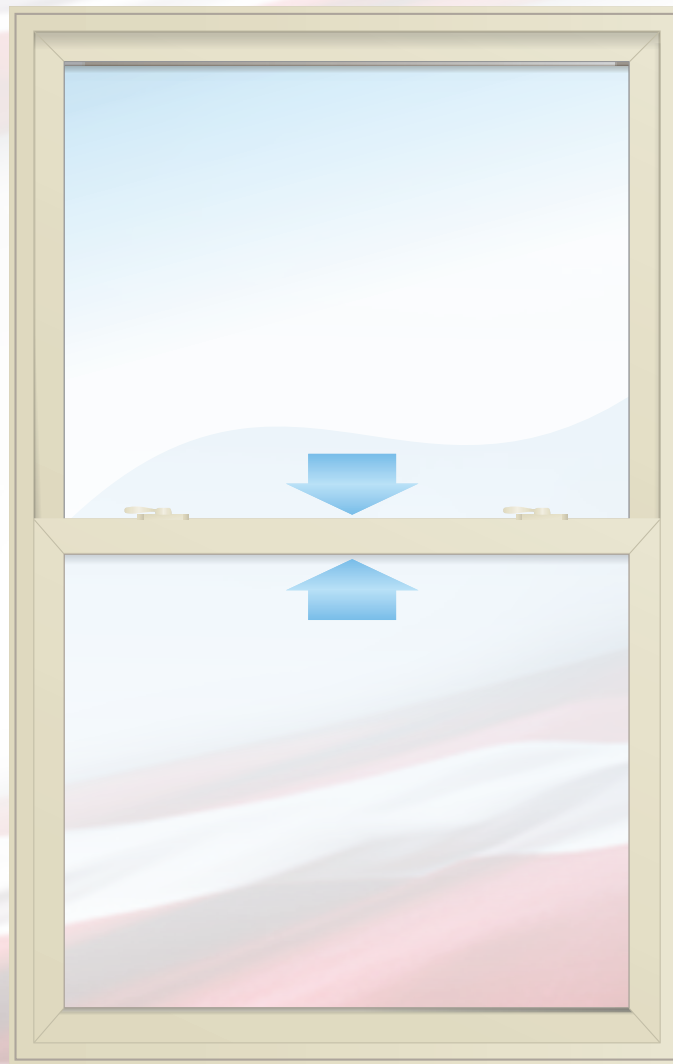
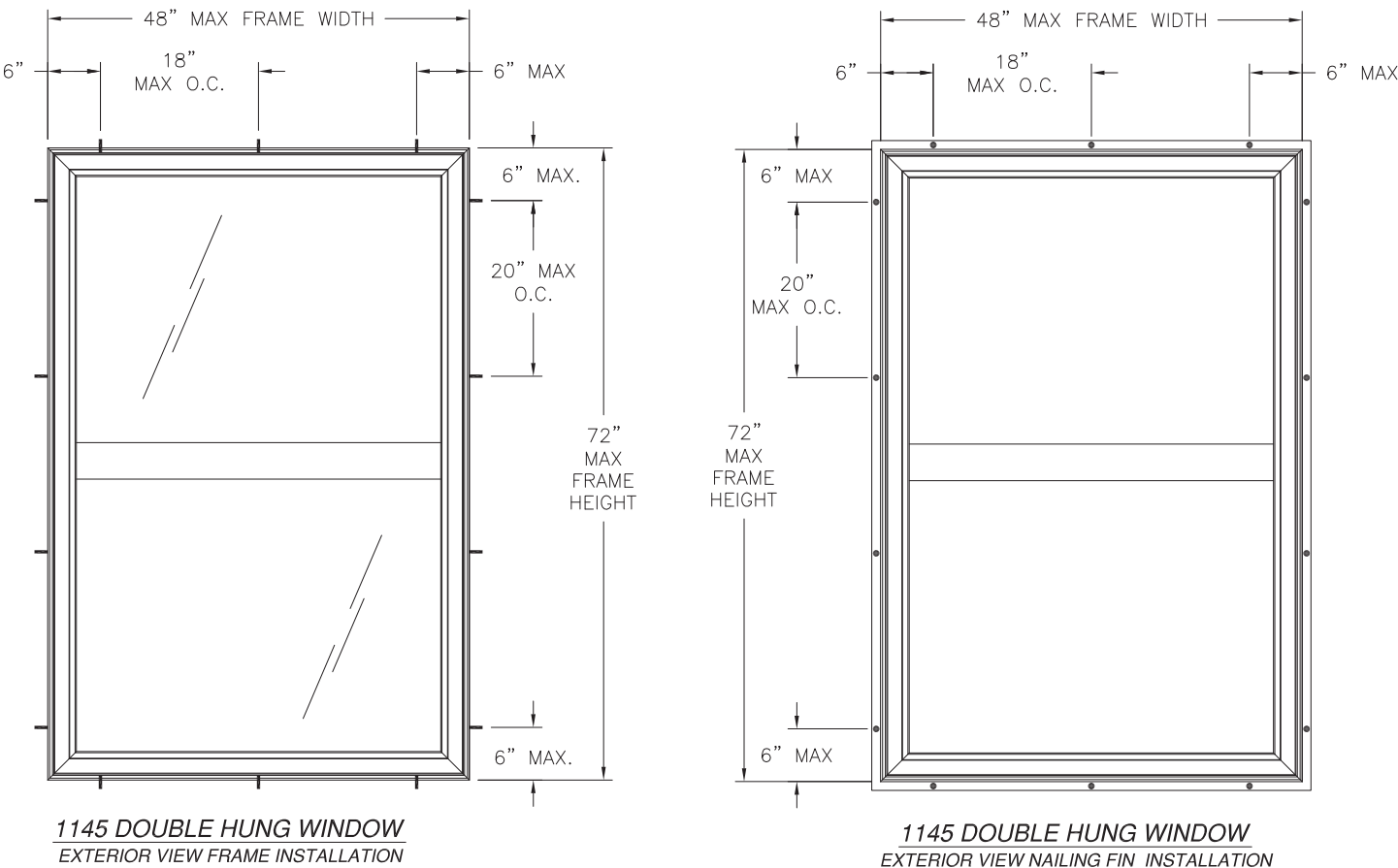


