15 - For installations with walls up to 15" thick

Installation Platform

The ZVAC requires a field supplied installation platform. The installation platform must be a minimum of 23 1/4" square, with legs to raise the platform a

minimum of 8" (12" recommended), and have a minimum load bearing capacity of 175 pounds. The platform legs must be positioned so access to the unit drain connection is not blocked. The centerline of the unit drain connection is located 5 1/4" from the left side of the unit and 8 1/2" from the left rear corner of the unit. A square cutout, 3" by 3", should be made in the platform centered 5 5/8" from the left edge and 8 5/8" from the edge of the platform that will be installed against the plenum.



The closet enclosure needs to be large enough to provide the following clearances for the platform (assuming the minimum 23 1/4" square platform):

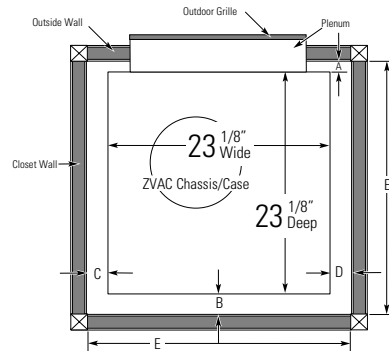
Unit installed from the front of the case - 4" minimum clearance from front of platform to inside of closet door - 3" minimum clearance on each side. Unit installed from the side of the case - 5" minimum clearance from the installation side wall or door - 4" minimum in the front of the unit - 3" minimum on the side opposite the installation side.

When determining the closet depth, consideration must be given to the fact that the plenum may protrude into the closet if the plenum is thicker than the exterior wall. The platform is positioned against the plenum, with the plenum centered on the edge of the platform, and secured to the floor with brackets and screws. The platform needs to be secured to the floor to prevent the platform from shifting since the unit is secured to both the plenum and the mounting platform.

Closet Sizing Guide

Since the most critical aspect of installing a GE Vertical PTAC/PTHP is the closet size, here are a few hints to prevent installation, application, and operational problems.

Minimum Inside Closet Width	Minimum Inside Closet Depth
“C” dimension3"	‘A’ dimension?"
“D” dimension3"	‘B’ dimension?"
ZVAC dimension...23 1/8"	ZVAC dimension...23 1/8"
Total.....29 1/8"	Total?"



Important Notes

- ‘A’ dimension determined by wall thickness and plenum size selected
- ‘B’ dimension minimum 4" for front installation
- ‘B’ dimension minimum 5" for side installation
- ‘E’ dimension minimum for 28" door - 33"
- ‘E’ dimension minimum for RAVRG1 Access Panel - 30"

NOTE: For easier installation and removal, door or access panel should be centered on Zonline.

Exterior Grille

The architectural louver exterior grille is mounted to the exterior flange of the plenum and held in place with four screws inserted from inside enclosure closet. The grille is designed specifically for use with the ZVAC unit and the use of any other grille must be approved by GE Air Conditioning Applications Engineering.



Unit including sleeve and front panel

The unit is packaged with the case and the front panel in place (filter not included). Installation begins by removing the front panel and pulling the unit out of the case. The empty case is positioned on the platform in the closet with the outdoor side facing the wall plenum opening and secured to the plenum with six screws.

Level the case using the four leveling legs and, using the holes in the bottom of the case as guides, drill holes in the mounting platform to secure the case to the platform. Use four field-supplied bolts, washers and nuts to secure the case to the mounting platform. Do not tighten the bolts to the point of distorting the case.



Failure to secure the case to the platform may result in excessive unit vibration and increased noise level. Install the unit into the case, either through the front panel opening or remove the side panel if a side installation is to be made. With the unit in position in the case, replace the front panel and, if removed, the side panel. Ground the unit to the case by installing the front unit-to-case hex bolt and/or the case-to-unit side screw.

The drain connection is made by connecting a 90° PVC elbow to the unit's female NPT drain connector. The other end of the elbow is used to run the drain to either the internal or external drain.

A 10" diameter flange on the top of the unit is used to connect to field supplied, insulated, flexible or rigid transition duct with an adjustable ring clamp.

Flexible duct may be used for transitions only. Rigid duct must be used for 90° bends and tees. Do not use flexible duct for unsupported runs of five feet or more.

Power Connection Kit

The ZVAC units have a universal heater assembly that is capable of producing electric resistance heat that can operate on a 15-amp, 20-amp, or 30-amp circuit. The amount of resistance heat is determined by the selection of the correct power connection kit. This is the same type of connection used by GE for years in the Premium series of the regular Zonline unit.

Units installed on 230 or 208-volt circuits may be line cord connected by plugging the line cord into a wall-mounted receptacle in the enclosure closet or directly connected. All ZVAC units come with a unit mounted junction box to contain the wiring connections if a direct connection installation is required. The same power connection kit is used for line cord connection or to make a direct connection. Instructions for making a direct connection on 230 or 208-volt circuits are included in the unit installation instructions.

230/208 Volt Line Cord Connected Units

Power Connection	RAK3152	RAK3202	RAK3302
Heater kW	2.55/2.09	3.45/2.82	5.0/4.09
Watts	2550/2090	3450/2820	5000/4090
Heater Amps	11.0/10.0	15.0/13.6	21.7/19.7
Minimum Circuit	15	20	30
Recommended Protective Device	15 Amp Time Delay Fuse or Breaker	20 Amp Time Delay Fuse or Breaker	30 Amp Time Delay Fuse or Breaker
Plug Configuration	15 Amp Tandem	20 Amp Perpendicular	30 Amp Large Tandem

Units installed on a 265-volt circuit must be direct connected in accordance with National Electrical Code. All ZVAC units come with a unit mounted junction box to contain the wiring connections when direct connection installation is made.

265 Volt Permanent Connected Units

Power Connection	RAK5157	RAK5207	RAK5307
Heater kW	2.55	3.45	5.0
Watts	2550	3450	5000
Heater Amps	9.7	13.1	18.9
Minimum Circuit	15	20	30
Recommended Protective Device	15 Amp Time Delay Fuse or Breaker	20 Amp Time Delay Fuse or Breaker	30 Amp Time Delay Fuse or Breaker
Plug Configuration	15 Amp Tandem	20 Amp Perpendicular	30 Amp Large Tandem

Return air grille, access panel or louvered closet door

The return air from the room to the unit may enter the enclosure closet through one of four ways. A louvered door may be installed on the closet to allow return air to enter the closet through the louvers. When a louvered door is used, the filter would be installed in the filter bracket on the front panel of the unit.



A wall-mounted access panel may be used instead of the louvered door. In this installation access to the unit is through a wall-mounted access panel rather than a door. The return air is through the panel. The access panel, model RAVRG1, requires a 28" wide by 48" high cutout in the wall and the filter bracket is behind the grille louvers.

The return air grille, model RAVRG2, may also be used and is designed to be installed in a 20 3/8" by 20 3/8" cutout in a flush closet door. In this installation, the filter fits in a bracket in the RAVRG2.

A field-supplied return air grille, with a minimum dimension of 20" by 20", may be used if mounted in a cutout in the door or wall. When employing this method for return air, the filter is installed in the bracket mounted on the unit.

Remote Thermostat

The ZVAC units are controlled by a wall-mounted thermostat. GE offers a complete line of thermostats to interface with the units or most 24-V AC thermostats may be used. If a non-GE thermostat is used, the compatibility of the thermostat with the unit is the responsibility of the installer. The unit has an integral transformer and no external voltage or transformer may be used.



Resistance Heat - Single Stage Cooling / Single Stage Heating Thermostats

GE Thermostat Model Number	Type	Low Voltage Conductors
RAK163A1	Mechanical	4
RAK163D1	Digital	5
RAK163P2	Programmable	5

Heat Pump - Single Stage Cooling / Two Stage Heating Thermostats

GE Thermostat Model Number	Type	Low Voltage Conductors
RAK147	Mechanical	6
RAK147D1	Digital	6
RAK147P2	Programmable	6

One of the customer-requested features on the ZVAC unit is the ability for the user to select either HIGH or LOW fan speed operation at the thermostat. The RAK163P2 and the RAK147P2 thermostats have been designed with this request as one of the design criteria.

These thermostats will allow the user to select either HIGH or LOW fan speed to satisfy their comfort requirements. The RAK163P2 and the RAK147P2 also have Temperature Limiting and Freeze Sentinel features incorporated in the thermostat logic so it is not necessary to use the separate Room Air Temperature Sensor to have these features.

Maximum wiring length and wire size - AWG 18 up to 66 feet - AWG 20 up to 66 feet - AWG 24 up to 40 feet.

Standard Size Filter (field supplied)

The ZVAC unit uses a standard size 20" by 20" by 1" air conditioner/furnace filter. The filter is not provided with the unit, but can be purchased at any building supply or maintenance equipment supplier. The standard size filter allows the use of special filters if the owner desires. Regardless of the installation and the return air method, only one filter may be used in the installation.

Optional: Room Air Temperature Sensor

The Room Air Temperature Sensor accessory, model number RAVRMS, is available as an option to allow Temperature Limiting and Freeze Sentinel protection with the use of a thermostat other than the RAK147P2 and RAK163P2, which have these features incorporated into the thermostat. The Room Air Temperature Sensor has a nine-foot wiring harness designed to allow the sensor to mount on the room side of the closet wall. Terminal connectors are located on the terminal block inside the unit to permit easy connection of the Room Air Temperature Sensor conductors.

Ductwork (field supplied)

Supply Registers (field supplied)

Ductwork and supply registers are mentioned here as System Essential Components, because they are necessary to complete the installation. These components are field supplied since each installation may have different requirements for the ductwork and supply registers.

Electrical Information - General

Zoneline Vertical Packaged Terminal Air Conditioners are to be connected to a single-phase 60 hertz power. Units with the voltage designator "D" in the 8th character of the model number may be operated on either nominal 230-volt or 208-volt power. The units are designed to operate properly on power sources from 197 volts to 253 volts. Units with the voltage designator "E" in the 8th character of the model number are to be operated on nominal 265-volt power. This unit is also used on 277-volt power. The units are designed to operate properly on power sources from 238 volts to 292 volts.

For all installations, feeder, sub-feeder, branch circuit and electrical protective devices must conform to all local codes. In the absence of a local code, the National Electrical Code should be followed.

Each unit should be installed on a single branch circuit. More than one unit per branch circuit is not recommended. All wiring, including installation of receptacle, must conform to local electrical regulations and codes. When in doubt, consult the National Electrical Code.

Power Connection Kits are Required on Vertical Zoneline® Chassis

(see chart below).

The correct kit for the installation is determined by the voltage and amperage of the electrical circuit and the means of connecting the unit to the building wiring. If the unit is to be plugged into a receptacle, a power cord kit would be used; if the unit is to be permanently connected, a permanent connection kit would be used.



Power Connection Kits
Required on Premium models.
See specification sheet for heater kW and branch circuit ampacity.

RAK3152/3202/3302
230/208 Volt Cord Connection Kit

230/208 Volt Power Connection Kit	Line Cord Connected Units		
	RAK3152	RAK3202	RAK3302
Heater kW	2.55/2.09	3.45/2.82	5.00/4.09
Min. Circuit Amps	15	20	30
Recommended Protective Device	15 Amp Time Delay Fuse or Breaker	20 Amp Time Delay Fuse or Breaker	30 Amp Time Delay Fuse or Breaker

Complete Accessory List

Kit Number	Description	For Additional Information Refer to Pages
RAK3152	Line cord power connection kit - 230/208 V - 2.55/2.09 kW - 15 amp	11 & 12
RAK3202	Line cord power connection kit - 230/208 V - 3.45/2.82 kW - 20 amp	11 & 12
RAK3302	Line cord power connection kit - 230/208 V - 5.0/4.09 kW - 30 amp	11 & 12
RAK5157	Direct connect power connection kit - 265 volt - 2.55 kW - 15 amp	11
RAK5207	Direct connect power connection kit - 265 volt - 3.45 kW - 20 amp	11
RAK5307	Direct connect power connection kit - 265 volt - 5.0 kW - 30 amp	11
RAK147	Mechanical thermostat for heat pump - single stage cool - two stage heat	12
RAK147D1	Digital thermostat for heat pump - single stage cool - two stage heat	12
RAK147P2	Digital programmable t'stat for heat pump - single stage cool - two stage heat	12
RAK163A1	Mechanical t'stat for resistance heat unit- single stage cool - single stage heat	12
RAK163D1	Digital t'stat for resistance heat unit - single stage cool - single stage heat	12
RAK163P2	Digital programmable t'stat - resistance heat unit- single stage cool - single stage heat	12
RAVAL1	Exterior grille	15
RAVRG1	Access panel for return air	11 & 15
RAVRMS	Freeze Sentinel™/temperature limiting room air sensor	12
RAVRG2	Return Air Grille for flush door	11 & 15
RAVWP6	Wall Plenum for walls up to 6" thick	10 & 15
RAVWP8	Wall Plenum for walls up to 8" thick	10 & 15
RAVWP12	Wall Plenum for walls up to 12" thick	10 & 15
RAVWP15	Wall Plenum for walls up to 15" thick	10 & 15

Unit Specifications

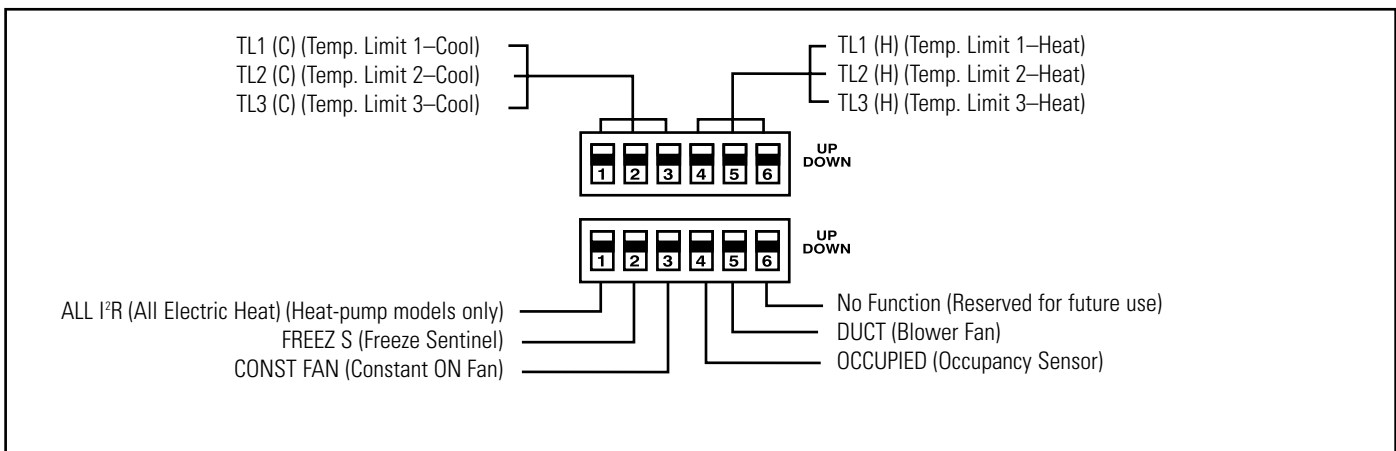
	AZ75E09DAC	AZ75E12DAC	AZ75E18DAC	AZ75H09DAC	AZ75H12DAC	AZ75H18DAC
230/208 Volt Models	Electric Resistance Heat					
Features						
BTUH	9,500/9,300	11,700/11,500	17,500/17,200	9,500/9,300	11,700/11,500	17,500/17,200
Watts	950/930	1095/1075	1750/1720	950/930	1095/1075	1750/1720
E.E.R.	10.5/10.5	10.7/10.7	10.0/10.0	10.5/10.5	10.7/10.7	10.0/10.0
Cool Amps	4.3/4.5	5.4/5.8	8.3/9.0	4.3/4.5	5.4/5.8	8.3/9.0
Dehumidification (pints/hr.)	2.7	3.6	5.0	2.7	3.6	5.0
SHR	.70	.67	.71	.70	.67	.71
Reverse Cycle (BTUH)				8,400/8,200	10,900/10,700	15,700/15,500
COP @ 47°				3.6	3.3/3.3	3.1
Indoor CFM (Hi/Lo)	310/260/230	375/315/250	550/475/440	310/260/230	375/315/250	550/475/440
Ship Wt.	152	165	174	152	165	174
Net Wt.	141	154	163	141	154	163

	AZ75E09EAC	AZ75E12EAC	AZ75E18EAC	AZ75H09EAC	AZ75H12EAC	AZ75H18EAC
265 Volt Models	Heat Pump					
Features						
BTUH	9,500	11,700	17,500	9,500	11,700	17,500
Watts	950	1095	1750	950	1095	1750/1720
E.E.R.	10.0	10.7	10.0	10.0	10.7	10.0/10.0
Cool Amps	3.7	4.7	7.2	3.7	4.7	7.2
Dehumidification (pints/hr.)	2.7	3.6	5.0	2.7	3.6	5.0
SHR	.70	.67	.71	.70	.67	.71
Reverse Cycle (BTUH)				8,400	10,900	15,700
COP @ 47°				3.6	3.3	2.5
Indoor CFM (Hi/Lo)	310/260/230	375/315/250	550/475/440	310/260/230	375/315/250	550/475/440
Ship Wt.	152	165	174	152	165	174
Net Wt.	141	154	163	141	154	163

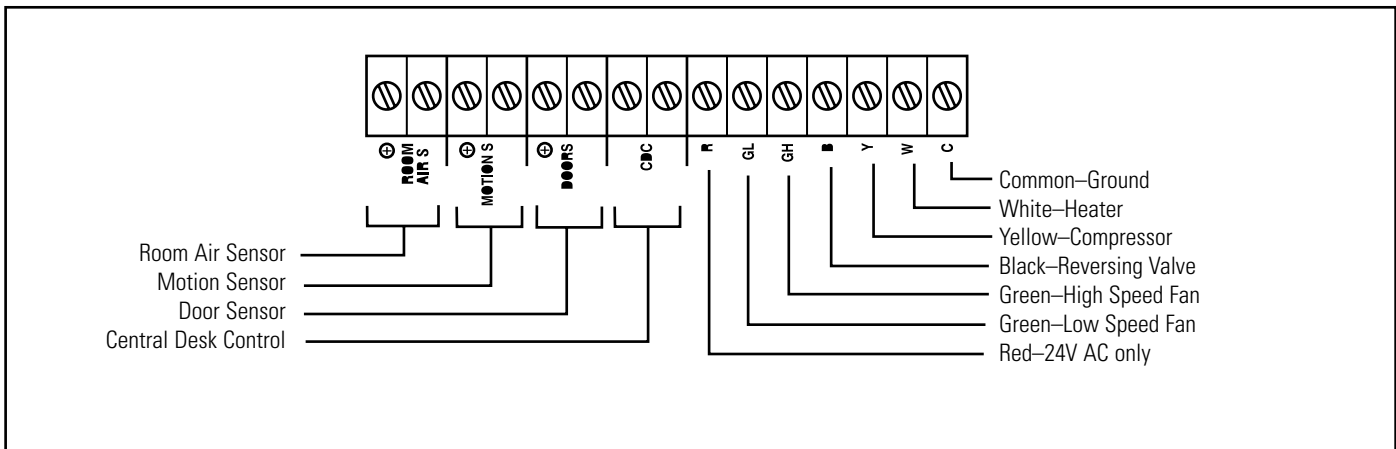
Air Flow Table

	AZ75(H/E)09			AZ75(H/E)12			AZ75(H/E)18		
	DUCT SELECT SWITCH			DUCT SELECT SWITCH			DUCT SELECT SWITCH		
	Up		Down	Up		Down	Up		Down
ESP	High CFM	Medium CFM	Low CFM	High CFM	Medium CFM	Low CFM	High CFM	Medium CFM	Low CFM
0.0	390	340	305	475	390	350	630	545	490
0.1	370	320	290	450	370	325	610	530	480
0.2	350	300	270	425	350	300	590	515	470
0.3	330	280	250	400	330	275	570	495	455
0.4	310	260	230	375	315	250	550	475	440

Dip Switch Locations

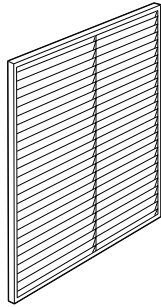


Terminal Block Location

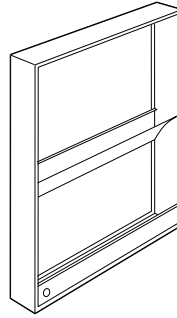


REQUIRED ACCESSORIES

(Check the "Essential Elements" label on the unit.)



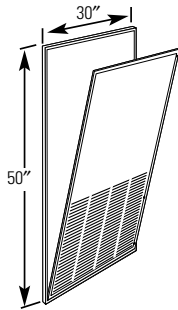
Architectural Louver
RAVAL1



Cutout
Dimensions:
20" W x 32 1/4" H

Wall Plenum

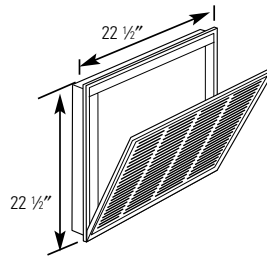
RAVWP6 - 6"D x 19 3/4"W x 32"H
RAVWP8 - 8"D x 19 3/4"W x 32"H
RAVWP12 - 12"D x 19 3/4"W x 32"H
RAVWP15 - 15"D x 19 3/4"W x 32"H



Cutout
Dimensions:
28"W x 48"H

Access Panel with
Return Air Grille
RAVRG1

OR



Cutout
Dimensions:
20 3/8"W x 20 3/8"H

Return Air Grille
RAVRG2

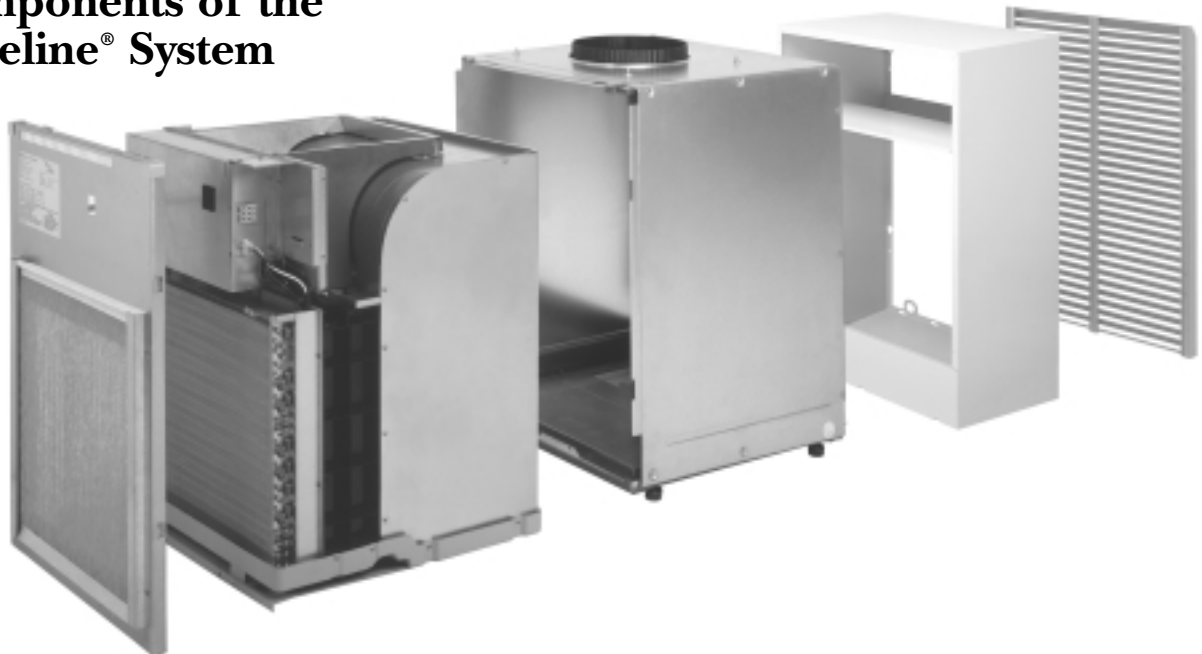


Wall Thermostat

Model Type	Mechanical Thermostat	Electronic Thermostat
Heat/Cool Models	4-wire	5-wire
Heat Pump Models	6-wire	6-wire

Check the thermostat instructions for correct wiring and installation requirements.

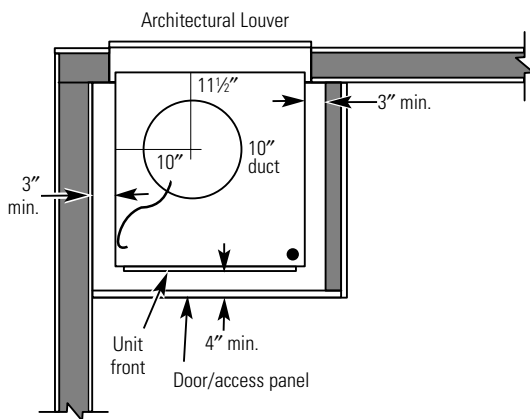
Components of the Zoneline® System



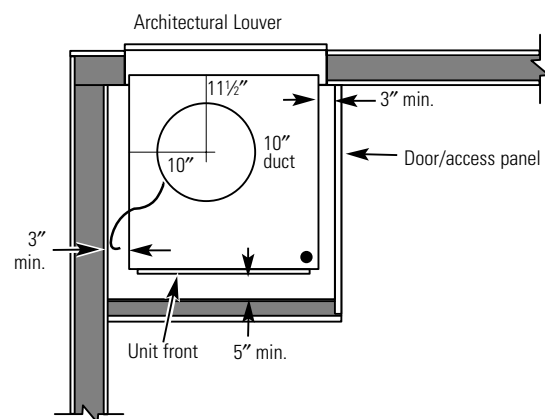
UNIT INSTALLED THROUGH FRONT OF CASE

UNIT INSTALLED THROUGH SIDE OF CASE

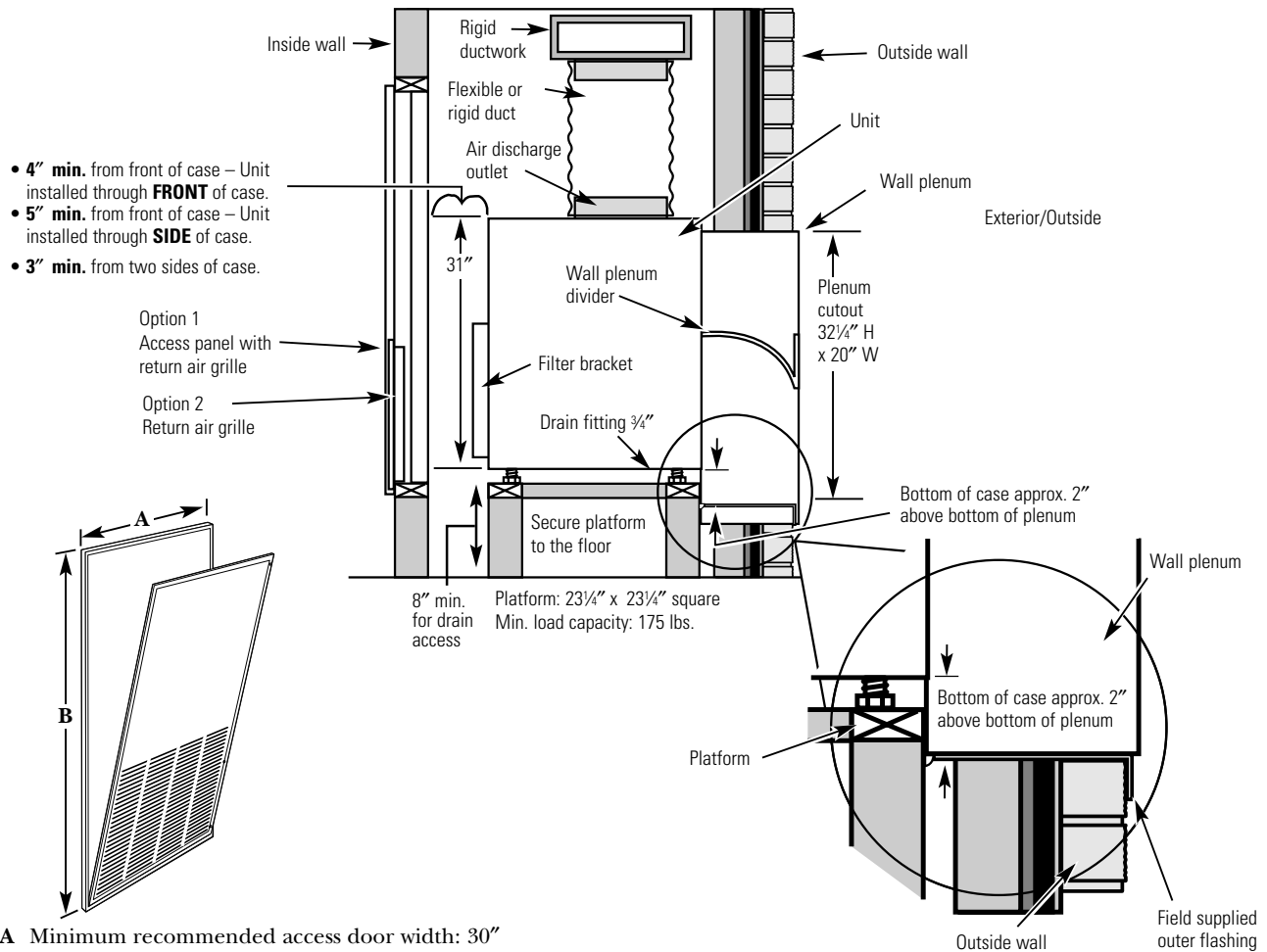
Top View



Top View

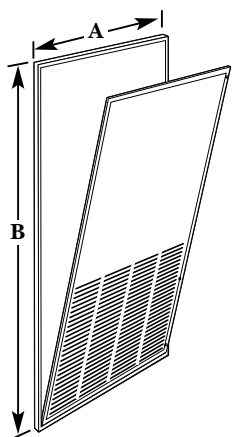


Side View



- **4" min.** from front of case – Unit installed through **FRONT** of case.
- **5" min.** from front of case – Unit installed through **SIDE** of case.
- **3" min.** from two sides of case.

- Option 1
Access panel with return air grille
- Option 2
Return air grille



- A** Minimum recommended access door width: 30"
- B** Minimum recommended access door height: 50"

Suggested Bid Form Specifications

The following are suggested specifications for the 7500 Series Vertical Packaged Terminal Air Conditioners and Heat Pumps:

The contractor shall furnish Vertical Packaged Terminal Air Conditioners or Heat Pumps of the sizes and capacities shown on the schedule or in the specifications. The units shall be located as shown on the drawings and each shall consist of a chassis, appropriately sized wall plenum, outdoor grille, remote wall thermostat, support platform, and closet access panel or door.

Units shall be listed by UL and cUL, certified to ARI standard 310/380-93, and shall be GE Vertical Zoneline models or equal. Unit dimensions shall not exceed 23 1/8" x 23 1/8" x 32".

Chassis

The air conditioner chassis shall be the standard product of the manufacturer and shall be shipped in protective cartons to prevent damage. Cartons shall be appropriately marked with factory wording sufficient to warn handlers against dropping, improper stacking, upending, or rolling.

The chassis shall be slide-in type, ready to operate after installation.

The chassis shall be protected against the harmful effects of airborne chemicals and saltwater corrosion.

The chassis shall have a hermetically sealed refrigerant system with an external vibration isolated rotary compressor. Indoor coils shall have copper tubing with aluminum fins. Outdoor coils shall have copper tubing with aluminum fins treated to resist the effects of airborne chemicals and saltwater corrosion. All refrigerant coil fins will have the necessary enhancements to achieve EER and COP ratings of the unit. Refrigerant system metering shall be done with capillaries. Cooling shall be possible to outdoor temperature of 35°F without compressor damage.

Airflow system shall consist of one permanently lubricated fan motor for the outdoor side and a separate permanently lubricated three-speed motor for the indoor blower. Outdoor fan shall be multi-blade axial-flow design made of non-corrosive material. Indoor fan shall be blower type to optimize airflow and minimize air noise. All motors on the exterior side of the weather barrier shall be painted and enclosed to reduce the effects of moisture and corrosion.

Units will have a positive cooling condensate disposal system, which meets the test requirements of applicable A.R.I. standard 310/380-93. The disposal system shall have a slinger ring on the outdoor fan to dispose of condensate water and to assist in cooling the outdoor coil.

Unit indoor and outdoor airflows must match the capacity of the coils for efficient heat transfer and meet latent and sensible heat requirements. Water blow-off shall not occur on the indoor coil.

Unit shall have a sensor to prevent indoor coil freeze up.

Wall Plenum

Wall Plenums shall be constructed of heavy gauge, zinc coated, phosphated steel with a baked on enamel finish.

Plenums shall be installed through the exterior wall where shown on the plans and shall be of correct depth to allow sealing to exterior and interior walls.

Exterior Grilles

Each unit shall be equipped with a standard exterior grille that has been designed to allow operation in high ambient conditions.

Special exterior grilles or custom louver sections supplied by others will conform to minimum free area requirements and shall be submitted to the manufacturer, if requested, for feasibility and air flow characteristics.

Electrical

Units shall be designed to operate on _____-volts, 60 Hz, single-phase power.

Units shall have means of electrical connection listed by Underwriters Laboratories and compatible with the units required voltage and ampacity in conformance with National Electrical Code (NEC) and all local codes.

Features

Unit must have a positive-closing fresh air ventilation system with a concealed manual control.

Unit must be compatible with 2-wire Central Desk Control systems.

Units must be compatible with Mechanical and Electronic Class-2 remote wall thermostats.

Units must have available connections to interface with occupancy sensors.

Using optional kit, unit shall have Electronic Temperature Limiting with seven independent heating and cooling settings to limit maximum and minimum room temperature settings.

Using optional kit, unit shall be equipped with Freeze Sentinel™ to automatically activate the electric heaters and appropriate fan motors to warm and circulate indoor air to prevent damage due to freezing temperatures. Freeze Sentinel™ shall operate when unit is connected to a powered electrical circuit and the unit shall have the ability to disable this feature.

Additional Specifications For GE Vertical Zoneline Heat Pumps

Heat pump unit shall automatically switch from heat pump operation to electric resistance heat when it is unable to provide sufficient heat to maintain room temperature or when the outdoor temperature falls below 25°F.

Unit shall be equipped with a temperature activated valve to allow condensate water generated during defrost cycles to drain into the building drain system.

Unit shall have a concealed switch to allow heat pump operation to be overridden and heat provided by electric resistance heaters regardless of outdoor temperatures.

Heat pump unit shall have Reverse Cycle (hot gas) Defrost system to maximize heat pump operation and minimize energy consumption.

To minimize energy consumption, units shall have electric heaters locked out when outdoor temperatures are above 46°F. Heating will be provided by heat pump operation only.

In the event of a compressor failure during heat pump operation, the unit shall automatically switch to electric resistance heat to maintain selected room temperature regardless of outdoor temperatures.

When the heat mode is selected or when the unit is switched from off to on in heat mode, the unit shall energize electric heaters to quickly warm the room to wall thermostat set point. Heat pump operation will resume on subsequent heating requirements.

Unit shall have an indoor coil temperature sensor to protect the compressor when the outdoor temperatures are too high for heat pump operation.

Additional Specifications Service

Submit complete information with bid covering service availability, to whom service on units will be assigned, complete address and phone number, including phone number of emergency service personnel.

Startup, Adjust, Demonstrate

Contractor shall be responsible for the initial starting of units, adjustments thereto, cleaning, etc.; to place the units in required operating condition. Contractor shall demonstrate to the owner, or his representative, the operation of units for both summer and winter functions.

Warranty

For one year from date of original purchase, manufacturer will provide, free of charge, parts and service labor on site to repair or replace any part of the Zoneline that fails because of a manufacturing defect. For an additional four years from the date of original purchase, manufacturer will provide, free of charge, parts and on-site service labor to repair or replace any part of the sealed refrigerating system (compressor, condenser, evaporator, and all connecting tubing) that fails due to a manufacturing defect.

For the second through fifth year from the date of original purchase, the manufacturer will provide a limited parts warranty. The manufacturer will provide, free of charge, parts that fail as a result of a manufacturing defect. Parts covered are fan motors, switches, heater, heater protectors, compressor overload, solenoids, circuit boards, auxiliary controls, thermistors, frost controls, capacitors, and varistors. This limited parts warranty does not include labor or transportation to and from the service shop.

All warranty service is to be provided by manufacturers factory service centers or by their authorized servicers during normal working hours.

ZONELINE® WARRANTY

Staple sales slip or cancelled check here. Proof of original purchase date is needed to obtain service under warranty. For service in the U.S., call 800-GE-CARES. In Canada, contact: Manager, Consumer Relations, Camco Inc., 5800 Keaton Crescent, Mississauga, Ontario, Canada L5R 3K2.

WHAT IS COVERED FULL ONE-YEAR WARRANTY

For one year from date of original purchase, we will provide, free of charge, parts and service labor on site to repair or replace **any part of the Zoneline unit** that fails because of a manufacturing defect.

FULL ADDITIONAL FOUR-YEAR SEALED REFRIGERATING SYSTEM WARRANTY

For four years from the date of original purchase, we will provide, free of charge, parts and on site service labor to repair or replace **any part of the sealed refrigerating system** (the compressor, condenser, evaporator and all connecting tubing) that fails because of a manufacturing defect.

LIMITED 2ND THROUGH 5TH YEAR PARTS WARRANTY

For the second through the fifth year from date of original purchase, General Electric will provide, free of charge, parts that fail as a result of a manufacturing defect. Parts covered are fan motors, switches, thermostat, heater, heater protectors, compressor overload, solenoids, circuit boards, auxiliary controls, thermistors, frost controls, ICR pump, capacitors, varistors, and indoor blower bearing. This is a limited parts-only warranty, and does not include labor or transportation to and from the service shop.

WHAT IS NOT COVERED

- Service trips to your site to teach you how to use the product.
- Improper installation.
If you have an installation problem, or if the air conditioner is of improper cooling capacity for the intended use, contact your dealer or installer. You are responsible for providing adequate electrical connecting facilities.
- Replacement of fuses or resetting of circuit breakers.
- In commercial locations, labor necessary to move the unit to a location where it is accessible for service by an individual technician.
- Failure of the product resulting from

modifications to the product or due to unreasonable use including failure to provide reasonable and necessary maintenance.

- Failure or damage resulting from corrosion due to installation in an environment containing corrosive chemicals.
- Failure or damage resulting from corrosion due to installation in a coastal environment, except for models treated with special factory-applied anti-corrosion protection as designated in the model number.
- Damage to product caused by improper power supply voltage, accident, fire, floods or acts of God.
- Incidental or consequential damage to personal property caused by possible defects with this air conditioner.

Warrantor: General Electric Company, Louisville, KY 40225

This warranty is extended to the original purchaser and any succeeding owner for products purchased for use within the USA and Canada. In Alaska, the warranty excludes the cost of shipping or service calls to your site.

Some states do not allow the exclusion or limitation of incidental or consequential damages. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state. To know what your legal rights are in your state, consult your local or state consumer affairs office or your state's Attorney General.

Equipment used as a primary source for heating or cooling is an integral part of the building in which it is installed. Proper application is essential for satisfactory performance over a wide range of operating conditions. It is strongly recommended that a professional engineer determine proper application.

If this unit is a replacement unit, its specifications and performance may differ from those of the unit it is replacing. For that reason, we again strongly recommend that a professional engineer determine proper application. See page 21.

GE has a policy of continuous improvement on its products and reserves the right to change materials and specifications without notice.



GE Appliances

General Electric Company
Louisville, Kentucky 40225
www.GEAppliances.com



Listed by
Underwriters'
Laboratories.



NEW GE ZONELINE® WALL THERMOSTATS



Programmable:

RAK163P1 - For use with Zoneline Resistance Heat models

RAK147P1 - For use with Zoneline Heat Pumps

Digital (non-programmable):

RAK163D1 - For use with Zoneline Resistance Heat models

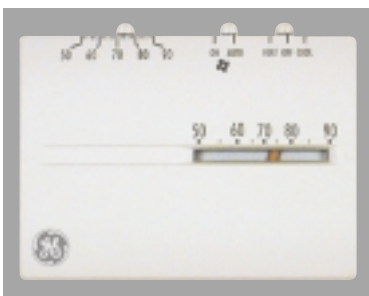
RAK147D1 - For use with Zoneline Heat Pumps

- Independent Cool and Heat mode Programmability
- Digital Temperature, Time and Date indicators
- "Hold" mode
- Automatic unit shutoff if room temperature rises above 90 or below 45 degrees F
- Backup 10 year Lithium Battery
- Low Battery Warning
- LCD Backlight

Mechanical Thermostat:

RAK163A2 - For use with Zoneline Resistance Heat models

- Temperature, operation mode and fan operation are controlled at wall mounted thermostat
- Integral low voltage terminal board to connect with thermostat



We bring good things to life.

For Liquid and Steam Service

Job Name _____

Contractor _____

Job Location _____

Approval _____

Engineer _____

Contractor's P.O. No. _____

Approval _____

Representative _____

Series 777, S777

Wye-Pattern Bronze Strainers

Sizes: 1/4" – 4" (8-100mm)

Series 777, S777 Wye-Pattern Bronze Strainers are designed to protect system components from dirt, rust and other damaging debris in the piping system. This series features a solid retainer cap with gasket.

Features

- Bronze body
- Wye-pattern
- Solid retainer cap with gasket

Models

777 – 1/4" – 4" (8 – 100mm) threaded connections

S777 – 1/2" – 2" (15 – 50mm) solder connections

Specifications

A wye-pattern bronze strainer to be installed as indicated on the plans. The strainer must have a solid retainer cap with gasket. Strainer shall be rated to 400psi (27.6 bar) WOG @ 210°F (99°C); 125psi (8.6 bar) WSP @ 353°F (178°F) for sizes 1/4" – 3" (8 – 75mm) and 300psi (20.7 bar) WOG @ 210°F (99°C); 125psi (8.6 bar) @ 353°F (178°C) for size 4" (100mm). Strainer shall be a Watts Regulator Company Series 777 (threaded ends) or S777 (solder ends).

Materials

Body:	Bronze
Retainer Cap:	1/4" – 1/2" (8-15mm): Brass 3/4" – 4" (20-100): Bronze
Cap Gasket:	1/2" – 2" (15-50mm): EPDM Other sizes consult factory
Standard Screen:	1/2" – 2 1/2" (8-65mm): 304 stainless steel #20 mesh, 3" (75mm): 3/64" (1.2mm) 304 stainless steel perforated screen 4" (100mm): 1/8" (3mm) 304 stainless steel perforated screen

Pressure – Temperature

Maximum Working Pressure:

1/4" – 3" (8-75mm)

400psi (27.6 bar) WOG @ 210°F (99°C)

125psi (8.6 bar) WSP @ 353°F (178°F)

4" (100mm)

300psi (20.7 bar) WOG @ 210°F (99°C)

125psi (8.6 bar) WSP @ 353°F (178°F)



The Watts logo, consisting of the word "WATTS" in a bold, sans-serif font with a registered trademark symbol (®) to the upper right.

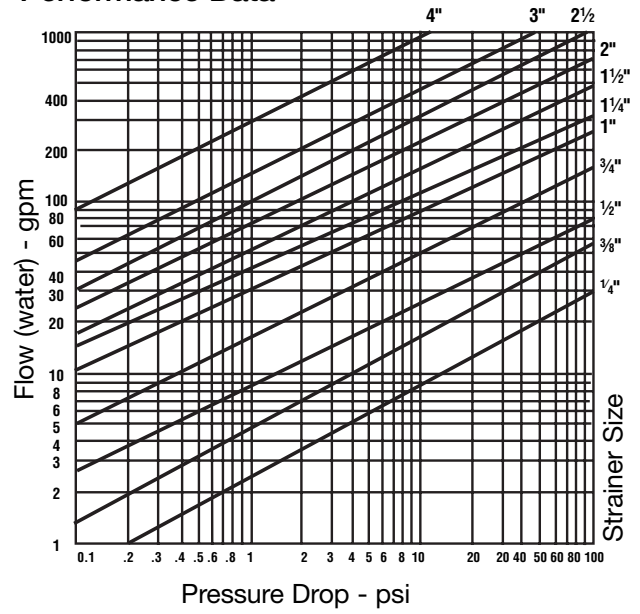
Screen Options

304 Stainless Steel Wire Mesh Liners:
(#30, #40, #60, #80, #100)

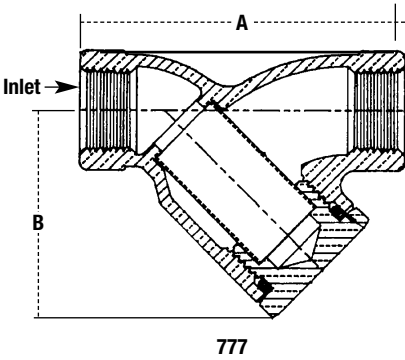
304 Stainless Steel Perforated Screens:
(1/32", 3/64", 1/16", 1/8", 3/16", 1/4")

Consult factory for ordering codes

Performance Data



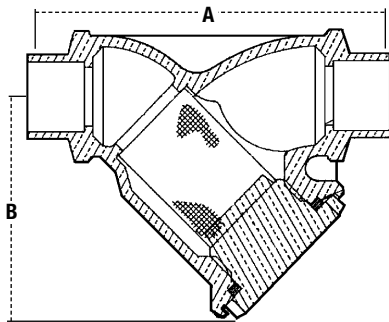
Dimensions – Weights



777

777

SIZE (DN)		DIMENSIONS				WEIGHT	
in.	mm	A		B		lbs.	kgs.
		in.	mm	in.	mm		
1/4	8	2 11/16	68	1 11/16	43	1.7	0.77
3/8	10	2 11/16	68	1 11/16	43	1.7	0.77
1/2	15	3	76	2	51	1.7	0.77
3/4	20	3 5/16	84	2 5/16	59	1.7	0.77
1	25	4 1/2	114	2 5/16	59	2.7	1.22
1 1/4	32	5 1/8	130	3 1/8	79	3.0	1.36
1 1/2	40	5 5/8	149	3 3/4	95	4.0	1.81
2	50	6 3/16	157	4 7/8	124	7.4	3.36
2 1/2	65	8 1/8	206	4 9/16	125	12.0	5.44
3	75	10 1/8	257	6 11/16	170	24.0	10.90
4	100	13	325	10 1/2	267	41.0	18.60



S777

S777

SIZE (DN)		DIMENSIONS				WEIGHT	
in.	mm	A		B		lbs.	kgs.
		in.	mm	in.	mm		
1/2	15	3 3/8	86	2 1/16	52	1.5	0.68
3/4	20	3 3/4	95	2 7/16	63	1.6	0.73
1	25	5	127	3	76	2.5	1.13
1 1/4	32	5 5/8	143	3 1/4	82	2.8	1.25
1 1/2	40	6 7/16	164	3 13/16	97	4.0	1.81
2	50	7 1/2	191	4 5/8	118	7.4	3.39



Water Safety & Flow Control Products



USA: 815 Chestnut St., No. Andover, MA 01845-6098; www.watts.com

Canada: 5435 North Service Rd., Burlington, ONT. L7L 5H7; www.wattscanada.ca

For Water Heater and Hot Water Storage Tank Applications

Job Name _____

Contractor _____

Job Location _____

Approval _____

Engineer _____

Contractor's P.O. No. _____

Approval _____

Representative _____

Series DET

Potable Water Expansion Tanks

Series DET Potable Water Expansion Tanks are designed to absorb the increased volume of water created by thermal expansion and to maintain balanced pressure throughout the potable water supply system.

Heated water expands, and in a domestic hot water system the system may be closed when the potable water system is isolated from the public water supply by a one-way valve such as pressure reducing valve, backflow preventer or check valve. Provisions must be made for this expansion.

Series DET expansion tanks absorb the increased volume of water created when the hot water storage tank is heated and keeps the system pressure below the relief setting of the T&P relief valve. It is a pre-pressurized steel tank with an expansion membrane that prevents contact of the water with the air in the tank. This prevents loss of air to the water and insures long and trouble-free life for the system. These tanks may be used with all types of Direct Fired Hot Water Heaters (gas, oil or electric) and hot water storage tanks.

Features

- Rugged flexible butyl diaphragm
- Field adjustable pre-charge
- In-line and free standing models
- Can be used with most standard hot water heaters and storage tanks
- Made in U.S.A.

Models

DET-5-M1 has 3/4" male connection, tank volume 2.1 gal.
 DET-12-M1 has 3/4" male connection, tank volume 4.5 gal.
 DET-20-M1 has 3/4" male connection, tank volume 8.5 gal.
 DET-35-M1 has 1" female connection, tank volume 14.00 gal.

Specifications

The potable water expansion tank shall be of drawn steel construction. It shall have a Butyl diaphragm separating the air chamber from the water containing chamber. Inlet connector shall be brass (Model DET-35-M1: Stainless Steel). Materials of manufacture for the diaphragm shall be FDA approved.

The potable water expansion tank shall be a Watts Model DET-__M1.



Standards

Models DET-5-M1, DET-12-M1 and DET-20-M1 are Listed by IAPMO.

Certified to ANSI/NSF 61

Model DET-35-M1

Certified to ANSI/NSF 61



(73°F/23°C)

Note: The potable water expansion tank shall be installed in the cold water service pipe line on the supply side of the water heater (or water storage tank). A pressure relief valve sized and installed in accordance with local codes must be incorporated in the system. In those systems requiring a combined temperature and pressure safety relief valve, the temperature and pressure relief valve should be sized and installed in accordance with local codes. Adequate drainage provisions should be provided where water flow will cause damage.

See chart on back



Watts product specifications in U.S. customary units and metric are approximate and are provided for reference only. For precise measurements, please contact Watts Technical Service. Watts reserves the right to change or modify product design, construction, specifications, or materials without prior notice and without incurring any obligation to make such changes and modifications on Watts products previously or subsequently sold.

Selection

This Quick Reference Selection Guide may be used as an alternative to using a formula to determine the correct expansion tank for the system. This table is based upon a relief valve setting of 150psi, and a maximum of 50°F temperature rise.

To select the correct model DET series tank, simply go the supply pressure equal to the system supply pressure (for pressures between those shown use next highest supply pressure shown), read across the chart to the correct tank as indicated by the water heater capacity (for capacities between those shown, use next highest capacity).

To accommodate the thermal expansion required for higher temperature and/or higher pressure systems, multiple tanks may be used. Please contact the factory for sizing information.

SUPPLY PRESSURE (PSIG)	WATER HEATER (GALLONS)						
	20	30	40	50	80	100	120
40							
50							
55							
60							
70							
80							
90							
100							
110							
120							

	DET-5-M1		DET-20-M1
	DET-12-M1		DET-35-M1
	Multiple tanks required - consult factory		

Materials

Diaphragm: Butyl rubber

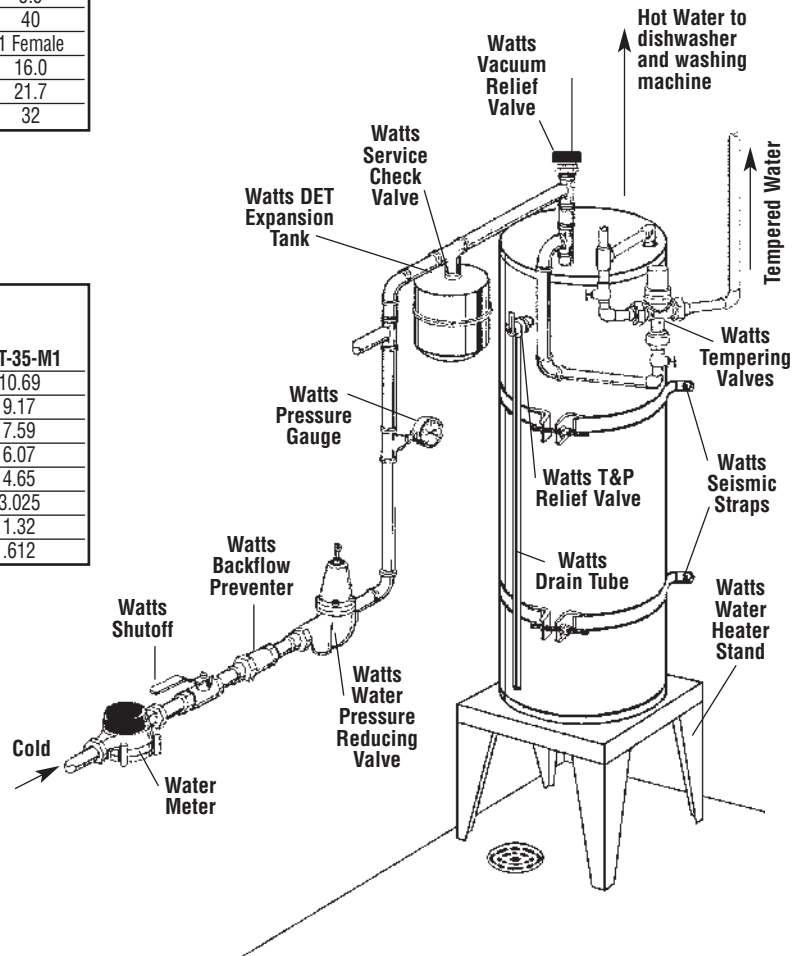
Inlet Connection: Brass (DET-35-M1: Stainless Steel)

Technical Information

Description	DET-5-M1	DET-12-M1	DET-20-M1	DET-35-M1
Max. Pressure - PSI	150	150	150	150
Max. Temp. - °F	200	200	200	200
Tank Volume - Gal.	2.1	4.5	8.5	14.00
Tank Acceptance - Gal.	.85	1.8	3.2	5.6
Air Pre-charge - PSI	40	40	40	40
Connections Size - Inches	¾ Male	¾ Male	¾ Male	1 Female
Diameter - Inches	8.5	10.0	12.5	16.0
Length - Inches	11.5	15.0	19.2	21.7
Weight - Lbs.	7	10	15	32

Acceptance Volume

Air Side Pre-pressure (psi)	Water Side Volume at 150psi (gallons)			
	DET-5-M1	DET-12-M1	DET-20-M1	DET-35-M1
20	1.500	2.801	7.102	10.69
40	1.272	2.208	5.882	9.17
60	.996	2.076	4.705	7.59
80	.720	1.716	4.009	6.07
100	.602	1.128	2.001	4.65
120	.348	.660	1.488	3.025
140	.132	.240	.639	1.32
150	.036	.204	.602	.612



USA: 815 Chestnut St., No. Andover, MA 01845-6098; www.wattsreg.com
 Canada: 5435 North Service Rd., Burlington, ONT L7L 5H7; www.wattscanada.ca



The new degree of comfort®



Residential Electric
Professional Classic
Tankless Water Heaters

Professional Classic® tankless electric water heaters offer continuous hot water

Performance Features

- On demand, consistent and continuous hot water
- Compact and stylish with digital temperature control in increments of 1° ranging from 80°F to 140°F*
- Robust copper immersion heating elements with brass top increases durability and are threaded for easy replacement
- Simple Installation
- Digital temperature display
- External controls to adjust temperature in increments of 1°*

Average GPM Usage by Application

Standard Hand Sink	0.5 GPM
Washing Machine	1 to 1.5 GPM
Water-Saver Shower Head	1.5 GPM
Dishwasher	1 to 2 GPM
Kitchen Sink	1 to 2 GPM
Standard Shower Head	2.0 GPM
Bath Tub	≥ 4 GPM
Whole-Home	Up to 6 GPM

Average Gallons Per Minute (GPM) based on 2010 Plumbing Standards

Warranty

- 5-Year heating chamber and 1-year parts limited warranty

See Residential Warranty Certificate for complete information

*RTEX-04 and RTEX-06 only show output temperature and are non-thermostatically controlled

MODEL NUMBER	TEMPERATURE RISE °F								
	0.5 GPM	1.0 GPM	1.5 GPM	2.0 GPM	2.5 GPM	3.0 GPM	4.0 GPM	5.0 GPM	6.0 GPM
SINGLE POINT-OF-USE									
RTEX-04	48°	24°	16°	12°	-	-	-	-	-
RTEX-06	75°	37°	25°	19°	-	-	-	-	-
MULTIPLE APPLICATIONS									
RTEX-08	+	55°	36°	27°	22°	18°	14°	-	-
RTEX-11	+	75°	50°	38°	30°	25°	19°	-	-
RTEX-13	+	89°	59°	44°	36°	30°	22°	-	-
RTEX-18	+	+	82°	62°	49°	41°	31°	25°	-
RTEX-24	+	+	109°	82°	66°	55°	41°	33°	27°
RTEX-27	+	+	+	92°	74°	62°	46°	37°	31°
RTEX-36	+	+	+	+	98°	82°	62°	49°	41°

+ Temperature electronically limited setting on adjustable thermostat on front cover

POINT-OF-USE

For 0.5 GPM to 2.0 GPM Applications



RTEX-04, RTEX-06

MULTIPLE APPLICATIONS

For 0.5 GPM to 6.0 GPM Applications



RTEX-08, RTEX-11, RTEX-13



RTEX-18



RTEX-24, RTEX-27



RTEX-36



Tested and certified by the Water Quality Association against NSF/ANSI 372 for lead free compliance.



RTEX-04, RTEX-06

Unique Features:

- External Digital Display – shows outlet temperature
- Durable Copper Immersion single heating element, field serviceable
- Simple Installation – Bottom 1/2" NPT water connections



RTEX-08, RTEX-11, RTEX-13

Unique Features:

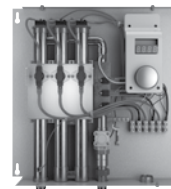
- External Adjustable Digital Thermostatic Control with LED display (+/- 1 degree accuracy)
- Durable Copper Immersion two heating elements, field serviceable
- Simple Installation – Side 1/2" compression water connections with 1/2" NPT adapters included



RTEX-18

Unique Features:

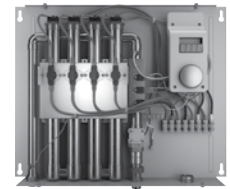
- External Digital Thermostatic Control with LED display (+/- 1 degree accuracy)
- Most advanced self-modulation, adjust power to meet hot water demand
- Durable Copper Immersion two heating elements, field serviceable
- Simple Installation – Bottom 3/4" NPT water connections



RTEX-24, RTEX-27

Unique Features:

- External Digital Thermostatic Control with LED display (+/- 1 degree accuracy)
- Most advanced self-modulation, adjust power to meet hot water demand
- Durable Copper Immersion three heating elements, field serviceable
- Simple Installation – Bottom 3/4" NPT water connections



RTEX-36

Unique Features:

- External Digital Thermostatic Control with LED display (+/- 1 degree accuracy)
- Most advanced self-modulation, adjust power to meet hot water demand
- Durable Copper Immersion four heating elements, field serviceable
- Simple Installation – Bottom 3/4" NPT water connections



INTEGRATED HOME COMFORT

Rheem.com



The new degree of comfort.



Residential Electric
Professional Classic
Tankless Water Heaters

Specifications

DESCRIPTION	FEATURES							ROUGHING IN DIMENSIONS (SHOWN IN INCHES)					
	MODEL NUMBER	KW	AMPS	RECOMMENDED BREAKER SIZE	VOLTAGE	RECOMMENDED WIRE SIZE (CU)	MIN. FLOW (GPM)	MAX. FLOW (GPM)	HEIGHT	WIDTH	DEPTH	WATER CONN.	SHIP WEIGHT (LBS.)
120V 1 HEATING CHAMBER													
RTEX-04	3.5	29A	(1x30)A	120	10 AWG	0.3	1.5	5-7/8	10-7/8	2-3/4	1/2 NPT	4.5	
240V* 1 HEATING CHAMBER													
RTEX-06	6.0	25A	(1x25)A	220	10 AWG	0.3	2.0	5-7/8	10-7/8	2-3/4	1/2 NPT	4.5	
RTEX-08*	7.3	33A	(1x40)A	240	8 AWG	0.3	4.8	12-5/8	8-1/4	3-5/8	1/2 CF	7	
RTEX-11*	11.8	46A	(1x50)A	240	6 AWG	0.3	4.8	12-5/8	8-1/4	3-5/8	1/2 CF	8.5	
RTEX-13*	13.0	54A	(1x60)A	240	6 AWG	0.3	4.8	12-5/8	8-1/4	3-5/8	1/2 CF	8.5	
240V* 2 HEATING CHAMBERS													
RTEX-18*	18.0	75A	(2x40)A	240	8 AWG	0.3	7.0	18-1/4	14-1/2	3-1/2	3/4 NPT	14.78	
240V* 3 HEATING CHAMBERS													
RTEX-24*	24.0	100A	(3x40)A	240	8 AWG	0.3	7.0	18-1/4	17-5/8	3-1/2	3/4 NPT	17.8	
RTEX-27*	27.0	113A	(3x40)A	240	8 AWG	0.3	7.0	18-1/4	17-5/8	3-1/2	3/4 NPT	17.8	
240V* 4 HEATING CHAMBERS													
RTEX-36*	36.0	150A	(4x40)A	240	8 AWG	0.3	8.0	18-1/4	21-5/8	3-1/2	3/4 NPT	22.7	

*240V units can be used on 208V single phase with 25% reduced temperature output. Please note per UL standards the rating plate and installation instructions will all be according to a 240V applied voltage. Check with local officials prior to derating the electrical infrastructure.

Product Specifications (all models)	Rated Pressure	25 PSI min., 150 PSI max.
	Certifications	ETL Listed to UL 499 and CSA
	Std. Temp. Settings	120°F (Adjustable 80°F-140°F)
	Temp. Accuracy	+/-1° at steady flow
	Turn-On	0.3 GPM

Suggested Specifications

Unit shall have copper clad immersion heating element(s) with brass terminations for increased durability. External temperature control and display adjustable in 1° increments with a range of 80°-140°F. Display shall be capable of displaying setpoint temperature in Celsius or Fahrenheit temperature scales. Unit shall utilize a flow meter with a 0.3 gpm activation point and manage power based on actual flow rate and inlet temperature. Values should be processed 60 times per second. Unit shall be WQA certified lead free, certified to UL499 and CSA C22.2 No.64.

Optional Inline Flow Regulator

- Enhanced outlet temperature control
- Install on the outlet side of the heater
- Limit maximum volume to the specified flow rate to ensure exiting temperature is within an acceptable range
- Flow Regulators for 1/2" and 3/4" NPT plumbing connections
- Flow range: 1 to 5 gallons per minute

RHEEM PART NUMBER	GPM RATING OF INSERTS PROVIDED	CONNECTION SIZE
RTE10001A	1.0, 1.5, 2.0	1/2" NPT
RTE10001B	2.0, 3.0, 4.0, 5.0	3/4" NPT

Suggested Sizing Guide

MODEL NUMBER	FLOW REGULATOR PART NO.	GPM INSERT TO USE BASED ON INLET WATER TEMPERATURE			
		40°F	50°F	60°F	70°F
RTEX-04	N/A	N/A	N/A	N/A	N/A
RTEX-06	N/A	N/A	N/A	N/A	N/A
RTEX-08	RTE10001A	1.0	1.0	1.0	1.5
RTEX-11	RTE10001A	1.0	1.0	1.5	2.0
RTEX-13	RTE10001A	1.0	1.0	1.5	2.0
RTEX-18	RTE10001B	2.0	2.0	2.0	3.0
RTEX-24	RTE10001B	2.0	2.0	3.0	4.0
RTEX-27	RTE10001B	2.0	3.0	4.0	5.0
RTEX-36	RTE10001B	3.0	4.0	5.0	5.0

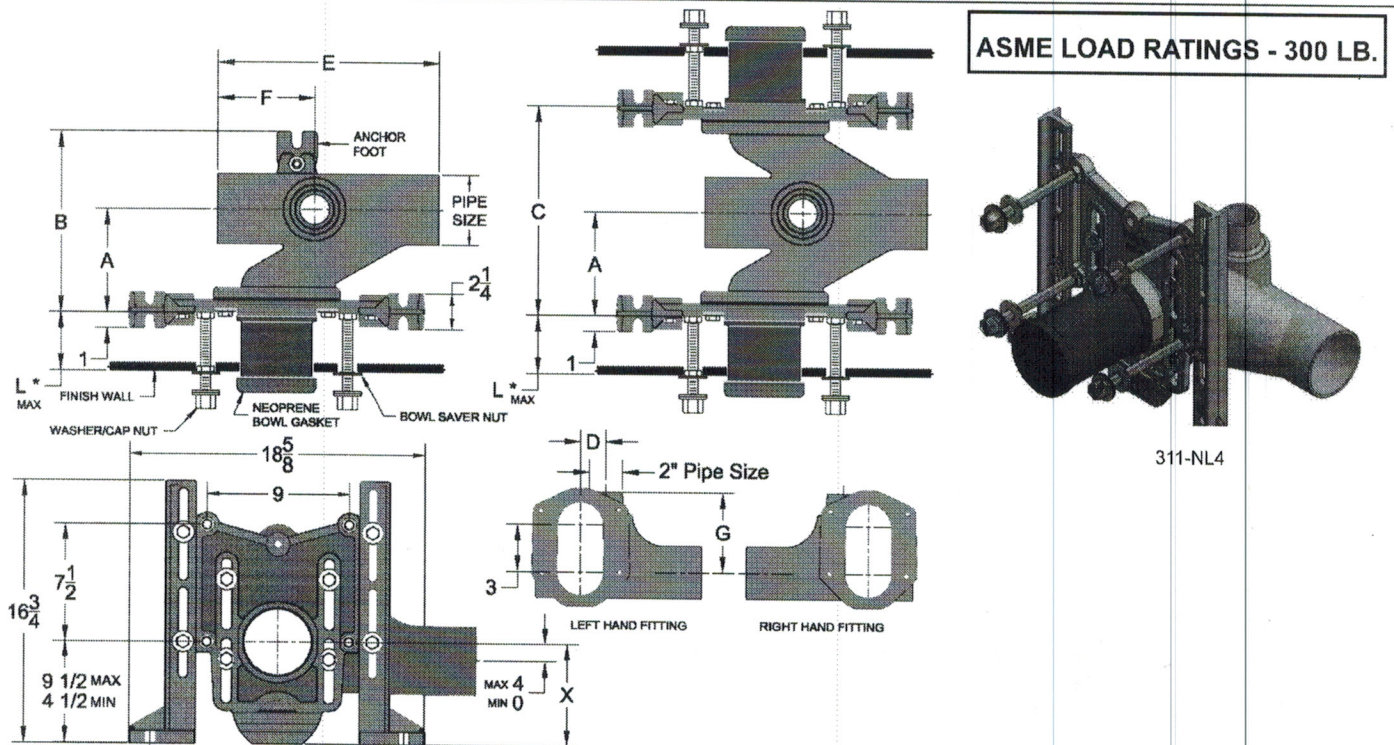
In keeping with its policy of continuous progress and product improvement, Rheem reserves the right to make changes without notice.

Rheem.com | 800.374.8806
Manufacturers National Service Department
400 Captain Neville Drive, Waterbury, CT 06705



INTEGRATED HOME COMFORT

311 Horizontal, Adjustable Water Closet Support (Replaces 300,310,320)



Regularly Furnished: Adjustable horizontal siphon jet water closet support provides a rigid system with No-Hub connections. Comes complete with painted cast iron right-hand, left-hand, or double main fitting, 2" vent, adjustable gasketed faceplate, universal floor mounted foot supports, corrosion resistant polymer coupling with integral test cap, fixture studs, trim, and stud protectors. Includes rear anchor tie down and bowl gasket.

Model	Wt. Lbs.	Style	Connection Type	Regularly Furnished	Dimensions						
					A	B	C	D	E	F	G
311-CL4 *	69.4	Left	Hub/Spigot	\$1628.00	6-1/2"	11-3/8"	-	4"	17"	8-1/2"	8"
311-CR4 *	69.4	Right		1628.00	6-1/2"	11-3/8"	-	4"	17"	8-1/2"	8"
311-CD4 *	117.8	Double		3044.00	6-1/2"	11-3/8"	13"	4"	17"	8-1/2"	8"
311-NL3	66.4	Left	No-Hub	1448.00	6"	10-3/8"	-	2-3/8"	14"	6-1/8"	6-1/4"
311-NR3	66.4	Right		1448.00	6"	10-3/8"	-	2-3/8"	14"	6-1/8"	6-1/4"
311-ND3	106.8	Double		2671.00	6"	10-3/8"	13"	2-3/8"	14"	6-1/8"	6-1/4"
311-NL4	71.4	Left		1584.00	6-1/2"	11-3/8"	-	2-3/8"	14"	6-1/8"	6-1/4"
311-NR4	71.4	Right		1584.00	6-1/2"	11-3/8"	-	2-3/8"	14"	6-1/8"	6-1/4"
311-ND4	111.8	Double		2965.00	6-1/2"	11-3/8"	13"	2-3/8"	14"	6-1/8"	6-1/4"

Suffix Options			
Suffix	Description		Add
AM1	Flush Valve Support	Sgl	\$ 89.00
		Dbl	178.00
AM21	Tiling Flange	Sgl	84.00
		Dbl	167.00
ECC11	Extended Coupling & Hardware (11" Coupling)	Sgl.	N/C
		Dbl.	
ECC14	Extended Coupling & Hardware (14" Coupling)	Sgl.	202.00
		Dbl.	405.00
ECC24	Extended Coupling & Hardware (24" Coupling)	Sgl.	1214.00
		Dbl.	2429.00
FPO	6" Adj. All Thread ABS Coupling		N/C
FPO/ECC14	14" Adj. All Thread ABS Coupling	Sgl.	202.00
		Dbl.	405.00

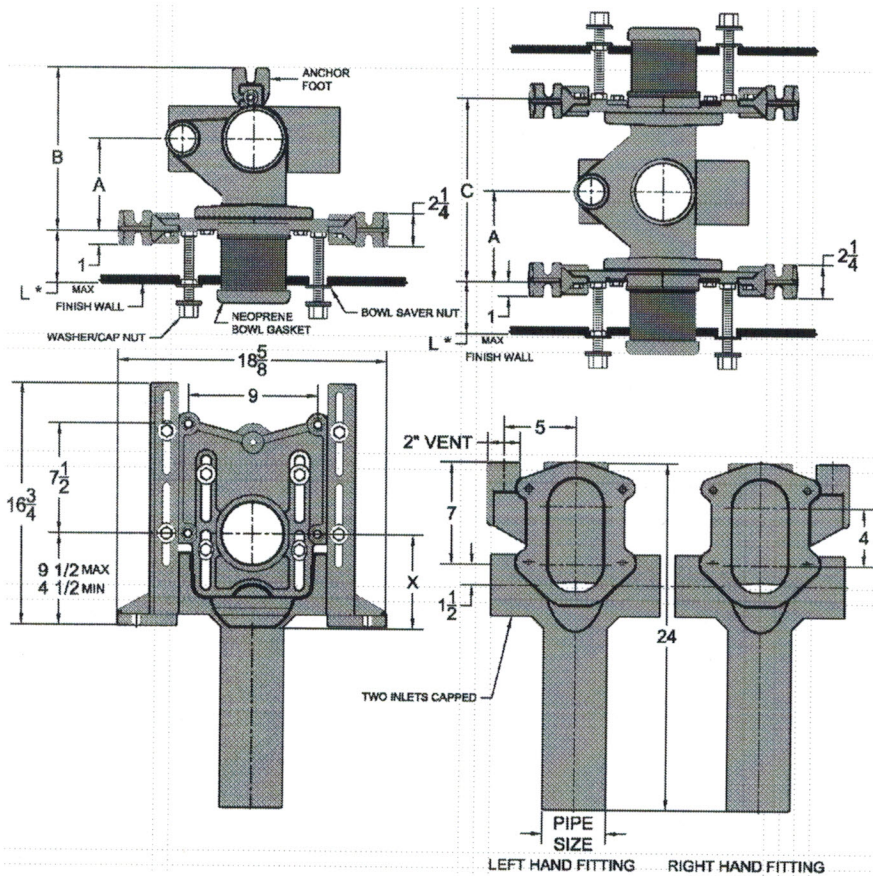
Suffix Options			
Suffix	Description		Add
M3	Vandal Proof Hardware	Sgl	135.00
		Dbl	270.00
M4	Rod Support Feet	Sgl	321.00
		Dbl	642.00
M26	Adjustable Cast Iron Coupling (Up to 12")		N/C
36	36" Extended Barrel* (N/A 3")	Sgl.	381.00
		Dbl.	277.00
Suffix	Description		Deduct
M14	Floor Mounted, Back Outlet Adapter	Sgl.	(156.00)
		Dbl.	(312.00)
PF	Pre-Fab Faceplate Assembly		N/C

* Dimensions vary from illustration

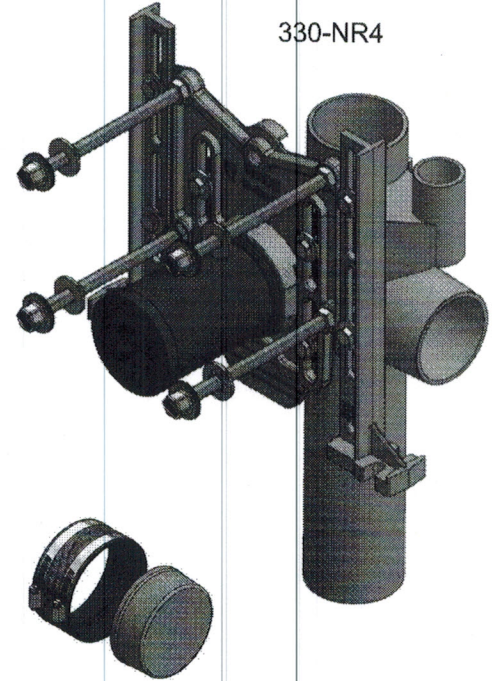
FIXTURE SUPPORTS



330 Vertical, Adjustable Water Closet Support (No-Hub)



ASME LOAD RATING - 300 LB.



Assembly includes (2) No-Hub Blind Plugs and Couplings for Blanking Side Inlets.

Regularly Furnished: Adjustable vertical siphon jet water closet support provides a rigid system with No-Hub connections. Comes complete with painted cast iron right-hand, left-hand, or double main fitting, 2" vent, adjustable gasketed faceplate, universal floor mounted foot supports, corrosion resistant polymer coupling with integral test cap, fixture studs, trim, and stud protectors. Includes rear anchor tie down and bowl gasket.

Model	Wt. Lbs.	Style	Connection Type	Regularly Furnished	Dimensions		
					A	B	C
330-NR4	92.3	Single RH	No-Hub	\$ 1794.00	6-1/2"	11-5/8"	-
330-NL4	92.3	Single LH		1794.00	6-1/2"	11-5/8"	-
330-ND4	154.6	Double		3174.00	6-1/2"	11-5/8"	13"

Suffix Options			
Suffix	Description		Add
AM1	Flush Valve Support	Sgl	\$ 89.00
		Dbl	178.00
AM21	Tiling Flange	Sgl	84.00
		Dbl	167.00
ECC11	Extended Coupling & Hardware (11" Coupling)	Sgl.	N/C
		Dbl.	
ECC14	Extended Coupling & Hardware (14" Coupling)	Sgl.	202.00
		Dbl.	405.00
ECC24	Extended Coupling & Hardware (24" Coupling)	Sgl.	1214.00
		Dbl.	2429.00
FPO	6" Adj. All Thread ABS Coupling		N/C
FPO/ECC14	14" Adj. All Thread ABS Coupling	Sgl.	202.00
		Dbl.	405.00

Suffix Options			
Suffix	Description		Add
M3	Vandal Proof Hardware	Sgl	\$135.00
		Dbl	270.00
M4	Rod Support Feet	Sgl.	321.00
		Dbl.	642.00
M26	Adjustable Cast Iron Coupling (Up to 12")		N/C
Suffix	Description		Deduct
M14	Floor Mounted, Back Outlet Adapter	Sgl	(156.00)
		Dbl	(312.00)
PF	Pre-Fab Faceplate Assembly		N/C

Glenwall® Vormax® Elongated Toilet

- 2882107**
 - **Wall-hung, back outlet gravity flush toilet configuration**
 - VorMax flushing technology cleans two times better than conventional toilets**
 - Combination bowl and tank, less seat
 - Elongated siphon action bowl
 - High efficiency toilet (HET) 1.28 gpf/4.8 Lpf
 - Meets EPA WaterSense® criteria
 - EverClean® Antimicrobial Surface included
 - CleanCurve™ rim eliminates rim area where dirt and build-up hide
 - Creates 50% less noise than pressure-assist technology toilets
 - Consistently flushes and removes paper seat covers unlike many pressure-assist toilets which tend to rip and leave behind paper
 - Meets all applicable drain line carry requirements and performs just as well as all pressure-assist HETs
 - 16-1/2" (419 mm) rim height for accessible applications
 - 2-1/16" (52 mm) trapway
 - Dual injection flush valves
 - Chrome trip lever included
 - 10 year warranty (1 year commercial)
 - Wall carrier supplied by others



2882107 Combo with Seat 5055A65C



2882107 Combo with Seat 5901100

- 2882108** Same as above except trip lever on right hand side
- 3447101** Elongated Bowl
- 4385A107** HET Tank

Nominal Dimensions:

29-1/2" x 17-13/16" x 32-13/16"
(750 x 453 x 833 mm)

Fixture only, seat, supply and wall carrier sold separately

Alternative Tank Configuration Available:

- 4385A108** Tank complete with trip lever located on right side
- 4385A167** Left hand trip lever tank with tank cover lock device.

Compliance Certifications -

Meets or Exceeds the Following Specifications:

- ASME A112.19.2/CSA B45.1 for Vitreous China Fixtures
- US EPA WaterSense® Specification for HETs

*Glenwall 1000g MaP score due 2019

** Source: Test Report No. 109-141486-002, comparing VorMax against conventional under-the-rim-water-dispersal toilets from major retailers.

† MaP testing performed by IAPMO R&T Lab. MaP report conducted by Gauley Associates Ltd. and Koeller and Company.

SEE REVERSE FOR ROUGHING-IN DIMENSIONS AND PRODUCT SPECIFICATIONS

To Be Specified:

- Color: White
- Seat: #5055A65C Elongated Slow Close solid plastic seat and cover or #5901100 Elongated heavy-duty open front seat less cover
- Supply with stop:



When installed so top of seat is 432 to 483mm (17" to 19") from the finished floor.
MEETS THE AMERICANS WITH DISABILITIES ACT GUIDELINES AND ANSI A117.1 REQUIREMENTS FOR ACCESSIBLE AND USEABLE BUILDING FACILITIES-CHECK LOCAL CODES.



ENVIRONMENTAL
PRODUCT
DECLARATION



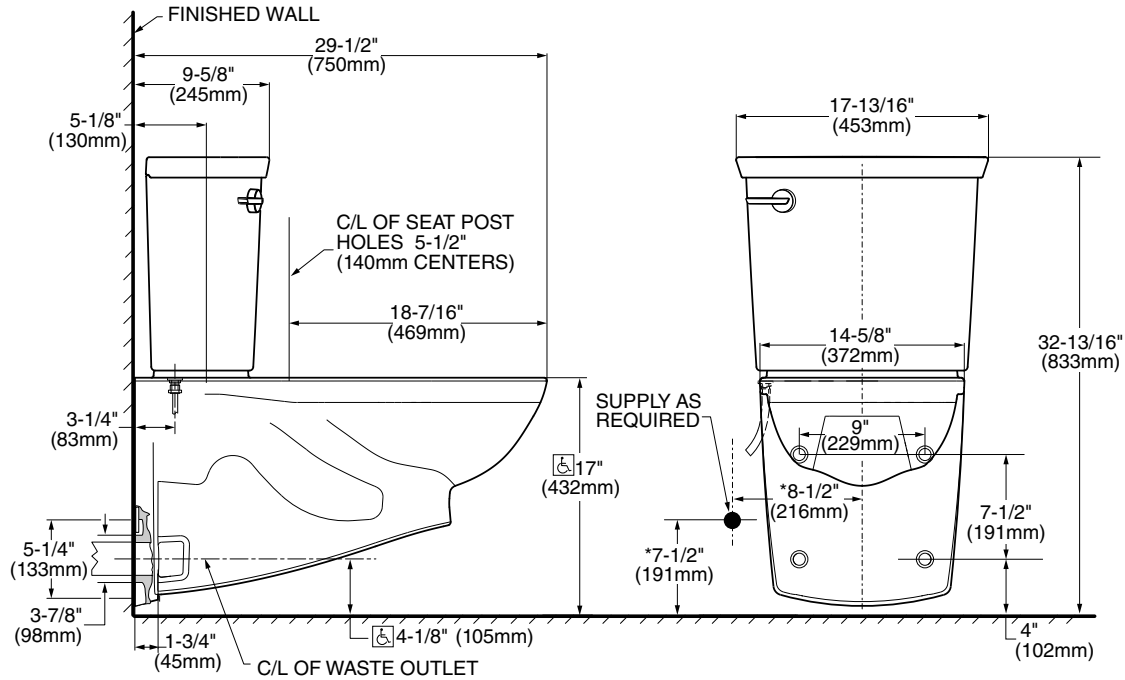
EVERCLEAN®



EPA
WATERSENSE®
CERTIFIED



WATER
EFFICIENT



NOTES:

WASTE OUTLET SEAL RING MUST BE NEOPRENE OR GRAPHITE-FELT (WAX RING NOT RECOMMENDED)
 SUGGEST 1/16" CLEARANCE BETWEEN FACE AT WALL AND BACK OF BOWL.
 CARRIER FITTING TO BE FURNISHED BY OTHERS.
 PROVIDE SUITABLE REINFORCEMENT FOR ALL SUPPORTS.
 SUPPLY NOT INCLUDED WITH FIXTURE AND MUST BE ORDERED SEPARATELY.
 * DIMENSION SHOWN FOR LOCATION OF SUPPLY IS SUGGESTED.
 FOR ADDITIONAL INFORMATION REFER TO INSTALLATION INSTRUCTIONS SUPPLIED.

IMPORTANT: Dimensions of fixtures are nominal and may vary within the range of tolerances established by ANSI Standard A112.19.2. These measurements are subject to change or cancellation. No responsibility is assumed for use of superseded or voided pages.

For Commercial, Residential & Institutional HVAC Applications

Job Name _____

Contractor _____

Job Location _____

Approval _____

Engineer _____

Contractor's P.O. No. _____

Approval _____

Representative _____

Series DPG-5

Top Entry Pressure Gauges

Dial Sizes: 2", 2 1/2", 3" (50, 65, 80mm)

DPG-5 Top-Entry Pressure Gauges are used in commercial, residential, and institutional HVAC applications. These gauges feature ABS polymer cases, Kostil Polymer windows, 1/8" (3mm) or 1/4" (8mm) NPT connections, and copper alloy Bourdon tube sensing elements. Accuracy is ASME, Type B. Series DPG-5 gauges are available in various pressure rating scales. The dual scale features PSI and kPa measurements.



DPG-5

Features

- ABS polymer case
- Kostil polymer window
- Copper alloy Bourdon sensing element
- Tin alloy welding
- 1/8" (3mm) or 1/4" (8mm) NPT connections
- ASME Type "B" accuracy

Approvals

Certified by The Northern Certification Society of Italy
(Det Norske Verita Italia S.r.l.)

Standards

ISO 9002 quality standard.
ASME B40.100

Temperature

Working Temperature: -4°F to 176°F (-20°C to 80°C)

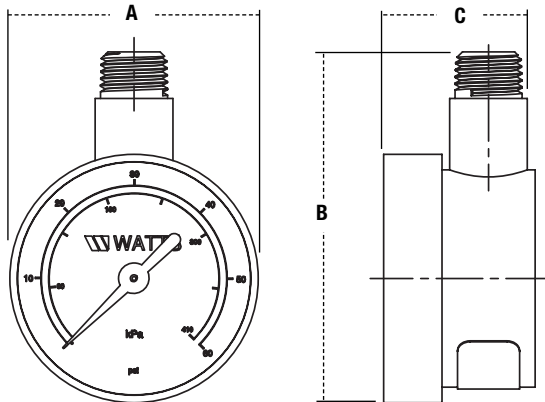
Materials

Case:	ABS polymer
Window:	Kostil polymer
Sensing Element:	Copper alloy Bourdon tube
Welding:	Tin alloy

WATTS®

Watts product specifications in U.S. customary units and metric are approximate and are provided for reference only. For precise measurements, please contact Watts Technical Service. Watts reserves the right to change or modify product design, construction, specifications, or materials without prior notice and without incurring any obligation to make such changes and modifications on Watts products previously or subsequently sold.

Dimensions – Weights



MODEL	SCALE		SIZE (DN)		DIMENSIONS						WEIGHT	
					A		B		C			
					in.	mm	in.	mm	in.	mm		
DPG5-2	0 – 160psi	1103 kPa	1/8	3	2	50	2 ¹¹ / ₁₆	68	1 ¹ / ₁₆	27	.15	.07
DPG5-2	0 – 15psi	207 kPa	1/4	8	2	50	2 ¹³ / ₁₆	71	1 ¹ / ₁₆	27	.2	.09
DPG5-2	0 – 30psi	207 kPa	1/4	8	2	50	2 ¹³ / ₁₆	71	1 ¹ / ₁₆	27	.2	.09
DPG5-2	0 – 60psi	413 kPa	1/4	8	2	50	2 ¹³ / ₁₆	71	1 ¹ / ₁₆	27	.2	.09
DPG5-2	0 – 100psi	689 kPa	1/4	8	2	50	2 ¹³ / ₁₆	71	1 ¹ / ₁₆	27	.2	.09
DPG5-2	0 – 160psi	1103 kPa	1/4	8	2	50	2 ¹³ / ₁₆	71	1 ¹ / ₁₆	27	.2	.09
DPG5-2	0 – 200psi	1379 kPa	1/4	8	2	50	2 ¹³ / ₁₆	71	1 ¹ / ₁₆	27	.2	.09
DPG5-2	0 – 300psi	2069 kPa	1/4	8	2	50	2 ¹³ / ₁₆	71	1 ¹ / ₁₆	27	.2	.09
DPG5-2 1/2"	0 – 15psi	103 kPa	1/4	8	2 1/2	63	3 ⁵ / ₁₆	84	1 1/8	29	.3	.14
DPG5-2 1/2"	0 – 30psi	207 kPa	1/4	8	2 1/2	63	3 ⁵ / ₁₆	84	1 1/8	29	.3	.14
DPG5-2 1/2"	0 – 60psi	413 kPa	1/4	8	2 1/2	63	3 ⁵ / ₁₆	84	1 1/8	29	.3	.14
DPG5-2 1/2"	0 – 100psi	689 kPa	1/4	8	2 1/2	63	3 ⁵ / ₁₆	84	1 1/8	29	.3	.14
DPG5-2 1/2"	0 – 160psi	1103 kPa	1/4	8	2 1/2	63	3 ⁵ / ₁₆	84	1 1/8	29	.3	.14
DPG5-2 1/2"	0 – 200psi	1379 kPa	1/4	8	2 1/2	63	3 ⁵ / ₁₆	84	1 1/8	29	.3	.14
DPG5-2 1/2"	0 – 300psi	2069 kPa	1/4	8	2 1/2	63	3 ⁵ / ₁₆	84	1 1/8	29	.3	.14
DPG5-3	0 – 15psi	103 kPa	1/4	8	3	80	3 ⁷ / ₈	98	1 1/8	29	.4	.18
DPG5-3	0 – 30psi	207 kPa	1/4	8	3	80	3 ⁷ / ₈	98	1 1/8	29	.4	.18
DPG5-3	0 – 60psi	413 kPa	1/4	8	3	80	3 ⁷ / ₈	98	1 1/8	29	.4	.18
DPG5-3	0 – 100psi	689 kPa	1/4	8	3	80	3 ⁷ / ₈	98	1 1/8	29	.4	.18
DPG5-3	0 – 160psi	1103 kPa	1/4	8	3	80	3 ⁷ / ₈	98	1 1/8	29	.4	.18
DPG5-3	0 – 200psi	1379 kPa	1/4	8	3	80	3 ⁷ / ₈	98	1 1/8	29	.4	.18
DPG5-3	0 – 300psi	2069 kPa	1/4	8	3	80	3 ⁷ / ₈	98	1 1/8	29	.4	.18



Water Safety & Flow Control Products



USA: 815 Chestnut St., No. Andover, MA 01845-6098; www.watts.com

Canada: 5435 North Service Rd., Burlington, ONT. L7L 5H7; www.wattscanada.ca

The Model 24 and B24 are anti-siphon, vacuum breaker protected wall faucets designed for irrigation purposes in mild climate areas. The Model B24 is enclosed in a flush mounted wall box. Both models are designed to blend with modern architecture for installation on or in homes, service stations, churches, motels, drive-in restaurants, etc. The Model Y24 is designed to be used on a stand pipe in the lawn and garden, etc.

Anti-Siphon Wall Faucets



Model 24/B24/Y24

SPECIFICATIONS:

VACUUM BREAKER - ANTI-SIPHON:

- NIDEL® Model 34HF with 3/4 inch male hose thread
- ASSE Standard 1011 approved
- IAPMO® listed
- Canadian Standards Association

EPDM PACKING: Prevents leaking.

PACKING NUT: Adjustable brass nut with deep stem guard.

VALVE SEAT: Standard "O" size washer.

HANDLES: Furnished with polycarbonate wheel handle and loose tee key.

Optional: Metal wheel handle.

INLETS: Model 24 as shown below.
Model B24: 24P- 1/2" or 24P 3/4" only.
Model Y24: 3/4" FPT.

MAX PRESSURE: 125 p.s.i.

MAX TEMPERATURE: 120° F

SHIPPING WEIGHT: (per unit)

MODEL 24 & Y24: 1 lb

MODEL B24: 13 lbs (brass or chrome box)
6 lbs (aluminum box)



MODEL 24

Exterior Finish:

Standard - Chrome (CH)

Optional- Rough Brass (BR) or Polished Chrome (PC)



MODEL B24

Exterior Finish:

Standard - Chrome (CH)

Optional- Rough Brass (BR) or Polished Brass (PB)

Other Options: Anodized Aluminum Box (AL)



MODEL Y24

Exterior Finish:

Standard - Chrome (CH)

Optional- Rough Brass (BR) or Polished Chrome (PC)

Inlet Descriptions

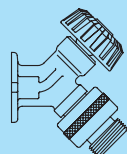
MODEL 24/B24

P-1/2" Inlet

1/2" FPT

P-3/4" Inlet

3/4" FPT



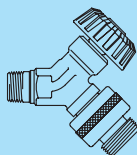
MODEL 24 ONLY

CP Inlet

COMBINATION

1/2" COPPER TUBE

1/2" MPT



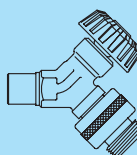
MODEL 24 ONLY

C Inlet

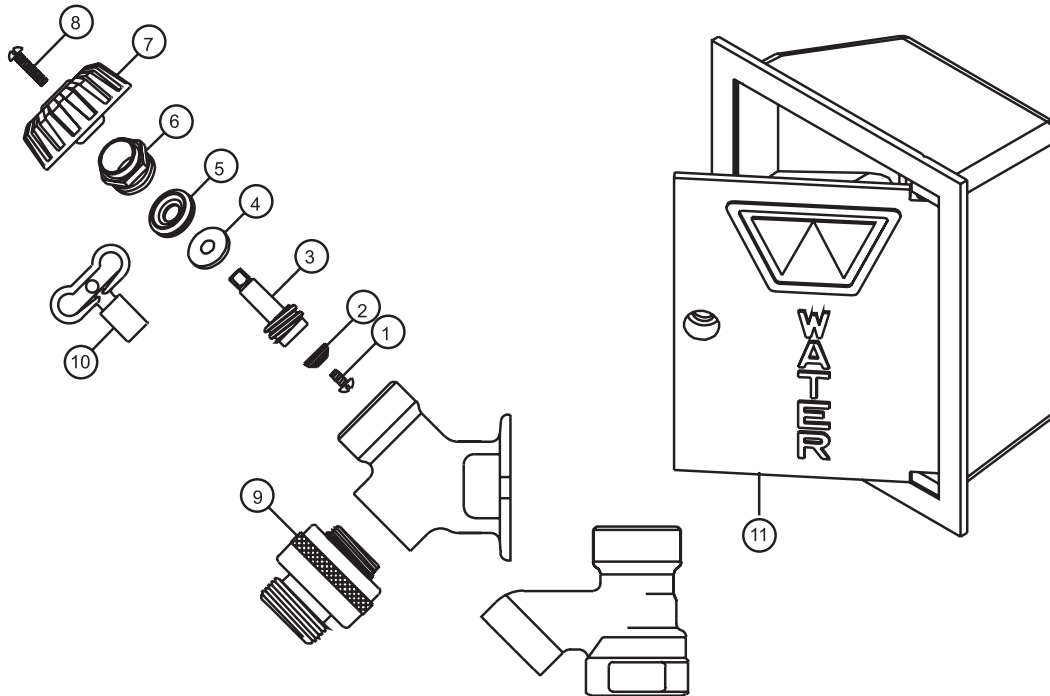
COMBINATION

1/2" COPPER TUBE

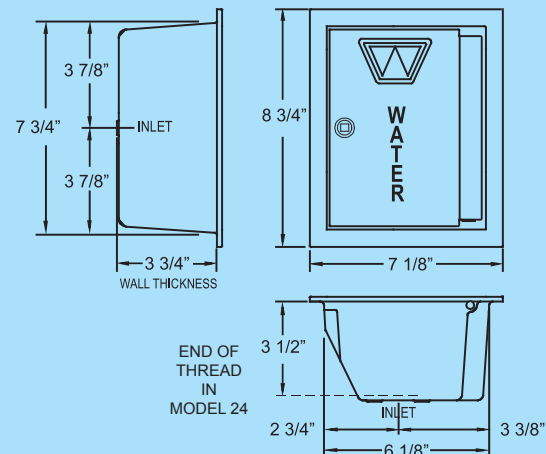
3/4" COPPER TUBE



For Installation / Troubleshooting Instructions go to www.woodfordmfg.com or call 1-800-621-6032

WOODFORD**MODEL 24/B24/Y24 PARTS LIST**

ITEM	PART#	DESCRIPTION
1	30009	Washer Screw
2	30008	Washer
3	30104	Operating Stem
4	30105	Packing Support Washer
5	30247	EPDM Packing
6	30109	Packing Nut - Chrome
	30107	Packing Nut - Brass
7	30120	Wheel Handle - Clear
	30233	Wheel Handle - Tan
8	30121	Handle Screw - Nickel
	30002	Handle Screw - Brass
9	34HF-CH	34HF Vacuum Breaker - Chrome
	34HF-BR	34HF Vacuum Breaker - Brass
10	50009	Tee Key
11	B24BX	Box/Door Assembly - Chrome
	B24BX-BR	Box/Door Assembly - Brass
	B24BX-PB	Box/Door Assembly - Polished Brass
	B24BX-AL	Box/Door Assembly - Anodized Aluminum
	RK-24	Chrome Repair Kit (Includes items 1-8)
	RK-H34	Brass Repair Kit (Includes items 1-8)

**MODEL B24
Rough-In Dimensions**

Manufactured under one or more of the following patents: U.S. Patents: 3,414,001; 3,543,786; 4,178,956; 4,316,481; D216,790; D216,791; D277,365; D277,366; Canada Patents: 822,458; 852,529; 865,995

For more information contact...

