Installation Instructions

General Aluminum Clad Window Nail Fin Installation

SIERRA PACIFIC WINDOWS



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INTRODUCTION

This document will provide the necessary steps to install Sierra Pacific Windows (SPW) using a nail fin/mounting flange. This instruction covers standard (non-impact) rated aluminum clad nail fin windows in a typical membrane drainage system. Contact SPW for installation in wall conditions not noted in this instruction.

Refer to www.sierrapacificwindows.com for supplemental brickmould and through frame Installation Instructions.

NOTICE

Installation requirements may vary in regions and in other types of construction. Proper installation is essential and Sierra Pacific Windows recommends consultation with an AAMA Certified Installer, or other qualified, registered building professional before installation of any Sierra Pacific product. Proper installation of Sierra Pacific products is the responsibility of the installer. Sierra Pacific is not responsible for the design of, conditions in, or performance of building construction beyond the perimeters of the Sierra Pacific units, or for proper integration of the Sierra Pacific units with the weather-barrier systems of the building.

⚠ IMPORTANT NOTIFICATIONS

- **Please read these instructions in their entirety prior to beginning the installation process.** Failure to follow these instructions will void the warranty. Any alteration or deviation to this instruction must be reviewed and approved by SPW.
- The window nail fin/mounting flange is the defined water plane of the unit; therefore, proper integration of any building water barrier systems **MUST** be made from the nail fin location to the interior. Any moisture exterior of the water plane (between the building envelope and exterior façade) should be expected. **It is the responsibility of the General Contractor to ensure that application of exterior finishes does not impede any designed membrane drainage systems.**
- Sierra Pacific Windows is not responsible for site measurements or the structural requirements for the installation of the window and door units.
- It is the responsibility of the installer to confirm that any installation materials such as sealants, flashings, foam, and weather barriers are compatible with one another.

⚠ SAFETY PRECAUTIONS

- Always wear necessary protective gear such as safety glasses, gloves, ear plugs, clothing, etc.
- Ensure the work area is accessible and safe for performing installation of the window and/or door.
- Use all power tools in accordance with manufacturers' instructions.

⚠ DANGER



Screens will not stop children, anyone, or anything from falling out window or door.

Keep children and objects away from open windows or doors.

Falling from window or door opening may result in serious injury or death. DO NOT leave openings unattended when children are present.

⚠ WARNING

Weight of window and door unit(s) will vary. Use a reasonable number of people with sufficient strength to lift, carry, and install window or door unit(s) and accessories. Always consider site conditions and use appropriate techniques when installing.

TOOLS REQUIRED

- Framing square
- 3’ level
- 6’ level
- Tape measure
- Caulking gun
- Drill and driver bits
- Utility Knife

MATERIALS NEEDED (SUPPLIED BY OTHERS)

- Non-compressible (plastic) shims in various thicknesses
- Silicone Sealant for Window/Door Installation
- Sill Pan (recommended)
- 4” (minimum) Self-Adhesive Flashing (SAF) tape
- Batt insulation or Low Expanding Foam
- 1-1/2” (minimum) Non-corrosive Screws
  [or fastener length long enough for a 1” min. embedment]

1 PRE-INSTALLATION

It is recommended to conduct a pre-installation inspection to ensure successful installation of your new SPW product.

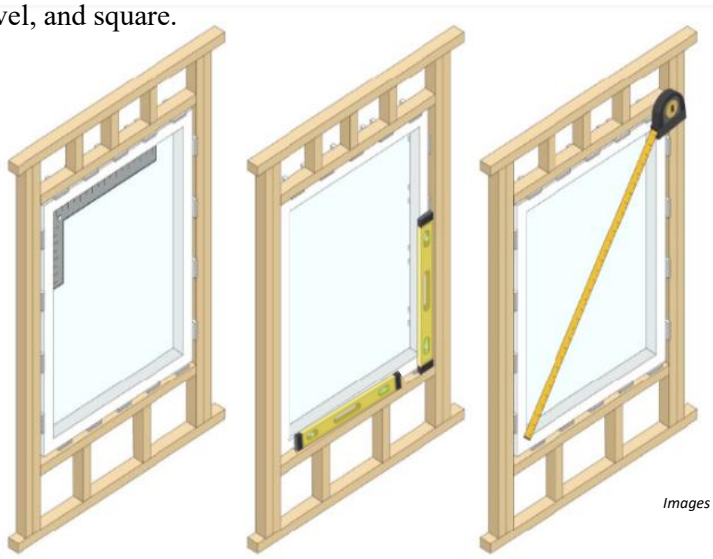
1.1 Ensure the area is accessible and safe for maneuvering.