Operational Window Double Hung/Single Hung Installation & Instructions



Operational Window Double Hung/Single Hung

Installation & Instructions



The Right Tools & Parts

- Safety Glasses - Caulk Gun - Waterproof Shims - Tape Measure - Level - Hammer -Power Drill
- Screw Driver - Screws (#8 Flat Head) - 3/16" Tapcons - Shims - Caulking

CHECKING FOR PLUMB, LEVEL AND SQUARENESS



Figure A



Figure B

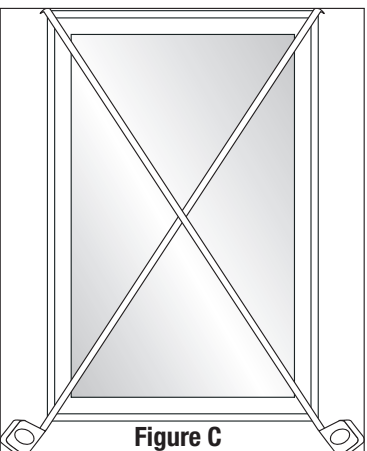


Figure C

Notes:

1. Begin by measuring the window to be replaced. Measure in 3 places on height and width. Do not remove the old window until the sizes of the new window have been identified as correct to fit in the opening. Make sure you have all tools and accessories to complete the project. (Installation accessories are available from Window Mart and can be purchased from your Window Mart dealer).

2. Remove the old window and prepare the opening. The sill must be level to ensure proper function. It is imperative that the replacement window must fit into the opening plumb, level and square, even if the opening may not be.

*** For housing and child occupied facilities built before 1978 refer to [*www.epa.gov/lead](http://www.epa.gov/lead) (before removing old window).**

If the window is not installed plumb, level and square, the following problems could occur:

- Sashes may be hard or impossible to operate;
- The pivot bar on Double-Hung or Single-Hung could bind, causing the sash to become inoperative;
- The interlock on units may not perform properly allowing air and water infiltration, even if sash is locked;
- The weather-stripping may not seal properly, allowing air and water infiltration;
- The lock and keeper mechanism may not engage properly;
- The alignment of sashes and frames may distort, causing one or the other to appear out of square.
- Improper weeping for moisture.