WOODFORD MANUFACTURING COMPANY

2121 Waynoka Road, Colorado Springs, Colorado 80915 • Phone: (800) 621-6032 • Fax: (800) 765-4115

To view our complete product line visit: www.woodfordmfg.com or email: sales@woodfordmfg.com

A Division Of WCM Industries, Inc.



Z5340

20" x 18" Wall Hung Lavatory

TAG _____



Z5340 Series

- 20" [508 mm] x 18" [457 mm]
- Vitreous china
- Faucet holes for single, 4", or 8" centers
- Wall hung lavatory provided with wall hanger or for use with concealed arm carrier systems
- Front overflow
- Waste: 1-1/4" O.D.
- Depth: 5-3/4"
- Shipping Weight: 42 lbs.

Z5340 Series

Suffix Options:

- ___ **-CB** Cast ductile bracket.
- ___ **-PED** Vitreous china half pedestal

Recommended Trim:

- Z8743-PC** Grid Strainer.
- Z8700** Series P-Trap.
- Z8800** Series Stop with Flexible Supplies.
- Z8946-1-NT** ADA Trap, Stop, and Supply Protectors.

Optional Trim:

- Z8746-PC** ADA Grid Strainer.
- Z8946-3-NT** ADA Trap, Stop, and Supply Protectors for Offset Grid Strainers.

These dimensions and specifications are subject to change without notice.

Fixture dimensions meet ANSI/ASME standard A112.19.2 and CAN/CSA B45 requirements.

Meets the American Disabilities Guidelines and ANSI A117.1 requirements when lavatory is installed 34" [864mm] from finished floor.



Engineering Specification:

- Z5341** 20" x 18" vitreous china wall hung lavatory with single faucet hole. Provided with hanger plate and holes for concealed arm carrier systems.
- Z5344** 20" x 18" vitreous china wall hung lavatory with 4" center faucet holes. Provided with hanger plate and holes for concealed arm carrier systems.
- Z5348** 20" x 18" vitreous china wall hung lavatory with 8" center faucet holes. Provided with hanger plate and holes for concealed arm carrier systems.

This space is for Architectural/engineering Approval

See Zurn One Systems for suggested packages.

Zurn Plumbing Products Group Commercial Brass and Fixtures Operation
2640 South Work Street · Falconer, NY 14733 · Phone: 716-665-1132 · Fax: 716-665-1135 · www.zurn.com



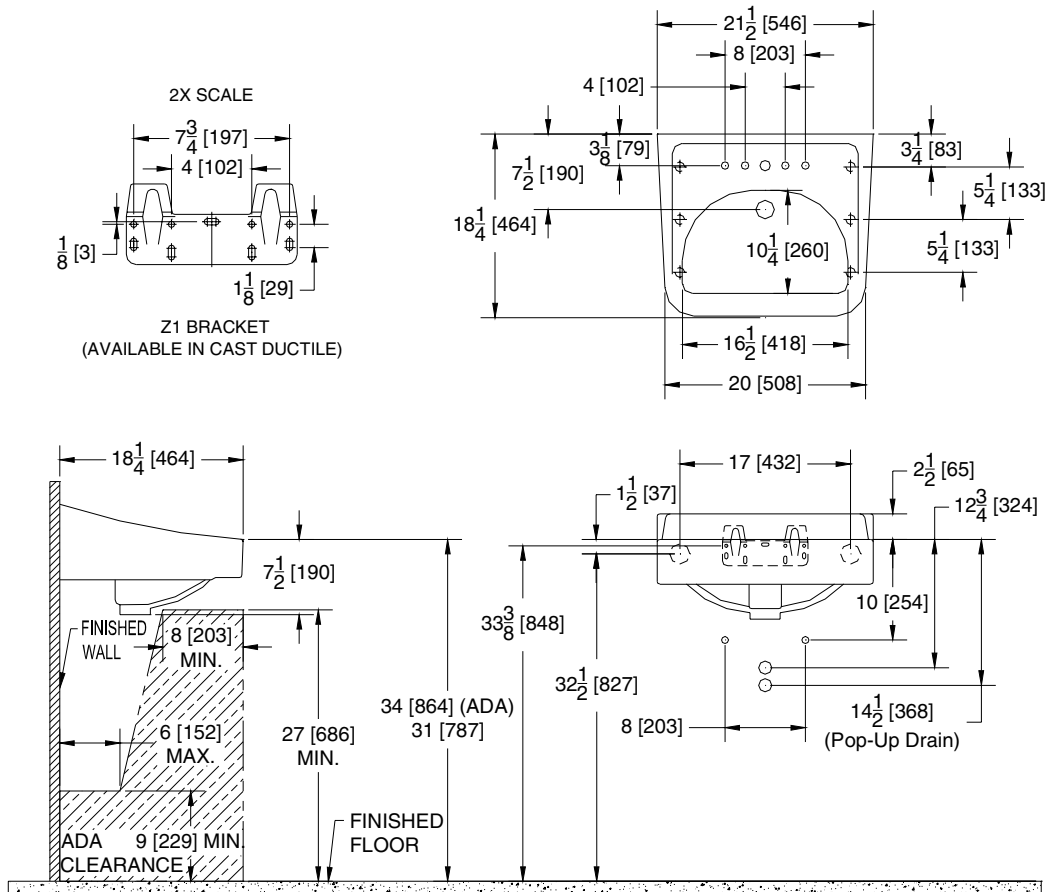
Z5340

20" x 18" Wall Hung Lavatory Rough-In

TAG _____

Rough-in dimensions for Z5340 Series

- Z5341 Lavatory with single faucet hole
- Z5344 Lavatory with 4" center faucet holes
- Z5348 Lavatory with 8" center faucet holes



These dimensions and specifications are subject to change without notice.

Fixture dimensions meet ANSI/ASME standard A112.19.2 and CAN/CSA B45 requirements.

Meets the American Disabilities Guidelines and ANSI A117.1 requirements when lavatory is installed 34" [864mm] from finished floor.



Note: Rough-in for concealed arm carrier, see Zurn Z-1231 Rough-in sheet.

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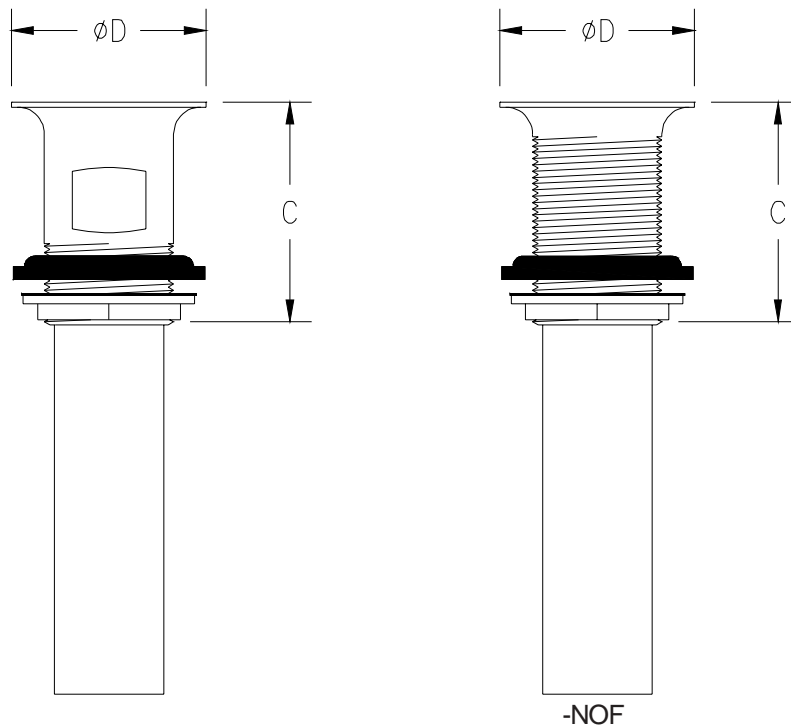


SOLID TOP, OPEN-GRID P.O. PLUGS

Z8743-PC

TAG _____

Engineering Specification: Zurn Z8743-PC – Chrome plated cast brass solid top, open grid, P.O. plug. Furnished with 5"[127mm] long, chrome plated brass 17 gauge tailpiece and chrome plated cast brass locknut for sink depth up to 2 1/4"[57mm]. 6"-, 8"-, 10"- and 12"- tailpieces available.



Note: All dimensions are for reference only. Do not use for pre-plumbing

PRODUCT NUMBER	TAILPIECE in[mm]	DIMENSIONS		MASTER CARTON	WEIGHT CARTON
		Cin[mm]	øDin[mm]		
Z8743-PC	1 1/4[32]	2 9/16[65]	2 1/4[57]	30	30
Z8743-1-PC	1 1/2[38]	2 9/16[65]	2 1/4[57]	30	30

OPTIONAL ACCESSORIES

Suffix	Description
_____ -NOF	No Overflow (PC Only)
_____ -PB	Polished Brass
_____ -6	w/6"[152mm] Tailpiece
_____ -8	w/8"[203mm] Tailpiece
_____ -12	w/12"[305mm] Tailpiece

ZURN INDUSTRIES, INC. ♦ COMMERCIAL BRASS OPERATION ♦ 2640 SOUTH WORK STREET ♦ FALCONER NY 14733

Phone: 1-716-665-1132 ♦ Fax: 1-716-665-1135 ♦ World Wide Web: www.zurn.com

In Canada: ZURN INDUSTRIES LIMITED ♦ 3544 Nashua Drive ♦ Mississauga, Ontario L4V1L2 ♦ Phone: 905/405-8272 Fax: 905/405-1292

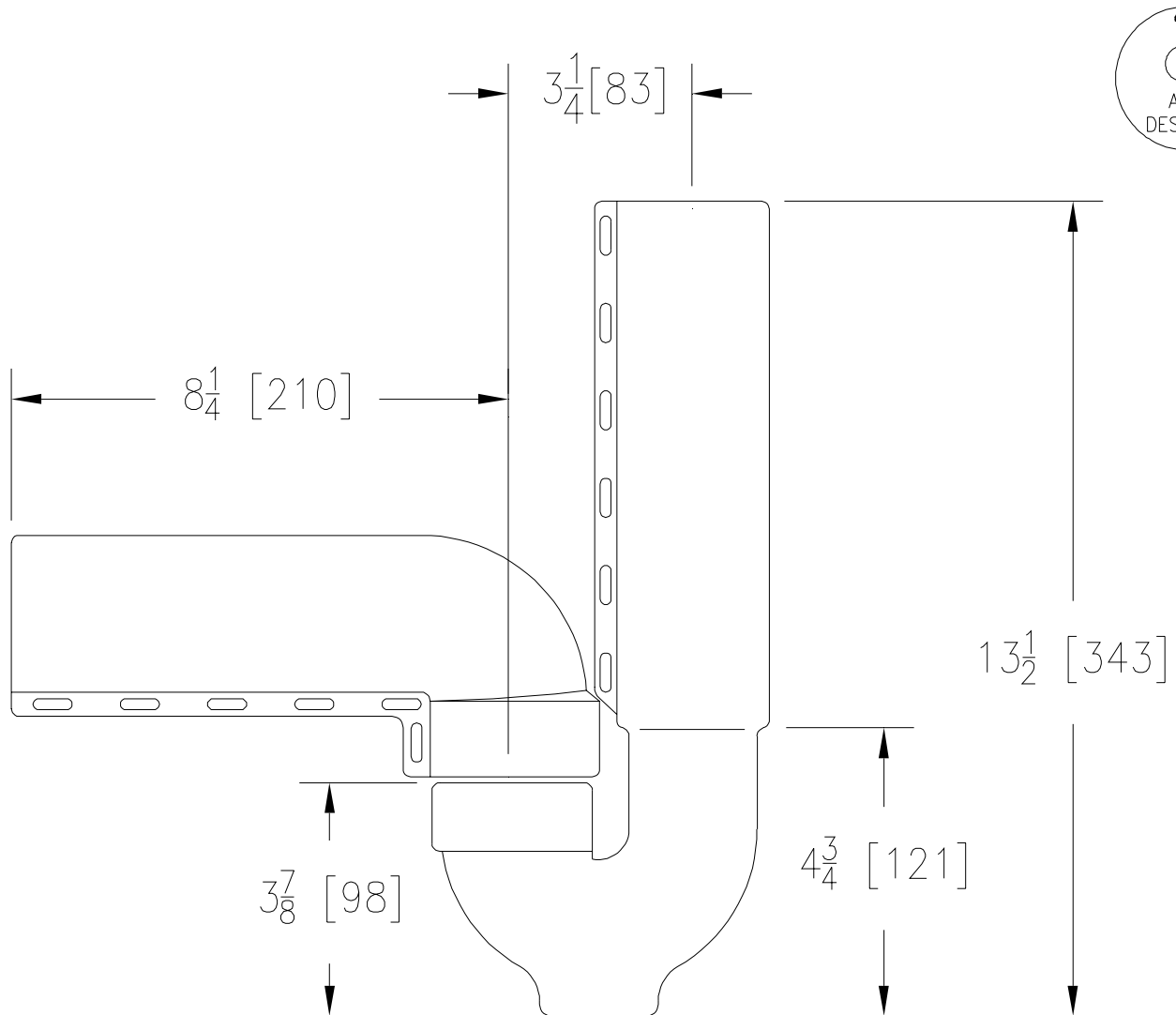


TRAP PROTECTOR

Z8943-NT

TAG _____

ENGINEERING SPECIFICATION: ZURN Z8943-NT Trap protector, satin white PVC resin . Antimicrobial, resists thermal transfer, and is ADA compliant. Fits 1 1/2 [38] maximum, tubular and semi-cast P traps.



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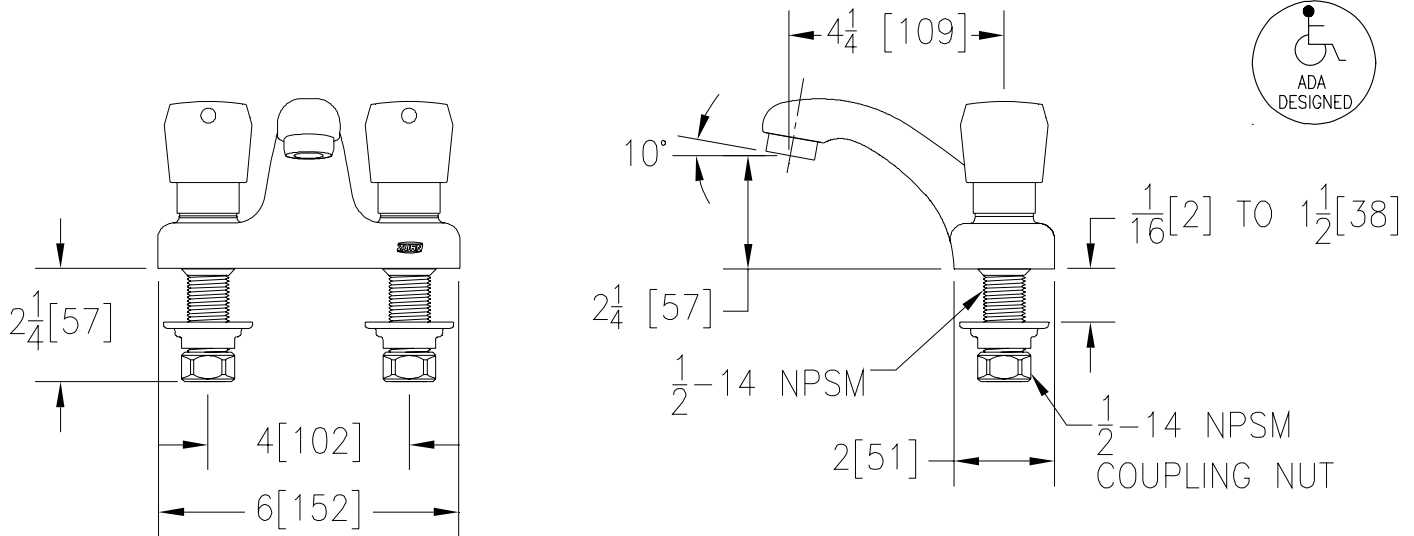
CENTERSET METERING Z86500

TAG _____



Engineering Specifications: Zurn AquaSpec® Z86500

Polished chrome-plated cast brass faucet body with integral shanks, slow-closing metering cartridges, a 4" [102mm] long integral cast spout, and vandal-resistant ADA compliant color-coded metal handles. Easy adjustable cycle time, preset to 10 seconds at 80 PSI. Unit is furnished with a water-conserving spray outlet which reduces flow to .25 GPC [1.0 GPM] (complying to ANSI A112.18.1 Standard for flow), integral shank filters, mounting hardware and 1/2" coupling nuts for standard lavatory risers.



Note: All dimensions are for reference only. Do not use for pre-plumbing

OPTIONAL ACCESSORIES

Suffix	Description
___-CS	Check Stop
___-G	1-1/4" [32mm] Grid Strainer Drain
___-GH	1-1/4" [32mm] Offset Handicap Drain
___-IN	Institutional Handle - Tamper-Proof and Vandal-Resistant
___-PT	1-1/4" [32mm] Cast Brass P-Trap with a 7-1/2" [191mm] Long 17-Gauge Wall Bend
___-RKR	ADA Compliant Rocker Handle
___-3M	0.5 GPM [1.9L] Vandal-Resistant Pressure Compensating Male Spray Outlet
___-16M	1.0 GPM [3.8 L] Vandal-Resistant Pressure Compensating Male Spray Outlet

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Technical Data

MIRROR WITH STAINLESS STEEL CHANNEL FRAME

B-165 SERIES

SNAP LOCKING DESIGN (Rear View)

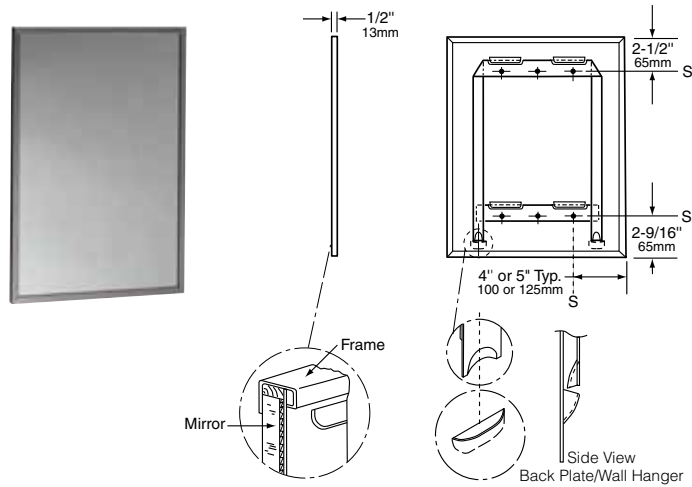


Figure: 1

SCREW LOCKING DESIGN (Rear View)

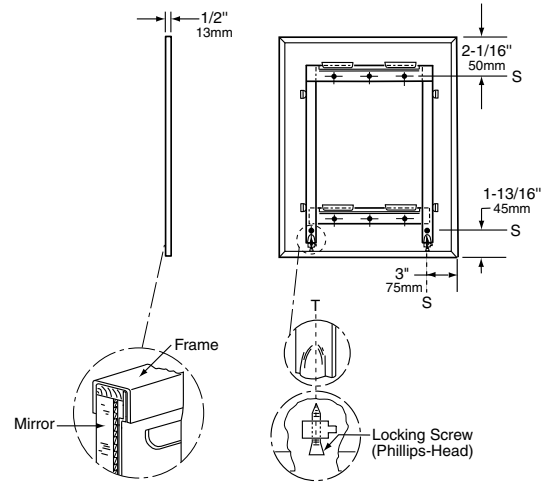


Figure: 2

STANDARD B-165 SERIES MIRRORS

MODEL NO.	OVERALL SIZE	
	W	H
B-165 1824	18" (46cm)	24" (61cm)
B-165 1830	18" (46cm)	30" (76cm)
B-165 1836	18" (46cm)	36" (91cm)
B-165 2430	24" (61cm)	30" (76cm)
B-165 2436	24" (61cm)	36" (91cm)
B-165 2448	24" (61cm)	48" (122cm)
B-165 2460	24" (61cm)	60" (152cm)

STANDARD B-165 SERIES MIRRORS

MODEL NO.	OVERALL SIZE	
	W	H
B-165 4836	48" (122cm)	36" (91cm)

All Other Size Mirrors

Designer's Notes:

- Special-order sizes available on request.
- Maximum size mirror available, 72" x 60" (183 x 152cm); minimum size, 12" x 12" (30 x 30cm).
- All Bobrick framed mirrors are manufactured to overall width and height dimensions. EXAMPLE: A 24" x 36" (61 x 91cm) mirror will be furnished 24" x 36" (61 x 91cm) outside-of-frame to outside-of-frame.
- To specify special sizes use Series Number followed by width then height in inches. EXAMPLE: B-165 2024.
- Bobrick framed mirrors are manufactured to a tolerance 1/8" (3.2mm).
- For sufficient space to lift mirror onto wall hanger(s), provide 3-1/4" (85mm) minimum clearance above center line of mounting screw holes.
- Provide 1" (25mm) minimum clearance at bottom of mirror for engaging locking screws and 1" (25mm) clearance on each side.

MATERIALS:

Frame — Type-430 stainless steel, 1/2" x 1/2" x 3/8" (13 x 13 x 9.5mm) channel with 1/4" (6mm) return at rear with bright polished finish. One piece frame with 90 degree mitered corners. Galvanized steel back has integral horizontal hanging brackets near the top for hanging the mirror and near the bottom to prevent the bottom of the mirror from pulling away from the wall. Locking devices secure mirror to concealed wall hanger. In Screw Locking Design (see figure 2), concealed Phillips-head locking screws securely fasten mirror to wall hanger.

Mirror — No. 1 quality, 1/4" (6mm) select float glass: selected for silvering, electrolytically copper-plated by the galvanic process, and guaranteed for 10 years against silver spoilage. Corners are protected by friction-absorbing filler strips; back is protected by full-size, shock-absorbing, water-resistant, nonabrasive, 3/16" (5mm) thick polyethylene padding.

Concealed Wall Hanger — 20-gauge (0.9mm) galvanized steel. Incorporates lower support member, forming rigid rectangle, which engages lower backplate louvers to keep bottom of mirror against wall.

continued . . .

INSTALLATION:

Mount wall hanger on wall with screws (not furnished) at points indicated by an S. For plaster or dry wall construction, provide backing to comply with local building codes, then secure wall hanger with screws (not furnished). When providing a concealed backing, allow backing to cover minimum range of mounting hole locations shown on drawing. For other wall surfaces, provide fiber plugs or expansion shields for use with screws (not furnished), or provide 1/8" (3mm) toggle bolts or expansion bolts. Hang mirror on wall hanger with all four backplate louvers engaged behind horizontal wall hanger members. Hang mirror on wall hanger with all four backplate louvers engaged behind horizontal wall hanger members. To do this, mirror must be centered in front of the wall hanger horizontally, pressed flat against the wall approximately 1" (25mm) above final position and then lowered into final position.

Snap Locking Design — Locking devices automatically secure mirror to concealed wall hanger when it is lowered into final position. Locking devices may be unlocked by inserting two flat blade screwdrivers behind each side of mirror near the bottom or under the bottom of the mirror and pulling mirror bottom forward and then up (see figure 3).

Screw Locking Design — Lock mirror to wall hanger by tightening Phillips-head locking screws that are concealed in the bottom of frame at points indicated by a T. Mirror may be unlocked from wall hanger by loosening locking screws and lifting mirror off of concealed wall hanger (see figure 4).

SNAP LOCKING DESIGN
(Front View)

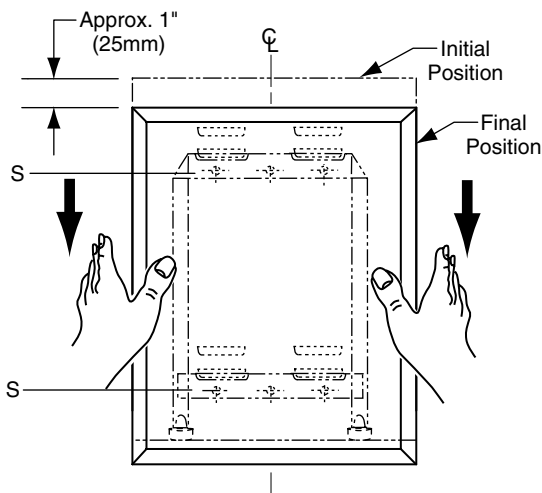


Figure: 3

SCREW LOCKING DESIGN
(Front View)

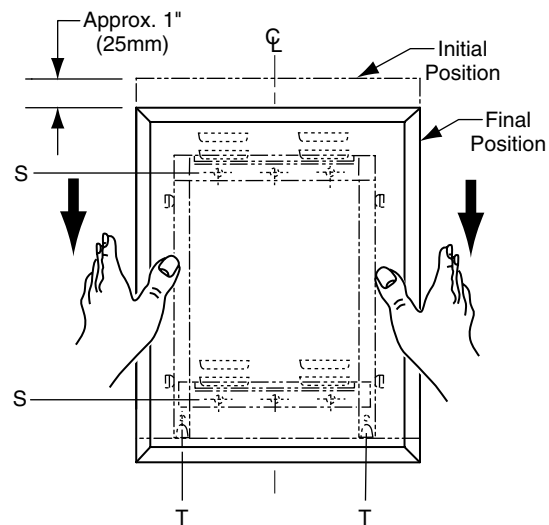


Figure: 4

SPECIFICATION:

Mirror shall have a one-piece type-430 stainless steel channel frame, 1/2" x 1/2" x 3/8" (13 x 13 x 9.5mm), with 90° mitered corners; all exposed surfaces shall have bright polished finish. Select float glass mirror shall be guaranteed for 10 years against silver spoilage. Corners shall be protected by friction-absorbing filler strips and the back shall be protected by full-size, shock-absorbing, water-resistant, nonabrasive, 3/16" (5mm) thick polyethylene padding. Galvanized steel back shall have integral horizontal hanging brackets located at top and bottom for mounting on concealed rectangular wall hanger to prevent the mirror from pulling away from the wall. Locking devices secure mirror to concealed wall hanger. Mirror shall be removable from the wall.

Framed Mirror shall be Model B-165 _____ (insert width and height) of Bobrick Washroom Equipment, Inc., Clifton Park, New York; Jackson, Tennessee; Los Angeles, California; Bobrick Washroom Equipment Company, Scarborough, Ontario; Bobrick Washroom Equipment Pty. Ltd., Australia; and Bobrick Washroom Equipment Limited, United Kingdom.



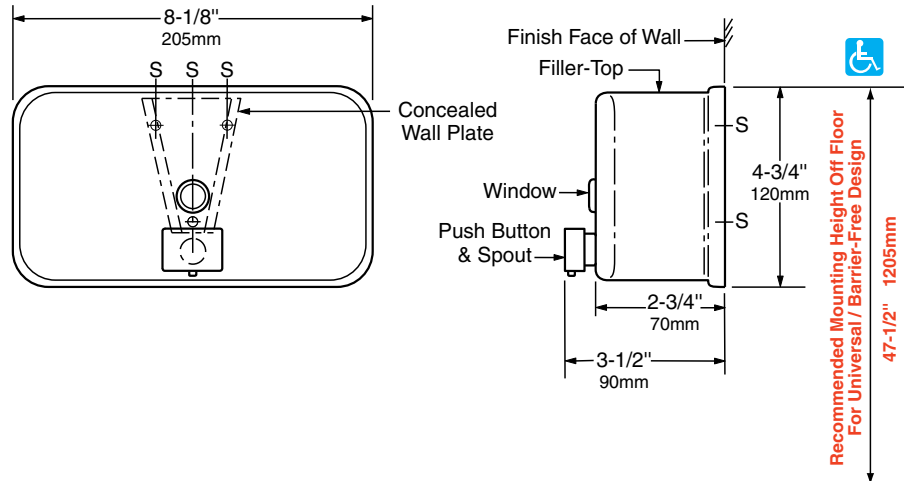
Technical Data

ClassicSeries™ SURFACE-MOUNTED SOAP DISPENSER

B-2112



Patented



MATERIALS:

Container — 18-8 S, type-304, 22-gauge (0.8mm) stainless steel with satin-finish. Body is drawn, one-piece, seamless construction. Back plate has mounting bracket attached. Furnished with concealed wall plate. Equipped with an unbreakable, clear acrylic soap refill-indicator window and a locked, hinged stainless steel lid for top filling. Capacity: 40-fl oz (1.2-L).

Valve — Black molded plastic push button and spout. Soap head-holding mushroom valve. Stainless steel spring. U-packing seal and duckbill. Corrosion-resistant to most soaps and detergents. *CAUTION: Valve does not dispense antibacterial soaps.*

OPERATION:

Corrosion-resistant valve dispenses commercially marketed all-purpose hand soaps. To prevent corrosion, use only chloride-free pH-neutral liquid soaps. Valve is operable with one hand, without tight grasping, pinching, or twisting of the wrist, and with less than 5 pounds of force (22.2 N) to comply with barrier-free accessibility guidelines (including ADAAG in U.S.A.). Window indicates when refill is required. The locked, hinged lid opens for top filling only with special key provided. Concealed, vandal-resistant mounting.

INSTALLATION:

Secure wall plate to the wall with three sheet-metal screws, furnished by manufacturer, at points indicated by an S. Slide mounting bracket of container down onto wall plate and secure unit with furnished locking-screw. For plaster or dry wall construction, provide concealed backing to comply with local building codes and secure with sheet-metal screws furnished. For other wall surfaces, provide fiber plugs or expansion shields for use with sheet-metal screws furnished, or provide 1/8" (3mm) toggle bolts or expansion bolts.

Note: Surface-mount the dispenser plumb and true with valve 6" (150mm) to right or left of lavatory center. Provide 4" (100mm) minimum clearance from the lid to the underside of any horizontal projection. Push buttons should be located 44" (1120mm) maximum above the finish floor.

SPECIFICATION:

Surface-mounted soap dispenser shall be type-304 stainless steel with satin-finish. Corrosion-resistant valve shall dispense commercially marketed all-purpose hand soaps. To prevent corrosion, use only chloride-free pH-neutral liquid soaps. Valve shall be operable with one hand and with less than 5 pounds of force (22.2 N) to comply with barrier-free accessibility guidelines (including ADAAG in U.S.A.). Container shall be equipped with a clear acrylic soap refill-indicator window; a locked, hinged stainless steel lid for top filling; and shall have a capacity of 40-fl oz (1.2-L). Unit shall have concealed, vandal-resistant mounting. Manufacturer's service and parts manual shall be provided to the building owner/manager upon request.

Surface-Mounted Soap Dispenser shall be Model B-2112 of Bobrick Washroom Equipment, Inc., Clifton Park, New York; Jackson, Tennessee; Los Angeles, California; Bobrick Washroom Equipment Company, Scarborough, Ontario; Bobrick Washroom Equipment Pty. Ltd., Australia; and Bobrick Washroom Equipment Limited, United Kingdom.



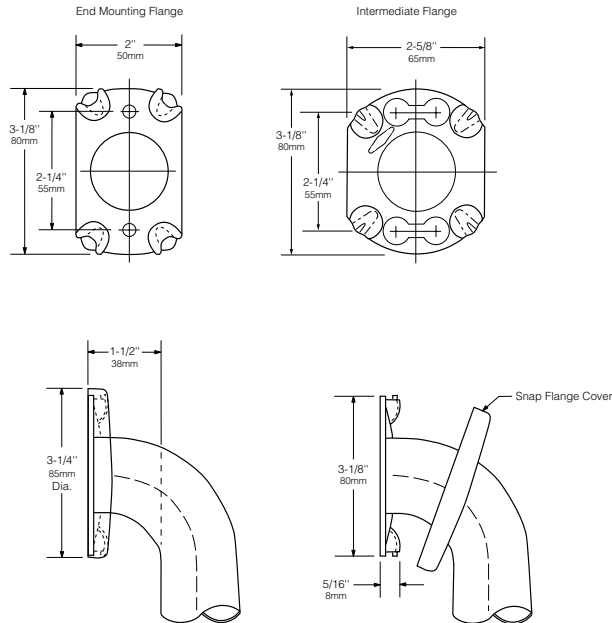
Technical Data

**1½" (38mm) DIAMETER
STAINLESS STEEL GRAB
BARS WITH SNAP FLANGE**

**B-6806
SERIES**

Specify Finish Required:

- Satin finish
- Satin finish with peened gripping surface; add suffix .99 to model number



<p>HORIZONTAL</p>	<p>VERTICAL</p>	<p>TWO-WALL WHEELCHAIR TOILET COMPARTMENT</p>
<p>B-6806 x 12, 18, 24, 30, 36, 42, 48</p>		<p>B-68137</p>
<p>HORIZONTAL TUB BATH 24 x 36</p>	<p>HORIZONTAL TWO-WALL BAR for Shower Stall</p>	<p>TWO-WALL TOILET COMPARTMENT BAR 42 x 54</p>
<p>B-68616</p>	<p>B-6861</p>	<p>B-6897</p>

continued . . .

MATERIALS:

Grab Bar — 18-8 S, type-304, 18-gauge (1.2mm) stainless steel tubing with satin-finish. 1-1/2" (38mm) outside diameter. Ends are heliarc welded to flanges. Clearance between the grab bar and wall is 1-1/2" (38mm).

Concealed Mounting Flanges — 18-8 S, type-304, 1/8" (3mm) thick, stainless steel plate; end flanges 2" x 3-1/8" (50 x 80mm) with two holes for attachment to wall. Intermediate flanges 2-5/8" x 3-1/8" (65 x 80mm) wide x 3-1/8" (80mm) diameter.

Snap Flange Covers — 18-8 S, type-304, 22-gauge (0.8mm) drawn stainless steel with satin-finish. 3-1/4" (85mm) diameter x 1/2" (13mm) deep. Each cover snaps over mounting flange to conceal mounting screws.

STRENGTH:

Bobrick grab bars that provide 1-1/2" (38mm) clearance from wall can support loads in excess of 900 pounds (408kg) if properly installed. Other grab bar configurations can support loads in excess of 250 pounds (113kg) if properly installed, complying with barrier-free accessibility guidelines (including ADAAG in the U.S.A.) for structural strength

Warning: *Grab bars are no stronger than the anchors or walls to which they are attached and, therefore, must be firmly secured in order to support the loads for which they are intended.*

INSTALLATION:

Provide concealed anchor device or backing as specified or required in accordance with local building codes before wall is finished. Fasten concealed mounting flanges to anchor device or backing with two screws in each flange. Snap flange covers over each mounting flange to conceal mounting screws. Concealed anchor devices and mounting screws are not included with Bobrick grab bars and must be specified as an accessory.

For Grab Bars with an Intermediate Flange(s), Pull Snap-Flange Covers away from mounting flanges. Place grab bar in desired mounting location. Use intermediate flange as a template to mark location of mounting screws at intermediate flange only. Mark screw locations at the center of the slot in the middle of the double-keyhole shaped mounting holes (2) in the intermediate flange. Remove grab bar from wall. Drive the intermediate flange mounting screws into wall at marked locations. **Note:** Make sure to leave a space of just over 1/8" (3.17mm) between the underside of the screw head and the wall. install grab bar on the wall by placing the round ends of the intermediate flange double-keyhole shaped mounting holes over the mounting screws (2) are located in the middle of the flange slots. Install the mounting screws into the wall at the end flanges and secure tightly. Tighten the mounting screws at the intermediate flange. Press all snap-flange covers into place to conceal mounting flanges.

Note: Recommend use of 1/4" or #14 (M6.3) sheet metal or wood screws to install Intermediate Flange. #12 (M5.5) screws may also be used.

Important Notes:

1. **Mounting Kits** — Bobrick has a selection of mounting screws and fasteners available for different types of installations; **one Bobrick mounting kit is required for each flange.**

Mounting Kit No.	Description
252-30	Consists of (3) #14 x 2½" (M6.3 x 64mm) type-304 stainless steel, Phillips round-head, sheet-metal screws.
2521-30	Consists of (3) 1/4"-20 x 3½" (M6.3-1 x 89mm) type-304 stainless steel, Phillips round-head, machine screws with plated-steel toggle nuts.
2522-30	Consists of (3) 1/4"-20 x 2" (M6.3-1 x 51mm) type-304 stainless steel, Phillips round-head, machine screws with metal expansion shields.

2. **Grab Bar Fastener** — Bobrick has a grab bar fastening system that secures all Bobrick grab bar series; **one Bobrick fastener is required for each flange.** Install grab bar without backing in wall requires minimum 5/8" (16mm) thick painted or tiled drywall.

WingIt™ Fastener No.	Description
251-4	Consists of (3) 10-32 x 5/16" round-head, Phillips 18/8 stainless steel screws. (1) WingIt grab bar fastener.

3. **Optional Anchor Device** — Bobrick grab bar anchor device includes stainless steel machine screws to be used for attaching grab bars to anchors. **one Bobrick concealed anchor device is required for each flange.**

Optional Anchor No.	Description
2583	Anchor for 3/4" to 1" (19-25mm) panel 1 anchor required for each flange.
2586	Anchor for 1/2" to 1" (13mm) panel 1 anchor required for each flange.

SPECIFICATION:

Grab bar shall be type-304 stainless steel with satin-finish. Grab bar shall have 18-gauge (1.2mm) wall thickness and 1-1/2" (38mm) outside diameter. Clearance between the grab bar and wall shall be 1-1/2" (38mm). Concealed mounting flanges shall be 1/8" (3mm) thick stainless steel plate, 2" x 3-1/8" (50 x 80mm), and equipped with two screw holes for attachment to wall. Flange covers shall be 22 gauge (0.8mm), 3-1/4" (85mm) diameter x 1/2" (13mm) deep, and shall snap over mounting flange to conceal mounting screws and/or WingIt fasteners. Ends of grab bar shall pass through concealed mounting flanges and be heliarc welded to form one structural unit. Grab bar shall comply with barrier-free accessibility guidelines (including ADAAG in the U.S.A.) for structural strength. Manufacturer's service and parts manual shall be provided to the building owner/manager upon request.

Grab Bar shall be Model _____ (insert model number) of Bobrick Washroom Equipment, Inc., Clifton Park, New York; Jackson, Tennessee; Los Angeles, California; Bobrick Washroom Equipment Company, Scarborough, Ontario; Bobrick Washroom Equipment Pty. Ltd., Australia; and Bobrick Washroom Equipment Limited, United Kingdom.



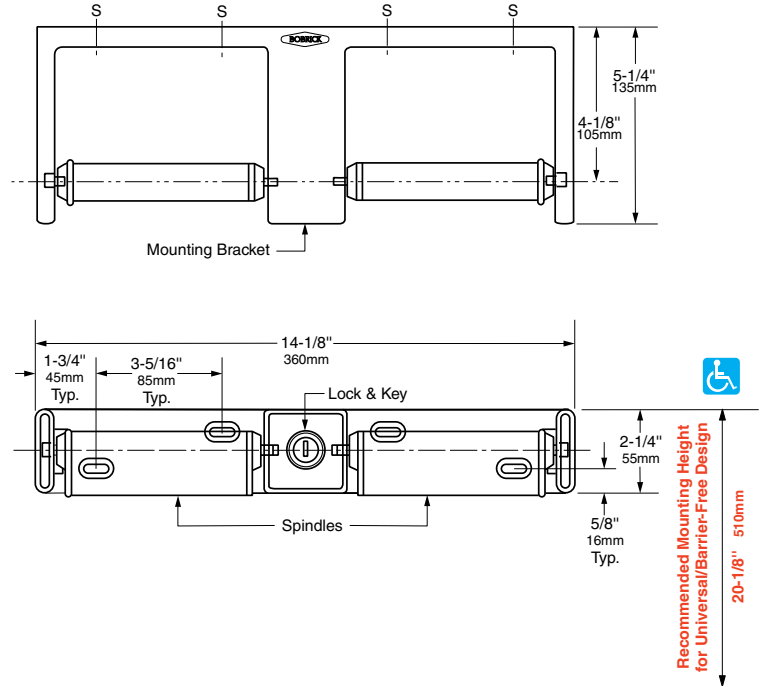
Technical Data

DOUBLE-ROLL TOILET TISSUE DISPENSER

B-27460



Patented



MATERIALS:

Bracket — Heavy-duty cast aluminum with satin finish. Equipped with a tumbler lock that is keyed like other Bobrick wash-room accessories.

Spindles (2) — Molded high-impact ABS.

OPERATION:

Accommodates two standard-core toilet tissue rolls up to 6" (152mm) diameter (2000 sheets). Tumbler lock secures spindles in place; spindles can only be removed after unlocking with key furnished. Vandal-resistant.

INSTALLATION:

For partitions with particle-board or other solid core, provide sheet-metal screws or through-bolts, nuts, and washers.

For hollow-core metal partitions, provide solid backing into which sheet-metal screws can be secured. If two units are installed back-to-back, then provide threaded sleeves and machine screws for the full thickness of partition.

For plaster or dry wall construction, provide concealed backing to comply with local building codes, then secure unit with sheet-metal screws.

For masonry walls, provide sheet-metal screws and fiber plugs or expansion shields, or provide 1/8" (3mm) toggle bolts or expansion bolts.

SPECIFICATION:

Double-roll toilet tissue dispenser shall have a heavy-duty cast-aluminum bracket with satin finish. Bracket shall be equipped with a tumbler lock to secure spindles in place. Vandal-resistant spindles shall be molded high-impact ABS. Unit shall accommodate two standard-core toilet tissue rolls up to 6" (152mm) diameter (2000 sheets). Manufacturer's service and parts manual shall be provided to the building owner/manager upon request.

Double-Roll Toilet Tissue Dispenser shall be Model B-27460 of Bobrick Washroom Equipment, Inc., Clifton Park, New York; Jackson Tennessee; Los Angeles, California; Bobrick Washroom Equipment Company, Scarborough, Ontario; Bobrick Washroom Equipment Pty. Ltd., Australia; and Bobrick Washroom Equipment Limited, United Kingdom.

ThinAir® HAND DRYER



MODELS: TA - ABS SB -VOLTAGE (See Chart)



TA-SB
Brushed Stainless Steel



TA-ABS
White Polymer (ABS)



TA-SB
Brushed Stainless Steel

PERFORMANCE

TESTED TO **PCR** GUIDELINES **DRY TIME: 14 SECONDS*** **ENERGY PER USE: 3.7 Wh***

Wattage: 950 Watts (Heat On) - 300 Watts (Heat Off)

Certifications:



CONSTRUCTION

- A. All covers will be fastened to a base plate by one chrome plated tamper-proof bolt. The cover shall be composed of:
 - ABS** – White polymer with SanaFor™ antimicrobial additive.
 - SB** – Brushed Stainless Steel.
- B. Base plate shall be equipped with (3) 7/8" (22 mm) diameter knockouts, one of which is located on the right side and suitable for use with surface conduit.
- C. All internal parts shall be coated according to Underwriters' Laboratories, Inc. requirements.
- D. Entire mechanism shall be internally grounded, per UL requirements.
- E. Accessories (optional)
 - Microban® Antimicrobial Wall Guards:**
89W (White), 89B (Black), 89S (Brushed Stainless Steel)

MECHANISM

- A. Motor shall be a thermally protected, series commutated, through-flow discharge vacuum motor/blower (~½ hp / high-30,000 rpm, low-20,000 rpm) which provides air velocity of up to 16,000 LFM (linear feet per minute) at the air outlet. Includes a washable metal mesh filter for more reliable performance.
- B. Heating element (550 W) is constructed of Nichrome wire and mounted inside the blower housing behind air baffle, thereby being vandal resistant. It shall be protected by an automatic resetting thermostat, which shall open whenever air flow is cut off and shall close when flow of air is resumed. It shall produce an air temperature of up to 141°F (61°C) at a 72°F (22°C) ambient room temperature at the outlet and 101°F (38°C) at the hands (4 inches [102 mm] below air outlet).
- C. Control assembly is activated by an infrared optical sensor located next to the air outlet. The dryer shall operate as long as hands are under the air outlet. Control includes a speed and sound control mechanism, adjustable heat control with High, Medium, Low and Off settings and a filter sensor which is activated should the filter become clogged. There is a 35-second lockout feature if hands are not removed. Sensor equipped with externally visible Red LED light that can flash error codes to assist in troubleshooting.

LIMITED WARRANTY

The dryer shall be guaranteed to be free from defects for a period of five (5) years. Warranty shall include labor performed at factory as well as the repair or exchange of defective parts, at manufacturer's option.

QUANTITY RECOMMENDATIONS

One dryer for every two washbasins is sufficient for most applications. If restroom traffic is unusually heavy, we suggest one dryer per washbasin in small installations and two dryers for every three washbasins in larger installations. When a 54" washfountain is used, we suggest four to five dryers.

ADA COMPLIANCE

ADA guidelines state that fixtures mounted above 27" must not protrude more than 4" from the wall.

4"



Maximum: 48"
Recommended: 37"

37"



UL Environment published the first global Product Category Rules (PCR) for Hand Dryers and Excel Dryer is proud to have been selected to chair the project. The PCR created evaluation methods through industry consensus that compare products' environmental impact and performance. Third party testing results then enable specifiers and buyers to make a true apples-to-apples comparison of products and more informed decisions.

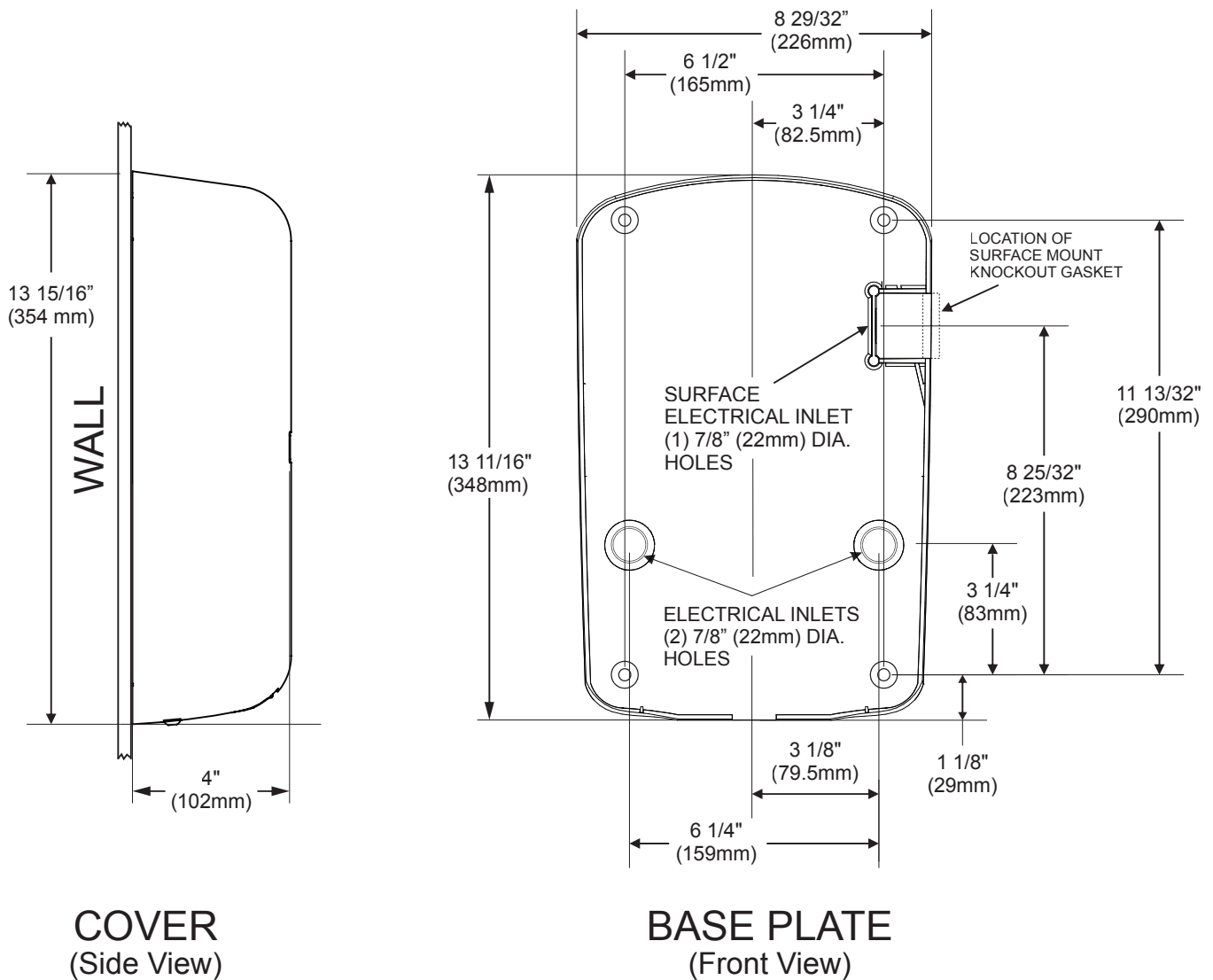
FOR ARCHITECT/ENGINEER APPROVAL

Job Name	Date
Model Specified	Quantity
Voltage Specified	
Customer/Wholesaler	
Contractor	
Architect	

ThinAir® HAND DRYER



MODELS: TA - ABS SB -VOLTAGE (See Chart)



COVER
(Side View)

BASE PLATE
(Front View)

OVERALL DIMENSIONS

Width: 9 5/32" (233 mm) Height: 13 15/16" (354 mm) Depth: 4" (102 mm)

WEIGHT

TA-ABS: 8 lbs. (3.6 kgs.) TA-SB: 10 lbs. (4.5 kgs.)

ELECTRICAL

Units are Single Phase; 950 Watts or as low as 300 Watts (without heat) and available as specified in:

VOLTS	AMPS	WATTS	NO HEAT AMPS	NO HEAT WATTS	HERTZ	
110-120V	7-7.7A	770-915W	3-3.2A	310-370W	50/60 Hz	
208-277V	3.6-4A	735-950W	1.5-1.9A	300-375W	50/60 Hz	
230V	3.9A	890W	1.7A	375W	50 Hz	

ACTIVATION

Automatic Sensor Activated

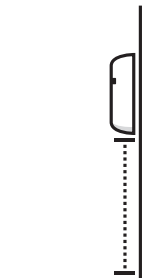
MOUNTING

Surface-Mounted

SUGGESTED MOUNTING HEIGHTS

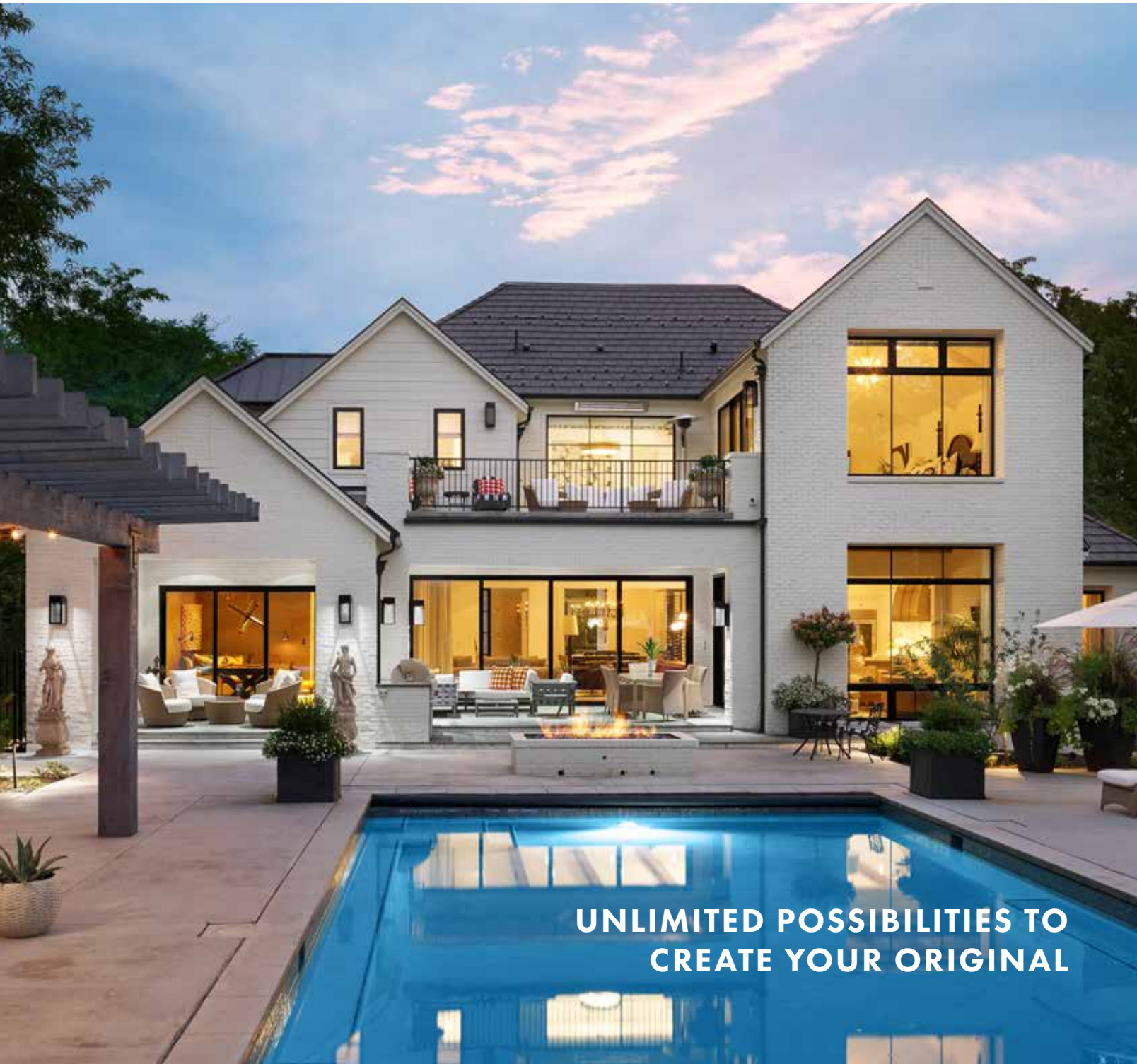
from floor to bottom of dryer:

Men	45" (114 cm)
Women	43" (109 cm)
Teenagers	41" (104 cm)
Small Children	35" (89 cm)
Accessible	37" (94 cm)



*Dry time and energy use testing performed by SGS International on standard Thin Air Hand Dryers to 0.25g or less of residual moisture, pursuant to the UL Environment Global Product Category Rules (PCR) for Hand Dryers.

E-SERIES
Architectural Collection



**UNLIMITED POSSIBILITIES TO
CREATE YOUR ORIGINAL**

CONTENTS

E-SERIES WINDOWS & PATIO DOORS

Performance & Durability	2
Contemporary Style	5
Unlimited Combinations	6
Exteriors	7
Interiors	12
Exterior & Interior Trim	16
Unlimited Views	18
Glass	20
Stormwatch® Protection	21
Grilles	22
Insect Screens, Blinds & Shades	24
Window Hardware & Smart Home Solutions	26
Patio Door Hardware	28
Environmental Responsibility	30

Casement Windows	32
Casement Windows	34
French Casement Windows	36
Push Out Casement Windows	38
Awning Windows	63
Awning Windows	50
Push Out Awning Windows	52
Double-Hung Windows	56
Double-Hung Windows	58
Double-Hung Insert (RetroFit) Windows	60
Double-Hung Sash Replacement Kit	62
Bay & Bow Windows	80
Gliding (Slide-By) Windows	92
Specialty (Auxiliary) Windows	98

Hinged Patio Doors	103
Gliding Patio Doors	142

Installation Materials	154
Product Performance	163

For warranty information, visit andersenwindows.com/warranty.





E-SERIES WINDOWS & PATIO DOORS

E-Series windows and patio doors are made to your exact specifications for unmatched flexibility and design freedom. These premier products allow you to create custom shapes, dramatic sizes and striking combinations to set your work apart. 50 standard exterior colors, custom colors and anodized finishes, plus a range of interior wood species and beautiful interior stains. Or, if your customers want something even more distinctive, we can source virtually any wood species they desire. If it's possible, it's possible with E-Series windows and patio doors. For more information, visit andersenwindows.com/e-series.

MADE STRONG

Aluminum is a distinguishing element that enables us to offer the strength, beauty and design freedom for which E-Series products are known. Through decades of innovation, we have elevated the extruded aluminum-clad window and patio door category and perfected a made-to-order process that is unsurpassed.

STRENGTH

We harness the full strength of aluminum with heavy gauge, extruded aluminum-clad wood sash and frames. Our thick cladding offers greater structural capabilities than thinner, roll-form aluminum, while providing a superior exterior finish that resists the elements of inclement weather, abrasion and impact.*

BEAUTY

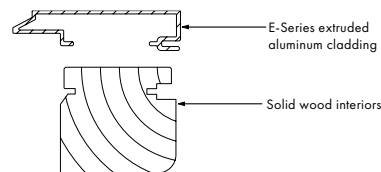
Aluminum offers a smooth finish and versatility in design that enables us to create windows and doors with distinctive character and unparalleled beauty. It provides an essential foundation for our quality, baked-on silicone polyester finish, and it enables us to offer a broad array of unique accessory metals to create or recreate the architectural style you need. And beauty doesn't stop on the outside — we give you the design freedom you need to create a look of distinction both inside and out.

VERSATILITY

Aluminum's strength and versatility allow us to offer beautiful made-to-order design solutions for practically any combination of shapes and styles you can imagine. We offer dozens of exterior accessory metals to match any architectural style, and our colorful 2-, 3- and 4-tone exteriors truly broaden your creative palette.

DURABILITY

Our aluminum cladding withstands nature's toughest elements — the extrusions slide onto the wood and are secured independently, allowing both wood and aluminum to expand and contract naturally. Our products are engineered to open, close, support, swing or slide reliably day after day.*



A solid wood core and extruded aluminum cladding give E-Series windows both strength and flexibility in many design applications.



E-Series casement window with Terratone exterior color.

*Visit andersenwindows.com/warranty for details.

ENGINEERED FOR PERFORMANCE & DURABILITY

ENERGY-SAVING GLASS FOR ANY CLIMATE

Andersen makes windows and patio doors with options that make them ENERGY STAR® v. 6.0 certified throughout the United States. Visit andersenwindows.com/energystar for more information and to verify that the product with your glass option is ENERGY STAR certified in your area.



LOW-MAINTENANCE EXTERIORS

Baked-on silicone polyester enamel exteriors offer virtually maintenance-free performance and durability. They're warranted for 10 years against chalking and color change and for 20 years against cracking, checking, peeling, flaking, blistering and loss of adhesion.*



PROTECTION FOR COASTAL AREAS

E-Series windows and patio doors with Stormwatch® Protection meet building code requirements in many Gulf and Atlantic coast states. See your local building code official for specific requirements. Visit andersenwindows.com/coastal for more information.



BUILT FOR YEARS TO COME

Our renowned Owner-2-Owner® limited warranty is fully transferrable and not prorated, making it one of the best coverage plans available – which means it can add resale value for your customers. It's also supported by the industry's largest service network.*



*Visit andersenwindows.com/warranty for details.



CONTEMPORARY STYLE

Modern home styles incorporate clean lines, simple forms and open floor plans. They often feature floor-to-ceiling windows or doors with narrow profiles to maximize light and view, have multiple units arranged in rectangular groupings and use dark colors or metal finishes. E-Series products are available in these options to let you create a contemporary style.



Interior of door shown with 3 1/16" contemporary panel profile.

CONTEMPORARY DESIGNS

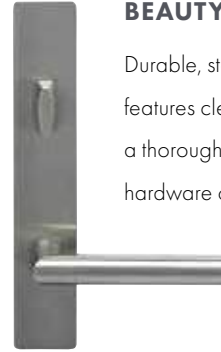
Dark colors and narrow profile options on windows, patio doors and even grille options offer a truly contemporary style.



Contemporary grille profile in black with a black spacer bar.

BEAUTY

Durable, stainless steel FSB® hardware features clean lines in a satin finish for a thoroughly modern look. See FSB hardware options on page 29.



SLEEK INTERIORS

High-quality, factory-applied interior finishes offer convenience along with beauty. For a modern look, choose a black or anodized silver painted interior.



BRING YOUR VISION TO LIFE

Andersen has done extensive research into many architectural styles and how windows and patio doors play a critical role in achieving them. We've compiled it all into our Home Style Library. Whether you're looking for a modern home style or something more traditional, our library shows how easily you can achieve each style with our Andersen® products. To view our complete Home Style Library, visit andersenwindows.com/stylelibrary.



Miesian Modern



Industrial Modern



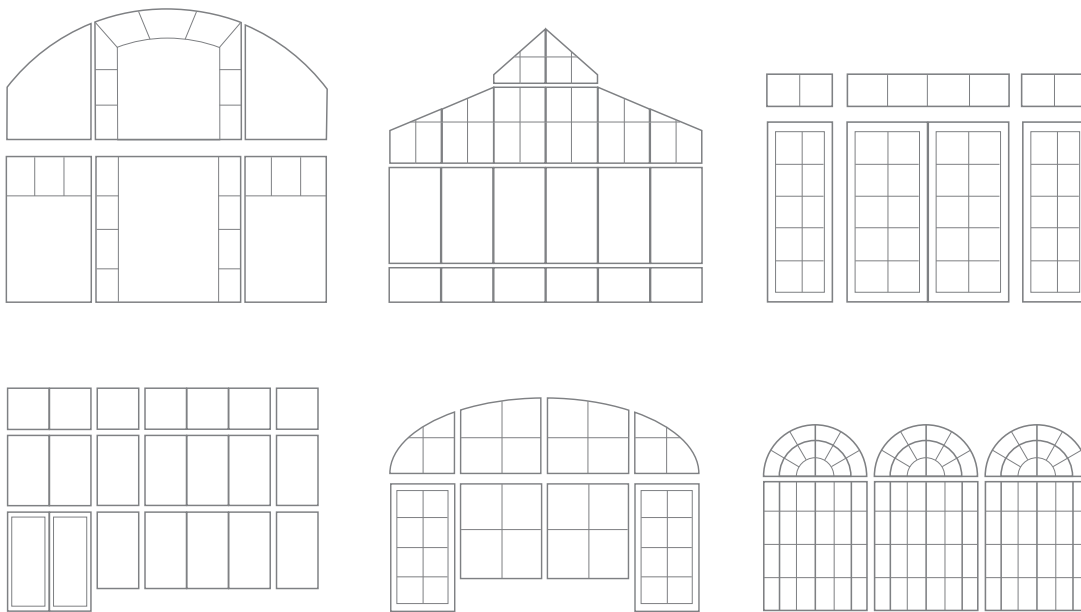
International Modern

UNLIMITED COMBINATIONS

E-Series windows and patio doors are made to your exact design specifications. Because we make your window or door especially for you, and since our options are virtually limitless, you have the advantage of combining shapes, sizes and styles for new construction or remodeling applications.

BUILDING BLOCKS

Our complete window and door styles are your building blocks for making any architectural statement. We give you the products and the design freedom you need to create the perfect solution for your project whether residential or commercial, new construction or remodeling. Unique shapes in varying combinations create focal points that become defining architectural elements.



SIZING OPTIONS

We believe you shouldn't have to settle for "close enough." Our made-to-order process enables us to make your windows and doors to the specific size you need. So when you go from inspirational sketch to architectural drawing, know that we will fulfill your design needs. We provide a thorough range of sizes for most applications and offer custom sizing anytime you need it.



UNLIMITED EXTERIORS

Color enhances your design and is a vital element of every architectural style. We believe it shouldn't have to cost more which is why our 50 exterior colors, an industry-leading modern palette, are available at no additional cost. Add to that our 2-, 3- and 4-tone exteriors and set your E-Series windows and doors apart from the rest.

If your inspiration comes from an autumn leaf, a river-washed stone, a glass of fine wine or even a classic car, we will bring it to life with our custom color capabilities. And for a look of distinction, we offer seven spectacular anodized finishes that truly shine.





50 EXTERIOR COLORS

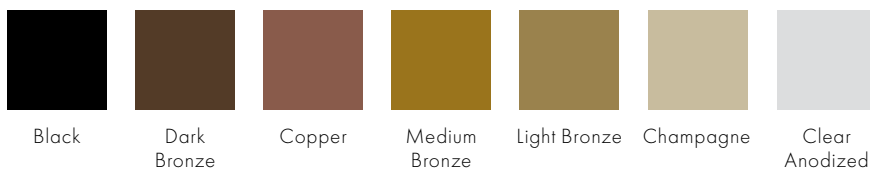
Our exclusive line of exterior colors offers a broad spectrum of quality, baked-on, silicone polyester enamel exteriors that meet AAMA 2604 specification. AAMA 2605 color compliance is also available.* Our limited warranty covers exteriors for 10 years against chalking and color change and 20 years against cracking, checking, peeling, flaking, blistering and loss of adhesion.**

EXTERIOR COLORS



7 ANODIZED FINISHES

Choose from a spectacular selection of anodized finishes. Anodizing is a process that penetrates the aluminum like a stain penetrates wood. The result is a rich, lustrous metallic appearance that cannot peel or flake and is not affected by sunlight.** This process produces a harder, more durable finish that makes this a perfect choice for high-traffic areas in commercial or residential buildings.



*AAMA 2605 finishes are available in any of our 50 colors or select a custom color of your choice.

**Visit andersenwindows.com/warranty for details.

Printing limitations prevent exact color and finish replication. See your Andersen supplier for actual color and finish samples.



CUSTOM COLORS

While our large selection of exterior colors covers a lot of ground, inspiration comes in infinite hues. Let us match a paint chip, a photograph, a favorite work of art to bring your dream color into the light of day.

2-, 3- AND 4-TONE EXTERIORS

With our 2-, 3- and 4-tone color combinations, the sky's the limit. Mix and match up to four of our 50 exterior colors on the frame, sash, exterior trim and grilles for a combination look that's all your own.



Country Blue and Stormy Blue



Sage, Moss and Canvas

A RANGE OF INTERIORS

Natural wood adds character to your design and defines a room's character while creating a warm, comfortable space that leaves a lasting impression. We offer distinctive wood varieties, custom wood species and interior stain and paint options to meet your design needs.





DISTINCTIVE WOOD SELECTIONS

Our distinctive woods add uncommon flair to any room. Each option has its own character, grain and staining capabilities, so you can select one that makes your windows stand out or one that blends seamlessly with your interior décor.

INTERIOR WOOD SPECIES



Pine

Mixed Grain
Douglas Fir

Oak

Maple

Hickory

Mahogany*

Cherry

Walnut

Vertical Grain
Douglas Fir

Alder

CUSTOM WOOD INTERIORS

If a unique wood species is required to complete your project, we will try to source any variety that meets our production standards and your needs.

*Actual wood species is either Sapele or Sipo, both non-endangered species grown in Africa, with color and characteristics similar to Central American mahoganies.

Wood species shown are unfinished.

Naturally occurring variations in grain, color and texture of wood make each window one of a kind. We cannot guarantee consistency in wood grain and/or color within a particular species, product or project.



VARIETY OF INTERIOR FINISHES

Our high-quality, factory-applied stains offer you convenience along with beauty. Before staining, each wood component is treated with a preservative and insect repellent and dried thoroughly. We apply two coats of polyurethane for a long-lasting,* durable finish, and because every exposed edge is stained before the window is assembled, you get a complete, consistent finish. Choose from nine stain colors. If you prefer a painted interior, choose one of our painted or primed options.

STAINED INTERIOR OPTIONS



Clear Coat Wheat Autumn Oak Golden Hickory Honey Cinnamon Russet Mocha Espresso

All stained interior finish options are shown on pine.

PAINTED INTERIOR OPTIONS



White Birch Bark Primed (for paint) Canvas Sandtone Terratone Forest Green



Dark Bronze Dove Gray Prairie Grass Red Rock Cocoa Bean Black Anodized Silver

Painted interior options are available on pine.
Dark bronze and black also available on maple.
Anodized silver available on maple only.

CUSTOM STAINS, PAINTS & COLOR MATCHING

When only a specific tint will do, we will create one for you, matching existing woodwork, interior furnishings or other items for just the right finish to your design.

*Visit andersenwindows.com/warranty for details.

Please note that custom finishes and primed option require additional finishing. Some nail and staple holes may need to be filled prior to applying the final finish. Printing limitations prevent exact finish and color replication. See your Andersen supplier for actual finish and color samples.

EXTERIOR & INTERIOR TRIM OPTIONS

Details take your project from ordinary to extraordinary. The perfect finishing touches make every window and patio door an irreplaceable part of any home or commercial building. We offer the trim and accessory metals that make the final details of your project easier to complete and more beautiful to look at.

EXTERIOR TRIM

Designed to add depth and traditional appeal, our exterior trim options extend outward from the window or door frame, casting a shadow line consistent with true historical applications. Choose from our extended selection of flat and profiled casings, brick mould casings and sill nose. Match or contrast the trim with your windows and doors in any of our 50 exterior colors, custom colors and anodized finishes.



3 1/2" backband and bead casing and 1 1/2" sill nose shown on casement



3 1/2" flat casing shown on hinged inswing patio door



2" brick mould and 1 1/2" sill nose shown on casement



3 1/2" brick mould and 1 1/2" deep sill nose shown on double-hung

INTERIOR TRIM COMPONENTS

Extension Jamb

Pre-installed, dimensional extension jambs save time on jobsites and help enable a perfect installation. Available in all wood species, extension jambs can accommodate a wide variety of wall conditions.



Drywall Returns

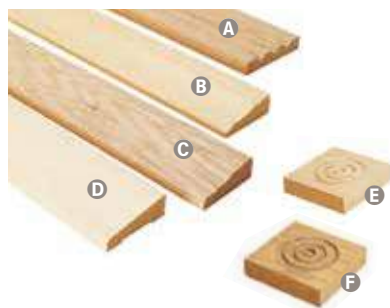
We offer drywall returns in three depths:

1 1/16", 3/16" and 7/16"



Wood Casing

A subtle touch around the perfect window or door makes your view even more special. Choose from four different casings and add plinth blocks at the corners for just the right touch of detail.



- A** 1/2" x 3 1/4" Fluted Casing
- B** 1 1/16" x 2 1/4" Colonial Casing (WM366)
- C** 1 1/16" x 2 1/4" Colonial Casing (WM356)
- D** 1 1/16" x 2 1/4" Ranch Casing (WM324)
- E** 2 1/2" Plinth Block
- F** 3 1/2" Plinth Block



UNLIMITED VIEWS

Whether your design demands performance, clarity or architectural detail, we have the glass and divided light solutions to make your views spectacular. For performance needs in a variety of environments, we offer a multitude of glass options, including our High-Performance Low-E4® glass and our exclusive Stormwatch® impact-resistant product systems for severe weather conditions.*

And for visual impact, made-to-order decorative glass and grilles give you infinite possibilities, so your design will be as original as your inspiration.

*See your local code official for building code requirements in your area.





GLASS OPTIONS

We offer a multitude of glass options to meet all of your design needs. Whether you're in need of energy efficiency or resistance to harsh weather conditions, we provide the solutions for you.

Low-E4® Glass, our standard glass option, provides excellent insulation from heat and cold. Compared to ordinary dual-pane glass, High-Performance Low-E4 glass is up to 44% more energy efficient in winter and up to 57% more efficient in summer.* Or consider Sun glass with its soft, glare-controlling tint.

Low-E4 Passive Sun® Glass is a great solution for colder climate zones where higher heat gain is desired. It allows a higher amount of the sun's heat to pass into the home, making it an ideal solution for passive solar applications.

Low-E4 SmartSun™ Glass combines performance with clarity — letting more light in and keeping more heat out. It blocks 95% of the sun's damaging ultraviolet rays. Enjoy the performance benefits of tinted glass without the loss of visibility.

Triple-Pane Glass with three panes of glass, combined with Low-E coatings, can provide enhanced energy performance. Adding triple-pane glass can produce a lower U-Factor than using regular dual-pane glass.

HeatLock® Technology can increase the energy efficiency of any E-Series window or door with Low-E4 or SmartSun glass. Applied to the room-side glass surface, it reflects heat back into the home and improves U-Factors, which can help the window or door meet ENERGY STAR® requirements.

Laminated Glass offers sound protection, forced entry and impact resistance. It reduces unwanted outside noise, making it ideal for locations like airports and high-volume traffic areas.

Decorative & Specialty Glass options are also available. See our decorative glass collection at andersenwindows.com/artglass or combine beveled, frosted, grooved, colored or textured glass with three coming options to create your own design. Specialty glass includes tinted glass, spandrel glass and Mapes panels as well as rain, reeded and obscure glass options.

A removable translucent film shields glass from damage and simplifies finishing and cleaning on the jobsite.

GLASS	ENERGY		LIGHT	
	U-Factor How well a product prevents heat from escaping.	Solar Heat Gain Coefficient How well a product blocks heat caused by sunlight.	Visible Light Transmittance How much visible light comes through a product.	UV Protection How well a product blocks ultraviolet rays.
SmartSun™	● ● ● ○	● ● ● ●	● ● ● ○	● ● ● ●
SmartSun with HeatLock® Coating	● ● ● ●	● ● ● ●	● ● ○ ○	● ● ● ●
Low-E4®	● ● ● ○	● ● ● ○	● ● ● ○	● ● ● ○
Low-E4 with HeatLock Coating	● ● ● ●	● ● ● ○	● ● ● ○	● ● ● ○
Sun	● ● ● ○	● ● ● ●	● ○ ○ ○	● ● ● ○
Passive Sun	● ● ● ○	● ○ ○ ○	● ● ● ○	● ● ● ○
Triple-Pane	● ● ● ●	● ● ● ○	● ● ● ○	● ● ● ●
Clear Dual-Pane	● ○ ○ ○	○ ○ ○ ○	● ● ● ●	○ ○ ○ ○

Center of glass performance only. Ratings based on glass options available as of January 2019. Visit www.andersenwindows.com/energystar for ENERGY STAR® map and NFRC total unit performance data.

*Winter and summer values are based on comparison of E-Series 3866 double-hung window U-Factor to the U-Factor for clear dual-pane glass non-metal frame default values from the 2006, 2009, 2012, 2015 and 2018 International Energy Conservation Code "Glazed Fenestration" Default Tables. See your Andersen supplier for actual glass samples.

"ENERGY STAR" is a registered trademark of the U.S. Environmental Protection Agency.

STORMWATCH® PROTECTION

Designed for use in coastal areas, these systems combine monolithic or insulated laminated glass with structural enhancements to meet or exceed the stringent code requirements of ASTM and TAS testing protocols.* You get the performance you need with the design options you want.

PRODUCT AVAILABILITY

Choose from a variety of coastal windows including casement, awning, double-hung** and fixed windows. Impact-resistant double-hung windows utilize two or more snuggers applied to the sill, creating a structural connection between the lower sash and frame. Simply close and lock the window and it's ready to withstand even the toughest weather conditions.†

We also offer a variety of coastal patio doors including inswing patio doors (impact-resistant insulated glass options only), outswing patio doors and French gliding patio doors. Surface bolts are required for impact certification of double doors.

Plus, you can select any of our 50 exterior colors, anodized finishes or custom colors. Choose from a variety of wood species, interior finishes, hardware, grille options, VeriLock® sensors and more. The only options not available on coastal products are decorative glass, blinds and shades.

PERFORMANCE & DURABILITY

Impact-resistant glass provides windborne debris protection,† reduced sound transmission and burglar resistance

Designed to satisfy:

- AAMA/WDMA/CSA 101/I.S.2/A440-08 & -11
- Large missile impact test ASTM E1886/E1996
- TAS 201, 202, 203 (excluding inswing patio doors)
- Peace of mind with 24/7 protection



Double-hung window with Stormwatch Protection.

Impact-Resistant Insulated Glass Options†

- Low-E
- SmartSun™
- Bronze or Gray
- Bronze/Bronze or Gray/Gray (meets Florida Turtle Code)

Impact-Resistant Monolithic Glass Options†

- Low-E
- SmartSun
- Bronze, Gray or Green
- Clear



*See your local code official for building code requirements in your area.

**Double-hung windows are only available with impact-resistant monolithic bronze, gray, green and clear glass options.

†E-Series Casement 3060 HP Impact DP+65/-75 (AAMA/WDMA/CSA 101/I.S.2/A440-08 & -11). For more information, visit andersenwindows.com/e-series.

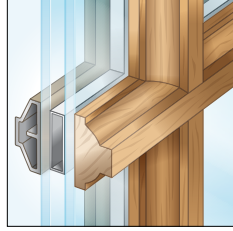


ARCHITECTURALLY AUTHENTIC GRILLES

We offer a variety of grille styles and patterns to choose from, or design your own with varying lines, curves and shapes.

FULL DIVIDED LIGHT (MODERN DIVIDED LIGHT)

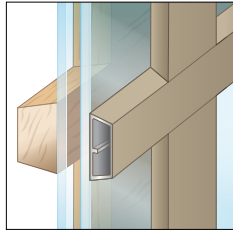
Give any window an authentic look with full divided light grilles that are permanently applied to the interior and exterior of your window with a spacer between the glass. Available in ovolo (colonial) and contemporary profiles.



Shown with chamfer exterior grille and ovolo interior grille profiles.

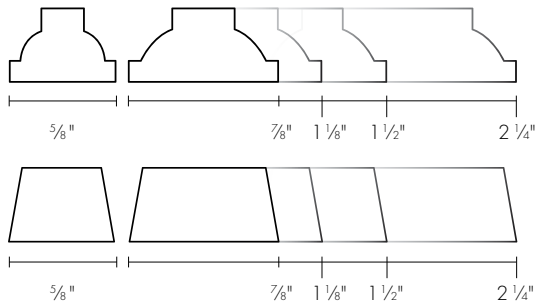
SIMULATED DIVIDED LIGHT (CLASSIC DIVIDED LIGHT)

An economical solution with traditional beauty, our simulated divided light features fixed exterior and interior grilles without an internal spacer. Available in ovolo and contemporary profiles.

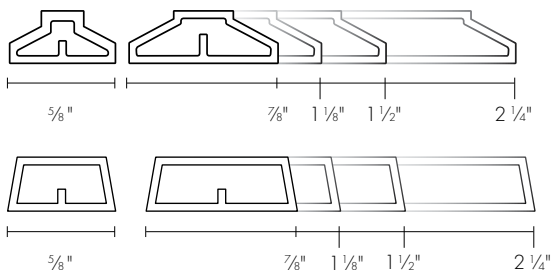


Shown with contemporary exterior and interior grille profiles.

Profiles and Widths – Interior Grilles

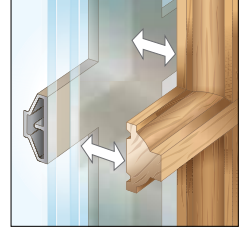


Profiles and Widths – Exterior Grilles



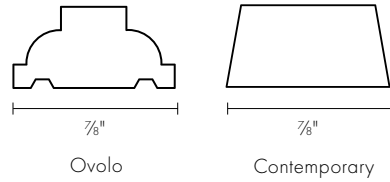
REMOVABLE INTERIOR WOOD GRILLES

Our removable wood grilles are installed on the interior surface. They are available with an optional surround and an optional permanently applied exterior grille. Available in ovolo and contemporary profiles.



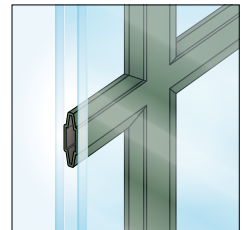
Shown with ovolo profile and optional permanently applied exterior grille with chamfer profile.

Profiles and Widths



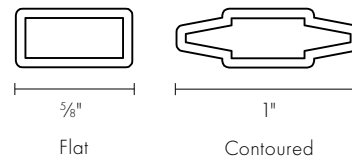
FINELIGHT™ GRILLES-BETWEEN-THE-GLASS

Aluminum grilles conveniently placed between two panes of glass make the glass easy to clean inside and out.



Shown with 1" contoured profile.

Profiles and Widths

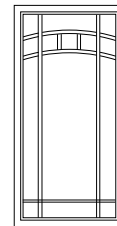
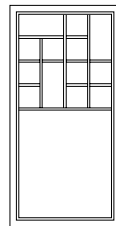
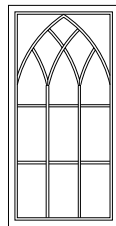
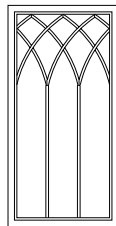
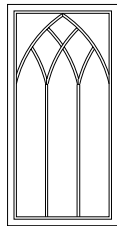
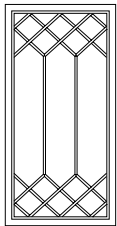
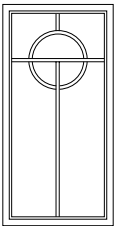
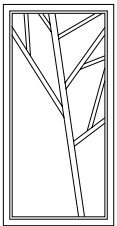


5/8" Color Options	1" Color Options
Colony White	Sierra Bronze/Colony White
Sierra Bronze	Pebble Tan/Colony White
Pebble Tan	Forest Green/Colony White
Forest Green	Choose from our broad palette of 50 colors or select from the two-tone paint combinations shown above.



DESIGN YOUR OWN GRILLES

We offer a variety of grille patterns to choose from, or design your own with varying lines, curves and shapes to create a truly unique pattern.



SCREEN OUT THE INSECTS, NOT THE VIEW

E-Series insect screens let the beauty of the outdoors in, while keeping even small insects out. Choose from a wide selection of insect screen styles, including options that blend seamlessly with your window.



Conventional
Insect Screen

TruScene
Insect Screen



Retractable
Insect Screen

TRUSCENE® INSECT SCREENS*

TruScene insect screens for windows are made with a micro-fine stainless steel mesh that offers 50% more clarity than our conventional aluminum mesh insect screens. TruScene insect screens let in more fresh air and sunlight and keep small insects out.

WOOD VENEER INSECT SCREENS

For a clean appearance, E-Series interior window insect screens can feature a wood veneer to blend into your window.

RETRACTABLE INSECT SCREEN FOR PATIO DOORS**

This insect screen is built with an innovative color-matched aluminum housing that hides the insect screen when not in use. It's there when you need it and gone when you don't.

RETRACTABLE INSECT SCREENS FOR WINDOWS AND PATIO DOORS

Retractable insect screens for casement and awning windows offer a sleek addition to any home. In place, the insect screen keeps insects out. When retracted, it provides a beautiful clear view.

For patio doors,** retractable insect screens are built with an innovative color-matched housing that hides the insect screen when not in use. It's there when you need it and gone when you don't.

HINGED INSECT SCREEN

Available for hinged inswing patio doors, this solid insect screen offers a full-door view and features a lockable latch and automatic closer.

TOP-HUNG GLIDING INSECT SCREEN FOR PATIO DOORS

Open your room to the outdoors with the touch of a finger. Our top-hung gliding insect screen provides smooth and reliable operation, season after season.†

*TruScene wood-veneered insect screens utilize a different frame profile than other E-Series wood-veneered insect screens.
**Retractable insect screens are available on inswing, outswing and gliding patio doors. See your Andersen supplier for details.
†Visit andersenwindows.com/warranty for details.

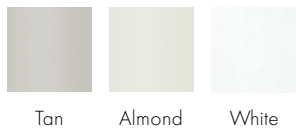
All comparisons are made to conventional E-Series aluminum insect screens.

BETWEEN-THE-GLASS BLINDS & SHADES

What could be more convenient than blinds or shades between the panes of glass? Minimal cleaning and no worry about damage. It's simply a fitting way to put privacy at your fingertips. E-Series blinds and shades offer the ultimate in practicality for both residential and commercial applications.

BLINDS-BETWEEN-THE-GLASS

E-Series blinds-between-the-glass can be installed in many of our patio doors and rectangular picture windows. Placed between the two panes of glass away from dust, dirt and damage, you get the benefit of energy efficiency and privacy control and convenience of blinds.



Blinds-Between-the-Glass

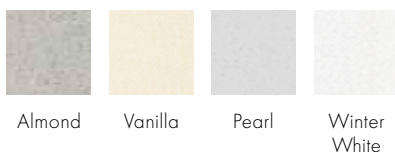
SYSTEM 3 BLINDS & SHADES

Add privacy and even greater energy efficiency with this low-maintenance blind or shade solution. Applied to the interior of the sash, the System 3 design creates a triple-glazed window for incredible energy efficiency. Our 3/4" blinds and pleated shades are available for casement, awning and picture windows, plus hinged patio doors, and are mounted to an extruded aluminum storm panel and applied to the interior of the sash. The removable storm panel is available in tan, gold, white or wood veneer.

Control Knobs



Shades



Blinds



System 3 Shades System 3 Blinds

*Not all sizes of blinds-between-the-glass are retractable.
 Printing limitations prevent exact color duplication. See your Andersen supplier for actual color samples.

WINDOW HARDWARE

Complement a home's decor with E-Series window hardware, available in a variety of finishes.

Casement & Awning



Operator Handle & Cover

Antique Brass | Black | Bright Chrome | Bronze | Gold
Oil Rubbed Bronze | Pewter | Polished Brass | Satin Chrome | White

Push Out Casement & Awning



Lock Handle



Insect Screen Pull

Antique Brass | Black
Oil Rubbed Bronze
Polished Brass
Satin Chrome | White

French Casement



Operator Handle & Cover

Antique Brass | **Black** | Bright Chrome | Bronze
Polished Brass | Satin Chrome | White



Sash Lock

Double-Hung



Sash Lift



Lock

Antique Brass | Black | Bright Chrome | Bronze | Gold
Oil Rubbed Bronze | **Pewter** | Polished Brass | Satin Chrome | White



Optional sash lock with VeriLock® security sensor shown in black. See page 27 for more information.

Gliding Windows



Lock



Slim Line Sash Pull

Antique Brass
Black | Bright Chrome
Bronze | Gold
Oil Rubbed Bronze
Pewter | Polished Brass
Satin Chrome | White

Black
Bronze
Gold
Polished Brass
White

Bold name denotes finish shown.

HARDWARE FINISHES



Antique Brass | Black | Bright Chrome | Bronze | Gold | Oil Rubbed Bronze | Pewter | Polished Brass | Satin Chrome | White

*Hardware sold separately.

Oil rubbed bronze is a "living" finishes that will change with time and use. Printing limitations prevent exact finish replication. See your Andersen supplier for actual finish samples.

THE SMARTEST TECHNOLOGY FOR THE SMARTEST HOMES

Andersen® E-Series windows and doors can now be part of today’s connected home. Monitor the status of your windows and patio doors anytime and from anywhere with our sensor options.* Plus, our new Yale® Assure Lock®, shown on page 29, lets you remotely lock or unlock your hinged patio doors.† Learn more about the convenience and peace of mind Andersen smart home products offer at andersenwindows.com/connect.



Double-Hung Sash Lock VeriLock Security Sensor



Open/Closed Sensor

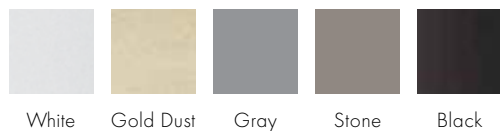
VERILOCK® SECURITY SENSORS

With the most advanced technology in the industry, VeriLock security sensors not only indicate whether windows and patio doors are open or closed, they even indicate if they are locked or unlocked.‡ No other sensor can do that.

Maintains Warranty – No drilling required which can void warranties.

Helps Maximize Energy Efficiency – Windows that are closed but unlocked lose air at a rate up to 3X that of a closed and locked window.** VeriLock sensors tell you which windows and patio doors are open or unlocked* so you can help manage air loss.

Preserves Beauty – Available in a variety of colors to complement many Andersen hardware or interior finishes.



WIRELESS OPEN/CLOSED SENSORS

These wireless sensors provide the peace of mind of knowing whether your windows and patio doors are open

Easy Installation – No tools are required to install our sensors. Simply place the sensor on a window or patio door and line up the magnet with the sensor until the LED glows blue!†

Maintains Warranty – No drilling required which can void warranties.

Compact Design – Sleek, compact design in a variety of colors to blend in with the window or patio door.



*When properly configured and maintained with a professionally installed security system and/or self-monitoring system compatible with Honeywell® 5800 controls. See your Andersen supplier for more information.

**Based on testing of thirty-two (32) A-Series double-hung windows. Air loss through unlocked windows will vary based on window type and age, pressure differential, temperatures inside and outside the home, altitude and application.

†See product installation for details.

Printing limitations prevent exact color duplication. See your Andersen supplier for actual color samples.

PATIO DOOR HARDWARE

E-Series patio door hardware is available in a variety of different designs to match virtually any style. Yuma®, Encino®, Anvers®, Newbury®, Covington™ and Whitmore® hardware options feature solid drop-forged brass for added strength, while Albany and Tribeca® hardware options are made of zinc die cast with durable powder-coated finishes.



YUMA
Distressed Bronze
Distressed Nickel



ENCINO
Distressed Bronze
Distressed Nickel



NEWBURY
Antique Brass | Bright Brass
Brushed Chrome | **Oil Rubbed Bronze**
Polished Chrome | Satin Nickel



ANVERS
Bright Brass | Oil Rubbed Bronze
Satin Nickel



COVINGTON
Antique Brass | **Bright Brass**
Oil Rubbed Bronze



WHITMORE
Antique Brass | Bright Brass
Oil Rubbed Bronze | Satin Nickel



ALBANY
Black | **Gold Dust**
Stone | White



TRIBECA
Stone | **White**

Bold name denotes finish shown.

HARDWARE FINISHES



Hardware sold separately.

Distressed bronze and oil rubbed bronze are "living" finishes that will change with time and use.

Bright brass and satin nickel finishes on patio door hardware feature a 10-year limited warranty.

Printing limitations prevent exact finish replication. See your Andersen supplier for actual finish samples.



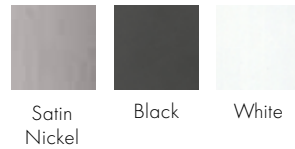
FSB® HINGED PATIO DOOR HARDWARE

Durable, stainless steel FSB hinged door hardware features clean lines and a sleek satin finish for a thoroughly modern look.



YALE® ASSURE LOCK®

Monitor, lock and unlock from anywhere with the Yale Assure Lock. This slim, sleek keyless lock is designed exclusively for Andersen hinged patio doors and integrates with a wide range of smart home platforms.



One Touch Locking – Lock up without the hassle of keys by simply tapping the keypad.

Key Free – No cylinder means no lost keys and no pick and bump break-ins.

Battery Backup – Never lose power, the lock can be energized with a 9V battery.

Three Connectivity Options – Touchscreen, Bluetooth® + WiFi and Z-Wave®

Smart Home Integration – Monitor, lock and unlock from anywhere.

Hardware sold separately.
 Yale manufactures and supports the limited warranty for Yale Assure Lock for Andersen patio doors.
 All marks where denoted are trademarks of their respective owners.
 Printing limitations prevent exact finish replication. See your Andersen supplier for actual finish samples.

ENVIRONMENTAL RESPONSIBILITY

It is more essential than ever that we all do our part to help protect the environment. While environmental responsibility may be new to some, to us, making environmentally responsible manufacturing decisions is nothing new. We've made responsible choices in the past and will continue to strive to be responsible in the future.

PRESERVING NATURE

To protect our natural resources, we use wood harvested from managed forests and leverage engineered wood technology whenever possible — we use finger-jointed wood and laminated veneer lumber, both of which use wood efficiently and result in superior performance. In addition, we use water-based finishes, which have less impact on the environment than oil-based products.

CONSERVING ENERGY

Our technology and design innovation creates greater energy efficiency in all our products. Our High-Performance Low-E4® glass provides superior thermal protection, helping significantly reduce heating and cooling requirements. Additional energy-efficient glass options include triple-pane glass and SmartSun™ glass. Combined with weathertight frames, sash and weatherstrip, E-Series windows and doors play an important role in energy conservation.



High-Performance Low-E4 glass is up to 45% more energy efficient in winter and up to 57% more energy efficient in summer compared to ordinary dual-pane glass.*

USING RECLAIMED MATERIALS

Our cladding contains pre-consumer reclaimed aluminum, which requires much less energy to process than virgin aluminum. In addition, our glass utilizes reclaimed glass, which reduces landfill waste.

REDUCING WASTE

We recycle whenever possible — office paper, corrugated cardboard, sawdust, scrap aluminum, paints and solvents. Our electrostatic paint system attracts the paint to the aluminum, creating an efficient use of materials. Packaging enhancements include frame protectors made of HDPE, a recyclable plastic.

TAKING AN ACTIVE ROLE

We work closely with the industry organizations shown to manufacture energy-efficient and environmentally responsible products.



ENVIRONMENTAL CERTIFICATIONS

E-Series windows and doors have received SCS Global Services (SCS) Indoor Advantage™ Gold certification for indoor air quality. Indoor air quality is an important issue because many people spend as much as 90% of their time indoors, either at home, work or school.



*Winter and summer values are based on comparison of E-Series 3866 double-hung window U-Factor to the U-Factor for clear dual-pane glass non-metal frame default values from the 2006, 2009, 2012, 2015 and 2018 International Energy Conservation Code "Glazed Fenestration" Default Tables.