1.2 Ensure you have all necessary tools and adequate materials as noted on above.

1.3 Remove packaging materials and inspect units for damage and/or shortages. Immediately contact your dealer informing them of any damage or issues with received product.

1.4 Check size (width and height), plumb, levelness, and squareness of the rough opening (See Figure 1). The rough opening should allow a minimum 3/8” shim space at head, sill, and jambs. The sill **MUST** be flat, level, and capable of supporting the weight of the unit. Make all necessary adjustments to ensure the rough opening is plumb, level, and square.

Figure 1



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1.5 Check/measure the unit size to ensure each unit will fit its designated rough opening.

1.6 To assist in ensuring units are installed square in the opening, keep units closed and locked during installation.

2 Preparing The Rough Opening

Note: SPW recommends the InstallationMaster A1 flashing method when installing units with nail fins. This method is used when the weather resistant barrier (WRB) is applied before the unit, and the jamb flashing is applied over the nail fin.

Note: Minimum 4” flashing may be used when applying self-adhesive flashing (SAF) tape.

2.1 Cut the WRB that covers the window opening in a modified I-Cut and fold and attach to the interior (See Figure 2).

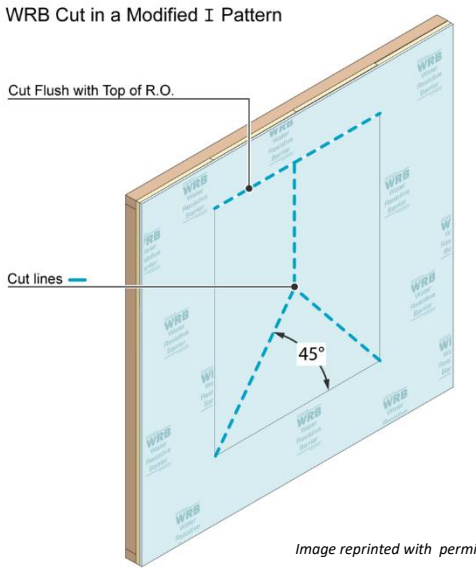


Figure 2

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2.2 Cut the head of the WRB with 45° diagonal cut at each end and tape in place to be folded down after unit is installed and flashed (See Figure 3).