3. Proper disposal of products being removed is important. Most of the parts of the removed window can be recycled such as the aluminum frames, glass and old vinyl windows can be sold to antique stores as they are often used for artistic decorations. If you are disposing of lead paint debris. Please refer to the following government website [* www.epa.gov/lead](http://www.epa.gov/lead) for proper disposal instructions.

4. Use shims if necessary to ensure solid and level sill. Insert insulation in any cracks or crevices to stop any air filtration.

5. Shim as required at each installation anchor with load bearing shim. Shim where space of 1/16" or greater occurs. Maximum allowable shim stack to be 1/4".

6. For anchoring into vinyl framing or 2x buck use #8 vinyl screws with sufficient length to achieve a 1 1/4" minimum embedment into substrate. Locate anchors as shown in elevations and installation details.

7. For anchoring into masonry/concrete use 3/16" tapcons with sufficient length to achieve a 1 1/4" minimum embedment into substrate with 2 1/2" minimum edge distance. Locate anchors as shown in elevations and installation details.

8. For anchor into metal structure use #8 sms or self drilling screws with sufficient length to achieve 3 threads minimum beyond structure interior wall. Locate anchors as shown in elevations and installation details.

9. All Fasteners to be corrosion resistant.

10. Attach sill expander (if necessary) to the bottom of the sill and trim to fit in the opening. Then apply head expander (if necessary) to top of the window.

11. Tilt the window up into the opening with the sash closed and locked. Set it down on the vinyl shims placed along the window sill.

12. Insert shims where necessary on jambs and head to secure window while checking it for plumb, level and squareness.

• To check for plumb, place level vertically on both the interior and face of the left and right jambs. If the bubble is centered, the unit is plumb **(Figure A).**

• To check level, place a level along the sill. If the bubble indicator is centered, the unit is level **(Figure B).**

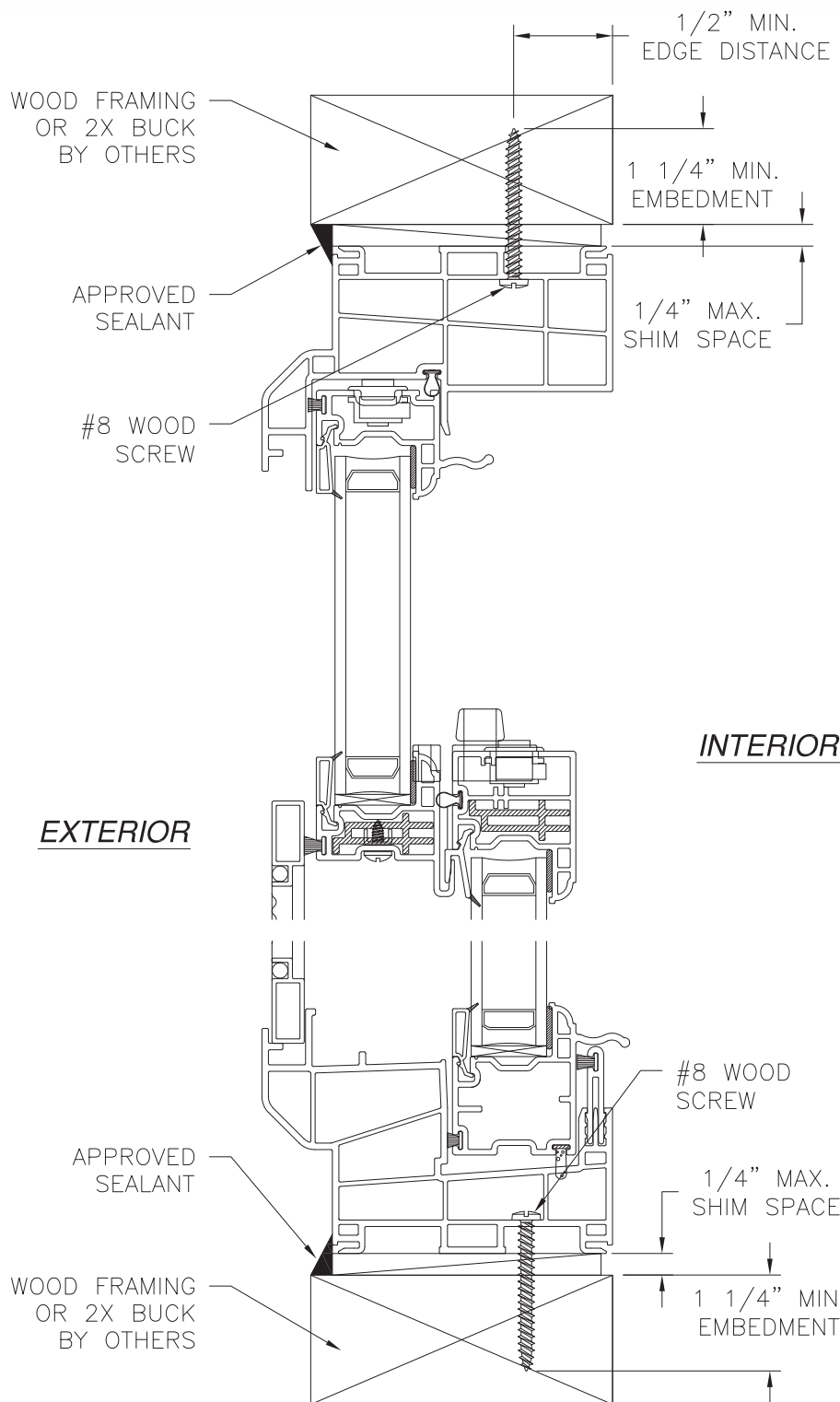
• To check squareness, measure window frame diagonally. Measure from the top left corner of the frame to the bottom right corner and from the top right corner to the bottom left. If the measurements are equal, the window is square **(Figure C).**