All marks where denoted are trademarks of their respective owners.



CASEMENT WINDOWS

Simple, beautiful and extremely functional, this casement window offers enhanced energy performance. Plus, stainless steel hinges and tracks that open to 90° for great ventilation and easy cleaning. In addition, a single-lever, multi-point locking mechanism with minimally exposed hardware offers a sleek, modern look.

Casement Overview	34
French Casement Overview	36
Push Out Casement Overview	38
Sizing	
Casement	40
Casement Picture & Transom	41
Arch Casement	42
French Casement	43
Push Out Casement	44
Details	45
Installation Materials	154
Product Performance	158





CASEMENT WINDOW

FEATURES

CASEMENT WINDOWS

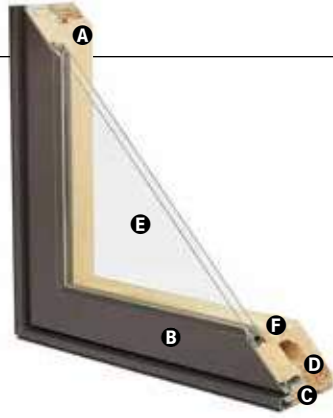
FRAME & SASH

A Select wood components are kiln dried and treated with water/insect repellent and preservative. Interior wood surfaces are available in pine, mixed grain Douglas fir, cherry, hickory, mahogany*, maple, oak, walnut, alder or vertical grain Douglas fir. Interior surfaces are available unfinished or factory primed. Factory-applied finishes are available in a variety of stain and paint options.

B Wood components are fitted with aluminum extrusions on the exterior. 50 exterior colors that meet AAMA 2604 and 2605 specifications are available, as well as custom colors. Also available is a selection of seven exterior anodized options. Integral, butyl-backed corner keys provide a positive, tight seal.

Vinyl installation flanges are pre-applied into a kerf on the frame exterior to facilitate installation. Optional aluminum flanges and metal installation clips are available.

C A Fibrex® material thermal barrier encompasses the interior perimeter of the frame and is a neutral beige color.



D A continuous perimeter bulb weatherstrip around the frame is positioned on the Fibrex material thermal barrier and provides solid surface contact with the sash.

A secondary bulb weatherstrip is applied on three sides of the sash into a stand-alone kerf on the aluminum extrusion. Available in white or optional black.

GLASS

E High-Performance Low-E4® glass with a low-conductivity spacer. Triple-pane glass, tinted, clear dual-pane, high-altitude glass and other special glazing options are available.

F Glass is fixed in place from the interior with wood stops that can be removed for easy reglazing if necessary. Glass stops available in ovolo (colonial) and contemporary profiles.

HARDWARE

Equipped with a stainless steel gear operator, concealed hinges and hinge track. Arch casement units use stainless steel piano hinges.

Locks, handles and operator covers are available in 10 finishes and can be shipped separately closer to job completion.

Sash Locks



Concealed sash locks (multi-point on units taller than 2'-8") provide a positive lock by operating one convenient lever. Stainless steel keepers resist corrosion.** Available in finishes to match operator handles.

HARDWARE OPTIONS



Antique Brass | **Black**
Bright Chrome | Bronze
Gold | Oil Rubbed Bronze
Pewter | Polished Brass
Satin Chrome | White

Bold name denotes finish shown.

HARDWARE FINISHES

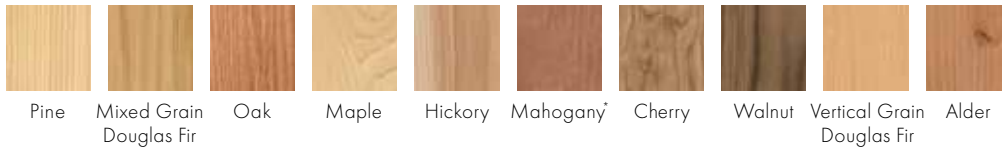


Oil rubbed bronze is a "living" finish that will change with time and use.

EXTERIOR & INTERIOR OPTIONS

EXTERIOR COLORS 50 exterior colors, 7 anodized finishes and custom colors. See exterior colors on page 11.

INTERIOR WOOD SPECIES

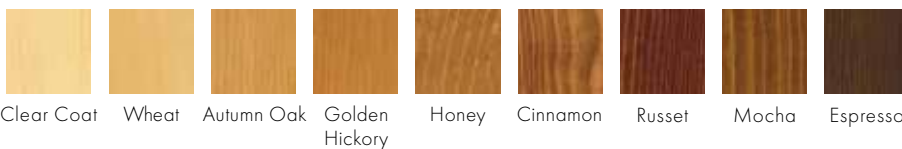


Interior custom stains, paints and color matching available.

Naturally occurring variations in grain, color and texture of wood make each window one of a kind.

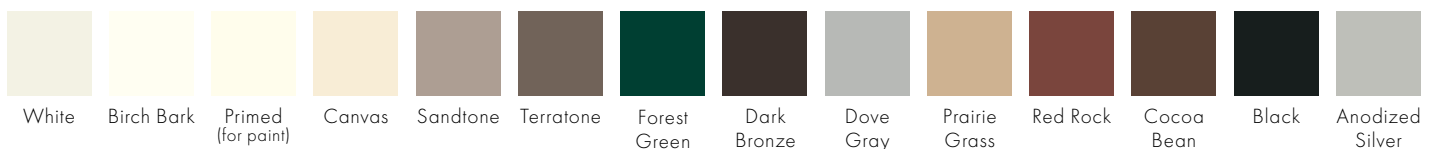
All factory-finished options are shown on pine.

FACTORY-FINISHED INTERIORS



Painted options available on pine. Dark bronze and black painted options available on pine or maple. Anodized silver painted option available on maple only.

INTERIOR PAINTED OPTIONS



*Actual wood species is either Sapele or Sipo, both non-endangered species grown in Africa, with color and characteristics similar to Central American mahoganies.

**Visit andersenwindows.com/warranty for details.

Printing limitations prevent exact replication of colors and finishes. Please see your Andersen supplier for actual color and finish samples.

ACCESSORIES Sold Separately

CASEMENT WINDOWS
HARDWARE
Power Operator


Power operators are available in bronze, white, black or gold.

Window Opening Control Device Kit

An optional Window Opening Control Device Kit is available, which limits opening the sash to less than 4" when the window is first opened. Available in stone and white.

Construction Hardware


Construction locks and operator handles keep your permanent window hardware away from the construction process and possible damage yet allow operation of windows during construction.

SENSORS
VeriLock® Security Sensors

VeriLock sensors are unique as they detect whether the windows are locked or unlocked* — a feature no other sensors can provide. See page 27 for Smart Home options.

Open/Closed Sensors

Wireless open/closed sensors are available in four colors. See page 27 for details.

PRIVACY OPTIONS
System 3 Blinds


A 5/8" aluminum slat blind is mounted to an extruded aluminum blind panel and applied to the window, creating a triple-glazed window boasting privacy and energy efficiency. Available in three colors. Blind panels are offered in white, tan, gold or an optional wood veneer to match your interior.

System 3 Shades

Pleated fabric shades are available in four colors to effortlessly and beautifully filter the light. See page 25 for more details.

INSECT SCREENS
Conventional Insect Screens


Charcoal fiberglass screen mesh fits into an aluminum frame in colors of bronze, white or gold as well as optional black. Aluminum screen mesh and wood-veneered insect screen also available as options.

TruScene® Insect Screens


TruScene insect screens available in painted aluminum or wood-veneered options.

Retractable Insect Screens

Retractable insect screen available in wood-veneered options.

See page 24 for more information on our insect screen options.

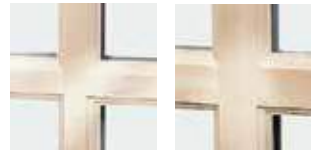
GRILLES
Full Divided Light

Permanent interior and exterior grilles with grille spacer bars between two panes of glass. Available in 5/8", 7/8", 1 1/8", 1 1/2", or 2 1/4" widths. Interior grilles are available with ovolo or contemporary profile (ovolo profile shown below). Not all widths are shown.



5/8"

7/8"



1 1/8"

1 1/2"

Simulated Divided Light

Permanent exterior and interior grilles without grille spacer bars. Available in 5/8", 7/8", 1 1/8", 1 1/2", or 2 1/4" widths. Interior grilles are available with ovolo or contemporary profile (ovolo profile shown below). Not all widths are shown.



7/8"

Finelight™ Grilles-Between-the-Glass

Available in 5/8" flat or 1" contoured aluminum profiles. Two-tone colors of pebble tan/colony white, sierra bronze/colony white or forest green/colony white are available on the 1" profile.



5/8" Flat

1" Contoured

Removable Interior Wood Grilles

Removable interior wood grilles are available in a 7/8" width and ovolo or contemporary profiles. Optional surround for removable grille and permanent exterior grilles also available.



7/8"

See page 22 for more information on grilles.

*When properly configured and maintained with a professionally installed security system and/or self monitoring system compatible with Honeywell® 5800 controls. See your Andersen supplier for more information.

FRENCH CASEMENT WINDOW

FEATURES

FRENCH CASEMENT WINDOWS

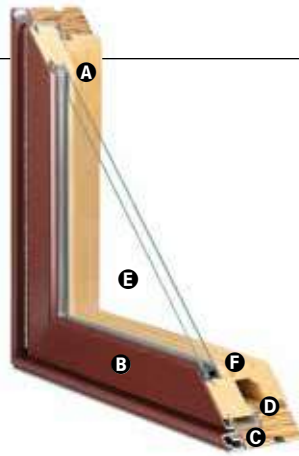
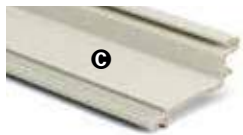
FRAME & SASH

A Select wood components are kiln dried and treated with water/insect repellent and preservative. Interior wood surfaces are available in pine, mixed grain Douglas fir, cherry, hickory, mahogany*, maple, oak, walnut, alder or vertical grain Douglas fir. Interior surfaces are available unfinished or factory primed. Factory-applied finishes are available in a variety of stain and paint options.

B Wood components are fitted with aluminum extrusions on the exterior. 50 exterior colors that meet AAMA 2604 and 2605 specifications are available, as well as custom colors. Also available is a selection of seven exterior anodized options.

Vinyl installation flanges are pre-applied into a kerf on the frame exterior to facilitate installation. Optional aluminum flanges and metal installation clips are available.

C A Fibrex® material thermal barrier encompasses the interior perimeter of the frame and is a neutral beige color.



D A continuous perimeter bulb weatherstrip around the frame is positioned on the Fibrex material thermal barrier and provides solid surface contact with the sash.

Secondary weatherstrip is applied on three sides of the sash. Available in white or optional black.

GLASS

E High-Performance Low-E4® glass with a low-conductivity spacer. Tinted, clear dual-pane, high-altitude glass and other special glazing options are available.

F Glass is fixed in place from the interior with wood stops that can be removed for easy reglazing if necessary. Glass stops available in ovolo (colonial) and contemporary profiles.

HARDWARE

Equipped with stainless steel gear operators and piano hinges.

Sash Locks

Concealed, multi-point sash locks provide a positive lock by operating one convenient lever. Stainless steel keepers resist corrosion.**



Antique Brass | **Black**
Bright Chrome | Bronze
Polished Brass
Satin Chrome | White

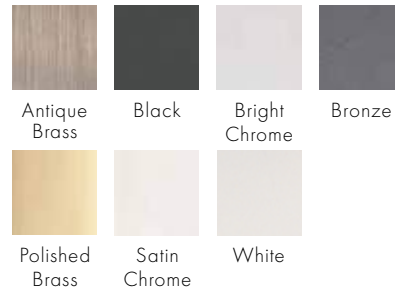
HARDWARE OPTIONS



Antique Brass | **Black**
Bright Chrome | Bronze
Polished Brass
Satin Chrome | White

Bold name denotes finish shown.

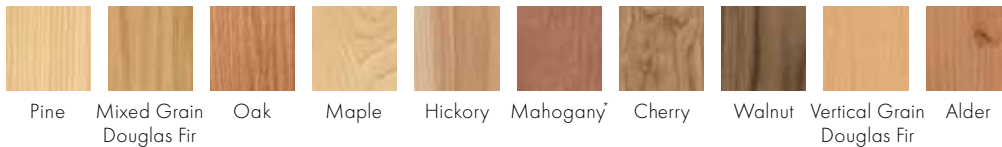
HARDWARE FINISHES



EXTERIOR & INTERIOR OPTIONS

EXTERIOR COLORS 50 exterior colors, 7 anodized finishes and custom colors. See exterior colors on page 11.

INTERIOR WOOD SPECIES



Interior custom stains, paints and color matching available.

Naturally occurring variations in grain, color and texture of wood make each window one of a kind.

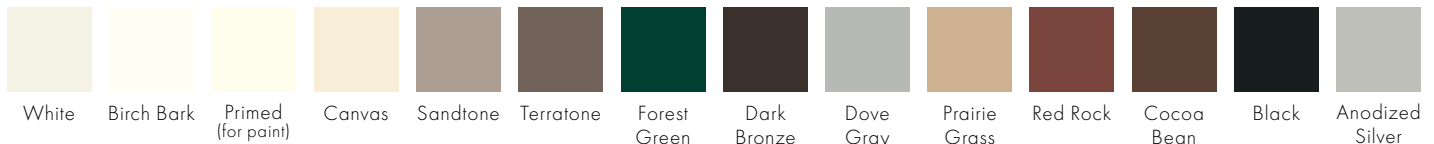
All factory-finished options are shown on pine.

FACTORY-FINISHED INTERIORS



Painted options available on pine. Dark bronze and black painted options available on pine or maple. Anodized silver painted option available on maple only.

INTERIOR PAINTED OPTIONS



*Actual wood species is either Sapele or Sipo, both non-endangered species grown in Africa, with color and characteristics similar to Central American mahogonies.

**Visit andersenwindows.com/warranty for details.

Printing limitations prevent exact replication of colors and finishes. Please see your Andersen supplier for actual color and finish samples.

ACCESSORIES Sold Separately

**FRENCH CASEMENT
WINDOWS**

SENSORS

Open/Closed Sensors

Wireless open/closed sensors are available in four colors. See page 27 for details.

INSECT SCREENS

Conventional Insect Screens



Charcoal fiberglass screen mesh fits into an aluminum frame in colors of bronze, white or gold as well as optional black. Aluminum screen mesh and wood-veneered insect screen also available as options.

TruScene® Insect Screens



TruScene insect screens available in painted aluminum or wood-veneered options.

Retractable Insect Screens

Retractable insect screen available in wood-veneered options.

See page 24 for more information on our insect screen options.

GRILLES

Full Divided Light

Permanent interior and exterior grilles with grille spacer bars between two panes of glass. Available in 5/8", 7/8", 1 1/8", 1 1/2", or 2 1/4" widths. Interior grilles are available with ovolo or contemporary profile (ovolo profile shown below). Not all widths are shown.



5/8"

7/8"



1 1/8"

1 1/2"

Simulated Divided Light

Permanent exterior and interior grilles without grille spacer bars. Available in 5/8", 7/8", 1 1/8", 1 1/2", or 2 1/4" widths. Interior grilles are available with ovolo or contemporary profile (ovolo profile shown below). Not all widths are shown.



7/8"

Finelight™

Grilles-Between-the-Glass

Available in 5/8" flat or 1" contoured aluminum profiles. Two-tone colors of pebble tan/colony white, sierra bronze/colony white or forest green/colony white are available on the 1" profile.



5/8" Flat

1" Contoured

Removable Interior Wood Grilles

Removable interior wood grilles are available in a 7/8" width and ovolo or contemporary profiles. Optional surround for removable grille and permanent exterior grilles also available.



7/8"

See page 22 for more information on grilles.

*When properly configured and maintained with a professionally installed security system and/or self monitoring system compatible with Honeywell® 5800 controls. See your Andersen supplier for more information.

PUSH OUT CASEMENT WINDOW

FEATURES

PUSH OUT CASEMENT WINDOWS

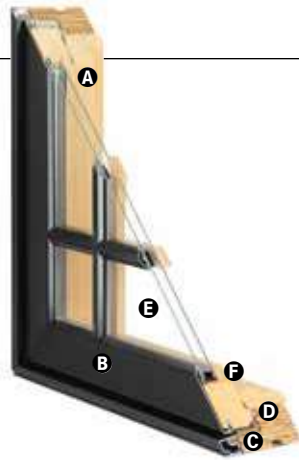
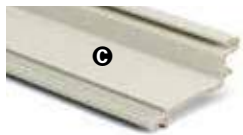
FRAME & SASH

A Select wood components are kiln dried and treated with water/insect repellent and preservative. Interior wood surfaces are available in pine, mixed grain Douglas fir, cherry, hickory, mahogany*, maple, oak, walnut, alder or vertical grain Douglas fir. Interior surfaces are available unfinished or factory primed. Factory-applied finishes are available in a variety of stain and paint options.

B Wood components are fitted with aluminum extrusions on the exterior. 50 exterior colors that meet AAMA 2604 and 2605 specifications are available, as well as custom colors. Also available is a selection of seven exterior anodized options.

Vinyl installation flanges are pre-applied into a kerf on the frame exterior to facilitate installation. Optional aluminum flanges and metal installation clips are available.

C A Fibrex® material thermal barrier encompasses the interior perimeter of the frame and is a neutral beige color.



D A continuous perimeter bulb weatherstrip around the frame is positioned on the Fibrex material thermal barrier and provides solid surface contact with the sash.

A secondary bulb weatherstrip is applied on three sides of the sash. Available in white or optional black.

GLASS

E High-Performance Low-E4® glass with a low-conductivity spacer. Tinted, clear dual-pane, high-altitude glass and other special glazing options are available.

F Glass is fixed in place from the interior with wood stops that can be removed for easy reglazing if necessary. Glass stops available in ovolo (colonial) and contemporary profiles.

HARDWARE

Equipped with a stainless steel 4-bar friction hinge. Larger units use a stainless steel piano hinge with stainless steel stays.

Manual lock system featuring lock handles allows for easy operation. Units under 40" high use a single lock, while units 40" and taller use dual locks.

HARDWARE OPTIONS



Antique Brass | Black
Oil Rubbed Bronze
Polished Brass
Satin Chrome | White

Bold name denotes finish shown.

HARDWARE FINISHES

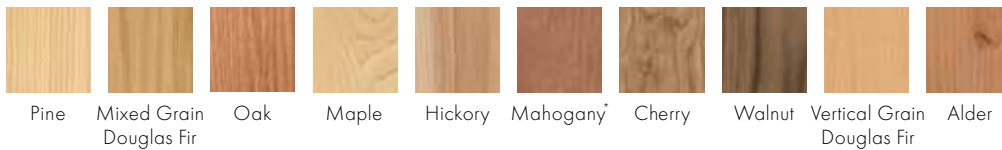


Oil rubbed bronze is a "living" finish that will change with time and use.

EXTERIOR & INTERIOR OPTIONS

EXTERIOR COLORS 50 exterior colors, 7 anodized finishes and custom colors. See exterior colors on page 11.

INTERIOR WOOD SPECIES



Interior custom stains, paints and color matching available.

Naturally occurring variations in grain, color and texture of wood make each window one of a kind.

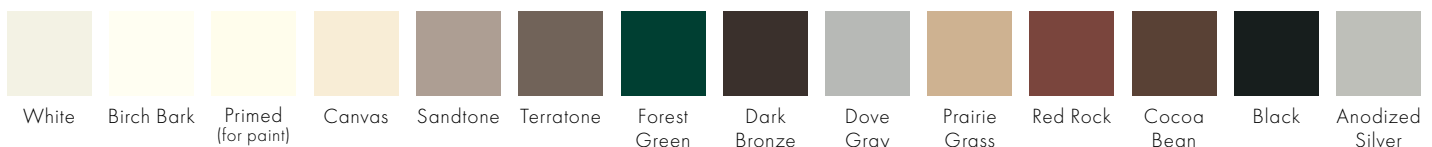
All factory-finished options are shown on pine.

FACTORY-FINISHED INTERIORS



Painted options available on pine. Dark bronze and black painted options available on pine or maple. Anodized silver painted option available on maple only.

INTERIOR PAINTED OPTIONS



*Actual wood species is either Sapele or Sipo, both non-endangered species grown in Africa, with color and characteristics similar to Central American mahoganies. Printing limitations prevent exact replication of colors and finishes. Please see your Andersen supplier for actual color and finish samples.

ACCESSORIES Sold Separately

PUSH OUT CASEMENT WINDOWS

VeriLock® Security Sensors

VeriLock sensors are unique as they detect whether the windows are locked or unlocked* — a feature no other sensors can provide. See page 27 for Smart Home options.

Open/Closed Sensors

Wireless open/closed sensors are available in four colors. See page 27 for details.

INSECT SCREENS

Hinged Insect Screens



Oil Rubbed Bronze**

Hinged insect screen opens to the interior, providing access to the lock handle. Choose from charcoal fiberglass or aluminum screen mesh. Available in wood-veneered options. Insect screen pulls are available in antique brass, black, oil rubbed bronze,** polished brass, satin chrome and white.

Retractable Insect Screens

Retractable insect screen available in wood-veneered options. Extension jambs required for push out casement windows with retractable insect screens.

See page 24 for more information on our insect screen options.

GRILLES

Full Divided Light

Permanent interior and exterior grilles with grille spacer bars between two panes of glass. Available in 5/8", 7/8", 1 1/8", 1 1/2", or 2 1/4" widths. Interior grilles are available with ovolo or contemporary profile (ovolo profile shown below). Not all widths are shown.



5/8"

7/8"



1 1/8"

1 1/2"

Simulated Divided Light

Permanent exterior and interior grilles without grille spacer bars. Available in 5/8", 7/8", 1 1/8", 1 1/2", or 2 1/4" widths. Interior grilles are available with ovolo or contemporary profile (ovolo profile shown below). Not all widths are shown.



7/8"

Finelight™

Grilles-Between-the-Glass

Available in 5/8" flat or 1" contoured aluminum profiles. Two-tone colors of pebble tan/colony white, sierra bronze/colony white or forest green/colony white are available on the 1" profile.



5/8" Flat

1" Contoured

Removable Interior Wood Grilles

Removable interior wood grilles are available in a 7/8" width and ovolo or contemporary profiles. Optional surround for removable grille and permanent exterior grilles also available.



7/8"

See page 22 for more information on grilles.

*When properly configured and maintained with a professionally installed security system and/or self monitoring system compatible with Honeywell® 5800 controls. See your Andersen supplier for more information.

**Oil rubbed bronze is a "living" finish that will change with time and use.

CASEMENT WINDOWS

Casement Window Sizes

	1' 6 1/4"	1' 8 1/2"	2' 0 1/2"	2' 4 1/2"	2' 6 1/2"	2' 8 1/2"	3' 0 1/2"
1' 5 3/4"	1' 8"	2' 0"	2' 4"	2' 6"	2' 8"	3' 0"	
2' 0 1/2"							
2' 6 1/2"							
2' 8 1/2"							
3' 0 1/2"							
3' 4 1/2"							
4' 0 1/2"							
4' 6 1/2"							
5' 0 1/2"							
5' 6 1/2"							
6' 0 1/2"							

NOTES

† These units meet or exceed the following dimensions: Clear Opening Area 5.7 sq. ft., Clear Opening Width 20", Clear Opening Height 24" and 44" maximum floor to sill height (with standard 6' 10-1/2" structural header height).

†† Units meet the stated dimensions above when optional hardware for widest clear opening is used.

* A sash-limiting device is standard on 2856 and 3050 casement units. See your local code official for requirements in your area.

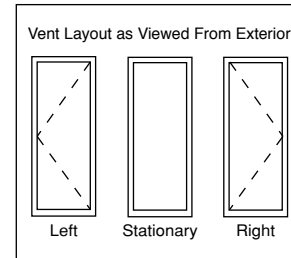
** A piano hinge and sash limiting device is standard on 2860, 3056 and 3060 casement units.

If glass is positioned within 18" of the finished floor, safety/tempered glass may be required. Local codes may differ. Verify tempered glass requirements with your local building code official.

Use structural joining material when necessary or required by code.

The light patterns illustrated apply to rectangular removable interior wood grilles, Full Divided Light, Simulated Divided Light, Decorelle 100, 150 and 400 and Finelight™ Grilles-Between-the-Glass. All removable interior wood grilles will be installed in the units unless otherwise specified.

For a metric conversion in millimeters, multiply dimensions in inches by 25.4.



FORMULA FOR COMBINATION WINDOWS

The overall frame dimension (both width and height) is equal to the sum of the individual unit frame dimensions plus joining material dimension(s).

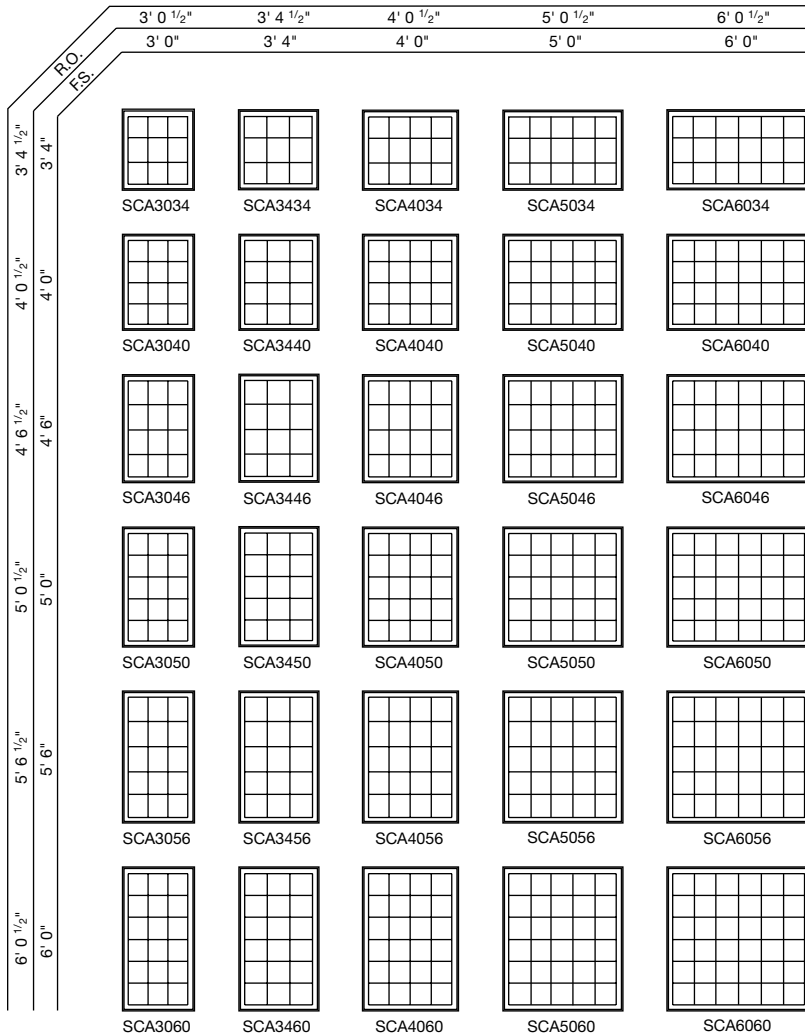
The overall rough opening (both width and height) is equal to the overall frame dimensions plus 1/4" on all sides.

Any unit within each combination can be operating or stationary.

Joined Casement Combinations	2-Wide		3-Wide		4-Wide		5-Wide		
	Single Unit Frame Width	Rough Opening Width	Frame Width	Rough Opening Width	Frame Width	Rough Opening Width	Frame Width	Rough Opening Width	Frame Width
	1'-5 3/4"	3'-0"	2'-11 1/2"	4'-5 3/4"	4'-5 1/4"	5'-11 1/2"	5'-11"	7'-5 1/4"	7'-4 3/4"
	1'-8"	3'-4 1/2"	3'-4"	5'-0 1/2"	5'-0"	6'-8 1/2"	6'-8"	8'-4 1/2"	8'-4"
	2'-0"	4'-0 1/2"	4'-0"	6'-0 1/2"	6'-0"	8'-0 1/2"	8'-0"	10'-0 1/2"	10'-0"
	2'-4"	4'-8 1/2"	4'-8"	7'-0 1/2"	7'-0"	9'-4 1/2"	9'-4"	11'-8 1/2"	11'-8"
	2'-6"	5'-0 1/2"	5'-0"	7'-6 1/2"	7'-6"	10'-0 1/2"	10'-0"	12'-6 1/2"	12'-6"
	2'-8"	5'-4 1/2"	5'-4"	8'-0 1/2"	8'-0"	10'-8 1/2"	10'-8"	13'-4 1/2"	13'-4"
	3'-0"	6'-0 1/2"	6'-0"	9'-0 1/2"	9'-0"	12'-0 1/2"	12'-0"	15'-0 1/2"	15'-0"

FOR WINDOWS GREATER THAN 30 SQUARE FEET OR RATED HIGHER THAN PG50, ONE OF THESE THREE INSTALLATION METHODS IS REQUIRED: A) THROUGH THE JAMB B) ALUMINUM INSTALLATION FLANGE OR C) INSTALLATION CLIPS. ADDITIONAL CUSTOM SIZES ARE AVAILABLE. CONTACT YOUR LOCAL SUPPLIER FOR MORE INFORMATION. DRAWINGS ARE NOT TO SCALE.

Casement Picture Window Sizes



NOTES

If glass is positioned within 18" of the finished floor, safety/tempered glass may be required. Local codes may differ. Verify tempered glass requirements with your local building code official.

Use structural joining material when necessary or required by code.

The light patterns illustrated apply to rectangular removable interior wood grilles, Full Divided Light, Simulated Divided Light, Decorelle 100, 150 and 400 and Finelight™ Grilles-Between-the-Glass. All removable interior wood grilles will be installed in the units unless otherwise specified.

For a metric conversion in millimeters, multiply dimensions in inches by 25.4.

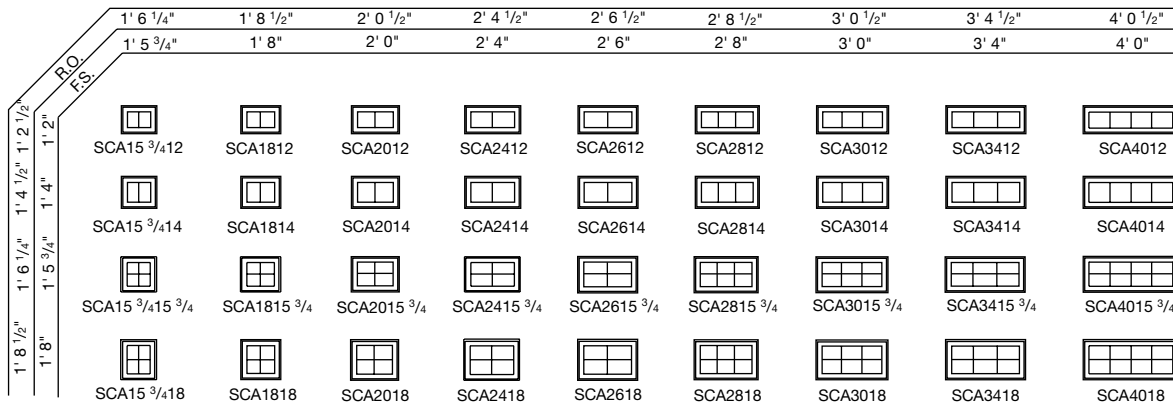
FORMULA FOR COMBINATION WINDOWS

The overall frame dimension (both width and height) is equal to the sum of the individual unit frame dimensions plus joining material dimension(s).

The overall rough opening (both width and height) is equal to the overall frame dimensions plus 1/4" on all sides.

Any unit within each combination can be operating or stationary.

Casement Transom Window Sizes

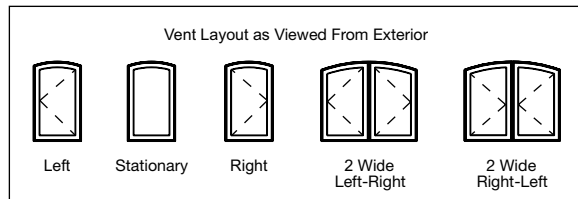


FOR WINDOWS GREATER THAN 30 SQUARE FEET OR RATED HIGHER THAN PG50, ONE OF THESE THREE INSTALLATION METHODS IS REQUIRED:
A) THROUGH THE JAMB B) ALUMINUM INSTALLATION FLANGE OR C) INSTALLATION CLIPS.
ADDITIONAL CUSTOM SIZES ARE AVAILABLE. CONTACT YOUR LOCAL SUPPLIER FOR MORE INFORMATION. DRAWINGS ARE NOT TO SCALE.

CASEMENT WINDOWS

Arch Casement Window Sizes

		2' 0 1/2"	4' 0 1/2"	2' 4 1/2"	4' 8 1/2"	2' 6 1/2"	5' 0 1/2"	2' 8 1/2"	5' 4 1/2"	3' 0 1/2"	6' 0 1/2"
		2' 0"	4' 0"	2' 4"	4' 8"	2' 6"	5' 0"	2' 8"	5' 4"	3' 0"	6' 0"
		3'-0" RAD	6'-0" RAD	3'-0" RAD	6'-0" RAD	3'-0" RAD	6'-0" RAD	3'-0" RAD	6'-0" RAD	3'-0" RAD	6'-0" RAD
R.O. F.S.	2' 0 1/2"										
	2' 0"	RCAX2020	RCAX2020-2	RCAX2420	RCAX2420-2	RCAX2620	RCAX2620-2	RCAX2820	RCAX2820-2	RCAX3020	RCAX3020-2
	2' 6 1/2"										
	2' 6"	RCAX2026	RCAX2026-2	RCAX2426	RCAX2426-2	RCAX2626	RCAX2626-2	RCAX2826	RCAX2826-2	RCAX3026	RCAX3026-2
	2' 8 1/2"										
	2' 8"	RCAX2028	RCAX2028-2	RCAX2428	RCAX2428-2	RCAX2628	RCAX2628-2	RCAX2828	RCAX2828-2	RCAX3028	RCAX3028-2
	3' 0 1/2"										
	3' 0"	RCAX2030	RCAX2030-2	RCAX2430	RCAX2430-2	RCAX2630	RCAX2630-2	RCAX2830	RCAX2830-2	RCAX3030	RCAX3030-2
	3' 4 1/2"										
	3' 4"	RCAX2034	RCAX2034-2	RCAX2434	RCAX2434-2	RCAX2634	RCAX2634-2	RCAX2834	RCAX2834-2	RCAX3034	RCAX3034-2
4' 0 1/2"											
4' 0"	RCAX2040	RCAX2040-2	RCAX2440 †	RCAX2440-2 †	RCAX2640 †	RCAX2640-2 †	RCAX2840 †	RCAX2840-2 †	RCAX3040 †	RCAX3040-2 †	
4' 6 1/2"											
4' 6"	RCAX2046	RCAX2046-2	RCAX2446 †	RCAX2446-2 †	RCAX2646 †	RCAX2646-2 †	RCAX2846 †	RCAX2846-2 †	RCAX3046 †	RCAX3046-2 †	
5' 0 1/2"											
5' 0"	RCAX2050	RCAX2050-2	RCAX2450 †	RCAX2450-2 †	RCAX2650 †	RCAX2650-2 †	RCAX2850 †	RCAX2850-2 †	RCAX3050 *	RCAX3050-2 *	
5' 6 1/2"											
5' 6"	RCAX2056	RCAX2056-2	RCAX2456 †	RCAX2456-2 †	RCAX2656 †	RCAX2656-2 †	RCAX2856 *	RCAX2856-2 *	RCAX3056 *	RCAX3056-2 *	
6' 0 1/2"											
6' 0"	RCAX2060	RCAX2060-2	RCAX2460 †	RCAX2460-2 †	RCAX2660 †	RCAX2660-2 †	RCAX2860 *	RCAX2860-2 *	RCAX3060 *	RCAX3060-2 *	



NOTES

† These units meet or exceed the following dimensions: Clear Opening Area 5.7 sq. ft., Clear Opening Width 20", Clear Opening Height 24" and 44" maximum floor to sill height (with standard 6' 10-1/2" structural header height).

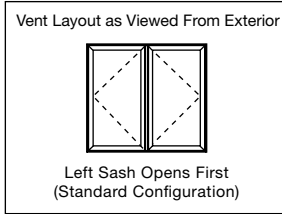
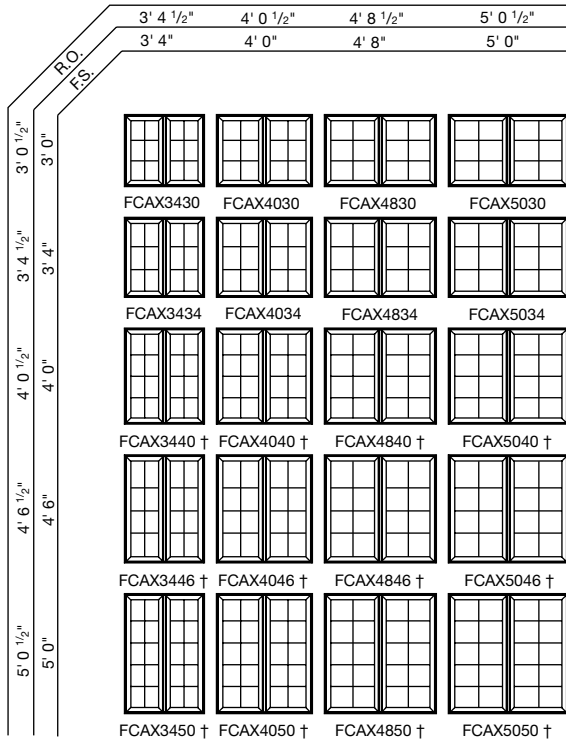
* A sash-limiting device is standard on 2856, 2860, 3056 and 3060 casement units. See your local code official for requirements in your area.

Piano hinges are standard on all arch casement units.

See notes on page 43 for more information.

FOR WINDOWS GREATER THAN 30 SQUARE FEET OR RATED HIGHER THAN PG50, ONE OF THESE THREE INSTALLATION METHODS IS REQUIRED:
A) THROUGH THE JAMB B) ALUMINUM INSTALLATION FLANGE OR C) INSTALLATION CLIPS.
ADDITIONAL CUSTOM SIZES ARE AVAILABLE. CONTACT YOUR LOCAL SUPPLIER FOR MORE INFORMATION. DRAWINGS ARE NOT TO SCALE.

French Casement Window Sizes



NOTES

† These units meet or exceed the following dimensions: Clear Opening Area 5.7 sq. ft., Clear Opening Width 20", Clear Opening Height 24" and 44" maximum floor to sill height (with standard 6' 10-1/2" structural header height). Local codes may differ. Verify egress requirements with your local building code official.

Piano hinges and step jamb are standard on all French casement units.

If glass is positioned within 18" of the finished floor, safety/tempered glass may be required. Local codes may differ. Verify tempered glass requirements with your local building code official.

Use structural joining material when necessary or required by code.

The light patterns illustrated apply to rectangular removable interior wood grilles, Full Divided Light, Simulated Divided Light, Decorelle 100, 150 and 400 and Finelight™ Grilles-Between-the-Glass. All removable interior wood grilles will be installed in the units unless otherwise specified.

For a metric conversion in millimeters, multiply dimensions in inches by 25.4.

FORMULA FOR COMBINATION WINDOWS

The overall frame dimension (both width and height) is equal to the sum of the individual unit frame dimensions plus joining material dimension(s).

The overall rough opening (both width and height) is equal to the overall frame dimensions plus 1/4" on all sides.

Any unit within each combination can be operating or stationary.

**FOR WINDOWS GREATER THAN 30 SQUARE FEET OR RATED HIGHER THAN PG50, ONE OF THESE THREE INSTALLATION METHODS IS REQUIRED:
A) THROUGH THE JAMB B) ALUMINUM INSTALLATION FLANGE OR C) INSTALLATION CLIPS.
ADDITIONAL CUSTOM SIZES ARE AVAILABLE. CONTACT YOUR LOCAL SUPPLIER FOR MORE INFORMATION. DRAWINGS ARE NOT TO SCALE.**

CASEMENT WINDOWS

Push Out Casement Window Sizes

	1' 6 1/4"	1' 8 1/2"	2' 0 1/2"	2' 4 1/2"	2' 6 1/2"	2' 8 1/2"	3' 0 1/2"
2' 0 1/2"							
2' 6"							
2' 8 1/2"							
3' 0"							
3' 4 1/2"							
4' 0"							
4' 6"							
5' 0"							
5' 6"							
6' 0"							

NOTES

† These units meet or exceed the following dimensions: Clear Opening Area 5.7 sq. ft., Clear Opening Width 20", Clear Opening Height 24" and 44" maximum floor to sill height (with standard 6' 10-1/2" structural header height). Local codes may differ. Verify egress requirements with your local building code official.

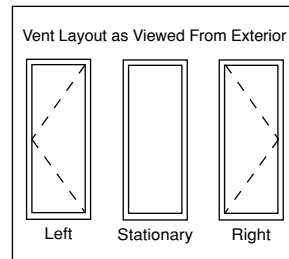
Units ≤ 24" Actual Frame Width (AFW) will receive hinges only (no clip or friction arm).
Units > 24" AFW and ≤ 30" AFW receive clip only.
Units > 30" AFW receive (2) 14" friction arms.

If glass is positioned within 18" of the finished floor, safety/tempered glass may be required. Local codes may differ. Verify tempered glass requirements with your local building code official.

Use structural joining material when necessary or required by code.

The light patterns illustrated apply to rectangular removable interior wood grilles, Full Divided Light, Simulated Divided Light, Decorelle 100, 150 and 400 and Finelight™ Grilles-Between-the-Glass. All removable interior wood grilles will be installed in the units unless otherwise specified.

For a metric conversion in millimeters, multiply dimensions in inches by 25.4.



FORMULA FOR COMBINATION WINDOWS

The overall frame dimension (both width and height) is equal to the sum of the individual unit frame dimensions plus joining material dimension(s).

The overall rough opening (both width and height) is equal to the overall frame dimensions plus 1/4" on all sides.

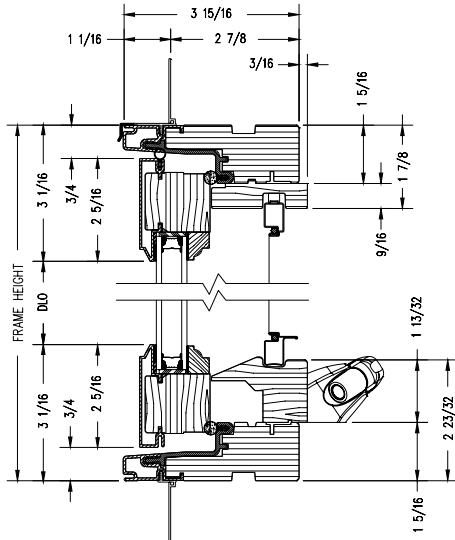
Any unit within each combination can be operating or stationary.

Joined Casement Combinations	2-Wide		3-Wide		4-Wide		5-Wide		
	Single Unit Frame Width	Rough Opening Width	Frame Width	Rough Opening Width	Frame Width	Rough Opening Width	Frame Width	Rough Opening Width	Frame Width
	1'-5 3/4"	3'-0"	2'-11 1/2"	4'-5 3/4"	4'-5 1/4"	5'-11 1/2"	5'-11"	7'-5 1/4"	7'-4 3/4"
	1'-8"	3'-4 1/2"	3'-4"	5'-0 1/2"	5'-0"	6'-8 1/2"	6'-8"	8'-4 1/2"	8'-4"
	2'-0"	4'-0 1/2"	4'-0"	6'-0 1/2"	6'-0"	8'-0 1/2"	8'-0"	10'-0 1/2"	10'-0"
	2'-4"	4'-8 1/2"	4'-8"	7'-0 1/2"	7'-0"	9'-4 1/2"	9'-4"	11'-8 1/2"	11'-8"
	2'-6"	5'-0 1/2"	5'-0"	7'-6 1/2"	7'-6"	10'-0 1/2"	10'-0"	12'-6 1/2"	12'-6"
	2'-8"	5'-4 1/2"	5'-4"	8'-0 1/2"	8'-0"	10'-8 1/2"	10'-8"	13'-4 1/2"	13'-4"
	3'-0"	6'-0 1/2"	6'-0"	9'-0 1/2"	9'-0"	12'-0 1/2"	12'-0"	15'-0 1/2"	15'-0"

FOR WINDOWS GREATER THAN 30 SQUARE FEET OR RATED HIGHER THAN PG50, ONE OF THESE THREE INSTALLATION METHODS IS REQUIRED:
A) THROUGH THE JAMB B) ALUMINUM INSTALLATION FLANGE OR C) INSTALLATION CLIPS.
ADDITIONAL CUSTOM SIZES ARE AVAILABLE. CONTACT YOUR LOCAL SUPPLIER FOR MORE INFORMATION. DRAWINGS ARE NOT TO SCALE.

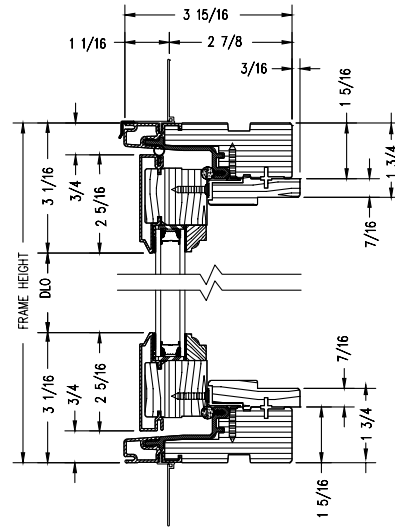
Casement Windows

Casement

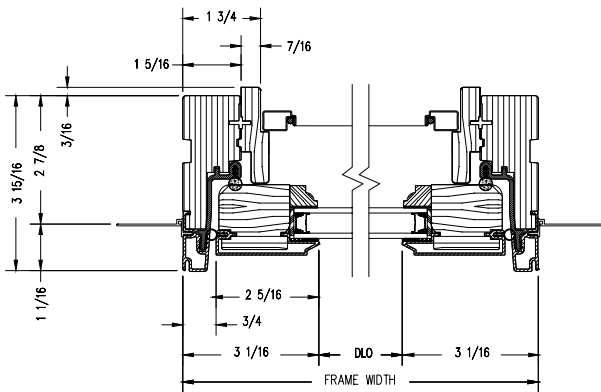


Vertical Section

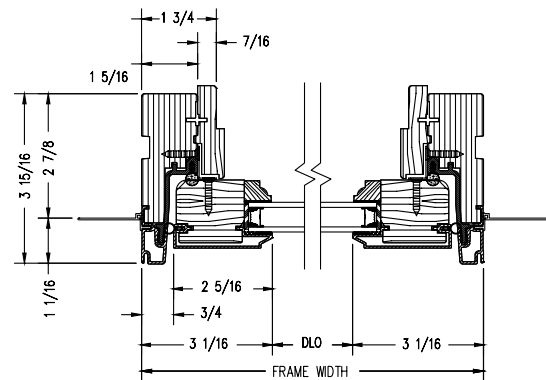
Sash-Set (2-Piece) Casement



Vertical Section



Horizontal Section



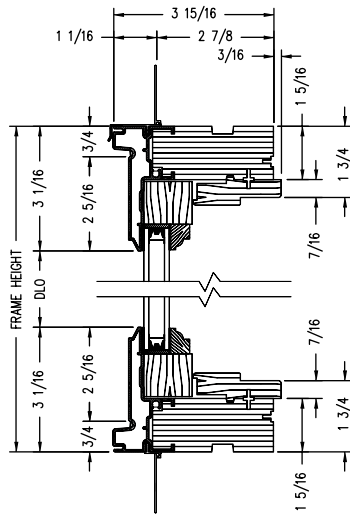
Horizontal Section

Shown with ovolo (colonial) glass stops.

PROPER INSTALLATION AND MAINTENANCE OF E-SERIES PRODUCTS IS ESSENTIAL TO ATTAIN OPTIMUM PERFORMANCE AND OPERATION. WRITTEN INSTALLATION INSTRUCTIONS THAT PROVIDE GUIDELINES FOR PROPER INSTALLATION ARE AVAILABLE BY VISITING ANDERSENWINDOWS.COM. CUSTOM SIZES ARE AVAILABLE. CONTACT YOUR LOCAL SUPPLIER FOR MORE INFORMATION. DRAWINGS ARE NOT TO SCALE.

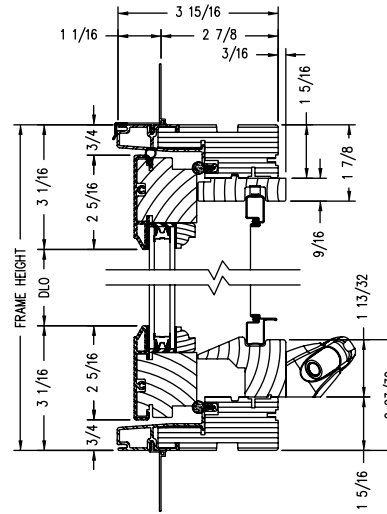
Casement Windows

Direct-Set (1-Piece) Casement

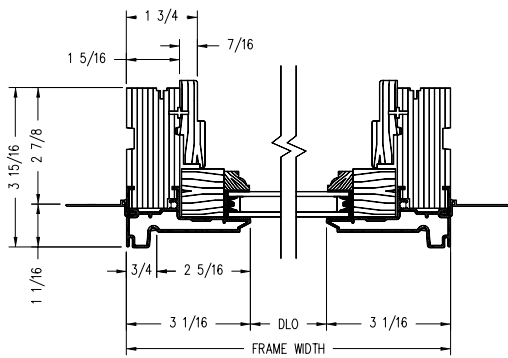


Vertical Section

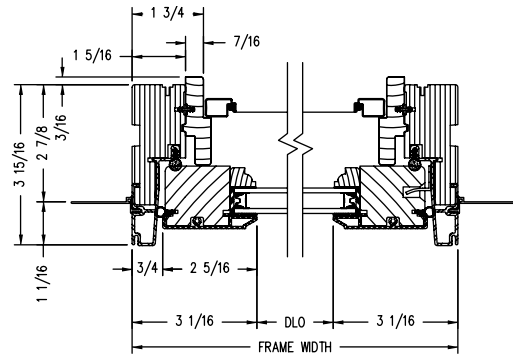
Arch Casement



Vertical Section



Horizontal Section

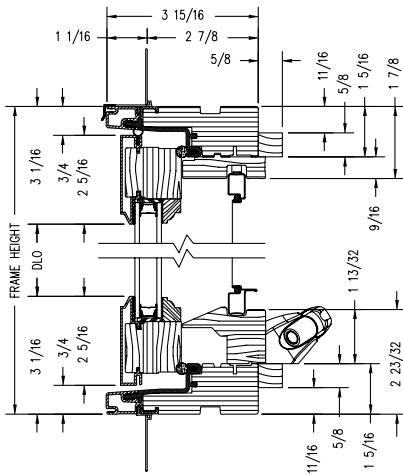


Horizontal Section

Shown with ovolo (colonial) glass stops.

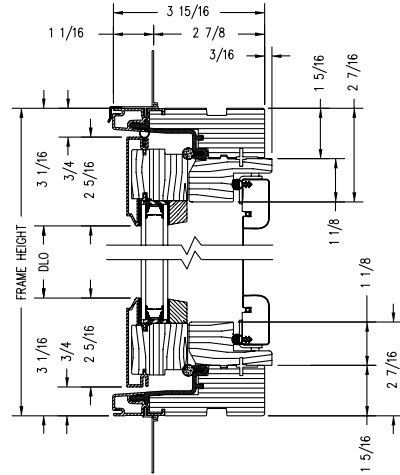
PROPER INSTALLATION AND MAINTENANCE OF E-SERIES PRODUCTS IS ESSENTIAL TO ATTAIN OPTIMUM PERFORMANCE AND OPERATION. WRITTEN INSTALLATION INSTRUCTIONS THAT PROVIDE GUIDELINES FOR PROPER INSTALLATION ARE AVAILABLE BY VISITING ANDERSENWINDOWS.COM. CUSTOM SIZES ARE AVAILABLE. CONTACT YOUR LOCAL SUPPLIER FOR MORE INFORMATION. DRAWINGS ARE NOT TO SCALE.

French Casement Windows

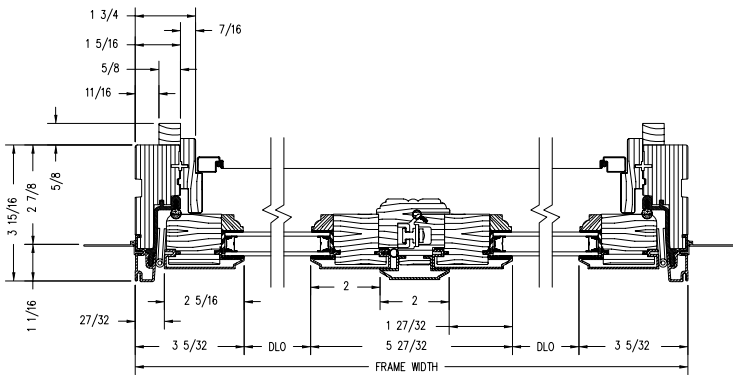


Vertical Section

Push Out Casement Windows

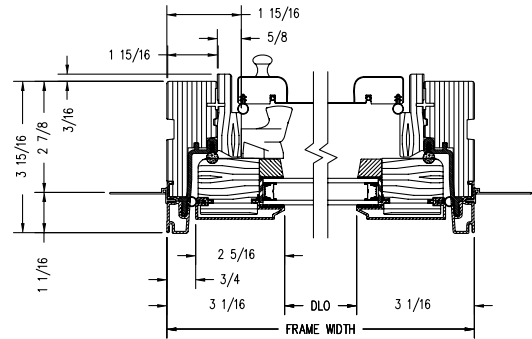


Vertical Section



Horizontal Section

Shown with ovolo (colonial) glass stops.



Horizontal Section

Shown with contemporary glass stops.

PROPER INSTALLATION AND MAINTENANCE OF E-SERIES PRODUCTS IS ESSENTIAL TO ATTAIN OPTIMUM PERFORMANCE AND OPERATION. WRITTEN INSTALLATION INSTRUCTIONS THAT PROVIDE GUIDELINES FOR PROPER INSTALLATION ARE AVAILABLE BY VISITING ANDERSENWINDOWS.COM. CUSTOM SIZES ARE AVAILABLE. CONTACT YOUR LOCAL SUPPLIER FOR MORE INFORMATION. DRAWINGS ARE NOT TO SCALE.

AWNING WINDOWS

Used alone or as an accent window, E-Series awning windows add visual interest and ventilation. Plus, they are easy to clean from the inside, while still offering a weathertight seal for outstanding performance. They include stainless steel hardware with the operator located on the sill for a true awning style and feature the same sight lines as our casement window for design flexibility when creating large window combinations.

Awning Overview	50
Push Out Casement Overview	52
Sizing	
Awning	54
Push Out Awning	54
Details	55
Installation Materials	154
Product Performance	158





AWNING WINDOW

FEATURES

AWNING WINDOWS

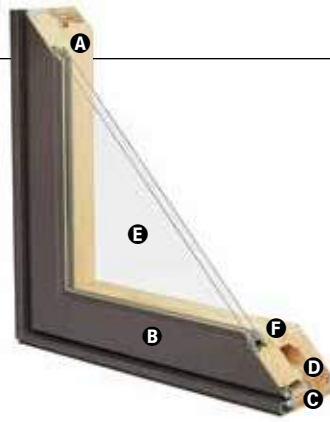
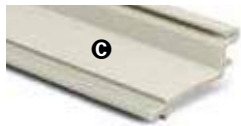
FRAME & SASH

A Select wood components are kiln dried and treated with water/insect repellent and preservative. Interior wood surfaces are available in pine, mixed grain Douglas fir, cherry, hickory, mahogany*, maple, oak, walnut, alder or vertical grain Douglas fir. Interior surfaces are available unfinished or factory primed. Factory-applied finishes are available in a variety of stain and paint options.

B Wood components are fitted with aluminum extrusions on the exterior. 50 exterior colors that meet AAMA 2604 and 2605 specifications are available, as well as custom colors. Also available is a selection of seven exterior anodized options. Integral, butyl-backed corner keys provide a positive, tight seal.

Vinyl installation flanges are pre-applied into a kerf on the frame exterior to facilitate installation. Optional aluminum flanges and metal installation clips are available.

C A Fibrex® material thermal barrier encompasses the interior perimeter of the frame and is a neutral beige color.



D A continuous perimeter bulb weatherstrip around the frame is positioned on the Fibrex material thermal barrier and provides solid surface contact with the sash.

A secondary bulb weatherstrip is applied on three sides of the sash into a stand-alone kerf on the aluminum extrusion. Available in white or optional black.

GLASS

E High-Performance Low-E4® glass with a low-conductivity spacer. Triple-pane glass, tinted, clear dual-pane, high-altitude glass and other special glazing options are available.

F Glass is fixed in place from the interior with wood stops that can be removed for easy reglazing if necessary. Glass stops available in ovolo (colonial) and contemporary profiles.

HARDWARE

Equipped with a stainless steel gear operator, concealed hinges and hinge track.

Locks, handles and operator covers are available in 10 finishes and can be shipped separately closer to job completion.



Concealed sash locks provide a positive lock. Stainless steel keepers resist corrosion.** Available in finishes to match operator handles.

HARDWARE OPTIONS



Antique Brass | **Black**
Bright Chrome | Bronze
Gold | Oil Rubbed Bronze
Pewter | Polished Brass
Satin Chrome | White

Bold name denotes finish shown.

HARDWARE FINISHES



Oil rubbed bronze is a "living" finish that will change with time and use.

EXTERIOR & INTERIOR OPTIONS

EXTERIOR COLORS 50 exterior colors, 7 anodized finishes and custom colors. See exterior colors on page 11.

INTERIOR WOOD SPECIES

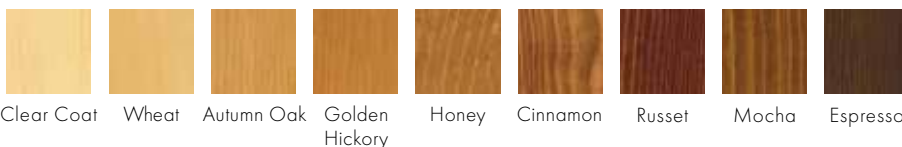


Naturally occurring variations in grain, color and texture of wood make each window one of a kind.

All factory-finished options are shown on pine.

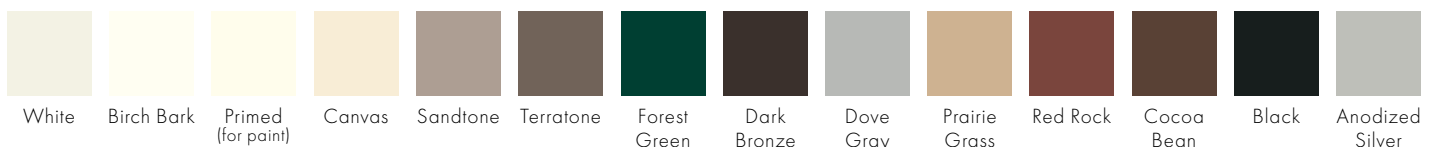
Painted options available on pine. Dark bronze and black painted options available on pine or maple. Anodized silver painted option available on maple only.

FACTORY-FINISHED INTERIORS



Interior custom stains, paints and color matching available.

INTERIOR PAINTED OPTIONS



*Actual wood species is either Sapele or Sipo, both non-endangered species grown in Africa, with color and characteristics similar to Central American mahoganies.

**Visit andersenwindows.com/warranty for details.

Printing limitations prevent exact replication of colors and finishes. Please see your Andersen supplier for actual color and finish samples.

ACCESSORIES Sold Separately

AWNING WINDOWS

HARDWARE

Power Operator



Power operators are available in bronze, white, black or gold.

Window Opening Control Device Kit

An optional Window Opening Control Device Kit is available, which limits opening the sash to less than 4" when the window is first opened. Available in stone and white.

Construction Hardware



Construction locks and operator handles keep your permanent window hardware away from the construction process and possible damage yet allow operation of windows during construction.

SENSORS

VeriLock® Security Sensors

VeriLock sensors are unique as they detect whether the windows are locked or unlocked* — a feature no other sensors can provide. See page 27 for Smart Home options.

Open/Closed Sensors

Wireless open/closed sensors are available in four colors. See page 27 for details.

PRIVACY OPTIONS

System 3 Blinds



A 5/8" aluminum slat blind is mounted to an extruded aluminum blind panel and applied to the window, creating a triple-glazed window boasting privacy and energy efficiency. Available in three colors. Blind panels are offered in white, tan, gold or an optional wood veneer to match your interior.

System 3 Shades

Pleated fabric shades are available in four colors to effortlessly and beautifully filter the light. See page 25 for more details.

INSECT SCREENS

Conventional Insect Screens



Charcoal fiberglass screen mesh fits into an aluminum frame in colors of bronze, white or gold as well as optional black. Aluminum screen mesh and wood-veneered insect screen also available as options.

TruScene® Insect Screens



TruScene insect screens available in painted aluminum or wood-veneered options.

Retractable Insect Screens

Retractable insect screen available in wood-veneered options.

See page 24 for more information on our insect screen options.

GRILLES

Full Divided Light

Permanent interior and exterior grilles with grille spacer bars between two panes of glass. Available in 5/8", 7/8", 1 1/8", 1 1/2", or 2 1/4" widths. Interior grilles are available with ovolo or contemporary profile (ovolo profile shown below). Not all widths are shown.



5/8"

7/8"



1 1/8"

1 1/2"

Simulated Divided Light

Permanent exterior and interior grilles without grille spacer bars. Available in 5/8", 7/8", 1 1/8", 1 1/2", or 2 1/4" widths. Interior grilles are available with ovolo or contemporary profile (ovolo profile shown below). Not all widths are shown.



7/8"

Finelight™ Grilles-Between-the-Glass

Available in 5/8" flat or 1" contoured aluminum profiles. Two-tone colors of pebble tan/colony white, sierra bronze/colony white or forest green/colony white are available on the 1" profile.



5/8" Flat

1" Contoured

Removable Interior Wood Grilles

Removable interior wood grilles are available in a 7/8" width and ovolo or contemporary profiles. Optional surround for removable grille and permanent exterior grilles also available.



7/8"

See page 22 for more information on grilles.

*When properly configured and maintained with a professionally installed security system and/or self monitoring system compatible with Honeywell® 5800 controls. See your Andersen supplier for more information.

PUSH OUT AWNING WINDOW

FEATURES

PUSH OUT AWNING WINDOWS

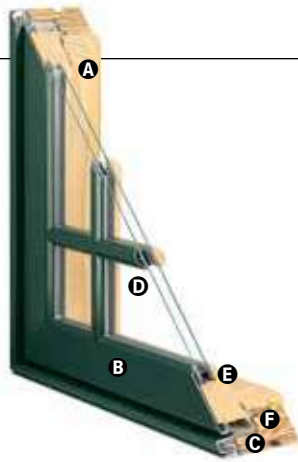
FRAME & SASH

A Select wood components are kiln dried and treated with water/insect repellent and preservative. Interior wood surfaces are available in pine, mixed grain Douglas fir, cherry, hickory, mahogany*, maple, oak, walnut, alder or vertical grain Douglas fir. Interior surfaces are available unfinished or factory primed. Factory-applied finishes are available in a variety of stain and paint options.

B Wood components are fitted with aluminum extrusions on the exterior. 50 exterior colors that meet AAMA 2604 and 2605 specifications are available, as well as custom colors. Also available is a selection of seven exterior anodized options.

Vinyl installation flanges are pre-applied into a kerf on the frame exterior to facilitate installation. Optional aluminum flanges and metal installation clips are available.

C A Fibrex® material thermal barrier encompasses the interior perimeter of the frame and is a neutral beige color.



D A continuous perimeter bulb weatherstrip around the frame is positioned on the Fibrex material thermal barrier and provides solid surface contact with the sash.

A secondary bulb weatherstrip is applied on three sides of the sash. Available in white or optional black.

GLASS

E High-Performance Low-E4® glass with a low-conductivity spacer. Triple-pane glass, tinted, clear dual-pane, high-altitude glass and other special glazing options are available.

F Glass is fixed in place from the interior with wood stops that can be removed for easy reglazing if necessary. Glass stops available in ovolo (colonial) and contemporary profiles.

HARDWARE

Manual lock system featuring lock handles allows for easy operation. Units under 40" high use a single lock, while units 40" and taller use dual locks. Lock handles are available in six finishes.

Equipped with a stainless steel 4-bar friction hinge.

HARDWARE OPTIONS



Antique Brass | Black
Oil Rubbed Bronze
Polished Brass
Satin Chrome | White

Bold name denotes finish shown.

HARDWARE FINISHES



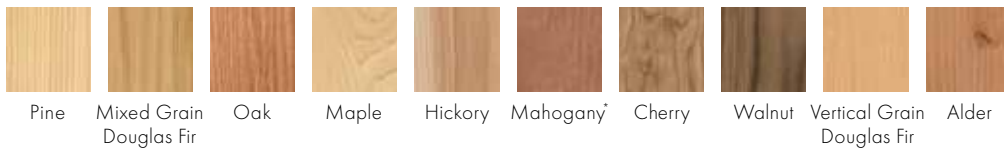
Antique Brass Black Oil Rubbed Bronze Polished Brass Satin Chrome White

Oil rubbed bronze is a "living" finish that will change with time and use.

EXTERIOR & INTERIOR OPTIONS

EXTERIOR COLORS 50 exterior colors, 7 anodized finishes and custom colors. See exterior colors on page 11.

INTERIOR WOOD SPECIES



Naturally occurring variations in grain, color and texture of wood make each window one of a kind.

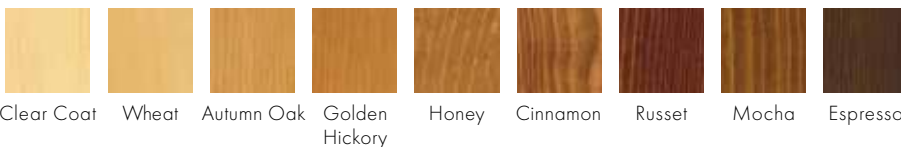
All factory-finished options are shown on pine.

Painted options available on pine. Dark bronze and black painted options available on pine or maple.

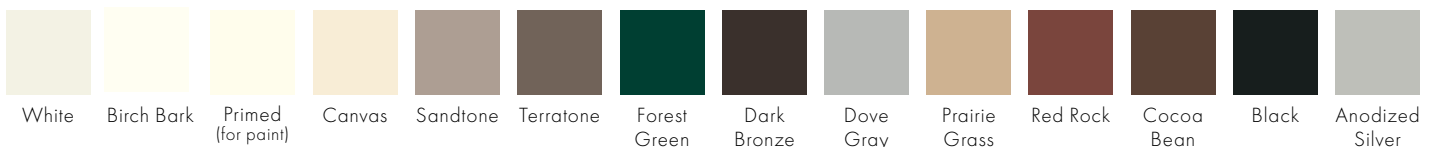
Anodized silver painted option available on maple only.

Interior custom stains, paints and color matching available.

FACTORY-FINISHED INTERIORS



INTERIOR PAINTED OPTIONS



*Actual wood species is either Sapele or Sipo, both non-endangered species grown in Africa, with color and characteristics similar to Central American mahoganies. Printing limitations prevent exact replication of colors and finishes. Please see your Andersen supplier for actual color and finish samples.

ACCESSORIES Sold Separately

PUSH OUT AWNING WINDOWS

SENSORS

VeriLock® Security Sensors

VeriLock sensors are unique as they detect whether the windows are locked or unlocked* — a feature no other sensors can provide. See page 27 for Smart Home options.

INSECT SCREENS

Hinged Insect Screens



Oil Rubbed Bronze**

Hinged insect screen opens to the interior, providing access to the lock handle. Choose from charcoal fiberglass or aluminum screen mesh. Available in wood-veneered options. Insect screen pulls are available in antique brass, black, oil rubbed bronze,** polished brass, satin chrome and white.

Retractable Insect Screens

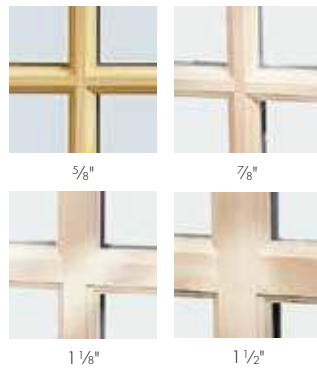
Retractable insect screen available in wood-veneered options. Extension jambs required for push out awning windows with retractable insect screens.

See page 24 for more information on our insect screen options.

GRILLES

Full Divided Light

Permanent interior and exterior grilles with grille spacer bars between two panes of glass. Available in 5/8", 7/8", 1 1/8", 1 1/2", or 2 1/4" widths. Interior grilles are available with ovolo or contemporary profile (ovolo profile shown below). Not all widths are shown.



Simulated Divided Light

Permanent exterior and interior grilles without grille spacer bars. Available in 5/8", 7/8", 1 1/8", 1 1/2", or 2 1/4" widths. Interior grilles are available with ovolo or contemporary profile (ovolo profile shown below). Not all widths are shown.



Finelight™

Grilles-Between-the-Glass

Available in 5/8" flat or 1" contoured aluminum profiles. Two-tone colors of pebble tan/colony white, sierra bronze/colony white or forest green/colony white are available on the 1" profile.



Removable Interior Wood Grilles

Removable interior wood grilles are available in a 7/8" width and ovolo or contemporary profiles. Optional surround for removable grille and permanent exterior grilles also available.



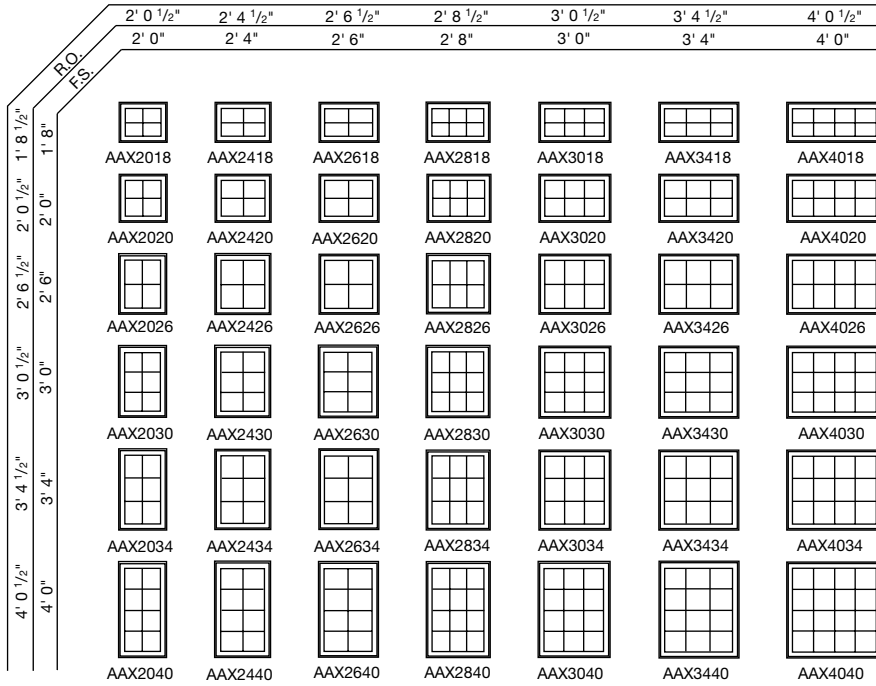
See page 22 for more information on grilles.

*When properly configured and maintained with a professionally installed security system and/or self monitoring system compatible with Honeywell® 5800 controls. See your Andersen supplier for more information.

**Oil rubbed bronze is a "living" finish that will change with time and use.

AWNING WINDOWS

Awning Window Sizes



NOTES

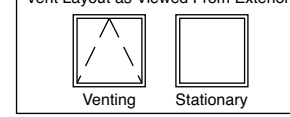
If glass is positioned within 18" of the finished floor, safety/tempered glass may be required. Local codes may differ. Verify tempered glass requirements with your local building code official.

Use structural joining material when necessary or required by code.

The light patterns illustrated apply to rectangular removable interior wood grilles, Full Divided Light, Simulated Divided Light, Decorelle 100, 150 and 400 and Finelight™ Grilles-Between-the-Glass. All removable interior wood grilles will be installed in the units unless otherwise specified.

For a metric conversion in millimeters, multiply dimensions in inches by 25.4.

Vent Layout as Viewed From Exterior



FORMULA FOR COMBINATION WINDOWS

The overall frame dimension (both width and height) is equal to the sum of the individual unit frame dimensions plus joining material dimension(s).

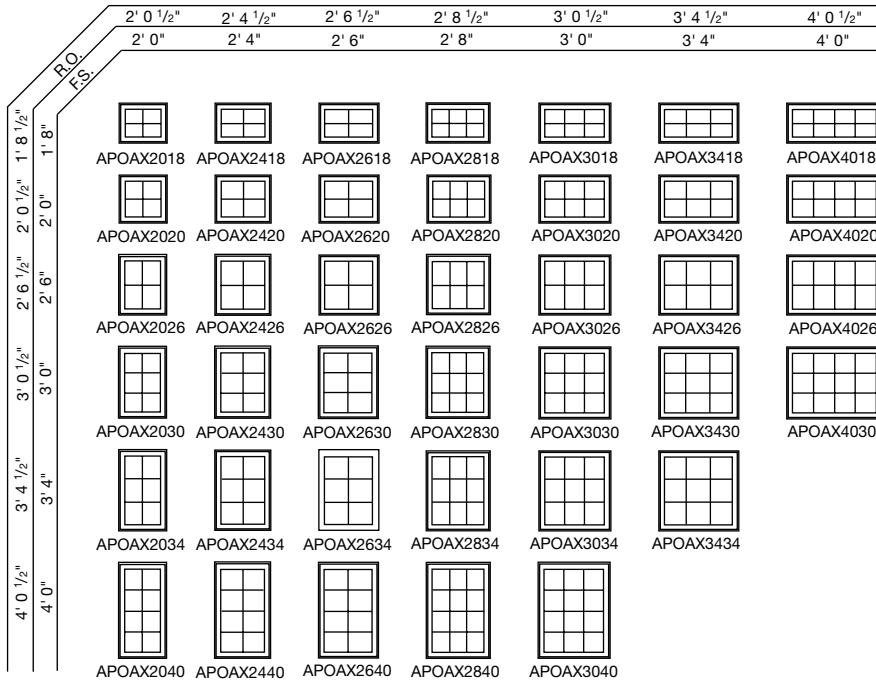
The overall rough opening (both width and height) is equal to the overall frame dimensions plus 1/4" on all sides.

Any unit within each combination can be operating or stationary.

PUSH OUT AWNING

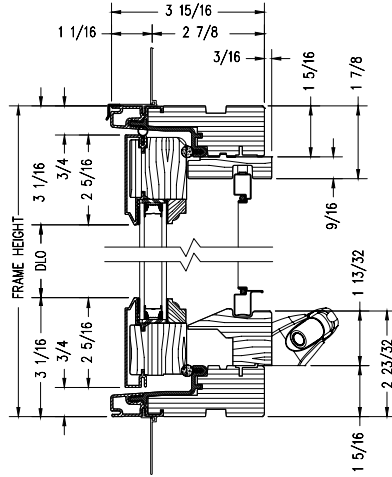
Units ≥ 36" Actual Frame Height receive (2) friction stays.

Push Out Awning Window Sizes

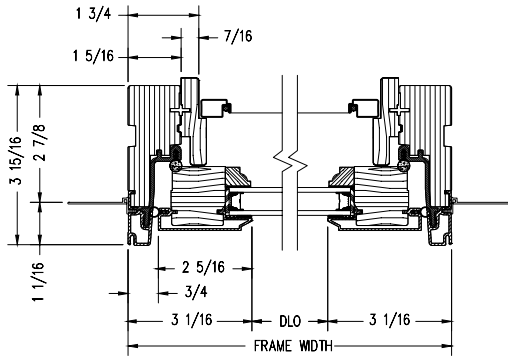


FOR WINDOWS GREATER THAN 30 SQUARE FEET OR RATED HIGHER THAN PG50, ONE OF THESE THREE INSTALLATION METHODS IS REQUIRED:
 A) THROUGH THE JAMB B) ALUMINUM INSTALLATION FLANGE OR C) INSTALLATION CLIPS.
 ADDITIONAL CUSTOM SIZES ARE AVAILABLE. CONTACT YOUR LOCAL SUPPLIER FOR MORE INFORMATION. DRAWINGS ARE NOT TO SCALE.

Awning Windows



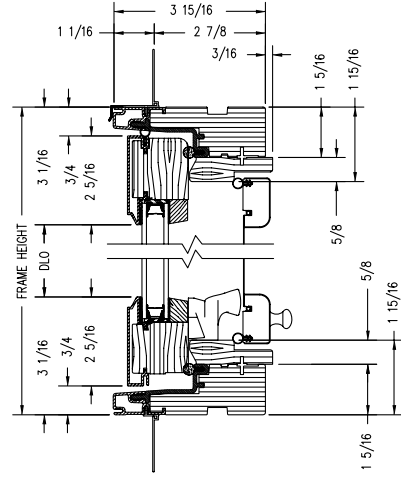
Vertical Section



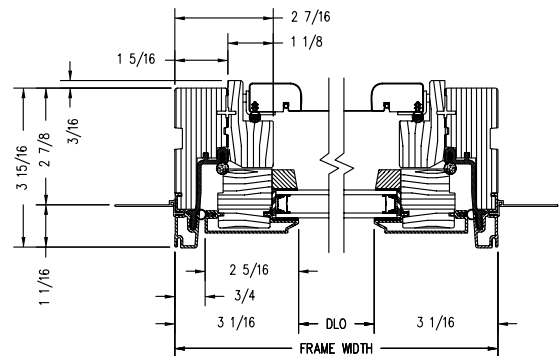
Horizontal Section

Shown with ovolo (colonial) glass stops.

Push Out Awning Windows



Vertical Section



Horizontal Section

Shown with contemporary glass stops.

E-Series Awning Windows

Joined Awning Width Combinations	2-Wide		3-Wide		
	Single Unit Frame Width	Rough Opening Width	Frame Width	Rough Opening Width	Frame Width
	2'-0"	4'-0 1/2"	4'-0"	6'-0 1/2"	6'-0"
	2'-4"	4'-8 1/2"	4'-8"	7'-0 1/2"	7'-0"
	2'-6"	5'-0 1/2"	5'-0"	7'-6 1/2"	7'-6"
	2'-8"	5'-4 1/2"	5'-4"	8'-0 1/2"	8'-0"
	3'-0"	6'-0 1/2"	6'-0"	9'-0 1/2"	9'-0"
	3'-4"	6'-8 1/2"	6'-8"	10'-0 1/2"	10'-0"
	4'-0"	8'-0 1/2"	8'-0"	12'-0 1/2"	12'-0"

Joined Awning Height Combinations	2-High		3-High		
	Single Unit Frame Height	Rough Opening Height	Frame Height	Rough Opening Height	Frame Height
	1'-8"	3'-4 1/2"	3'-4"	5'-0 1/2"	5'-0"
	2'-0"	4'-0 1/2"	4'-0"	6'-0 1/2"	6'-0"
	2'-6"	5'-0 1/2"	5'-0"	7'-6 1/2"	7'-6"
	3'-0"	6'-0 1/2"	6'-0"	9'-0 1/2"	9'-0"
	3'-4"	6'-8 1/2"	6'-8"	10'-0 1/2"	10'-0"
	4'-0"	8'-0 1/2"	8'-0"	12'-0 1/2"	12'-0"

PROPER INSTALLATION AND MAINTENANCE OF E-SERIES PRODUCTS IS ESSENTIAL TO ATTAIN OPTIMUM PERFORMANCE AND OPERATION. WRITTEN INSTALLATION INSTRUCTIONS THAT PROVIDE GUIDELINES FOR PROPER INSTALLATION ARE AVAILABLE BY VISITING ANDERSENWINDOWS.COM. CUSTOM SIZES ARE AVAILABLE. CONTACT YOUR LOCAL SUPPLIER FOR MORE INFORMATION. DRAWINGS ARE NOT TO SCALE.

DOUBLE-HUNG WINDOWS

A classic beauty, double-hung windows offer a sleek design with ventilation options from the top, bottom or both. Add a TruScene® insect screen to let the outside in, maximizing your view, not limiting it. E-Series double-hung windows give you the option to select aluminum or wood jamb liner inserts for added visual appeal and include flush-mounted hardware that allows for easy tilt-in operation.

Double-Hung Overview	58
Double-Hung Insert Overview	60
Double-Hung Sash Replacement Kit Overview	62
Sizing	
Double-Hung	64
Double-Hung Cottage & Reverse Cottage	66
Double-Hung Picture & Transom	67
Arch Single-Hung	68
Arch Single-Hung Reverse Cottage	70
Direct-Set Double-Hung Transom	71
Monumental Single-Hung	72
Details	74
Installation Materials	154
Product Performance	158





DOUBLE-HUNG WINDOW

FEATURES

DOUBLE-HUNG WINDOWS

FRAME & SASH

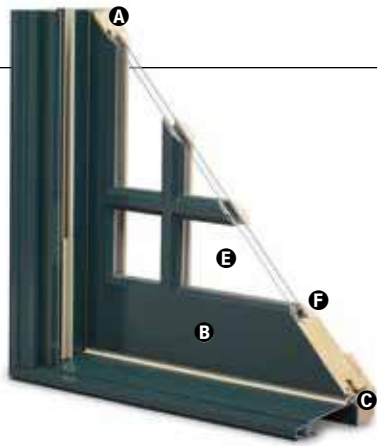
A Select wood components are kiln dried and treated with water/insect repellent and preservative. Interior wood surfaces are available in pine, mixed grain Douglas fir, cherry, hickory, mahogany*, maple, oak, walnut, alder or vertical grain Douglas fir. Interior surfaces are available unfinished or factory primed. Factory-applied finishes are available in a variety of stain and paint options.

B Wood components are fitted with aluminum extrusions on the exterior. 50 exterior colors that meet AAMA 2604 and 2605 specifications are available, as well as custom colors. Also available is a selection of seven exterior anodized options.

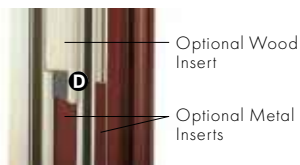
Optional vinyl installation flanges are pre-applied into a kerf on the frame exterior to facilitate installation. Optional aluminum flanges or metal installation clips are available.

C Compression bulb weatherstrip is applied on the bottom sash, head jamb, at the meeting rail and on side jambs for a maximum weather seal.

Jamb liners encase balancer assemblies that allow each sash to be tilted 90° inward from a bottom pivot and stay securely in place for washing.



D Double-hung jamb liners incorporate synthetic interior and exterior inserts or optional painted aluminum exterior and wood-veneered interior inserts.



GLASS

E High-Performance Low-E4® glass with a low-conductivity spacer. Triple-pane glass, tinted, clear dual-pane, high-altitude glass and other special glazing options are available.

F Glass is fixed in place from the interior with wood stops that can be removed for easy reglazing if necessary. Glass stops available in ovolo (colonial) and contemporary profiles.

HARDWARE

Sash lock/tilt mechanisms and keepers give a slim, more traditional design and allow opening and tilting of the window in one operation. Tilting the sash from the inside for cleaning is effortless.

Optional surface mount sash lifts allow for easy operation. Units less than 3' wide use one lift. Units 3' wide and greater use two lifts.

HARDWARE OPTIONS



Lock



Sash Lift

Antique Brass | **Black** | Bright Chrome | Bronze | Gold
Oil Rubbed Bronze | Pewter | Polished Brass | Satin Chrome | White

Windows with VeriLock® sensors use a different sash lock. See the next page for details.

HARDWARE FINISHES



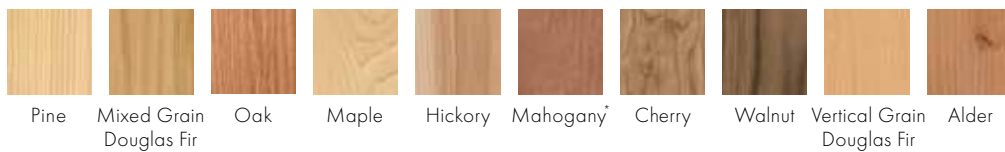
Antique Brass | Black | Bright Chrome | Bronze | Gold
Oil Rubbed Bronze | Pewter | Polished Brass | Satin Chrome | White

Oil rubbed bronze is a "living" finish that will change with time and use.

EXTERIOR & INTERIOR OPTIONS

EXTERIOR COLORS 50 exterior colors, 7 anodized finishes and custom colors. See exterior colors on page 11.

INTERIOR WOOD SPECIES



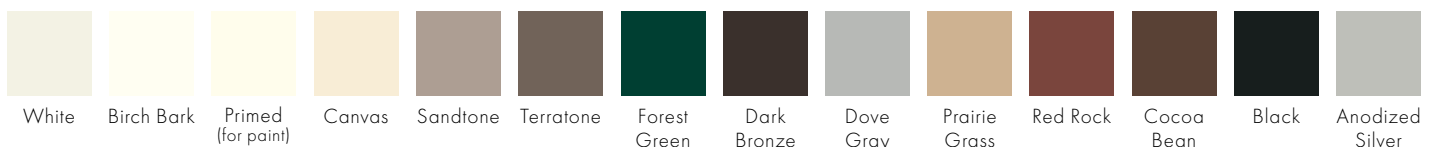
Pine | Mixed Grain Douglas Fir | Oak | Maple | Hickory | Mahogany* | Cherry | Walnut | Vertical Grain Douglas Fir | Alder

FACTORY-FINISHED INTERIORS



Clear Coat | Wheat | Autumn Oak | Golden Hickory | Honey | Cinnamon | Russet | Mocha | Espresso

INTERIOR PAINTED OPTIONS



White | Birch Bark | Primed (for paint) | Canvas | Sandtone | Terratone | Forest Green | Dark Bronze | Dove Gray | Prairie Grass | Red Rock | Cocoa Bean | Black | Anodized Silver

Naturally occurring variations in grain, color and texture of wood make each window one of a kind.

All factory-finished options are shown on pine.

Painted options available on pine. Dark bronze and black painted options available on pine or maple. Anodized silver painted option available on maple only.

Interior custom stains, paints and color matching available.

*Actual wood species is either Sapele or Sipo, both non-endangered species grown in Africa, with color and characteristics similar to Central American mahoganies. Printing limitations prevent exact replication of colors and finishes. Please see your Andersen supplier for actual color and finish samples.

ACCESSORIES Sold Separately

DOUBLE-HUNG WINDOWS

HARDWARE

Window Opening Control Device Kit

An optional Window Opening Control Device Kit is available, which limits opening the sash to less than 4" when the window is first opened. Available in stone and white.

SENSORS

VeriLock® Security Sensors



VeriLock sensors are unique as they detect whether the windows are locked or unlocked* — a feature no other sensors can provide. See page 27 for Smart Home options.

Open/Closed Sensors

Wireless open/closed sensors are available in four colors. See page 27 for details.

INSECT SCREENS

Conventional Insect Screens



Charcoal fiberglass screen mesh fits into an aluminum frame in all 50 exterior colors and seven anodized finishes. Available in half or full insect screens. Aluminum screen mesh is available as an option.

TruScene® Insect Screens

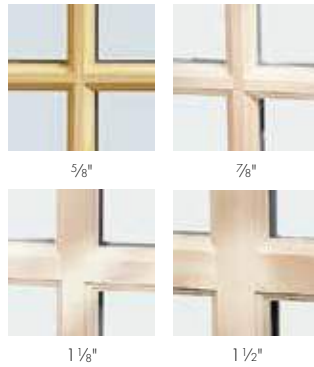
TruScene insect screens available in all 50 exterior colors and seven anodized finishes.

See page 24 for more information on our insect screen options.

GRILLES

Full Divided Light

Permanent interior and exterior grilles with grille spacer bars between two panes of glass. Available in 5/8", 7/8", 1 1/8", 1 1/2", or 2 1/4" widths. Interior grilles are available with ovolo or contemporary profile (ovolo profile shown below). Not all widths are shown.



Simulated Divided Light

Permanent exterior and interior grilles without grille spacer bars. Available in 5/8", 7/8", 1 1/8", 1 1/2", or 2 1/4" widths. Interior grilles are available with ovolo or contemporary profile (ovolo profile shown below). Not all widths are shown.



Finelight™

Grilles-Between-the-Glass

Available in 5/8" flat or 1" contoured aluminum profiles. Two-tone colors of pebble tan/colony white, sierra bronze/colony white or forest green/colony white are available on the 1" profile.



5/8" Flat 1" Contoured

Removable Interior Wood Grilles

Removable interior wood grilles are available in a 7/8" width and ovolo or contemporary profiles. Optional surround for removable grille and permanent exterior grilles also available.



7/8"

See page 22 for more information on grilles.

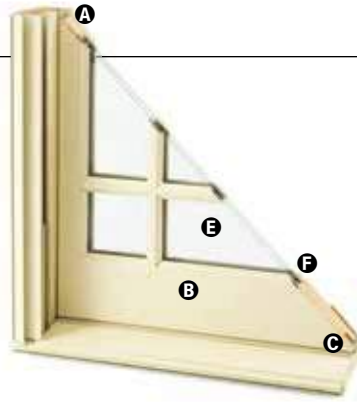
*When properly configured and maintained with a professionally installed security system and/or self monitoring system compatible with Honeywell® 5800 controls. See your Andersen supplier for more information.

DOUBLE-HUNG INSERT WINDOW

FEATURES

DOUBLE-HUNG INSERT WINDOWS

Double-hung insert window fits into an existing window frame making installation a breeze. The appearance of the interior and exterior of the home are maintained because the existing frame, wall coverings and trim work stay completely intact.



FRAME & SASH

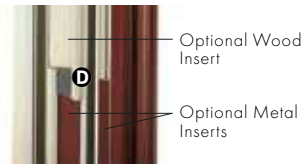
A Select wood components are kiln dried and treated with water/insect repellent and preservative. Interior wood surfaces are available in pine, mixed grain Douglas fir, cherry, hickory, mahogany*, maple, oak, walnut, alder or vertical grain Douglas fir. Interior surfaces are available unfinished or factory primed. Factory-applied finishes are available in a variety of stain and paint options.

B Wood components are fitted with aluminum extrusions on the exterior. 50 exterior colors that meet AAMA 2604 and 2605 specifications are available, as well as custom colors. Also available is a selection of seven exterior anodized options.

C Compression bulb weatherstrip is applied on the bottom sash, head jamb, at the meeting rail and on side jambs for a maximum weather seal.

Jamb liners encase balancer assemblies that allow each sash to be tilted 90° inward from a bottom pivot and stay securely in place for washing.

D Basic jamb liners are available in beige or white and are made of synthetic material. Optional painted aluminum exterior inserts and wood-veneered interior inserts also available.



SILL

8 degrees is the standard slope. Filler block is used on existing window sill angles of less than 8 degrees.

GLASS

E High-Performance Low-E4® glass with a low-conductivity spacer. Triple-pane glass, tinted, clear dual-pane, high-altitude glass and other special glazing options are available.

F Glass is fixed in place from the interior with wood stops that can be removed for easy reglazing if necessary. Glass stops available in ovolo (colonial) and contemporary profiles.

HARDWARE OPTIONS



Lock



Sash Lift

Antique Brass | **Black** | Bright Chrome | Bronze | Gold
Oil Rubbed Bronze | Pewter | Polished Brass | Satin Chrome | White

Windows with VeriLock® sensors use a different sash lock. See the next page for details.
Bold name denotes finish shown.

HARDWARE FINISHES

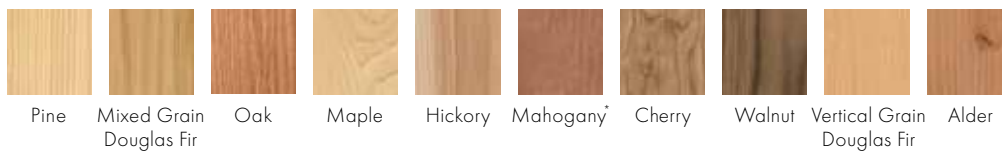


Oil rubbed bronze is a "living" finish that will change with time and use.

EXTERIOR & INTERIOR OPTIONS

EXTERIOR COLORS 50 exterior colors, 7 anodized finishes and custom colors. See exterior colors on page 11.

INTERIOR WOOD SPECIES



Naturally occurring variations in grain, color and texture of wood make each window one of a kind.

All factory-finished options are shown on pine.

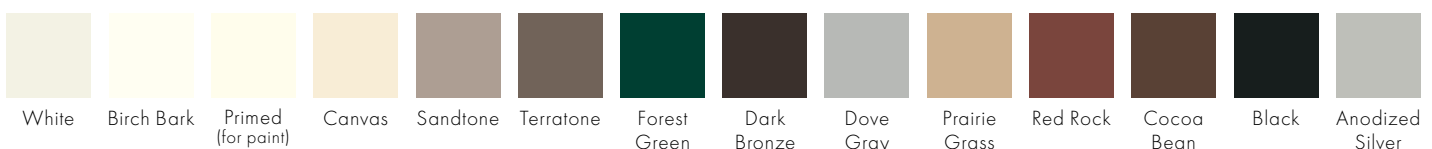
FACTORY-FINISHED INTERIORS



Painted options available on pine. Dark bronze and black painted options available on pine or maple. Anodized silver painted option available on maple only.

Interior custom stains, paints and color matching available.

INTERIOR PAINTED OPTIONS



*Actual wood species is either Sapele or Sipo, both non-endangered species grown in Africa, with color and characteristics similar to Central American mahoganies. Printing limitations prevent exact replication of colors and finishes. Please see your Andersen supplier for actual color and finish samples.

HARDWARE

Sash lock/tilt mechanisms and keepers give a slim, more traditional design and allow opening and tilting of the window in one operation. Tilting the sash from the inside for cleaning is effortless.

Surface mount sash lifts allow for easy operation. Units less than 3' wide use one lift. Units 3' wide and greater use two lifts.

MEASURING GUIDELINES

Measuring guidelines for double-hung insert and picture insert windows can be found on andersenwindows.com/measure.