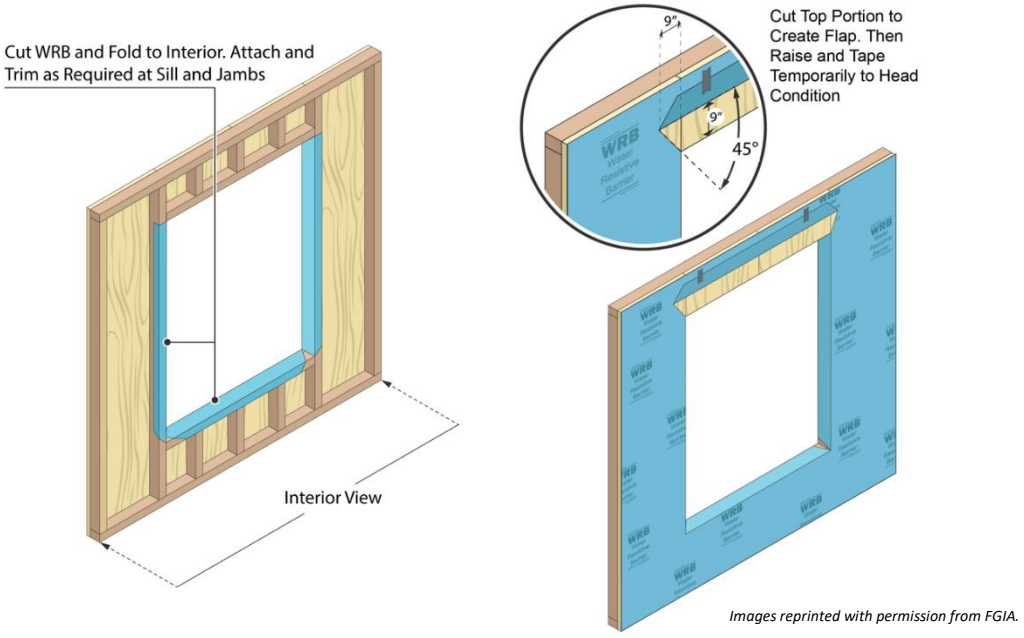


Figure 3

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2.3 Prepare and cut the Self-Adhesive Flashing (SAF) tape for installation. To save time and develop an efficient installation process, the flashing material may be cut in advance, using the formulas in the following table (see Figure 4).

Sill Flashing	= ROW + (2 x Flashing Width)
Jamb Flashing	= ROH + (2 x Flashing Width) – 1”
Head Flashing	= ROW + (2 x Flashing Width) + 2”
Legend	
RO = Rough Opening ROH = Rough Opening Vertical Height ROW = Rough Opening Horizontal Width	

Figure 4

2.4 Using SAF tape apply the horizontal sill flashing level with the top edge of the rough opening frame. Each end of the sill flashing must extend beyond the rough opening and each side by the total width of the flashing tape being used (see Figure 5).

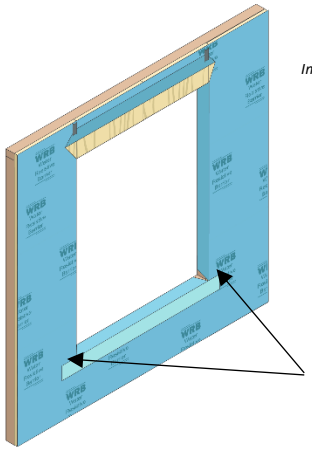


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This dimension is dependent on the width of SAF tape being used (i.e. – 4” SAF tape would extend 4” on each side).

Figure 5

2.5 Apply the sill pan flashing using SAF tape cut to the width of the sill plate and 6” up each side (see Figure 6). Flashing tape must be wide enough to cover the sill to at least the depth of the window plus at least 2” which shall lap onto the face of the drainage plane.

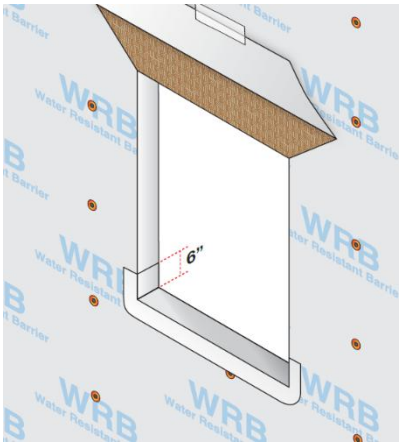


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Figure 6

Use of a rigid sill pan is recommended but not required. See page 9 for the use and installation of a rigid sill pan.

3.1 Pre-drill 1/8” holes through the nail fin to prepare for installing the window into the rough opening. The holes should be drilled through the indentation that runs the length of the nail fin. The holes should be 2”-4” from each corner and 10” – 12” on center thereafter. Inspect and clean the back side (interior surface) of the nail fin before proceeding to the next step.

⚠ **IMPORTANT**: **Any damage or missing sections of the integral nail fin must be reported to the dealer and the unit not installed.**

3.2 Apply a continuous 3/8” nominal bead of sealant on the back side (interior surface) of the nail fin at the head and both jambs (sides), ensuring the sealant is applied in line with any pre-drilled holes (see Figure 7). Alternatively, the sealant may be applied to the wall surface as opposed to the back of the nail fin. However, it is critical that the sealant is applied in line with where the nail fin will be pressed against the exterior wall when installed.