You can also check squareness of the window by closing the sash(es) to the point of just where it meets the head or sill. If both sides of the sash meet the bead or sill at the same time. You can also check squareness of the window by measuring diagonally as shown **(Figure C).** If measurements are the same then the window is square.

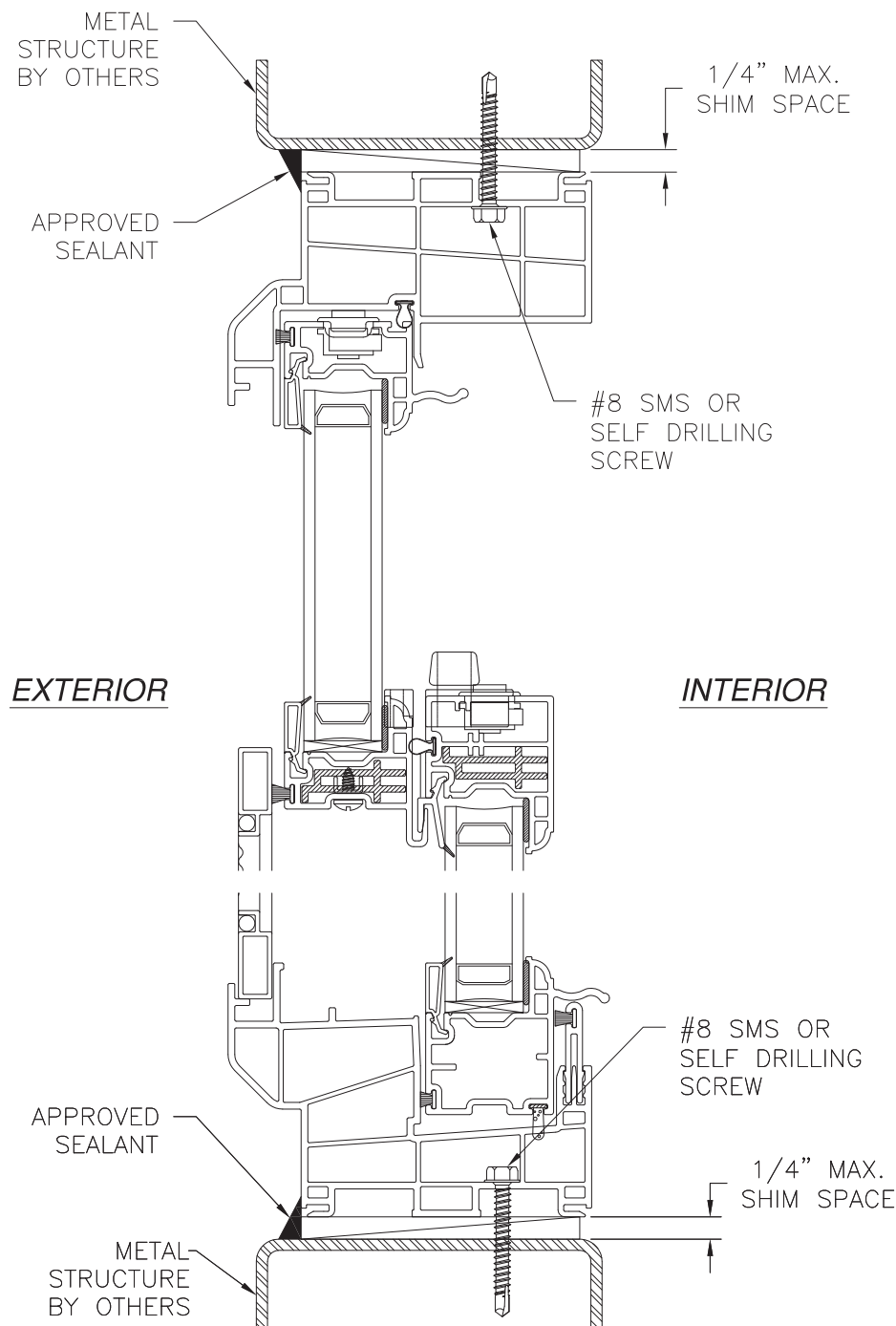
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Operational Window Double Hung/Single Hung