ACCESSORIES Sold Separately

DOUBLE-HUNG INSERT WINDOWS

HARDWARE

Window Opening Control Device Kit

An optional Window Opening Control Device Kit is available, which limits opening the sash to less than 4" when the window is first opened. Available in stone and white.

SENSORS

VeriLock® Security Sensors



VeriLock sensors are unique as they detect whether the windows are locked or unlocked* — a feature no other sensors can provide. See page 27 for Smart Home options.

Open/Closed Sensors

Wireless open/closed sensors are available in four colors. See page 27 for details.

INSECT SCREENS

Conventional Insect Screens



Charcoal fiberglass screen mesh fits into an aluminum frame in all 50 exterior colors and seven anodized finishes. Available in half or full insect screens. Aluminum screen mesh is available as an option.

TruScene® Insect Screens

TruScene insect screens available in all 50 exterior colors and seven anodized finishes.

See page 24 for more information on our insect screen options.

GRILLES

Full Divided Light

Permanent interior and exterior grilles with grille spacer bars between two panes of glass. Available in 5/8", 7/8", 1 1/8", 1 1/2", or 2 1/4" widths. Interior grilles are available with ovolo or contemporary profile (ovolo profile shown below). Not all widths are shown.



5/8"

7/8"



1 1/8"

1 1/2"

Simulated Divided Light

Permanent exterior and interior grilles without grille spacer bars. Available in 5/8", 7/8", 1 1/8", 1 1/2", or 2 1/4" widths. Interior grilles are available with ovolo or contemporary profile (ovolo profile shown below). Not all widths are shown.



7/8"

Finelight™

Grilles-Between-the-Glass

Available in 5/8" flat or 1" contoured aluminum profiles. Two-tone colors of pebble tan/colony white, sierra bronze/colony white or forest green/colony white are available on the 1" profile.



5/8" Flat

1" Contoured

Removable Interior Wood Grilles

Removable interior wood grilles are available in a 7/8" width and ovolo or contemporary profiles. Optional surround for removable grille and permanent exterior grilles also available.



7/8"

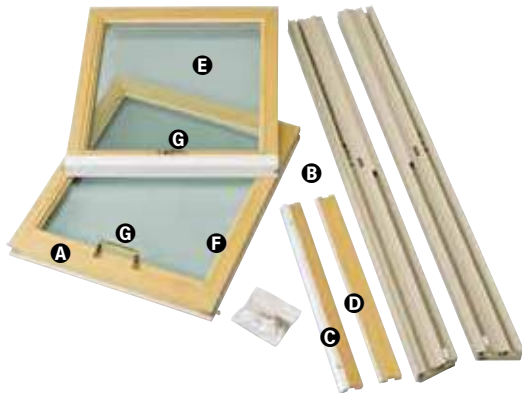
See page 22 for more information on grilles.

*When properly configured and maintained with a professionally installed security system and/or self monitoring system compatible with Honeywell® 5800 controls. See your Andersen supplier for more information.

DOUBLE-HUNG SASH REPLACEMENT KIT

FEATURES

DOUBLE-HUNG SASH REPLACEMENT KITS



Double-hung sash replacement kits are complete with window sash, locking hardware and sash lifts, compression jamb liners and balancer systems, sill filler, head parting stop and installation hardware. Each kit is built to your exact measurements.

The kits were designed to replace older sash with a new energy-efficient sash without removing the trim and the window frame. The sash replacement will fit a double-hung window with a jamb pocket depth of 2 1/4" or larger.

Kits are also available in a picture window design. The sash depth is 1 7/32". Picture window sash replacement kit consists of one sash and one sill filler.

SASH

A Select wood components are kiln dried and treated with water/insect repellent and preservative. Interior wood surfaces are available in pine, mixed grain Douglas fir, cherry, hickory, mahogany*, maple, oak, walnut, alder or vertical grain Douglas fir. Interior surfaces are available unfinished or factory primed. Factory-applied finishes are available in a variety of stain and paint options.

B Wood components are fitted with aluminum extrusions on the exterior. 50 exterior colors that meet AAMA 2604 and 2605 specifications are available, as well as custom colors. Also available is a selection of seven exterior anodized options.

C The sash replacement kit utilizes a two-piece foam weatherstrip on the bottom of the lower sash that forms a weather-tight seal against the sill filler when closed.

D Hollow bulb weatherstrip forms a compression seal at the meeting rails and at the head.

Each kit utilizes a two-piece foam-backed jamb liner and a block and tackle balancer system. The sash tilt inward for easy cleaning. Beige or white jamb liners are available and are cut to the sill slope specified at time of order.

HARDWARE OPTIONS



Lock



Sash Lift

Bronze | Polished Brass | Gold | White | **Black**

Bold name denotes finish shown.

HARDWARE FINISHES

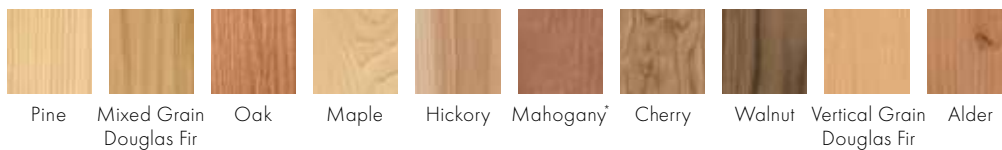


Oil rubbed bronze is a "living" finish that will change with time and use.

EXTERIOR & INTERIOR OPTIONS

EXTERIOR COLORS 50 exterior colors, 7 anodized finishes and custom colors. See exterior colors on page 11.

INTERIOR WOOD SPECIES



Naturally occurring variations in grain, color and texture of wood make each window one of a kind.

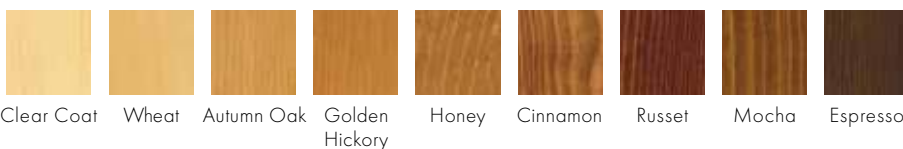
All factory-finished options are shown on pine.

Painted options available on pine. Dark bronze and black painted options available on pine or maple.

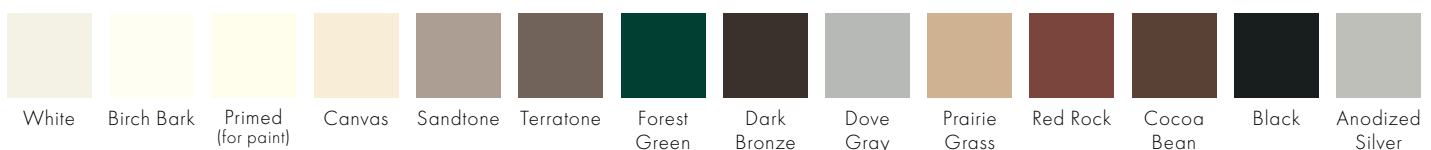
Anodized silver painted option available on maple only.

Interior custom stains, paints and color matching available.

FACTORY-FINISHED INTERIORS



INTERIOR PAINTED OPTIONS



*Actual wood species is either Sapele or Sipo, both non-endangered species grown in Africa, with color and characteristics similar to Central American mahoganies. Printing limitations prevent exact replication of colors and finishes. Please see your Andersen supplier for actual color and finish samples.

GLASS

E High-Performance Low-E4® glass with a low-conductivity spacer. Triple-pane glass, tinted, clear dual-pane, high-altitude glass and other special glazing options are available.

F Glass is fixed in place from the interior with wood stops that can be removed for easy reglazing if necessary. Glass stops available in ovolo (colonial) and contemporary profiles.

HARDWARE

G Sash replacement kits under 36" in width will receive one lock and one sash lift. Kits 36" to 48" in width will receive two locks and two sash lifts. Kits 48" and wider will require three locks and two sash lifts.

MEASURING GUIDELINES

Measuring guidelines for double-hung and picture sash replacement kits can be found on andersenwindows.com/measure.

ACCESSORIES Sold Separately

DOUBLE-HUNG SASH REPLACEMENT KITS

INSECT SCREENS

Conventional Insect Screens



Charcoal fiberglass screen mesh fits into an aluminum frame in all 50 exterior colors and seven anodized finishes. Available in half or full insect screens. Aluminum screen mesh is available as an option.

TruScene® Insect Screens

TruScene insect screens available in all 50 exterior colors and seven anodized finishes.

See page 24 for more information on our insect screen options.

GRILLES

Full Divided Light

Permanent interior and exterior grilles with grille spacer bars between two panes of glass. Available in 5/8", 7/8", 1 1/8", 1 1/2", or 2 1/4" widths. Interior grilles are available with ovolo or contemporary profile (ovolo profile shown below). Not all widths are shown.



Simulated Divided Light

Permanent exterior and interior grilles without grille spacer bars. Available in 5/8", 7/8", 1 1/8", 1 1/2", or 2 1/4" widths. Interior grilles are available with ovolo or contemporary profile (ovolo profile shown below). Not all widths are shown.



Finelight™ Grilles-Between-the-Glass

Available in 5/8" flat or 1" contoured aluminum profiles. Two-tone colors of pebble tan/colony white, sierra bronze/colony white or forest green/colony white are available on the 1" profile.



Removable Interior Wood Grilles

Removable interior wood grilles are available in a 7/8" width and ovolo or contemporary profiles. Optional surround for removable grille and permanent exterior grilles also available.



See page 22 for more information on grilles.

DOUBLE-HUNG WINDOWS

Double-Hung Window Sizes

	1' 8 1/2"	2' 0 1/2"	2' 4 1/2"	2' 6 1/2"	2' 8 1/2"	3' 0 1/2"	3' 2 1/2"	3' 4 1/2"	3' 8 1/2"	4' 0 1/2"
	1' 8"	2' 0"	2' 4"	2' 6"	2' 8"	3' 0"	3' 2"	3' 4"	3' 8"	4' 0"
3' 0 1/2"										
	TCLDH1830	TCLDH2030	TCLDH2430	TCLDH2630	TCLDH2830	TCLDH3030	TCLDH3230	TCLDH3430	TCLDH3830	
3' 4 1/2"										
	TCLDH1834	TCLDH2034	TCLDH2434	TCLDH2634	TCLDH2834	TCLDH3034	TCLDH3234	TCLDH3434	TCLDH3834	
4' 0 1/2"										
	TCLDH1840	TCLDH2040	TCLDH2440	TCLDH2640	TCLDH2840	TCLDH3040	TCLDH3240	TCLDH3440	TCLDH3840	TCLDH4040
4' 6 1/2"										
	TCLDH1846	TCLDH2046	TCLDH2446	TCLDH2646	TCLDH2846	TCLDH3046	TCLDH3246	TCLDH3446	TCLDH3846	TCLDH4046
4' 9 1/2"										
	TCLDH1849	TCLDH2049	TCLDH2449	TCLDH2649	TCLDH2849	TCLDH3049	TCLDH3249	TCLDH3449	TCLDH3849	TCLDH4049
5' 0 1/2"										
	TCLDH1850	TCLDH2050	TCLDH2450	TCLDH2650	TCLDH2850	TCLDH3050	TCLDH3250	TCLDH3450	TCLDH3850	TCLDH4050
5' 1 1/2"										
	TCLDH1851	TCLDH2051	TCLDH2451	TCLDH2651	TCLDH2851	TCLDH3051	TCLDH3251 †	TCLDH3451 †	TCLDH3851 †	TCLDH4051 †

Joined Double-Hung Combinations					
2-Wide			3-Wide		
Single Unit Frame Width	Rough Opening Width	Frame Width	Single Unit Frame Width	Rough Opening Width	Frame Width
1'-8"	3'-4 1/2"	3'-4"	1'-8"	5'-0 1/2"	5'-0"
2'-0"	4'-0 1/2"	4'-0"	2'-0"	6'-0 1/2"	6'-0"
2'-4"	4'-8 1/2"	4'-8"	2'-4"	7'-0 1/2"	7'-0"
2'-6"	5'-0 1/2"	5'-0"	2'-6"	7'-6 1/2"	7'-6"
2'-8"	5'-4 1/2"	5'-4"	2'-8"	8'-0 1/2"	8'-0"
3'-0"	6'-0 1/2"	6'-0"	3'-0"	9'-0 1/2"	9'-0"
3'-2"	6'-4 1/2"	6'-4"	3'-2"	9'-6 1/2"	9'-6"
3'-4"	6'-8 1/2"	6'-8"	3'-4"	10'-0 1/2"	10'-0"
3'-8"	7'-4 1/2"	7'-4"	3'-8"	11'-0 1/2"	11'-0"
4'-0"	8'-0 1/2"	8'-0"	4'-0"	12'-0 1/2"	12'-0"

NOTES

† These units meet or exceed the following dimensions:
 Clear Opening Area 5.7 sq. ft., Clear Opening Width 20",
 Clear Opening Height 24" and 44" maximum floor to sill
 height (with standard 6' 10-1/2" structural header height).
 See your local code official for requirements in your area.

Units may be ordered with sash lifts if desired. Units 3' 0" and wider will use two sash lifts.

If glass is positioned within 18" of the finished floor, safety/tempered glass may be required. Local codes may differ. Verify tempered glass requirements with your local building code official.

Use structural joining material when necessary or required by code.

The light patterns illustrated apply to rectangular removable interior wood grilles, Full Divided Light, Simulated Divided Light, Decorelle 100, 150 and 400 and Finelight™ Grilles-Between-the-Glass. All removable interior wood grilles will be installed in the units unless otherwise specified.

For a metric conversion in millimeters, multiply dimensions in inches by 25.4.

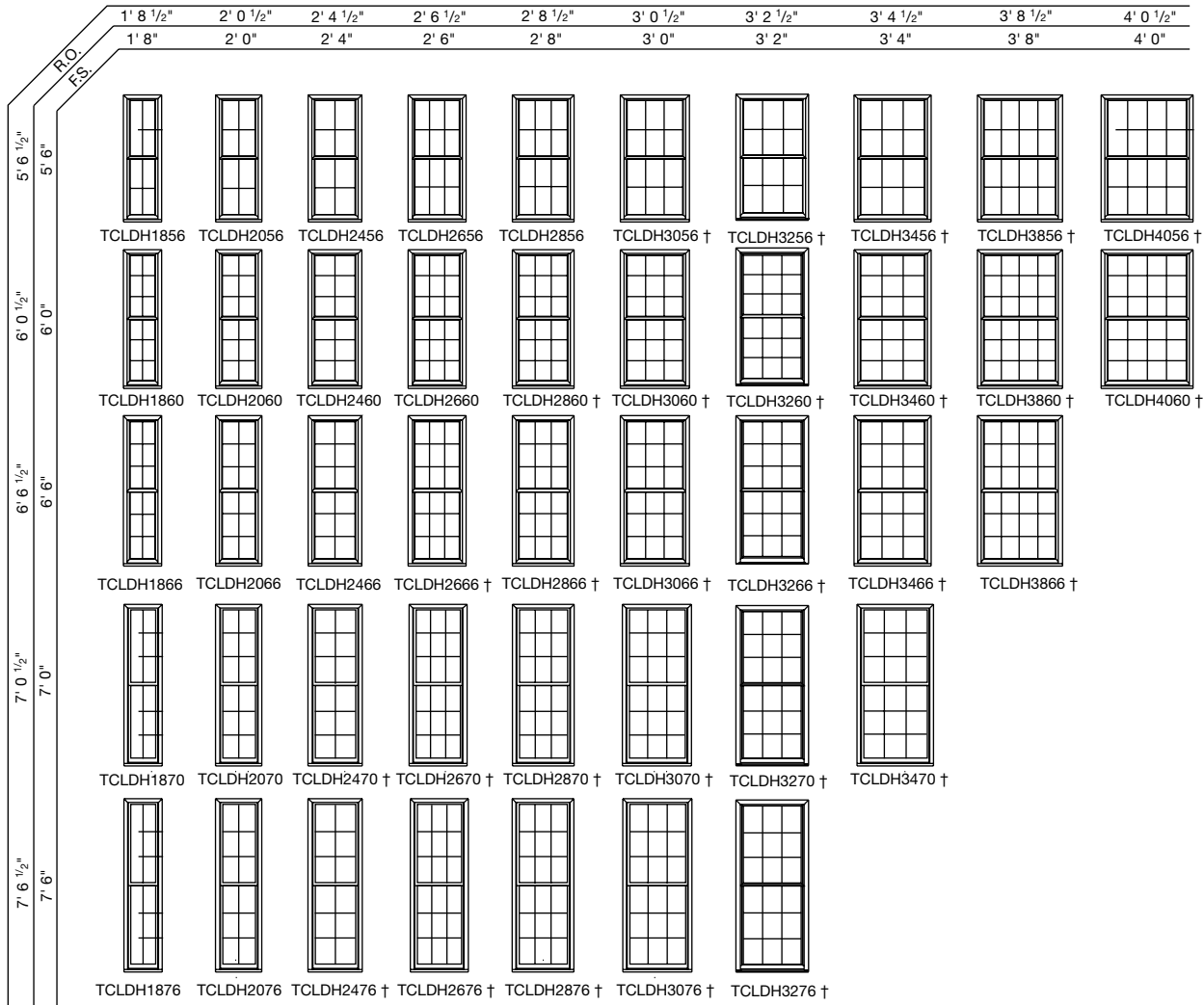
FORMULA FOR COMBINATION WINDOWS

The overall frame dimension (both width and height) is equal to the sum of the individual unit frame dimensions plus joining material dimension(s).

The overall rough opening (both width and height) is equal to the overall frame dimensions plus 1/4" on all sides.

**FOR WINDOWS GREATER THAN 30 SQUARE FEET OR RATED HIGHER THAN PG50, ONE OF THESE THREE INSTALLATION METHODS IS REQUIRED:
 A) THROUGH THE JAMB B) ALUMINUM INSTALLATION FLANGE OR C) INSTALLATION CLIPS.
 ADDITIONAL CUSTOM SIZES ARE AVAILABLE. CONTACT YOUR LOCAL SUPPLIER FOR MORE INFORMATION. DRAWINGS ARE NOT TO SCALE.**

Double-Hung Window Sizes



E-Series Double-Hung Windows

NOTES

† These units meet or exceed the following dimensions: Clear Opening Area 5.7 sq. ft., Clear Opening Width 20", Clear Opening Height 24" and 44" maximum floor to sill height (with standard 6' 10-1/2" structural header height). See your local code official for requirements in your area.

Units may be ordered with sash lifts if desired. Units 3'0" and wider will use two sash lifts.

If glass is positioned within 18" of the finished floor, safety/tempered glass may be required. Local codes may differ. Verify tempered glass requirements with your local building code official.

Use structural joining material when necessary or required by code.

The light patterns illustrated apply to rectangular removable interior wood grilles, Full Divided Light, Simulated Divided Light, Decorelle 100, 150 and 400 and Finelight™ Grilles-Between-the-Glass. All removable interior wood grilles will be installed in the units unless otherwise specified.

For a metric conversion in millimeters, multiply dimensions in inches by 25.4.

FORMULA FOR COMBINATION WINDOWS

The overall frame dimension (both width and height) is equal to the sum of the individual unit frame dimensions plus joining material dimension(s).

The overall rough opening (both width and height) is equal to the overall frame dimensions plus 1/4" on all sides.

**FOR WINDOWS GREATER THAN 30 SQUARE FEET OR RATED HIGHER THAN PG50, ONE OF THESE THREE INSTALLATION METHODS IS REQUIRED:
A) THROUGH THE JAMB B) ALUMINUM INSTALLATION FLANGE OR C) INSTALLATION CLIPS.
ADDITIONAL CUSTOM SIZES ARE AVAILABLE. CONTACT YOUR LOCAL SUPPLIER FOR MORE INFORMATION. DRAWINGS ARE NOT TO SCALE.**

DOUBLE-HUNG WINDOWS

Cottage & Reverse Cottage Double-Hung Window Sizes

	1' 8 1/2"	2' 0 1/2"	2' 4 1/2"	2' 6 1/2"	2' 8 1/2"	3' 0 1/2"	3' 2 1/2"	3' 4 1/2"	3' 8 1/2"
	1' 8"	2' 0"	2' 4"	2' 6"	2' 8"	3' 0"	3' 2"	3' 4"	3' 8"
4' 6 1/2"									
	TCLDH1846C	TCLDH2046C	TCLDH2446C	TCLDH2646C	TCLDH2846C	TCLDH3046C	TCLDH3246C	TCLDH3446C	TCLDH3846C
4' 6"									
	TCLDH1846RC	TCLDH2046RC	TCLDH2446RC	TCLDH2646RC	TCLDH2846RC	TCLDH3046RC	TCLDH3246RC	TCLDH3446RC	TCLDH3846RC
5' 0 1/2"									
	TCLDH1850C	TCLDH2050C	TCLDH2450C	TCLDH2650C	TCLDH2850C	TCLDH3050C	TCLDH3250C	TCLDH3450C	TCLDH3850C
5' 0"									
	TCLDH1850RC	TCLDH2050RC	TCLDH2450RC	TCLDH2650RC	TCLDH2850RC	TCLDH3050RC	TCLDH3250RC	TCLDH3450RC	TCLDH3850RC
5' 1 1/2"									
	TCLDH1851C	TCLDH2051C	TCLDH2451C	TCLDH2651C	TCLDH2851C	TCLDH3051C	TCLDH3251C	TCLDH3451C	TCLDH3851C
5' 1"									
	TCLDH1851RC	TCLDH2051RC	TCLDH2451RC	TCLDH2651RC	TCLDH2851RC	TCLDH3051RC	TCLDH3251RC	TCLDH3451RC	TCLDH3851RC
5' 6 1/2"									
	TCLDH1856C	TCLDH2056C	TCLDH2456C	TCLDH2656C	TCLDH2856C	TCLDH3056C	TCLDH3256C	TCLDH3456C	TCLDH3856C
5' 6"									
	TCLDH1856RC	TCLDH2056RC	TCLDH2456RC	TCLDH2656RC	TCLDH2856RC	TCLDH3056RC	TCLDH3256RC	TCLDH3456RC	TCLDH3856RC
6' 0 1/2"									
	TCLDH1860C	TCLDH2060C	TCLDH2460C	TCLDH2660C	TCLDH2860C	TCLDH3060C	TCLDH3260C	TCLDH3460C	TCLDH3860C
6' 0"									
	TCLDH1860RC	TCLDH2060RC	TCLDH2460RC	TCLDH2660RC	TCLDH2860RC	TCLDH3060RC	TCLDH3260RC	TCLDH3460RC	TCLDH3860RC

NOTES

Units may be ordered with sash lifts if desired. Units 3' 0" and wider will use two sash lifts.

If glass is positioned within 18" of the finished floor, safety/tempered glass may be required. Local codes may differ. Verify tempered glass requirements with your local building code official.

Use structural joining material when necessary or required by code.

The light patterns illustrated apply to rectangular removable interior wood grilles, Full Divided Light, Simulated Divided Light, Decorelle 100, 150 and 400 and Finelight™ Grilles-Between-the-Glass. All removable interior wood grilles will be installed in the units unless otherwise specified.

For a metric conversion in millimeters, multiply dimensions in inches by 25.4.

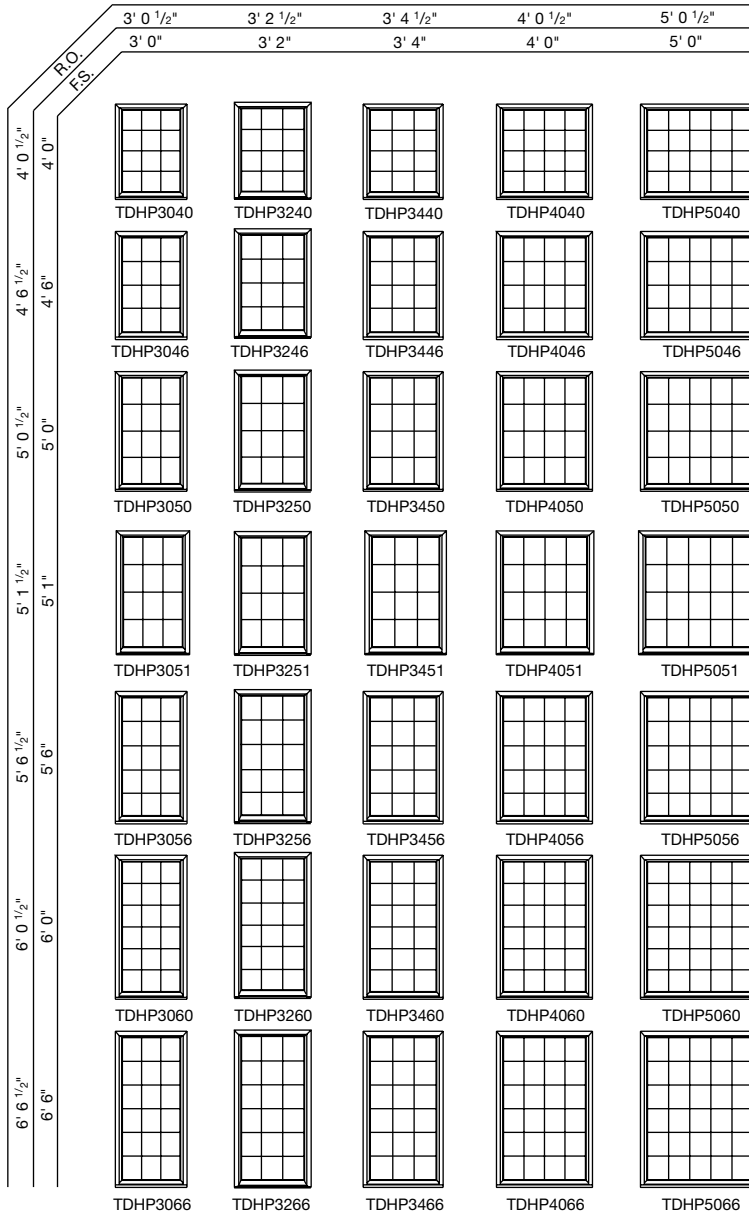
FORMULA FOR COMBINATION WINDOWS

The overall frame dimension (both width and height) is equal to the sum of the individual unit frame dimensions plus joining material dimension(s).

The overall rough opening (both width and height) is equal to the overall frame dimensions plus 1/4" on all sides.

FOR WINDOWS GREATER THAN 30 SQUARE FEET OR RATED HIGHER THAN PG50, ONE OF THESE THREE INSTALLATION METHODS IS REQUIRED:
 A) THROUGH THE JAMB B) ALUMINUM INSTALLATION FLANGE OR C) INSTALLATION CLIPS.
 ADDITIONAL CUSTOM SIZES ARE AVAILABLE. CONTACT YOUR LOCAL SUPPLIER FOR MORE INFORMATION. DRAWINGS ARE NOT TO SCALE.

Double-Hung Picture Window Sizes



NOTES

If glass is positioned within 18" of the finished floor, safety/tempered glass may be required. Local codes may differ. Verify tempered glass requirements with your local building code official.

Use structural joining material when necessary or required by code.

The light patterns illustrated apply to rectangular removable interior wood grilles, Full Divided Light, Simulated Divided Light, Decorelle 100, 150 and 400 and Finelight™ Grilles-Between-the-Glass. All removable interior wood grilles will be installed in the units unless otherwise specified.

For a metric conversion in millimeters, multiply dimensions in inches by 25.4.

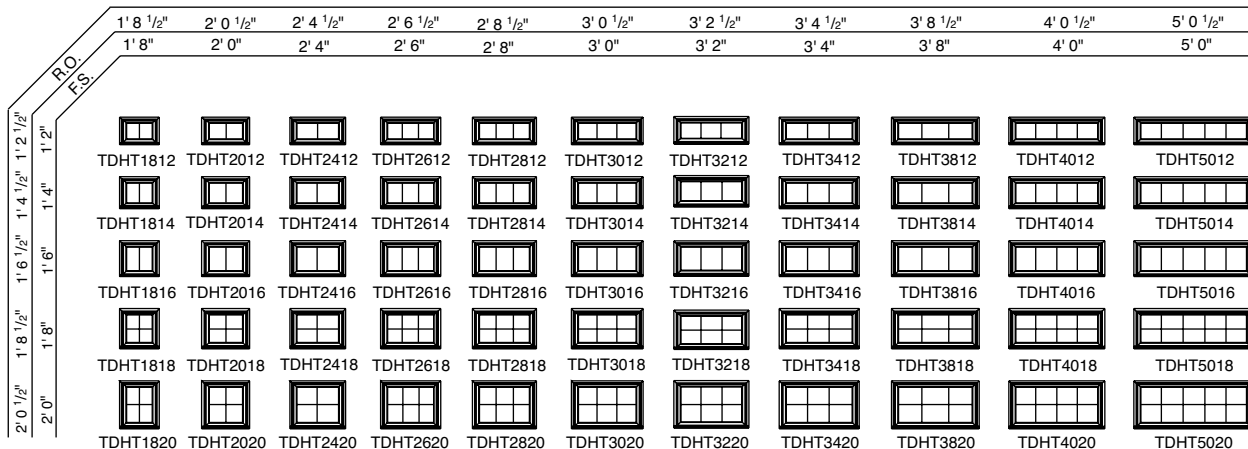
FORMULA FOR COMBINATION WINDOWS

The overall frame dimension (both width and height) is equal to the sum of the individual unit frame dimensions plus joining material dimension(s).

The overall rough opening (both width and height) is equal to the overall frame dimensions plus 1/4" on all sides.

E-Series Double-Hung Windows

















































Double-Hung Transom Window Sizes



FOR WINDOWS GREATER THAN 30 SQUARE FEET OR RATED HIGHER THAN PG50, ONE OF THESE THREE INSTALLATION METHODS IS REQUIRED:
A) THROUGH THE JAMB B) ALUMINUM INSTALLATION FLANGE OR C) INSTALLATION CLIPS.
ADDITIONAL CUSTOM SIZES ARE AVAILABLE. CONTACT YOUR LOCAL SUPPLIER FOR MORE INFORMATION. DRAWINGS ARE NOT TO SCALE.

DOUBLE-HUNG WINDOWS

Arch Single-Hung Window Sizes

R.O. F.S.	2'-0" 1/2"	4'-0" 1/2"	2'-4" 1/2"	4'-8" 1/2"	2'-6" 1/2"	5'-0" 1/2"
	2'-0"	4'-0"	2'-4"	4'-8"	2'-6"	5'-0"
	3'-0" RAD	6'-0" RAD	3'-0" RAD	6'-0" RAD	3'-0" RAD	6'-0" RAD
3'-0" 1/2"	 TCLRDH2030	 TCLRDH2030-2	 TCLRDH2430	 TCLRDH2430-2	 TCLRDH2630	 TCLRDH2630-2
3'-4" 1/2"	 TCLRDH2034	 TCLRDH2034-2	 TCLRDH2434	 TCLRDH2434-2	 TCLRDH2634	 TCLRDH2634-2
4'-0" 1/2"	 TCLRDH2040	 TCLRDH2040-2	 TCLRDH2440	 TCLRDH2440-2	 TCLRDH2640	 TCLRDH2640-2
4'-6" 1/2"	 TCLRDH2046	 TCLRDH2046-2	 TCLRDH2446	 TCLRDH2446-2	 TCLRDH2646	 TCLRDH2646-2
5'-0" 1/2"	 TCLRDH2050	 TCLRDH2050-2	 TCLRDH2450	 TCLRDH2450-2	 TCLRDH2650	 TCLRDH2650-2
5'-1" 1/2"	 TCLRDH2051	 TCLRDH2051-2	 TCLRDH2451	 TCLRDH2451-2	 TCLRDH2651	 TCLRDH2651-2
5'-6" 1/2"	 TCLRDH2056	 TCLRDH2056-2	 TCLRDH2456	 TCLRDH2456-2	 TCLRDH2656	 TCLRDH2656-2
6'-0" 1/2"	 TCLRDH2060	 TCLRDH2060-2	 TCLRDH2460	 TCLRDH2460-2	 TCLRDH2660	 TCLRDH2660-2

NOTES

Units may be ordered with sash lifts if desired. Units 3' 0" and wider will use two sash lifts.

Bottom sash operates up and down and tilts inward for cleaning. Top sash is fixed.

If glass is positioned within 18" of the finished floor, safety/tempered glass may be required. Local codes may differ. Verify tempered glass requirements with your local building code official.

Use structural joining material when necessary or required by code.

The light patterns illustrated apply to rectangular removable interior wood grilles, Full Divided Light, Simulated Divided Light, Decorelle 100, 150 and 400 and Finelight™ Grilles-Between-the-Glass. All removable interior wood grilles will be installed in the units unless otherwise specified.

For a metric conversion in millimeters, multiply dimensions in inches by 25.4.












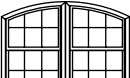





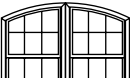





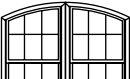






















FORMULA FOR COMBINATION WINDOWS

The overall frame dimension (both width and height) is equal to the sum of the individual unit frame dimensions plus joining material dimension(s).

The overall rough opening (both width and height) is equal to the overall frame dimensions plus 1/4" on all sides.

FOR WINDOWS GREATER THAN 30 SQUARE FEET OR RATED HIGHER THAN PG50, ONE OF THESE THREE INSTALLATION METHODS IS REQUIRED:
A) THROUGH THE JAMB B) ALUMINUM INSTALLATION FLANGE OR C) INSTALLATION CLIPS.
ADDITIONAL CUSTOM SIZES ARE AVAILABLE. CONTACT YOUR LOCAL SUPPLIER FOR MORE INFORMATION. DRAWINGS ARE NOT TO SCALE.

Arch Single-Hung Window Sizes

	2'-8 1/2"	5'-4 1/2"	3'-0 1/2"	6'-0 1/2"	3'-2 1/2"	6'-4 1/2"
	2'-8"	5'-4"	3'-0"	6'-0"	3'-2"	6'-4"
	3'-0" RAD	6'-0" RAD	3'-0" RAD	6'-0" RAD	3'-0" RAD	6'-0" RAD
3'-0 1/2" R.O. 3'-0" F.S.	 TCLRDH2830	 TCLRDH2830-2	 TCLRDH3030	 TCLRDH3030-2	 TCLRDH3230	
3'-4 1/2"	 TCLRDH2834	 TCLRDH2834-2	 TCLRDH3034	 TCLRDH3034-2	 TCLRDH3234	
4'-0 1/2"	 TCLRDH2840	 TCLRDH2840-2	 TCLRDH3040	 TCLRDH3040-2	 TCLRDH3240	 TCLRDH3240-2
4'-6 1/2"	 TCLRDH2846	 TCLRDH2846-2	 TCLRDH3046	 TCLRDH3046-2	 TCLRDH3246	 TCLRDH3246-2
5'-0 1/2"	 TCLRDH2850	 TCLRDH2850-2	 TCLRDH3050	 TCLRDH3050-2	 TCLRDH3250	 TCLRDH3250-2
5'-1 1/2"	 TCLRDH2851	 TCLRDH2851-2	 TCLRDH3051	 TCLRDH3051-2	 TCLRDH3251	 TCLRDH3251-2
5'-6 1/2"	 TCLRDH2856	 TCLRDH2856-2	 TCLRDH3056	 TCLRDH3056-2	 TCLRDH3256	 TCLRDH3256
6'-0 1/2"	 TCLRDH2860	 TCLRDH2860-2	 TCLRDH3060	 TCLRDH3060-2	 TCLRDH3260	 TCLRDH3260-2

E-Series Double-Hung Windows

NOTES

Units may be ordered with sash lifts if desired. Units 3'0" and wider will use two sash lifts.

Bottom sash operates up and down and tilts inward for cleaning. Top sash is fixed.

If glass is positioned within 18" of the finished floor, safety/tempered glass may be required. Local codes may differ. Verify tempered glass requirements with your local building code official.

Use structural joining material when necessary or required by code.

The light patterns illustrated apply to rectangular removable interior wood grilles, Full Divided Light, Simulated Divided Light, Decorelle 100, 150 and 400 and Finelight™ Grilles-Between-the-Glass. All removable interior wood grilles will be installed in the units unless otherwise specified.

For a metric conversion in millimeters, multiply dimensions in inches by 25.4.

FORMULA FOR COMBINATION WINDOWS

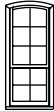
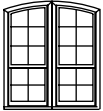
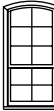

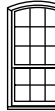
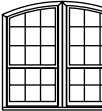
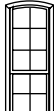
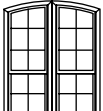

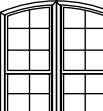

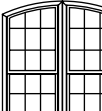

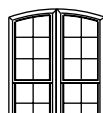

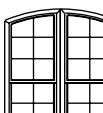
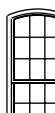
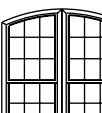
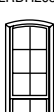
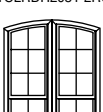
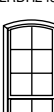
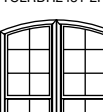

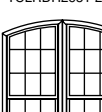






The overall frame dimension (both width and height) is equal to the sum of the individual unit frame dimensions plus joining material dimension(s).

The overall rough opening (both width and height) is equal to the overall frame dimensions plus 1/4" on all sides.

**FOR WINDOWS GREATER THAN 30 SQUARE FEET OR RATED HIGHER THAN PG50, ONE OF THESE THREE INSTALLATION METHODS IS REQUIRED:
A) THROUGH THE JAMB B) ALUMINUM INSTALLATION FLANGE OR C) INSTALLATION CLIPS.
ADDITIONAL CUSTOM SIZES ARE AVAILABLE. CONTACT YOUR LOCAL SUPPLIER FOR MORE INFORMATION. DRAWINGS ARE NOT TO SCALE.**

DOUBLE-HUNG WINDOWS

Arch Reverse Cottage Single-Hung Window Sizes

	2'-0 1/2"	4'-0 1/2"	2'-4 1/2"	4'-8 1/2"	2'-6 1/2"	5'-0 1/2"
	2'-0"	4'-0"	2'-4"	4'-8"	2'-6"	5'-0"
	3'-0" RAD	6'-0" RAD	3'-0" RAD	6'-0" RAD	3'-0" RAD	6'-0" RAD
4'-6 1/2" R.O. 4'-6" F.S.						
	TCLRDH2046RC	TCLRDH2046-2RC	TCLRDH2446RC	TCLRDH2446-2RC	TCLRDH2646RC	TCLRDH2646-2RC
5'-0 1/2" R.O. 5'-0" F.S.						
	TCLRDH2050RC	TCLRDH2050-2RC	TCLRDH2450RC	TCLRDH2450-2RC	TCLRDH2650RC	TCLRDH2650-2RC
5'-1 1/2" R.O. 5'-1" F.S.						
	TCLRDH2051RC	TCLRDH2051-2RC	TCLRDH2451RC	TCLRDH2451-2RC	TCLRDH2651RC	TCLRDH2651-2RC
5'-6 1/2" R.O. 5'-6" F.S.						
	TCLRDH2056RC	TCLRDH2056-2RC	TCLRDH2456RC	TCLRDH2456-2RC	TCLRDH2656RC	TCLRDH2656-2RC
6'-0 1/2" R.O. 6'-0" F.S.						
	TCLRDH2060RC	TCLRDH2060-2RC	TCLRDH2460RC	TCLRDH2460-2RC	TCLRDH2660RC	TCLRDH2660-2RC

NOTES

Units may be ordered with sash lifts if desired. Units 3'0" and wider will use two sash lifts.

Bottom sash operates up and down and tilts inward for cleaning. Top sash is fixed.

If glass is positioned within 18" of the finished floor, safety/tempered glass may be required. Local codes may differ. Verify tempered glass requirements with your local building code official.

Use structural joining material when necessary or required by code.

The light patterns illustrated apply to rectangular removable interior wood grilles, Full Divided Light, Simulated Divided Light, Decorelle 100, 150 and 400 and Finelight™ Grilles-Between-the-Glass. All removable interior wood grilles will be installed in the units unless otherwise specified.

For a metric conversion in millimeters, multiply dimensions in inches by 25.4.

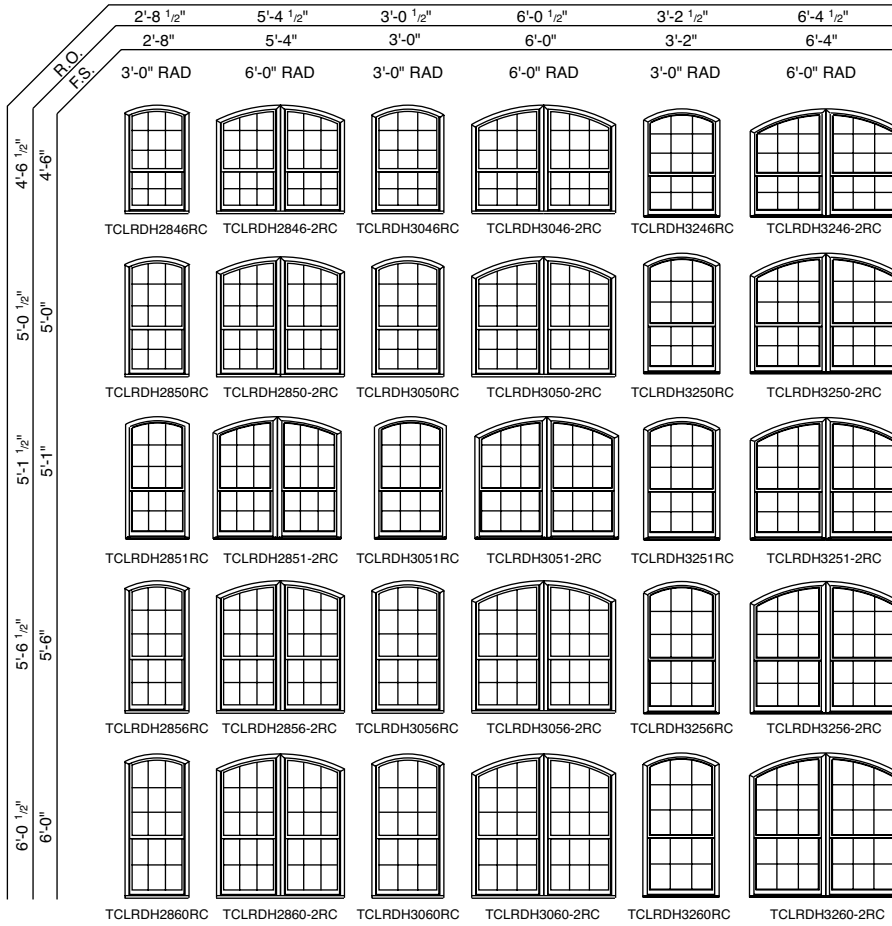
FORMULA FOR COMBINATION WINDOWS

The overall frame dimension (both width and height) is equal to the sum of the individual unit frame dimensions plus joining material dimension(s).

The overall rough opening (both width and height) is equal to the overall frame dimensions plus 1/4" on all sides.

FOR WINDOWS GREATER THAN 30 SQUARE FEET OR RATED HIGHER THAN PG50, ONE OF THESE THREE INSTALLATION METHODS IS REQUIRED:
 A) THROUGH THE JAMB B) ALUMINUM INSTALLATION FLANGE OR C) INSTALLATION CLIPS.
 ADDITIONAL CUSTOM SIZES ARE AVAILABLE. CONTACT YOUR LOCAL SUPPLIER FOR MORE INFORMATION. DRAWINGS ARE NOT TO SCALE.

Arch Reverse Cottage Single-Hung Window Sizes



NOTES

Units may be ordered with sash lifts if desired. Units 3' 0" and wider will use two sash lifts.

Bottom sash operates up and down and tilts inward for cleaning. Top sash is fixed.

If glass is positioned within 18" of the finished floor, safety/tempered glass may be required. Local codes may differ. Verify tempered glass requirements with your local building code official.

Use structural joining material when necessary or required by code.

The light patterns illustrated apply to rectangular removable interior wood grilles, Full Divided Light, Simulated Divided Light, Decorelle 100, 150 and 400 and Finelight™ Grilles-Between-the-Glass. All removable interior wood grilles will be installed in the units unless otherwise specified.

For a metric conversion in millimeters, multiply dimensions in inches by 25.4.

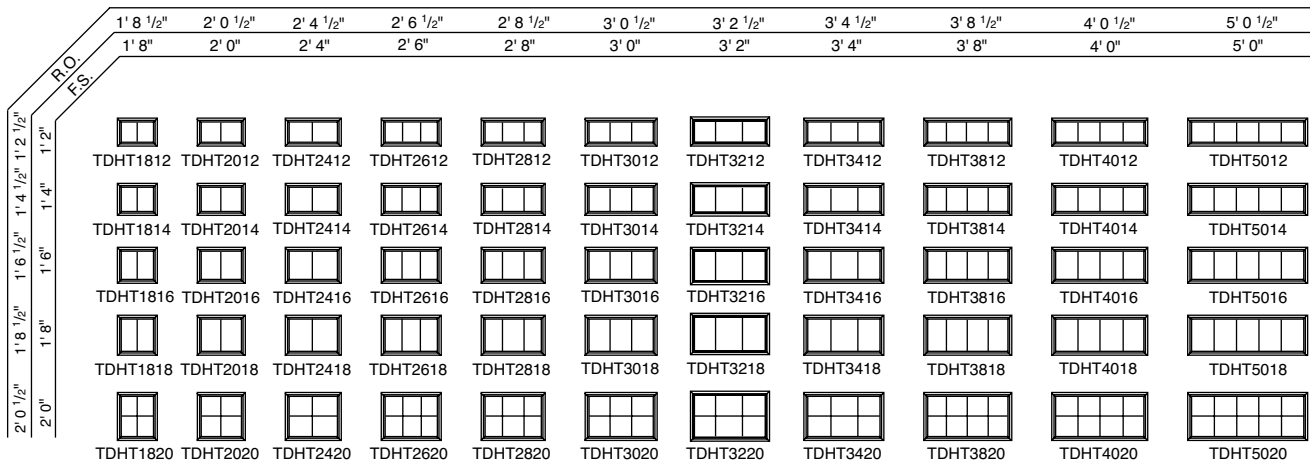
FORMULA FOR COMBINATION WINDOWS

The overall frame dimension (both width and height) is equal to the sum of the individual unit frame dimensions plus joining material dimension(s).

The overall rough opening (both width and height) is equal to the overall frame dimensions plus 1/4" on all sides.

E-Series Double-Hung Windows

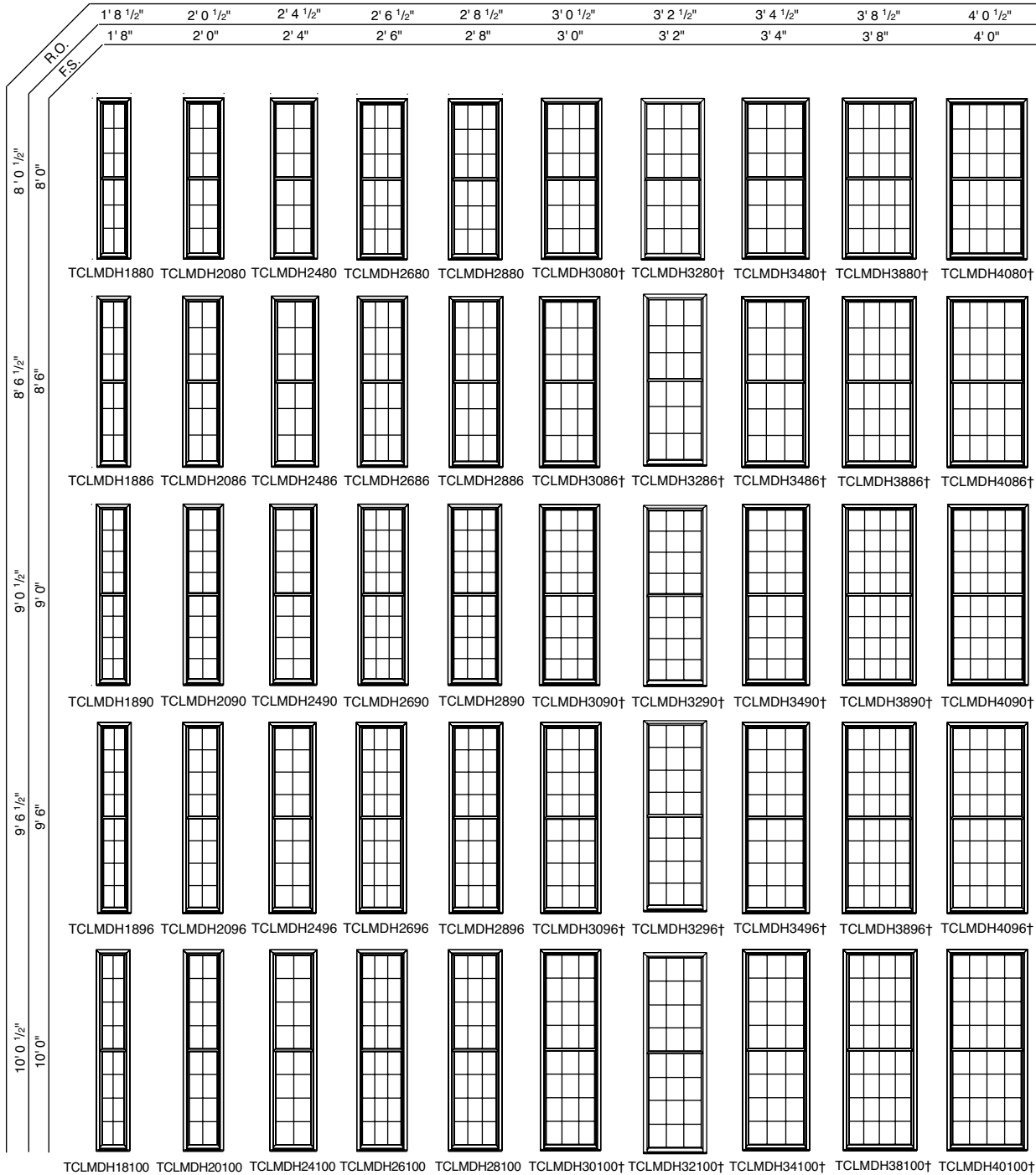
Double-Hung Direct-Set Transom Window Sizes



FOR WINDOWS GREATER THAN 30 SQUARE FEET OR RATED HIGHER THAN PG50, ONE OF THESE THREE INSTALLATION METHODS IS REQUIRED:
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ADDITIONAL CUSTOM SIZES ARE AVAILABLE. CONTACT YOUR LOCAL SUPPLIER FOR MORE INFORMATION. DRAWINGS ARE NOT TO SCALE.

DOUBLE-HUNG WINDOWS

Monumental Single-Hung Window Sizes



NOTES

† These units meet or exceed the following dimensions: Clear Opening Area 5.7 sq. ft., Clear Opening Width 20", Clear Opening Height 24" and 44" maximum floor to sill height (with standard 6' 10-1/2" structural header height). See your local code official for requirements in your area.

Units may be ordered with sash lifts if desired. Units 3' 0" and wider will use two sash lifts.

Bottom sash operates up and down but does not tilt. Top sash is fixed.

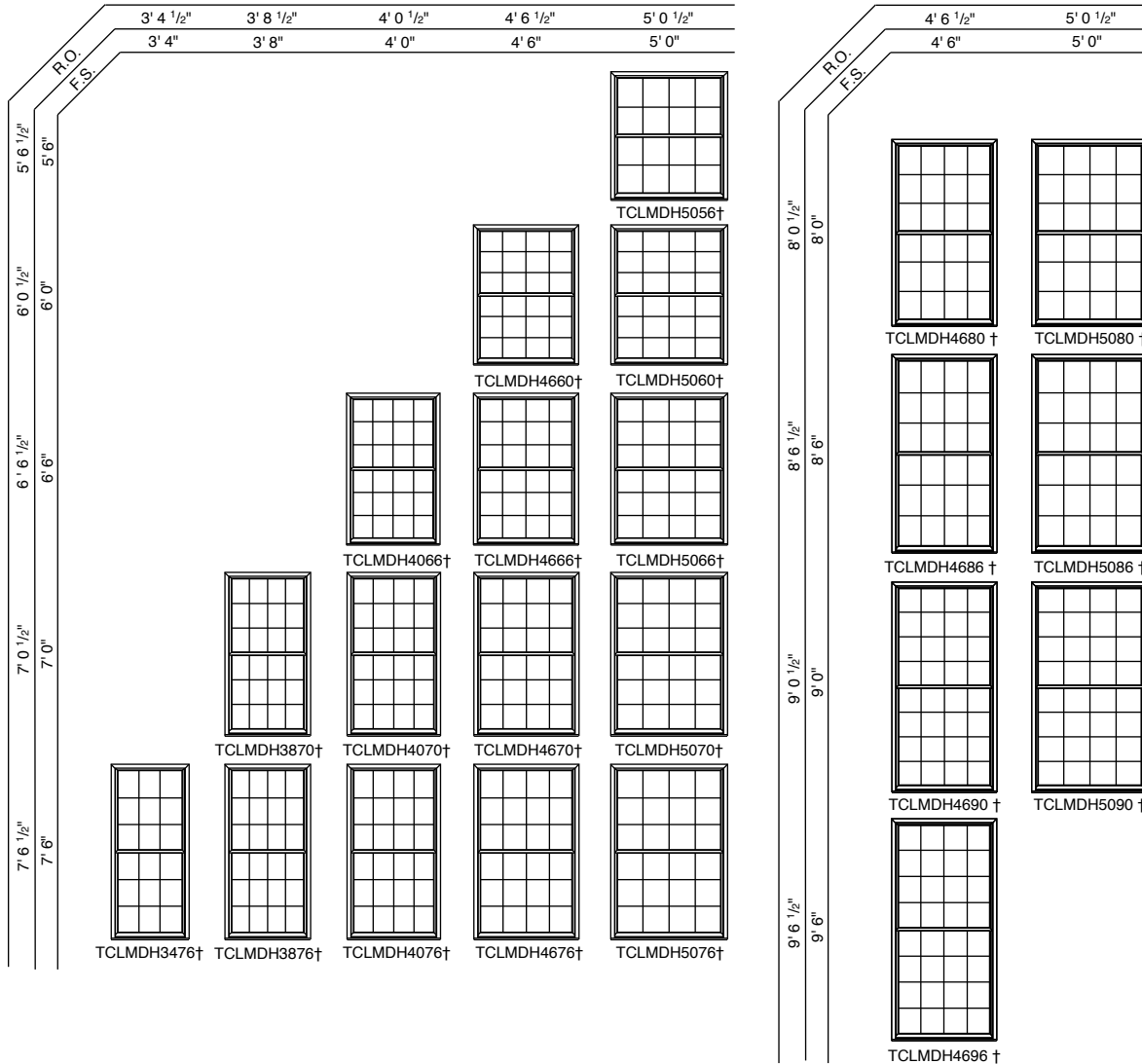
Units equal to or greater than 8' 0" tall are limited to 24" of clear opening height.

Sash Ratio: Standard units are equal sash. However, Cottage and Reverse Cottage are available as an option with some limitations. Contact your local supplier for more information.

See notes on page 73 for more information.

**FOR WINDOWS GREATER THAN 30 SQUARE FEET OR RATED HIGHER THAN PG50, ONE OF THESE THREE INSTALLATION METHODS IS REQUIRED:
 A) THROUGH THE JAMB B) ALUMINUM INSTALLATION FLANGE OR C) INSTALLATION CLIPS.
 ADDITIONAL CUSTOM SIZES ARE AVAILABLE. CONTACT YOUR LOCAL SUPPLIER FOR MORE INFORMATION. DRAWINGS ARE NOT TO SCALE.**

Monumental Single-Hung Window Sizes



NOTES

† These units meet or exceed the following dimensions: Clear Opening Area 5.7 sq. ft., Clear Opening Width 20", Clear Opening Height 24" and 44" maximum floor to sill height (with standard 6' 10-1/2" structural header height). See your local code official for requirements in your area.

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Units equal to or greater than 8' 0" tall are limited to 24" of clear opening height.

Sash Ratio: Standard units are equal sash. However, Cottage and Reverse Cottage are available as an option with some limitations. Contact your local supplier for more information.

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For a metric conversion in millimeters, multiply dimensions in inches by 25.4.

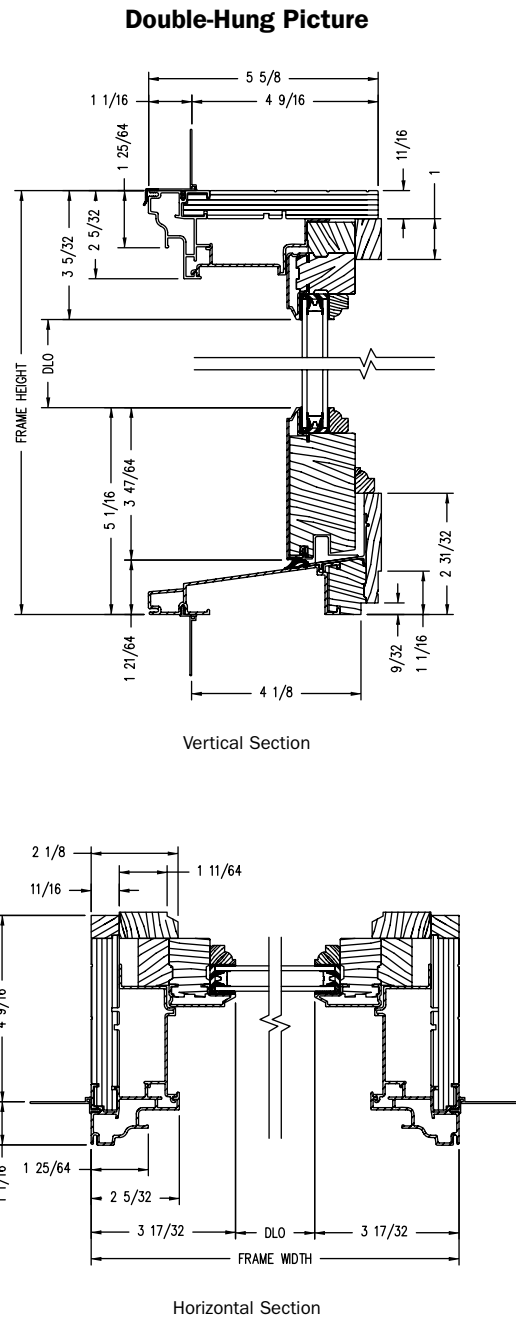
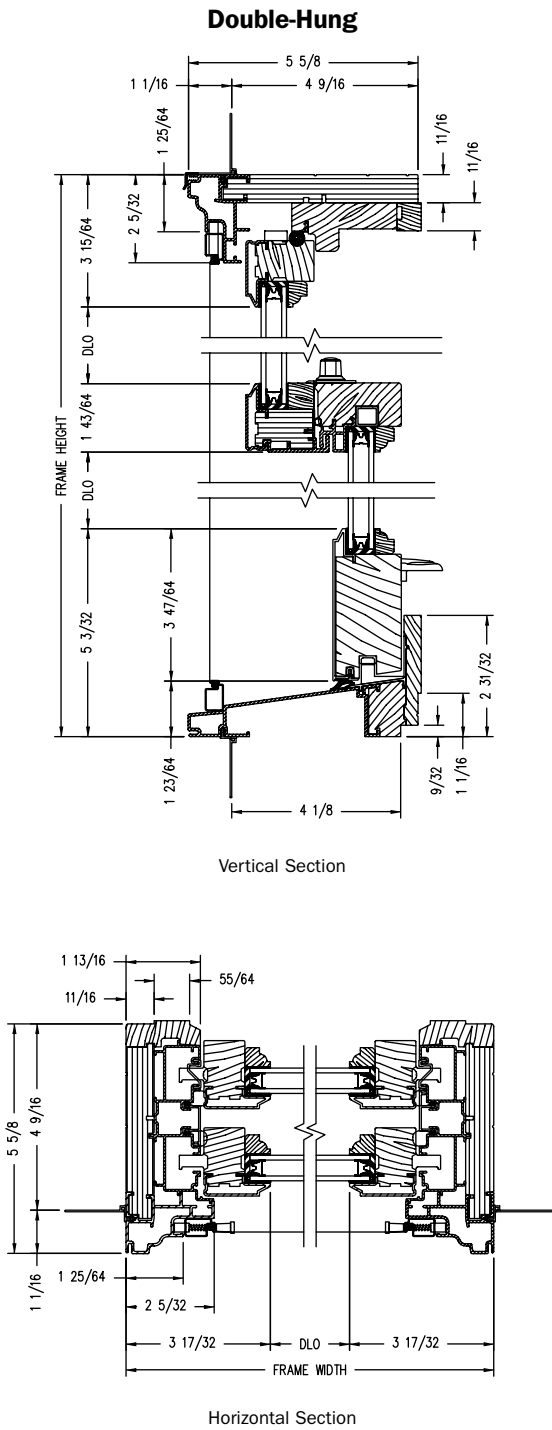
FORMULA FOR COMBINATION WINDOWS

The overall frame dimension (both width and height) is equal to the sum of the individual unit frame dimensions plus joining material dimension(s).

The overall rough opening (both width and height) is equal to the overall frame dimensions plus 1/4" on all sides.

**FOR WINDOWS GREATER THAN 30 SQUARE FEET OR RATED HIGHER THAN PG50, ONE OF THESE THREE INSTALLATION METHODS IS REQUIRED:
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Double-Hung Windows

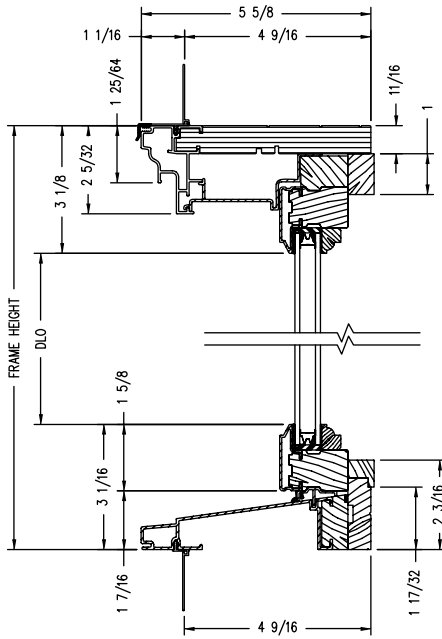


Shown with ovolo (colonial) glass stops.

PROPER INSTALLATION AND MAINTENANCE OF E-SERIES PRODUCTS IS ESSENTIAL TO ATTAIN OPTIMUM PERFORMANCE AND OPERATION. WRITTEN INSTALLATION INSTRUCTIONS THAT PROVIDE GUIDELINES FOR PROPER INSTALLATION ARE AVAILABLE BY VISITING ANDERSENWINDOWS.COM. CUSTOM SIZES ARE AVAILABLE. CONTACT YOUR LOCAL SUPPLIER FOR MORE INFORMATION. DRAWINGS ARE NOT TO SCALE.

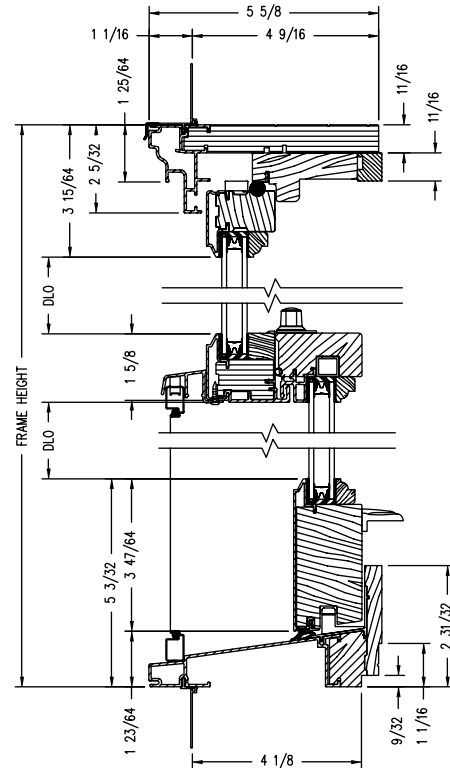
Double-Hung Windows

Double-Hung Transom

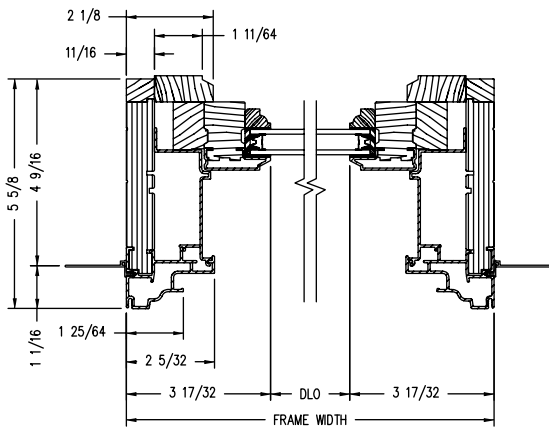


Vertical Section

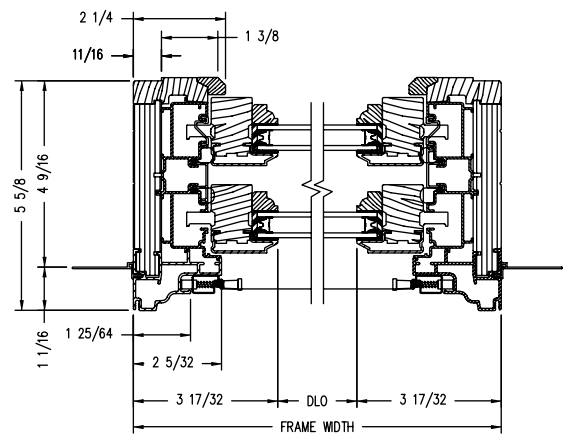
Monumental Single-Hung



Vertical Section



Horizontal Section

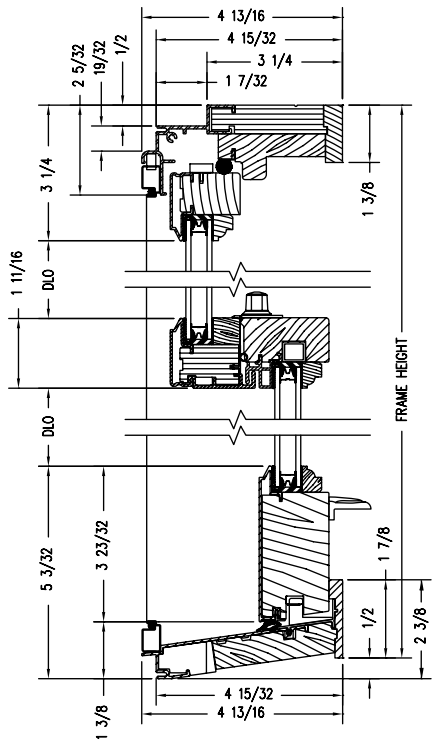


Horizontal Section

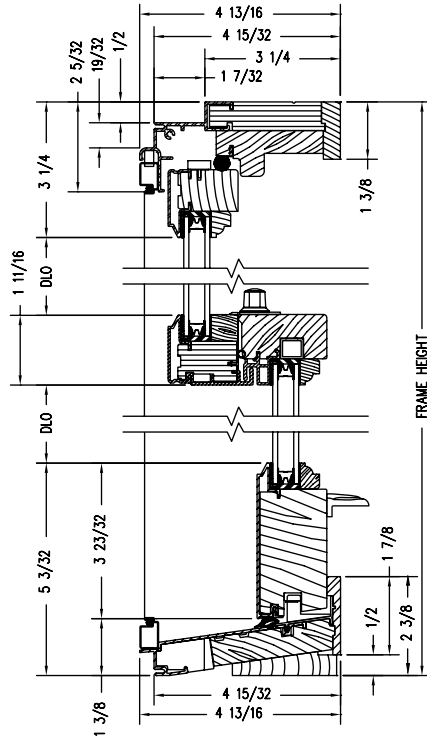
Shown with ovolo (colonial) glass stops.

PROPER INSTALLATION AND MAINTENANCE OF E-SERIES PRODUCTS IS ESSENTIAL TO ATTAIN OPTIMUM PERFORMANCE AND OPERATION. WRITTEN INSTALLATION INSTRUCTIONS THAT PROVIDE GUIDELINES FOR PROPER INSTALLATION ARE AVAILABLE BY VISITING ANDERSENWINDOWS.COM. CUSTOM SIZES ARE AVAILABLE. CONTACT YOUR LOCAL SUPPLIER FOR MORE INFORMATION. DRAWINGS ARE NOT TO SCALE.

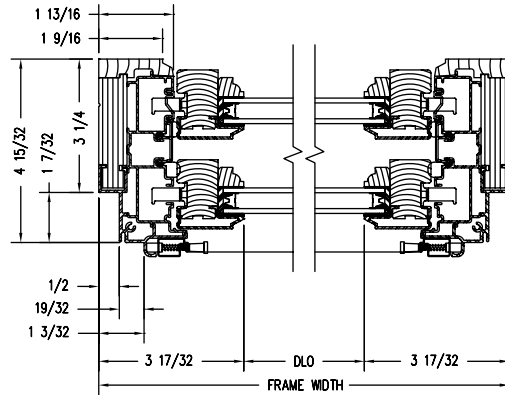
Double-Hung Insert Windows



Vertical Section
(For sill angles 8° and greater)



Vertical Section
(For sill angles less than 8°)

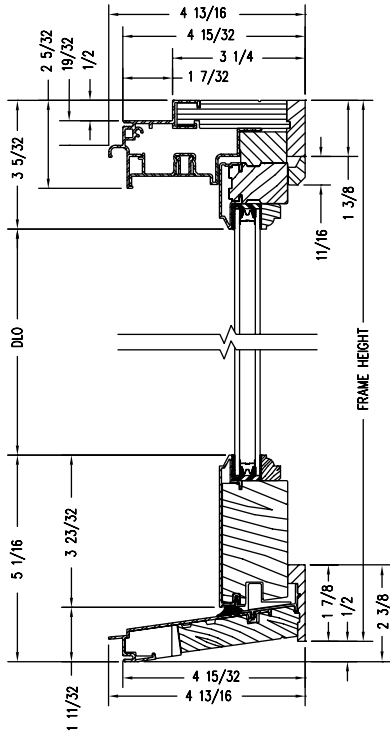


Horizontal Section

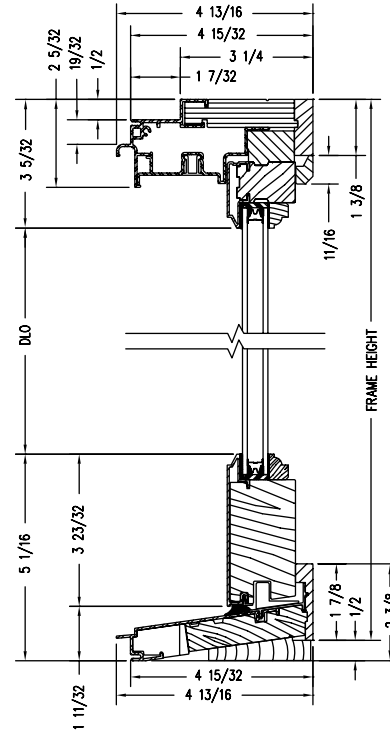
Shown with ovolo (colonial) glass stops.

PROPER INSTALLATION AND MAINTENANCE OF E-SERIES PRODUCTS IS ESSENTIAL TO ATTAIN OPTIMUM PERFORMANCE AND OPERATION. WRITTEN INSTALLATION INSTRUCTIONS THAT PROVIDE GUIDELINES FOR PROPER INSTALLATION ARE AVAILABLE BY VISITING ANDERSENWINDOWS.COM. CUSTOM SIZES ARE AVAILABLE. CONTACT YOUR LOCAL SUPPLIER FOR MORE INFORMATION. DRAWINGS ARE NOT TO SCALE.

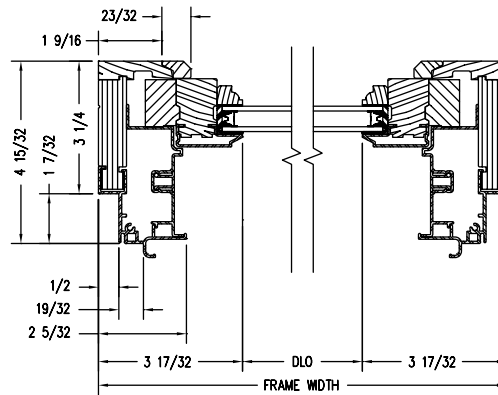
Double-Hung Picture Insert Windows



Vertical Section
(For sill angles 8° and greater)



Vertical Section
(For sill angles less than 8°)



Horizontal Section

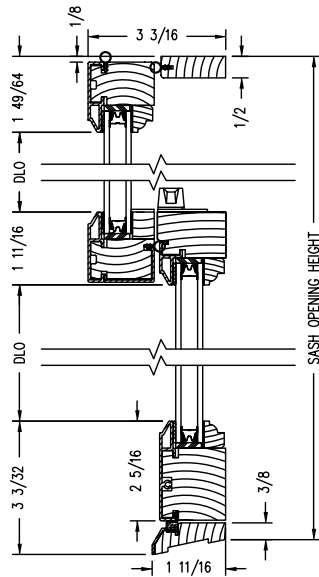
Shown with ovolo (colonial) glass stops.

E-Series Double-Hung
Windows

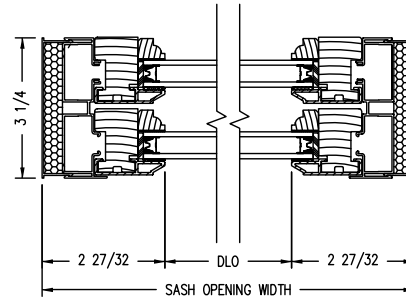
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Double-Hung Sash Replacement Kits

Double-Hung Sash Replacement

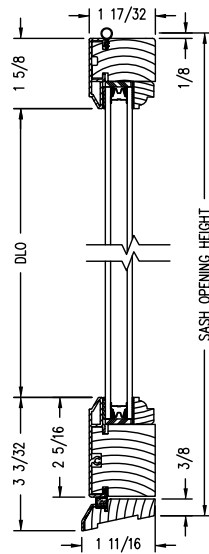


Vertical Section

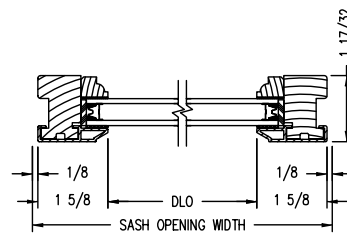


Horizontal Section

Double-Hung Picture Sash Replacement



Vertical Section



Horizontal Section

Shown with ovolo (colonial) glass stops.

PROPER INSTALLATION AND MAINTENANCE OF E-SERIES PRODUCTS IS ESSENTIAL TO ATTAIN OPTIMUM PERFORMANCE AND OPERATION. WRITTEN INSTALLATION INSTRUCTIONS THAT PROVIDE GUIDELINES FOR PROPER INSTALLATION ARE AVAILABLE BY VISITING ANDERSENWINDOWS.COM. CUSTOM SIZES ARE AVAILABLE. CONTACT YOUR LOCAL SUPPLIER FOR MORE INFORMATION. DRAWINGS ARE NOT TO SCALE.

Notes

A large grid area for taking notes, consisting of a 30x40 grid of small squares.

BAY & BOW WINDOWS

E-Series bay and bow windows provide a focal point that is architecturally consistent inside and out, making any room feel spacious. They feature consistent sight lines when integrated with double-hung or casement windows, head and seat boards in birch or oak and an all-inclusive accessory package when ordered as a kit.

Bay & Bow Overview	82
Sizing	
10° Casement Bow	84
30° & 45° Casement Bay	85
90° Casement Box Bay	86
30° Double-Hung Bay	89
45° Double-Hung Bay	90
Details	
Casement	87
Double-Hung	91
Installation Materials	154
Product Performance	158





BAY & BOW WINDOWS

FEATURES

BAY & BOW WINDOWS

A Select wood components are kiln dried and treated with water/insect repellent and preservative. Interior wood surfaces are available in pine, mixed grain Douglas fir, cherry, hickory, mahogany*, maple, oak, walnut, alder or vertical grain Douglas fir. Interior surfaces are available unfinished or factory primed. Factory-applied finishes are available in a variety of stain and paint options.

Wood components are fitted with aluminum extrusions on the exterior. 50 exterior colors that meet AAMA 2604 and 2605 specifications are available, as well as custom colors. Also available is a selection of seven exterior anodized options.

Compression bulb weatherstrip is applied for a maximum weather seal.

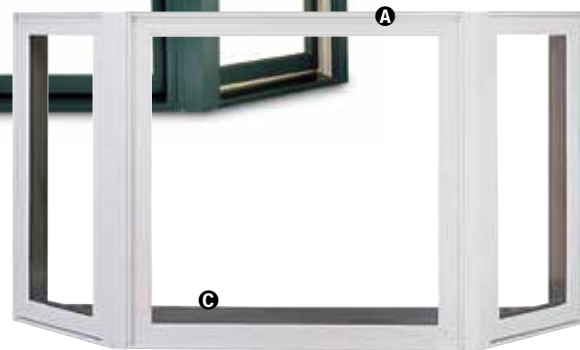
GLASS

B High-Performance Low-E4® glass with a low-conductivity spacer. Triple-pane glass, tinted, clear dual-pane, high-altitude glass and other special glazing options are available.

Glass is fixed in place from the interior with wood stops that can be removed for easy reglazing if necessary. Glass stops available in ovolo (colonial) and contemporary profiles.



Double-Hung Bay Window



Casement Bay Window

CABLE SUPPORT SYSTEM

Support is required underneath all bay and bow units. We offer a cable support system for your use. Insulated platforms and brackets are not included.



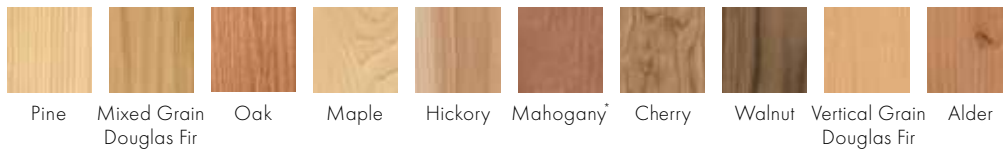
HEAD & SEAT BOARDS

C Wood head and seat boards are available in birch or oak.

EXTERIOR & INTERIOR OPTIONS

EXTERIOR COLORS 50 exterior colors, 7 anodized finishes and custom colors. See exterior colors on page 11.

INTERIOR WOOD SPECIES



Naturally occurring variations in grain, color and texture of wood make each window one of a kind.

All factory-finished options are shown on pine.

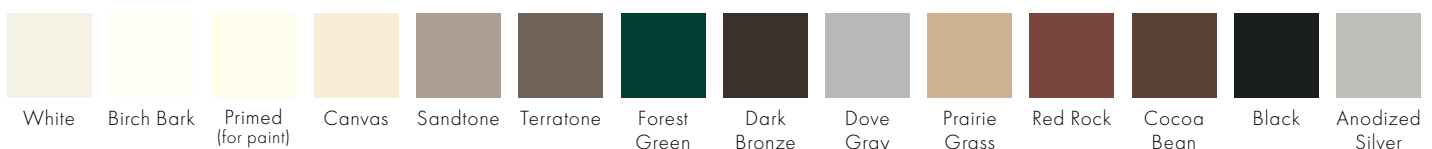
Painted options available on pine. Dark bronze and black painted options available on pine or maple. Anodized silver painted option available on maple only.

Interior custom stains, paints and color matching available.

FACTORY-FINISHED INTERIORS



INTERIOR PAINTED OPTIONS



*Actual wood species is either Sapele or Sipo, both non-endangered species grown in Africa, with color and characteristics similar to Central American mahoganies. Printing limitations prevent exact replication of colors and finishes. Please see your Andersen supplier for actual color and finish samples.

ACCESSORIES Sold Separately

BAY & BOW WINDOWS

SENSORS

VeriLock® Security Sensors



VeriLock sensors are unique as they detect whether the windows are locked or unlocked* — a feature no other sensors can provide. Available in all hardware finishes. VeriLock sensors for double-hung sash lock shown above. Also available for casement windows. See page 27 for Smart Home options.

INSECT SCREENS

Charcoal fiberglass screen mesh fits into an aluminum frame. Aluminum screen mesh is available as an option. See casement or double-hung sections for additional insect screen options.

PRIVACY OPTIONS

System 3 Blinds for Casement Windows



A 5/8" aluminum slat blind is mounted to an extruded aluminum blind panel and applied to the window, creating a triple-glazed window boasting privacy and energy efficiency. Available in three colors. Blind panels are offered in white, tan, gold or an optional wood veneer to match your interior.

System 3 Shades for Casement Windows

Pleated fabric shades are available in four colors to effortlessly and beautifully filter the light. See page 25 for more details.

GRILLES

Full Divided Light

Permanent interior and exterior grilles with grille spacer bars between two panes of glass. Available in 5/8", 7/8", 1 1/8", 1 1/2", or 2 1/4" widths. Interior grilles are available with ovolo or contemporary profile (ovolo profile shown below). Not all widths are shown.



Simulated Divided Light

Permanent exterior and interior grilles without grille spacer bars. Available in 5/8", 7/8", 1 1/8", 1 1/2", or 2 1/4" widths. Interior grilles are available with ovolo or contemporary profile (ovolo profile shown below). Not all widths are shown.



Finelight™ Grilles-Between-the-Glass

Available in 5/8" flat or 1" contoured aluminum profiles. Two-tone colors of pebble tan/colony white, sierra bronze/colony white or forest green/colony white are available on the 1" profile.



Removable Interior Wood Grilles

Removable interior wood grilles are available in a 7/8" width and ovolo or contemporary profiles. Optional surround for removable grille and permanent exterior grilles also available.



See page 22 for more information on grilles.

E-Series Bay & Bow Windows

HARDWARE OPTIONS

Double-Hung



Lock



Sash Lift

Antique Brass | Black | **Bright Chrome** | Bronze | Gold
Oil Rubbed Bronze | Pewter | Polished Brass | Satin Chrome | White

Windows with VeriLock sensors use a different sash lock. See above for details.

Casement



Folding Handle

Antique Brass | **Black** | Bright Chrome | Bronze | Gold
Oil Rubbed Bronze | Pewter | Polished Brass | Satin Chrome | White

Bold name denotes finish shown.

HARDWARE FINISHES



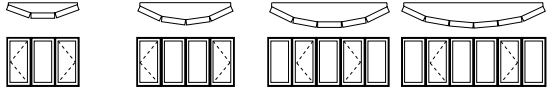
Antique Brass | Black | Bright Chrome | Bronze | Gold | Oil Rubbed Bronze | Pewter | Polished Brass | Satin Chrome | White

Oil rubbed bronze is a "living" finish that will change with time and use.

*When properly configured and maintained with a professionally installed security system and/or self monitoring system compatible with Honeywell® 5800 controls. See your Andersen supplier for more information.

BAY & BOW WINDOWS

10° Casement Bow Window Sizes



		WIDTH			
Rough Opg.	3-WIDE 4'-6 3/16"	4-WIDE 5'-11 5/8"	5-WIDE 7'-4 9/16"	6-WIDE 8'-8 3/4"	
3'-0 1/2"	15 3/4 30-3	15 3/4 30-4	15 3/4 30-5	15 3/4 30-6	
3'-4 1/2"	15 3/4 34-3	15 3/4 34-4	15 3/4 34-5	15 3/4 34-6	
4'-0 1/2"	15 3/4 40-3	15 3/4 40-4	15 3/4 40-5	15 3/4 40-6	
4'-6 1/2"	15 3/4 46-3	15 3/4 46-4	15 3/4 46-5	15 3/4 46-6	
5'-0 1/2"	15 3/4 50-3	15 3/4 50-4	15 3/4 50-5	15 3/4 50-6	
5'-6 1/2"	15 3/4 56-3	15 3/4 56-4	15 3/4 56-5	15 3/4 56-6	
6'-0 1/2"	15 3/4 60-3	15 3/4 60-4	15 3/4 60-5	15 3/4 60-6	
Projection	0'-3 5/32"	0'-6 1/4"	0'-9 11/32"	1'-1 15/16"	
Rough Opg.	5'-0 7/8"	6'-8 1/2"	8'-3 7/16"	9'-9 11/16"	
3'-0 1/2"	1830-3	1830-4	1830-5	1830-6	
3'-4 1/2"	1834-3	1834-4	1834-5	1834-6	
4'-0 1/2"	1840-3	1840-4	1840-5	1840-6	
4'-6 1/2"	1846-3	1846-4	1846-5	1846-6	
5'-0 1/2"	1850-3	1850-4	1850-5	1850-6	
5'-6 1/2"	1856-3	1856-4	1856-5	1856-6	
6'-0 1/2"	1860-3	1860-4	1860-5	1860-6	
Projection	0'-3 9/16"	0'-7 1/32"	0'-10 1/2"	1'-3 21/32"	
Rough Opg.	6'-0 3/4"	8'-0 3/16"	9'-10 7/8"	11'-8 5/8"	
3'-0 1/2"	2030-3	2030-4	2030-5	2030-6	
3'-4 1/2"	2034-3	2034-4	2034-5	2034-6	
4'-0 1/2"	2040-3	2040-4	2040-5	2040-6	
4'-6 1/2"	2046-3	2046-4	2046-5	2046-6	
5'-0 1/2"	2050-3	2050-4	2050-5	2050-6	
5'-6 1/2"	2056-3	2056-4	2056-5	2056-6	
6'-0 1/2"	2060-3	2060-4	2060-5	2060-6	
Projection	0'-4 1/4"	0'-8 13/32"	1'-0 9/16"	1'-6 3/4"	
Rough Opg.	7'-0 5/8"	9'-3 7/8"	11'-6 1/4"		
3'-0 1/2"	2430-3	2430-4	2430-5	-----	
3'-4 1/2"	2434-3	2434-4	2434-5	-----	
4'-0 1/2"	2440-3	2440-4	2440-5	-----	
4'-6 1/2"	2446-3	2446-4	2446-5	-----	
5'-0 1/2"	2450-3	2450-4	2450-5	-----	
5'-6 1/2"	2456-3	2456-4	2456-5	-----	
6'-0 1/2"	2460-3	2460-4	2460-5	-----	
Projection	0'-4 15/16"	0'-9 13/16"	1'-2 5/8"	-----	
Rough Opg.	7'-6 9/16"	9'-11 11/16"	12'-3 15/16"		
3'-0 1/2"	2630-3	2630-4	2630-5	-----	
3'-4 1/2"	2634-3	2634-4	2634-5	-----	
4'-0 1/2"	2640-3	2640-4	2640-5	-----	
4'-6 1/2"	2646-3	2646-4	2646-5	-----	
5'-0 1/2"	2650-3	2650-4	2650-5	-----	
5'-6 1/2"	2656-3	2656-4	2656-5	-----	
6'-0 1/2"	2660-3	2660-4	2660-5	-----	
Projection	0'-5 5/16"	0'-10 1/2"	1'-3 21/32"	-----	

NOTES

Projection is measured from the outside of the exterior sheathing to the exterior sheathing line of the outermost unit.

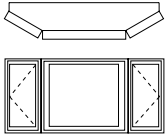
Support is required underneath all bay and bow units. For additional support, we offer a cable support system.

Insulated platforms and brackets are not included.

HEIGHT

FOR WINDOWS GREATER THAN 30 SQUARE FEET OR RATED HIGHER THAN PG50, ONE OF THESE THREE INSTALLATION METHODS IS REQUIRED:
 A) THROUGH THE JAMB B) ALUMINUM INSTALLATION FLANGE OR C) INSTALLATION CLIPS.
 ADDITIONAL CUSTOM SIZES ARE AVAILABLE. CONTACT YOUR LOCAL SUPPLIER FOR MORE INFORMATION. DRAWINGS ARE NOT TO SCALE.

30° Casement Angle Bay Window Sizes



NOTES

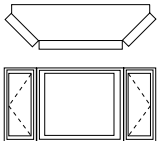
Projection is measured from the outside of the exterior sheathing to the exterior sheathing line of the outermost unit.

Support is required underneath all bay and bow units. For additional support, we offer a cable support system.

Insulated platforms and brackets are not included.

WIDTH						
30 Degree Casement Angle Bay Units						
Rough Opp.	6'-5 11/16"	7'-1 11/16"	8'-1 11/16"	7'-0 5/8"	7'-8 5/8"	8'-8 5/8"
	1'-8" Wide Flanker Units			2'-0" Wide Flanker Units		
	3'-4" Center	4'-0" Center	5'-0" Center	3'-4" Center	4'-0" Center	5'-0" Center
4'-0 1/2"	1840-3440-1840	1840-4040-1840	1840-5040-1840	2040-3440-2040	2040-4040-2040	2040-5040-2040
4'-6 1/2"	1846-3446-1846	1846-4046-1846	1846-5046-1846	2046-3446-2046	2046-4046-2046	2046-5046-2046
5'-0 1/2"	1850-3450-1850	1850-4050-1850	1850-5050-1850	2050-3450-2050	2050-4050-2050	2050-5050-2050
5'-6 1/2"	1856-3456-1856	1856-4056-1856	1856-5056-1856	2056-3456-2056	2056-4056-2056	2056-5056-2056
6'-0 1/2"	1860-3460-1860	1860-4060-1860	1860-5060-1860	2060-3460-2060	2060-4060-2060	2060-5060-2060
Projection	0'-10 17/32"	0'-10 17/32"	0'-10 17/32"	1'-0 17/32"	1'-0 17/32"	1'-0 17/32"
HEIGHT						
Rough Opp.	7'-7 9/16"	8'-3 9/16"	9'-3 9/16"	7'-11"	8'-7"	9'-7"
	2'-4" Wide Flanker Units			2'-6" Wide Flanker Units		
	3'-4" Center	4'-0" Center	5'-0" Center	3'-4" Center	4'-0" Center	5'-0" Center
4'-0 1/2"	2440-3440-2440	2440-4040-2440	2440-5040-2440	2640-3440-2640	2640-4040-2640	2640-5040-2640
4'-6 1/2"	2446-3446-2446	2446-4046-2446	2446-5046-2446	2646-3446-2646	2646-4046-2646	2646-5046-2646
5'-0 1/2"	2450-3450-2450	2450-4050-2450	2450-5050-2450	2650-3450-2650	2650-4050-2650	2650-5050-2650
5'-6 1/2"	2456-3456-2456	2456-4056-2456	2456-5056-2456	2656-3456-2656	2656-4056-2656	2656-5056-2656
6'-0 1/2"	2460-3460-2460	2460-4060-2460	2460-5060-2460	2660-3460-2660	2660-4060-2660	2660-5060-2660
Projection	1'-2 17/32"	1'-2 17/32"	1'-2 17/32"	1'-3 17/32"	1'-3 17/32"	1'-3 17/32"

45° Casement Angle Bay Window Sizes

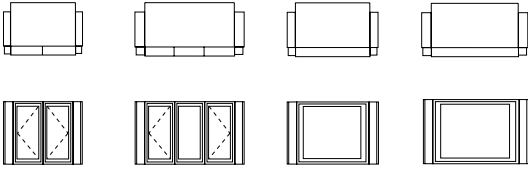


WIDTH						
45 Degree Casement Angle Bay Units						
Rough Opp.	6'-0 3/4"	6'-8 3/4"	7'-8 3/4"	6'-6 3/8"	7'-2 3/8"	8'-2 3/8"
	1'-8" Wide Flanker Units			2'-0" Wide Flanker Units		
	3'-4" Center	4'-0" Center	5'-0" Center	3'-4" Center	4'-0" Center	5'-0" Center
4'-0 1/2"	1840-3440-1840	1840-4040-1840	1840-5040-1840	2040-3440-2040	2040-4040-2040	2040-5040-2040
4'-6 1/2"	1846-3446-1846	1846-4046-1846	1846-5046-1846	2046-3446-2046	2046-4046-2046	2046-5046-2046
5'-0 1/2"	1850-3450-1850	1850-4050-1850	1850-5050-1850	2050-3450-2050	2050-4050-2050	2050-5050-2050
5'-6 1/2"	1856-3456-1856	1856-4056-1856	1856-5056-1856	2056-3456-2056	2056-4056-2056	2056-5056-2056
6'-0 1/2"	1860-3460-1860	1860-4060-1860	1860-5060-1860	2060-3460-2060	2060-4060-2060	2060-5060-2060
Projection	1'-3 5/32"	1'-3 5/32"	1'-3 5/32"	1'-6"	1'-6"	1'-6"
HEIGHT						
Rough Opp.	7'-0"	7'-8"	8'-8"	7'-2 7/8"	7'-10 7/8"	8'-10 7/8"
	2'-4" Wide Flanker Units			2'-6" Wide Flanker Units		
	3'-4" Center	4'-0" Center	5'-0" Center	3'-4" Center	4'-0" Center	5'-0" Center
4'-0 1/2"	2440-3440-2440	2440-4040-2440	2440-5040-2440	2640-3440-2640	2640-4040-2640	2640-5040-2640
4'-6 1/2"	2446-3446-2446	2446-4046-2446	2446-5046-2446	2646-3446-2646	2646-4046-2646	2646-5046-2646
5'-0 1/2"	2450-3450-2450	2450-4050-2450	2450-5050-2450	2650-3450-2650	2650-4050-2650	2650-5050-2650
5'-6 1/2"	2456-3456-2456	2456-4056-2456	2456-5056-2456	2656-3456-2656	2656-4056-2656	2656-5056-2656
6'-0 1/2"	2460-3460-2460	2460-4060-2460	2460-5060-2460	2660-3460-2660	2660-4060-2660	2660-5060-2660
Projection	1'-8 13/16"	1'-8 13/16"	1'-8 13/16"	1'-10 7/32"	1'-10 7/32"	1'-10 7/32"

FOR WINDOWS GREATER THAN 30 SQUARE FEET OR RATED HIGHER THAN PG50, ONE OF THESE THREE INSTALLATION METHODS IS REQUIRED:
 A) THROUGH THE JAMB B) ALUMINUM INSTALLATION FLANGE OR C) INSTALLATION CLIPS.
 ADDITIONAL CUSTOM SIZES ARE AVAILABLE. CONTACT YOUR LOCAL SUPPLIER FOR MORE INFORMATION. DRAWINGS ARE NOT TO SCALE.