Figure 7

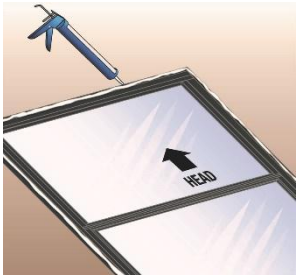


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3.3 Apply a discontinuous 3/8” nominal bead of sealant along the back side (interior surface) of the sill nail fin, leaving two 2” voids within 4” of each jamb (see Figure 8).

Figure 8

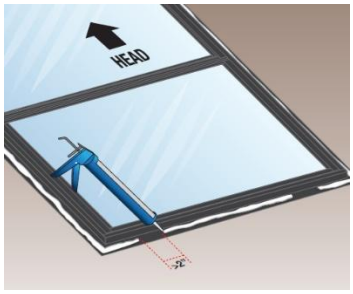


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3.4 Apply non-compressible (plastic) shims, minimum 1/8” thick, along the rough opening sill before setting the window into the opening (see Figure 11 on page 7). Thicker shims may be necessary to ensure a level sill. This will allow for any moisture that gets into the rough opening to weep to the exterior.

3.5 With the sill shims in place, immediately center and set the window in the opening (see Figure 9) ensuring squeeze out of the sealant under the flange (see Figure 10).

Figure 9



Figure 10



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3.6 Using minimum 1-1/2” non-corrosive screw, fasten the unit through the pre-drilled hole (Step 3.1) in either upper corner temporarily holding the unit in place.

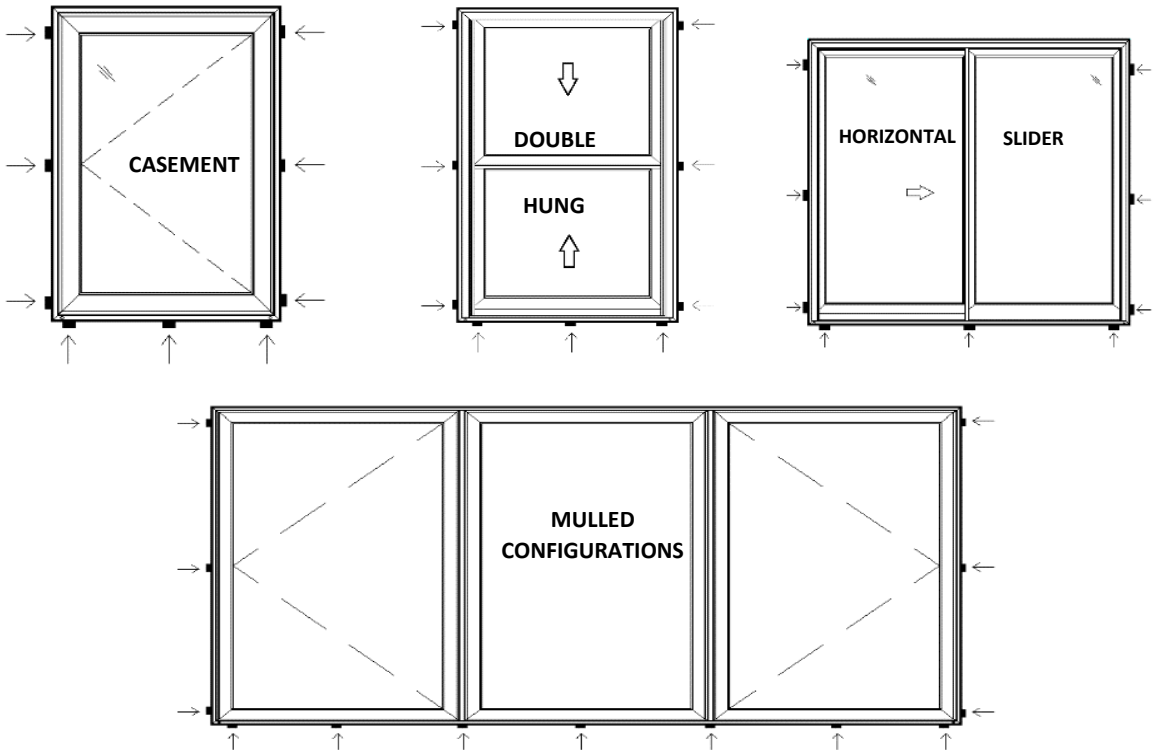
Note: The length of fastener used must be long enough to ensure a minimum 1” embedment into the structure.