Installation & Instructions



VERTICAL CROSS SECTION
WOOD FRAMING OR 2X BUCK INSTALLATION



VERTICAL CROSS SECTION
METAL STRUCTURE INSTALLATION

Continuous from page 2

13. Once the window is plumb, level and square, pre-drill installation holes in the jamb and head pockets where the most secure framing can be found. Do so by using a 3/8" drill bit and push through first layer of vinyl only. Using screws to install through pre-drilled holes. Screws can go through vinyl blocks or shims if necessary. **DO NOT OVER TIGHTEN THE SCREWS!** This could cause the frame to bow. Recheck the sash for proper operation once the screws have been installed. Install plug buttons into pre-drilled holes. If installation calls for installing through sill, you must seal with silicone the head of the screw once tightened. Apply a small amount of silicone around plug button before installing it into pre-drilled hole. By not doing so, the natural weeping system could result in water leaving the frame itself and entering the vinyl framing of the opening.

14. Proper Flashing and sealing is necessary as a barrier to prevent water from infiltrating the building. When using flexible paper flashing a 9 inch minimum width must be used. Flashing material should also carry a continuous identification on the exterior. Always use flashing that meets or exceeds the ASTM D-779 standards.

15. If installing large windows or windows with high wind load requirements, install interior and exterior blind stops along the jambs, head and sill (if not already present). The blind stops are recommended to be 3/4" to 1/2".

16. (Pocket Replacement) It is the responsibility of the homeowner, contractor or installer to ensure any exposed unfinished vinyl is covered or finished. Possible methods include, however are not limited, covering with aluminum coil stock or painting.

17. Finishing the exterior of the window is very important to the over- all weatherability of the unit. Trim the opening and cap off any gaps. Seal the entire perimeter of the window with the proper silicone caulk (can be purchased from Window Mart Dealer). It is important that the application of sealant and installation of product happen in rapid succession. Do not allow sealant to dry and form a skin prior to bedding the window product into the sealant.) **DO NOT SILICONE OVER WEEP HOLES! MUST BE ALLOWED TO FLOW MOISTURE FROM INSIDE OF UNIT!**