BAY & BOW WINDOWS

90° Casement Box Bay Window Sizes



		WIDTH			
		3'-0"	4'-5 3/4"	4'-0 1/2"	5'-0 1/2"
HEIGHT	Rough Openings				
		15 3/4-2 Center	15 3/4 -3 Center	4'-0" Center	5'-0" Center
	3'-0 1/2"	15 3/4 30-2	15 3/4 30-3	4030	5030
	4'-0 1/2"	15 3/4 40-2	15 3/4 40-3	4040	5040
	5'-0 1/2"	15 3/4 50-2	15 3/4 50-3	4050	5050
	Projection	1'-10 7/8"	1'-10 7/8"	1'-10 7/8"	1'-10 7/8"
1'-5 3/4" wide operating casement flankers are standard on all box bay units.					

NOTES

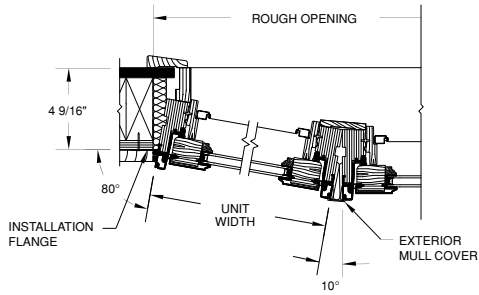
Projection is measured from the outside of the exterior sheathing to the exterior sheathing line of the outermost unit.

Support is required underneath all bay and bow units. For additional support, we offer a cable support system.

Insulated platforms and brackets are not included.

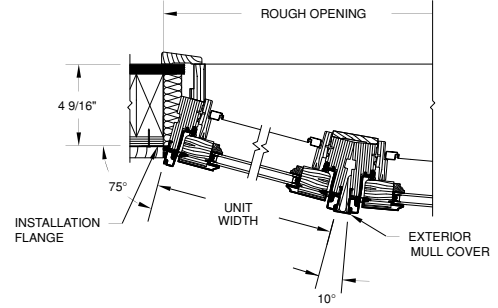
FOR WINDOWS GREATER THAN 30 SQUARE FEET OR RATED HIGHER THAN PG50, ONE OF THESE THREE INSTALLATION METHODS IS REQUIRED:
 A) THROUGH THE JAMB B) ALUMINUM INSTALLATION FLANGE OR C) INSTALLATION CLIPS.
 ADDITIONAL CUSTOM SIZES ARE AVAILABLE. CONTACT YOUR LOCAL SUPPLIER FOR MORE INFORMATION. DRAWINGS ARE NOT TO SCALE.

3-Wide 10° Casement Bow Windows



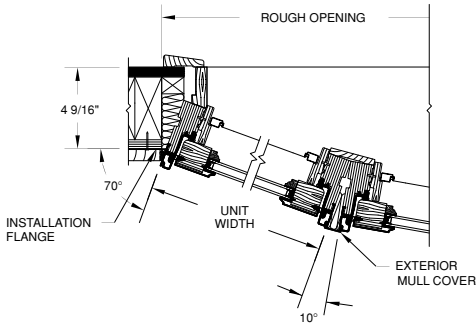
Horizontal Section

4-Wide 10° Casement Bow Windows



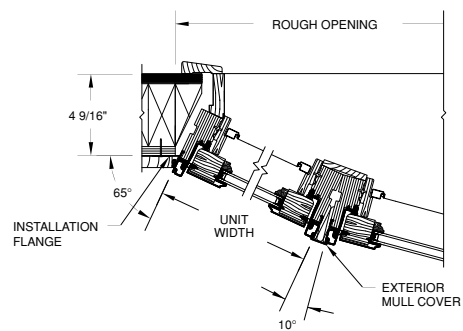
Horizontal Section

5-Wide 10° Casement Bow Windows



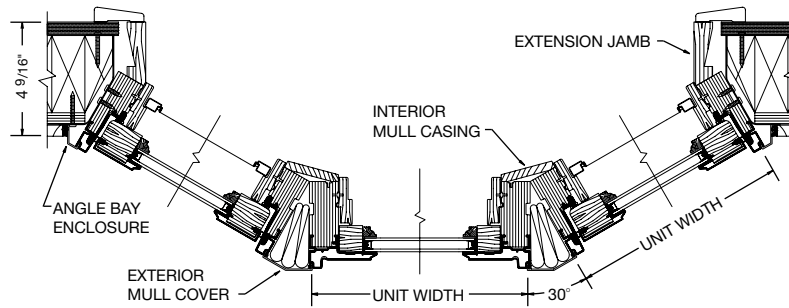
Horizontal Section

6-Wide 10° Casement Bow Windows



Horizontal Section

30° Casement Angle Bay Windows



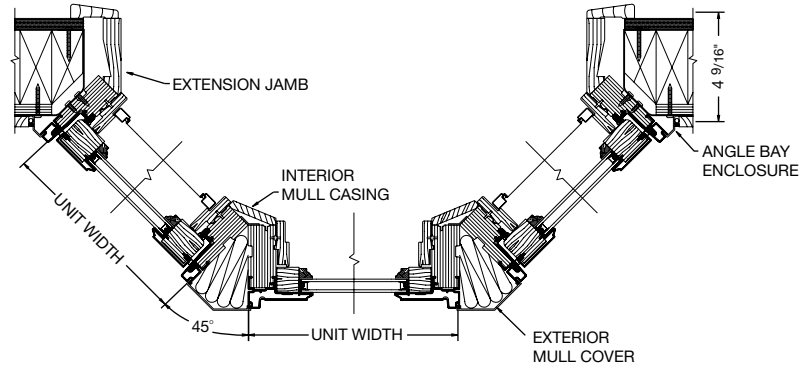
Horizontal Section

Shown with ovolo (colonial) glass stops.

PROPER INSTALLATION AND MAINTENANCE OF E-SERIES PRODUCTS IS ESSENTIAL TO ATTAIN OPTIMUM PERFORMANCE AND OPERATION. WRITTEN INSTALLATION INSTRUCTIONS THAT PROVIDE GUIDELINES FOR PROPER INSTALLATION ARE AVAILABLE BY VISITING ANDERSENWINDOWS.COM. CUSTOM SIZES ARE AVAILABLE. CONTACT YOUR LOCAL SUPPLIER FOR MORE INFORMATION. DRAWINGS ARE NOT TO SCALE.

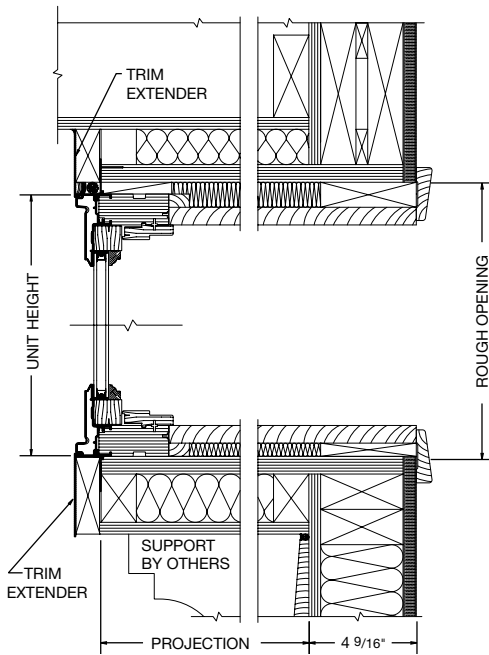
BAY & BOW WINDOWS

45° Casement Angle Bay Windows



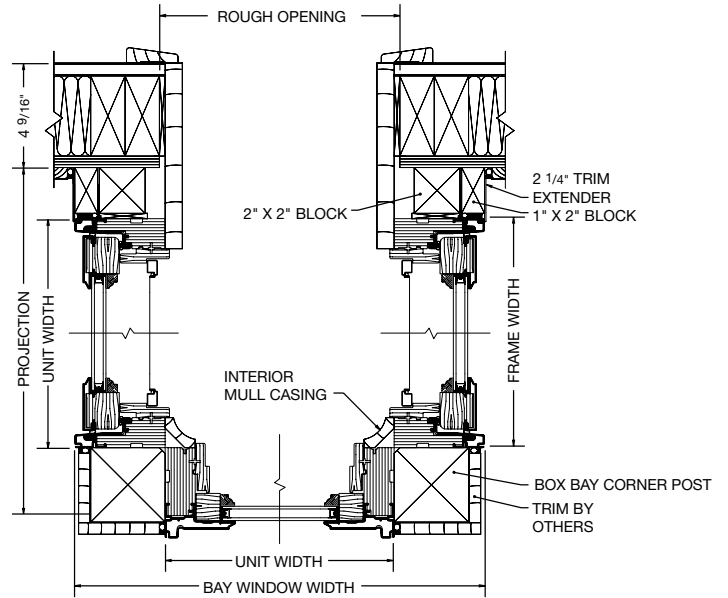
Horizontal Section

Casement Bay/Bow Windows



Vertical Section

90° Casement Box Bay Windows

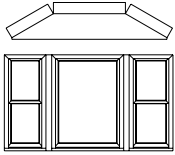


Horizontal Section

Shown with ovolo (colonial) glass stops.

PROPER INSTALLATION AND MAINTENANCE OF E-SERIES PRODUCTS IS ESSENTIAL TO ATTAIN OPTIMUM PERFORMANCE AND OPERATION. WRITTEN INSTALLATION INSTRUCTIONS THAT PROVIDE GUIDELINES FOR PROPER INSTALLATION ARE AVAILABLE BY VISITING ANDERSENWINDOWS.COM. CUSTOM SIZES ARE AVAILABLE. CONTACT YOUR LOCAL SUPPLIER FOR MORE INFORMATION. DRAWINGS ARE NOT TO SCALE.

30° Double-Hung Angle Bay Window Sizes



		WIDTH				
		30 Degree Double-Hung Angle Bay Units				
HEIGHT	Rough Opp.	6'-3 11/16"	6'-5 11/16"	6'-7 11/16"	7'-3 11/16"	8'-3 11/16"
		1'-8" Wide Flanker Units				
		3'-0" Center	3'-2" Center	3'-4" Center	4'-0" Center	5'-0" Center
	4'-0 1/2"	1840-3040-1840	1840-3240-1840	1840-3440-1840	1840-4040-1840	1840-5040-1840
	4'-6 1/2"	1846-3046-1846	1846-3246-1846	1846-3446-1846	1846-4046-1846	1846-5046-1846
	4'-9 1/2"	1849-3049-1849	1849-3249-1849	1849-3449-1849	1849-4049-1849	1849-5049-1849
	5'-0 1/2"	1850-3050-1850	1850-3250-1850	1850-3450-1850	1850-4050-1850	1850-5050-1850
	5'-1 1/2"	1851-3051-1851	1851-3251-1851	1851-3451-1851	1851-4051-1851	1851-5051-1851
	5'-6 1/2"	1856-3056-1856	1856-3256-1856	1856-3456-1856	1856-4056-1856	1856-5056-1856
	6'-0 1/2"	1860-3060-1860	1860-3260-1860	1860-3460-1860	1860-4060-1860	1860-5060-1860
	Projection	0'-10 3/4"	0'-10 3/4"	0'-10 3/4"	0'-10 3/4"	0'-10 3/4"
HEIGHT	Rough Opp.	6'-10 5/8"	7'-0 5/8"	7'-2 5/8"	7'-10 5/8"	8'-10 5/8"
		2'-0" Wide Flanker Units				
		3'-0" Center	3'-2" Center	3'-4" Center	4'-0" Center	5'-0" Center
	4'-0 1/2"	2040-3040-2040	2040-3240-2040	2040-3440-2040	2040-4040-2040	2040-5040-2040
	4'-6 1/2"	2046-3046-2046	2046-3246-2046	2046-3446-2046	2046-4046-2046	2046-5046-2046
	4'-9 1/2"	2049-3049-2049	2049-3249-2049	2049-3449-2049	2049-4049-2049	2049-5049-2049
	5'-0 1/2"	2050-3050-2050	2050-3250-2050	2050-3450-2050	2050-4050-2050	2050-5050-2050
	5'-1 1/2"	2051-3051-2051	2051-3251-2051	2051-3451-2051	2051-4051-2051	2051-5051-2051
	5'-6 1/2"	2056-3056-2056	2056-3256-2056	2056-3456-2056	2056-4056-2056	2056-5056-2056
	6'-0 1/2"	2060-3060-2060	2060-3260-2060	2060-3460-2060	2060-4060-2060	2060-5060-2060
	Projection	1'-0 3/4"	1'-0 3/4"	1'-0 3/4"	1'-0 3/4"	1'-0 3/4"
HEIGHT	Rough Opp.	7'-5 1/2"	7'-7 1/2"	7'-9 1/2"	8'-5 1/2"	9'-5 1/2"
		2'-4" Wide Flanker Units				
		3'-0" Center	3'-2" Center	3'-4" Center	4'-0" Center	5'-0" Center
	4'-0 1/2"	2440-3040-2440	2440-3240-2440	2440-3440-2440	2440-4040-2440	2440-5040-2440
	4'-6 1/2"	2446-3046-2446	2446-3246-2446	2446-3446-2446	2446-4046-2446	2446-5046-2446
	4'-9 1/2"	2449-3049-2449	2449-3249-2449	2449-3449-2449	2449-4049-2449	2449-5049-2449
	5'-0 1/2"	2450-3050-2450	2450-3250-2450	2450-3450-2450	2450-4050-2450	2450-5050-2450
	5'-1 1/2"	2451-3051-2451	2451-3251-2451	2451-3451-2451	2451-4051-2451	2451-5051-2451
	5'-6 1/2"	2456-3056-2456	2456-3256-2456	2456-3456-2456	2456-4056-2456	2456-5056-2456
	6'-0 1/2"	2460-3060-2460	2460-3260-2460	2460-3460-2460	2460-4060-2460	2460-5060-2460
	Projection	1'-2 3/4"	1'-2 3/4"	1'-2 3/4"	1'-2 3/4"	1'-2 3/4"

NOTES

Projection is measured from the outside of the exterior sheathing to the exterior sheathing line of the outermost unit.

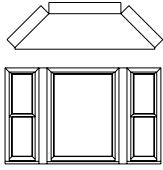
Support is required underneath all bay and bow units. For additional support, we offer a cable support system.

Insulated platforms and brackets are not included.

FOR WINDOWS GREATER THAN 30 SQUARE FEET OR RATED HIGHER THAN PG50, ONE OF THESE THREE INSTALLATION METHODS IS REQUIRED:
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BAY & BOW WINDOWS

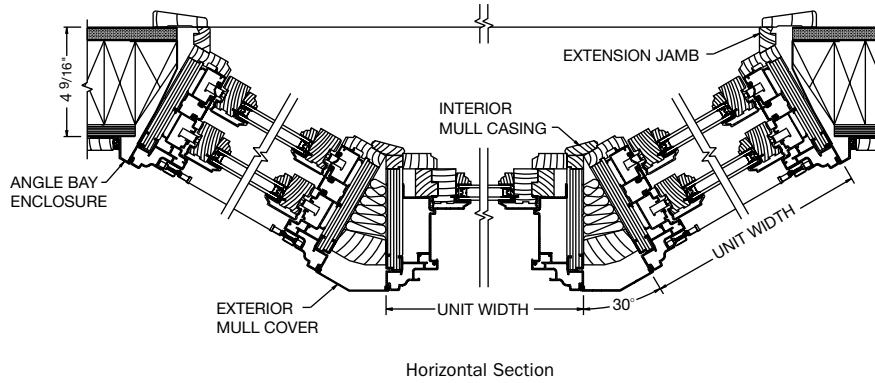
45° Double-Hung Angle Bay Window Sizes



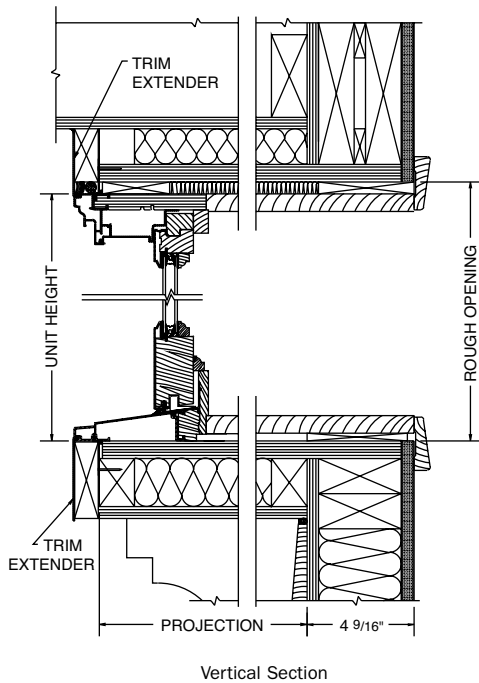
		WIDTH				
		45 Degree Double-Hung Angle Bay Units				
Rough Opg.		5'-11 1/16"	6'-1 1/16"	6'-3 1/16"	6'-11 1/16"	7'-11 1/16"
			1'-8" Wide Flanker Units			
		3'-0" Center	3'-2" Center	3'-4" Center	4'-0" Center	5'-0" Center
4'-0 1/2"		1840-3040-1840	1840-3240-1840	1840-3440-1840	1840-4040-1840	1840-5040-1840
4'-6 1/2"		1846-3046-1846	1846-3246-1846	1846-3446-1846	1846-4046-1846	1846-5046-1846
4'-9 1/2"		1849-3049-1849	1849-3249-1849	1849-3449-1849	1849-4049-1849	1849-5049-1849
5'-0 1/2"		1850-3050-1850	1850-3250-1850	1850-3450-1850	1850-4050-1850	1850-5050-1850
5'-1 1/2"		1851-3051-1851	1851-3251-1851	1851-3451-1851	1851-4051-1851	1851-5051/1851
5'-6 1/2"		1856-3056-1856	1856-3256-1856	1856-3456-1856	1856-4056-1856	1856-5056-1856
6'-0 1/2"		1860-3060-1860	1860-3260-1860	1860-3460-1860	1860-4060-1860	1860-5060-1860
Projection		1'-3 11/16"	1'-3 11/16"	1'-3 11/16"	1'-3 11/16"	1'-3 11/16"
Rough Opg.		6'-4 3/4"	6'-6 3/4"	6'-8 3/4"	7'-4 3/4"	8'-4 3/4"
		2'-0" Wide Flanker Units				
		3'-0" Center	3'-2" Center	3'-4" Center	4'-0" Center	5'-0" Center
4'-0 1/2"		2040-3040-2040	2040-3240-2040	2040-3440-2040	2040-4040-2040	2040-5040-2040
4'-6 1/2"		2046-3046-2046	2046-3246-2046	2046-3446-2046	2046-4046-2046	2046-5046-2046
4'-9 1/2"		2049-3049-2049	2049-3249-2049	2049-3449-2049	2049-4049-2049	2049-5049-2049
5'-0 1/2"		2050-3050-2050	2050-3250-2050	2050-3450-2050	2050-4050-2050	2050-5050-2050
5'-1 1/2"		2051-3051-2051	2051-3251-2051	2051-3451-2051	2051-4051-2051	2051-5051-2051
5'-6 1/2"		2056-3056-2056	2056-3256-2056	2056-3456-2056	2056-4056-2056	2056-5056-2056
6'-0 1/2"		2060-3060-2060	2060-3260-2060	2060-3460-2060	2060-4060-2060	2060-5060-2060
Projection		1'-6 1/2"	1'-6 1/2"	1'-6 1/2"	1'-6 1/2"	1'-6 1/2"
Rough Opg.		6'-10 3/8"	7'-0 3/8"	7'-2 3/8"	7'-10 3/8"	8'-10 3/8"
		2'-4" Wide Flanker Units				
		3'-0" Center	3'-2" Center	3'-4" Center	4'-0" Center	5'-0" Center
4'-0 1/2"		2440-3040-2440	2440-3240-2440	2440-3440-2440	2440-4040-2440	2440-5040-2440
4'-6 1/2"		2446-3046-2446	2446-3246-2446	2446-3446-2446	2446-4046-2446	2446-5046-2446
4'-9 1/2"		2449-3049-2449	2449-3249-2449	2449-3449-2449	2449-4049-2449	2449-5049-2449
5'-0 1/2"		2450-3050-2450	2450-3250-2450	2450-3450-2450	2450-4050-2450	2450-5050-2450
5'-1 1/2"		2451-3051-2451	2451-3251-2451	2451-3451-2451	2451-4051-2451	2451-5051-2451
5'-6 1/2"		2456-3056-2456	2456-3256-2456	2456-3456-2456	2456-4056-2456	2456-5056-2456
6'-0 1/2"		2460-3060-2460	2460-3260-2460	2460-3460-2460	2460-4060-2460	2460-5060-2460
Projection		1'-9 11/32"	1'-9 11/32"	1'-9 11/32"	1'-9 11/32"	1'-9 11/32"

FOR WINDOWS GREATER THAN 30 SQUARE FEET OR RATED HIGHER THAN PG50, ONE OF THESE THREE INSTALLATION METHODS IS REQUIRED:
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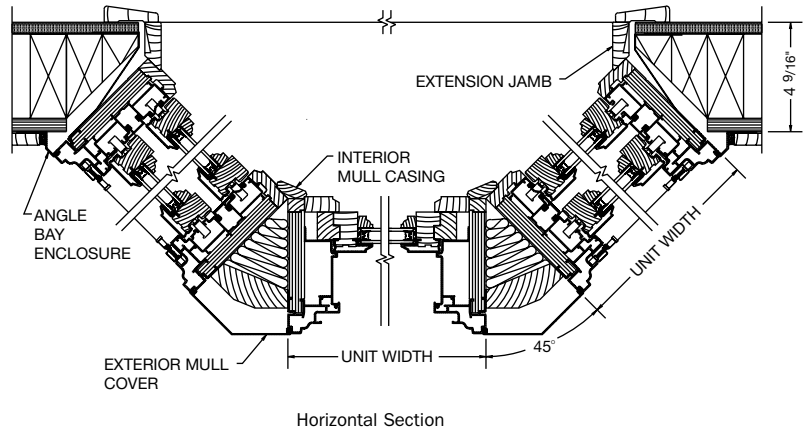
30° Double-Hung Angle Bay Windows



Double-Hung Angle Bay Windows



45° Double-Hung Angle Bay Windows



E-Series Bay & Bow Windows

Shown with ovolo (colonial) glass stops.

PROPER INSTALLATION AND MAINTENANCE OF E-SERIES PRODUCTS IS ESSENTIAL TO ATTAIN OPTIMUM PERFORMANCE AND OPERATION. WRITTEN INSTALLATION INSTRUCTIONS THAT PROVIDE GUIDELINES FOR PROPER INSTALLATION ARE AVAILABLE BY VISITING ANDERSENWINDOWS.COM. CUSTOM SIZES ARE AVAILABLE. CONTACT YOUR LOCAL SUPPLIER FOR MORE INFORMATION. DRAWINGS ARE NOT TO SCALE.

GLIDING WINDOWS

Functionality is the key to our gliding window. Efficient space utilization and sleek lines make this window the right choice for that tight, hard-to-manage space. With two or three sash systems all in one frame and discreet hardware creating clear, unobstructed views, these windows offer a cost-effective design with modern efficiencies.

Gliding Overview	94
Sizing	
Gliding 2-Sash	96
Gliding 3-Sash	96
Details	97
Installation Materials	154
Product Performance	158





GLIDING WINDOWS

FEATURES

GLIDING WINDOWS

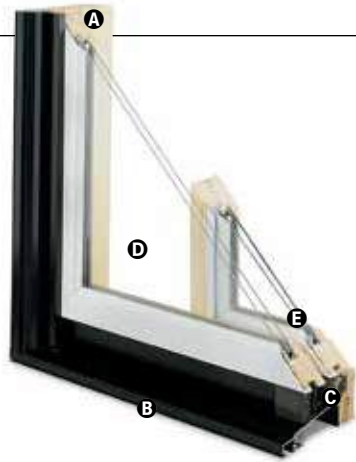
FRAME & SASH

A Select wood components are kiln dried and treated with water/insect repellent and preservative. Interior wood surfaces are available in pine, mixed grain Douglas fir, cherry, hickory, mahogany*, maple, oak, walnut, alder or vertical grain Douglas fir. Interior surfaces are available unfinished or factory primed. Factory-applied finishes are available in a variety of stain and paint options.

B Wood components are fitted with aluminum extrusions on the exterior. 50 exterior colors that meet AAMA 2604 and 2605 specifications are available, as well as custom colors. Also available is a selection of seven exterior anodized options.

C The frame consists of a rigid vinyl head and sill track. The compression-style head track helps create a positive seal between the sash and frame.

Vinyl installation flanges are pre-applied into a kerf on the frame exterior to facilitate installation. Optional aluminum flanges or metal installation clips are available.



Compression foam-filled bulb weatherstrip is applied on the sill for maximum resistance to water and air infiltration. Outside and inside sash are sealed with a compression bulb weatherstrip at the meeting stile.

GLASS

D High-Performance Low-E4® glass with a low-conductivity spacer. Triple-pane glass, tinted, clear dual-pane, high-altitude glass and other special glazing options are available.

E Glass is fixed in place from the interior with wood stops that can be removed for easy reglazing if necessary. Glass stops available in ovolo (colonial) and contemporary profiles.

HARDWARE

Sash locks and keepers give a slim, more traditional design and allow easy opening.

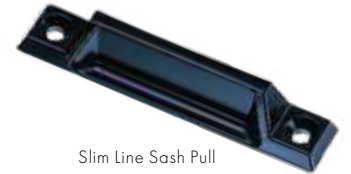
Slim Line sash pulls allow easy operation and do not interfere with window coverings.

HARDWARE OPTIONS



Lock

Antique Brass | **Black** | Bright Chrome
Bronze | Gold | Oil Rubbed Bronze
Pewter | Polished Brass
Satin Chrome | White



Slim Line Sash Pull

Standard: **Black** | Bronze
Gold | White
Optional: Polished Brass

Bold name denotes finish shown.

HARDWARE FINISHES

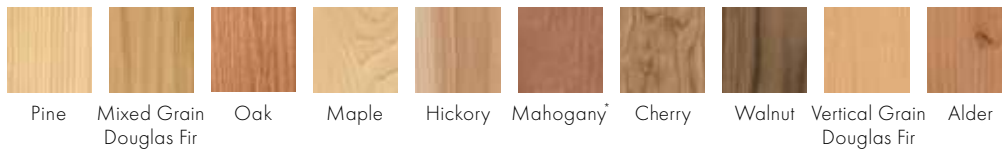


Oil rubbed bronze is a "living" finish that will change with time and use.

EXTERIOR & INTERIOR OPTIONS

EXTERIOR COLORS 50 exterior colors, 7 anodized finishes and custom colors. See exterior colors on page 11.

INTERIOR WOOD SPECIES



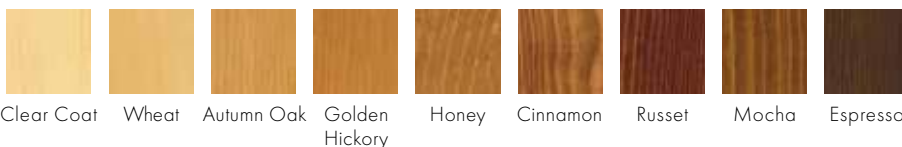
Naturally occurring variations in grain, color and texture of wood make each window one of a kind.

All factory-finished options are shown on pine.

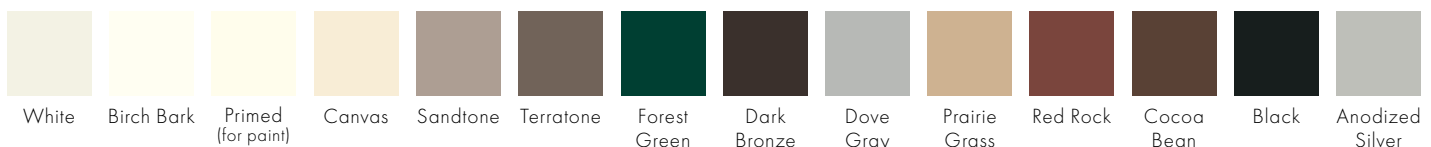
Painted options available on pine. Dark bronze and black painted options available on pine or maple. Anodized silver painted option available on maple only.

Interior custom stains, paints and color matching available.

FACTORY-FINISHED INTERIORS



INTERIOR PAINTED OPTIONS



*Actual wood species is either Sapele or Sipo, both non-endangered species grown in Africa, with color and characteristics similar to Central American mahoganies. Printing limitations prevent exact replication of colors and finishes. Please see your Andersen supplier for actual color and finish samples.

ACCESSORIES Sold Separately

GLIDING WINDOWS

INSECT SCREENS

Conventional Insect Screens



Charcoal fiberglass screen mesh fits into an aluminum frame in all 50 exterior colors. Aluminum screen mesh is available as an option.

TruScene® Insect Screens

TruScene insect screens available in all 50 exterior colors and seven anodized finishes.

See page 24 for more information on our insect screen options.

SENSORS

VeriLock® Security Sensors



VeriLock sensors are unique as they detect whether the windows are locked or unlocked — a feature no other sensors can provide. See page 27 for Smart Home options.

Open/Closed Sensors

Wireless open/closed sensors are available in four colors. See page 27 for details.

GRILLES

Full Divided Light

Permanent interior and exterior grilles with grille spacer bars between two panes of glass. Available in 5/8", 7/8", 1 1/8", 1 1/2", or 2 1/4" widths. Interior grilles are available with ovolo or contemporary profile (ovolo profile shown below). Not all widths are shown.



5/8"

7/8"



1 1/8"

1 1/2"

Simulated Divided Light

Permanent exterior and interior grilles without grille spacer bars. Available in 5/8", 7/8", 1 1/8", 1 1/2", or 2 1/4" widths. Interior grilles are available with ovolo or contemporary profile (ovolo profile shown below). Not all widths are shown.



7/8"

Finelight™

Grilles-Between-the-Glass

Available in 5/8" flat or 1" contoured aluminum profiles. Two-tone colors of pebble tan/colony white, sierra bronze/colony white or forest green/colony white are available on the 1" profile.



5/8" Flat

1" Contoured

Removable Interior Wood Grilles

Removable interior wood grilles are available in a 7/8" width and ovolo or contemporary profiles. Optional surround for removable grille and permanent exterior grilles also available.

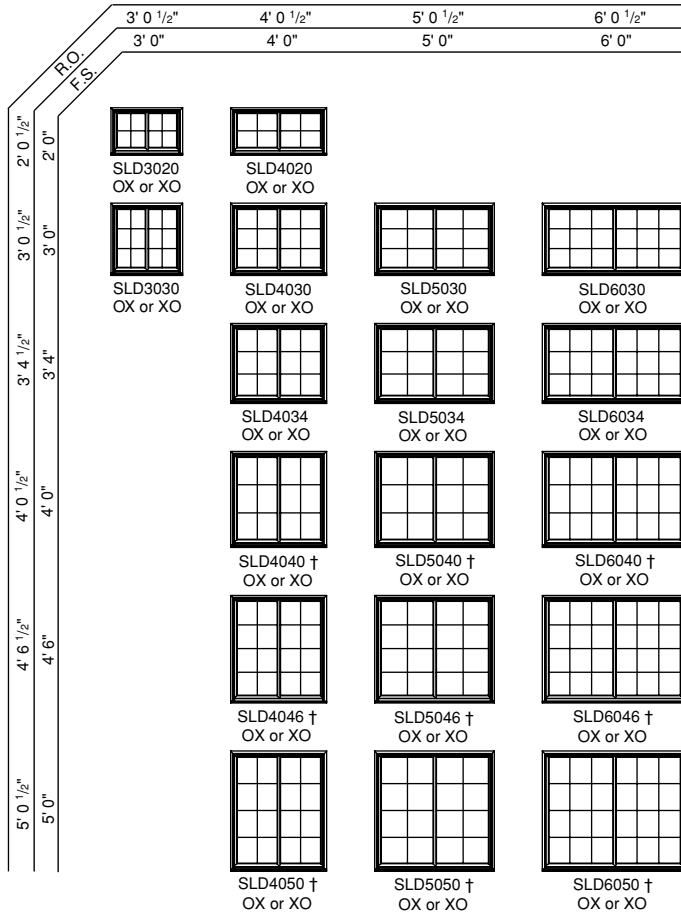


7/8"

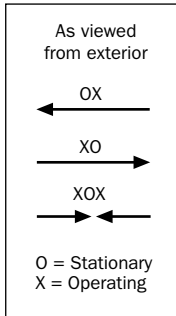
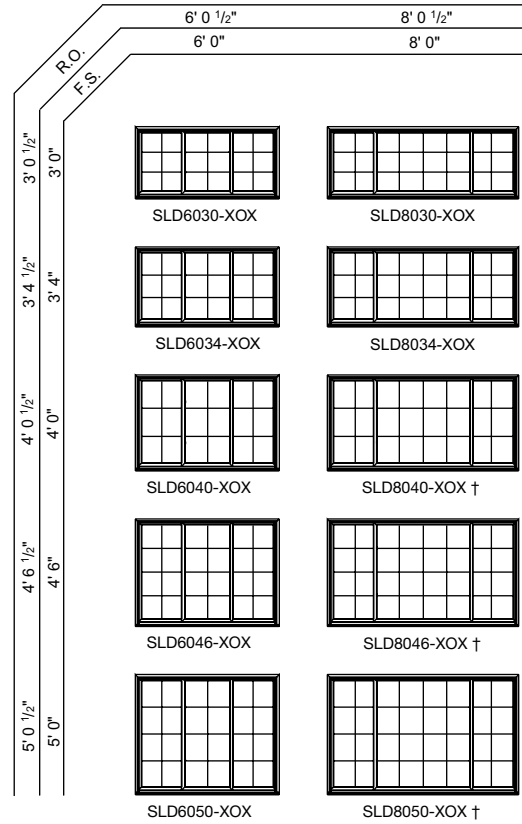
See page 22 for more information on grilles.

GLIDING WINDOWS

2-Sash Gliding Window Sizes



3-Sash Gliding Window Sizes



NOTES

† These units meet or exceed the following dimensions: Clear Opening Area 5.7 sq. ft., Clear Opening Height 24" and 44" maximum floor to sill height (with standard 6' 10-1/2" structural header height). See your local code official for requirements in your area.

3-sash gliding units use 2'0" operating sash as a standard. Additional sash ratios also available.

If glass is positioned within 18" of the finished floor, safety/tempered glass may be required. Local codes may differ. Verify tempered glass requirements with your local building code official.

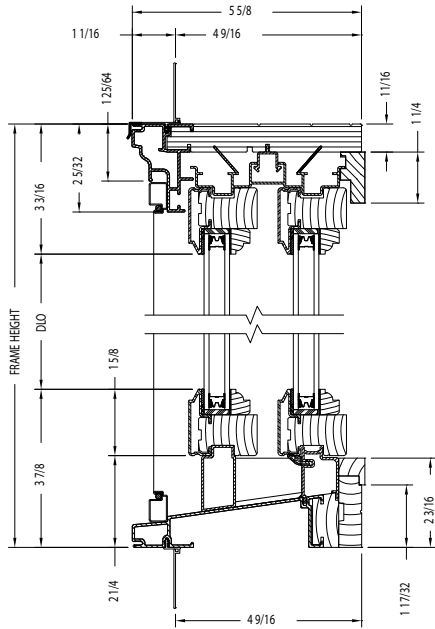
Use structural joining material when necessary or required by code.

The light patterns illustrated apply to rectangular removable interior wood grilles, Full Divided Light, Simulated Divided Light, Decorelle 100, 150 and 400 and Finelight™ Grilles-Between-the-Glass. All removable interior wood grilles will be installed in the units unless otherwise specified.

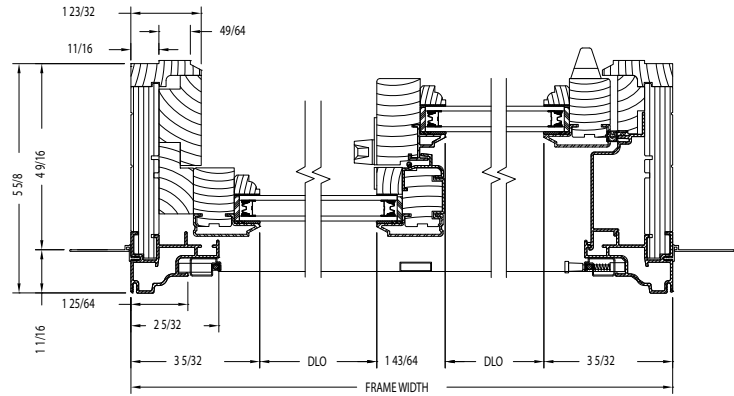
For a metric conversion in millimeters, multiply dimensions in inches by 25.4.

**FOR WINDOWS GREATER THAN 30 SQUARE FEET OR RATED HIGHER THAN PG50, ONE OF THESE THREE INSTALLATION METHODS IS REQUIRED:
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2-Sash Gliding Windows



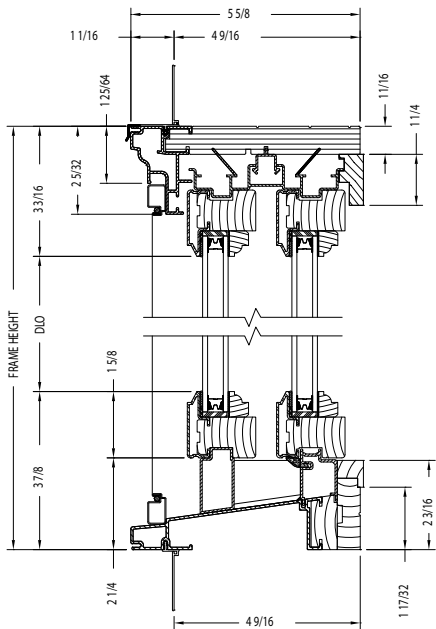
Vertical Section



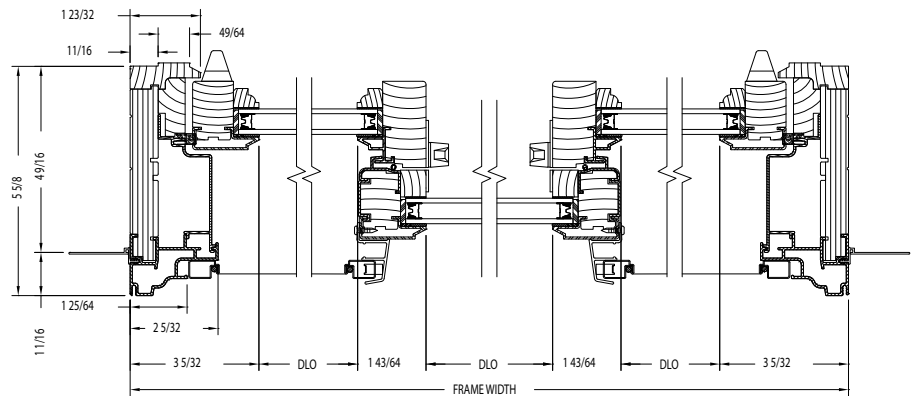
Horizontal Section

Shown with ovolo (colonial) glass stops.

3-Sash Gliding Windows



Vertical Section



Horizontal Section

Shown with ovolo (colonial) glass stops.

PROPER INSTALLATION AND MAINTENANCE OF E-SERIES PRODUCTS IS ESSENTIAL TO ATTAIN OPTIMUM PERFORMANCE AND OPERATION. WRITTEN INSTALLATION INSTRUCTIONS THAT PROVIDE GUIDELINES FOR PROPER INSTALLATION ARE AVAILABLE BY VISITING ANDERSENWINDOWS.COM. CUSTOM SIZES ARE AVAILABLE. CONTACT YOUR LOCAL SUPPLIER FOR MORE INFORMATION. DRAWINGS ARE NOT TO SCALE.

SPECIALTY WINDOWS

Our made-to-order philosophy lets you be creative with your look. Design your very own window using basic or unique shapes and add decorative glass for a creative accent. Our specialty profiles even complement double-hung and casement details for ultimate design flexibility.

Specialty Overview	100
Shapes	102
Sizing	
Half Circle	103
Quarter Circle	104
Circle & Oval	104
Details	105
Installation Materials	154
Product Performance	158





SPECIALTY WINDOWS

FEATURES

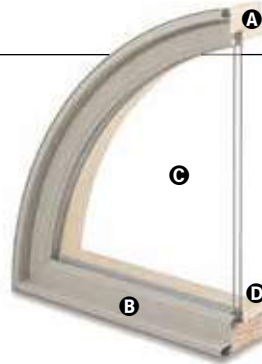
SPECIALTY WINDOWS

FRAME & SASH

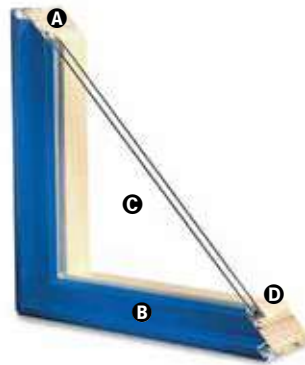
A Select wood components are kiln dried and treated with water/insect repellent and preservative. Interior wood surfaces are available in pine, mixed grain Douglas fir, cherry, hickory, mahogany*, maple, oak, walnut, alder or vertical grain Douglas fir. Interior surfaces are available unfinished or factory primed. Factory-applied finishes are available in a variety of stain and paint options.

B Wood components are fitted with aluminum extrusions on the exterior. 50 exterior colors that meet AAMA 2604 and 2605 specifications are available, as well as custom colors. Also available is a selection of seven exterior anodized options.

Vinyl installation flanges are pre-applied into a kerf on the frame exterior to facilitate installation. Optional aluminum flanges or metal installation clips are available.



Half Circle



Geometric Specialty



Double-Hung Specialty

In addition to our standard profile, a double-hung specialty frame profile is also available for half circle and geometric specialty windows.

GLASS

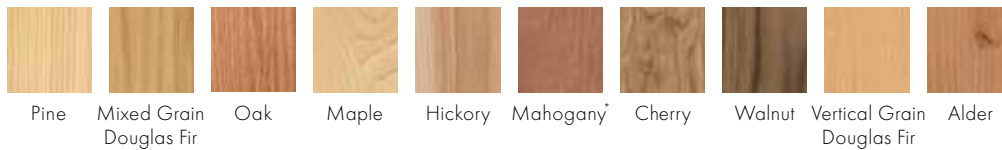
C High-Performance Low-E4® glass with a low-conductivity spacer. Triple-pane glass, tinted, clear dual-pane, high-altitude glass and other special glazing options are available.

D Glass is fixed in place from the interior with wood stops that can be removed for easy reglazing if necessary. Glass stops available in ovolo (colonial) and contemporary profiles.

EXTERIOR & INTERIOR OPTIONS

EXTERIOR COLORS 50 exterior colors, 7 anodized finishes and custom colors. See exterior colors on page 11.

INTERIOR WOOD SPECIES



Naturally occurring variations in grain, color and texture of wood make each window one of a kind.

All factory-finished options are shown on pine.

Painted options available on pine. Dark bronze and black painted options available on pine or maple.

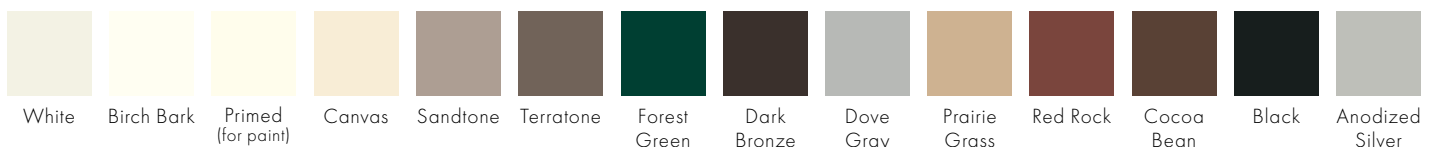
Anodized silver painted option available on maple only.

Interior custom stains, paints and color matching available.

FACTORY-FINISHED INTERIORS



INTERIOR PAINTED OPTIONS



*Actual wood species is either Sapele or Sipo, both non-endangered species grown in Africa, with color and characteristics similar to Central American mahoganies. Printing limitations prevent exact replication of colors and finishes. Please see your Andersen supplier for actual color and finish samples.

ACCESSORIES Sold Separately

SPECIALTY WINDOWS

PRIVACY OPTIONS

Blinds-Between-the-Glass



A 5/8" aluminum slat blind is encased between two panes of insulated glass in a dust-free environment (rectangular shapes only). Available colors are white, tan and almond. Blind can be tilted or raised and lowered with the use of one cord (not all sizes are retractable).

System 3 Blinds



A 5/8" aluminum slat blind is mounted to an extruded aluminum blind panel and applied to the window, creating a triple-glazed window boasting privacy and energy efficiency. Available in three colors. Blind panels are offered in white, tan, gold or an optional wood veneer to match your interior.

System 3 Shades

Pleated fabric shades are available in four colors to effortlessly and beautifully filter the light. See page 25 for more details.

GRILLES

Full Divided Light

Permanent interior and exterior grilles with grille spacer bars between two panes of glass. Available in 5/8", 7/8", 1 1/8", 1 1/2", or 2 1/4" widths. Interior grilles are available with ovolo or contemporary profile (ovolo profile shown below). Not all widths are shown.



5/8"

7/8"



1 1/8"

1 1/2"

Simulated Divided Light

Permanent exterior and interior grilles without grille spacer bars. Available in 5/8", 7/8", 1 1/8", 1 1/2", or 2 1/4" widths. Interior grilles are available with ovolo or contemporary profile (ovolo profile shown below). Not all widths are shown.



7/8"

Finelight™

Grilles-Between-the-Glass

Available in 5/8" flat or 1" contoured aluminum profiles. Two-tone colors of pebble tan/colony white, sierra bronze/colony white or forest green/colony white are available on the 1" profile.



5/8" Flat

1" Contoured

Removable Interior Wood Grilles

Removable interior wood grilles are available in a 7/8" width and ovolo or contemporary profiles. Optional surround for removable grille and permanent exterior grilles also available.

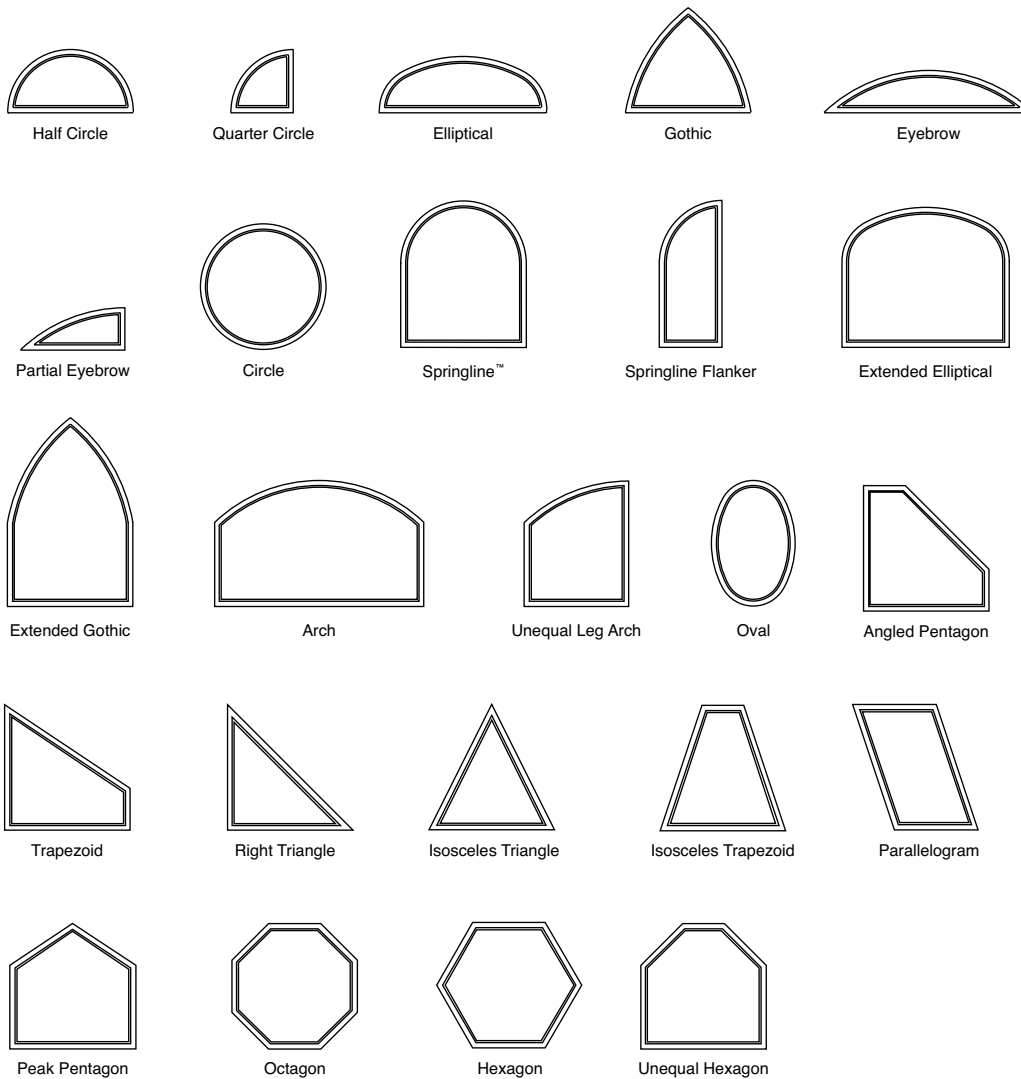


7/8"

See page 22 for more information on grilles.

SPECIALTY WINDOWS

Specialty Shapes



NOTES

The following general guidelines do not apply to every specialty shape. Contact your local supplier for specific limitations of the specialty shapes shown above or about creating custom shapes beyond those shown here.

Overall unit block size should not be larger than 50 sq. ft.

Frame width and height must be between 9" and 144".

Units can only be larger than 82" in one direction.

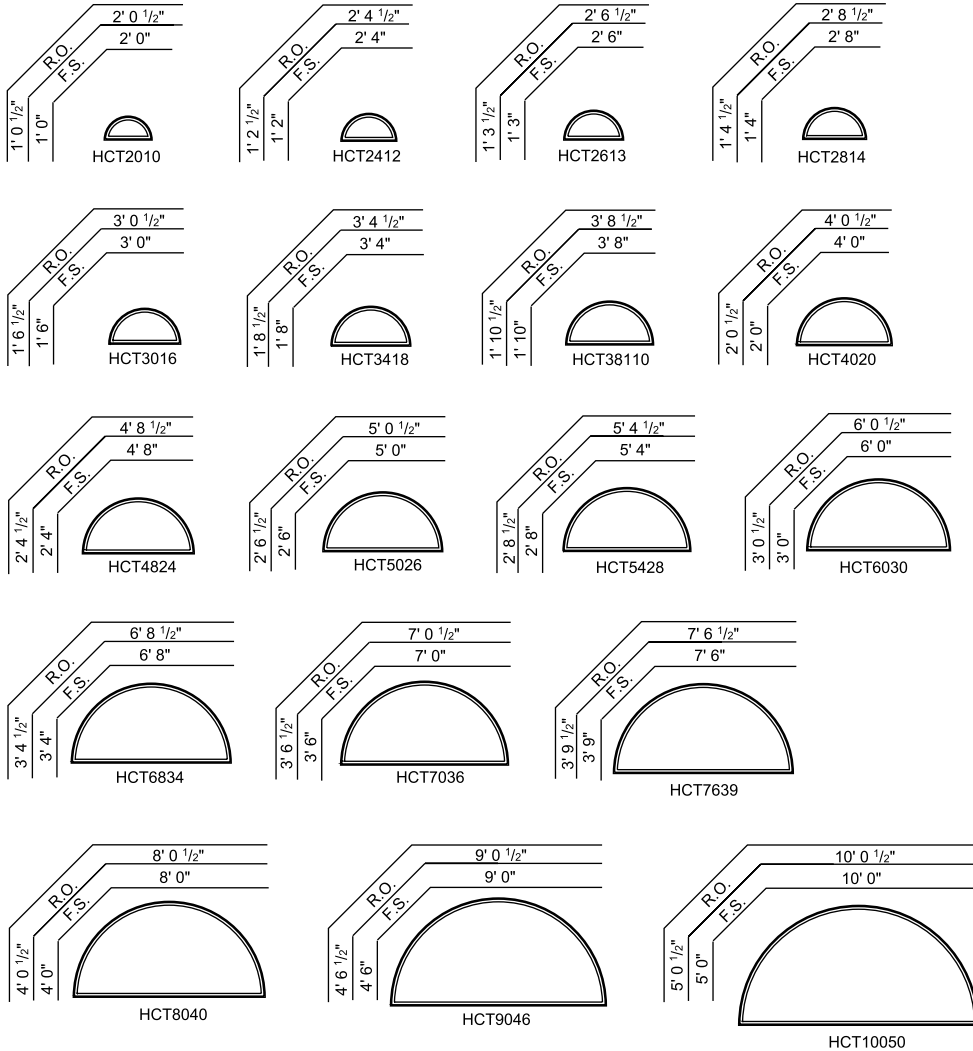
Corners/angles cannot be less than 27°.

Standard radiuses include:

1' 0"	3' 0"	7' 0"
1' 2"	3' 1"	7' 6"
1' 3"	3' 3"	8' 0"
1' 4"	3' 4"	9' 0"
1' 6"	3' 6"	10' 7"
1' 6-23/32"	3' 9"	12' 0"
1' 8"	4' 0"	13' 8"
1' 10"	4' 6"	15' 0"
2' 0"	5' 0"	16' 0"
2' 4"	5' 6"	17' 10"
2' 6"	6' 0"	19' 8"
2' 8"	6' 6"	
2' 10-19/32"		

**FOR WINDOWS GREATER THAN 30 SQUARE FEET OR RATED HIGHER THAN PG50, ONE OF THESE THREE INSTALLATION METHODS IS REQUIRED:
A) THROUGH THE JAMB B) ALUMINUM INSTALLATION FLANGE OR C) INSTALLATION CLIPS.
ADDITIONAL CUSTOM SIZES ARE AVAILABLE. CONTACT YOUR LOCAL SUPPLIER FOR MORE INFORMATION. DRAWINGS ARE NOT TO SCALE.**

Half Circle Window Sizes



NOTES

If glass is positioned within 18" of the finished floor, safety/tempered glass may be required. Local codes may differ. Verify tempered glass requirements with your local building code official.

Use structural joining material when necessary or required by code.

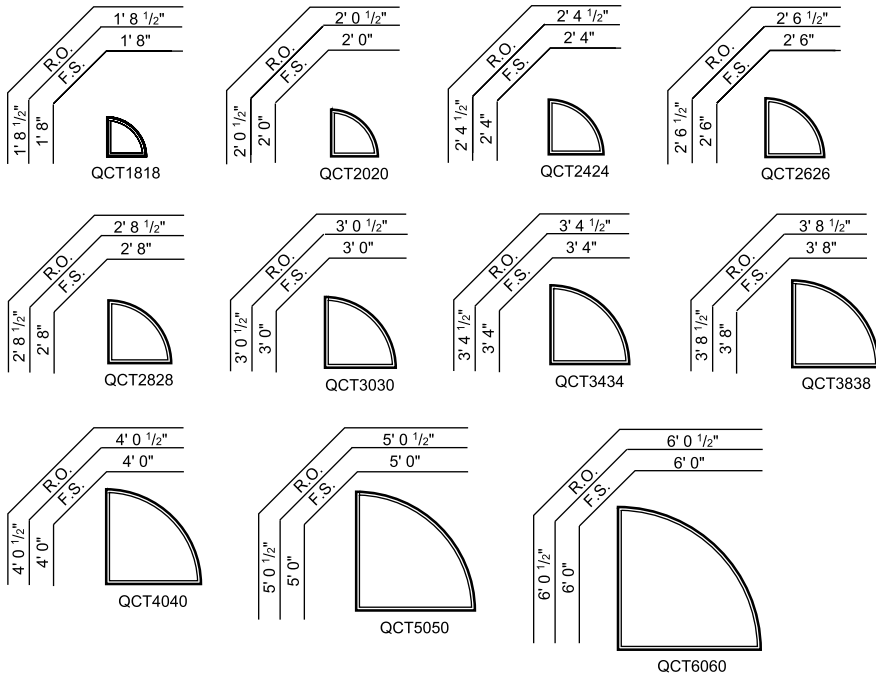
Some limitations exist for light patterns for removable interior wood grilles, Full Divided Light, Simulated Divided Light, Decorelle 100, 150 and 400 and Finelight™ Grilles-Between-the-Glass. Please contact your local supplier for more information. All removable interior wood grilles will be installed in the units unless otherwise specified.

For a metric conversion in millimeters, multiply dimensions in inches by 25.4.

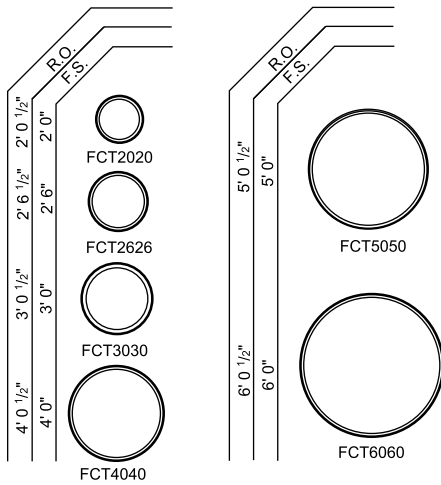
**FOR WINDOWS GREATER THAN 30 SQUARE FEET OR RATED HIGHER THAN PG50, ONE OF THESE THREE INSTALLATION METHODS IS REQUIRED:
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SPECIALTY WINDOWS

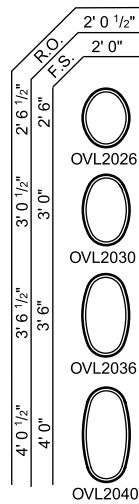
Quarter Circle Window Sizes



Circle Window Sizes



Oval Window Sizes



NOTES

If glass is positioned within 18" of the finished floor, safety/tempered glass may be required. Local codes may differ. Verify tempered glass requirements with your local building code official.

Use structural joining material when necessary or required by code.

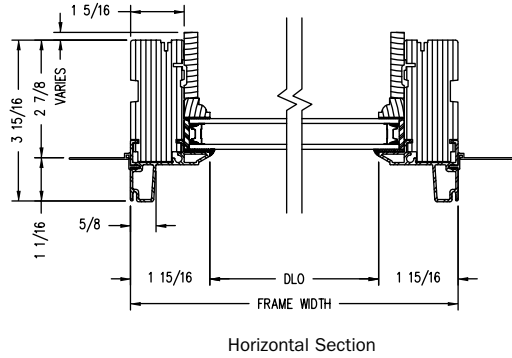
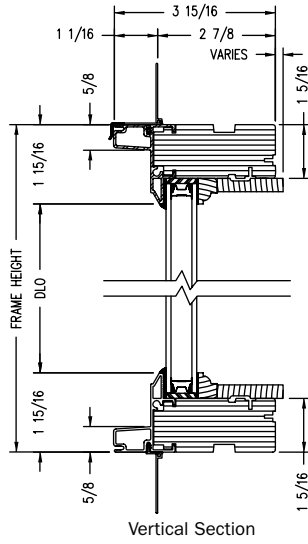
Some limitations exist for light patterns for removable interior wood grilles, Full Divided Light, Simulated Divided Light, Decorelle 100, 150 and 400 and Finelight™ Grilles-Between-the-Glass. Please contact your local supplier for more information. All wood grilles will be installed in the units unless otherwise specified.

For a metric conversion in millimeters, multiply dimensions in inches by 25.4.

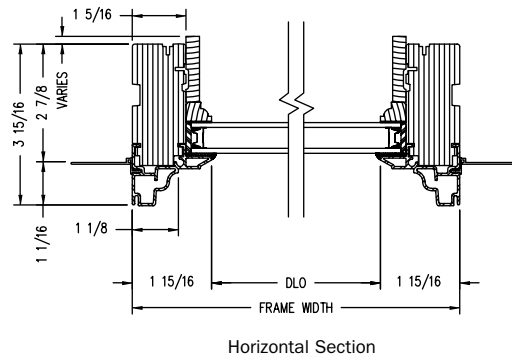
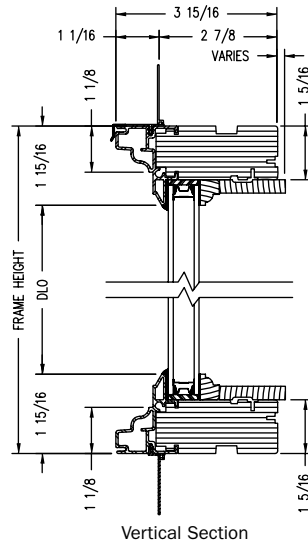
**FOR WINDOWS GREATER THAN 30 SQUARE FEET OR RATED HIGHER THAN PG50, ONE OF THESE THREE INSTALLATION METHODS IS REQUIRED:
A) THROUGH THE JAMB B) ALUMINUM INSTALLATION FLANGE OR C) INSTALLATION CLIPS.
ADDITIONAL CUSTOM SIZES ARE AVAILABLE. CONTACT YOUR LOCAL SUPPLIER FOR MORE INFORMATION. DRAWINGS ARE NOT TO SCALE.**

Specialty Windows

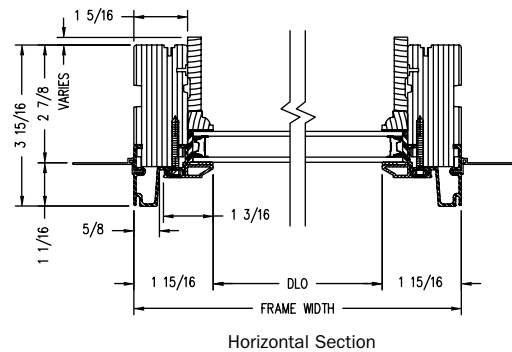
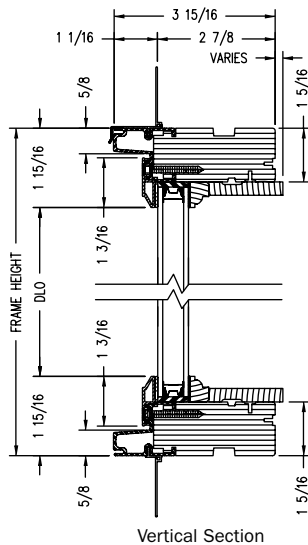
Specialty



**Specialty
(Double-Hung
Frame
Profile)**



**Exterior
Glazed
Specialty**



PROPER INSTALLATION AND MAINTENANCE OF E-SERIES PRODUCTS IS ESSENTIAL TO ATTAIN OPTIMUM PERFORMANCE AND OPERATION. WRITTEN INSTALLATION INSTRUCTIONS THAT PROVIDE GUIDELINES FOR PROPER INSTALLATION ARE AVAILABLE BY VISITING ANDERSENWINDOWS.COM. CUSTOM SIZES ARE AVAILABLE. CONTACT YOUR LOCAL SUPPLIER FOR MORE INFORMATION. DRAWINGS ARE NOT TO SCALE.

HINGED PATIO DOORS

Bottom and intermediate rail options are just the start to this door’s solid design. Select contemporary or French styling, go as high as 10 feet, add venting inswing or outswing sidelights or raised solid wood panel inserts and create a truly custom look.

Hinged Overview	108
Panel Labeling	112
Panel Handing.....	116, 132
Inswing Sizing	
Single Panel Doors	118
Two-Panel Doors	119
Sash-Set & Direct-Set Sidelights	120
Sash-Set Transom	121
Specialty Transom	122
Direct-Set Transom	123
Arch Doors.....	125
Inswing Details	127
Outswing Sizing	
Two-Panel Doors	133
Single Panel Doors & Sash-Set Sidelights.....	134
Sash-Set Transom	135
Direct-Set & Specialty Transom	136
Arch Doors.....	137
Concealed Panic System Sizing	138
Outswing Details.....	139
Installation Materials	154
Product Performance	158





HINGED PATIO DOORS

FEATURES

HINGED PATIO DOORS

FRAME & PANEL

A Select wood components are kiln dried and treated with water/insect repellent and preservative. Interior wood surfaces are available in pine, mixed grain Douglas fir, cherry, hickory, mahogany*, maple, oak, walnut, alder or vertical grain Douglas fir. Interior surfaces are available unfinished or factory primed. Factory-applied finishes are available in a variety of stain and paint options.

B Wood components are fitted with aluminum extrusions on the exterior. 50 exterior colors that meet AAMA 2604 and 2605 specifications are available, as well as custom colors. Also available is a selection of seven exterior anodized options.

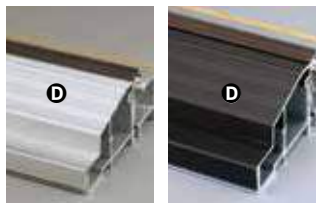
C The frame perimeter consists of a high-quality foam-filled weatherstrip.

Inswing and outswing doors receive a factory-applied vinyl installation flange with drip cap. Some inswing patio doors require an adjustable metal installation flange. Optional aluminum flanges and metal installation clips are available.

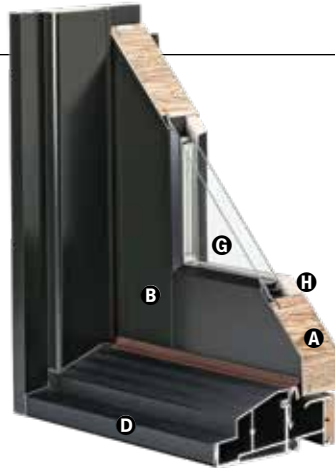
SILL

Inswing Drainage Sill

D Premium grade aluminum inswing sill with an oak threshold. Sills have a built-in drainage channel that allows water to drain away from the interior of the door. A top plate is removable for easy channel cleaning. A polyurethane thermal barrier helps reduce heat loss. Available in clear anodized or dark bronze anodized finish.



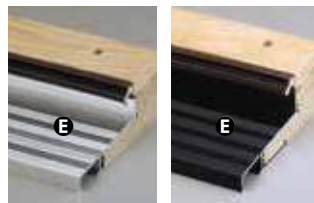
4 1/16" Inswing Drainage Sills



Inswing Patio Door with Contemporary Panel

Outswing On-Floor Sill

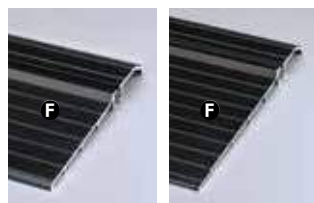
E Premium grade aluminum outswing sill with oak threshold. Outswing door sill is backed with a compression foam weatherstrip. Available in clear anodized or dark bronze anodized finish.



Outswing On-Floor Sills

Inswing & Outswing Low-Threshold Sills

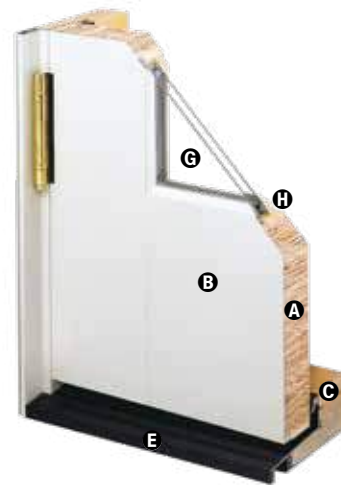
F Aluminum low threshold sill available for outswing doors and inswing doors with jamb depths of 4 1/16" and 6 7/16". Low threshold design provides a smooth transition from interior to exterior and is wheelchair-accessible. A polyurethane thermal barrier helps reduce heat loss. Available in dark bronze anodized finish.



Inswing Low-Threshold Sills



Outswing Low-Threshold Sill



Outswing Patio Door with French Panel

GLASS

G High-Performance Low-E4® glass with a low-conductivity spacer. Triple-pane glass, tinted, clear dual-pane, high-altitude glass and other special glazing options are available.

H Glass is fixed in place from the interior with wood stops that can be removed for easy reglazing if necessary. Glass stops available in ovolo (colonial) and contemporary profiles.

HARDWARE

Multi-Point Locking System

Autolatch® stainless steel multi-point locking system locks the panel in three locations to provide a secure, weather-resistant entry system. Some door heights lock the panel in four locations.

Hinges



Heavy-duty commercial grade hinges are available in a standard finish of polished brass or optional finishes of limited lifetime brass, antique brass, oil rubbed bronze,** pewter, satin chrome, bright chrome, white, black, stainless steel or gold dust to match your handle set. Hinges are complete with matching screws. An innovative hinge shimming system allows for minor adjustments.

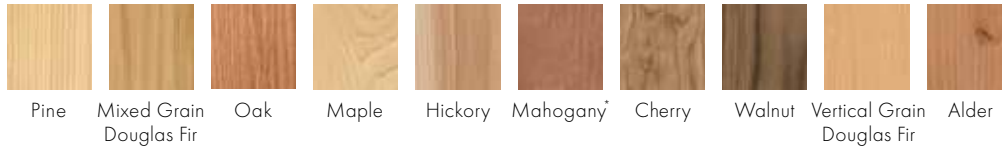
*Actual wood species is either Sapele or Sipo, both non-endangered species grown in Africa, with color and characteristics similar to Central American mahoganies.

**Oil rubbed bronze is a "living" finish that will change with time and use.

EXTERIOR & INTERIOR OPTIONS

EXTERIOR COLORS 50 exterior colors, 7 anodized finishes and custom colors. See exterior colors on page 11.

INTERIOR WOOD SPECIES



Naturally occurring variations in grain, color and texture of wood make each window one of a kind.

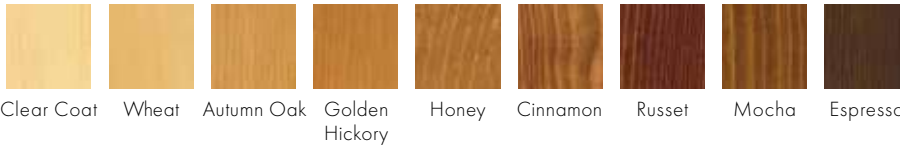
All factory-finished options are shown on pine.

Painted options available on pine. Dark bronze and black painted options available on pine or maple.

Anodized silver painted option available on maple only.

Interior custom stains, paints and color matching available.

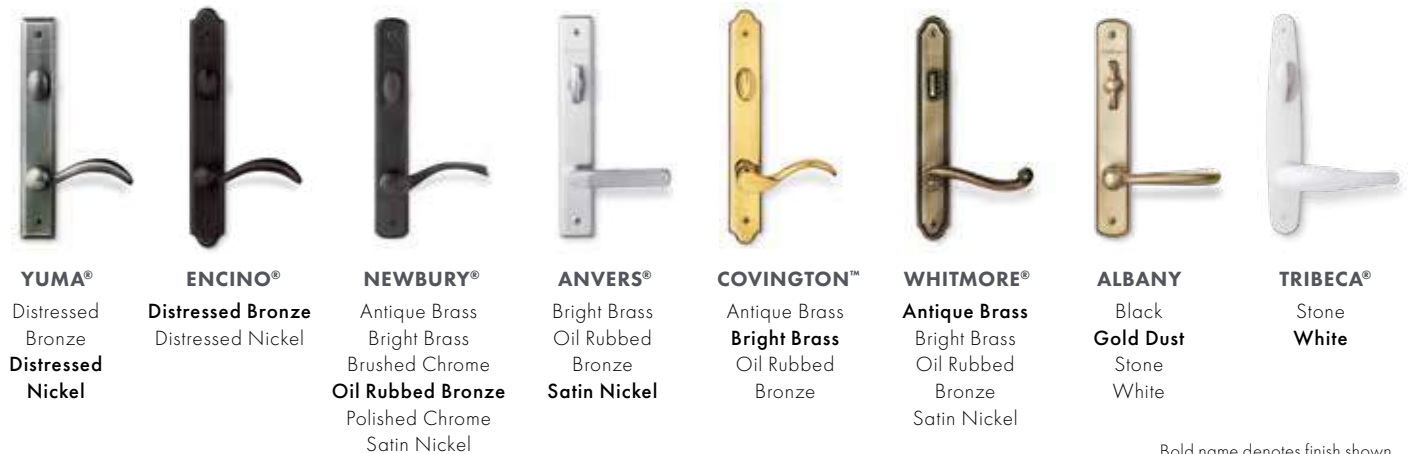
FACTORY-FINISHED INTERIORS



INTERIOR PAINTED OPTIONS



HARDWARE OPTIONS



Bold name denotes finish shown.

HARDWARE FINISHES



Oil rubbed bronze is a "living" finish that will change with time and use.

*Actual wood species is either Sapele or Sipo, both non-endangered species grown in Africa, with color and characteristics similar to Central American mahoganies.

**Matching hinges available in most hardware finishes for inswing patio doors.

Mix and match interior and exterior style and finish options are available, excludes FSB hardware.

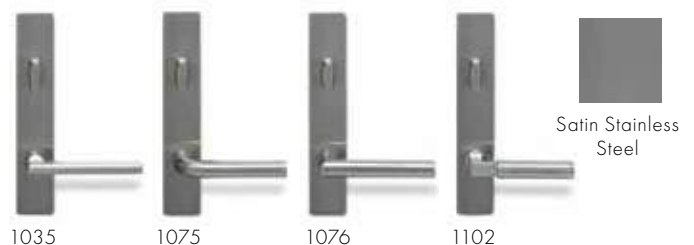
Bright brass and satin nickel finishes feature a 10-year limited warranty.

Tribeca and Albany hardware are zinc diecast with powder-coated durable finish, other hardware is solid forged brass.

Printing limitations prevent exact replication of colors and finishes. See your Andersen supplier for actual color and finish samples.

"FSB" is a registered trademark of Franz Schneider Brakel GmbH & Co.

FSB® HARDWARE



E-Series Hinged
Patio Doors

HINGED PATIO DOORS

FEATURES

HINGED PATIO DOORS

RAISED PANEL INSERTS



Available in $\frac{1}{2}$ and $\frac{3}{4}$ light options. Real wood, available in all wood species, makes up the interior panel insert. The exterior panel insert is made of formed aluminum cladding and is available in all 50 exterior colors and any custom color.

The raised panel inserts are based on the standard 8" bottom rail with $4\frac{1}{16}$ " stiles. Available in nine widths to match standard door panel sizes.

Additional intermediate rail options available allowing glass lights to be placed above and below the intermediate rail.

TRANSOMS



Available in two jamb depths to align with your inswing door jamb depth. Design is sloped for water disbursement. Inswing and outswing sash-set transoms are available with $2\frac{3}{4}$ ", $3\frac{1}{16}$ ", $4\frac{1}{16}$ " and $6\frac{1}{2}$ " stiles to match your door.

SIDELIGHTS



Outswing venting sidelights have concealed locks and operate with our convenient folding operator handles. Interior wood-veneered insect screen can be customized to match your interior wood species and finish.

Inswing venting sidelights come with special hardware that locks in the center and complements the door's handle set. When the handle is activated upwards, shoot bolts engage at the head and sill for added security. Inswing venting sidelights feature an exterior insect screen.

Non-venting direct-set and sash-set sidelights are also available for both inswing and outswing patio doors.

CENTER POST DOOR



Allows door panels to be hinged at the center or at the jamb. Available in two jamb depths: $4\frac{9}{16}$ " and $6\frac{9}{16}$ ".

The center post is clad laminated veneer lumber (LVL) that provides exceptional structural integrity. A top-hung gliding insect screen is available on the inswing center post door.

COMMERCIAL DOOR PANELS

Available in single or double door applications. The commercial door panels have a 12" bottom rail and $6\frac{1}{2}$ " stiles. The commercial door panels have a 12" bottom rail, $6\frac{1}{2}$ " stiles and an optional intermediate rail.

CONCEALED PANIC SYSTEM DOOR



We have created an innovative Concealed Panic System (CPS), eliminating the need for a center astragal and exposed vertical rods on double doors. This system provides a clear opening while maintaining a sleek, uncluttered interior look. The system locks at the head and sill for added security. You get the same warm, real wood interior you've come to expect from us without the unsightly clutter common to most commercial doors.

We've also aligned with Von Duprin®, the most recognized and trusted brand of commercial hardware in the window and door industry. Von Duprin, along with the Ingersoll-Rand family of brands, provides premium push bars, handle sets, closers and kick plates to make the CPS door truly innovative. Plus, our doors are factory-prepped, making installation much easier.

ACCESSORIES Sold Separately

HINGED PATIO DOORS

HARDWARE

Construction Handle



Temporary construction handle is available with all hinged patio doors. This handle allows operation during the construction phase, protecting finished hardware from damage or jobsite theft.

Additional hardware options such as exterior keyed locks and more are also available.

SENSORS

Yale® Assure Lock®

Monitor, lock and unlock from anywhere with the Yale Assure Lock. The sleek keyless lock includes Bluetooth® technology for key-free unlocking and is compatible with Z-Wave® for integration with a wide range of smart home platforms. See page 27 for Smart Home options.

VeriLock® Security Sensors

VeriLock sensors are unique as they detect whether the doors are locked or unlocked* — a feature no other sensors can provide. See page 27 for Smart Home options.

Open/Closed Sensors

Wireless open/closed sensors are available in four colors. See page 27 for details.

INSECT SCREENS

Retractable Insect Screens



Concealed, retractable insect screen has charcoal fiberglass screen mesh. Available for inswing single or double door units. Insect screen rolls out when needed and retracts into concealed housing when not in use. Available in 50 exterior colors.

Retractable insect screens for outswing doors are field applied to the interior of the door. Available in five colors including white, almond, desert sand, bronze and black.

Hinged Insect Screens for Inswing Patio Doors

Charcoal fiberglass screen mesh fits into an aluminum frame in 50 exterior colors. Provided with a black lockable latch and automatic closer for smooth operation. Available in single or multiple door units. Aluminum screen mesh is also available.

Top-Hung Gliding Insect Screens for Inswing Center Post Patio Doors

Charcoal fiberglass screen mesh fits into an aluminum frame available in 50 exterior colors. Aluminum screen mesh is also available.

PRIVACY OPTIONS

Blinds-Between-the-Glass



A 5/8" aluminum slot blind mounted between two panes of insulated glass in a dust-free environment. Available in white, tan and almond. Blinds are magnetically controlled and can be tilted or raised and lowered with one cord.** Not available on arch patio doors.

GRILLES

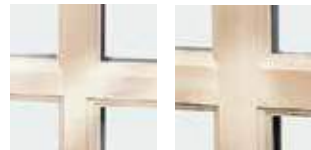
Full Divided Light

Permanent interior and exterior grilles with grille spacer bars between two panes of glass. Available in 5/8", 7/8", 1 1/8", 1 1/2", or 2 1/4" widths. Interior grilles are available with ovolo or contemporary profile (ovolo profile shown below). Not all widths are shown.



5/8"

7/8"



1 1/8"

1 1/2"

Simulated Divided Light

Permanent exterior and interior grilles without grille spacer bars. Available in 5/8", 7/8", 1 1/8", 1 1/2", or 2 1/4" widths. Interior grilles are available with ovolo or contemporary profile (ovolo profile shown below). Not all widths are shown.



7/8"

Finelight™ Grilles-Between-the-Glass

Available in 5/8" flat or 1" contoured aluminum profiles. Two-tone colors of pebble tan/colony white, sierra bronze/colony white or forest green/colony white are available on the 1" profile.



5/8" Flat

1" Contoured

Removable Interior Wood Grilles

Removable interior wood grilles are available in a 7/8" width and ovolo or contemporary profiles. Optional surround for removable grille and permanent exterior grilles also available.



7/8"

See page 22 for more information on grilles.

*When properly configured and maintained with a professionally installed security system and/or self-monitoring system compatible with Honeywell® 5800 controls. See your Andersen supplier for more information.

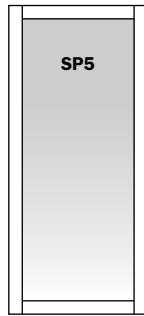
**Not all sizes are retractable. See your local Andersen supplier for details.

Hinged Patio Door Panel Labeling

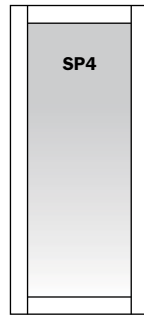
Door Panel Options

Andersen® E-Series offers a wide range of door styles to accommodate any home project style. Both contemporary and French panel styles are available to complement traditional or modern architecture.

Hinged Patio Door Contemporary Panels

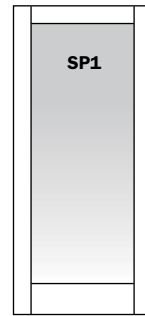


3¹/₁₆" stiles & rails

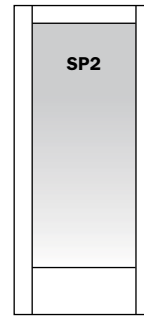


4¹/₁₆" stiles & rails

Hinged Patio Door French Panels

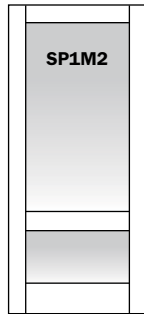


4¹/₁₆" stiles, 4¹/₁₆" top rail & 8" bottom rail

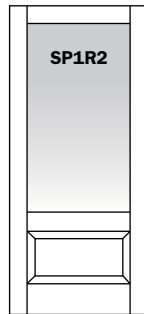


4¹/₁₆" stiles, 4¹/₁₆" top rail & 12" bottom rail

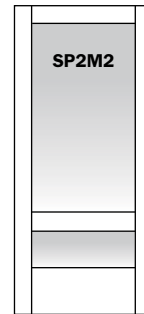
Panels with 5⁵/₁₆" Intermediate Rail 23¹/₄" from Bottom of Panel



4¹/₁₆" stiles, 4¹/₁₆" top rail & 8" bottom rail

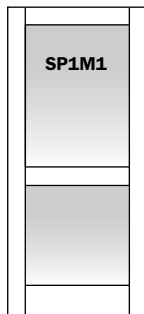


4¹/₁₆" stiles, 4¹/₁₆" top rail, 8" bottom rail & raised panel insert

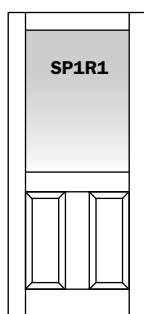


4¹/₁₆" stiles, 4¹/₁₆" top rail & 12" bottom rail

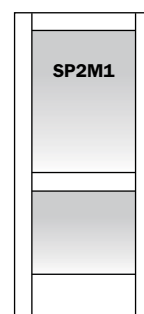
Panels with 5⁵/₁₆" Intermediate Rail 35" from Bottom of Panel



4¹/₁₆" stiles, 4¹/₁₆" top rail & 8" bottom rail



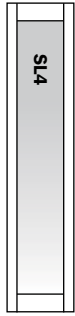
4¹/₁₆" stiles, 4¹/₁₆" top rail, 8" bottom rail & raised panel insert



4¹/₁₆" stiles, 4¹/₁₆" top rail & 12" bottom rail

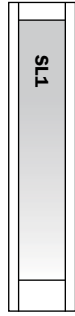
Sidelight Panels

Contemporary Panel

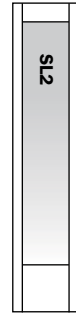


2 3/4" stiles
4 1/16" top rail
& bottom rail

French Panels

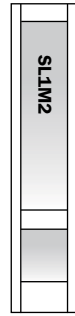


2 3/4" stiles
4 1/16" top rail
8" bottom rail

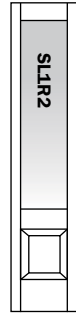


2 3/4" stiles
4 1/16" top rail
12" bottom rail

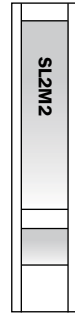
5 5/16" Intermediate Rail 23 3/4" from Bottom of Panel



2 3/4" stiles
4 1/16" top rail
8" bottom rail

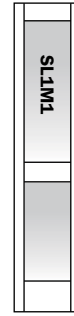


2 3/4" stiles
4 1/16" top rail
8" bottom rail &
raised panel insert

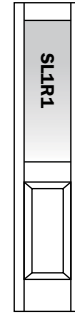


2 3/4" stiles
4 1/16" top rail
12" bottom rail

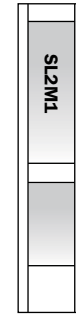
5 5/16" Intermediate Rail 35" from Bottom of Panel



2 3/4" stiles
4 1/16" top rail
8" bottom rail



2 3/4" stiles
4 1/16" top rail
8" bottom rail &
raised panel insert



2 3/4" stiles
4 1/16" top rail
12" bottom rail

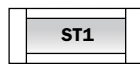
Transom Panels



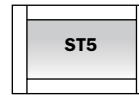
2 3/4" stiles & rails



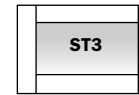
2 3/4" stiles & 4 1/16" rails



4 1/16" stiles & 2 3/4" rails

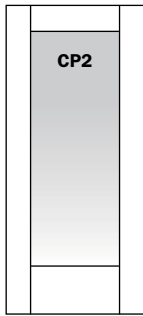


3 1/16" stiles & rails

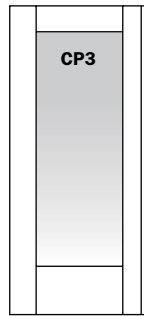


4 1/16" stiles & rails

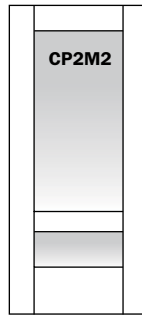
Commercial Door, Sidelight & Transom Panels*



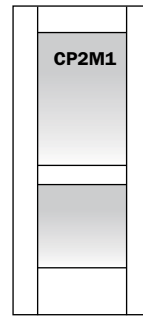
6 1/2" stiles, 6 1/2" top rail
& 12" bottom rail



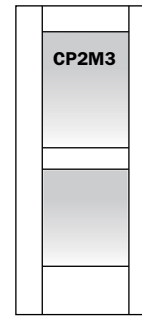
6 1/2" stiles, 6 1/2" top rail
& 12" bottom rail
Concealed Panic System



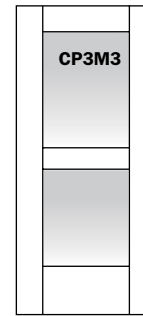
6 1/2" stiles, 6 1/2" top rail
& 12" bottom rail with
5 5/16" intermediate rail
23 3/4" from bottom of panel



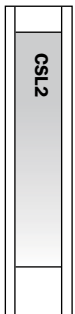
6 1/2" stiles, 6 1/2" top rail
& 12" bottom rail with
5 5/16" intermediate rail
35" from bottom of panel



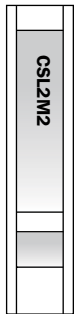
6 1/2" stiles, 6 1/2" top rail
& 12" bottom rail with
5 5/16" intermediate rail
39" from bottom of panel



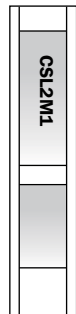
6 1/2" stiles, 6 1/2" top rail
& 12" bottom rail with
5 5/16" intermediate rail
39" from bottom of panel
Concealed Panic System



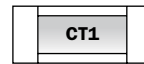
2 3/4" stiles,
6 1/2" top rail &
12" bottom rail



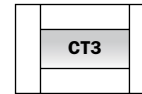
2 3/4" stiles, 6 1/2" top rail
& 12" bottom rail with
5 5/16" intermediate rail
23 3/4" from bottom of panel



2 3/4" stiles, 6 1/2" top rail
& 12" bottom rail with
5 5/16" intermediate rail
35" from bottom of panel



6 1/2" stiles & 2 3/4" rails



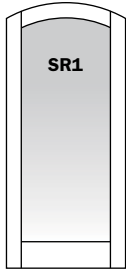
6 1/2" stiles & rails



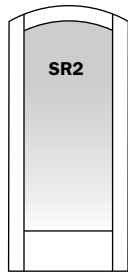
2 3/4" stiles & 6 1/2" rails

* Also available for residential applications.

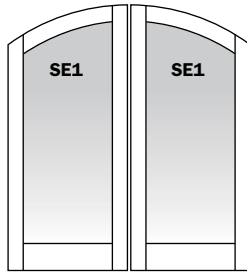
Arch Panels



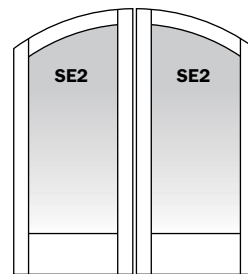
4 1/16" stiles, 4 1/16" top rail & 8" bottom rail



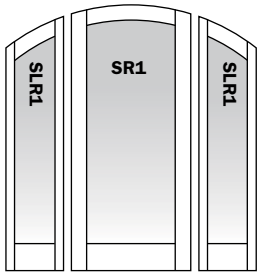
4 1/16" stiles, 4 1/16" top rail & 12" bottom rail



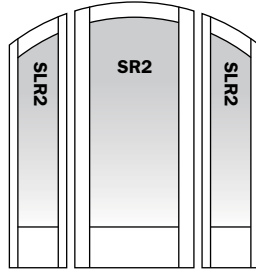
4 1/16" stiles, 4 1/16" top rail & 8" bottom rail



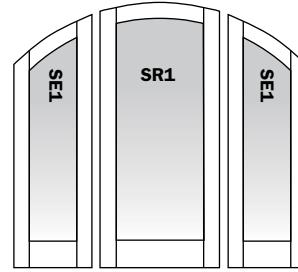
4 1/16" stiles, 4 1/16" top rail & 12" bottom rail



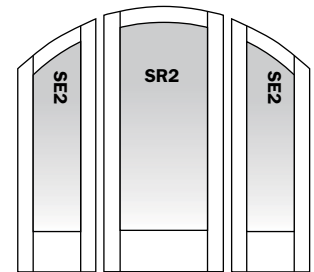
2 3/4" stiles 4 1/16" stiles
4 1/16" top rail 4 1/16" top rail
8" bottom rail 8" bottom rail



2 3/4" stiles 4 1/16" stiles
4 1/16" top rail 4 1/16" top rail
12" bottom rail 12" bottom rail

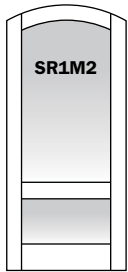


4 1/16" stiles 4 1/16" stiles
4 1/16" top rail 4 1/16" top rail
8" bottom rail 8" bottom rail

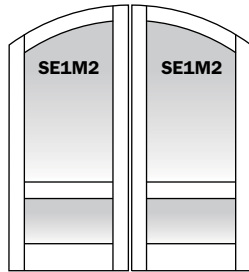


4 1/16" stiles 4 1/16" stiles
4 1/16" top rail 4 1/16" top rail
12" bottom rail 12" bottom rail

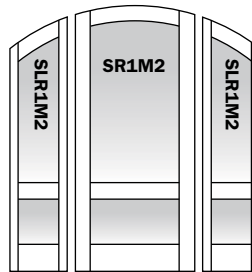
Arch Panels with 5 1/16" Intermediate Rail 23 1/4" from Bottom of Panel



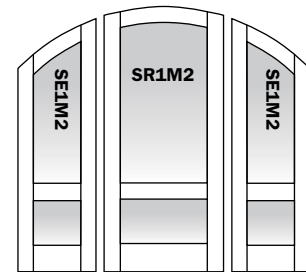
4 1/16" stiles, 4 1/16" top rail & 8" bottom rail



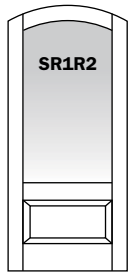
4 1/16" stiles, 4 1/16" top rail & 8" bottom rail



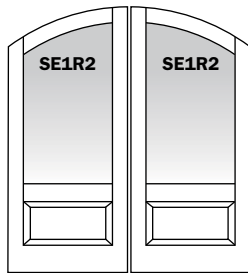
2 3/4" stiles 4 1/16" stiles
4 1/16" top rail 4 1/16" top rail
8" bottom rail 8" bottom rail



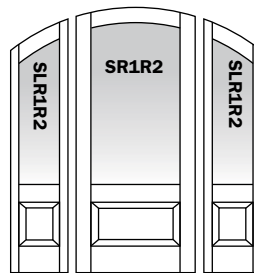
4 1/16" stiles 4 1/16" stiles
4 1/16" top rail 4 1/16" top rail
8" bottom rail 8" bottom rail



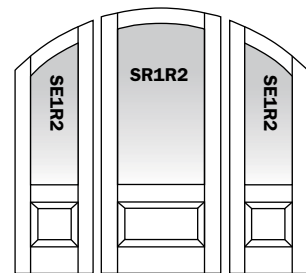
4 1/16" stiles, 4 1/16" top rail, 8" bottom rail & raised panel insert



4 1/16" stiles, 4 1/16" top rail, 8" bottom rail & raised panel inserts

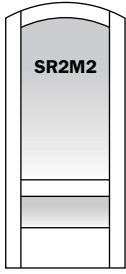


2 3/4" stiles, 4 1/16" stiles,
4 1/16" top rail, 4 1/16" top rail,
8" bottom rail & raised panel insert & raised panel insert

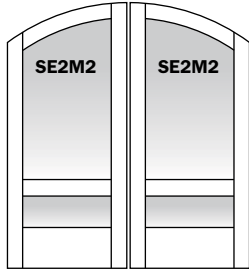


4 1/16" stiles, 4 1/16" stiles,
4 1/16" top rail, 4 1/16" top rail,
8" bottom rail & raised panel insert & raised panel insert

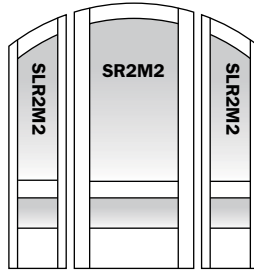
Arch Panels with 5⁵/₁₆" Intermediate Rail 23¹/₄" from Bottom of Panel (Continued)



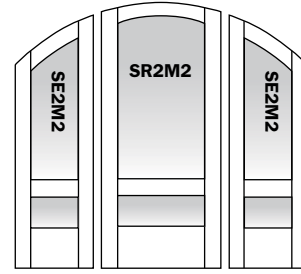
4¹/₁₆" stiles, 4¹/₁₆" top rail
& 12" bottom rail



4¹/₁₆" stiles, 4¹/₁₆" top rail
& 12" bottom rail

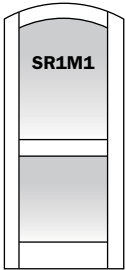


2³/₄" stiles 4¹/₁₆" stiles
4¹/₁₆" top rail 4¹/₁₆" top rail
12" bottom rail 12" bottom rail

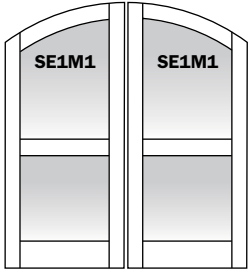


4¹/₁₆" stiles 4¹/₁₆" stiles
4¹/₁₆" top rail 4¹/₁₆" top rail
12" bottom rail 12" bottom rail

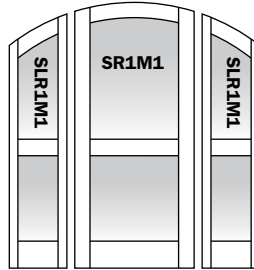
Arch Panels with 5⁵/₁₆" Intermediate Rail 35" from Bottom of Panel



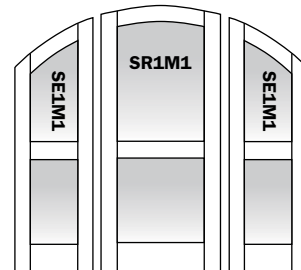
4¹/₁₆" stiles, 4¹/₁₆" top rail
& 8" bottom rail



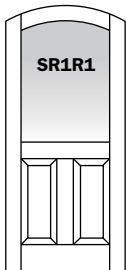
4¹/₁₆" stiles, 4¹/₁₆" top rail
& 8" bottom rail



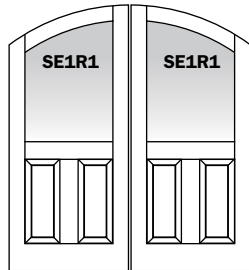
2³/₄" stiles 4¹/₁₆" stiles
4¹/₁₆" top rail 4¹/₁₆" top rail
8" bottom rail 8" bottom rail



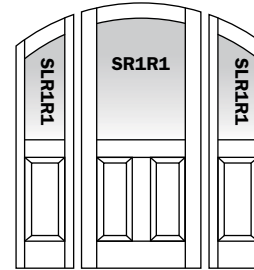
4¹/₁₆" stiles 4¹/₁₆" stiles
4¹/₁₆" top rail 4¹/₁₆" top rail
8" bottom rail 8" bottom rail



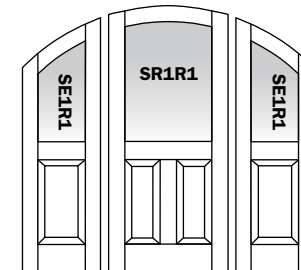
4¹/₁₆" stiles, 4¹/₁₆" top rail,
8" bottom rail &
raised panel insert



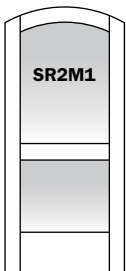
4¹/₁₆" stiles, 4¹/₁₆" top rail,
8" bottom rail &
raised panel inserts



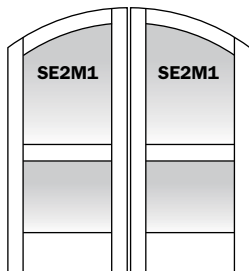
2³/₄" stiles, 4¹/₁₆" stiles,
4¹/₁₆" top rail, 4¹/₁₆" top rail,
8" bottom rail 8" bottom rail
& raised panel insert & raised panel insert



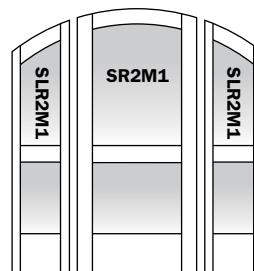
4¹/₁₆" stiles, 4¹/₁₆" stiles,
4¹/₁₆" top rail, 4¹/₁₆" top rail,
8" bottom rail 8" bottom rail
& raised panel insert & raised panel insert



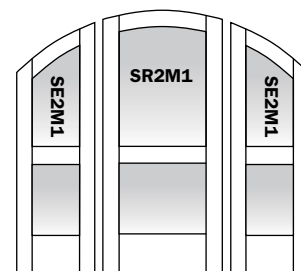
4¹/₁₆" stiles, 4¹/₁₆" top rail
& 12" bottom rail



4¹/₁₆" stiles, 4¹/₁₆" top rail
& 12" bottom rail



2³/₄" stiles 4¹/₁₆" stiles
4¹/₁₆" top rail 4¹/₁₆" top rail
12" bottom rail 12" bottom rail



4¹/₁₆" stiles 4¹/₁₆" stiles
4¹/₁₆" top rail 4¹/₁₆" top rail
12" bottom rail 12" bottom rail

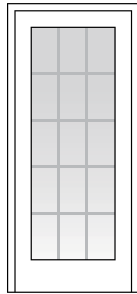
HINGED PATIO DOORS

Hinged Patio Door Handing

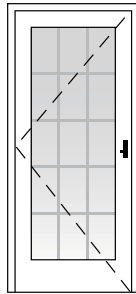
The door handing and order designation noted below and on the opposite page is consistent with the handing of other Andersen® doors and is used throughout the remainder of the hinged patio doors section.