3.7 Using a tape measure and level, check the unit for square, straight, and level, shimming as necessary (see Figure 11 for proper shimming locations). Once the unit is square, straight, and level, place a screw in the opposite corner of the unit. Continue fastening the unit in place using screws in all the pre-drilled hole locations.

Figure 11

SHIMMING LOCATIONS

- Shims should be placed at each corner no more than 1-2” from corner, 12” on center thereafter.
- Shim as needed to achieve level and straight jambs. The number of shims needed will vary by size.
- Shims **MUST** be placed at the checkrail of any hung unit.
- Shims **MUST** be placed at the sill under any mull post or joint location.
- Shims MUST be placed at any through frame fastening locations.



Refer to section S2 on page 10 for additional steps and fastening of units requiring installation straps.

3.8 Apply SAF over each side jamb nail fin. Position the top end of the flashing tape 2” above the rough opening, such that the head flashing (applied in the next step) will lap over the jamb flashing by at least 2” (see Figure 12). Use firm pressure (use of J-Roller is recommended) to apply the SAF tape to promote a consistent seal to the window flange and exterior wall.

Figure 12



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3.9 Apply SAF across the head nail fin and rough opening. Cut and position the head flashing to the width of the rough opening and extending 1” over each outside edge of the side jamb flashing already applied (see Figure 13).

Figure 13



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3.10 Fold down the head flap of the WRB previously cut and taped in place in Step 2.2. Allow the WRB to lay flat over the head flashing. Using sheathing tape or SAF tape, apply the tape over the diagonal cuts made in the WRB (see Figure 14).

Figure 14

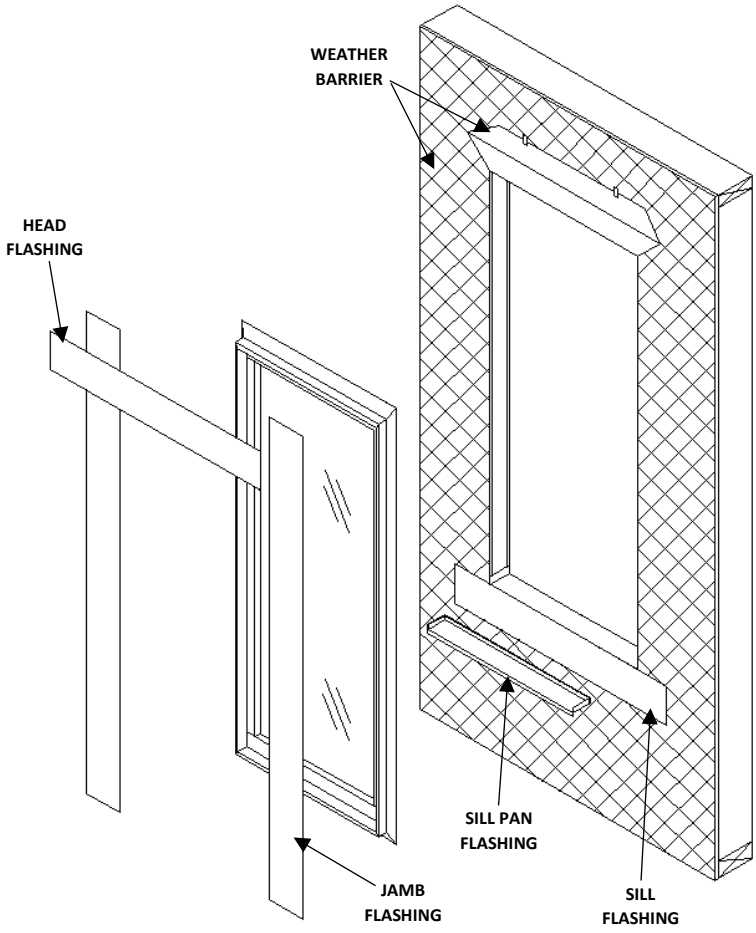


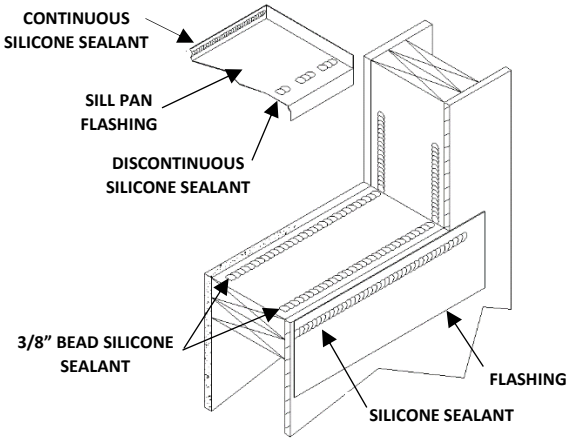
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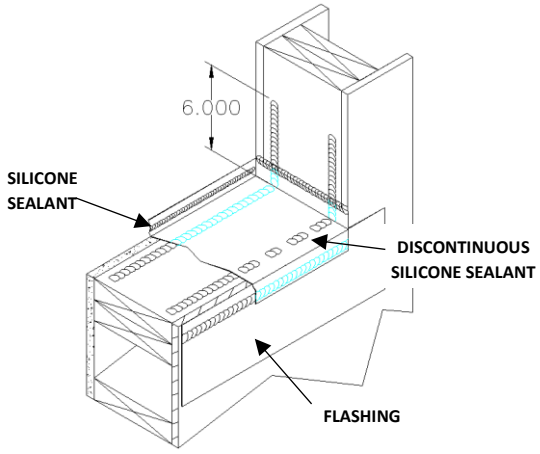
S1 Instruction Supplement - Formed Sill Pan

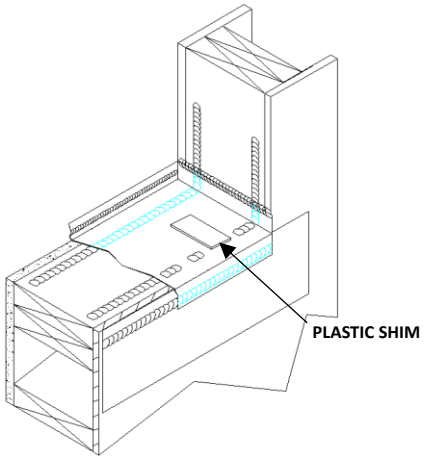
Note: Following the sealant instructions is strongly advised. Anything other than a discontinuous bead of sealant (as shown) at the front of the sill pan could allow water to become trapped, resulting in potential water damage. Such action will void the manufacturer's warranty.

Note: When setting a window or door into the sill pan, it is recommended that the unit be set onto 1/8" minimum non-compressible shims. This will allow for any water collected in the sill pan to weep to the exterior. Space shims 1" to 2" in from each end of the sill pan, and 12" on center thereafter as needed.









S2 Instruction Supplement – Installation Straps

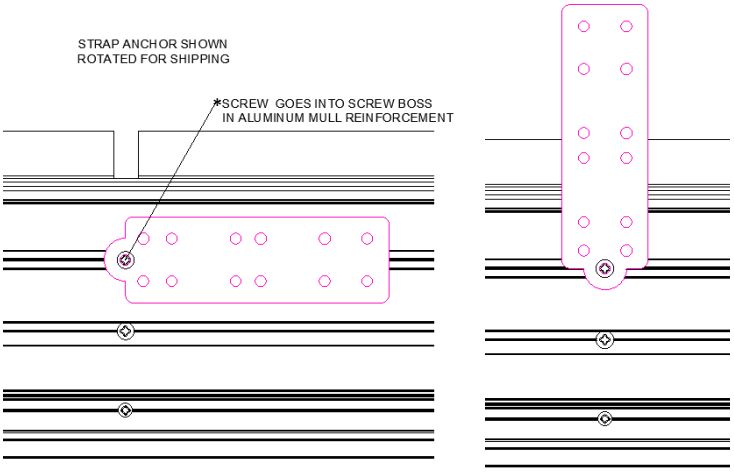
Some units may require the use of installation straps in combination with the nail fin install to meet a specific performance rating. The installation straps will ship installed from the factory as required.

Prior to installing, the installation straps must be repositioned on the jambs so they may be fastened to the rough opening. Depending on the rough opening depth, installation straps may be fastened flat to the opening or bent and fastened to the interior of the opening.

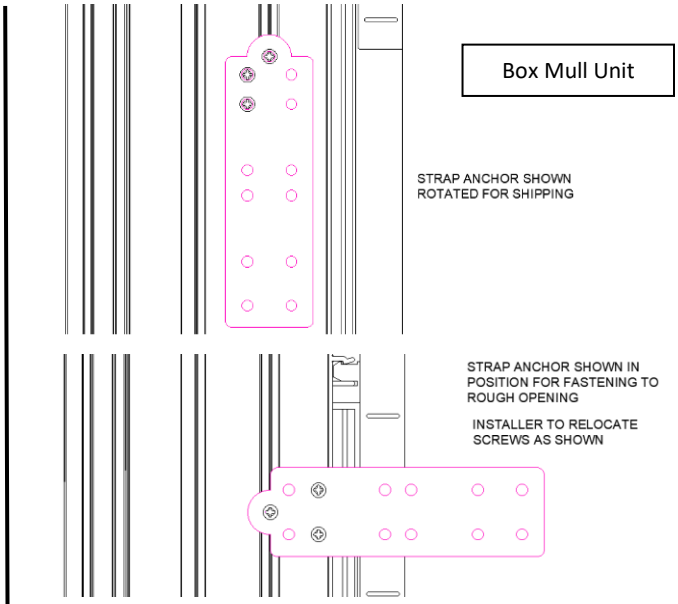
Straps must be fastened to the opening using a minimum of two fasteners, preferably in diagonal pre-punched hole locations.

1 Reposition the factory applied installation strap on the jamb by rotating it so it is perpendicular to the jamb.
- *On units with strap on either side of a box mull or in the middle of the jamb, remove the two bottom screws, loosen the screw at the radius head*, rotate the strap, tighten the screw at the radius head, and insert the remaining two screws in the pre-punched screw holes.*

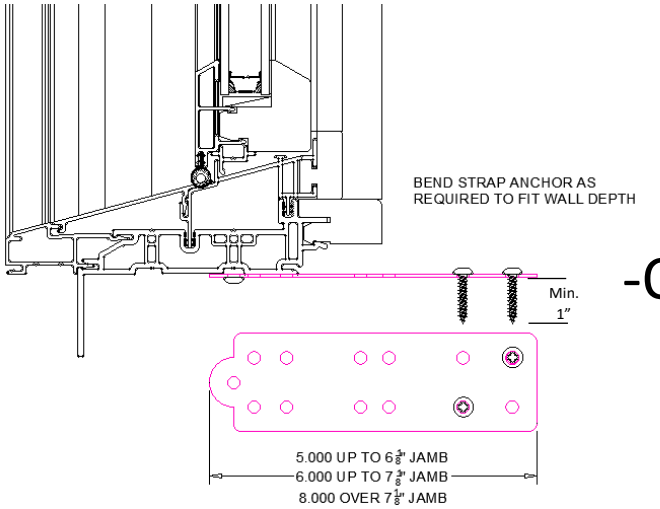
Common Mull Unit



Box Mull Unit



2 Using #8 wood screws, fasten the installation strap to the rough opening. The screw length used must achieve a minimum 1" embedment. Depending on wall depth the installation strap may be left flat or bent to fasten to the rough opening.



-OR-