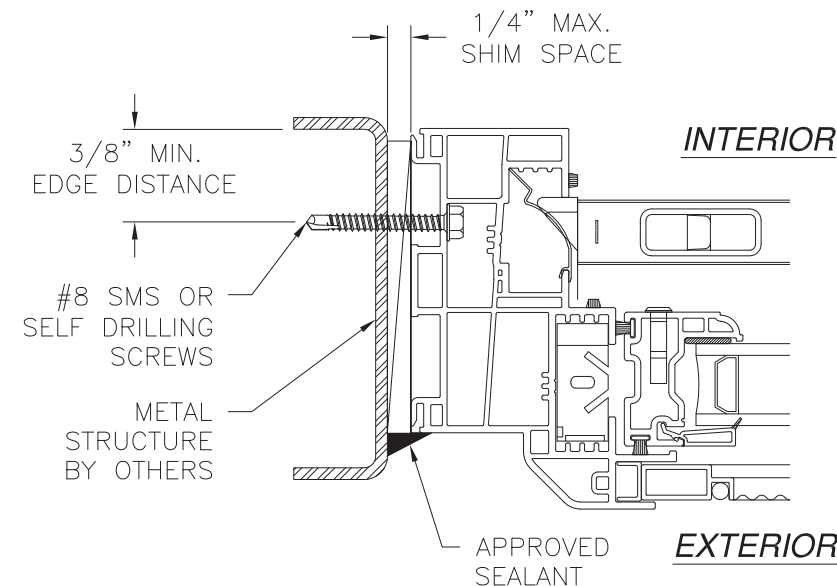
18. Remember... the homeowner is the final inspector. Clean the window well and remove all debris from the job site. Be sure the homeowner is familiar with the proper operation and adjustments and all the features of the window.

Building designs, construction methods, building materials, and site conditions unique to your project may require an installation method different from these instructions and/or additional care. Determining the appropriate installation method is the responsibility of you, your architect, or construction professional.

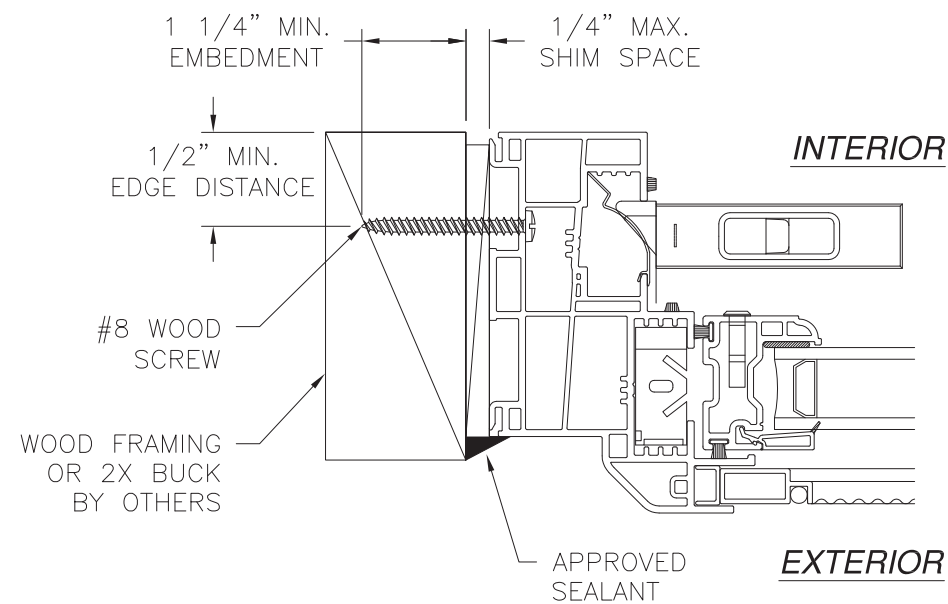
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Operational Window Double Hung/Single Hung

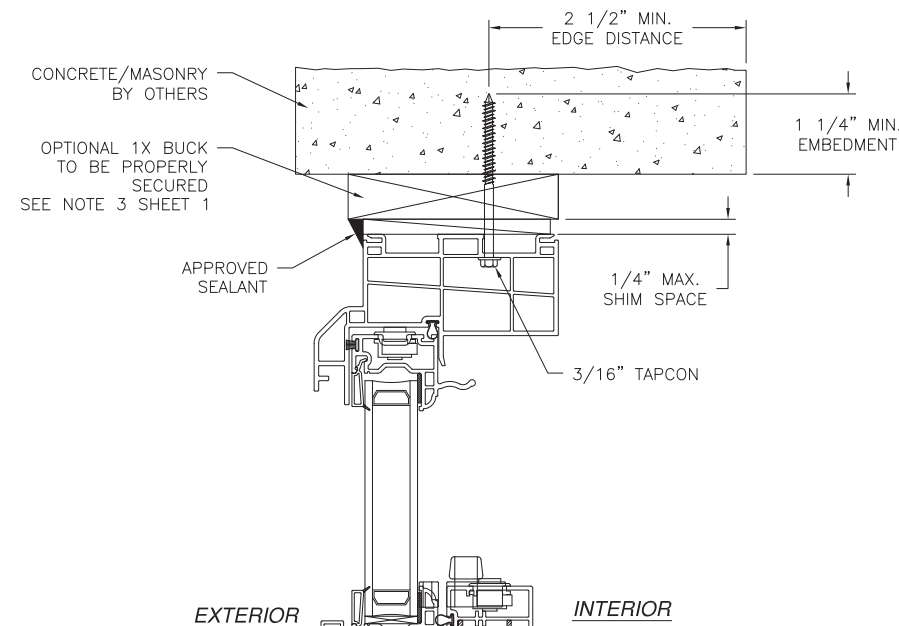
Installation & Instructions



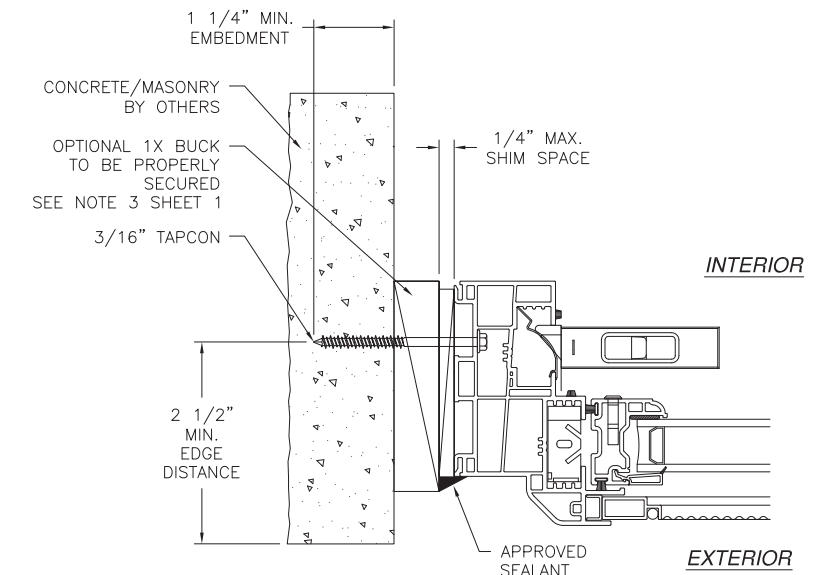
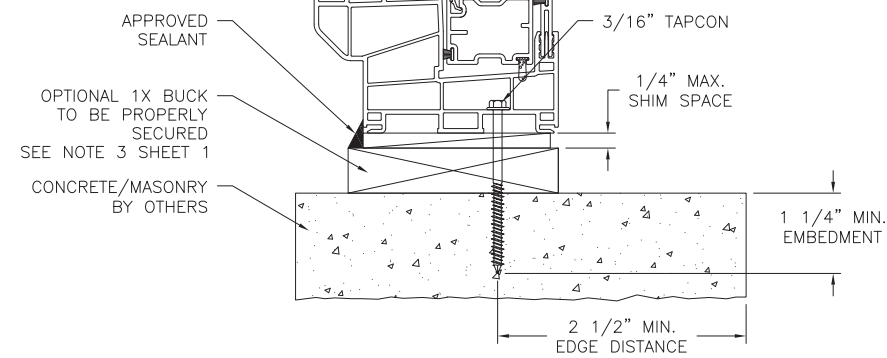
JAMB INSTALLATION DETAIL
METAL STRUCTURE INSTALLATION



JAMB INSTALLATION DETAIL
WOOD FRAMING OR 2X BUCK INSTALLATION



VERTICAL CROSS SECTION
CONCRETE/MASONRY INSTALLATION



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