Identification

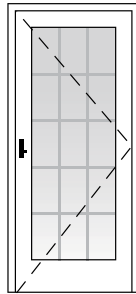
All hinged doors are **viewed from the exterior**. From left to right, choose stationary, active or passive, then choose hinge location.



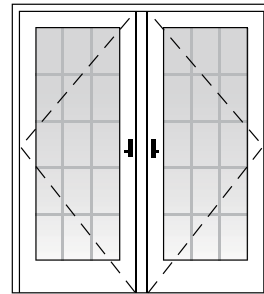
Stationary Panel
Non-operating panel.



Left Hinged
Hinges mounted on the left side of the panel.



Right Hinged
Hinges mounted on the right side of the panel.

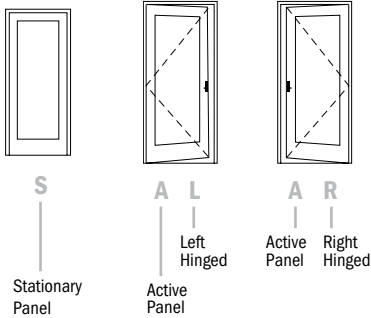


Active Panel **Passive Panel**
The operating panel most often used. The operating panel with astragal attached.

Hinged Patio Doors — Inswing

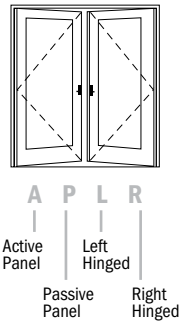
Handing Options

Single Door



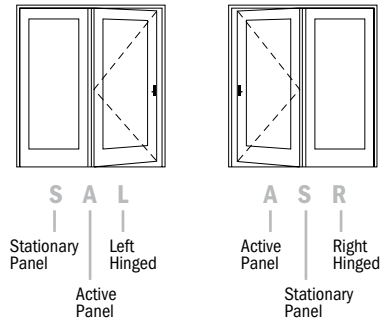
Double Door

(shown as APLR)



Center Post Door

(shown as hinged off astragal)

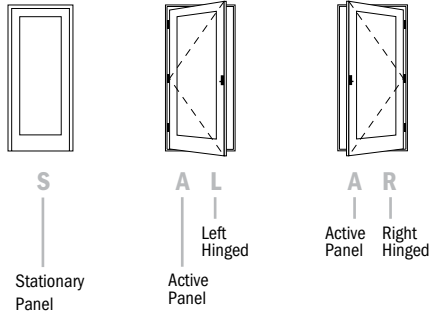


Order Designation Description	
	As Viewed From Exterior
Single Door	S
	AL
	AR
Double Door	PALR
	APLR
	SS
Center Post Door – Hinged Off Jamb	SAR
	ASL
Center Post Door – Hinged Off Astragal	SAL
	ASR

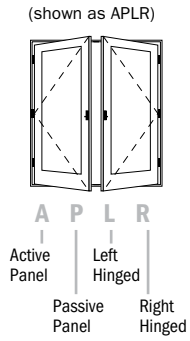
Hinged Patio Doors — Outswing

Handing Options

Single Door



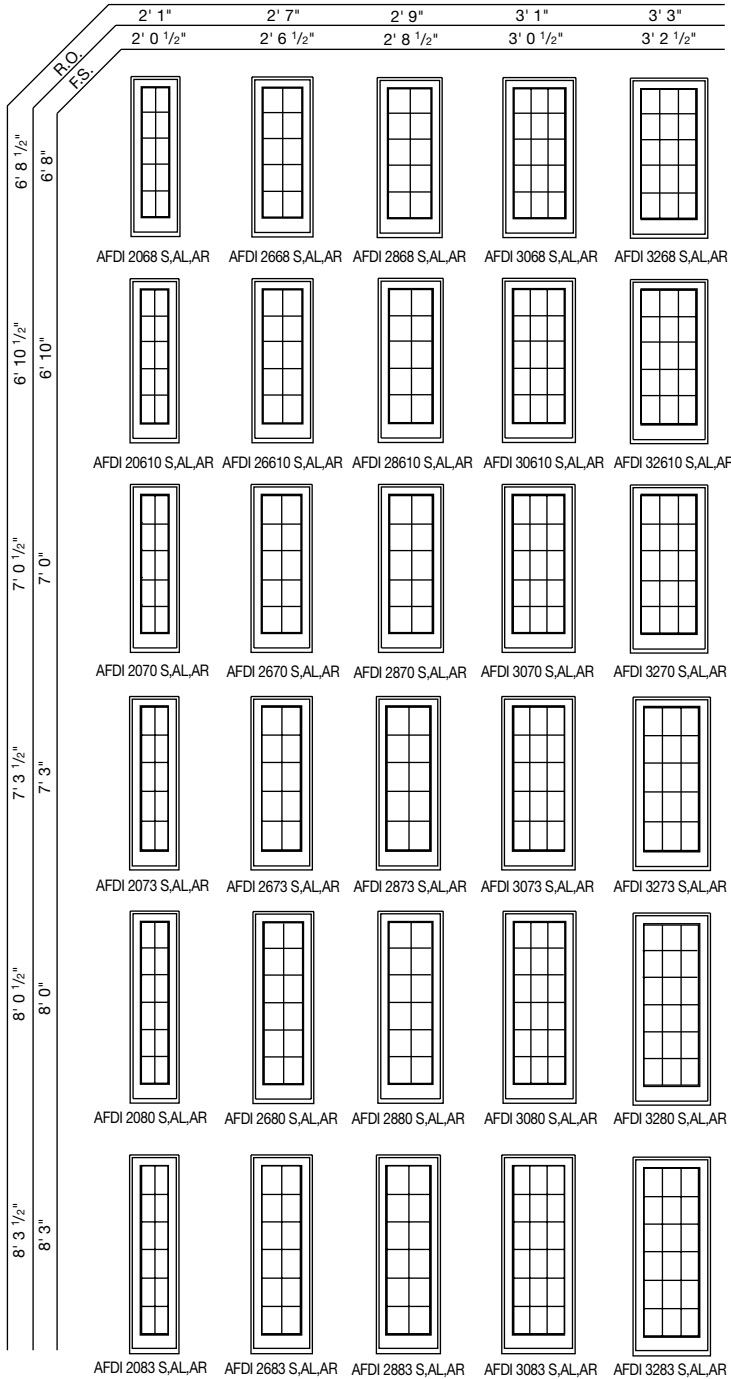
Double Door



Order Designation Description	
	As Viewed From Exterior
Single Door	S
	AR
	AL
Double Door	APLR
	PALR
	SS

HINGED PATIO DOORS

Single Hinged Inswing Patio Door & Sidelight Sizes



NOTES

All doors and sidelights use safety/tempered glass.

The minimum vertical joining material width for doors and sidelights is 1/2".

See handing chart on page 132 for operation options.

Use structural joining material when necessary or required by code.

The light patterns illustrated apply to removable interior wood grilles, Full Divided Light, Simulated Divided Light, Decorelle 100, 150 and 400 and Finelight™ Grille-Between-the-Glass. All removable interior wood grilles will be installed in the units unless otherwise specified.

For a metric conversion in millimeters, multiply dimensions in inches by 25.4.

Inswing Frame Height (using Low Threshold Sill)

= Standard Inswing Frame Height - 15/16"

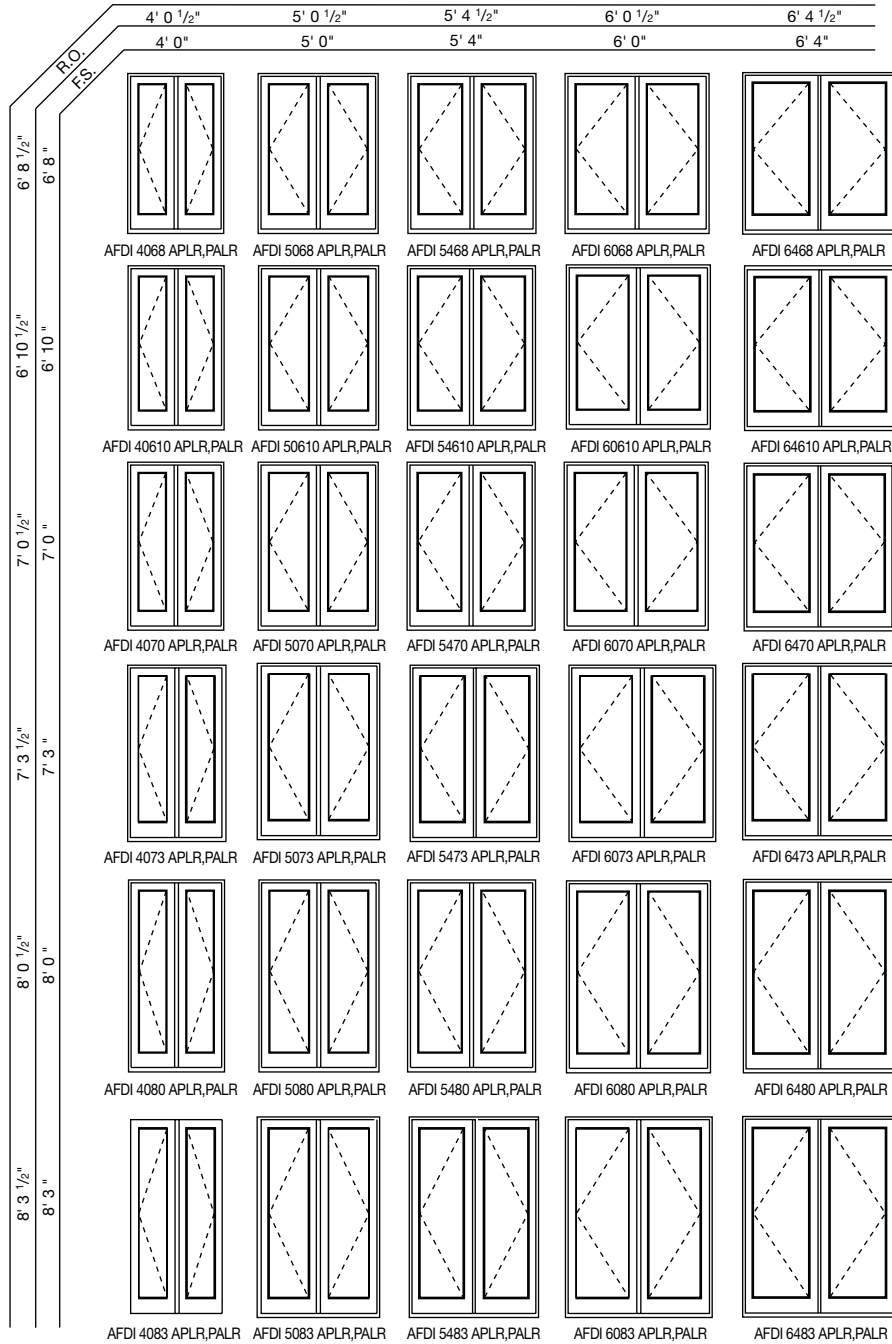
FORMULA FOR COMBINATION DOORS

The overall frame dimension (both width and height) is equal to the sum of the individual unit frame dimensions plus joining material dimension(s).

The overall rough opening (both width and height) is equal to the overall frame dimensions plus 1/4" on all sides.

Any unit within each combination can be operating or stationary except for direct-set units and transoms.

Double Hinged Inswing Patio Door Sizes



NOTES

All doors and sidelights use safety/tempered glass.

The minimum vertical joining material width for doors and sidelights is 1/2".

See handing chart on page 132 for operation options.

Use structural joining material when necessary or required by code.

For a metric conversion in millimeters, multiply dimensions in inches by 25.4.

**Inswing Frame Height
(using Low Threshold Sill)**

= Standard Inswing Frame Height - 15/16"

FORMULA FOR COMBINATION DOORS

The overall frame dimension (both width and height) is equal to the sum of the individual unit frame dimensions plus joining material dimension(s).

The overall rough opening (both width and height) is equal to the overall frame dimensions plus 1/4" on all sides.

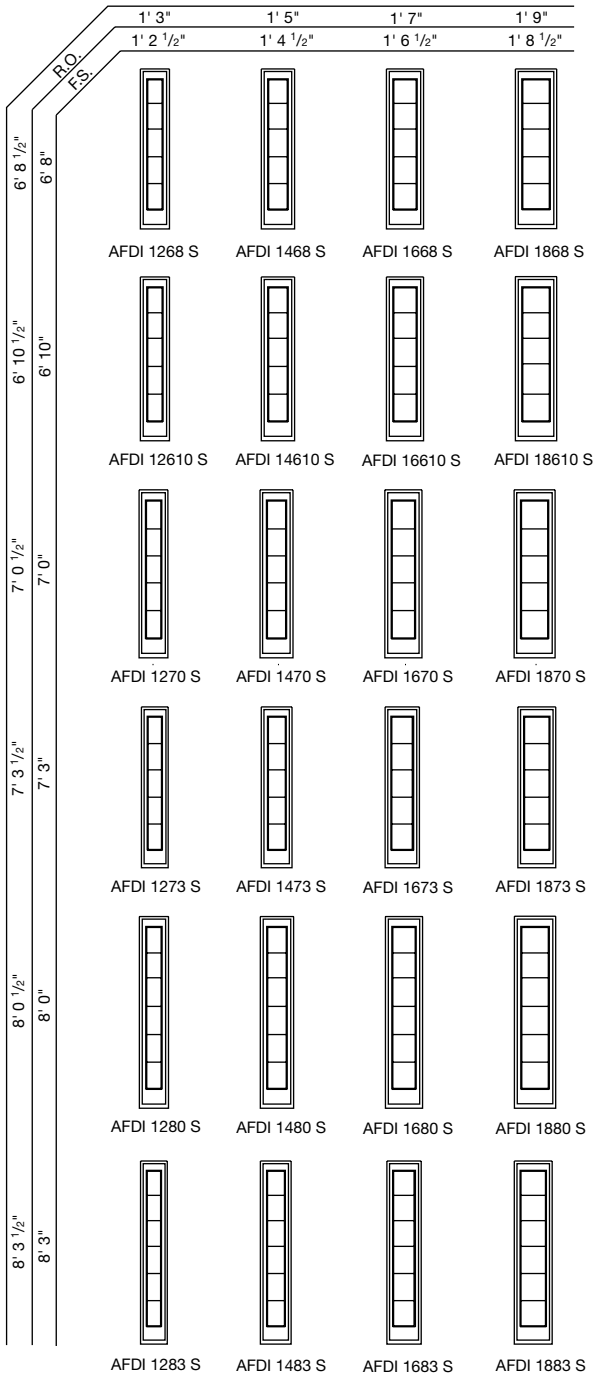
Any unit within each combination can be operating or stationary except for direct-set units and transoms.

ALSO AVAILABLE AS:

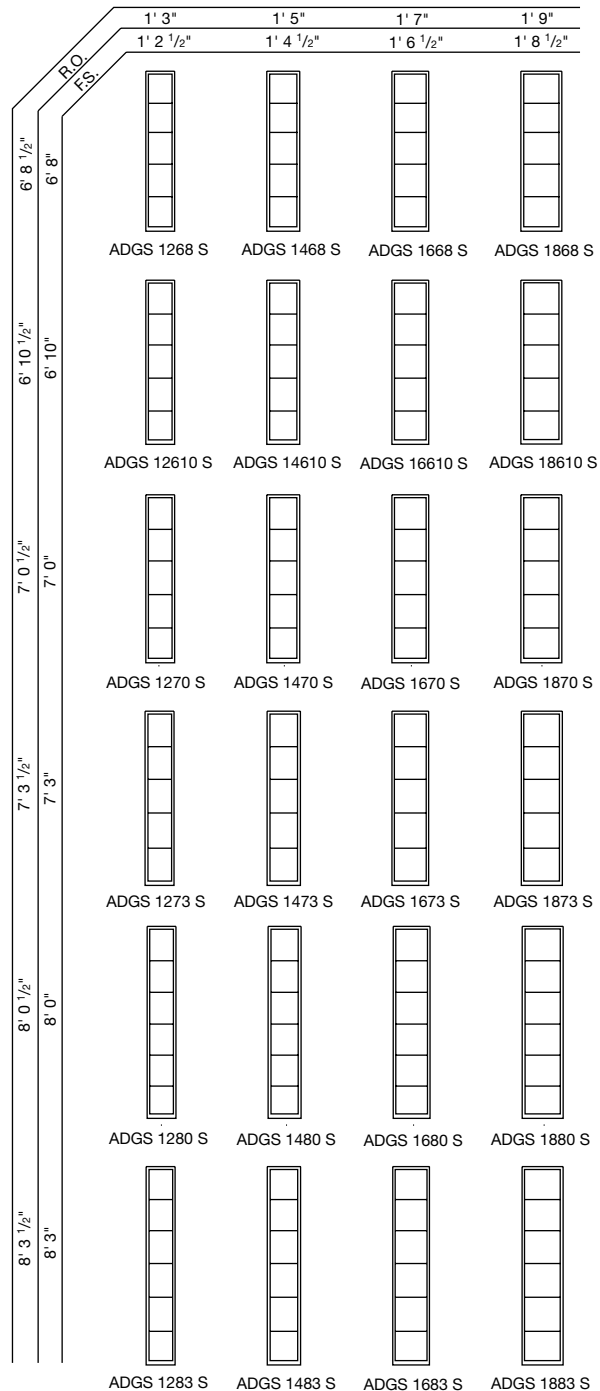
- Stationary Doors SS
- Center Post Doors SAR, ASL, SAL, ASR

HINGED PATIO DOORS

Inswing Sash-Set Sidelight Sizes



Inswing Direct-Set Sidelight Sizes



NOTES

All doors and sidelights use safety/tempered glass.

The minimum vertical joining material width for doors and sidelights is 1/2". When joining a venting sidelight to a door, the minimum vertical joining material width is 2".

Use structural joining material when necessary or required by code.

The light patterns illustrated apply to removable interior wood grilles, Full Divided Light, Simulated Divided Light, Decorelle 100, 150 and 400 and Finelight™ Grilles-Between-the-Glass. All removable interior wood grilles will be installed in the units unless otherwise specified.

For a metric conversion in millimeters, multiply dimensions in inches by 25.4.

Inswing Frame Height (using Low Threshold Sill)

= Standard Inswing Frame Height - 15/16"

FORMULA FOR COMBINATION DOORS

The overall frame dimension (both width and height) is equal to the sum of the individual unit frame dimensions plus joining material dimension(s).

The overall rough opening (both width and height) is equal to the overall frame dimensions plus 1/4" on all sides.

Any unit within each combination can be operating or stationary except for direct-set units and transoms.

**FOR WINDOWS GREATER THAN 30 SQUARE FEET OR RATED HIGHER THAN PG50, ONE OF THESE THREE INSTALLATION METHODS IS REQUIRED:
A) THROUGH THE JAMB B) ALUMINUM INSTALLATION FLANGE OR C) INSTALLATION CLIPS.
ADDITIONAL CUSTOM SIZES ARE AVAILABLE. CONTACT YOUR LOCAL SUPPLIER FOR MORE INFORMATION. DRAWINGS ARE NOT TO SCALE.**

Hinged Inswing Patio Door Sash-Set Transom Sizes

	2' 1"	2' 7"	2' 9"	3' 1"	3' 3"	4' 0 ¹ / ₂ "	5' 0 ¹ / ₂ "	5' 4 ¹ / ₂ "	6' 0 ¹ / ₂ "	6' 4 ¹ / ₂ "
	2' 0 ¹ / ₂ "	2' 6 ¹ / ₂ "	2' 8 ¹ / ₂ "	3' 0 ¹ / ₂ "	3' 2 ¹ / ₂ "	4' 0"	5' 0"	5' 4"	6' 0"	6' 4"
1' 2"										
1' 4"										
1' 6"										
1' 8"										
2' 0"										
2' 4"										
2' 6"										
2' 8"										
3' 0"										

Hinged Inswing Patio Door Sash-Set Transom Sizes

	1' 3"	1' 5"	1' 7"	1' 9"
	1' 2 ¹ / ₂ "	1' 4 ¹ / ₂ "	1' 6 ¹ / ₂ "	1' 8 ¹ / ₂ "
1' 2"				
1' 4"				
1' 6"				
1' 8"				
2' 0"				

	1' 3"	1' 5"	1' 7"	1' 9"
	1' 2 ¹ / ₂ "	1' 4 ¹ / ₂ "	1' 6 ¹ / ₂ "	1' 8 ¹ / ₂ "
2' 4"				
2' 6"				
2' 8"				
3' 0"				

NOTES

If glass is positioned within 18" of the finished floor, safety/tempered glass may be required. Local codes may differ. Verify tempered glass requirements with your local building code official.

Use structural joining material when necessary or required by code.

The light patterns illustrated apply to removable interior wood grilles, Full Divided Light, Simulated Divided Light, Decorelle 100, 150 and 400 and Finelight™ Grilles-Between-the-Glass. All removable interior wood grilles will be installed in the units unless otherwise specified. The staggered light patterns illustrated align with light patterns in double doors. Other light patterns are available upon request.

For a metric conversion in millimeters, multiply dimensions in inches by 25.4.

FORMULA FOR COMBINATION DOORS

The overall frame dimension (both width and height) is equal to the sum of the individual unit frame dimensions plus joining material dimension(s).

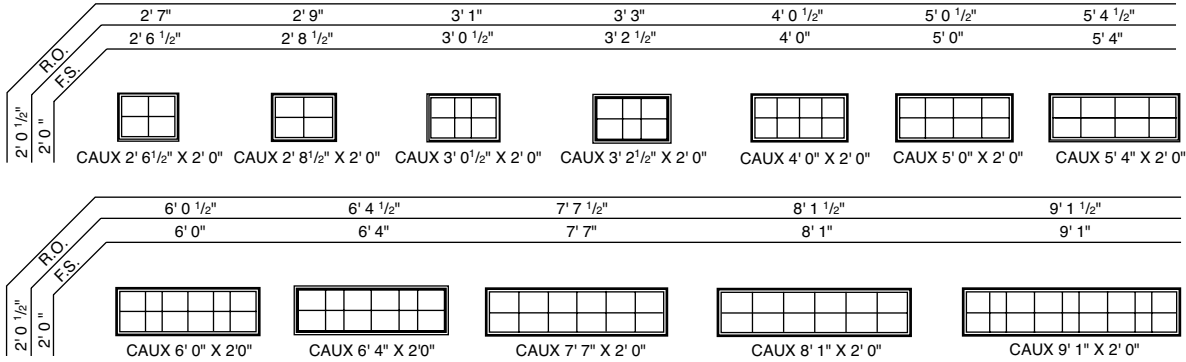
The overall rough opening (both width and height) is equal to the overall frame dimensions plus 1/4" on all sides.

Any unit within each combination can be operating or stationary except for direct-set units and transoms.

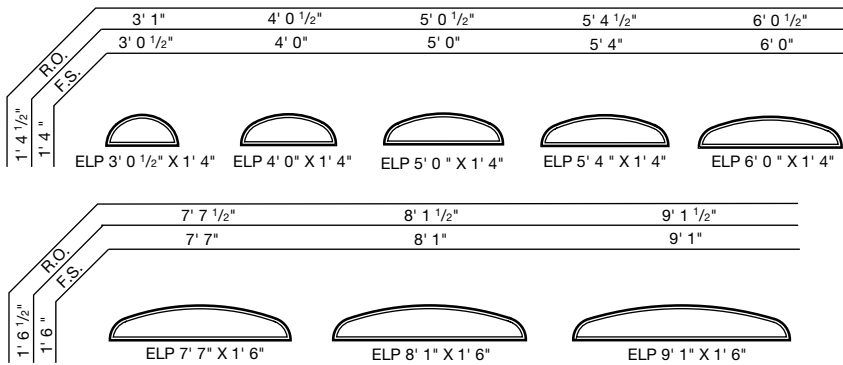
**FOR WINDOWS GREATER THAN 30 SQUARE FEET OR RATED HIGHER THAN PG50, ONE OF THESE THREE INSTALLATION METHODS IS REQUIRED:
A) THROUGH THE JAMB B) ALUMINUM INSTALLATION FLANGE OR C) INSTALLATION CLIPS.
ADDITIONAL CUSTOM SIZES ARE AVAILABLE. CONTACT YOUR LOCAL SUPPLIER FOR MORE INFORMATION. DRAWINGS ARE NOT TO SCALE.**

HINGED PATIO DOORS

Hinged Inswing Patio Door Direct-Set Transom Sizes (Specialty Frame)



Hinged Inswing Patio Door Direct-Set Elliptical Sizes (Specialty Frame)



NOTES

If glass is positioned within 18" of the finished floor, safety/tempered glass may be required. Local codes may differ. Verify tempered glass requirements with your local building code official.

- 2' 6-1/2" wide transoms are used above 2668, 26610 or 2680 Hinged Inswing Patio Doors.
- 2' 8-1/2" wide transoms are used above 2868, 28610 or 2880 Hinged Inswing Patio Doors.
- 3' 0-1/2" wide transoms are used above 3068, 30610 or 3080 Hinged Inswing Patio Doors.
- 4' 0" wide transoms are used above 4068, 40610 or 4080 Hinged Inswing Patio Doors.
- 5' 0" wide transoms are used above 5068, 50610 or 5080 Hinged Inswing Patio Doors.
- 5' 4" wide transoms are used above 5468, 54610 or 5480 Hinged Inswing Patio Doors.
- 6' 0" wide transoms are used above 6068, 60610 or 6080 Hinged Inswing Patio Doors.
- 7' 7" wide transoms are used above 5068/50610/5080 Hinged Inswing Patio Doors with 2668/26610/2680 Sidelights.
- 8' 1" wide transoms are used above 5468/54610/5480 Hinged Inswing Patio Doors with 2868/28610/2880 Sidelights.
- 9' 1" wide transoms are used above 6068/60610/6080 Hinged Inswing Patio Doors with 3068/30610/3080 Sidelights.

Use structural joining material when necessary or required by code.

The light patterns illustrated apply to removable interior wood grilles, Full Divided Light, Simulated Divided Light, Decorelle 100, 150 and 400 and Finelight™ Grilles-Between-the-Glass. All removable interior wood grilles will be installed in the units unless otherwise specified. The staggered light patterns illustrated align with light patterns in double doors. Other light patterns are available upon request.

For a metric conversion in millimeters, multiply dimensions in inches by 25.4.

FORMULA FOR COMBINATION DOORS

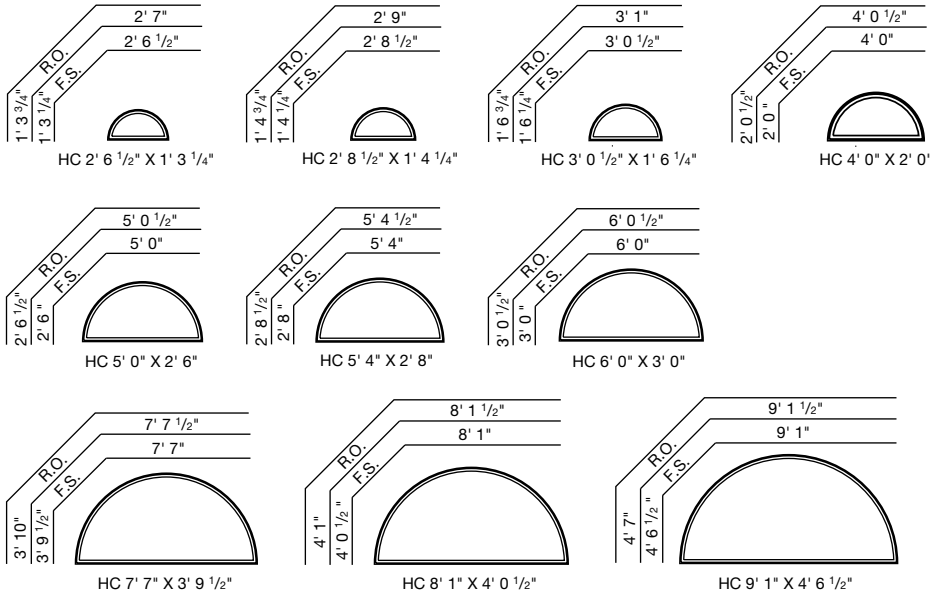
The overall frame dimension (both width and height) is equal to the sum of the individual unit frame dimensions plus joining material dimension(s).

The overall rough opening (both width and height) is equal to the overall frame dimensions plus 1/4" on all sides.

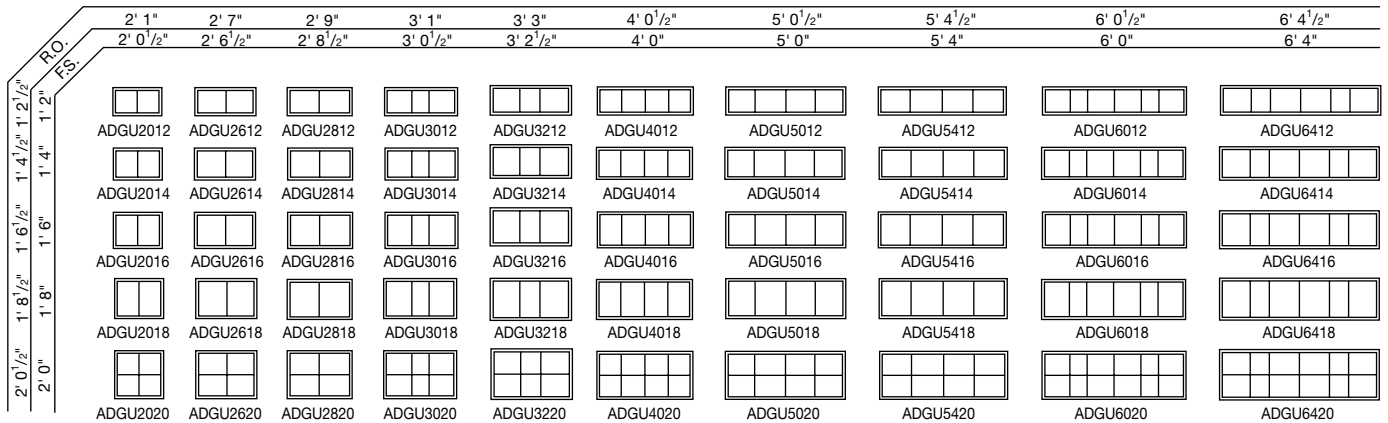
Any unit within each combination can be operating or stationary except for direct-set units and transoms.

**FOR WINDOWS GREATER THAN 30 SQUARE FEET OR RATED HIGHER THAN PG50, ONE OF THESE THREE INSTALLATION METHODS IS REQUIRED:
A) THROUGH THE JAMB B) ALUMINUM INSTALLATION FLANGE OR C) INSTALLATION CLIPS.
ADDITIONAL CUSTOM SIZES ARE AVAILABLE. CONTACT YOUR LOCAL SUPPLIER FOR MORE INFORMATION. DRAWINGS ARE NOT TO SCALE.**

Hinged Inswing Patio Door Direct-Set Half Circle Sizes (Specialty Frame)



Hinged Inswing Patio Door Direct-Set Transom Sizes



NOTES

If glass is positioned within 18" of the finished floor, safety/tempered glass may be required. Local codes may differ. Verify tempered glass requirements with your local building code official.

- 2'6-1/2" wide transoms are used above 2668, 26610 or 2680 Hinged Inswing Patio Doors.
- 2'8-1/2" wide transoms are used above 2868, 28610 or 2880 Hinged Inswing Patio Doors.
- 3'0-1/2" wide transoms are used above 3068, 30610 or 3080 Hinged Inswing Patio Doors.
- 4'0" wide transoms are used above 4068, 40610 or 4080 Hinged Inswing Patio Doors.
- 5'0" wide transoms are used above 5068, 50610 or 5080 Hinged Inswing Patio Doors.
- 5'4" wide transoms are used above 5468, 54610 or 5480 Hinged Inswing Patio Doors.
- 6'0" wide transoms are used above 6068, 60610 or 6080 Hinged Inswing Patio Doors.
- 7'7" wide transoms are used above 5068/50610/5080 Hinged Inswing Patio Doors with 2668/26610/2680 Sidelights.
- 8'1" wide transoms are used above 5468/54610/5480 Hinged Inswing Patio Doors with 2868/28610/2880 Sidelights.
- 9'1" wide transoms are used above 6068/60610/6080 Hinged Inswing Patio Doors with 3068/30610/3080 Sidelights.

Use structural joining material when necessary or required by code.

The light patterns illustrated apply to removable interior wood grilles, Full Divided Light, Simulated Divided Light, Decorelle 100, 150 and 400 and Finelight™ Grilles-Between-the-Glass. All removable interior wood grilles will be installed in the units unless otherwise specified. The staggered light patterns illustrated align with light patterns in double doors. Other light patterns are available upon request.

For a metric conversion in millimeters, multiply dimensions in inches by 25.4.

FORMULA FOR COMBINATION DOORS

The overall frame dimension (both width and height) is equal to the sum of the individual unit frame dimensions plus joining material dimension(s).

The overall rough opening (both width and height) is equal to the overall frame dimensions plus 1/4" on all sides.

Any unit within each combination can be operating or stationary except for direct-set units and transoms.

**FOR WINDOWS GREATER THAN 30 SQUARE FEET OR RATED HIGHER THAN PG50, ONE OF THESE THREE INSTALLATION METHODS IS REQUIRED:
A) THROUGH THE JAMB B) ALUMINUM INSTALLATION FLANGE OR C) INSTALLATION CLIPS.
ADDITIONAL CUSTOM SIZES ARE AVAILABLE. CONTACT YOUR LOCAL SUPPLIER FOR MORE INFORMATION. DRAWINGS ARE NOT TO SCALE.**

HINGED PATIO DOORS

Hinged Inswing Patio Door Direct-Set Transom Sizes

		2' 1"	2' 7"	2' 9"	3' 1"	3' 3"	4' 0 ¹ / ₂ "	5' 0 ¹ / ₂ "	5' 4 ¹ / ₂ "	6' 0 ¹ / ₂ "	6' 4 ¹ / ₂ "
		2' 0 ¹ / ₂ "	2' 6 ¹ / ₂ "	2' 8 ¹ / ₂ "	3' 0 ¹ / ₂ "	3' 2 ¹ / ₂ "	4' 0"	5' 0"	5' 4"	6' 0"	6' 4"
R.O. F.S.	2' 4 ¹ / ₂ "										
	2' 4"	ADGU2024	ADGU2624	ADGU2824	ADGU3024	ADGU3224	ADGU4024	ADGU5024	ADGU5424	ADGU6024	ADGU6424
	2' 6 ¹ / ₂ "										
	2' 6"	ADGU2026	ADGU2626	ADGU2826	ADGU3026	ADGU3226	ADGU4026	ADGU5026	ADGU5426	ADGU6026	ADGU6426
2' 8 ¹ / ₂ "											
2' 8"	ADGU2028	ADGU2628	ADGU2828	ADGU3028	ADGU3228	ADGU4028	ADGU5028	ADGU5428	ADGU6028	ADGU6428	
3' 0 ¹ / ₂ "											
3' 0"	ADGU2030	ADGU2630	ADGU2830	ADGU3030	ADGU3230	ADGU4030	ADGU5030	ADGU5430	ADGU6030	ADGU6430	

Hinged Inswing Patio Door Direct-Set Transom Sizes

		1' 3"	1' 5"	1' 7"	1' 9"
		1' 2 ¹ / ₂ "	1' 4 ¹ / ₂ "	1' 6 ¹ / ₂ "	1' 8 ¹ / ₂ "
R.O. F.S.	1' 2 ¹ / ₂ "				
	1' 2"	ADGU1212	ADGU1412	ADGU1612	ADGU1812
	1' 4 ¹ / ₂ "				
	1' 4"	ADGU1214	ADGU1414	ADGU1614	ADGU1814
	1' 6 ¹ / ₂ "				
	1' 6"	ADGU1216	ADGU1416	ADGU1616	ADGU1816
	1' 8 ¹ / ₂ "				
	1' 8"	ADGU1218	ADGU1418	ADGU1618	ADGU1818
	2' 0 ¹ / ₂ "				
	2' 0"	ADGU1220	ADGU1420	ADGU1620	ADGU1820
	2' 4 ¹ / ₂ "				
	2' 4"	ADGU1224	ADGU1424	ADGU1624	ADGU1824
2' 6 ¹ / ₂ "					
2' 6"	ADGU1226	ADGU1426	ADGU1626	ADGU1826	
2' 8 ¹ / ₂ "					
2' 8"	ADGU1228	ADGU1428	ADGU1628	ADGU1828	
3' 0 ¹ / ₂ "					
3' 0"	ADGU1230	ADGU1430	ADGU1630	ADGU1830	

NOTES

If glass is positioned within 18" of the finished floor, safety/tempered glass may be required. Local codes may differ. Verify tempered glass requirements with your local building code official.

Use structural joining material when necessary or required by code.

The light patterns illustrated apply to removable interior wood grilles, Full Divided Light, Simulated Divided Light, Decorelle 100, 150 and 400 and Finelight™ Grilles-Between-the-Glass. All removable interior wood grilles will be installed in the units unless otherwise specified. The staggered light patterns illustrated align with light patterns in double doors. Other light patterns are available upon request.

For a metric conversion in millimeters, multiply dimensions in inches by 25.4.

FORMULA FOR COMBINATION DOORS

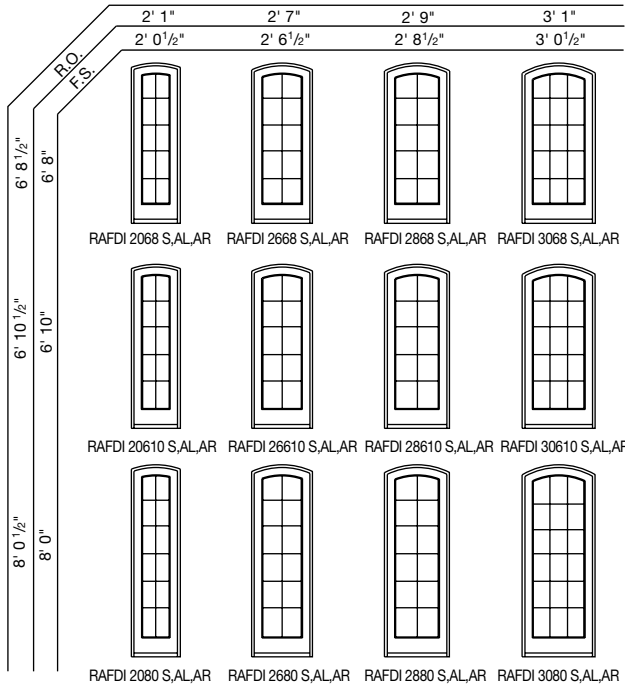
The overall frame dimension (both width and height) is equal to the sum of the individual unit frame dimensions plus joining material dimension(s).

The overall rough opening (both width and height) is equal to the overall frame dimensions plus 1/4" on all sides.

Any unit within each combination can be operating or stationary except for direct-set units and transoms.

FOR WINDOWS GREATER THAN 30 SQUARE FEET OR RATED HIGHER THAN PG50, ONE OF THESE THREE INSTALLATION METHODS IS REQUIRED:
 A) THROUGH THE JAMB B) ALUMINUM INSTALLATION FLANGE OR C) INSTALLATION CLIPS.
 ADDITIONAL CUSTOM SIZES ARE AVAILABLE. CONTACT YOUR LOCAL SUPPLIER FOR MORE INFORMATION. DRAWINGS ARE NOT TO SCALE.

Single Arch Inswing Patio Door & Sidelight Sizes



NOTES

All doors and sidelights use safety/tempered glass.

Single doors have a 3' 0" radius.

Double doors have a 5' 0" radius.

See handing chart on page 132 for operation options.

Use structural joining material when necessary or required by code.

The light patterns illustrated apply to removable interior wood grilles, Full Divided Light, Simulated Divided Light, Decorelle 100, 150 and 400 and Finelight™ Grilles-Between-the-Glass. All removable wood grilles will be installed in the units unless otherwise specified.

For a metric conversion in millimeters, multiply dimensions in inches by 25.4.

Inswing Frame Height
(using Low Threshold Sill)
= Standard Inswing Frame Height – 15/16"

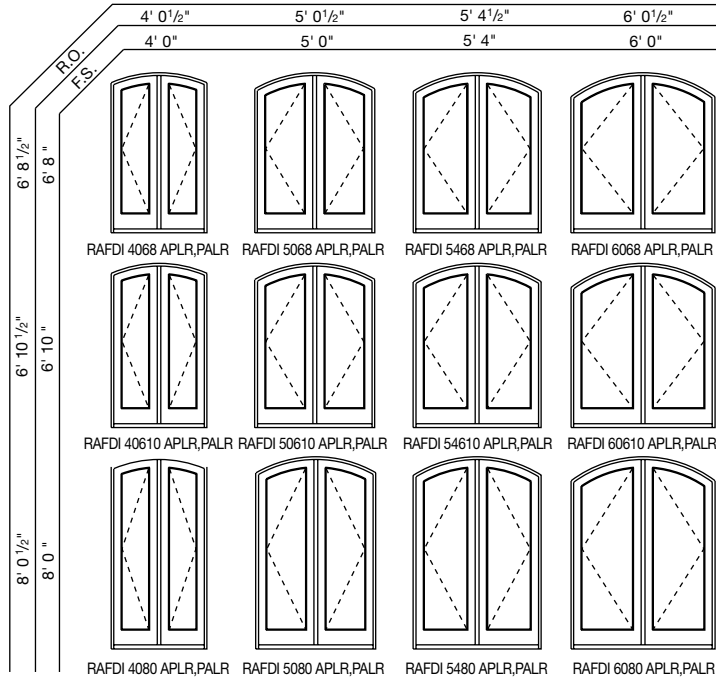
FORMULA FOR COMBINATION DOORS

The overall frame dimension (both width and height) is equal to the sum of the individual unit frame dimensions plus joining material dimension(s).

The overall rough opening (both width and height) is equal to the overall frame dimensions plus 1/4" on all sides.

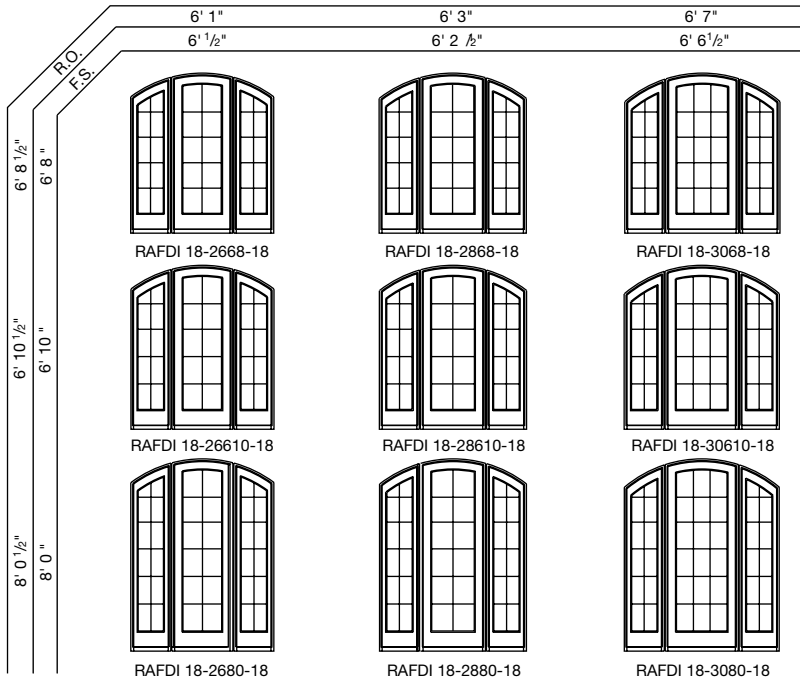
Any unit within each combination can be operating or stationary except for direct-set units and transoms.

Double Arch Inswing Patio Door Sizes



HINGED PATIO DOORS

3-Wide Arch Inswing Patio Door & Sidelight Sizes



NOTES

All doors and sidelights use safety/tempered glass.

3-wide doors have a 5' 0" radius.

See handing chart on page 132 for operation options.

Use structural joining material when necessary or required by code.

The light patterns illustrated apply to removable interior wood grilles, Full Divided Light, Simulated Divided Light, Decorelle 100, 150 and 400 and Finelight™ Grilles-Between-the-Glass. All removable interior wood grilles will be installed in the units unless otherwise specified.

For a metric conversion in millimeters, multiply dimensions in inches by 25.4.

Inswing Frame Height Formula (using Low Threshold Sill)

= Standard Inswing Frame Height – 15/16"

FORMULA FOR COMBINATION DOORS

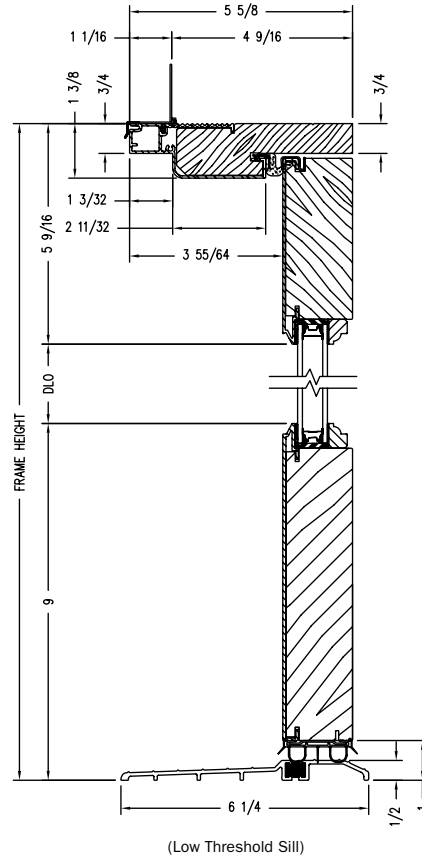
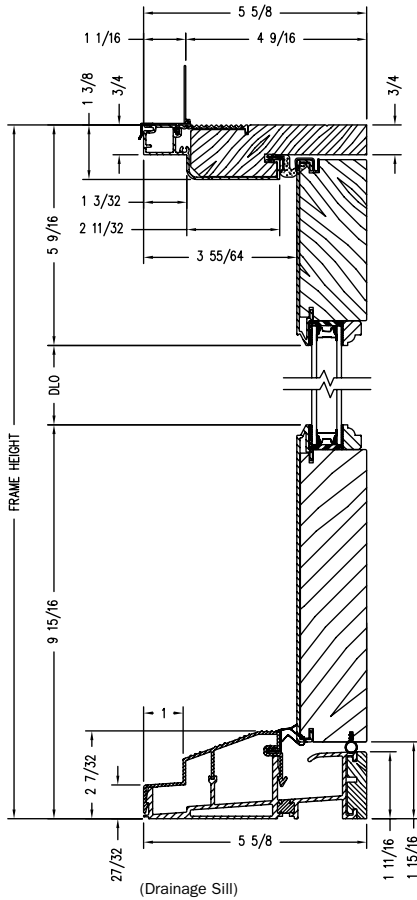
The overall frame dimension (both width and height) is equal to the sum of the individual unit frame dimensions plus joining material dimension(s).

The overall rough opening (both width and height) is equal to the overall frame dimensions plus 1/4" on all sides.

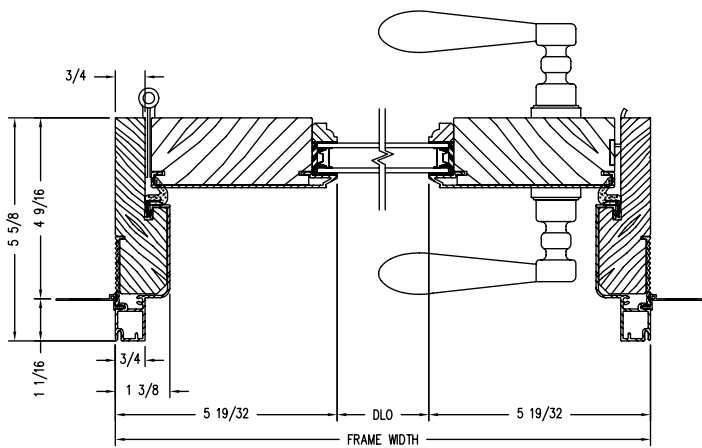
Any unit within each combination can be operating or stationary except for arch sidelights.

Hinged Inswing Patio Doors (4 9/16" Jamb Depth)

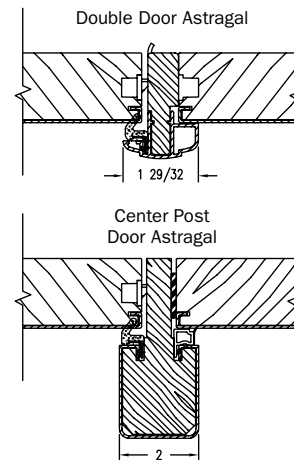
Hinged Inswing Patio Door



Vertical Section



Horizontal Section



Astragal

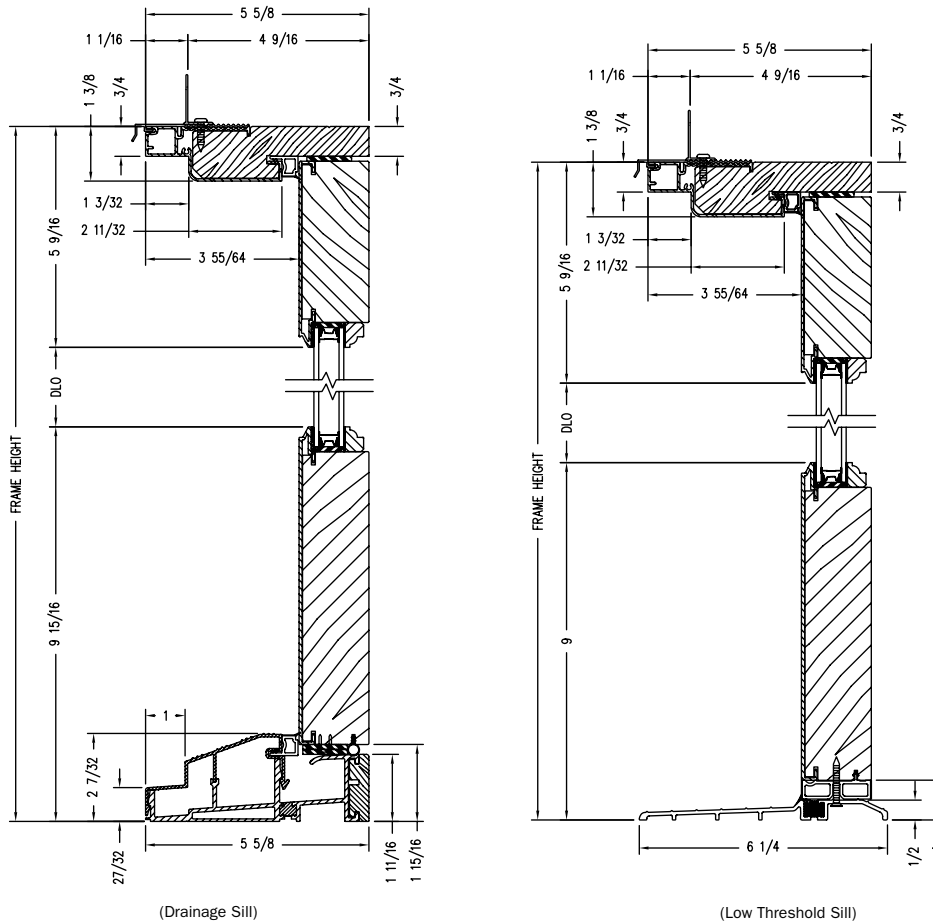
Shown with ovolo (colonial) glass stops.
French panel shown, also available with a contemporary panel.

PROPER INSTALLATION AND MAINTENANCE OF E-SERIES PRODUCTS IS ESSENTIAL TO ATTAIN OPTIMUM PERFORMANCE AND OPERATION. WRITTEN INSTALLATION INSTRUCTIONS THAT PROVIDE GUIDELINES FOR PROPER INSTALLATION ARE AVAILABLE BY VISITING ANDERSENWINDOWS.COM. CUSTOM SIZES ARE AVAILABLE. CONTACT YOUR LOCAL SUPPLIER FOR MORE INFORMATION. DRAWINGS ARE NOT TO SCALE.

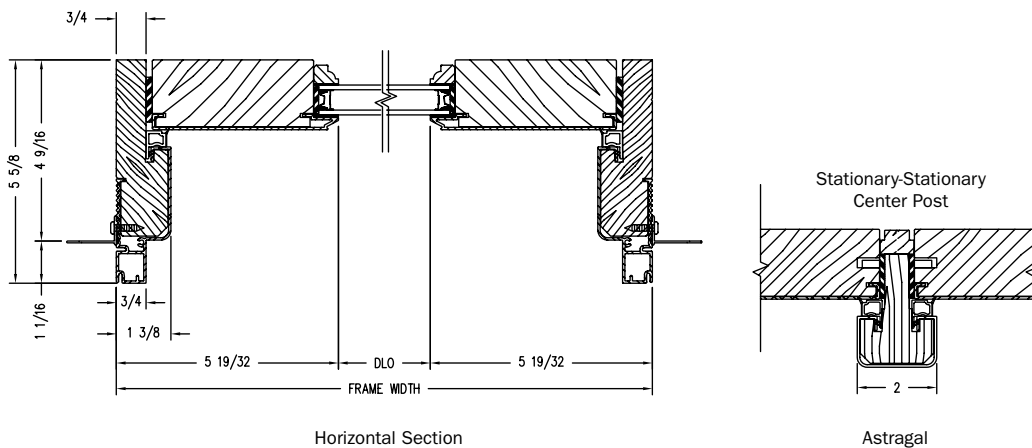
HINGED PATIO DOORS

Hinged Inswing Patio Doors (4 9/16" Jamb Depth)

Inswing Sash-Set Sidelight



Vertical Section



Horizontal Section

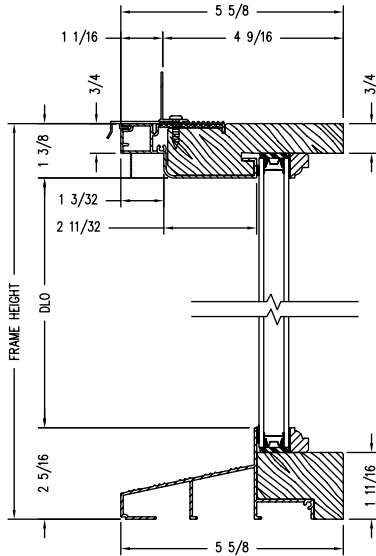
Astragal

Shown with ovolo (colonial) glass stops.

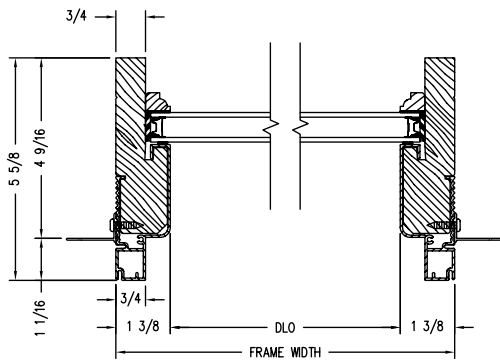
PROPER INSTALLATION AND MAINTENANCE OF E-SERIES PRODUCTS IS ESSENTIAL TO ATTAIN OPTIMUM PERFORMANCE AND OPERATION. WRITTEN INSTALLATION INSTRUCTIONS THAT PROVIDE GUIDELINES FOR PROPER INSTALLATION ARE AVAILABLE BY VISITING ANDERSENWINDOWS.COM. CUSTOM SIZES ARE AVAILABLE. CONTACT YOUR LOCAL SUPPLIER FOR MORE INFORMATION. DRAWINGS ARE NOT TO SCALE.

Hinged Inswing Patio Doors (4 9/16" Jamb Depth)

Inswing Direct-Set Sidelight

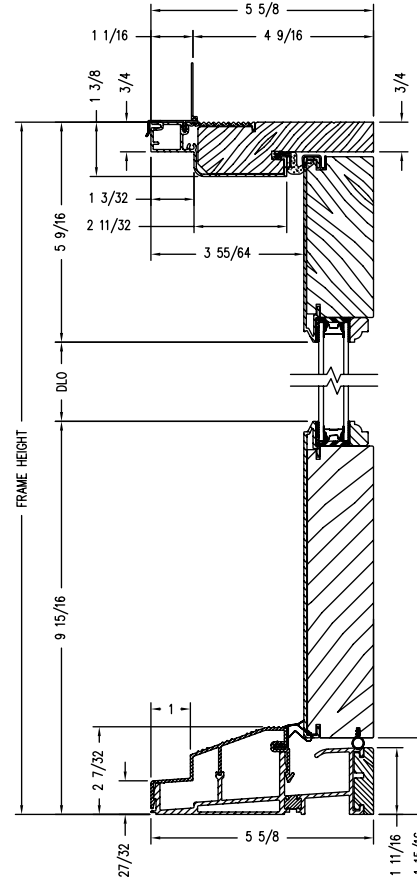


Vertical Section

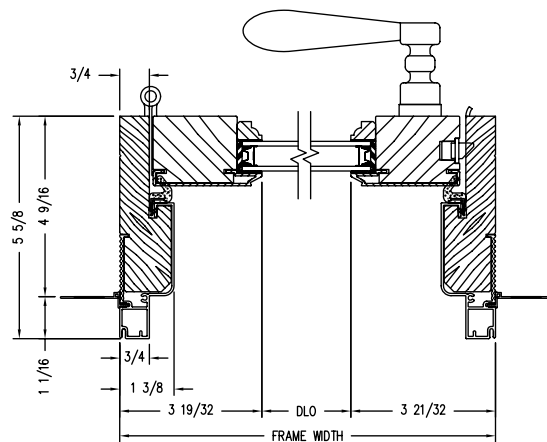


Horizontal Section

Inswing Venting Sidelight



Vertical Section



Horizontal Section

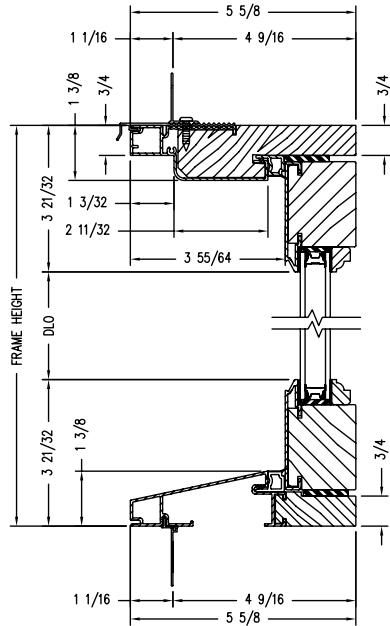
Shown with ovolo (colonial) glass stops.

PROPER INSTALLATION AND MAINTENANCE OF E-SERIES PRODUCTS IS ESSENTIAL TO ATTAIN OPTIMUM PERFORMANCE AND OPERATION. WRITTEN INSTALLATION INSTRUCTIONS THAT PROVIDE GUIDELINES FOR PROPER INSTALLATION ARE AVAILABLE BY VISITING ANDERSENWINDOWS.COM. CUSTOM SIZES ARE AVAILABLE. CONTACT YOUR LOCAL SUPPLIER FOR MORE INFORMATION. DRAWINGS ARE NOT TO SCALE.

HINGED PATIO DOORS

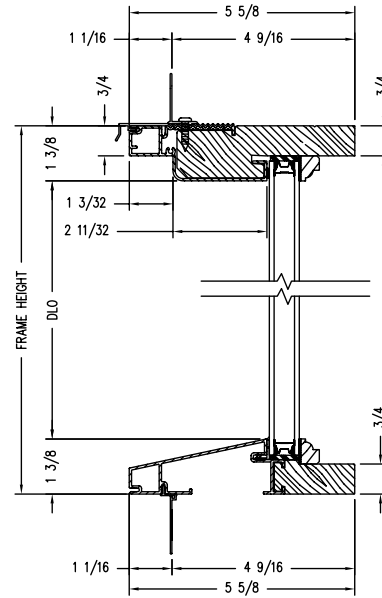
Hinged Inswing Patio Doors (4 9/16" Jamb Depth)

Inswing Sash-Set Transom

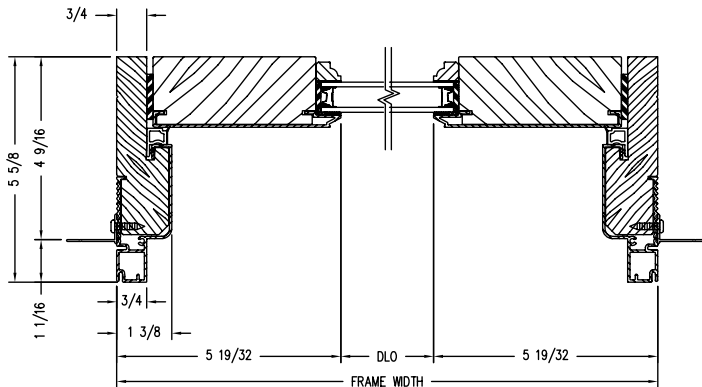


Vertical Section

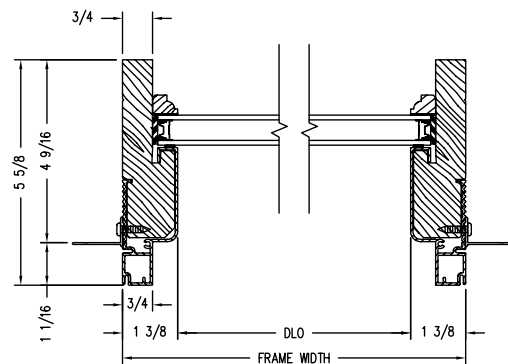
Inswing Direct-Set Transom



Vertical Section



Horizontal Section

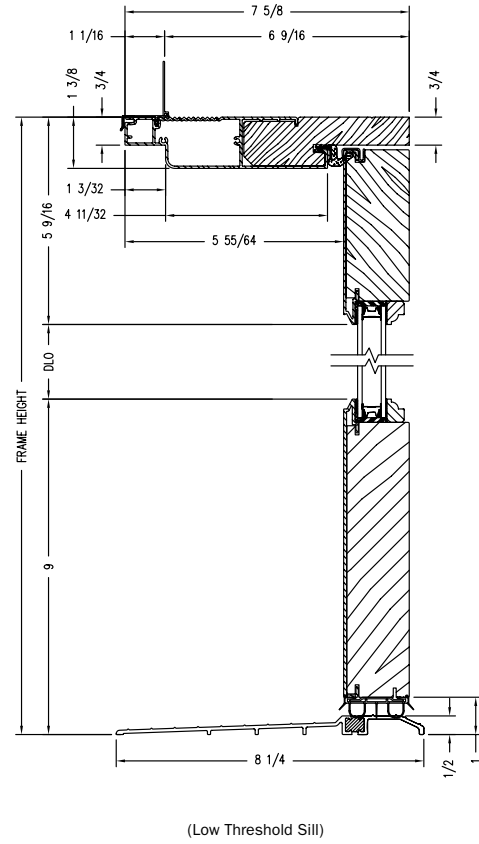
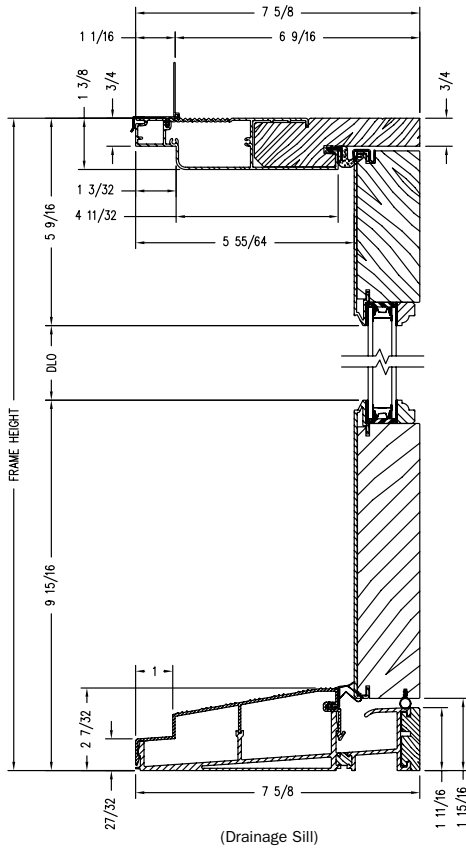


Horizontal Section

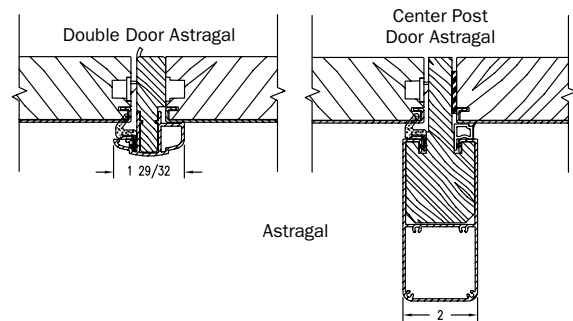
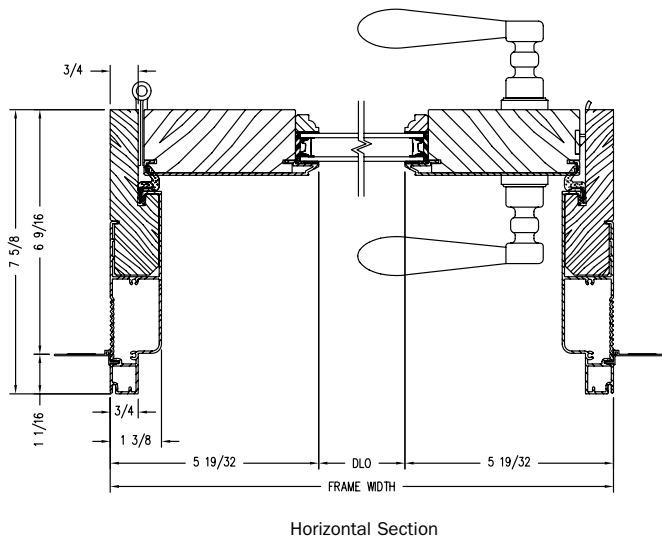
Shown with ovolo (colonial) glass stops.

PROPER INSTALLATION AND MAINTENANCE OF E-SERIES PRODUCTS IS ESSENTIAL TO ATTAIN OPTIMUM PERFORMANCE AND OPERATION. WRITTEN INSTALLATION INSTRUCTIONS THAT PROVIDE GUIDELINES FOR PROPER INSTALLATION ARE AVAILABLE BY VISITING ANDERSENWINDOWS.COM. CUSTOM SIZES ARE AVAILABLE. CONTACT YOUR LOCAL SUPPLIER FOR MORE INFORMATION. DRAWINGS ARE NOT TO SCALE.

Hinged Inswing Patio Doors (6 9/16" Jamb Depth)



Vertical Section



Shown with ovolo (colonial) glass stops.
 French panel shown, also available with a contemporary panel.
 Visit our website to see transoms and sidelight units with 6-9/16" jamb depth.

PROPER INSTALLATION AND MAINTENANCE OF E-SERIES PRODUCTS IS ESSENTIAL TO ATTAIN OPTIMUM PERFORMANCE AND OPERATION. WRITTEN INSTALLATION INSTRUCTIONS THAT PROVIDE GUIDELINES FOR PROPER INSTALLATION ARE AVAILABLE BY VISITING ANDERSENWINDOWS.COM. CUSTOM SIZES ARE AVAILABLE. CONTACT YOUR LOCAL SUPPLIER FOR MORE INFORMATION. DRAWINGS ARE NOT TO SCALE.

HINGED PATIO DOORS

Hinged Inswing Patio Door Handing (As Viewed From Exterior)

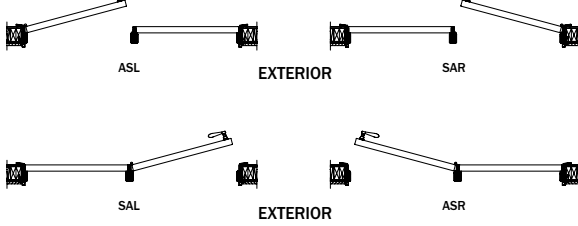
INSWING SINGLE DOOR



INSWING DOUBLE DOOR

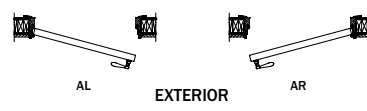


INSWING CENTER POST DOOR

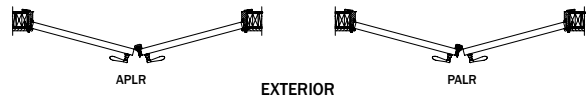


Hinged Outswing Patio Door Handing (As Viewed From Exterior)

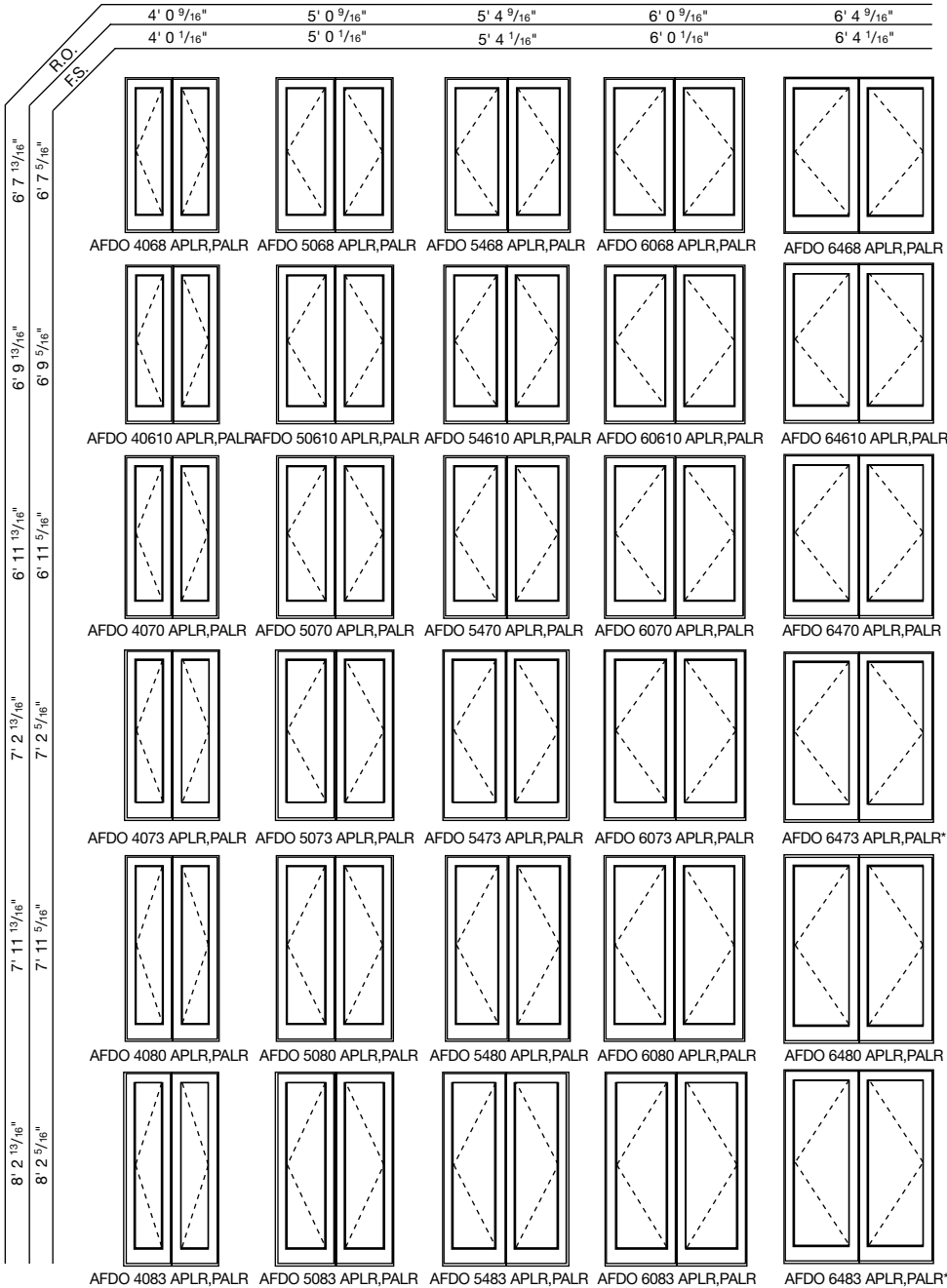
OUTSWING SINGLE DOOR



OUTSWING DOUBLE DOOR



Double Hinged Outswing Patio Door Sizes



NOTES

All doors and sidelights use safety/tempered glass.

The minimum vertical joining material width for doors and sidelights is 1/2".

*Commercial sized door panels.

See handing chart on page 132 for operation options.

Use structural joining material when necessary or required by code.

For a metric conversion in millimeters, multiply dimensions in inches by 25.4.

FORMULA FOR COMBINATION DOORS

The overall frame dimension (both width and height) is equal to the sum of the individual unit frame dimensions plus joining material dimension(s).

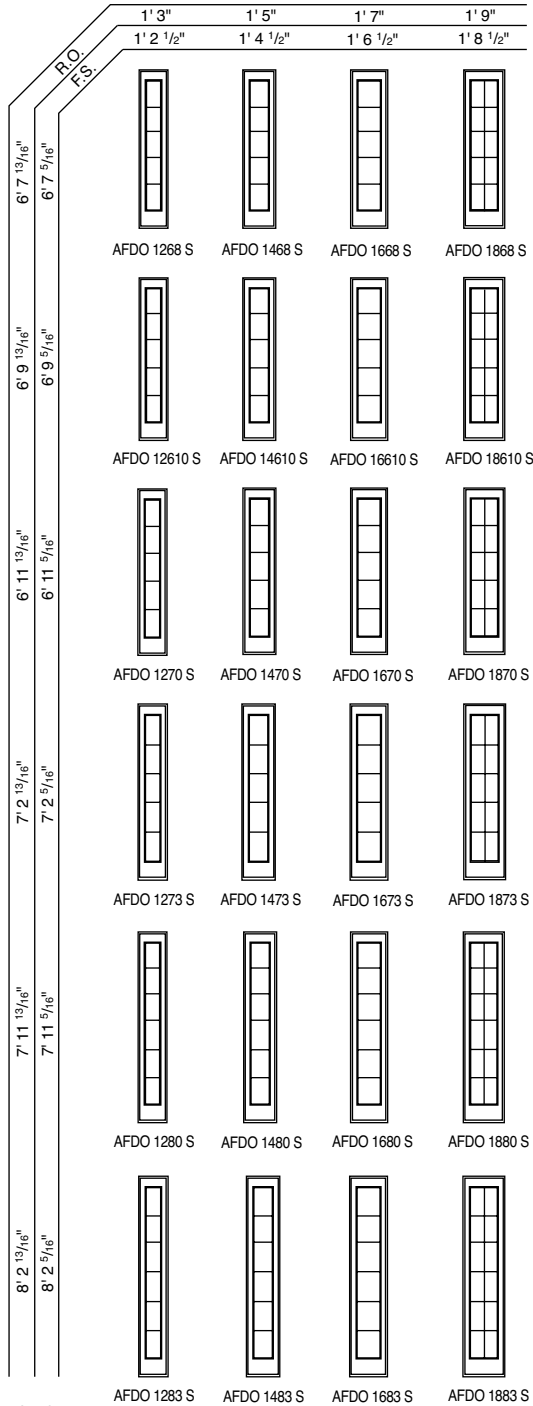
The overall rough opening (both width and height) is equal to the overall frame dimensions plus 1/4" on all sides.

Any unit within each combination can be operating or stationary except for direct-set units and transoms.

Outswing Frame Height Formula
(using Low Threshold Sill)
= Standard Outswing Frame Height – 7/16"

HINGED PATIO DOORS

Outswing Sash-Set Sidelight Sizes



NOTES
All doors and sidelights use safety/tempered glass.

The minimum vertical joining material width for doors and sidelights is 1/2".
When joining a venting sidelight to a door, the minimum vertical joining material width is 2".

*Commercial sized door panels.

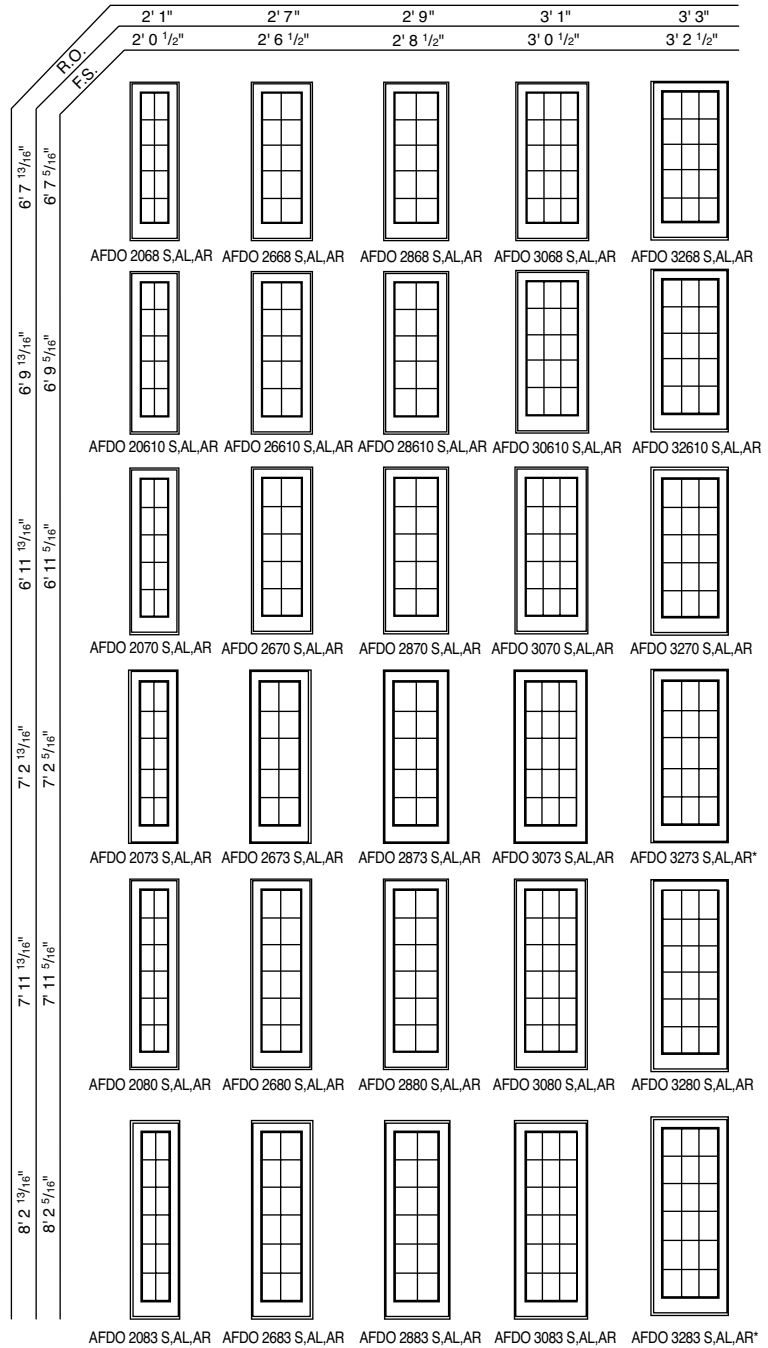
See handing chart on page 132 for operation options.

Use structural joining material when necessary or required by code.

The light patterns illustrated apply to removable interior wood grilles, Full Divided Light, Simulated Divided Light, Decorelle 100, 150 and 400 and Finelight™ Grilles-Between-the-Glass. All removable interior wood grilles will be installed in the units unless otherwise specified.

**FOR WINDOWS GREATER THAN 30 SQUARE FEET OR RATED HIGHER THAN PG50, ONE OF THESE THREE INSTALLATION METHODS IS REQUIRED:
A) THROUGH THE JAMB B) ALUMINUM INSTALLATION FLANGE OR C) INSTALLATION CLIPS.
ADDITIONAL CUSTOM SIZES ARE AVAILABLE. CONTACT YOUR LOCAL SUPPLIER FOR MORE INFORMATION. DRAWINGS ARE NOT TO SCALE.**

Single Hinged Outswing Patio Door & Sidelight Sizes



For a metric conversion in millimeters, multiply dimensions in inches by 25.4.

Outswing Frame Height Formula (using Low Threshold Sill)

$$= \text{Standard Outswing Frame Height} - 7/16"$$

FORMULA FOR COMBINATION DOORS

The overall frame dimension (both width and height) is equal to the sum of the individual unit frame dimensions plus joining material dimension(s).

The overall rough opening (both width and height) is equal to the overall frame dimensions plus 1/4" on all sides.

Any unit within each combination can be operating or stationary except for direct-set units and transoms.

Hinged Outswing Patio Door Sash-Set Transom Sizes

	2' 1" 2' 0 1/2"	2' 7" 2' 6 1/2"	2' 9" 2' 8 1/2"	3' 1" 3' 0 1/2"	3' 3" 3' 2 1/2"	4' 0 9/16" 4' 0 1/16"	5' 0 9/16" 5' 0 1/16"	5' 4 9/16" 5' 4 1/16"	6' 0 9/16" 6' 0 1/16"	6' 4 9/16" 6' 4 1/16"
1' 2" R.O. F.S.										
1' 4"										
1' 6"										
1' 8"										
2' 0"										
2' 4"										
2' 6"										
2' 8"										
3' 0"										

Hinged Outswing Patio Door Sash-Set Transom Sizes

	1' 3" 1' 2 1/2"	1' 5" 1' 4 1/2"	1' 7" 1' 6 1/2"	1' 9" 1' 8 1/2"
1' 2" R.O. F.S.				
1' 4"				
1' 6"				
1' 8"				
2' 0"				

Hinged Outswing Patio Door Sash-Set Transom Sizes

	1' 3" 1' 2 1/2"	1' 5" 1' 4 1/2"	1' 7" 1' 6 1/2"	1' 9" 1' 8 1/2"
1' 2" R.O. F.S.				
2' 4"				
2' 6"				
2' 8"				
3' 0"				

NOTES

If glass is positioned within 18" of the finished floor, safety/tempered glass may be required. Local codes may differ. Verify tempered glass requirements with your local building code official.

Use structural joining material when necessary or required by code.

The light patterns illustrated apply to removable interior wood grilles, Full Divided Light, Simulated Divided Light, Decorelle 100, 150 and 400 and Finelight™ Grilles-Between-the-Glass. All removable interior wood grilles will be installed in the units unless otherwise specified. The staggered light patterns illustrated align with light patterns in double doors. Other light patterns are available upon request.

For a metric conversion in millimeters, multiply dimensions in inches by 25.4.

FORMULA FOR COMBINATION DOORS

The overall frame dimension (both width and height) is equal to the sum of the individual unit frame dimensions plus joining material dimension(s).

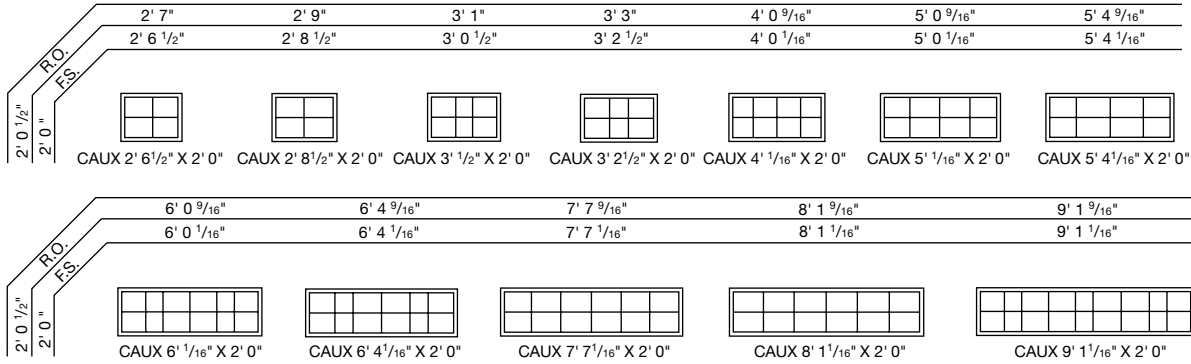
The overall rough opening (both width and height) is equal to the overall frame dimensions plus 1/4" on all sides.

Any unit within each combination can be operating or stationary except for direct-set units and transoms.

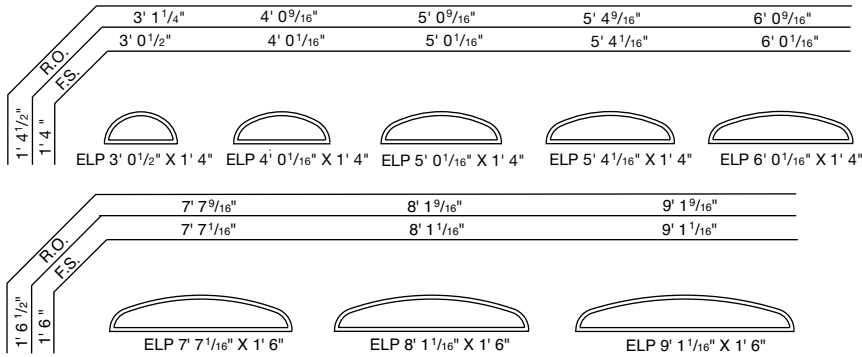
**FOR WINDOWS GREATER THAN 30 SQUARE FEET OR RATED HIGHER THAN PG50, ONE OF THESE THREE INSTALLATION METHODS IS REQUIRED:
A) THROUGH THE JAMB B) ALUMINUM INSTALLATION FLANGE OR C) INSTALLATION CLIPS.
ADDITIONAL CUSTOM SIZES ARE AVAILABLE. CONTACT YOUR LOCAL SUPPLIER FOR MORE INFORMATION. DRAWINGS ARE NOT TO SCALE.**

HINGED PATIO DOORS

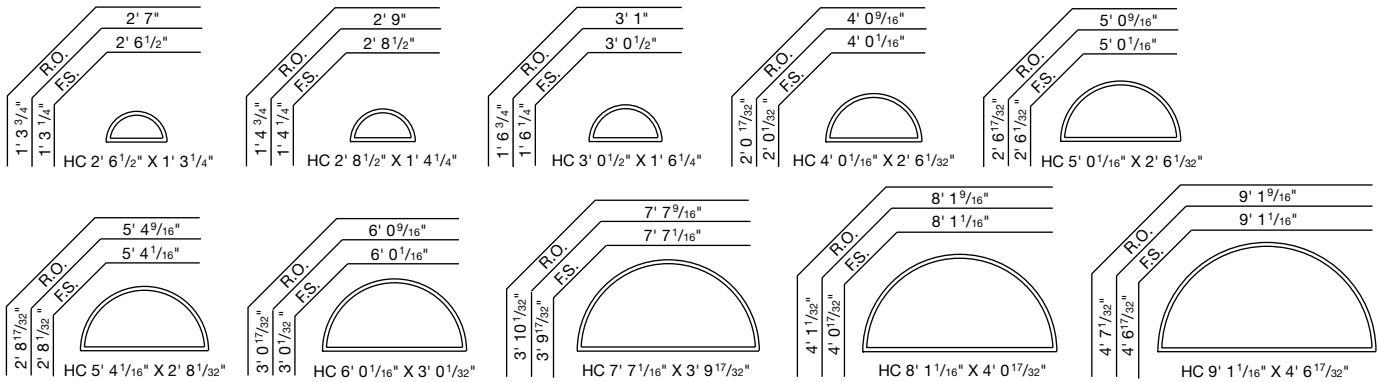
Hinged Outswing Patio Door Direct-Set Transom Sizes (Specialty Frame)



Hinged Outswing Patio Door Direct-Set Elliptical Sizes (Specialty Frame)



Hinged Outswing Patio Door Direct-Set Half Circle Sizes (Specialty Frame)



NOTES

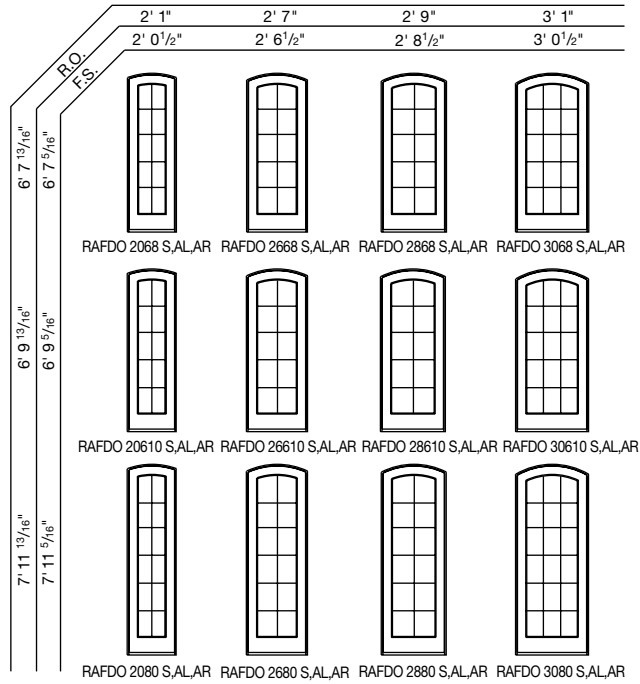
If glass is positioned within 18" of the finished floor, safety/tempered glass may be required. Local codes may differ. Verify tempered glass requirements with your local building code official.

- 2' 6-1/2" wide transoms are used above 2668, 26610 or 2680 Hinged Outswing Patio Doors.
- 2' 8-1/2" wide transoms are used above 2868, 28610 or 2880 Hinged Outswing Patio Doors.
- 3' 0-1/2" wide transoms are used above 3068, 30610 or 3080 Hinged Outswing Patio Doors.
- 4' 0" wide transoms are used above 4068, 40610 or 4080 Hinged Outswing Patio Doors.
- 5' 0" wide transoms are used above 5068, 50610 or 5080 Hinged Outswing Patio Doors.
- 5' 4" wide transoms are used above 5468, 54610 or 5480 Hinged Outswing Patio Doors.
- 6' 0" wide transoms are used above 6068, 60610 or 6080 Hinged Outswing Patio Doors.
- 7' 7" wide transoms are used above 5068/50610/5080 Hinged Outswing Patio Doors with 2668/26610/2680 Sidelights.
- 8' 1" wide transoms are used above 5468/54610/5480 Hinged Outswing Patio Doors with 2868/28610/2880 Sidelights.
- 9' 1" wide transoms are used above 6068/60610/6080 Hinged Outswing Patio Doors with 3068/30610/3080 Sidelights.

The light patterns illustrated apply to removable interior wood grilles, Full Divided Light, Simulated Divided Light, Decorelle 100, 150 and 400 and Finelight™ Grilles-Between-the-Glass. All removable interior wood grilles will be installed in the units unless otherwise specified. The staggered light patterns illustrated align with light patterns in double doors. Other light patterns are available upon request.

**FOR WINDOWS GREATER THAN 30 SQUARE FEET OR RATED HIGHER THAN PG50, ONE OF THESE THREE INSTALLATION METHODS IS REQUIRED:
A) THROUGH THE JAMB B) ALUMINUM INSTALLATION FLANGE OR C) INSTALLATION CLIPS.
ADDITIONAL CUSTOM SIZES ARE AVAILABLE. CONTACT YOUR LOCAL SUPPLIER FOR MORE INFORMATION. DRAWINGS ARE NOT TO SCALE.**

Single Arch Outswing Patio Door & Sidelight Sizes



NOTES

All doors and sidelights use safety/tempered glass.

Single doors have a 3' 0" radius.

Double doors have a 5' 0" radius.

See handing chart on page 132 for operation options.

Use structural joining material when necessary or required by code.

The light patterns illustrated apply to removable interior wood grilles, Full Divided Light, Simulated Divided Light, Decorelle 100, 150 and 400 and Finelight™ Grilles-Between-the-Glass. All removable interior wood grilles will be installed in the units unless otherwise specified.

For a metric conversion in millimeters, multiply dimensions in inches by 25.4.

Outswing Frame Height Formula
(using Low Threshold Sill)
= Standard Outswing Frame Height – 7/16"

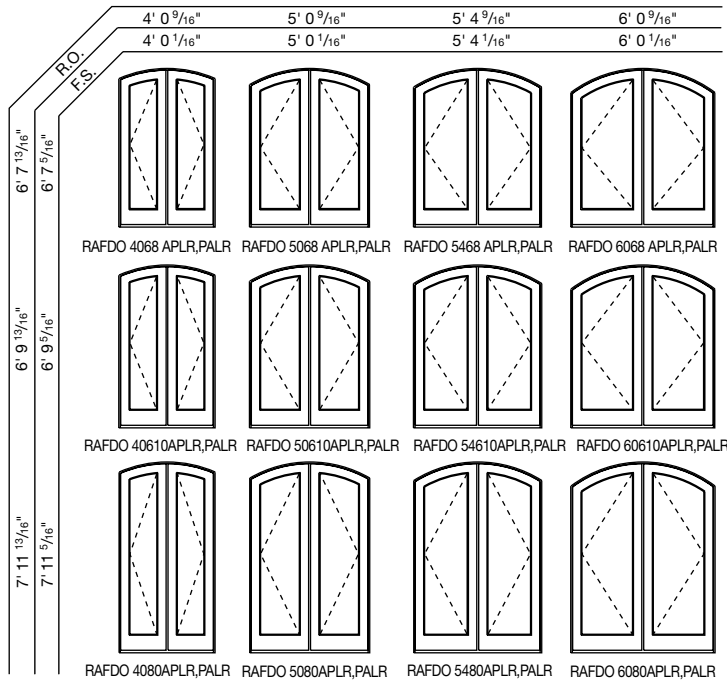
FORMULA FOR COMBINATION DOORS

The overall frame dimension (both width and height) is equal to the sum of the individual unit frame dimensions plus joining material dimension(s).

The overall rough opening (both width and height) is equal to the overall frame dimensions plus 1/4" on all sides.

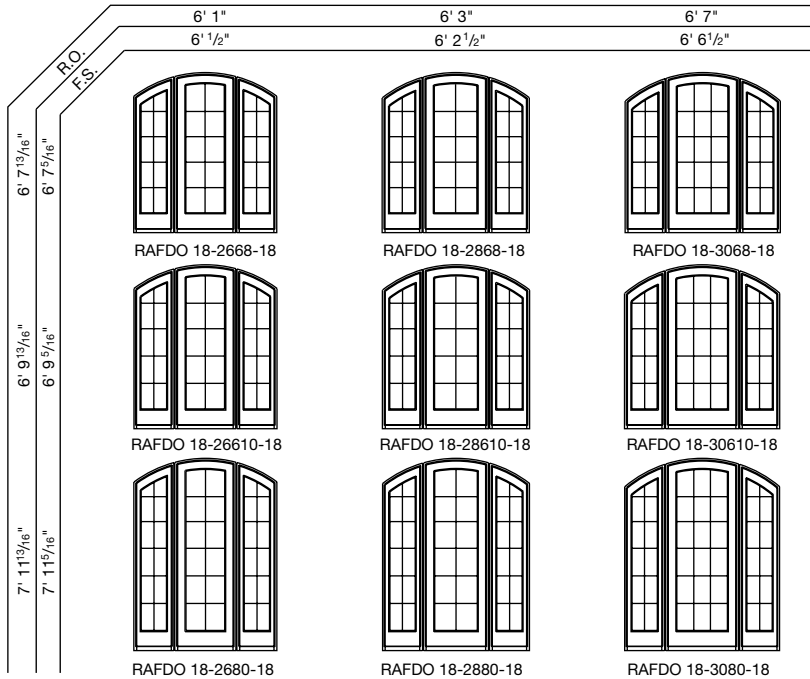
Any unit within each combination can be operating or stationary except for direct-set units and transoms.

Double Arch Outswing Patio Door Sizes



HINGED PATIO DOORS

3-Wide Arch Outswing Patio Door & Sidelight Sizes



NOTES

All doors and sidelights use safety/tempered glass.

3-wide doors have a 5'0" radius.

CPS doors shown with optional mid-rail.

See handing chart on page 132 for operation options.

Use structural joining material when necessary or required by code.

The light patterns illustrated apply to removable interior wood grilles, Full Divided Light, Simulated Divided Light, Decorelle 100, 150 and 400 and Finelight™ Grilles-Between-the-Glass. All removable interior wood grilles will be installed in the units unless otherwise specified.

For a metric conversion in millimeters, multiply dimensions in inches by 25.4.

Outswing Frame Height Formula* (using Low Threshold Sill)

$$= \text{Standard Outswing Frame Height} - 7/16''$$

*Does not apply to Concealed Panic System (CPS) doors

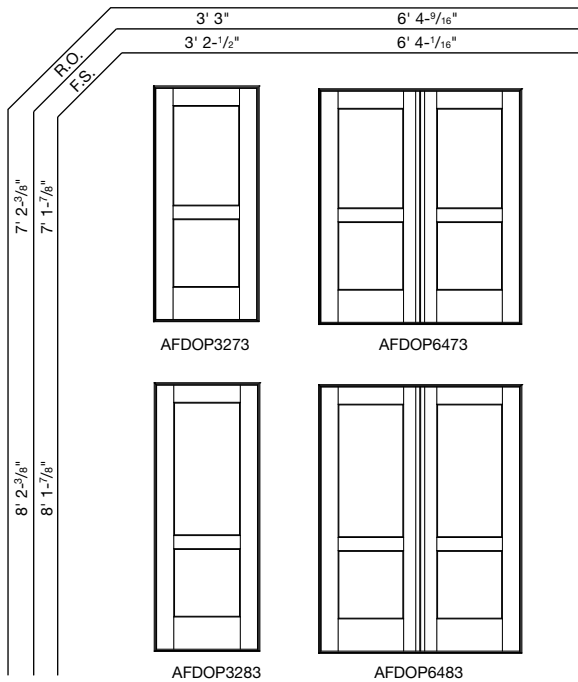
FORMULA FOR COMBINATION DOORS

The overall frame dimension (both width and height) is equal to the sum of the individual unit frame dimensions plus joining material dimension(s).

The overall rough opening (both width and height) is equal to the overall frame dimensions plus 1/4" on all sides.

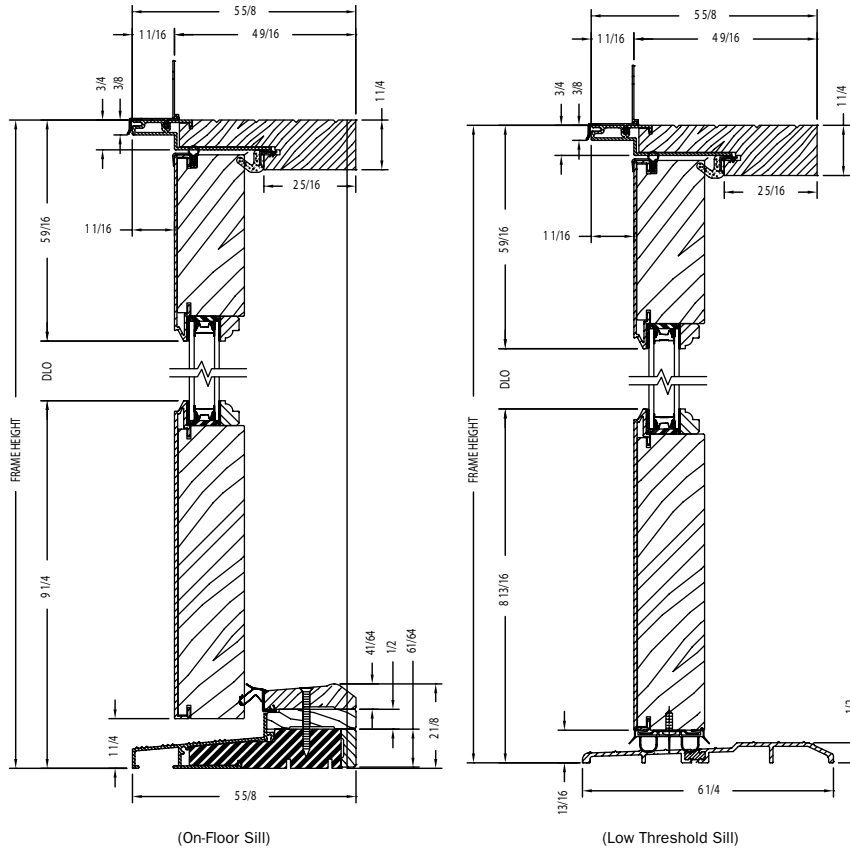
Any unit within each combination can be operating or stationary except for arch sidelights.

Concealed Panic System (CPS) Door Sizes



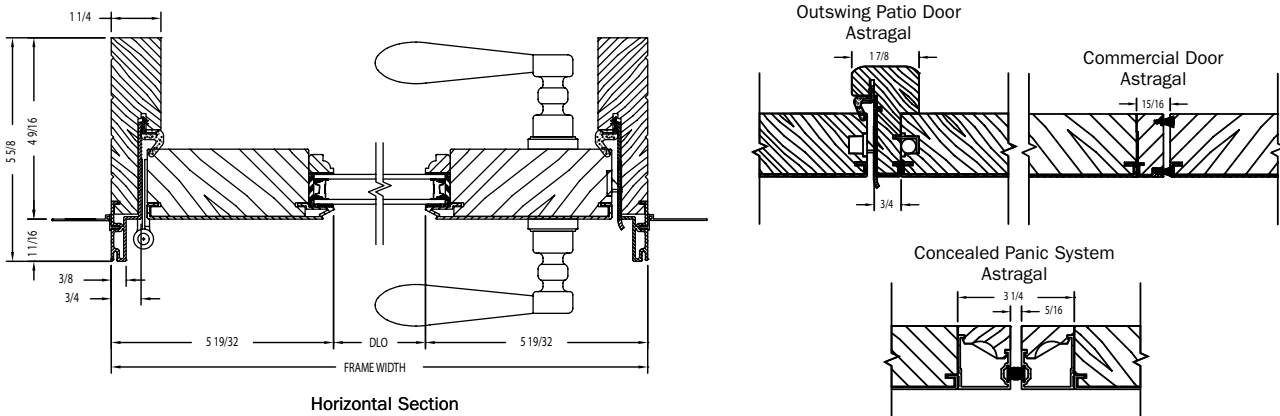
Hinged Outswing Patio Doors

Hinged Outswing Patio Door



Vertical Section

Astragal

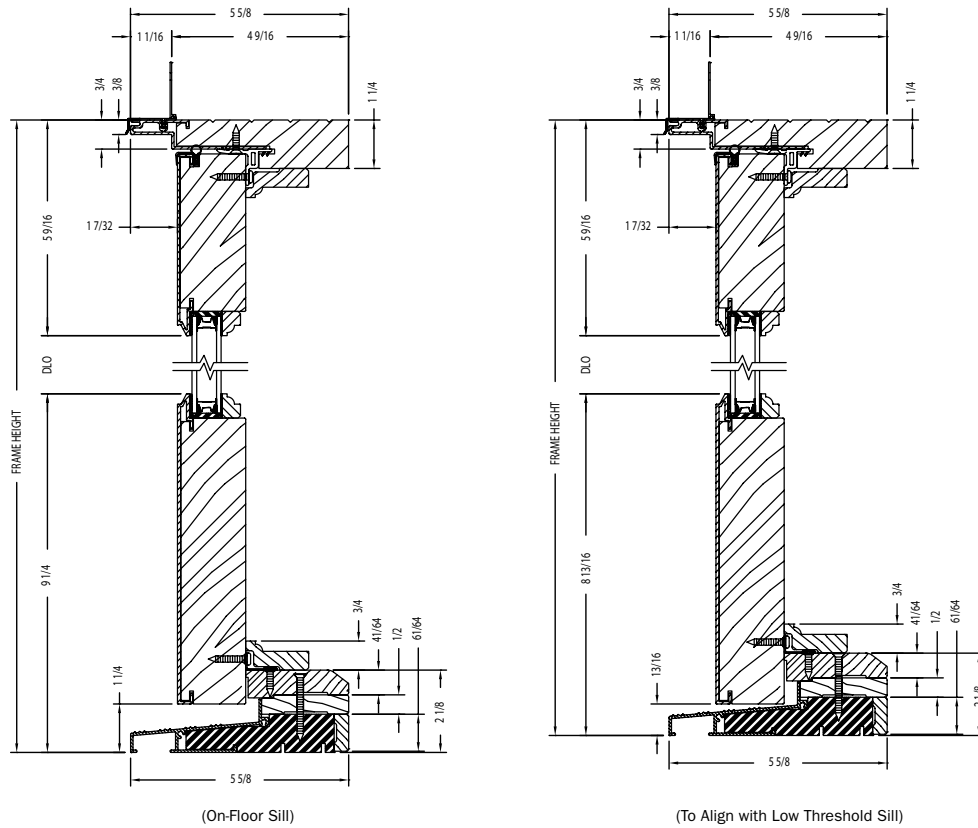


Shown with ovolo (colonial) glass stops.
French panel shown, also available with a contemporary panel.

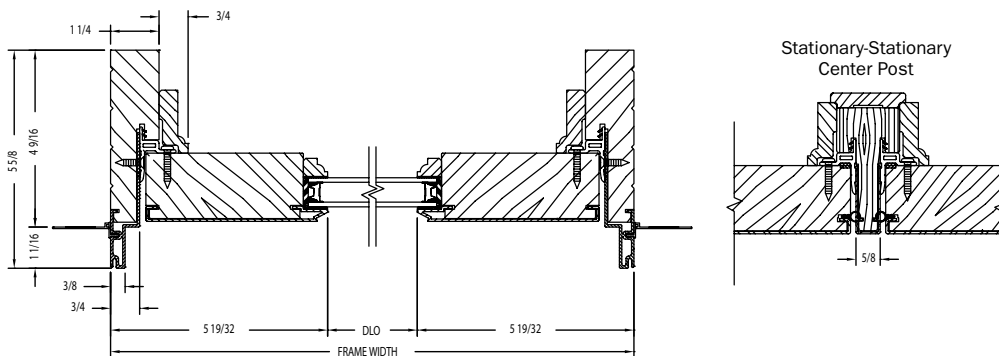
PROPER INSTALLATION AND MAINTENANCE OF E-SERIES PRODUCTS IS ESSENTIAL TO ATTAIN OPTIMUM PERFORMANCE AND OPERATION. WRITTEN INSTALLATION INSTRUCTIONS THAT PROVIDE GUIDELINES FOR PROPER INSTALLATION ARE AVAILABLE BY VISITING ANDERSENWINDOWS.COM. CUSTOM SIZES ARE AVAILABLE. CONTACT YOUR LOCAL SUPPLIER FOR MORE INFORMATION. DRAWINGS ARE NOT TO SCALE.

Hinged Outswing Patio Doors

Outswing Sash-Set Sidelight



Vertical Section



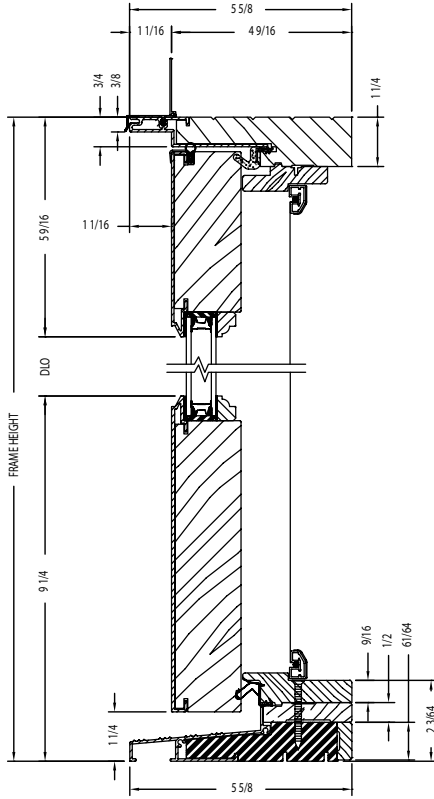
Horizontal Section

Shown with ovolo (colonial) glass stops.

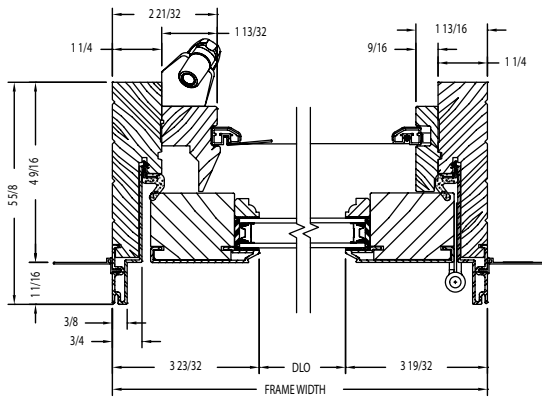
PROPER INSTALLATION AND MAINTENANCE OF E-SERIES PRODUCTS IS ESSENTIAL TO ATTAIN OPTIMUM PERFORMANCE AND OPERATION. WRITTEN INSTALLATION INSTRUCTIONS THAT PROVIDE GUIDELINES FOR PROPER INSTALLATION ARE AVAILABLE BY VISITING ANDERSENWINDOWS.COM. CUSTOM SIZES ARE AVAILABLE. CONTACT YOUR LOCAL SUPPLIER FOR MORE INFORMATION. DRAWINGS ARE NOT TO SCALE.

Hinged Outswing Patio Doors

Outswing Venting Sidelight

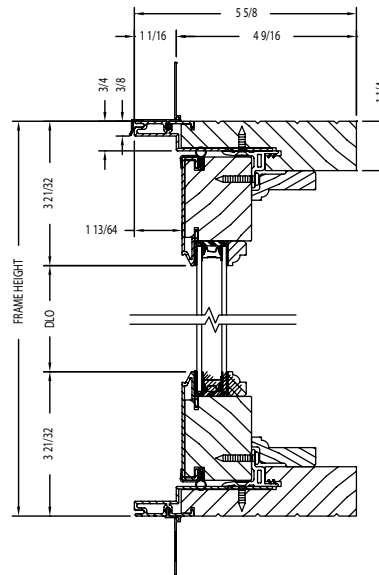


Vertical Section

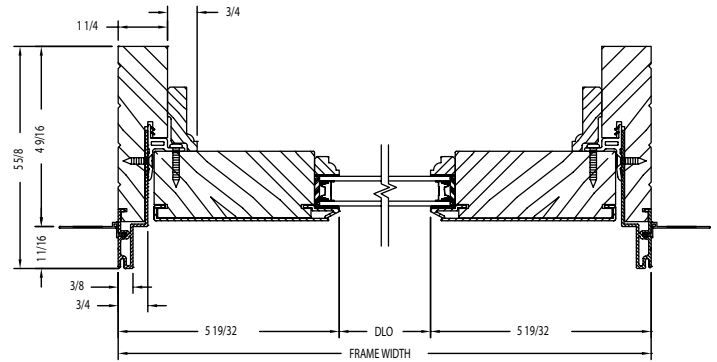


Horizontal Section

Outswing Sash-Set Transom



Vertical Section



Horizontal Section

Shown with ovolo (colonial) glass stops.

PROPER INSTALLATION AND MAINTENANCE OF E-SERIES PRODUCTS IS ESSENTIAL TO ATTAIN OPTIMUM PERFORMANCE AND OPERATION. WRITTEN INSTALLATION INSTRUCTIONS THAT PROVIDE GUIDELINES FOR PROPER INSTALLATION ARE AVAILABLE BY VISITING ANDERSENWINDOWS.COM. CUSTOM SIZES ARE AVAILABLE. CONTACT YOUR LOCAL SUPPLIER FOR MORE INFORMATION. DRAWINGS ARE NOT TO SCALE.

GLIDING PATIO DOORS

Choose from our French panels with 8" or 12" bottom rail options, or one of two narrower panel profiles for a more contemporary look, to create an open view to the outside. E-Series gliding patio doors feature multi-point locking hardware for a firm, secure seal and tandem ball bearing rollers for smooth operation.

Gliding Overview	144
Panel Labeling & Handing	146
Gliding Sizing	
Stationary & Two-Panel Doors	147
Four-Panel Doors	147
Specialty Transom	148
Gliding Details	149
French Gliding Sizing	
Stationary & Two-Panel Doors	150
Four-Panel Doors	151
Specialty Transom	152
French Gliding Details	153
Installation Materials	154
Product Performance	158





GLIDING PATIO DOORS

FEATURES

GLIDING PATIO DOORS

FRAME & PANEL

A Select wood components are kiln dried and treated with water/insect repellent and preservative. Interior wood surfaces are available in pine, mixed grain Douglas fir, cherry, hickory, mahogany*, maple, oak, walnut, alder or vertical grain Douglas fir. Interior surfaces are available unfinished or factory primed. Factory-applied finishes are available in a variety of stain and paint options.

B Wood components are fitted with aluminum extrusions on the exterior. 50 exterior colors that meet AAMA 2604 and 2605 specifications are available, as well as custom colors. Also available is a selection of seven exterior anodized options.

The frame consists of foam-filled leaf weatherstrip on the exterior creating a weather-resistant pocket for the door panel. A dual weatherstrip seal on the interlock is fitted between the fixed and operating meeting stiles.

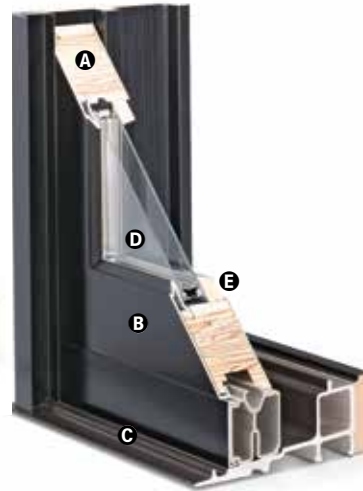


French Gliding Patio Door

Vinyl installation flanges are pre-applied into a kerf on the frame exterior to facilitate installation. Optional aluminum flanges and metal installation clips are available. Standard jamb depth is 4 7/16" for gliding patio doors.

SILL

C A durable fiberglass sill is an excellent thermal barrier. Stainless steel roller caps provide smooth operation of the door panel. Available in dark bronze or gray.



Gliding Patio Door

GLASS

D High-Performance Low-E4® glass with a low-conductivity spacer. Triple-pane glass, tinted, clear dual-pane, high-altitude glass and other special glazing options are available.

E Glass is fixed in place from the interior with wood stops that can be removed for easy reglazing if necessary. Glass stops available in ovolo (colonial) and contemporary profiles.

HARDWARE

Steel Rollers

Operating panel consists of two tandem ball bearing steel roller assemblies. Stainless steel roller assemblies are available as an option.



Multi-Point Locking System

The multi-point locking system features a unique reachout design that pulls the door panel tightly closed for a weather-tight seal and enhanced security.



ACCESSORIES Sold Separately

HARDWARE

Auxiliary Foot Lock

An enhanced foot lock is discreetly positioned on the side of the panel. Foot lock provides an extra measure of security when door is in locked position. Available in finish options to complement handle sets.



Additional hardware options such as exterior keyed locks and more are also available.

SENSORS

VeriLock® sensors and open/closed sensors are available for gliding patio doors. See page 27 for Smart Home options.

INSECT SCREENS

Top-Hung Gliding Insect Screens

Charcoal fiberglass screen mesh fits into an aluminum frame available in 50 exterior colors. Aluminum screen mesh is also available as an option.

Retractable Insect Screens

The retractable insect screen has charcoal fiberglass screen mesh. Insect screen retracts when not needed, providing an unobstructed view through the glass. Available in 50 exterior colors. See page 24 for more information on our insect screen options.

PRIVACY OPTIONS

Blinds-Between-the-Glass



A 5/8" aluminum slat blind mounted between two panes of insulated glass in a dust-free environment. Available in white, tan and almond. Blinds are magnetically controlled and can be tilted or raised and lowered with one cord.** Not available on arch patio doors.

GRILLES

Full Divided Light

Permanent interior and exterior grilles with grille spacer bars between two panes of glass. Available in 5/8", 7/8", 1 1/8", 1 1/2", or 2 1/4" widths and ovolo or contemporary profiles. The ovolo profile is shown below, not all widths are shown.



Simulated Divided Light

Permanent exterior and interior grilles without grille spacer bars. Available in 5/8", 7/8", 1 1/8", 1 1/2", or 2 1/4" widths and ovolo or contemporary profiles. The ovolo profile is shown below, not all widths are shown.



Finelight™ Grilles-Between-the-Glass

Available in 5/8" flat or 1" contoured aluminum profiles. Two-tone colors of pebble tan/colony white, sierra bronze/colony white or forest green/colony white are available on the 1" profile.



Removable Interior Wood Grilles

Removable interior wood grilles are available in a 7/8" width and ovolo or contemporary profiles. Optional surround for removable grille and permanent exterior grilles also available.



See page 22 for more information on grilles.

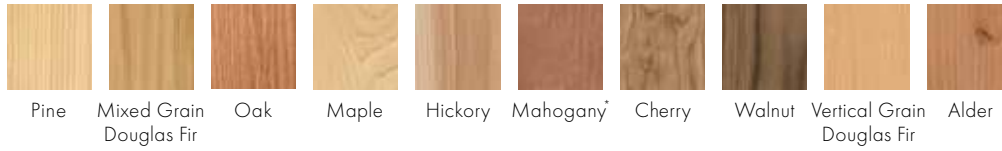
*Actual wood species is either Sapele or Sipo, both non-endangered species grown in Africa, with color and characteristics similar to Central American mahoganies.

**Not all sizes are retractable. See your local dealer for details.

EXTERIOR & INTERIOR OPTIONS

EXTERIOR COLORS 50 exterior colors, 7 anodized finishes and custom colors. See exterior colors on page 11.

INTERIOR WOOD SPECIES



Naturally occurring variations in grain, color and texture of wood make each window one of a kind.

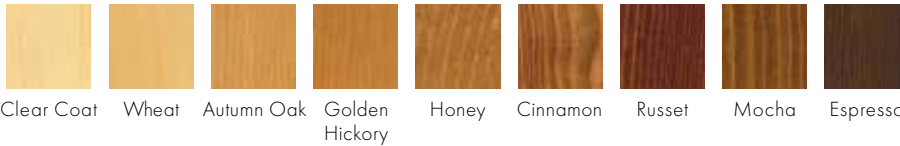
All factory-finished options are shown on pine.

Painted options available on pine. Dark bronze and black painted options available on pine or maple.

Anodized silver painted option available on maple only.

Interior custom stains, paints and color matching available.

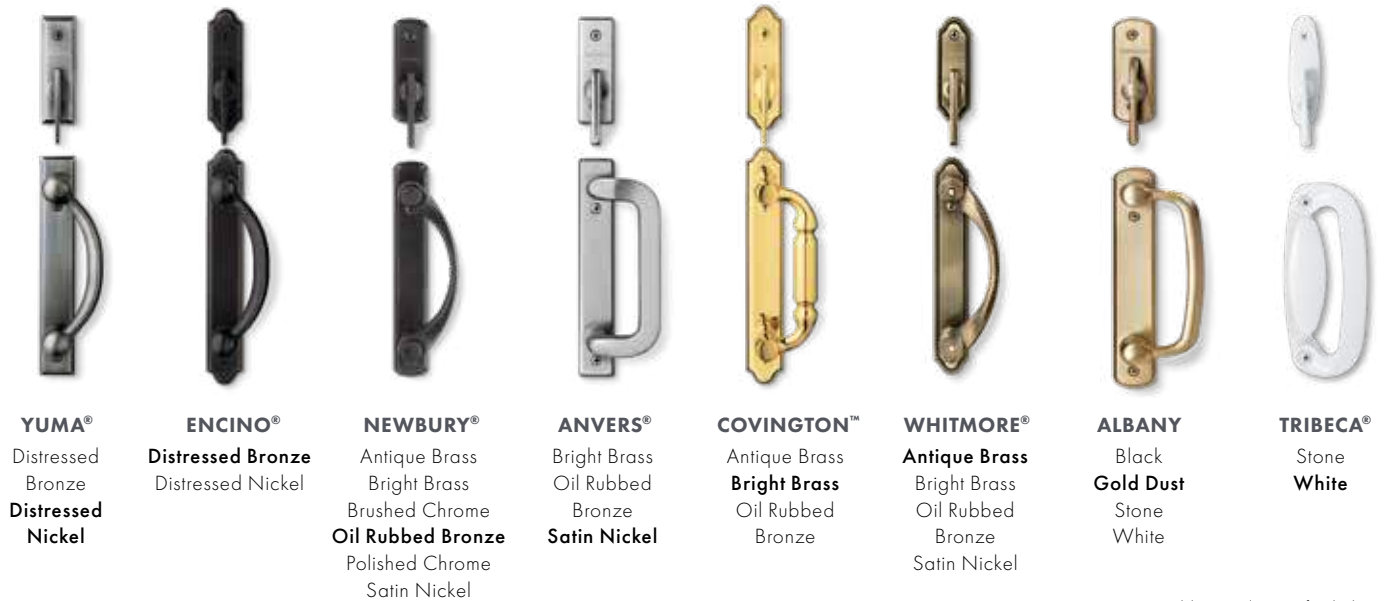
FACTORY-FINISHED INTERIORS



INTERIOR PAINTED OPTIONS



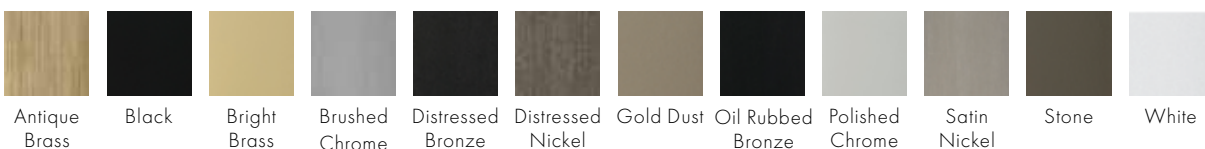
HARDWARE OPTIONS



YUMA® Distressed Bronze Distressed Nickel	ENCINO® Distressed Bronze Distressed Nickel	NEWBURY® Antique Brass Bright Brass Brushed Chrome Oil Rubbed Bronze Polished Chrome Satin Nickel	ANVERS® Bright Brass Oil Rubbed Bronze Satin Nickel	COVINGTON™ Antique Brass Bright Brass Oil Rubbed Bronze	WHITMORE® Antique Brass Bright Brass Oil Rubbed Bronze Satin Nickel	ALBANY Black Gold Dust Stone White	TRIBECA® Stone White
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Bold name denotes finish shown.

HARDWARE FINISHES



Oil rubbed bronze is a "living" finish that will change with time and use.

*Actual wood species is either Sapele or Sipo, both non-endangered species grown in Africa, with color and characteristics similar to Central American mahoganies.

Mix and match interior and exterior style and finish options are available.

Bright brass and satin nickel finishes feature a 10-year limited warranty.

Tribeca and Albany hardware are zinc diecast with powder-coated durable finish, other hardware is solid forged brass.

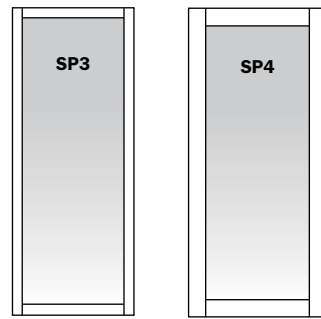
Printing limitations prevent exact replication of colors and finishes. See your Andersen supplier for actual color and finish samples.

Gliding Patio Door Panel Labeling

Door Panel Options

Andersen® E-Series offers both contemporary and French panel styles to complement traditional or modern architecture.

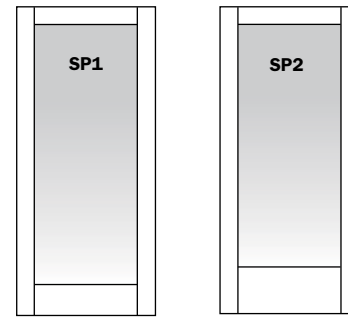
Gliding Patio Door Contemporary Panels



2 3/4" stiles & rails

4 1/16" stiles & rails

Gliding Patio Door French Panels



4 1/16" stiles, 4 1/16" top rail & 8" bottom rail

4 1/16" stiles, 4 1/16" top rail & 12" bottom rail

Gliding Patio Door Handing

The door handing and order designation noted below is consistent with the handing of other Andersen® gliding patio doors and is used throughout the remainder of the gliding patio doors section.

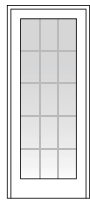
Identification

As viewed from the exterior, either the left or the right panel operates. The arrow designates the direction of panel operation. Stationary (S) doors can be used as an individual unit or as a sidelight.

Gliding Patio Doors & French Gliding Patio Doors

Handing Options

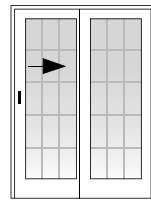
Single Door



S

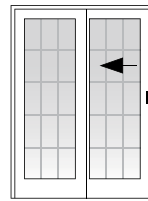
Stationary Panel

2-Panel Door



LS

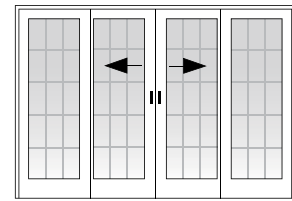
Left (L) panel is operating, right panel is stationary (S).



SR

Left panel is stationary (S), right (R) panel is operating.

4-Panel Door

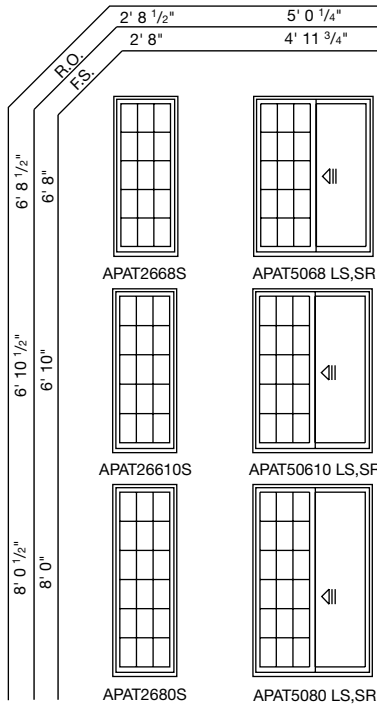


Astragal is attached on third panel from the left (as viewed from the exterior)

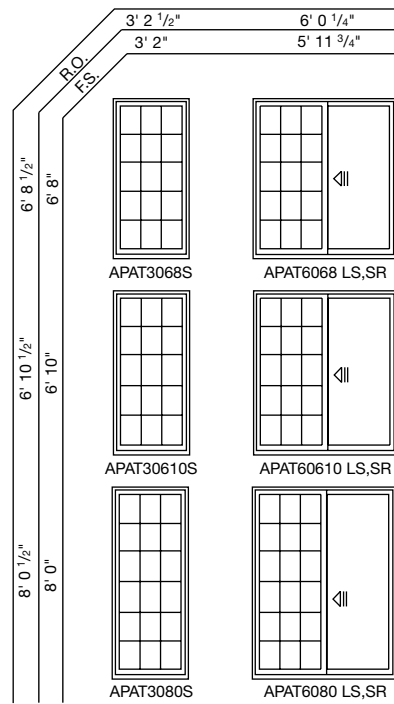
Order Designation Description

	As Viewed From Exterior
Stationary	S
2-Panel Door	SR
	LS
4-Panel Door	—

Gliding Patio Door Sizes



Gliding Patio Door Sizes



NOTES

All doors and sidelights use safety/tempered glass.

Astragal is applied to third panel from the left (as viewed from the exterior) on a 4-panel gliding patio door.

**4-panel doors are shipped knocked down and require field assembly because of size and weight.

Use structural joining material when necessary or required by code.

The light patterns illustrated apply to removable interior wood grilles, Full Divided Light, Simulated Divided Light, Decorelle 100, 150 and 400 and Finelight™ Grilles-Between-the-Glass. All removable interior wood grilles will be installed in the units unless otherwise specified.

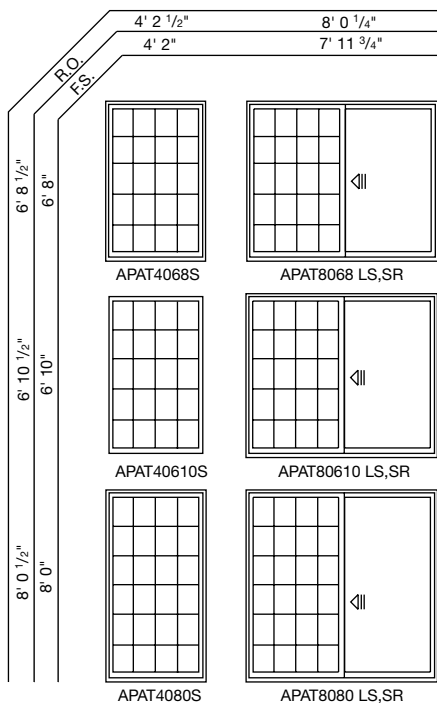
For a metric conversion in millimeters, multiply dimensions in inches by 25.4.

FORMULA FOR COMBINATION DOORS

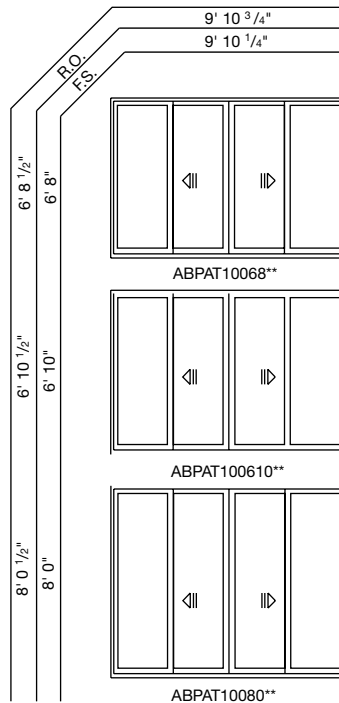
The overall frame dimension (both width and height) is equal to the sum of the individual unit frame dimensions plus joining material dimension(s).

The overall rough opening (both width and height) is equal to the overall frame dimensions plus 1/4" on all sides.

Gliding Patio Door Sizes

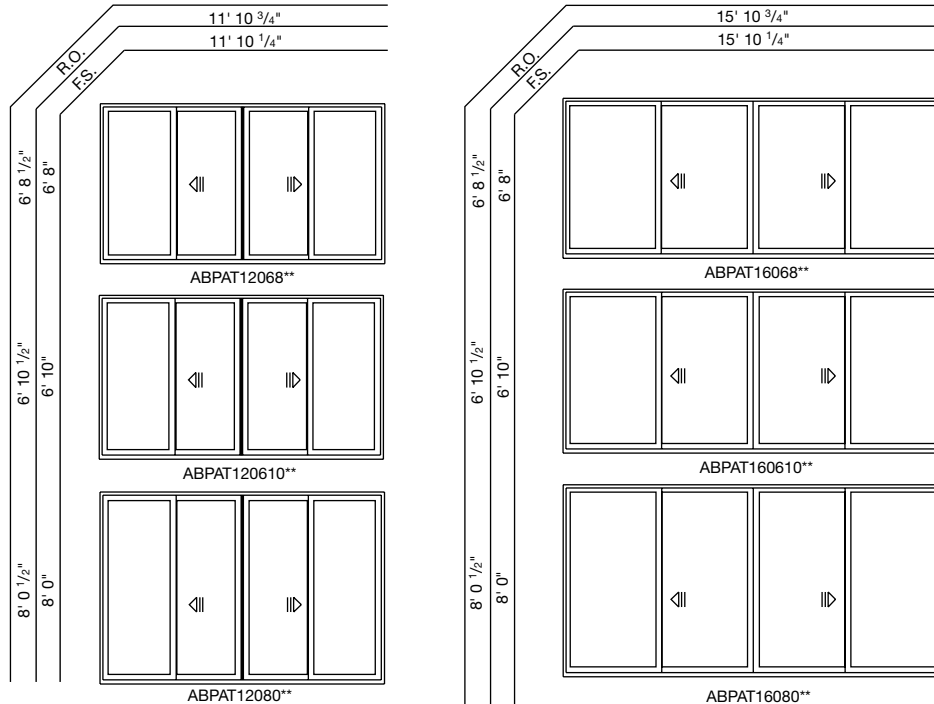


4-Panel Gliding Patio Door Sizes

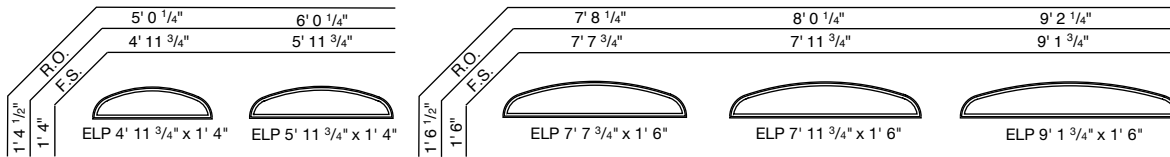


GLIDING PATIO DOORS

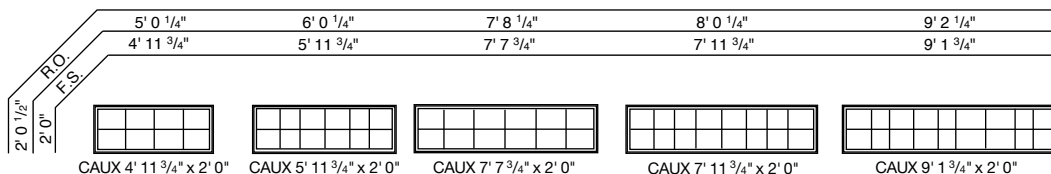
4-Panel Gliding Patio Door Sizes



Gliding Patio Door Direct-Set Elliptical Sizes (Specialty Frame)



Gliding Patio Door Direct-Set Transom Sizes (Specialty Frame)



NOTES

All doors and sidelights use safety/tempered glass.

If glass is positioned within 18" of the finished floor, safety/tempered glass may be required. Local codes may differ. Verify tempered glass requirements with your local building code official.

Astragal is applied to third panel from the left (as viewed from the exterior) on a 4-panel gliding patio door.

**4-panel doors are shipped knocked down and require field assembly because of size and weight.

See transom notes on page 149.

Use structural joining material when necessary or required by code.

The light patterns illustrated apply to removable interior wood grilles, Full Divided Light, Simulated Divided Light, Decorelle 100, 150 and 400 and Finelight™ Grilles-Between-the-Glass. All removable interior wood grilles will be installed in the units unless otherwise specified. The staggered light patterns illustrated align with light patterns for the gliding door. Other light patterns are available upon request.

For a metric conversion in millimeters, multiply dimensions in inches by 25.4.

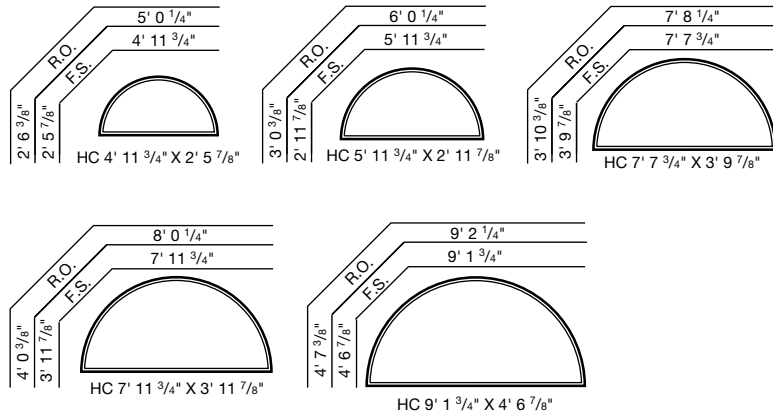
FORMULA FOR COMBINATION DOORS

The overall frame dimension (both width and height) is equal to the sum of the individual unit frame dimensions plus joining material dimension(s).

The overall rough opening (both width and height) is equal to the overall frame dimensions plus 1/4" on all sides.

**FOR WINDOWS GREATER THAN 30 SQUARE FEET OR RATED HIGHER THAN PG50, ONE OF THESE THREE INSTALLATION METHODS IS REQUIRED:
A) THROUGH THE JAMB B) ALUMINUM INSTALLATION FLANGE OR C) INSTALLATION CLIPS.
ADDITIONAL CUSTOM SIZES ARE AVAILABLE. CONTACT YOUR LOCAL SUPPLIER FOR MORE INFORMATION. DRAWINGS ARE NOT TO SCALE.**

Gliding Patio Door Direct-Set Half Circle Sizes (Specialty Frame)



NOTES

4' 11-3/4" wide units are used above 5068, 50610 or 5080 Gliding Patio Doors.

5' 11-3/4" wide units are used above 6068, 60610 or 6080 Gliding Patio Doors.

7' 7-3/4" wide units are used above 7668, 76610 or 7680 Gliding Patio Doors.

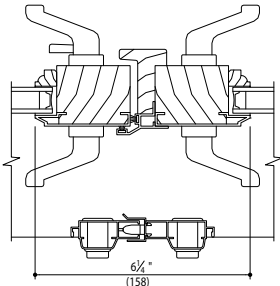
7' 11-3/4" wide units are used above 8068, 80610 or 8080 Gliding Patio Doors.

9' 1-3/4" wide units are used above 9068, 90610 or 9080 Gliding Patio Doors.

See notes on page 148 for more information.

Gliding Patio Doors

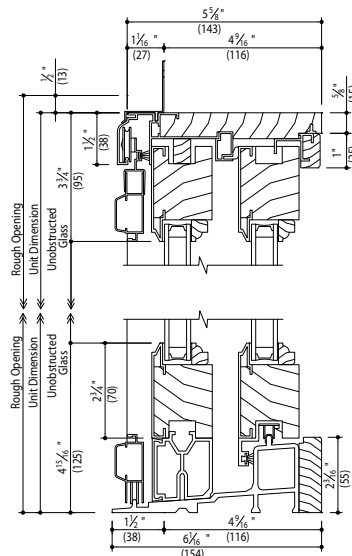
Astragal



Contemporary door panel shown with ovolo (colonial) glass stops.

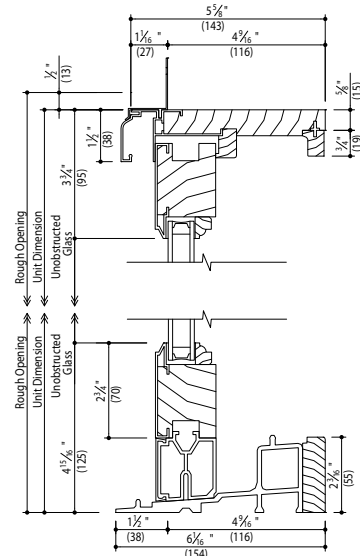
Dimensions in parentheses are in millimeters.

Gliding Patio Door

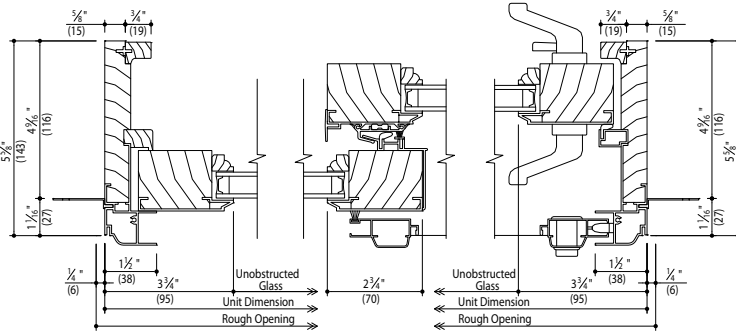


Vertical Section

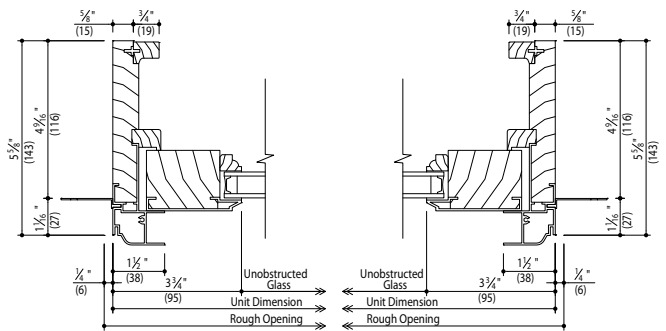
Gliding Patio Door Sidelight



Vertical Section



Horizontal Section

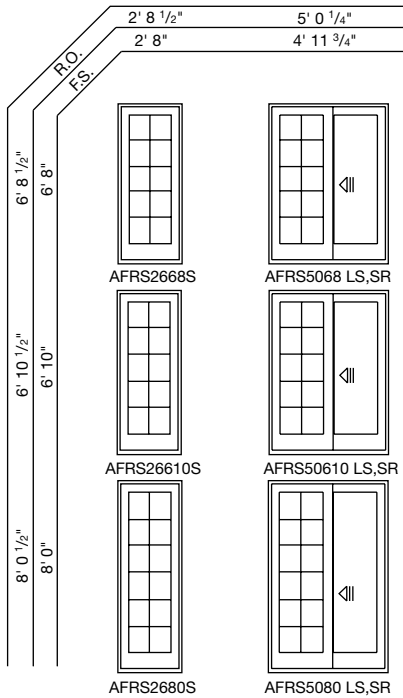


Horizontal Section

FOR WINDOWS GREATER THAN 30 SQUARE FEET OR RATED HIGHER THAN PG50, ONE OF THESE THREE INSTALLATION METHODS IS REQUIRED:
A) THROUGH THE JAMB B) ALUMINUM INSTALLATION FLANGE OR C) INSTALLATION CLIPS.
ADDITIONAL PROPER INSTALLATION AND MAINTENANCE OF E-SERIES PRODUCTS IS ESSENTIAL TO ATTAIN OPTIMUM PERFORMANCE AND OPERATION.
WRITTEN INSTALLATION INSTRUCTIONS THAT PROVIDE GUIDELINES FOR PROPER INSTALLATION ARE AVAILABLE BY VISITING ANDERSENWINDOWS.COM.
CUSTOM SIZES ARE AVAILABLE. CONTACT YOUR LOCAL SUPPLIER FOR MORE INFORMATION. DRAWINGS ARE NOT TO SCALE.

GLIDING PATIO DOORS

French Gliding Patio Door Sizes



NOTES

All doors and sidelights use safety/tempered glass.

Use structural joining material when necessary or required by code.

The light patterns illustrated apply to removable interior wood grilles, Full Divided Light, Simulated Divided Light, Decorelle 100, 150 and 400 and Finelight™ Grilles-Between-the-Glass. All removable interior wood grilles will be installed in the units unless otherwise specified.

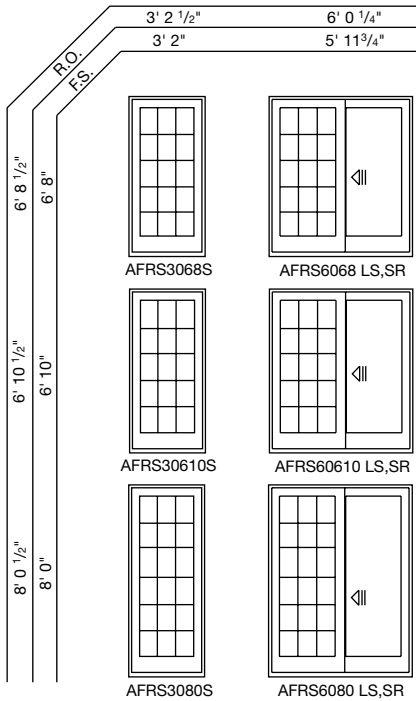
For a metric conversion in millimeters, multiply dimensions in inches by 25.4.

FORMULA FOR COMBINATION DOORS

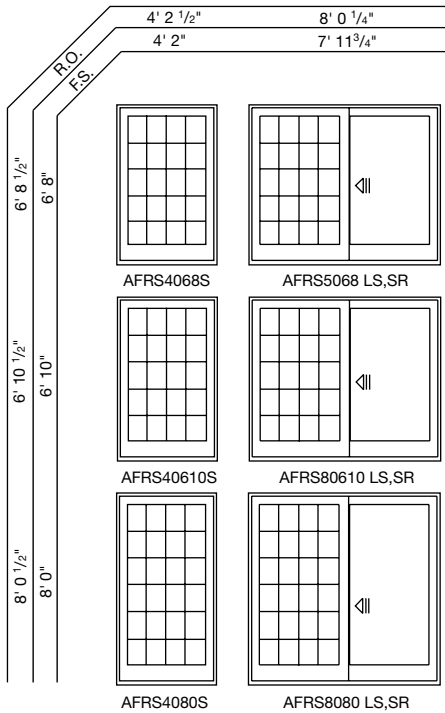
The overall frame dimension (both width and height) is equal to the sum of the individual unit frame dimensions plus joining material dimension(s).

The overall rough opening (both width and height) is equal to the overall frame dimensions plus 1/4" on all sides.

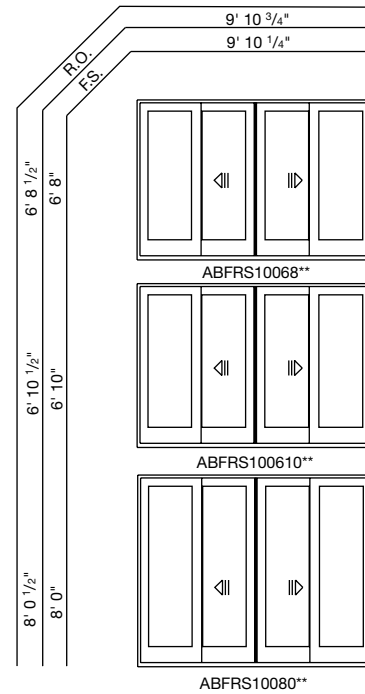
French Gliding Patio Door Sizes



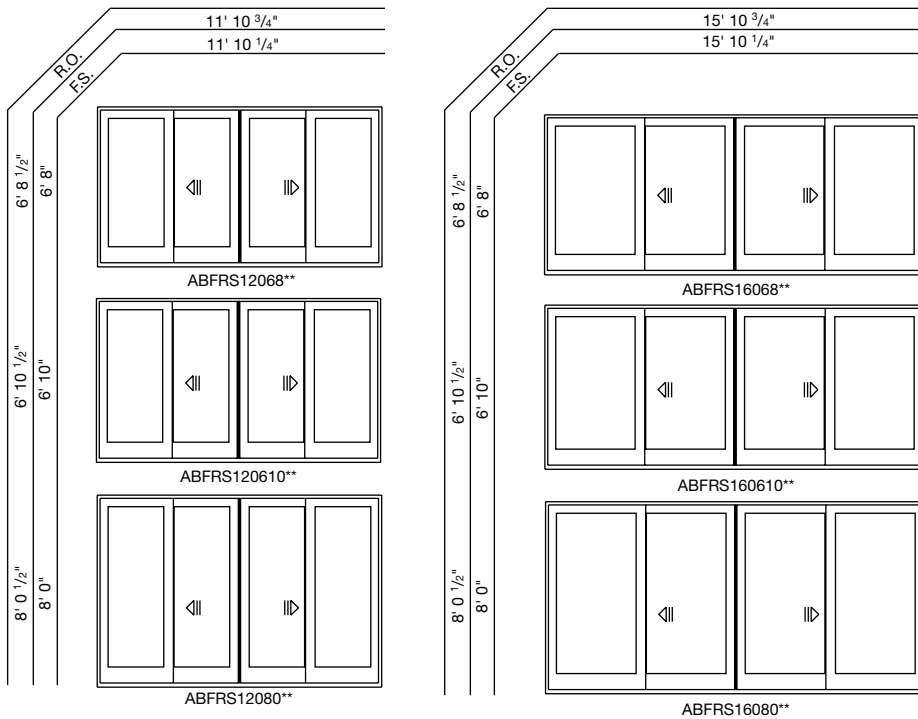
French Gliding Patio Door Sizes



4-Panel French Gliding Patio Door Sizes



4-Panel French Gliding Patio Door Sizes



NOTES

All doors and sidelights use safety/tempered glass.

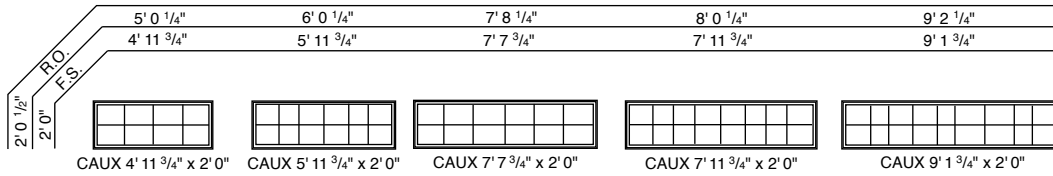
Astragal is applied to third panel from the left (as viewed from the exterior) on a 4-panel French gliding patio door.

** 4-panel doors are shipped knocked down and require field assembly because of size and weight.

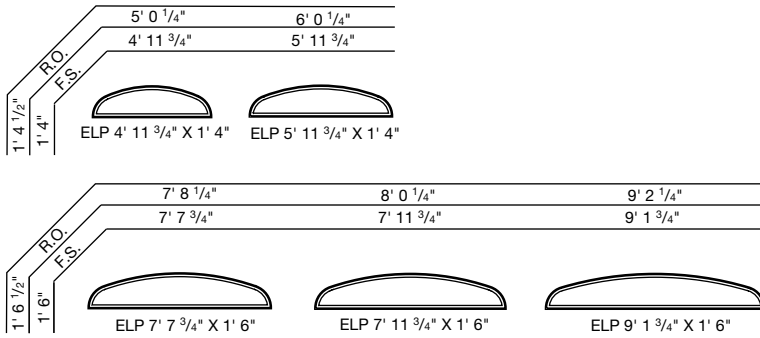
See notes on page 150 for more information.

GLIDING PATIO DOORS

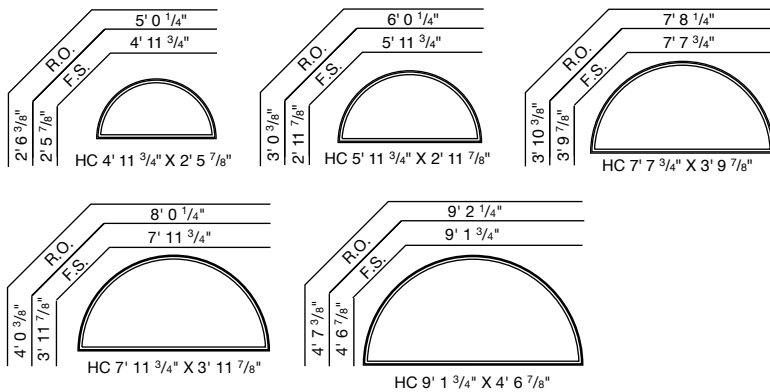
French Gliding Patio Door Direct-Set Transom Sizes (Specialty Frame)



French Gliding Patio Door Direct-Set Elliptical Sizes (Specialty Frame)



French Gliding Patio Door Direct-Set Half Circle Sizes (Specialty Frame)



NOTES

All doors and sidelights use safety/tempered glass.

If glass is positioned within 18" of the finished floor, safety/tempered glass may be required. Local codes may differ. Verify tempered glass requirements with your local building code official.

4' 11-3/4" wide units are used above 5068, 50610 or 5080 French Gliding Patio Doors.

5' 11-3/4" wide units are used above 6068, 60610 or 6080 French Gliding Patio Doors.

7' 7-3/4" wide units are used above 7668, 76610 or 7680 French Gliding Patio Doors.

7' 11-3/4" wide units are used above 8068, 80610 or 8080 French Gliding Patio Doors.

9' 1-3/4" wide units are used above 9068, 90610 or 9080 French Gliding Patio Doors.

Use structural joining material when necessary or required by code.

The light patterns illustrated apply to removable interior wood grilles, Full Divided Light, Simulated Divided Light, Decorelle 100, 150 and 400 and Finelight™ Grilles-Between-the-Glass. All removable interior wood grilles will be installed in the units unless otherwise specified. The staggered light patterns illustrated align with light patterns in the gliding door. Other light patterns are available upon request.

For a metric conversion in millimeters, multiply dimensions in inches by 25.4.

FORMULA FOR COMBINATION DOORS

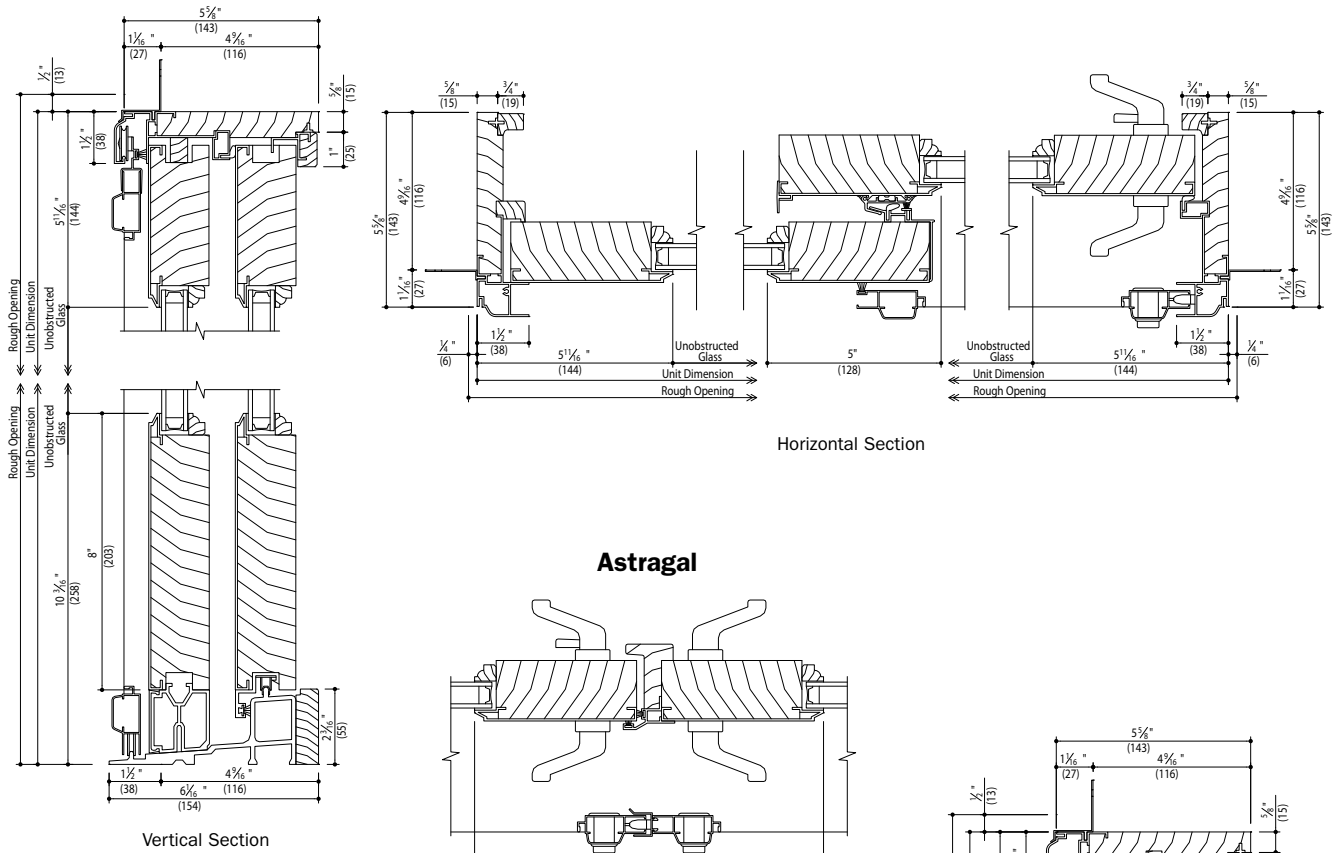
The overall frame dimension (both width and height) is equal to the sum of the individual unit frame dimensions plus joining material dimension(s).

The overall rough opening (both width and height) is equal to the overall frame dimensions plus 1/4" on all sides.

**FOR WINDOWS GREATER THAN 30 SQUARE FEET OR RATED HIGHER THAN PG50, ONE OF THESE THREE INSTALLATION METHODS IS REQUIRED:
 A) THROUGH THE JAMB B) ALUMINUM INSTALLATION FLANGE OR C) INSTALLATION CLIPS.
 ADDITIONAL CUSTOM SIZES ARE AVAILABLE. CONTACT YOUR LOCAL SUPPLIER FOR MORE INFORMATION. DRAWINGS ARE NOT TO SCALE.**

French Gliding Patio Doors

French Gliding Patio Door



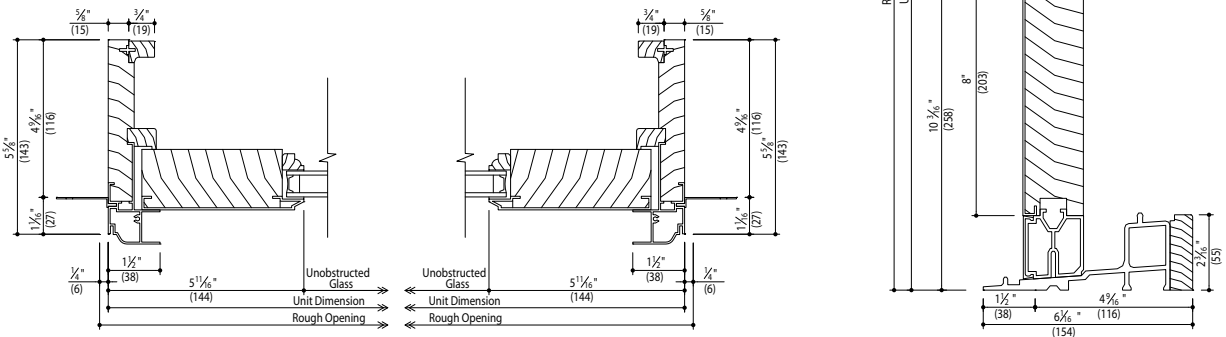
Horizontal Section

Astragal

Vertical Section

Shown with ovolo (colonial) glass stops.
Door panel with 8" bottom rail shown, also available with 12" bottom rail.
Dimensions in parentheses are in millimeters.

French Gliding Patio Door Sidelight



Horizontal Section

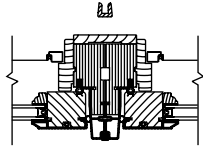
Vertical Section

PROPER INSTALLATION AND MAINTENANCE OF E-SERIES PRODUCTS IS ESSENTIAL TO ATTAIN OPTIMUM PERFORMANCE AND OPERATION. WRITTEN INSTALLATION INSTRUCTIONS THAT PROVIDE GUIDELINES FOR PROPER INSTALLATION ARE AVAILABLE BY VISITING ANDERSENWINDOWS.COM. CUSTOM SIZES ARE AVAILABLE. CONTACT YOUR LOCAL SUPPLIER FOR MORE INFORMATION. DRAWINGS ARE NOT TO SCALE.

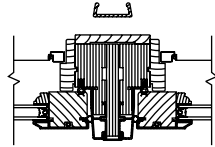
Installation Materials

We offer a variety of accessory metals to ensure a coordinated, low-maintenance window or door system. Available in 50 exterior colors at no additional cost, these trims save time on the job site.

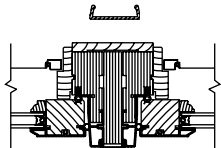
Joining Components



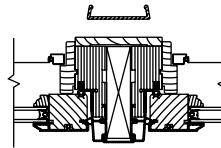
Standard Exterior Mull Cover



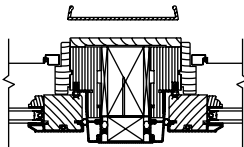
1/2" Exterior Mull Cover



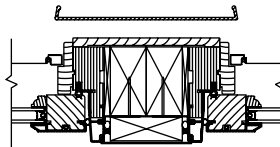
3/4" Exterior Mull Cover



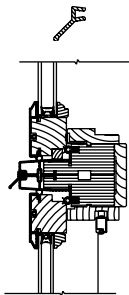
1" Exterior Mull Cover



2" Exterior Mull Cover

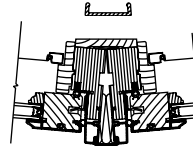


3-1/2" Exterior Mull Cover

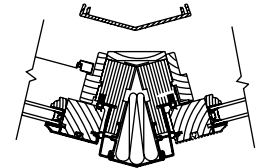


Standard Exterior Mull Cover with Drip

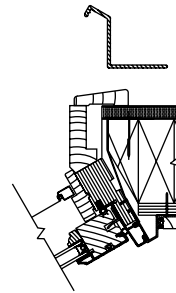
Bay and Bow Trim Metals & Applications



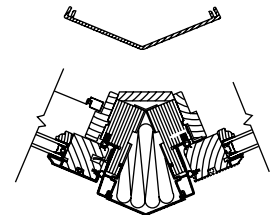
10° Casement Bow Exterior Mull Cover



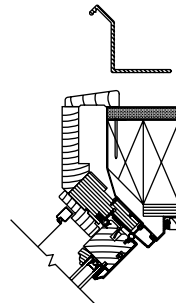
30° Casement Angle Bay Exterior Mull Cover



30° Angle Bay Enclosure



45° Casement Angle Bay Exterior Mull Cover



45° Angle Bay Enclosure

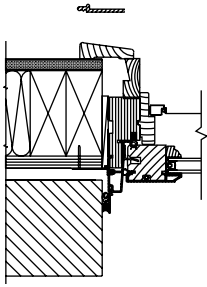


30° Angle Bay Exterior Mull Cover

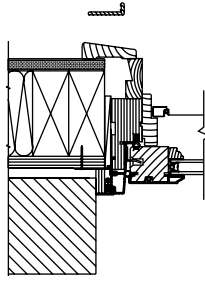


45° Double-Hung Exterior Mull Cover

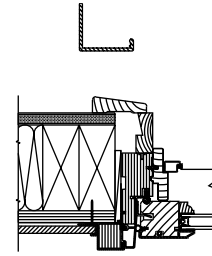
Trim Metals & Applications



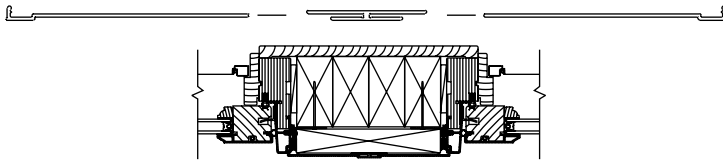
3/4" Frame Extender



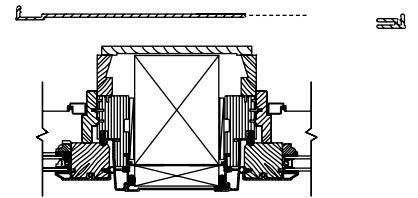
3/4" Frame Expander



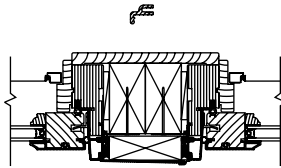
90° Angle Expander



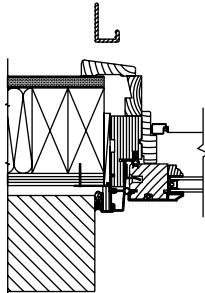
1-1/2" Mull Expander – May be used with adjustable mull covers or frame expanders (vertical joins only)



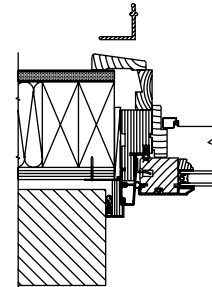
1" - 5" Adjustable Mull Cover and Receiver (vertical join)



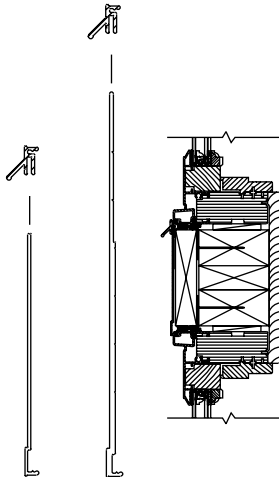
Frame Expander Receiver



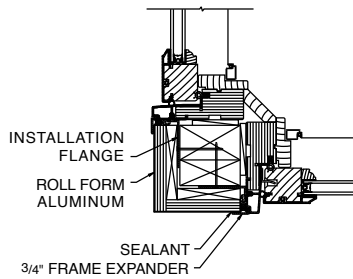
Expander Return



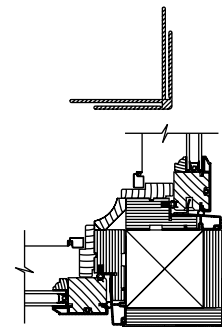
3/4" Frame Enclosure



1" - 5" and 5-1/4" - 8" Adjustable Mull Cover and Receiver with Drip Leg (horizontal join)



Corner Post Section of Box Bay Using Roll Form Metal on Corners



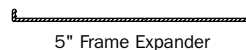
90° Outside Corner



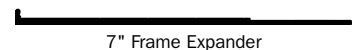
2-1/4" Frame Expander



3" Frame Expander



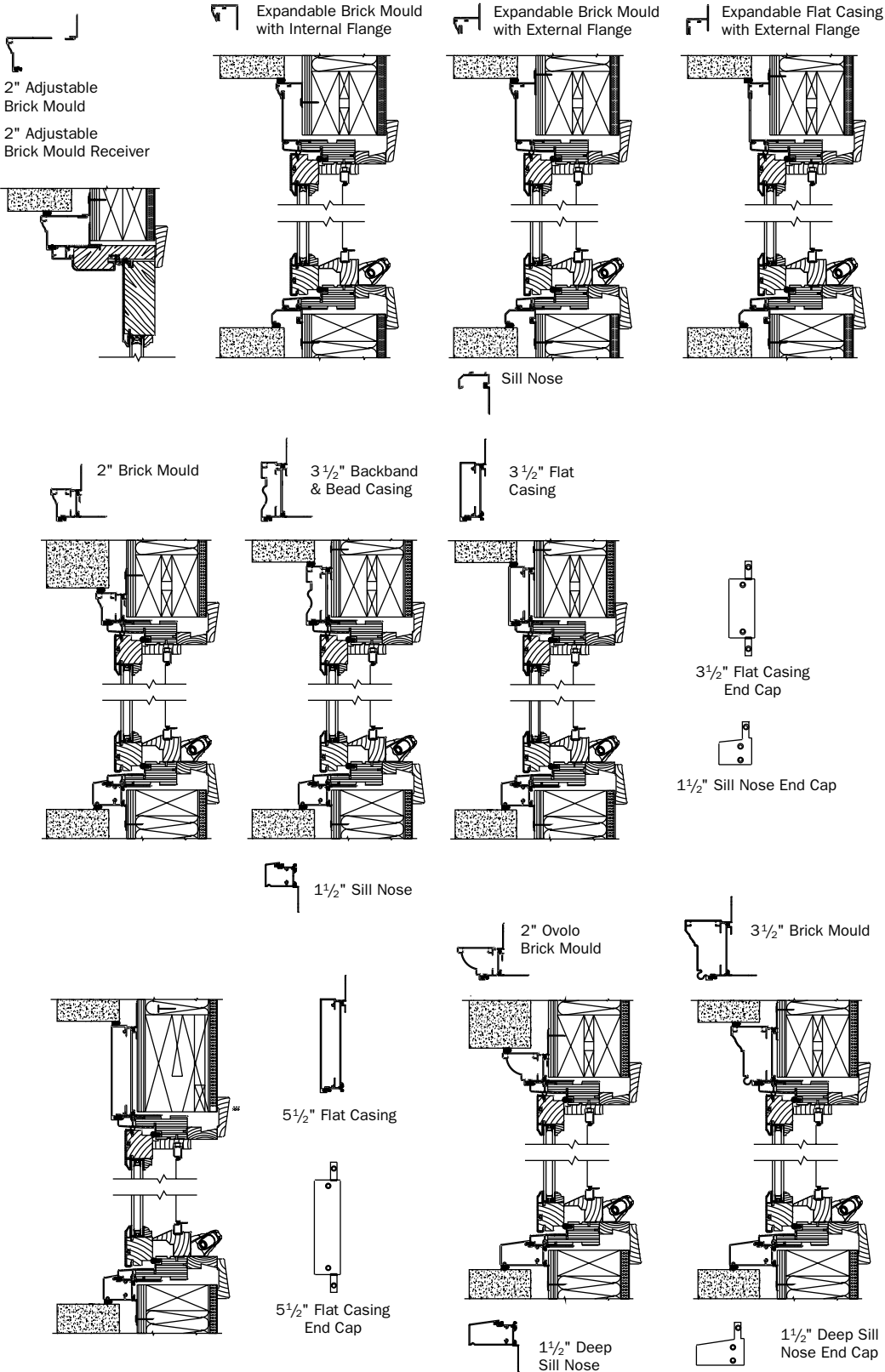
5" Frame Expander



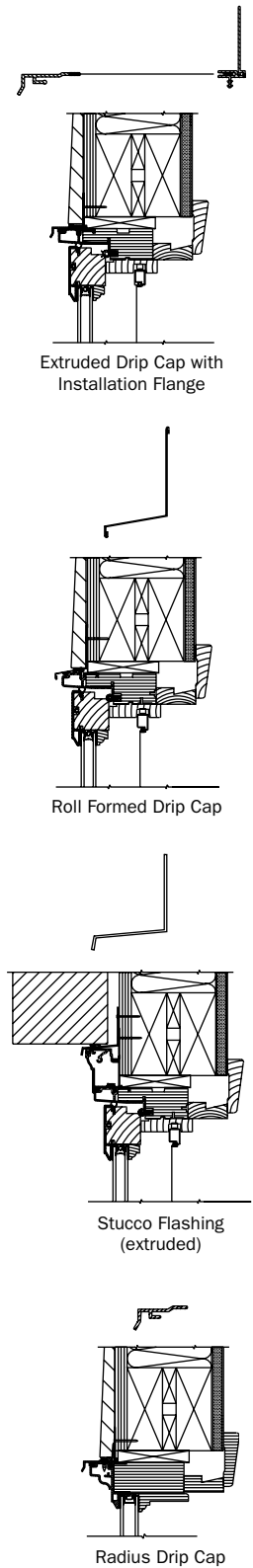
7" Frame Expander

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Applications

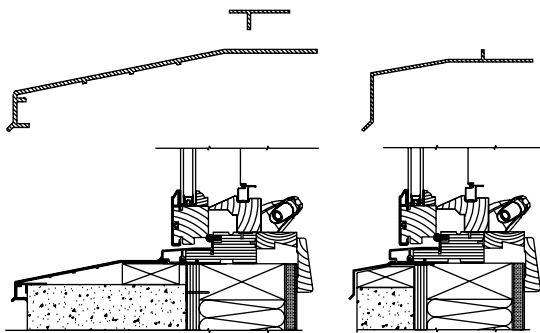


Drip Caps & Applications



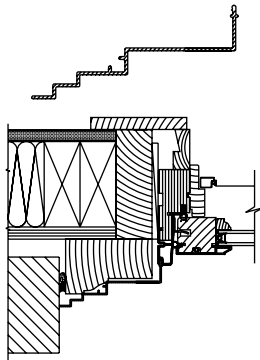
PROPER INSTALLATION AND MAINTENANCE OF E-SERIES PRODUCTS IS ESSENTIAL TO ATTAIN OPTIMUM PERFORMANCE AND OPERATION. WRITTEN INSTALLATION INSTRUCTIONS THAT PROVIDE GUIDELINES FOR PROPER INSTALLATION ARE AVAILABLE BY VISITING ANDERSENWINDOWS.COM.

Miscellaneous Trim Metals & Applications



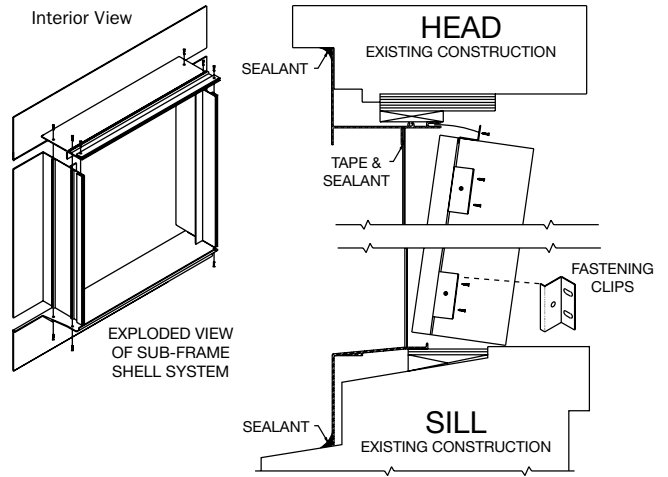
Extruded Sub-sill and T Sub-sill Clip

Alternate T Sub-sill



Historical Panning

Sub-Frame Shell System

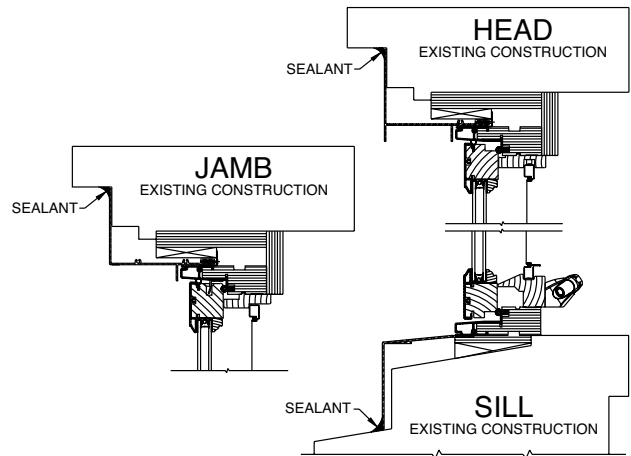


The E-Series Sub-Frame Shell System is a simple and effective way to meet remodeling needs for residential and commercial projects. Preserving existing buildings and neighborhoods has become increasingly important to our society. And a good, sound, older structure can be as efficient as, if not more efficient than, a new building.

Many E-Series products will work in the Sub-Frame Shell System for remodeling, which means you have unlimited design choices to fit the existing architecture. The Sub-Frame Shell System is a heavy aluminum perimeter-flange sub-frame that covers most existing construction conditions. It can be installed from the inside without costly scaffolding or off-staging.

Masonry Opening Formulas

Masonry Opening Formulas			
Formulas allow 1/4" for backer rod and sealant around entire perimeter			
2" Brick Mould 2" Ovolo Brick Mould	WIDTH		Frame + 3 3/4"
	HEIGHT	w/ Sill Nose	Frame + 3 1/4"
		4-Sides	Frame + 3 3/4"
	3-Sides	Frame + 2 1/8"	
3 1/2" Flat Casing 3 1/2" Brick Mould 3 1/2" Backband & Bead Casing	WIDTH		Frame + 6 3/4"
	HEIGHT	w/ Sill Nose	Frame + 4 3/4"
		4-Sides	Frame + 6 3/4"
	3-Sides	Frame + 3 5/8"	
5 1/2" Flat Casing	WIDTH		Frame + 10 3/4"
	HEIGHT	w/ Sill Nose	Frame + 6 3/4"
		4-Sides	Frame + 10 3/4"
	3-Sides	Frame + 5 5/8"	



PRODUCT PERFORMANCE

Performance Grade & Air Infiltration Ratings for E-Series Windows & Patio Doors – Dual-Pane & Triple-Pane Glass

For current performance information, please visit andersenwindows.com.

Andersen® Product	Panel Type	AAMA/WDMA/CSA 101/I.S.2/A440 Performance Grade (PG)	+/- Corresponding Design Pressure (DP)	Air Infiltration CFM/FT ²
Casement Windows				
Stationary (6060)	-	Class CW-PG50-FW Size Tested 72" x 72"	50/50	≤0.2
Venting (2660)	-	Class CW-PG55-C Size Tested 30" x 72" *	55/55	≤0.2
Venting (3028)	-	Class CW-PG55-C Size Tested 36" x 32"	55/55	≤0.2
Venting (3056)	-	Class CW-PG60-C Size Tested 36" x 66"	60/60	≤0.2
Venting, piano hinge (3060)	-	Class CW-PG70-C Size Tested 36" x 72"	70/70	≤0.2
Awning Windows				
Venting (4030)	-	Class LC-PG50-AP Size Tested 48" x 36"	50/50	≤0.2
Venting (4050)	-	Class LC-PG50-AP Size Tested 48" x 60"	50/50	≤0.2
Venting (4056)	-	Class LC-PG65-AP Size Tested 48" x 66"	65/65	≤0.2
Casement & Awning Picture/Transom Windows				
Fixed (46100) <i>dual-pane glass only</i>	-	Class CW-PG80-FW Size Tested 54" x 120" *	80/80	≤0.2
Fixed (6080) <i>dual-pane glass only</i>	-	Class CW-PG80-FW Size Tested 72" x 96"	80/80	≤0.2
Arch Casement Windows				
Stationary (6060)	-	Class LC-PG50-FW Size Tested 72" x 72"	50/50	≤0.2
Venting (3028)	-	Class CW-PG55-C Size Tested 36" x 32" *	55/55	≤0.2
Venting (3056)	-	Class CW-PG60-C Size Tested 36" x 66"	60/60	≤0.2
Venting (3060)	-	Class CW-PG70-C Size Tested 36" x 72"	70/70	≤0.2
French Casement Windows				
Venting (5050) <i>dual-pane glass only</i>	-	Class LC-PG30-C Tested 60" x 60"	30/30	≤0.2
Push Out Casement Windows				
Venting (3034)	-	Class LC-PG50-C Size Tested 36" x 40"	50/50	≤0.2
Venting (3060)	-	Class LC-PG50-C Size Tested 36" x 72"	50/50	≤0.2
Push Out Awning Windows				
Venting (3440)	-	Class LC-PG40-AP Size Tested 40" x 48"	40/40	≤0.2
Venting (4040)	-	Class LC-PG40-AP Size Tested 48" x 48"	40/40	≤0.2
Double-Hung Full-Frame Windows				
Venting (3470)	-	Class LC-PG55-H Size Tested 40" x 84"	55/55	≤0.2
Venting (3866)	-	Class LC-PG55-H Size Tested 44" x 78"	55/55	≤0.2
Venting (4060)	-	Class LC-PG55-H Size Tested 48" x 72"	55/55	≤0.2
Venting (4686)	-	Class LC-PG30-H Size Tested 54" x 102"	30/30	≤0.2
Double-Hung Picture Full-Frame Windows				
Fixed (5066)	-	Class CW-PG55-FW Size Tested 60" x 78"	55/55	≤0.2
Double-Hung Transom Full-Frame Windows				
Fixed (4040)	-	Class R-PG55-FW Size Tested 48" x 48"	55/55	≤0.2
Double-Hung Insert Windows				
Venting (3866)	-	Class LC-PG30-H Size Tested 44" x 78"	30/30	≤0.2
Double-Hung Picture Insert Windows				
Fixed (5066)	-	Class CW-PG30-FW Size Tested 60" x 78"	30/30	≤0.2
Monumental Single-Hung Windows				
Venting (40100)	-	Class LC-PG35-H Size Tested 48" x 120"	35/35	≤0.2
Venting (5090)	-	Class LC-PG30-H Size Tested 60" x 108"	30/30	≤0.2

* "Performance Grade (PG)" ratings may vary from tested performance rating for larger or smaller units of a particular type.

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* Contact your Andersen supplier for more information.

* Test specimen size is smaller than the North American Fenestration Standard (NAFS) gateway size specified for this product type and performance class.

Performance Grade & Air Infiltration Ratings for E-Series Windows & Patio Doors – Dual-Pane & Triple-Pane Glass *(continued)*

 For current performance information, please visit andersenwindows.com.

Andersen® Product	Panel Type	AAMA/WDMA/CSA 101/I.S.2/A440 Performance Grade (PG)	+/- Corresponding Design Pressure (DP)	Air Infiltration CFM/FT ²
Gliding Windows				
Venting, active-stationary (6040)	-	Class CW-PG30-HS Size Tested 72" x 48"	30/30	≤0.2
Venting, active-stationary (6050)	-	Class CW-PG30-HS Size Tested 72" x 60"	30/30	≤0.2
Specialty Windows				
Fixed, rectangle (46120)	-	Class CW-PG55-FW Size Tested 54" x 144" *	55/55	≤0.2
Fixed, rectangle (5080)	-	Class CW-PG75-FW Size Tested 60" x 96"	75/75	≤0.2
Gliding & French Gliding Patio Doors				
Single, stationary (4080)	Contemporary panel with 2 3/4" stiles & rails ¹	Class LC-PG50-SLT Size Tested 50" x 96"	50/50	≤0.2
Two-panel (6080)	Contemporary panels with 4 11/16" stiles & rails ²	Class LC-PG50-SD Size Tested 71" x 96"	50/50	≤0.2
Two-panel (8080)	Contemporary panels with 4 11/16" stiles & rails ²	Class LC-PG40-SD Size Tested 95" x 96"	40/40	≤0.2
Two-panel (8080)	Contemporary panels with 2 3/4" stiles & rails	Class LC-PG30-SD Size Tested 95" x 96"	30/30	≤0.2
Four-panel (12080)	Contemporary panels with 4 11/16" stiles & rails ²	Class LC-PG40-SD Size Tested 142" x 96"	40/40	≤0.2
Four-panel (16080)	Contemporary panels with 2 3/4" stiles & rails ³	Class LC-PG25-SD Size Tested 190" x 96"	25/25	≤0.2
Hinged Inswing Patio Doors & Sidelights				
Single, stationary or sidelight (34100)	French panel with 2 3/4" stiles, 4 11/16" top rail & 8" bottom rail ⁴	Class LC-PG45-FD Size Tested 40" x 119.5"	45/60	≤0.2
Single, stationary (34100)	Contemporary panel with 3 11/16" stiles & rails ⁵	Class LC-PG45-FD Size Tested 40.5" x 120"	45/50	≤0.2
Single, active (3486)	Contemporary panel with 4 11/16" stiles & rails ⁶	Class LC-PG45-SHD Size Tested 40" x 102"	45/65	≤0.2
Single, active (3486)	Contemporary panel with 3 11/16" stiles & rails	Class LC-PG45-SHD Size Tested 40.5" x 102"	45/50	≤0.2
Single, active, low threshold sill ** (3486)	Contemporary panel with 3 11/16" stiles & rails ⁵	Class LC-PG50-LW SHD Size Tested 40.5" x 101.18"	50/50	≤0.2
Single, active, low threshold sill ** (3486)	French panel with 4 11/16" stiles, 4 11/16" top rail & 8" bottom rail ⁷	Class LC-PG50-LW SHD Size Tested 40" x 101"	50/60	≤0.2
Single, active (34100)	French panel with 4 11/16" stiles, 4 11/16" top rail & 8" bottom rail ⁸	Class LC-PG45-SHD Size Tested 40" x 119.5"	45/65	≤0.2
Single, active (34100)	Contemporary panel with 3 11/16" stiles & rails ⁵	Class LC-PG45-SHD Size Tested 40.5" x 120"	45/50	≤0.2
Two-panel, stationary-stationary (6780)	French panels with 4 11/16" stiles, 4 11/16" top rail & 8" bottom rail ⁷	Class LC-PG40-FD Size Tested 79" x 96"	40/40	≤0.2
Two-panel, stationary-stationary (6780)	Contemporary panels with 3 11/16" stiles & rails ⁵	Class LC-PG40-FD Size Tested 79" x 95.3"	40/40	≤0.2
Two-panel, active-stationary, jamb hinged (6780)	Contemporary panels with 4 11/16" stiles & rails ⁶	Class LC-PG45-SHD Size Tested 79" x 96"	45/45	≤0.2
Two-panel, active-stationary, jamb hinged (6780)	Contemporary panels with 3 11/16" stiles & rails	Class LC-PG45-SHD Size Tested 79" x 96"	45/45	≤0.2
Two-panel, active-stationary, astragal hinged (6780)	Contemporary panels with 4 11/16" stiles & rails ⁶	Class LC-PG45-SHD Size Tested 79" x 96"	45/45	≤0.2
Two-panel, active-stationary, astragal hinged (6780)	Contemporary panels with 3 11/16" stiles & rails	Class LC-PG45-SHD Size Tested 79" x 96"	45/45	≤0.2
Two-panel, active-passive (6780)	Contemporary panels with 4 11/16" stiles & rails ⁶	Class LC-PG40-SHD Size Tested 79" x 96"	40/40	≤0.2
Two-panel, active-passive, low threshold sill ** (6786)	Contemporary panels with 3 11/16" stiles & rails ⁵	Class LC-PG30-LW SHD Size Tested 79" x 101"	30/30	≤0.2
Two-panel, active-passive (6786)	Contemporary panels with 4 11/16" stiles & rails ⁹	Class LC-PG30-SHD Size Tested 79" x 102"	30/30	≤0.2
Two-panel, active-passive (6786)	Contemporary panels with 3 11/16" stiles & rails	Class LC-PG30-SHD Size Tested 79" x 101.8"	30/40	≤0.2
Two-panel, active-passive, low threshold sill ** (6786)	French panels with 4 11/16" stiles, 4 11/16" top rail & 8" bottom rail ⁷	Class LC-PG30-LW SHD Size Tested 79" x 101"	30/30	≤0.2
Two-panel, active-passive (67100)	French panels with 4 11/16" stiles, 4 11/16" top rail & 8" bottom rail ⁸	Class LC-PG35-SHD Size Tested 79" x 120"	35/35	≤0.2
Two-panel, active-passive (67100)	Contemporary panels with 3 11/16" stiles & rails ⁵	Class LC-PG30-SHD Size Tested 79" x 120"	30/40	≤0.2

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 *Test specimen size is smaller than the North American Fenestration Standard (NAFS) gateway size specified for this product type and performance class.
 **Hinged doors with a low threshold sill have limited water performance.

Numbered footnotes provide additional panel types for the same patio door, sidelight or transom listed above that are covered by the given test data. Commercial patio door panels, referenced as an additional panel type in the numbered footnotes below, do not include commercial doors with Concealed Panic System (CPS).

- 1** Applies to similar contemporary door panel with 4 11/16" stiles & rails. Also applies to French door panel with 4 11/16" stiles, 4 11/16" top rail and 8" or 12" bottom rail.
- 2** Also applies to French door panels with 4 11/16" stiles, 4 11/16" top rail and 8" or 12" bottom rail.
- 3** Applies to similar contemporary door panels with 4 11/16" stiles & rails in doors with a unit dimension greater than 12' wide. Also applies to French door panels with 4 11/16" stiles, 4 11/16" top rail and 8" or 12" bottom rail in doors with a unit dimension greater than 12' wide.
- 4** Applies to similar French sidelight panel with 12" bottom rail; includes comparable commercial panel and similar non-commercial panel with intermediate rail and raised panel insert. Also applies to French door panel with 4 11/16" stiles, 4 11/16" top rail and 8" or 12" bottom rail; includes comparable commercial panel and similar non-commercial panel with intermediate rail and raised panel insert.
- 5** Also applies to contemporary door panel(s) with 4 11/16" stiles & rails.
- 6** Also applies to French door panel(s) with 4 11/16" stiles, 4 11/16" top rail and 8" or 12" bottom rail with or without intermediate rail and with or without raised panel insert; includes comparable commercial panel(s).
- 7** Applies to similar French door panel(s) with 12" bottom rail with or without intermediate rail and with or without raised panel insert; includes comparable commercial panel(s).
- 8** Applies to similar French door panel(s) with 12" bottom rail; includes comparable commercial panel(s).
- 9** Also applies to French door panels with 4 11/16" stiles, 4 11/16" top rail and 8" or 12" bottom rail; includes comparable commercial panels.

PRODUCT PERFORMANCE

Performance Grade & Air Infiltration Ratings for E-Series Windows & Patio Doors – Dual-Pane & Triple-Pane Glass *(continued)*

For current performance information, please visit andersenwindows.com.

Andersen® Product	Panel Type	AAMA/WDMA/CSA 101/I.S.2/A440 Performance Grade (PG)	+/- Corresponding Design Pressure (DP)	Air Infiltration CFM/FT ²
Hinged Inswing Patio Door Venting Sidelights				
Sidelight, venting (2080)	French panel with 2 3/4" stiles, 4 11/16" top rail & 8" bottom rail 10	Class CW-PG45-SLT Size Tested 24" x 96"	45/50	≤0.2
Hinged Inswing Patio Door Transoms				
Fixed (6720)	Panel with 2 3/4" stiles & rails 11	Class CW-PG60-TR Size Tested 79" x 24"	60/60	≤0.2
Arch Hinged Inswing Patio Doors & Sidelights				
Single, stationary or sidelight (3480)	French arch panel with 4 11/16" stiles, 4 11/16" top rail & 8" bottom rail 12	Class CW-PG45-FD Size Tested 40" x 96"	45/60	≤0.2
Single, active (3480)	French arch panel with 4 11/16" stiles, 4 11/16" top rail & 8" bottom rail 13	Class CW-PG45-SHD Size Tested 40" x 96"	45/55	≤0.2
Two-panel, active-passive (6080)	French unequal leg arch panels with 4 11/16" stiles, 4 11/16" top rail & 8" bottom rail 13	Class LC-PG40-SHD Size Tested 72" x 96"	40/40	≤0.2
Hinged Outswing Patio Doors & Sidelights				
Single, stationary or sidelight (2080)	French panel with 2 3/4" stiles, 4 11/16" top rail & 8" bottom rail, with intermediate rail at 35" location 10	Class CW-PG80-SLT Size Tested 24.5" x 95.3"	80/80	≤0.2
Single, stationary or sidelight (21080)	French panel with 2 3/4" stiles, 4 11/16" top rail & 8" bottom rail, with intermediate rail at 35" location & raised panel insert 14	Class CW-PG75-SLT Size Tested 34.6" x 95.3"	75/75	≤0.2
Single, stationary or sidelight (34100)	French panel with 2 3/4" stiles, 4 11/16" top rail & 8" bottom rail 15	Class LC-PG75-SLT Size Tested 40" x 119.3"	75/80	≤0.2
Single, stationary (34100)	Contemporary panel with 3 11/16" stiles & rails 5	Class LC-PG50-SLT Size Tested 40.5" x 120"	50/50	≤0.2
Single, active (3080)	French panel with 4 11/16" stiles, 4 11/16" top rail & 8" bottom rail, with intermediate rail at 35" location & raised panel insert	Class LC-PG60-SHD Size Tested 36.5" x 95.3"	60/60	≤0.2
Single, active (3080)	French panel with 2 3/4" stiles, 4 11/16" top rail & 8" bottom rail, with intermediate rail at 23 3/4" location & raised panel insert	Class LC-PG60-SHD Size Tested 36.5" x 95.3"	60/60	≤0.2
Single, active (3480)	French panel with 4 11/16" stiles, 4 11/16" top rail & 8" bottom rail 8	Class LC-PG60 SHD Size Tested 40" x 95"	60/60	≤0.2
Single, active (3480)	French panel with 4 11/16" stiles, 4 11/16" top rail & 8" bottom rail, with intermediate rail at 35" location 16	Class LC-PG60-SHD Size Tested 40" x 95.3"	60/60	≤0.2
Single, active, low threshold sill** (3480)	French panel with 4 11/16" stiles, 4 11/16" top rail & 8" bottom rail 7	Class LC-PG60-LW SHD Size Tested 40" x 94"	60/60	≤0.2
Single, active, low threshold sill** (3480)	Contemporary panel with 3 11/16" stiles & rails 5	Class LC-PG50-LW SHD Size Tested 40.5" x 94.8"	50/50	≤0.2
Single, active (3486)	Contemporary panel with 4 11/16" stiles & rails	Class LC-PG50-SHD Size Tested 40" x 101"	50/50	≤0.2
Single, active (3486)	Contemporary panel with 3 11/16" stiles & rails	Class LC-PG45-SHD Size Tested 40.5" x 101.5"	50/50	≤0.2
Single, active (34100)	French panel with 4 11/16" stiles, 4 11/16" top rail & 8" bottom rail 8	Class LC-PG50-SHD Size Tested 40" x 119.3"	50/50	≤0.2
Single, active (34100)	Contemporary panel with 3 11/16" stiles & rails 5	Class LC-PG45-SHD Size Tested 40.5" x 119.3"	50/50	≤0.2
Two-panel, stationary-stationary (6780)	French panels with 4 11/16" stiles, 4 11/16" top rail & 8" bottom rail 7	Class LC-PG60-FD Size Tested 79" x 95.3"	60/60	≤0.2
Two-panel, stationary-stationary (6780)	Contemporary panels with 3 11/16" stiles & rails 5	Class LC-PG50-FD Size Tested 79" x 96"	50/50	≤0.2

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**Hinged doors with a low threshold sill have limited water performance.

Numbered footnotes provide additional panel types for the same patio door, sidelight or transom listed above that are covered by the given test data.

Commercial patio door panels, referenced as an additional panel type in the numbered footnotes below, do not include commercial doors with Concealed Panic System (CPS).

5 Also applies to contemporary door panel(s) with 4 11/16" stiles & rails.

7 Applies to similar French door panel(s) with 12" bottom rail with or without intermediate rail and with or without raised panel insert; includes comparable commercial panel(s).

8 Applies to similar French door panel(s) with 12" bottom rail; includes comparable commercial panel(s).

10 Also applies to all available panels.

11 Also applies to transom panel with 4 11/16" stiles and 2 3/4" rails and transom panel with 4 11/16" stiles and rails; includes all commercial transom panels.

12 Applies to similar French door panel with 12" bottom rail; includes arch and unequal leg arch door panel with or without intermediate rail and with or without raised panel insert. Also applies to French sidelight panel with 8" or 12" bottom rail with or without intermediate rail and with or without raised panel insert.

13 Also applies to all arch and unequal leg arch door panels with 4 11/16" stiles.

14 Applies to similar French sidelight panel with intermediate rail at 23 3/4" location and raised panel insert. Also applies to French door panel with 4 11/16" stiles, 4 11/16" top rail and 8" or 12" bottom rail with intermediate rail with raised panel insert.

15 Applies to similar French sidelight panel with 12" bottom rail; includes comparable commercial sidelight panel. Also applies to French door panel with 4 11/16" stiles, 4 11/16" top rail and 8" or 12" bottom rail; includes comparable commercial door panel.

16 Applies to similar French door panel with intermediate rail at 23 3/4" location. Also applies to French door panel with 4 11/16" stiles, 4 11/16" top rail and 12" bottom rail and intermediate rail; includes comparable commercial door panel.

Performance Grade & Air Infiltration Ratings for E-Series Windows & Patio Doors – Dual-Pane & Triple-Pane Glass *(continued)*

 For current performance information, please visit andersenwindows.com.

Andersen® Product	Panel Type	AAMA/WDMA/CSA 101/I.S.2/A440 Performance Grade (PG)	+/- Corresponding Design Pressure (DP)	Air Infiltration CFM/FT ²
Hinged Outswing Patio Doors & Sidelights				
Two-panel, active-passive (6780)	French panels with 4 11/16" stiles, 4 11/16" top rail & 8" bottom rail 7	Class LC-PG60-SHD Size Tested 79" x 95"	60/60	≤0.2
Two-panel, active-passive, low threshold sill ** (6780)	French panels with 4 11/16" stiles, 4 11/16" top rail & 8" bottom rail 17	Class LC-PG50-LW SHD Size Tested 79" x 94"	50/50	≤0.2
Two-panel, active-passive, low threshold sill ** (6780)	Contemporary panels with 3 11/16" stiles & rails 5	Class LC-PG40-LW SHD Size Tested 79" x 95"	40/40	≤0.2
Two-panel, active-passive (6786)	Contemporary panels with 4 11/16" stiles & rails	Class LC-PG40-SHD Size Tested 79" x 101"	40/40	≤0.2
Two-panel, active-passive (6786)	Contemporary panels with 3 11/16" stiles & rails	Class LC-PG45-SHD Size Tested 79" x 101.5"	45/45	≤0.2
Two-panel, active-passive (67100)	French panels with 4 11/16" stiles, 4 11/16" top rail & 8" bottom rail 8	Class LC-PG40-SHD Size Tested 79" x 119"	40/40	≤0.2
Two-panel, active-passive (67100)	Contemporary panels with 3 11/16" stiles & rails 5	Class LC-PG30-SHD Size Tested 79" x 120"	30/40	≤0.2
Hinged Outswing Patio Door Venting Sidelights				
Sidelight, venting (2080)	French panel with 2 3/4" stiles, 4 11/16" top rail & 8" bottom rail with intermediate rail at 35" location 10	Class CW-PG50 Size Tested 24" x 96"	50/50	≤0.2
Hinged Outswing Patio Door Transoms				
Fixed (6720)	Panel with 2 3/4" stiles, top rail & bottom rail 10	Class CW-PG80-TR Size Tested 79" x 24"	80/80	≤0.2
Arch Hinged Outswing Patio Doors & Sidelights				
Single, stationary or sidelight (3480)	French arch panel with 4 11/16" stiles, 4 11/16" top rail & 8" bottom rail 12	Class CW-PG80-FD Size Tested 40" x 96"	80/80	≤0.2
Single, active (3480)	French arch panel with 4 11/16" stiles, 4 11/16" top rail & 8" bottom rail 13	Class LC-PG60-SHD Size Tested 40" x 96"	60/60	≤0.2
Two-panel (6080)	French unequal leg arch panels with 4 11/16" stiles, 4 11/16" top rail & 8" bottom rail 13	Class LC-PG60-SHD Size Tested 79" x 96"	60/60	≤0.2

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 ** Hinged doors with a low threshold sill have limited water performance.

Numbered footnotes provide a list of additional panel types for the same patio door, sidelight or transom listed above that are covered by the given test data. Commercial patio door panels, referenced as an additional panel type in the numbered footnotes below, do not include commercial doors with Concealed Panic System (CPS).

- 5** Also applies to contemporary door panel(s) with 4 11/16" stiles & rails.
- 7** Applies to similar French door panel(s) with 12" bottom rail with or without intermediate rail and with or without raised panel insert; includes comparable commercial panel(s).
- 8** Applies to similar French door panel(s) with 12" bottom rail; includes comparable commercial panel(s).
- 10** Also applies to all available panels.
- 12** Applies to similar French door panel with 12" bottom rail; includes arch and unequal leg arch door panel with or without intermediate rail and with or without raised panel insert. Also applies to French sidelight panel with 8" or 12" bottom rails with or without intermediate rail and with or without raised panel insert.
- 13** Also applies to all arch and unequal leg arch door panels with 4 11/16" stiles.
- 17** Applies to similar French door panel with 12" bottom rail; includes comparable commercial panel. Also applies to French door panel with 4 11/16" stiles, 4 11/16" top rail and 8" or 12" bottom rail with intermediate rail and raised panel insert.

 For performance ratings for E-Series products with Stormwatch® Protection, go to andersenwindows.com.

PRODUCT PERFORMANCE

Sound Transmission Ratings for E-Series Windows & Patio Doors

For current performance information, please visit andersenwindows.com.

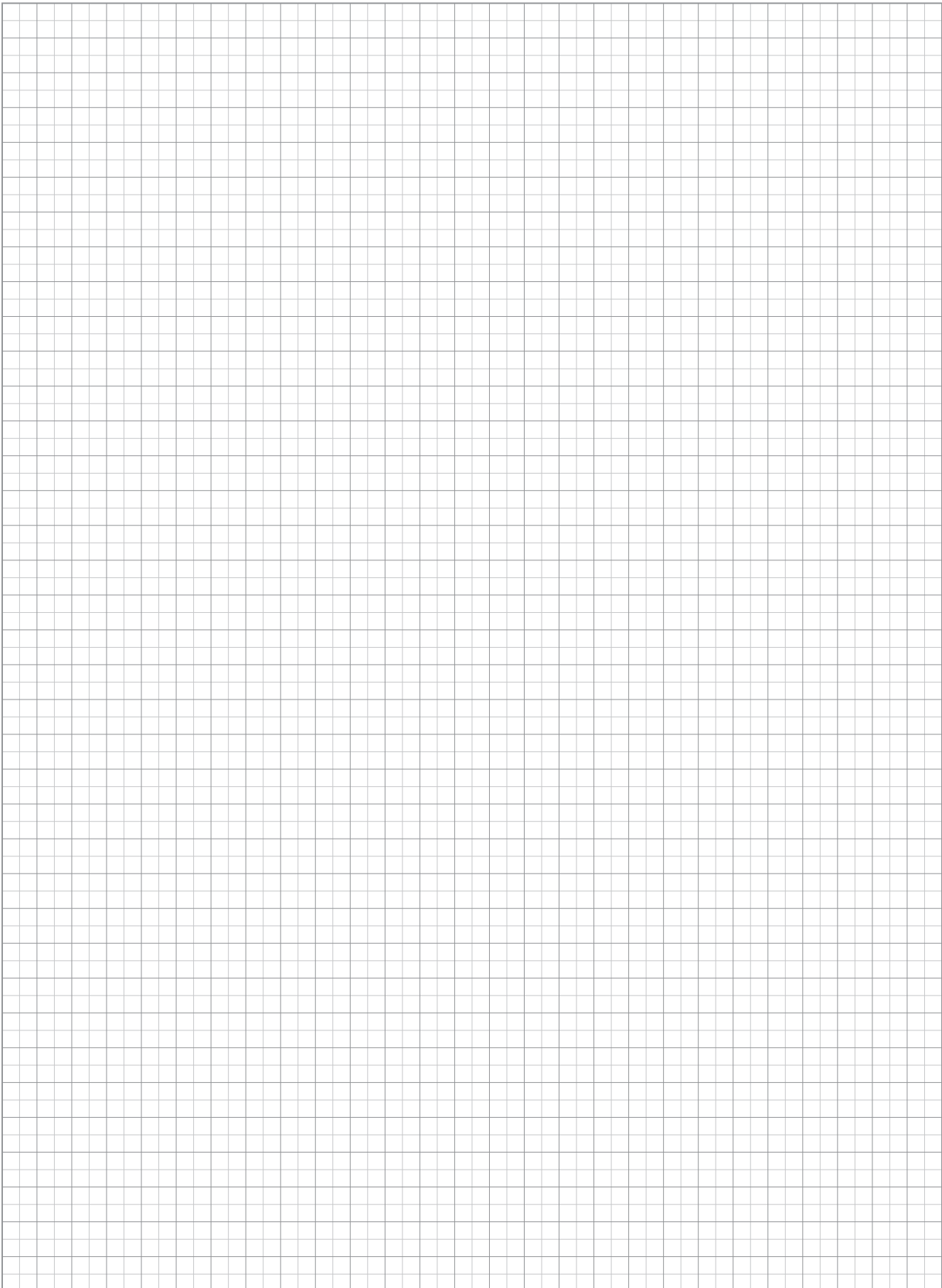
Andersen® Product & Glass Type	Panel Type	Test Size	Sound Transmission Class (STC)	Outdoor/Indoor Transmission Class (OITC)
Casement Windows - Stationary				
Dual-Pane	-	48" x 60"	29	25
Dual-Panel Laminated, 0.030"			33	29
STC Upgrade			32	29
Casement Windows - Venting				
Dual-Pane	-	24" x 80"	29	25
Triple-Pane			30	24
Dual-Panel Laminated, 0.030"			33	29
STC Upgrade			33	28
Double-Hung Windows				
Dual-Pane	-	48" x 60"	28	24
Triple-Pane			28	24
Dual-Panel Laminated, 0.030"			33	29
STC Upgrade			32	27
Double-Hung Picture Windows				
Dual-Pane	-	48" x 60"	31	26
Dual-Panel Laminated, 0.030"			35	30
STC Upgrade			34	30
Specialty Windows				
Dual-Pane	-	48" x 60"	28	24
Dual-Panel Laminated, 0.030"			31	25
STC Upgrade			34	29
French Gliding Patio Doors				
Dual-Pane	French panels with 4 11/16" stiles, 4 11/16" top rail & 8" bottom rail	72" x 80"	29	24
Triple-Pane			30	25
Dual-Panel Laminated, 0.030"			32	29
STC Upgrade			30	28
Hinged Inswing Patio Doors - Single Panel				
Dual-Pane	French panel with 4 11/16" stiles, 4 11/16" top rail & 12" bottom rail	37.875" x 84"	31	26
Triple-Pane			31	27
Dual-Panel Laminated, 0.030"			33	30
STC Upgrade			33	30
Hinged Inswing Patio Doors - Two-Panel				
Dual-Pane	French panels with 4 11/16" stiles, 4 11/16" top rail & 12" bottom rail	74.812" x 84"	30	26
Triple-Pane			31	26
Dual-Panel Laminated, 0.030"			33	30
STC Upgrade			32	29
Hinged Outswing Patio Doors - Single Panel				
Dual-Pane	French panel with 4 11/16" stiles, 4 11/16" top rail & 12" bottom rail	37.875" x 84"	30	26
Triple-Pane			31	26
Dual-Panel Laminated, 0.030"			33	30
STC Upgrade			33	30
Hinged Outswing Patio Doors - Two-Panel				
Dual-Pane	French panels with 4 11/16" stiles, 4 11/16" top rail & 12" bottom rail	74.812" x 84"	29	25
Triple-Pane			30	26
Dual-Panel Laminated, 0.030"			33	30
STC Upgrade			32	29

* "Sound Transmission Class (STC)" & "Outdoor/Indoor Transmission Class (OITC)" ratings are for individual units based on independent tests and represent entire unit.
 • This data is accurate as of October 2018. Due to ongoing product changes, updated test results or new industry standards, this data may change over time.
 • Contact your Andersen supplier for more information.

Notes

A large grid area for taking notes, consisting of a 30x40 grid of small squares.

Notes



142	E-Series Gliding Patio Doors
106	E-Series Hinged Patio Doors
98	E-Series Specialty Windows
92	E-Series Gliding Windows
80	E-Series Bay & Bow Windows
56	E-Series Double-Hung Windows
48	E-Series Awning Windows
32	E-Series Casement Windows
154 Installation Material & Product Performance	



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PDF NAVIGATION TIPS

Welcome to an overview of the enhanced navigation tools available in this PDF. Here are some simple tips on PDF navigation. Before you begin be sure you are using the latest version of Adobe Acrobat Reader DC, available at – <https://get.adobe.com/reader/>

To watch a 3-minute tutorial on navigating catalog PDFs, go to: <https://youtu.be/sWWnYn6ON3Y>

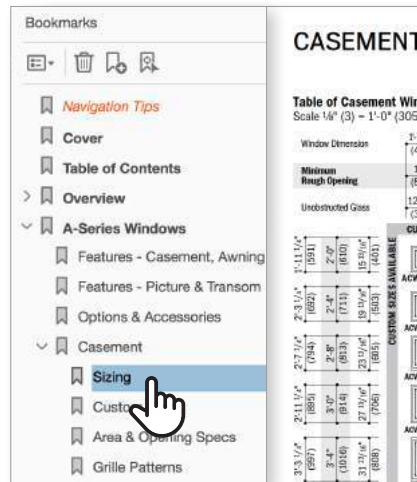
BOOKMARK NAVIGATION

①

Acrobat will display the bookmarks panel when you open the PDF.

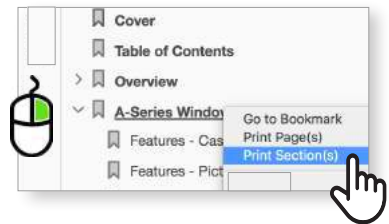
Bookmarks are the easiest way to find specific product information.

Select a topic and that page will be displayed.



②

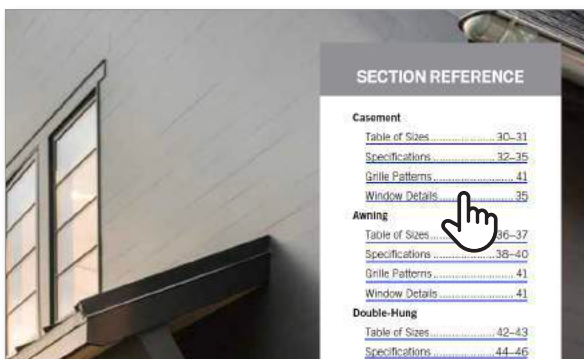
If you need to print a specific section, **right click on that section** within in the bookmarks panel and choose “**Print Section.**”



LINKS AND URL NAVIGATION

①

You can also use the **embedded links** to navigate between sections. All links are underlined in blue.



②

Website links automatically open in your web browser.



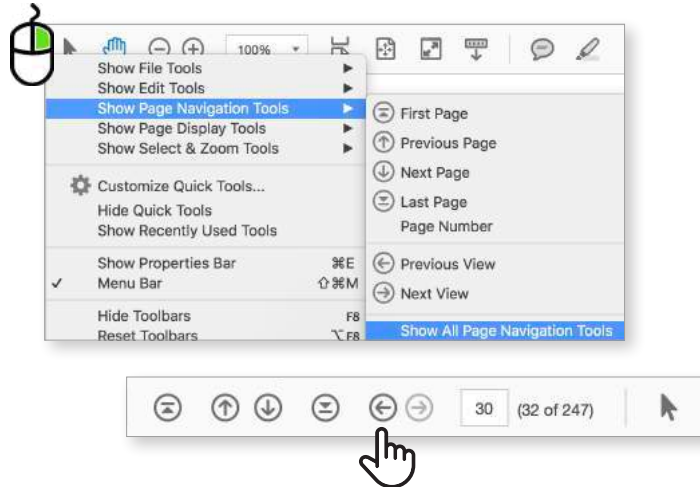
Add additional navigation tools by adjusting the default settings in Acrobat.

TOOL BAR NAVIGATION

1

To add a **“Jump Back” Button** to your tool bar, **right click on tool bar**, select **Show Page Navigation Tools** and choose **Show All Page Navigation Tools**.

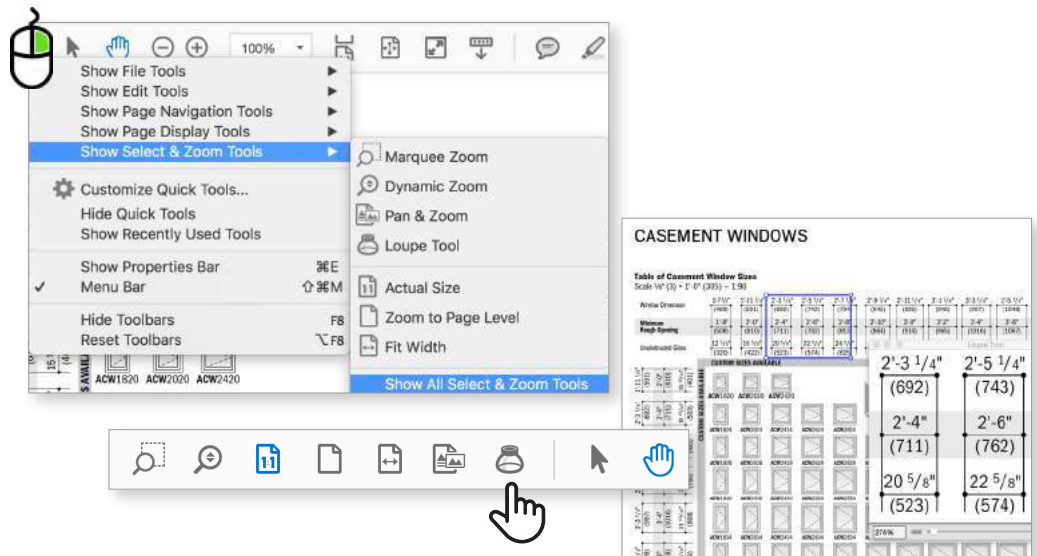
Right and left facing arrows are added to the tool bar allowing you to go back or forward to the last page you viewed.



2

Another helpful tool is the **Loupe Tool**. It allows you to zoom in on the page without having to increase the page size.

To add a **Loupe Tool** to your tool bar, **right click on tool bar**, select **Show Select & Zoom Tools** and then choose **Show All Select & Zoom Tools**.



3

You can also use the **commenting tools**. Add a post-it-note with your comments or highlight important information.

Be sure to save the file.

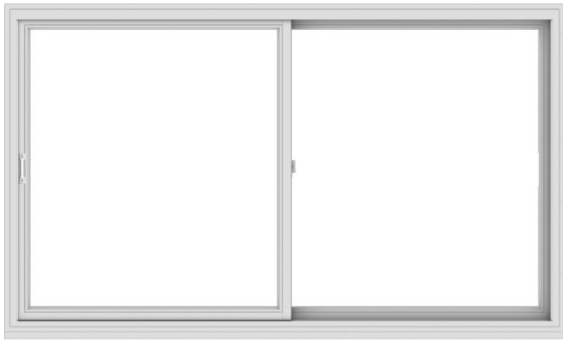


To watch a 3-minute tutorial on navigating catalog PDFs, go to: <https://youtu.be/sWWnYn60N3Y>

We are always looking for ways to improve.
Please send feedback to webmarketing@andersencorp.com.



E-SERIES GLIDING WINDOW



Interior



Exterior

Summary

Product ID#	SLD5030
Unit Width	60"
Unit Height	36"
Interior Color	White
Glass	Low-E4® Glass
Hardware	Sash Lock and Finger Pull, White
Grille Pattern	None
Exterior Frame Color	Terratone
Exterior Sash Color	White
Exterior Trim Profile	None

APPENDIX D



REQUIREMENTS FOR NATIONAL COOPERATIVE CONTRACT TO BE ADMINISTERED BY OMNIA PARTNERS

The following documents are used in evaluating and administering national cooperative contracts and are included for Supplier's review and response.

Exhibit A – RESPONSE FOR NATIONAL COOPERATIVE CONTRACT

Exhibit B – ADMINISTRATION AGREEMENT, EXAMPLE

Exhibit C – MASTER INTERGOVERNMENTAL COOPERATIVE PURCHASING AGREEMENT, EXAMPLE

Exhibit D – PRINCIPAL PROCUREMENT AGENCY CERTIFICATE, EXAMPLE

Exhibit E – CONTRACT SALES REPORTING TEMPLATE

Exhibit F – FEDERAL FUNDS CERTIFICATIONS

Exhibit G – NEW JERSEY BUSINESS COMPLIANCE

Exhibit H – ADVERTISING COMPLIANCE REQUIREMENT

EXHIBIT A
RESPONSE FOR NATIONAL COOPERATIVE CONTRACT

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 Education Service Center (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 Modular Buildings, Portable Storage, and Relocatable Walkways. 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 or not 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 \$50M 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. 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 in order 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 sales persons 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").

\$1,200,000.00 in year one
\$2,400,000.00 in year two
\$5,000,000.00 in year three

To the extent Supplier guarantees minimum Contract Sales, the administration fee shall be calculated based on the greater of the actual Contract Sales and the Guaranteed Contract Sales. **EXCEPTION**

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.

Exception Page 40 paragraph 1: The OMNIA Partners administration fee will be based on the actual sales and paid immediately following customer payments.

D&B Business Directory

HOME > BUSINESS DIRECTORY > WHOLESALE > UNITED STATES > KENTUCKY > LA GRANGE > HUNTER-KNEPSHIELD CO INC

Hunter-Knepshield Co Inc

go to Hunter-Knepshield Co Inc's website

- ON THIS PAGE
- Financial Statements
- Credit Reports
- Top Competitors
- Company Snapshot
- Related Companies
- Available Contacts - Free Plug-in!
- Industry Information

Company Profile

Get a D&B Hoovers Free Trial

CORPORATION INDEPENDENT

Website	www.hunterknepshield.com
Address	10 Hunters Trl La Grange, KY, 40031-8213 United States
Phone	(502) 225-9121
Company Description	Hunter-Knepshield Co Inc is located in La Grange, KY, United States and is part of the Wholesale Sector Industry. Hunter-Knepshield Co Inc has 14 total employees across all of its locations and generates \$2.99 million in sales

Install plugin
and receive
up to 50 free
email
contacts per
month!

FREE INSTALL

Industry

Wholesale Sector

Sporting and recreation goods

Prefabricated wood buildings

D&B Hoovers

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Financial Statements

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Revenue in USD

ANNUAL REVENUE2020

\$2.99 million USD 

Dun & Bradstreet collects private company financials for more than 23 million companies worldwide. [Find out more.](#)

Credit Reports

See detailed business credit reports on other businesses or your own.

EXHIBIT B
ADMINISTRATION AGREEMENT, EXAMPLE

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 Hunter Knepshield Company Inc. (“**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 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 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 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), 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 10th 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 12, 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:

Hunter Knepshield Company Inc.
10 Hunters Trail
P.O. Box 499
LaGrange, KY 40031

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.

Hunter Knepshield Company Inc.
10 Hunters Trail
P.O. Box 499
LaGrange, KY 40031

**NATIONAL
INTERGOVERNMENTAL
PURCHASING ALLIANCE
COMPANY, A DELAWARE
CORPORATION D/B/A OMNIA
PARTNERS, PUBLIC SECTOR**

Signature

Thomas Knepshield

Name

Vice President

Title

02/21/2021

Date

Signature

Sarah Vavra

Name

Sr. Vice President, Public Sector
Contracting

Title

Date

EXHIBIT D
PRINCIPAL PROCUREMENT AGENCY CERTIFICATE, EXAMPLE

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

FEDERAL CERTIFICATIONS
ADDENDUM FOR AGREEMENT FUNDED BY U.S. FEDERAL GRANT

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.

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.

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 AK Initials of Authorized Representative of offeror

(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 AK 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 AK. 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 AK. 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.

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 AK. 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 AK. 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 AK 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 AK 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 AK Initials of Authorized Representative of offeror

RECORD RETENTION REQUIREMENTS FOR CONTRACTS INVOLVING FEDERAL FUNDS

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 AK Initials of Authorized Representative of offeror

CERTIFICATION OF COMPLIANCE WITH THE ENERGY POLICY AND CONSERVATION ACT

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 OK. Initials of Authorized Representative of offeror

CERTIFICATION OF COMPLIANCE WITH BUY AMERICA PROVISIONS

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 OK. Initials of Authorized Representative of offeror

CERTIFICATION OF ACCESS TO RECORDS – 2 C.F.R. § 200.336

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 OK. Initials of Authorized Representative of offeror

CERTIFICATION OF APPLICABILITY TO SUBCONTRACTORS

Offeror agrees that all contracts it awards pursuant to the Contract shall be bound by the foregoing terms and conditions.

Does offeror agree? YES OK. Initials of Authorized Representative of offeror

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.

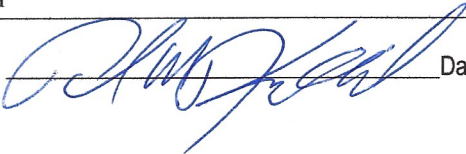
Offeror's Name: Hunter Knepshield Company Inc.

Address, City, State, and Zip Code: 10 Hunters Trail, P.O. Box 499, LaGrange, KY 40031

Phone Number: 502-225-9121 Fax Number: 502-225-9335

Printed Name and Title of Authorized Representative: 502-225-9121

Email Address: knepjr@iglou.com

Signature of Authorized Representative:  Date: 02/21/2021



02-21-2021

PERFORMANCE CAPABILITY

Re: Solicitation Number 21-05. Modular Buildings, Portable Storage, and Relocatable Walkways

SUPPLIER RESPONSE

The Hunter Knepschild company was established in 1967. As a distributor for paper products and then recreation products for parks, recreation, schools, churches, military and campgrounds.

The Hunter Knepschild company has been involved in the startup of manufacturing companies such as Century Industries Inc., Qualite Sports Lighting, Recreation Creations Inc. American Leisure designs Inc. and now the Hunter Knepschild Company modular building manufacturing. Our experience has been with mobile and portable stages, bleachers and concessions, along with sports lighting, playground equipment, pedestrian bridges and site amenities. Our involvement has been financial ownership and sales representation for these companies.

Over the last few years we have put our investment into the modular building industry. Specializing in custom buildings for parks, recreation schools, military, HUD and golf courses. Our design gives us the capability of using materials that will match the environment of where the buildings are going to be located. Architects and engineers and customers can choose from endless floor plans, materials and architectural design. Our building method allows us to provide a building 8-9 inches off grade and have the look that our building belongs in the environment and not a trailer or mobile home. Our mission is to build high quality, environmentally sound buildings using high quality commercial materials and deliver a building that is simple to complete on site. We are committed to purchase USA American products including Roofing, Siding, sheathing, electrical panels and boxes, plumbing products, wood, structural steel, framing steel, specialized adhesives and paint.

Currently, we have a sales office in Plano Texas, Ft. Lauderdale Florida and our home office in LaGrange Kentucky. We are working on establishing a representative company in New York and Arizona. Our market is the 50 United States for delivery. The manufacturing facility is 25,000 sq.ft. with 7,500 sq.ft. of office space. There is an additional 2,400 sq.ft. material storage building adjacent to the factory building.

Our business model incorporates contract labor from a diverse trade related supply companies. This ensures that we receive skilled and vetted workers who are diverse and fully insured. Our assembly systems are monitored by a third-party inspection companies and third-party engineers. Together with our quality control system, inspection, engineering and skilled labor we ensure quality products meeting specifications set forth in the customers purchase orders.

The pricing system that our estimating department incorporates the cost of materials, estimated labor for assembly rate, and time on the floor overhead. A consistent profit margin is placed on these items and is calculated automatically by a computer program. These costs are updated on a yearly starting at the beginning of the year January 1. per this contract, the price will be consistent and equal from the start date and the end of one year. At each contract year end a 2% increase will be placed on quotation as a separate line item to show the contract is consistent throughout the terms.

MARKETING AND SALES

The timing of this contract is perfect to our timing a marketing strategy. We have stepped back spending on printed advertising due to the pandemic. We have focused efforts on search engines and website. With people working from home, printed matter is going to the offices where it is most likely trashed. Over the last year, advertising produced very little rewards due to the shutdown of basically the market for new construction modular buildings at the government level. Our focus prior to the pandemic was to landscape architects and civil engineering companies. We have advertised in Landscape Architect Magazine, Parks Recreation Business as well as others depending on the product and market.

Continuing forward, our go to market strategy would be through social media, focusing on school board, school administration and procurement. The implementation of several search engine blast focused on the same target market objectives. Working with OMNIA Partners on our website product addition purchasing option and media blast would be a first 10-day priority. Printed advertising will need to include the OMNIA Partners approved logo as an incentive to purchase with ease. We will advertise with our normal channels as well as suggested publications recommended by OMNIA Partners. Finalizing a printed material set and strategy should not take more than 90 days. Media companies welcome and discount new advertiser campaigns usually having ads to market in 30 days. Pictures, words and approval.

Attending in person tradeshow will be on our schedule when available. We have displays and have experience in the tradeshow marketing strategies. We have attended the NIGP Forums and NPI Conferences in the past. OMNIA Partners suggested tradeshow are exactly the exhibit market we have been to in the past and are willing to attend under the OMNIA Partners co-op booth.

During the contract period if awarded, I will be responsible for all contract inquiries, including marketing, sales related and accounting related items until all inside staff and outside staff are trained. Individual contacts will be forwarded after training and procedures are complete. The Hunter Knepshield Company is new in the modular classroom building market. At this time our modular sales to the school and recreation market have been less than a million dollars a year since 2017. The strategy to expand our building technology and developing our marketing focus to a national program such as OMNIA Partners will exponentially increase our sales and sales to advertising dollars spent should also be more effective. I estimate sales will be 1.2 million by contract year end if the contract is awarded July 1. With year 2 ending with 2.4 million sales. With this type of construction and the floorspace capacity indoors, I estimate sales in the third year to be at capacity around 5 million. If, sales projections hit the year two mark, additional assembly space can be provide at the former Naval Ordinance near our current plant. If customers locations are mainly western. We can locate a plant near our Texas sales office in Plano Texas. The OMNIA Partners administration fee will be based on the actual sales and paid immediately following customer payments.

If awarded, the OMNIA Partners cooperative will be the only agency we will partner with during the contract period. OMNIA Partners has a great reputation for the success bringing manufacturers to the purchasers. We have had purchasing contracts in the past and they have been the tool of success of many of our previous start-up companies. Our current sales force is waiting for a purchasing contract as they familiar with other types and will be easily trained on the contract purchase. It is a sales tool to get orders. We are asked for co-op purchasing all the time and have lost orders by not having co-op purchasing. This

is a great opportunity for both parties and our customers. I am looking forward to a business relationship if awarded a contract.

Sincerely,

Thomas M. Knepshield
Vice President

is a great opportunity for both parties and our customers. I am looking forward to a business relationship if awarded a contract.

Sincerely,

A handwritten signature in blue ink, appearing to read "T. M. Knepschild", written in a cursive style.

Thomas M. Knepschild
Vice President




Hunter Knepshield Company Modular Buildings

Offsite Construction for the Onsite Environment



Why Modular?

- ▶ THE MODULAR ADVANTAGE
 - ▶ MINIMAL SITE DISTURBANCE
 - ▶ REDUCED MAINTENANCE
 - ▶ ADA CODE COMPLIANT
 - ▶ SANITARY
 - ▶ FASTER THAN SITE BUILD
 - ▶ ARRIVE OPERATIONAL
 - ▶ ON-SITE CONSTRUCTION TIME REDUCED
- 

Modern Designs

Germantown, TN



Traditional Design

Waukegan, IL



Sports Buildings

Sanford, KY



Miami, FL



Miami, FL



Tamarac, FL



Park Entrance Buildings

Dover, DE



Special Construction Buildings

San Francisco, CA



Ticket buildings

Chicago, IL



Chicago, IL



Coronado Island, CA



Buildings start with a I-beam reinforced Concrete Floor



Walls and Roof are built and assembled



Mechanical equipment is installed



Exterior finish and framing begin to take place.



Buildings are prepped and split into parts if necessary for shipping.



Building is offloaded on site and assembled if necessary.



Building is off loaded and assembled in one day and ready for utility connections.



Landscape and use.



Lexington, KY



Springfield, TN



St. Johns, FL



Louisville, KY





Designed to Work within the Environment

- ▶ Since 1967, Hunter Knepshield has provided quality services and competitive pricing to the parks and recreation industry with a complete range of modular public use buildings for parks and sporting venues. Standard or custom designed modular buildings for restrooms, concessions, shower, laundry, storage, shelter or combination structures are engineered to meet needs for functionality and low maintenance with fast installation. Manufactured in a quality-controlled factory environment with the latest construction techniques and tools, these facilities are delivered pre-wired, pre-plumbed and complete with an integral flooring system...ready for final hook-up.
- ▶ Hunter Knepshied' modular facilities are not only functional and durable, but they're also designed to work within the environment. Architecturally attractive with exterior materials that complement the environment, Hunter Knepshield buildings can blend in with the surroundings or make a statement with flair to create a memorable landmark. Inside, the Hunter Knepshield facilities are designed for easy maintenance with graffiti-resistant materials

HUNTER KNEPSHIELD COMPANY

OBJECTIVE

The purpose of this quality control program is to provide organizational and controlled systems of management and operational procedures through which all buildings produced will comply with the minimum requirements of the approved drawings and specifications; the applicable codes and standards; and the in-house quality standards desired. In order for the quality assurance program to be effective, there must be good communication and close coordination between several divisions of the company including, but not limited to; general management and administration, sales, engineering, costing, purchasing, receiving, production, quality control, and service.

CONTROL OF APPROVED DESIGNS

The **engineering manager** is responsible for coordinating with the third party design approval agency to ensure that the designs for all buildings to be produced by the manufacturer will comply with the requirements of the applicable codes and standards, the rules and regulations, and customer requests. Upon receipt of approved drawings from the third party design approval agency (or government agency, if applicable) the **engineering manager** must verify that all in-house drawings and specifications are consistent with the requirements of the approved drawings. Any inconsistencies must be resolved as soon as possible by either changing the in-house documents or obtaining revision to the approved designs. Once assured that the approved designs and in-house documents are compatible, the **engineering manager** must distribute applicable documents to the various departments charged with the responsibility of implementing one or more of the required quality assurance functions. The **purchasing manager** must receive final specifications in order to ensure that the correct materials are ordered and received. **Production management** must receive appropriate drawings and specifications so that they can familiarize themselves with any special requirements that may pertain to the building and make any special provisions for construction that may be necessary. **Quality control inspection personnel** must receive appropriate drawings and specifications to allow time to familiarize themselves with any special requirements for the project and coordinate with production to ensure that all responsible parties are aware of the requirements. At a minimum, the following persons or departments should receive and retain a copy of the approved drawings: **engineering manager, production manager, quality control manager, purchasing manager**.

All revisions to the approved quality control/building system and/or plans must be submitted to the third party design approval agency for processing just as a new submittal would be. In addition, periodic revisions as would be required by the state, due to code changes or any other reasons, must be submitted as specified above for processing of approval.

A plan identification system will be instituted which will be coordinated with a module serial numbering system. This will allow organized filing of all approved plans and documents related thereto.

HUNTER KNEPSHIELD COMPANY

MATERIALS COMPLIANCE

One of the most important functions of the quality assurance program is ensuring that proper building materials, appliances and components are specified and purchased, and then handled and installed in an appropriate manner. This impacts upon both code compliance and cosmetic quality.

The **engineering manager** must advise the **purchasing manager** of any particular specifications for each individual building, the typical specifications common to all buildings produced by the plant, of any change to the codes and standards, and of any changes to the manufacturer's own quality standards.

The **purchasing manager** is responsible for ensuring that proper materials are ordered and purchased. Proper materials means only materials which comply with the minimum requirements of the approved design, the codes and standards, and the manufacturer's in-house standards and specifications.

The **purchasing manager** is responsible for conducting receiving inspections to ensure that materials which are received from suppliers actually do comply with the materials purchase orders. Any materials which do not satisfy the minimum requirements of the purchase order should be refused and delivery not accepted.

The **purchasing manager** is responsible for ensuring that all building materials and other components are handled and stored properly to prevent damage or degradation prior to installation on the production line.

Materials in storage shall be protected from the elements. Materials which are stored out of doors shall be supported on skids/blocking/etc. that is raised off of the ground, and shall be covered with visqueen or similar waterproof material.

Materials which are damaged, found to be defective, or rejected must be marked as such and stored separately for future disposal or returned to the supplier as applicable. This procedure applies to in-plant construction as well as in the field set up and repairs.

In addition, refer to the specific material manufacturer's storage and handling recommendations.

The **production manager** is responsible for ensuring that personnel in the various departments are aware of the proper methods for handling and installing the materials and components installed in their departments.

The **quality control inspectors** are responsible for ensuring that materials have been installed in accordance with the material manufacturer's installation instructions. Any discrepancies brought to the attention of appropriate production personnel for correction and repair.

HUNTER KNEPSHIELD COMPANY

PRODUCTION AND INSPECTION PROCESSES

The most vital aspects of the in-plant quality control program are clear communication and close coordination of efforts among the various production departments and between the production personnel and the quality control inspectors. It is critical for production and inspection personnel to work together as a team--not work against each other as adversaries. This is why it is important to have well defined systems of production and inspection.

It is imperative that all **production supervisors** and **quality control inspectors** thoroughly familiarize themselves with the inspection items contained on the **Quality Control Checklist** and the requirements of the approved design and codes and standards which pertain to each item on those sections of the checklist which fall under their area of responsibility.

The items on the **Quality Control Checklist** basically are grouped functionally and in accordance with the general production sequence. When a unit enters the production line, a QC Checklist will be attached to the front of the unit in a special carrier. Each component of a multisection building gets its own QC Checklist. The form will remain with the unit from the time it enters the production line until all work is completed.

Upon the completion of each phase of production, the **production supervisor** for each department must inspect all work to verify that it has been completed properly, per the requirements of the approved design, the codes and standards, and the manufacturer's standards for quality and workmanship. Any discrepancies must be corrected. When the production supervisor is satisfied that the work performed by his department is acceptable, he calls the appropriate **quality control inspector** for a QC inspection.

The **quality control inspector** inspects each item listed on the QC Checklist for that department, referring to the approval design, the applicable codes and standards, and the manufacturer's standards of quality and workmanship for pass/fail criteria. Any discrepancies noted must be recorded on the QC Checklist and brought to the attention of the **production supervisor** for correction and repair. Once the discrepancy has been corrected, it is reinspected by the **quality control inspector** and signed off as "O.K." on the QC Checklist. When all items for a given department have been signed off, the unit may proceed to the next stage of production.

The **production supervisor** of each work crew must verify that work performed by previous departments has been completed and approved by the quality control inspector prior to allowing his crew to begin work on a given unit. This verification can be made by reviewing the QC Checklist to see if all previous items have been signed off as "O.K." by the **quality control inspector**. If the previous work has not been signed off, the **production supervisor** must call the **quality control inspector** for an inspection. The **production supervisor** may allow his crew to begin work only with the prior approval of the **quality control inspector**. Examples of this type of interdepartmental coordination are as follows:

- A. Floor decking may not be installed until infloor plumbing has been inspected and signed off as "O.K."
- B. Back paneling may not begin until after wall framing, wall set, rough electrical, inwall plumbing, etc. have been inspected and signed off.
- C. Exterior wall coverings may not be applied until after exterior wall framing and set, insulation (if any), rough electrical, inwall plumbing, etc. have been inspected and signed off.
- D. Exterior roofing may not begin until roof construction and set and all items in the roof cavity that will be covered over have been inspected and signed off on the QC Checklist.

This type of coordination between the production and inspection process must continue throughout the production line until the unit is complete.

HUNTER KNEPSHIELD COMPANY

FINAL INSPECTION

After the unit has been completed, it must be subjected to a final inspection before being labeled and shipped. This final inspection shall be conducted by the **quality control inspector**, using the **Quality Control Checklist**. After completing the final inspection, the **quality control inspector** shall verify that all items on the QC Checklist have been completed and signed off.

When the inspections and records are complete, the applicable (state/third party/dealer/etc.) labels will be affixed to the building by the **quality control inspector**.

LABELS

State, third party, and dealer labels shall be affixed to each building produced as required by state regulations and contract with the third party inspection agency and dealers. These labels shall be affixed to each unit by the **quality control inspector** only after the final inspection of each building has been completed. The labels shall be attached in such a manner (riveting, gluing, etc.) that if removed, the labels will be destroyed.

The **quality control manager** shall be responsible for ordering and maintaining control of state and third party labels. He also shall ensure that label disposition reports are completed and forwarded to the state and third party inspection agencies on a monthly basis or as may otherwise be required.

The **quality control manager** also shall ensure that the data plate required by state regulations is filled out and affixed properly to each unit.

STORAGE OF FINISHED UNITS

All finished units which are stored at the plant or at the job site shall have all uncovered openings (mating wall, etc.) protected with visqueen or equal adequately secured for transport. All miscellaneous parts and finish materials for site connections and finishing shall be packed and secured in place for shipment.

TRANSPORTATION OF FINISHED UNITS

All finished units will be transported to the site on frames or carriers of a design previously used to transport units without damage or deviation.

HUNTER KNEPSHIELD COMPANY

QUALITY CONTROL RECORDS

An important part of any quality assurance program is the maintenance of proper records to document that each building has been inspected through all phases of production and does in fact comply with the requirements of the approved design, the governing codes and standards, and the manufacturer's own in-house quality standards.

One **Quality Control Checklist** is assigned to each unit (section) when it enters the production line and remains with the unit throughout the entire production process until completion. The manner in which the inspection form is used to coordinate the production and inspection processes is described in the "production and inspection processes" and "final inspection" sections of this manual.

The quality control inspections are documented on the QC Checklist in the following manner: the unit serial number, size, plan number, etc. are recorded in the spaces provided in the heading portion of the form. As the **quality control inspector** inspects each item on the lists, he documents his findings on the space provided. If an item is acceptable, he checks "YES" (Satisfactory). If an item is not acceptable, he checks "NO" (Unsatisfactory). After an item is repaired and reinspected and found to be acceptable, the **quality control inspector** documents his approval by checking or initialing "YES" under the "ITEM CORRECTED" or "SATISFACTORY" column.

After the quality control records are completed and the building is labeled, the completed **Quality Control Checklist** must be placed in the manufacturer's permanent files, where it shall remain for a minimum of five years.

The manufacturer's permanent files shall also contain reliable and retrievable records of the label and serial numbers assigned to each unit and the site to which the unit was shipped.

PERSONNEL

One of the most important aspects of any quality assurance program is personnel. Quality control and production procedures cannot be effective unless there are qualified and well trained people to implement them. Although every employee plays a part in achieving desired product quality, certain positions within the company must be assigned the responsibility for implementing the various aspects of the quality assurance program. Each individual's area of responsibility must be defined clearly and understood not only by the individual, but by all other members of the quality assurance program management team. Each departments personnel is may be assigned to manage one or more areas of the quality control program if properly trained.

A summary of the basic responsibilities of the quality control personnel, as they pertain to the quality assurance program, is presented below:

GENERAL MANAGER

- Responsible for ensuring that the quality assurance program is implemented as defined in this manual. He also shall be responsible for coordinating periodic assessments of the quality assurance program itself and the plant operations and for instituting whatever changes may be necessary to improve product quality.
- Responsible for overall implementation of the quality assurance program.
- Has ultimate responsibility for product compliance with codes, standards, rules and regulations.

HUNTER KNEPSHIELD COMPANY

ENGINEERING MANAGER

- Coordinates with third party design approval agency to obtain approved plans.
- Coordinates product design and specifications with other departments within the company.
- Distributes approved drawings and specifications to purchasing, production, and quality control.
- Maintains copies of all approved drawings.
- Must be familiar with applicable codes, standards, rules and regulations and advise other departments of pertinent changes.
- Assists production and quality control in solving on-line problems.
-

SALES MANAGER

- Selects and develops territory to appropriate people.
- Monitors information requests from customers and salespeople to see a project through the quote to order process.
- Trains salespeople in the field
- Maintains copies of all quotes and transmittals.
- Must be familiar with applicable codes, standards, rules and regulations and advise other departments of pertinent changes.
- Coordinates promotions, trade shows, seminars, sales meetings, and mailings.

PURCHASING MANAGER

- Ensures that all materials and components which are purchased comply with the approved drawings, specifications and codes and standards.
- Ensures that materials received comply with purchase order.
- Ensures that materials are stored and handled properly.

PRODUCTION MANAGER

- Must be familiar with approved design and codes and standards.
- Must ensure that production supervisors are properly trained.
- Coordinates with sales manager and quality control.
- Schedules work and rework.
- Responsible for ensuring that materials are handled and installed properly.
- Responsible for ensuring that buildings are produced in accordance with designs, specifications, codes and standards.

PRODUCTION SUPERVISOR

- Must be familiar with approved design, specifications, and codes and standards which apply to his department.
- Must ensure that all workers under his supervision are trained properly.
- Must ensure that all work performed in his department is completed per design, specifications, and standards.
- Must ensure that his department does not begin work until the work of all prior departments is complete.
- Coordinates with quality control to correct deficiencies.
- Coordinates with other production supervisors.

HUNTER KNEPSHIELD COMPANY

QUALITY CONTROL MANAGER

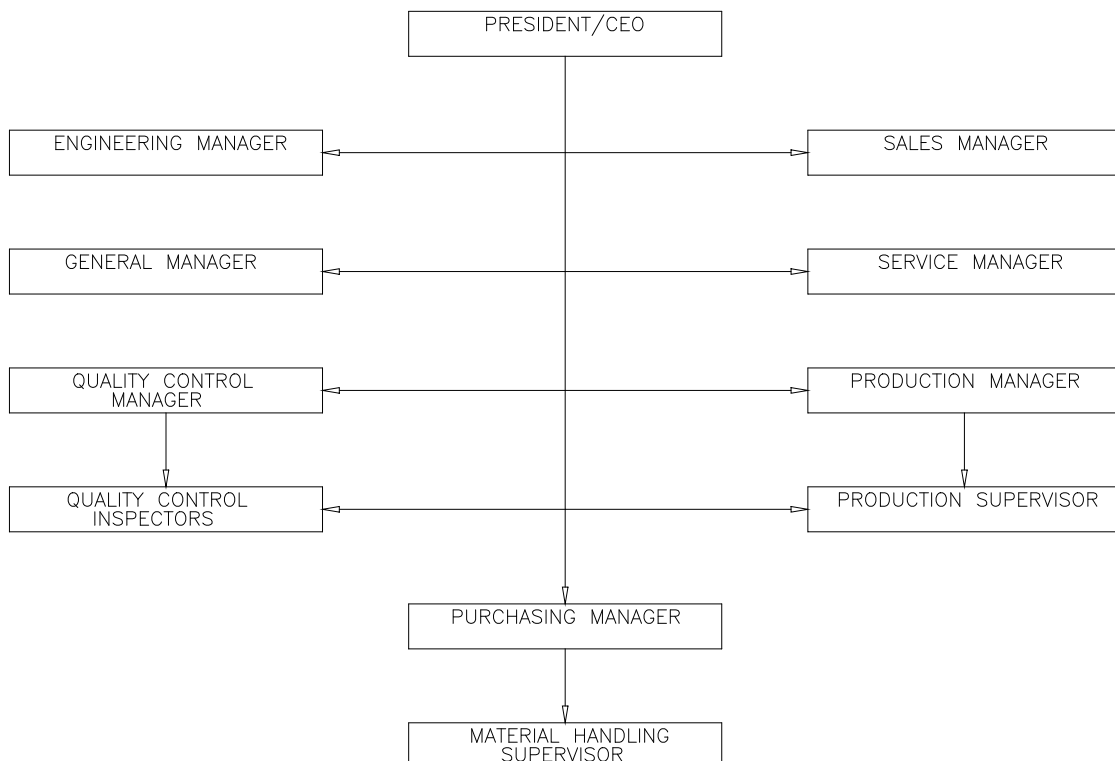
- Must be familiar with approved design, specifications, codes and standards.
- Orders and maintains control of state and third party labels.
- Responsible for maintaining permanent quality control records for each building.
- Coordinates with third party and state inspectors.
- Audits QC Inspectors under his supervision.

QUALITY CONTROL INSPECTOR

- Must be familiar with approved design, specifications, codes and standards.
- Inspects each building at each step of production to ensure compliance with drawings, specifications, codes and standards.
- Ensures that materials are installed per manufacturer's instructions.
- Documents each inspection on quality control records.
- Coordinates correction of noncompliance with production supervisors.
- Reinspects and approves correction of noncompliance.
- Witnesses plumbing and electrical tests.
- Conducts final unit inspection.
- Affixes labels to completed units.

SERVICE MANAGER

- Advises General Manager, Production Manager, Quality Control Manager and Sales Manager of prevalent service problems so that preventative measures may be taken.



HUNTER KNEPSHIELD COMPANY

TESTING REQUIREMENTS

WATER PIPING LEAKAGE TEST

To test the water distribution system, you must have an air supply of 100 psi and a pressure gauge marked in lbs/sq inch.

1. Connect all fixtures, fittings and branch lines of the potable water system. The water heater should be by-passes.
2. Apply 100 psi for 15 minutes and check for leaks. If any leaks are located, replace defective parts or materials. Reapply 100 psi and maintain for 15 minutes without any loss of pressure.

LEAKAGE TEST OF DRAINAGE SYSTEM

The drainage system of each unit shall be tested for leakage. The unit shall be leveled. All openings in the piping shall be tightly closed, except the highest opening above the roof, and the entire system shall be filled with water to the point of overflow. No section shall be tested with less than a ten foot head of water for a period of less than 15 minutes. Fittings and piping shall be examined for visible evidence of leakage. Defective materials shall be repaired or replaced.

FIXTURE TEST

The plumbing fixtures and connections shall be subjected to a flow test by filling them with water and checking for leaks and/or retarded flow while they are being emptied. Replace any defective parts or material, then retest.

SHOWER COMPARTMENT FLOOD TEST (WHEN REQUIRED)

Plug the shower drain and fill the shower compartment with water up to the top of the dam. Let stand for 15 minutes. Check for leaks and replace any defective parts or materials, then retest.

CONTINUITY TEST

Requires a battery operated buzzer signal device with probes or OHM meter or a continuity tester.

1. For units that will have outside permanent service, check between conduit stub and metallic drainage waste and vent piping and between conduit stub and metallic siding (if supplied)- penetrate paint, if necessary.
2. Check roof to siding; siding to frame at two or more corners.

Note: Other bonded parts which are readily accessible may be used as a reference point.

3. If continuity is not achieved, locate problem, correct, resume testing.
4. Test the following parts of each unit for electrical continuity to ground:
 - a. Metallic roof (if supplied)
 - b. Metallic exterior siding (if supplied)
 - c. Metallic chassis (if supplied)
 - d. Metallic water piping
 - e. Metallic feeder raceway or conduit to distribution panel
 - f. Metallic fixture canopies
 - g. Metallic frames of direct connected appliances and fans

HUNTER KNEPSHIELD COMPANY

The following do not have to be tested: cord connected appliances, window and door frames, door handles and other metallic parts not listed above.

Note: Unit half without electrical panel shall have temporary power supply connected when continuity, polarity and operational tests are performed. Power shall be supplied through crossover junction boxes installed in half without electrical panel.

Note: All defective workmanship to be repaired.

All defective parts or materials to be replaced.

OPERATIONAL (ELECTRICAL) TEST

The operational check is to demonstrate that all equipment is connected and in working order.

1. Check each receptacle with a polarity checking device.
2. Operate switch to check switched receptacle.
3. Insert a light bulb in each fixture and check for operation. Check each appliance or heater one at a time.

CAUTION ELECTRICAL SHOCK HAZARD

The electrical tests may involve a large area of energized circuits. Take proper precautions. Keep personnel away from out of the units being tested. De-energize circuits before checking connections.

Note: All defective workmanship to be repaired.

All defective parts or material to be replaced.

POLARITY TEST

Each 110 volt receptacle shall be tested with a polarity tester that will indicate “open grounds” etc. Any shorts, open grounds, lights not working, etc. shall be repaired and retested.

A receptacle tester can be modified to be used to test light fixtures also. Use a standard screw plug into which is plugged a two prong to three prong adapter, (the green cord with probe can be used to test bare ground at the base of the light fixture), now a three light indicator type receptacle tester can be plugged into the adapter. This unit can now be screwed into a canopy and be used to determine polarity for black and white wires. (Note: When light fixtures are tested using this apparatus, an additional continuity test is not required. Also, the polarity tester may be used instead of a light bulb for purposes of the operational test.)

All other electrical outlets such as 220 volt outlets shall be visually inspected to assure proper polarity.

Note: All defective workmanship to be repaired.

All defective parts or material to be replaced.

Note: All test equipment shall be calibrated in accordance with the manufacturer’s recommendations or a minimum of once each year, or following any accidental damage to the equipment that could affect its accuracy. The calibration report shall be kept on file.

HUNTER KNEPSHIELD COMPANY

QUALITY CONTROL INSPECTION GUIDELINES

The items listed below are to be used as guidelines for conducting quality control inspections, and generally correspond with the sign-off categories listed on the Quality Control Checklist. The purpose of these guidelines is to provide an expanded outline of some of the items that must be checked before each line item on the Quality Control Checklist is signed off as being “Satisfactory”. Some items on the Quality Control Checklist are reasonable self-explanatory, and have not been given additional clarification in these guidelines. In all cases, the person inspecting must refer to the approved design, the codes, and/or product manufacturer’s installation instructions to determine if a particular item has been completed satisfactorily.

These guidelines are a reference document only, not an on-line checklist. A copy of these guidelines is not required to travel with each unit in production. The only quality control document that must travel with each unit is the Quality Control Checklist.

CONCRETE/STEEL FLOOR

1. Proper materials- Proper type, size, gauge, configuration, alignment and spacing of all steel floor members.
2. Welding- Good workmanship and per approved design.
3. Steel I-beams located under interior walls (if required).
4. Lagging- steel to wood fasteners.
5. Plumbing:
 - a. All drains and drain pipes properly sized and located.
 - b. All DWV pipes and fittings are of approved materials and are assembled and installed properly.
 - c. DWV pipes are installed with proper slope.
 - d. DWV pipes are secured and supported properly.
6. Concrete floor properly graded, sloped towards floor drain.

WALL BUILD AND SET

1. Stud size and grade- Also includes:
 - a. Stud spacing
 - b. Limitations on notches and/or holes per approved drawings (if applicable).
2. Plates
 - a. Material size and grade.
 - b. Splice blocks.
 - c. Plate to stud fasteners.
3. Door framing- Includes:
 - a. Headers and sills
 - b. Studs
 - c. Cripples
 - d. Fasteners
4. Wall covering (jig side)- Proper material and installation
5. Columns (if required)- Includes proper size, grade, species, orientation and quantity of studs in each column, and fastening of multiple studs.
6. Special installations- example:
 - a. Recessed entries

HUNTER KNEPSHIELD COMPANY

ROOF BUILD AND SET

1. Correct rafters- glue laminated vs. solid
 - a. If solid- size, grade, species, spacing
 - b. If glue laminated- size, grade, species, per manufacturer's specifications
2. Correct beams
 - a. Correct material- built up vs. solid (grade, species, number of layers).
 - b. Size- depth and overall thickness of the beam.
3. Roof framing fasteners- rafter to rafter rail; rafter to beam; rafter to ledger (if applicable).
4. Overhang construction- materials and fasteners per approved drawings.
5. Ceiling material- proper type and thickness.
6. Ceiling bearing strip- Ceiling material not located between rafters and the top plates of bearing walls if prohibited by the approved design.
7. Ridge beam bearing- Proper bearing between beam and columns; bearing stiffeners installed properly (if required).
8. Uplift strapping- roof to wall; wall to floor; beam to column; column to floor.
9. Electrical rough-in:
 - a. Proper size and type of cable/conductors/conduit.
 - b. Cable sheath or conduit continuous between boxes and fittings and undamaged.
 - c. Conduits properly installed and supported.
 - d. Conduits terminated properly- reamed- bushings installed as required.
 - e. Cables secured/supported at 4-1/2' o.c. (max.) and within 12" of boxes.
 - f. Wire protectors installed where required.
 - g. Boxes installed at proper locations.
 - h. Boxes sized properly.
 - i. Boxes secured to structural members or braces.
 - j. Boxes flush with wall and ceiling surfaces or project there from.
 - k. Cutouts in wall panel and ceiling for boxes are closely fitted.
 - l. No unused openings in outlet and junction boxes.
 - m. NM cable sheath extends into box at least 1/4".
 - n. Cable clamps installed in boxes as required.
 - o. At least 6" of free conductor provided at each outlet and switch box.
 - p. Metal boxes grounded properly.
 - q. Correct size panel box.
 - r. No unused openings in panel box.
 - s. Wires secured within 12" of panel box.
 - t. Cable clamps installed at panel box.
 - u. Proper number of circuits installed.
 - v. Outlets wired on correct circuits per plans.
 - w. Switch boxes installed at proper height per handicapped code.
 - x. Wires within 6' of attic access guarded/protected.
 - y. No exposed combustible finish between outlet box and fixture canopy.
 - z. Boxes for specialty items located as required (e.g., exit signs, etc.).
10. Plumbing rough-in
 - a. All supply, drain and vent pipes properly sized and located.
All supply and DWV pipes and fittings are of approved materials and are assembled and installed properly.
 - b. DWV pipes are installed with proper slope.

HUNTER KNEPSHIELD COMPANY

- c. Supply and DWV pipes secured and supported properly.
 - 11. Wall insulation- proper R value and no voids (if insulation provided as option).
 - 12. Roof insulation- proper R value and no voids- roof insulation properly supported if 3/8 ceiling (if insulation provided as option).

EXTERIOR

- 1. Corner bracing- Proper materials and fastening per design.
- 2. End wall sheathing- Proper materials and fastening per design. Note that end wall sheathing must extend from floor joist to roof deck with all joints blocked.
- 3. Exterior siding- Proper materials; installed per approved design and manufacturer's instructions.
- 4. Roof decking- Proper material per design; fastening per design; joints blocked if required by design.
- 5. Roof covering- Proper material per design; fastening per design and manufacturer's instructions.
- 6. Attic ventilation- Per approved design.
- 7. Vent stacks- plumbing and mechanical vents installed properly and flashed and sealed properly.
- 8. Firestop/draft stop- Per approved design; includes construction of fire rated assemblies and sealing of penetrations through fire-rated assemblies.
- 9. Mansard- style, materials and installation per approved design.

FINAL FINISH

- 1. Wall coverings- proper materials and installation.
- 2. Finish electrical.
 - a. Correct color switches and receptacles installed.
 - b. Receptacles and switches wired properly.
 - c. Correct lights installed.
 - d. Lights wired properly.
 - e. Proper vent fan installed (if provided as option).
 - f. Vent fan wired and installed properly.
 - g. Proper number of circuits installed.
 - h. White wire used as a "hot" wire is re-identified at both ends.
 - i. Exposed metal parts grounded.
 - j. Floor system grounded to panel box.
 - k. Specialty items installed per specs (exit signs; emergency lights, etc.).
- 3. Plumbing fixtures.
 - a. All above floor supply and DWV pipes properly sized and installed.
 - b. All traps and connections are accessible.
 - c. Clean outs installed if required.
 - d. Fixtures installed properly.
 - e. Gaskets or compound used between fixture and drain.
 - f. Auto vents installed properly.
 - g. Vent stacks terminate at least 6" above roof line.
 - h. Water heater plumbed properly (if provided as option).
 - i. For North Carolina buildings, approved water heater installed with proper connections and safety devices.
 - A. Tank labeled indicating internal parts are capable of withstanding 400 degree temperature.
 - B. T & P valve is installed by water heater manufacturer.
 - C. Tank label indicates compliance with ASHRAE 90 A, 1980 Standards.

HUNTER KNEPSHIELD COMPANY

BUILDING MANUFACTURER'S DATE PLATE

MANUFACTURER: _____
ADDRESS: _____

BUILDING SERIAL NO.(S): _____ MODEL NO.: _____
STATE LABEL NO.(S): _____ DATE OF MANUFACTURE: _____
THIRD PARTY LABEL NO.(S): _____ DATE PLATE ATTACHED: _____

THIS BUILDING IS DESIGNED AND CONSTRUCTION IN COMPLIANCE WITH THE FOLLOWING CODES:

<u>DISCIPLINE</u>	<u>CODE/YEAR</u>	<u>AMMENDMENTS/SUPPLEMENTS</u>
BUILDING:	_____	_____
PLUMBING:	_____	_____
MECHANICAL:	_____	_____
ELECTRICAL:	_____	_____
_____:	_____	_____
_____:	_____	_____

THIS BUILDING IS DESIGNED FOR THE FOLLOWING CONDITIONS:

USE GROUP/OCCUPANCY: _____ FLOOR LIVE LOAD (PSF): _____
CONSTRUCTION TYPE: _____ ROOF LIVE LOAD (PSF): _____
FIRE RATING OF EXTERIOR WALLS (HRS): _____ WIND LOAD (MPH): _____
SEISMIC ZONE: _____
U FLOOR: _____ U WALLS: _____ U ROOF/CEILING: _____
ELECTRICAL SERVICE: _____ AMPS _____ VOLTS _____ PHASE _____ HZ
WATER SYSTEM TEST PRESSURE: _____ PSI

THE FOLLOWING MAJOR APPLIANCES WERE PROVIDED BY THE BUILDING MANUFACTURER

<u>APPLIANCE</u>	<u>MANUFACTURER</u>	<u>MODEL</u>
HEATING	_____	_____
WATER HEATER	_____	_____
_____	_____	_____
_____	_____	_____

NOTICE: THE INSTALLATION OF THIS BUILDING AND UTILITY CONNECTIONS SHOULD BE PERFORMED ONLY BY QUALIFIED PERSONS AND IS SUBJECT TO INSPECTION BY LOCAL AUTHORITIES. REFER TO THE APPROVED PLANS FOR REQUIRED ON SITE WORK AND CONNECTIONS AND TO THE INSTALLATION INSTRUCTIONS PROVIDED BY THE MANUFACTURER. ALL INSTRUCTIONS MUST BE FOLLOWED PRECISELY.

SPECIAL INSTRUCTION, LIMITATIONS, ETC. _____

HUNTER KNEPSHIELD COMPANY

PERSONAL RESUME

NAME: THOMAS M. KNEPSHIELD II

ADDRESS: 7719 CAMBRIDGE CT
CRESTWOOD, KY 40014

EDUCATION: MALE HIGH SCHOOL GRADUATE 1982
UNIVERSITY OF KENTUCKY GRADUATE
1987 BACHELOR OF BUSINESS ADMINISTRATION
1989 NOVELL CNE

EMPLOYMENT: 1984 SUMMER E.P. TOM SAWYER STATE PARK MAINTENANCE
1985 SUMMER SKYLINE DISPLAYS
1986 - PRESENT HUNTER KNEPSHIELD COMPANY

SCOPE FOR MODULAR BUILDING

A. PRIOR TO BUILDING ARRIVAL

1. Bring utilities from location 6' from building (supplied to 6' from building by others) to location on plans in chase area. **Double check utility locations on-site.**
2. Prepare pier foundation for building.
4. Make arrangements for crane operator to conduct pre-visit to site for prior approval of site conditions allowing for crane access. If any unusual circumstances exist for crane delivery of building (plates required, excavation, removal of equipment, trim trees, etc.) these will be coordinated with the City. Contract with crane company for permitting and setting of building. Crane operator will need two 14'-16' spreader bars, two straps that can handle 20,000 pounds each and other standard crane equipment.
7. Order required material to have on-site the day the building arrives.

B. DURING BUILDING ARRIVAL

1. Make final arrangements with HK company and coordinate with CONTRACTOR
2. Offload building onto foundation. (BY CONTRACTORS CRANE COMPANY)
3. Install drain p-traps and secure. (equipment supplied by MANUFACTURER INSTALLED BY CONTRACTOR). Integral P-traps are already installed in most states.
3. Weld building to weld plates in foundation. (BY CONTRACTORS CRANE COMPANY)
4. Offload sections, and se. (BY CONTRACTORS CRANE COMPANY)
5. Connect roof splice with bolts, washers and nuts (equipment supplied by MANUFACTURER INSTALLED BY CONTRACTOR).
6. Connect roof to wall section with bolts, washers and nuts (equipment supplied by MANUFACTURER INSTALLED BY CONTRACTOR).
7. Receive written approval and sign off from City for building, at current state.

C. POST BUILDING ARRIVAL

1. Install ridge flashing and required roofing flashing (equipment supplied by MANUFACTURER INSTALLED BY CONTRACTOR).
2. Connect electrical at panel and conduit splices, water and sewer connections in utility chase.
5. Fill in utility openings and tamp crushed aggregate to floor grade after utility inspections by the appropriate city inspectors.
6. Supply and install grounding rods inside or outside chase, as per code.
7. Complete any grading and concrete work associated with the owners bid specifications.
7. Conduct walk through with owner and complete any punch list items
8. Document all change order requests. These must be prior approved by HK.
9. General clean-up.
10. Acquire final sign-off by the owner.




Hunter Kneppshield Company

Modular Buildings

Offsite Construction for the Onsite Environment



Why Modular?

- ▶ THE MODULAR ADVANTAGE
 - ▶ MINIMAL SITE DISTURBANCE
 - ▶ REDUCED MAINTENANCE
 - ▶ ADA CODE COMPLIANT
 - ▶ SANITARY
 - ▶ FASTER THAN SITE BUILD
 - ▶ ARRIVE OPERATIONAL
 - ▶ ON-SITE CONSTRUCTION TIME REDUCED
- 

Modern Designs

Germantown, TN



Traditional Design

Waukegan, IL



Sports Buildings

Sanford, KY



Miami, FL



Miami, FL



Tamarac, FL



Park Entrance Buildings

Dover, DE



Special Construction Buildings

San Francisco, CA



Ticket buildings

Chicago, IL



Chicago, IL



Coronado Island, CA



Buildings start with a I-beam reinforced Concrete Floor



Walls and Roof are built and assembled



Mechanical equipment is installed



Exterior finish and framing begin to take place.



Buildings are prepped and split into parts if necessary for shipping.



Building is offloaded on site and assembled if necessary.



Building is off loaded and assembled in one day and ready for utility connections.



Landscape and use.



Lexington, KY



Springfield, TN



St. Johns, FL



Louisville, KY





Designed to Work within the Environment

- ▶ Since 1967, Hunter Knepshield has provided quality services and competitive pricing to the parks and recreation industry with a complete range of modular public use buildings for parks and sporting venues. Standard or custom designed modular buildings for restrooms, concessions, shower, laundry, storage, shelter or combination structures are engineered to meet needs for functionality and low maintenance with fast installation. Manufactured in a quality-controlled factory environment with the latest construction techniques and tools, these facilities are delivered pre-wired, pre-plumbed and complete with an integral flooring system...ready for final hook-up.
- ▶ Hunter Knepshied' modular facilities are not only functional and durable, but they're also designed to work within the environment. Architecturally attractive with exterior materials that complement the environment, Hunter Knepshield buildings can blend in with the surroundings or make a statement with flair to create a memorable landmark. Inside, the Hunter Knepshield facilities are designed for easy maintenance with graffiti-resistant materials



02-21-2021

Project References

David Whitehouse
Boone County Parks
dwhitehouse@boonecountyky.org
5958 Garrard Street
Burlington, KY 41005
Office: 859-334-2117
Fax: 859-334-2213

Leroy Garcia, MS, CGC, CRS2
GARCIAL@miamidade.gov
Miami-Dade County Park, Recreation and Open Spaces
275 NW 2nd Street
4th Floor
Miami, FL 33128
305.755.7850 office

Chris Hines
chines@landtekgroup.com
The LandTek Group, Inc.
235 County Line Rd. ■ Amityville, NY 11701
Office: 631-691-2381x555 ■ Fax: 631-598-8280
Westbury High School project

Joe Norton| Facilities Manager
jnorton@cincynature.org
4949 Tealtown Road | Milford | OH | 45150
W 513.831.1711 ext. 130 F 513.831.8052
www.CincyNature.org

Jon Daniel
jond@gearig.com
Project Manager
322 Grimaude Boulevard
Grovetown, Georgia 30813
www.gearig.com
Tel: 706-860-5981
Fax: 706-860-9639

Hunter Kneppshield Company - P.O. Box 499 - LaGrange, KY 40031
Call Toll Free: 800-626-6530 - Fax: 502-225-9335



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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.)

2/20/2021

Date



Authorized Signature & Title V.P.

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

Hunter Knepshield Company Inc.

Contact

10 Hunters Trail

P.O. Box 499

Address

LaGrange KY 40031

**Official
Authorizing
Proposal**

Phone

502-225-9121

Fax

502-225-9335


Signature

Thomas Knepshield

Printed Name

Vice President

Position with Company


Signature

Thomas Knepshield

Printed Name

Vice President

Position with Company

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.

Hunter Knepshield Company Inc.
 LaGrange, KY United States

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

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.

21-05
 Modular Buildings, Portable Storage, and Relocatable Walkways

DRAFT

4	Name of Interested Party	City, State, Country (place of business)	Nature of interest (check applicable)	
			Controlling	Intermediary

5 Check only if there is NO Interested Party.

6 UNSWORN DECLARATION

My name is _____, and my date of birth is _____.

My address is _____, _____, _____, _____, _____.
(street) (city) (state) (zip code) (country)

I declare under penalty of perjury that the foregoing is true and correct.

Executed in _____ County, State of _____, on the _____ day of _____, 20____.
(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, Thomas Knepshield, as an authorized representative of

Hunter Knepshield Company 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

02/20/221
Date

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: Hunter Knepshield Company Inc. _____

Organization Address: 10 Hunters Trail, P.O. Box 499 LaGrange, KY 40031 _____

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
Thomas Knepshield	902 Shady Lane, Anchorage, KY 40223

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.**

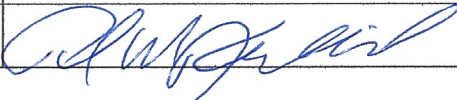
Website (URL) containing the last annual SEC (or foreign equivalent) filing	Page #'s

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
Thomas Knepshield	902 Shady Lane, Anchorage, KY 40223

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):	Thomas Knepshield	Title:	Vice President
Signature:		Date:	02/21/2021

DOC #2

NON-COLLUSION AFFIDAVIT

STANDARD BID DOCUMENT REFERENCE	
	Reference: VII-H
Name of Form:	NON-COLLUSION AFFIDAVIT
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.

**AFFIRMATIVE ACTION AFFIDAVIT
(P.L. 1975, C.127)**

Company Name: Hunter Kneppshield Company Inc.

Street: 10 Hunters Trail

City, State, Zip Code: LaGrange, KY 40031

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.

2/21/2021

Date


Authorized Signature and Title

**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

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). 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). 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:	Hunter Knepshield Company Inc.		
Address:	10 Hunters Trail P.O. Box 499		
City:	LaGrange	State: KY	Zip: 40031

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.



Thomas Knepshield
Printed Name

Vice President
Title

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)

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 Executive}

County Clerk

Surrogate

Sheriff

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: Thomas Knepshield	Name:
Home Address: 902 Shady Lane Anchorage KY 40223	Home Address:
Name:	Name:
Home Address:	Home Address:
Name:	Name:
Home Address:	Home Address:

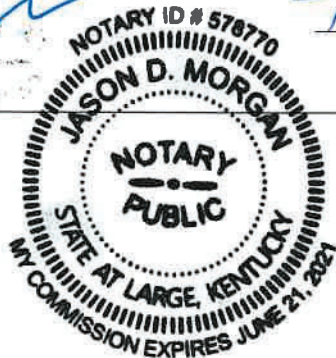
Subscribed and sworn before me this 22 day of February, 2021

(Notary Public) *[Signature]*

My Commission expires: 6-21-2021

[Signature]
(Affiant)
Thomas Knepshield
(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.

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: Solicitation Number 21-05 Bidder/Offeror: Hunter Knepshield Company 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 Thomas Knepshield Relationship to Bidder/Offeror Vice President
Description of Activities Modular Buildings, Portable Storage, and Relocatable Walkways
Duration of Engagement 3 years Anticipated Cessation Date 7-1-2024
Bidder/Offeror Contact Name _____ Contact Phone Number 502-225-9121

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): Thomas Knepshield

Signature: 

Title: Vice President

Date: 2-21-2021

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/>

kneplr@iglou.com

From: NJSTART <noreply@njstart.gov>
Sent: Monday, February 22, 2021 12:51 PM
To: Thomas Knepshield
Subject: Vendor Registration: Hunter Knepshield Company Inc.

Dear Thomas Knepshield,

Thank you for registering with NJSTART. Your account has been activated. Below you will find your NJSTART login ID and Vendor ID #.

Login ID: tomknepshield
Vendor #: V00061858 - Hunter Knepshield Company Inc.

Please log in to NJSTART. If you have any questions concerning your account, please contact us at (609) 341-3500.

Thank you,
NJSTART

Use this link to log on to NJSTART: <https://www.njstart.gov/bsc/view/login/login.xhtml>

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 for further information.

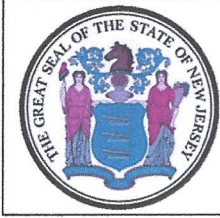
I certify that my bid package includes the required evidence per the above list and State website.

Name: _____ Title: _____

Signature: _____ Date: _____

Hunter Knepshield Comapny does not have employees in NJ. No Work is performed in NJ. If this status changes, A certificate will be forwarded.

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 #: 21-05
VENDOR/BIDDER: Hunter Knepshield Company 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

Thomas Knepshield, Vice President

Print Name and Title

2/21/2021

Date

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 Chapter III, ¶ 6.d 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. Termination for Convenience:

The right to terminate this Contract for the convenience of the Participating Public Agency is retained by the Participating Public Agency. In the event of a termination for convenience by the Participating Public Agency, the Participating Public Agency shall, at least ten (10) calendar days in advance, deliver written notice of the termination for convenience to Contractor. Upon Contractor's receipt of such written notice, Contractor immediately shall cease the performance of the Work and shall take reasonable and appropriate action to secure and protect the Work then in place. Contractor shall then be paid by the Participating Public Agency, in accordance with the terms and provisions of the Contract Documents, an amount not to exceed the actual labor costs incurred, the actual cost of all materials installed and the actual cost of all materials stored at the project site or away from the project site, as approved in writing by the Participating Public Agency but not yet paid for and which cannot be returned, and actual, reasonable and documented demobilization costs, if any, paid by Contractor and approved by the Participating Public Agency in connection with the Scope of Work in place which is completed as of the date of termination by the Participating Public Agency and that is in conformance with the Contract Documents, less all amounts previously paid for the Work. No amount ever shall be owed or paid to Contractor for lost or anticipated profits on any part of the Scope of Work not performed or for consequential damages of any kind.

2. Equal Employment Opportunity:

The Participating Public Agency highly encourages Contractors to implement Affirmative Action practices in their employment programs. This means Contractor should not discriminate against any employee or applicant for employment because of race, color, religion, sex, pregnancy, sexual orientation, political belief or affiliation, age, disability or genetic information.

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 by the contracting officer 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 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 section 202 of Executive Order 11246 of September 24, 1965, 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 the rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and accounts by the contracting 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 non-compliance with the nondiscrimination clauses of this contract or with any of such 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 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 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 may be directed by the Secretary of Labor as a means of enforcing such provisions including sanctions for noncompliance: *Provided*, however, that in the event the contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction, the contractor may request the United States to enter into such litigation to protect the interests of the United States.

3. "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, 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, 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 considerations for employment without regard to race, color, religion, sex, or national origin.
- (3) 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.

- (4) 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.
- (5) 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.
- (6) 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 as 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.
- (7) The contractor will include the portion of the sentence immediately preceding paragraph (1) and the provisions of paragraphs (1) through (7) 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."

4. Davis Bacon Act and Copeland Anti-Kickback Act.

- a. Applicability of Davis-Bacon Act. The Davis-Bacon Act only 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. **It does not apply to other FEMA grant and cooperative agreement programs, including the Public Assistance Program.**
- b. 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.
- c. 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.
- d. 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.
- e. In contracts subject to the Davis-Bacon Act, 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 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.

- f. The regulation at 29 C.F.R. § 5.5(a) does provide the required contract clause that applies to compliance with both the Davis-Bacon and Copeland Acts. However, as discussed in the previous subsection, the Davis-Bacon Act does not apply to Public Assistance recipients and subrecipients. **In situations where the Davis-Bacon Act does not apply, neither does the Copeland “Anti-Kickback Act.”** However, for purposes of grant programs where both clauses do apply, FEMA requires the following contract clause:

“Compliance with the Copeland “Anti-Kickback” Act.

- (1) Contractor. The contractor shall comply with 18 U.S.C. § 874, 40U.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.
- (2) Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clause above and such other clauses as the 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
- (3) 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.”

5. Contract Work Hours and Safety Standards Act.

- a. Applicability: This requirement applies to all FEMA grant and cooperative agreement programs.
- b. Where applicable (see 40 U.S.C. § 3701), 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.
- c. 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 workweek.
- d. 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.
- e. The regulation at 29 C.F.R. § 5.5(b) provides the required contract clause concerning compliance with the Contract Work Hours and Safety Standards Act:

“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 (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 (1) of this section, in the sum of \$10 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 (1) of this section.
- (3) Withholding for unpaid wages and liquidated damages. The (write in the name of the Federal agency or the loan or 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 (2) of this section.
- (4) Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraph (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 (1) through (4) of this section.”

6. Rights to Inventions Made Under a Contract or Agreement.

- a. Stafford Act Disaster Grants. This requirement **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.”

- b. 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.
- c. The regulation at 37 C.F.R. § 401.2(a) currently 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.

7. Clean Air Act and the Federal Water Pollution Control Act. Contracts of amounts in excess of \$150,000 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.

- a. The following provides a sample contract clause concerning compliance for contracts of amounts in excess of \$150,000:

“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 (name of the state agency or local or Indian tribal government) and understands and agrees that the (name of the state agency or local or Indian tribal government) will, in turn, report each violation as required to assure notification to the (name of recipient), 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 (name of the state agency or local or Indian tribal government) and understands and agrees that the (name of the state agency or local or Indian tribal government) will, in turn, report each violation as required to assure notification to the (name of recipient), 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.”

8. Debarment and Suspension.

- a. Applicability: This requirement applies to all FEMA grant and cooperative agreement programs.
- b. 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).
- c. 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 *Procurement Guidance for Recipients and Subrecipients Under 2 C.F.R. Part 200 (Uniform Rules): Supplement to the Public Assistance Procurement Disaster Assistance Team (PDAT) Field Manual Chapter IV, ¶ 6.d, and Appendix C, ¶ 2 [hereinafter PDAT Supplement].* 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. See 2 C.F.R. § 180.530; PDAT Supplement, Chapter IV, ¶ 6.d and Appendix C, ¶ 2.

- d. 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 subrecipient.
- e. 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. 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, its 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 (insert name of subrecipient). 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 (name of state agency serving as recipient and name of subrecipient), 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.”

9. Byrd Anti-Lobbying Amendment.

- a. Applicability: This requirement applies to all FEMA grant and cooperative agreement programs.
- b. Contractors that apply or bid for an award of \$100,000 or more must file the required certification. See 2 C.F.R. Part 200, Appendix II, ¶ 1; 44 C.F.R. Part 18; *PDAT Supplement*, Chapter IV, 6.c; Appendix C, ¶ 4.
- c. 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. See *PDAT Supplement*, Chapter IV, ¶ 6.c and Appendix C, ¶ 4.
- d. The following provides a Byrd Anti-Lobbying contract clause:

“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.”

APPENDIX A, 44 C.F.R. PART 18 – CERTIFICATION REGARDING LOBBYING

Certification for Contracts, Grants, Loans, and Cooperative Agreements (To be submitted with each bid or offer exceeding \$100,000)

The undersigned [Contractor] certifies, to the best of his or her knowledge, 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 31, U.S.C. § 1352 (as amended by the Lobbying Disclosure Act of 1995). 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, Hunter Knepshield Company 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. § 3801 et seq., apply to this certification and disclosure, if any.


Signature of Contractor's Authorized Official

Thomas Knepshield, Vice President

Name and Title of Contractor's Authorized Official

02/21/2021

Date"

10. Procurement of Recovered Materials.

- a. Applicability: This requirement applies to all FEMA grant and cooperative agreement programs.
- b. 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, Pub. L. No. 89-272 (1965) (codified as amended by the Resource Conservation and Recovery Act at 42 U.S.C. § 6962). See 2 C.F.R. Part 200, Appendix II, ¶ J; 2 C.F.R. § 200.322; PDAT Supplement, Chapter V, ¶ 7.
- c. 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. The following provides the clause that a state agency or agency of a political subdivision of a state and its contractors can include in contracts meeting the above contract thresholds:

"(1) 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—

- (i) Competitively within a timeframe providing for compliance with the contract performance schedule;

(ii) Meeting contract performance requirements; or

(iii) At a reasonable price.

(2) Information about this requirement, along with the list of EPA- designate items, is available at EPA's Comprehensive Procurement Guidelines web site, <https://www.epa.gov/smm/comprehensive-procurement-guideline-cpg-program>."

11. Additional FEMA Requirements.

a. The Uniform Rules authorize FEMA to require additional provisions for non- Federal entity contracts. FEMA, pursuant to this authority, requires or recommends the following:

b. Changes.

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. 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.

c. Access to Records.

All non-Federal entities must place into their contracts a provision that all contractors and their successors, transferees, assignees, and subcontractors acknowledge and agree to comply with applicable provisions governing Department and FEMA access to records, accounts, documents, information, facilities, and staff. See DHS Standard Terms and Conditions, v 3.0, ¶ XXVI (2013).

d. The following provides a contract clause regarding access to records:

"Access to Records. The following access to records requirements apply to this contract:

(1) The contractor agrees to provide (insert name of state agency or local or Indian tribal government), (insert name of recipient), 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.

(2) 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.

(3) 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."

12. DHS Seal, Logo, and Flags.

a. All non-Federal entities must 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. See DHS Standard Terms and Conditions, v

3.0, ¶ XXV (2013).

- b. The following provides a contract clause regarding DHS Seal, Logo, and Flags: “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.”

13. Compliance with Federal Law, Regulations, and Executive Orders.

- a. All non-Federal entities must 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.
- b. The following provides a contract clause regarding Compliance with Federal Law, Regulations, and Executive Orders: “This is an acknowledgement that FEMA financial assistance will be used to fund the contract only. The contractor will comply will all applicable federal law, regulations, executive orders, FEMA policies, procedures, and directives.”

14. No Obligation by Federal Government.

- a. The non-Federal entity must 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.
- b. The following provides a contract clause regarding no obligation by the Federal Government: “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.”

15. Program Fraud and False or Fraudulent Statements or Related Acts.

- a. 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. The following provides a contract clause regarding Fraud and False or Fraudulent or Related Acts: “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.”

Additional contract clauses per 2 C.F.R. § 200.325

For applicable construction/reconstruction/renovation and related services: A payment and performance bond are both required for 100 percent of the contract price. A “performance bond” is one executed in connection with a contract to secure fulfillment of all the contractor’s obligations under such contract. A “payment bond” is one executed in connection with a contract to assure payment as required by law of all persons supplying labor and material in the execution of the work provided in the contract.

Offeror agrees to comply with all terms and conditions outlined in the FEMA Special Conditions section of this solicitation.

Offeror’s Name: Hunter Kneppshield Company Inc.

Address, City, State, and Zip Code:

10 Hunters Trail, P.O. Box 499 LaGrange, KY 40031

Phone Number: 502-225-9121
Fax Number: 502-225-9121

Printed Name and Title of Authorized
Representative: Thomas Knepshield

Email Address: knepjr@iglou.com


Signature of Authorized Representative:

2/21/2021

Date: