

SERIES 5600

SLOPED GLAZED CURTAIN WALL

INSTALLATION INSTRUCTIONS



Part NO. Y308

April 2016

WHERE WINDOWS ARE JUST THE BEGINNING®



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Minimizing Condensation

Note: Please reference EFCO's "Understanding Condensation" brochure which can be obtained through your EFCO representative.

Condensation will form on any surface when unfavorable conditions (interior temperature and relative humidity and exterior temperature) are present. When the formation of excessive condensation is a concern, it is highly recommended that a design professional is utilized to perform an analysis of the shop drawings to recommend the best possible installation methods. Please contact your EFCO representative for information on EFCO's Thermal Analysis Services.

Many current installation practices lead to an increase in the possibility of the formation of condensation. Though not all inclusive, the list of examples below illustrates conditions under which condensation is likely to occur:

1. Bridging system thermal break with non-thermally broken metal flashing or lintels that are exposed to the exterior
2. System exposure to cold air cavities
3. Interior relative humidity levels not maintained at recommended levels, see EFCO's "Understanding Condensation" brochure
4. Inadequate separation between system and surrounding condition at perimeter
5. Product combinations during the shop drawing stage that result in bridging thermal breaks of one or all products involved

Section I: General Notes & Guidelines

- I. **HANDLING / STORING / PROTECTING ALUMINUM** - The following precautions are recommended to assure early acceptance of your products and workmanship.
 - A. **HANDLE CAREFULLY** - Store with adequate separation between components so the material will not rub together. Store material off the ground. Protect materials against weather elements and other construction trades.
 - B. **KEEP MATERIAL AWAY FROM WATER, MUD, AND SPRAY** - Prevent cement, plaster, and other materials from contacting with and damaging the finish. Do not allow moisture to be trapped between the finished surface and the wrapping material.
 - C. **PROTECT MATERIALS AFTER ERECTION** - Wrap or erect screens with plastic sheeting over material. Cement, plaster, terrazzo, and other alkaline materials are very harmful to the finish and are to be removed with soap and water before hardening. Under no circumstances should these materials be allowed to dry or permanent staining will occur.

- II. **GENERAL GUIDELINES** - The following practices are recommended for all installations:
 - A. **REVIEW APPROVED SHOP DRAWINGS** – Become thoroughly familiar with the project. Shop drawings govern when conflicting information exists in these installation instructions.
 - B. **INSTALL ALL FRAMING MATERIAL PLUMB, LEVEL, AND TRUE** – Proper alignment and relationships to benchmarks and column centerlines, as established by the architectural drawings and the general contractor, must be maintained.
 - C. The sequence of erection should be coordinated with the project superintendent to prevent delays and minimize the risk of material damage.
Note: If preset anchors are required, coordinate and supervise anchor placement with the general contractor.
 - D. Verify that all job site conditions and accompanying substrates receiving the installation are in accordance with the contract documents. If deviations occur, notification must be given **IN WRITING** to the general contractor and differences resolved before proceeding further with the installation in the questionable area.
 - E. Prevent all aluminum from coming in direct contact with masonry or dissimilar materials by means of an appropriate primer.

Section I: General Notes & Guidelines

- F. Follow EFCO framing installation and glazing instructions.
- G. Verify contents of all material shipments received upon arrival. Verify quantity and correct finishes. **NOTIFY EFCO IMMEDIATELY OF ANY DISCREPANCIES OR DAMAGE, THAT MAY HAVE OCCURRED.**
- H. Throughout these instructions the term "**SEALANT**" will appear. For the purposes of these instructions, sealant is to be defined as the following:

SEALANT - A weather resistant, gunnable liquid filler which when cured provides a resilient, flexible ($\pm 50\%$ movement capability) air and water seal between similar and dissimilar materials.

All sealant must meet **ASTM C 920, CLASS 50**.

BUTYL SEALANT- A non-skinning, non-hardening material (**NAAMM Reference Standard 5C-1**)

NOTE: All sealant must be compatible with all surfaces where adhesion is required, including other sealant surfaces. All frame surfaces should be clean, dry, dust, and frost free. If a primer is required, it must be applied to clean surfaces. All perimeter substrates shall be clean and properly treated to receive sealant.

This system is designed and has been tested to utilize butyl or silicone sealants at all internal joineries, i.e., joint plugs, gasket intersections, etc.

Regardless of the sealant used, the customer should contact the sealant manufacturer to determine compatibility and adhesion. Follow sealant manufacturer's proper application procedures and quality assurance programs for weather sealing.

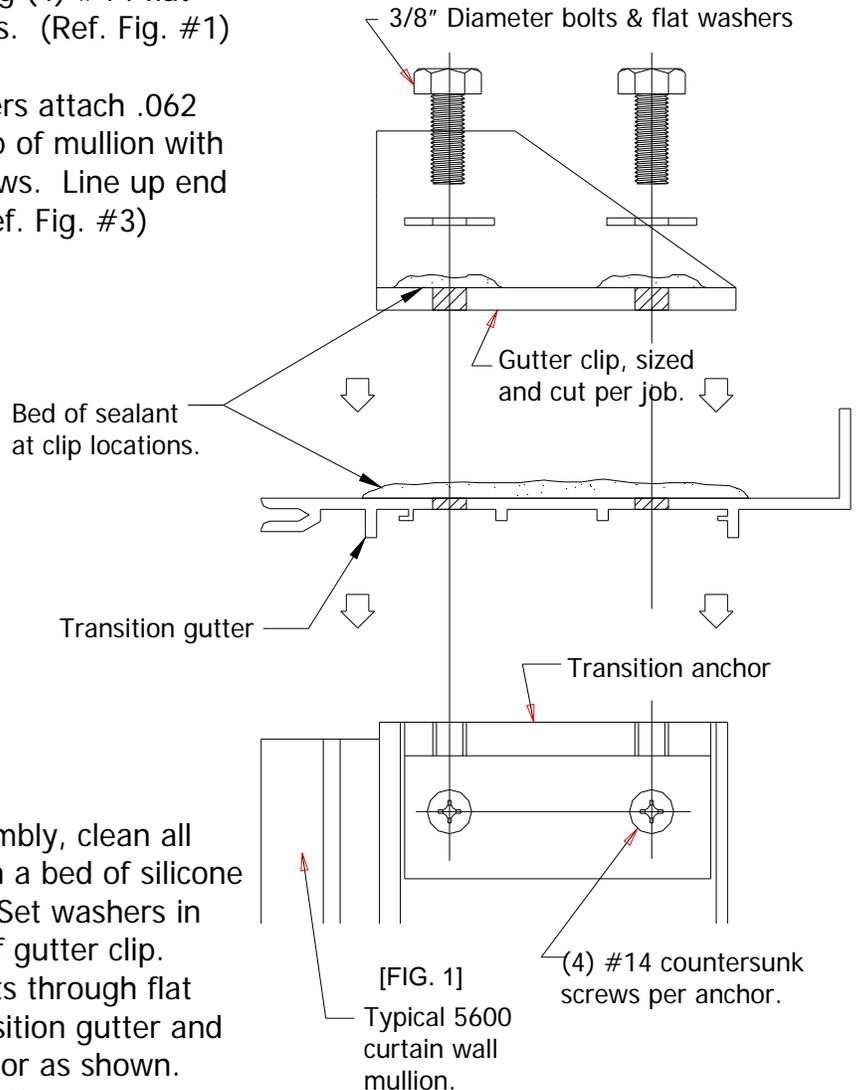
Maintain caulk joints as shown in the approved shop drawings. Unless specified otherwise, most sealant manufacturers recommend a 3/8" minimum perimeter caulk joint. A 3/4" minimum joint is recommended at the head condition to accommodate thermal expansion and contraction.

Anchoring surfaces of perimeter construction must be level and plumb within the adjustable limits of the head, jamb, and sill framing.

Section II: Gutter and Mullion Assembly

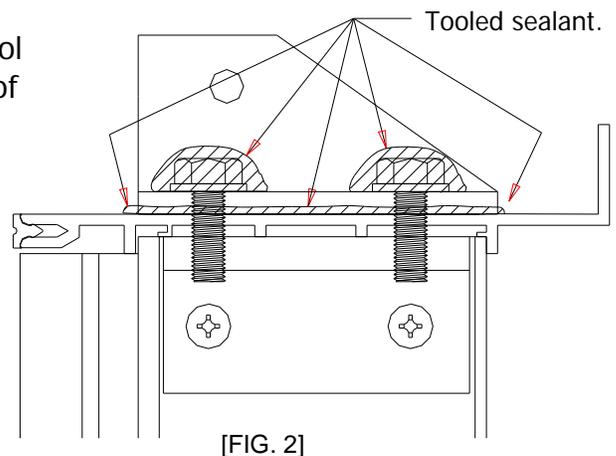
Gutter and Mullion Assembly

- A.) Insert the transition anchor in top of 5600 wall vertical mullion using (4) #14 flat head countersunk screws. (Ref. Fig. #1)
- B.) At extreme jamb members attach .062 aluminum end cap to top of mullion with (2) #8 countersunk screws. Line up end cap as shown below. (Ref. Fig. #3)



- C.) Prior to setting clip assembly, clean all metal surfaces and lay in a bed of silicone sealant at clip location. Set washers in silicone sealant on top of gutter clip. Insert 3/8" diameter bolts through flat washer, gutter clip, transition gutter and secure to transition anchor as shown. (Ref. Fig. #1 & #2)

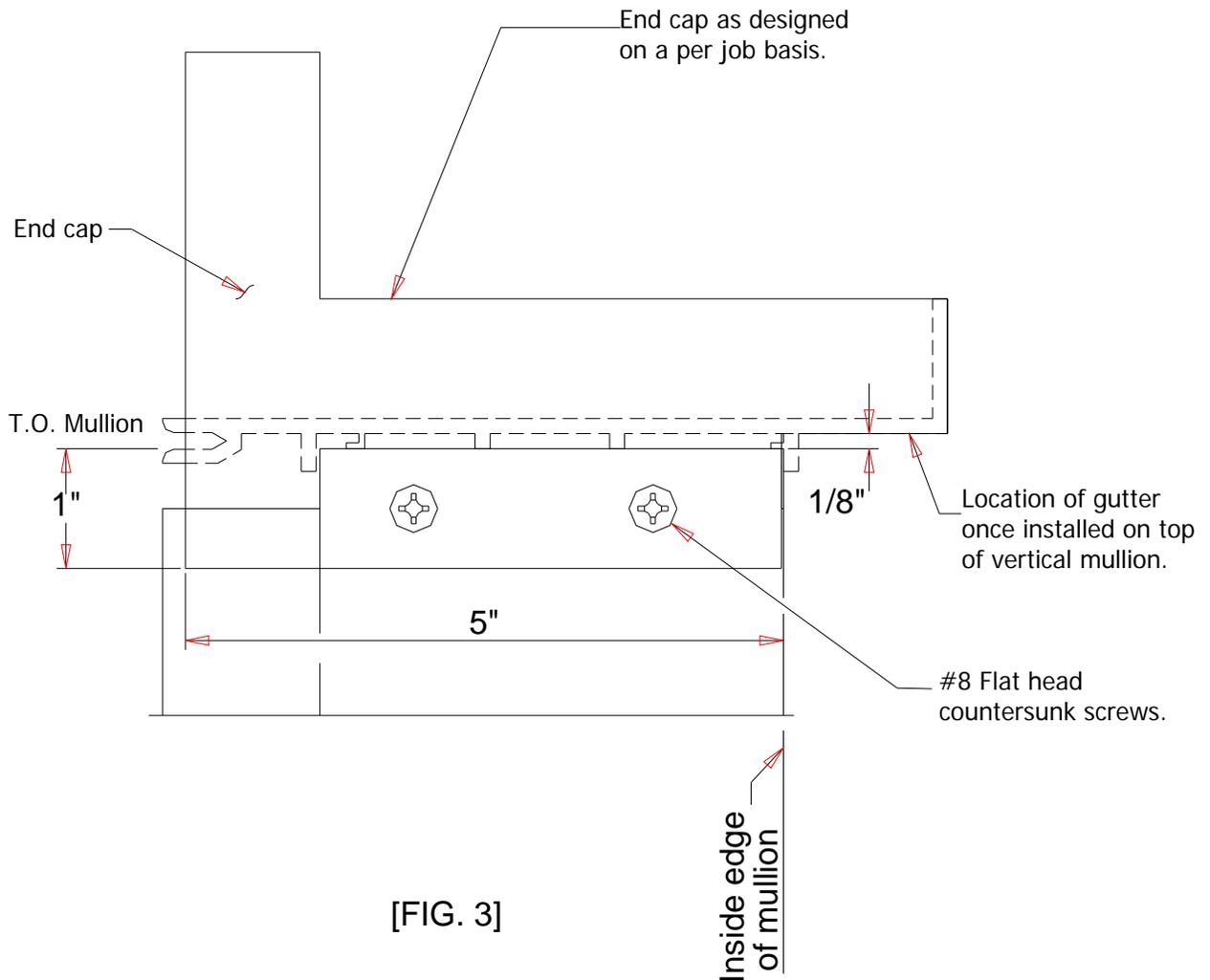
- D.) Seal over bolt heads & washers then tool excess sealant around perimeter edge of gutter clip to insure proper seal.



Note: Primer may be needed on mill finish material, consult sealant manufacturer.

Section III: End Cap Installation

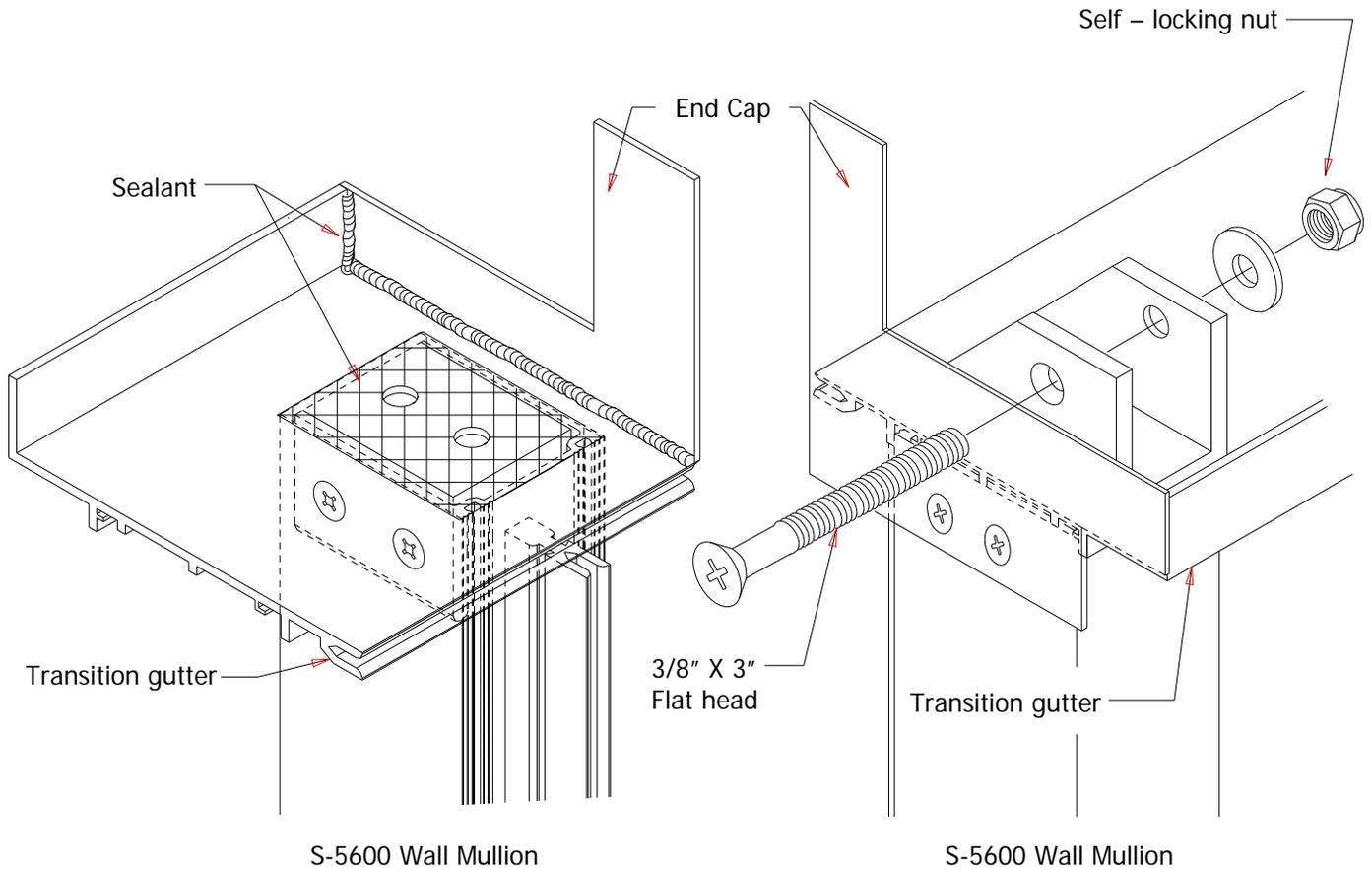
End Cap Installation



- A.) Seal joint between gutter and end cap as shown. When jamb condition is exposed (end wall condition), use a 3/8" diameter X 3" long countersunk bolt to secure the lower rafter clip to the gutter clip. This will allow for overlap of flashing as designed.

Section III: End Cap Installation

End Cap Installation



[FIG. 4]

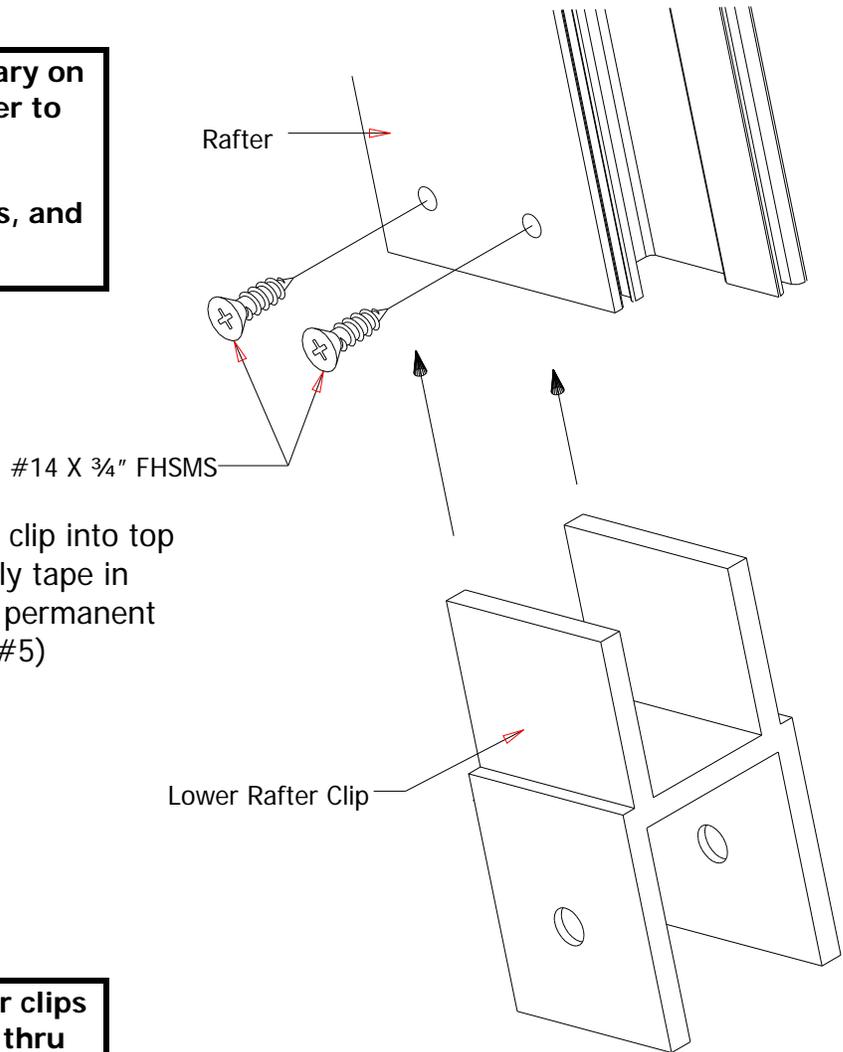
Note: Refer to typical S-5600 Wall Installation Instructions for procedures regarding installation of curtain wall above or below slope glazing system.

Section IV: Rafter and Purlin Assembly

Rafter and Purlin Assembly

- A.) Slide lower rafter clip in bottom end of rafter and attach with (4) #14 countersunk screws. (Ref. Fig. #5)

Note: Anchor conditions vary on a per job basis. Refer to "APPROVED" shop drawings for actual anchoring conditions, and attach accordingly.



- B.) Insert extruded anchor clip into top of rafter and temporarily tape in position until ready for permanent attachment. (Ref. Fig. #5)

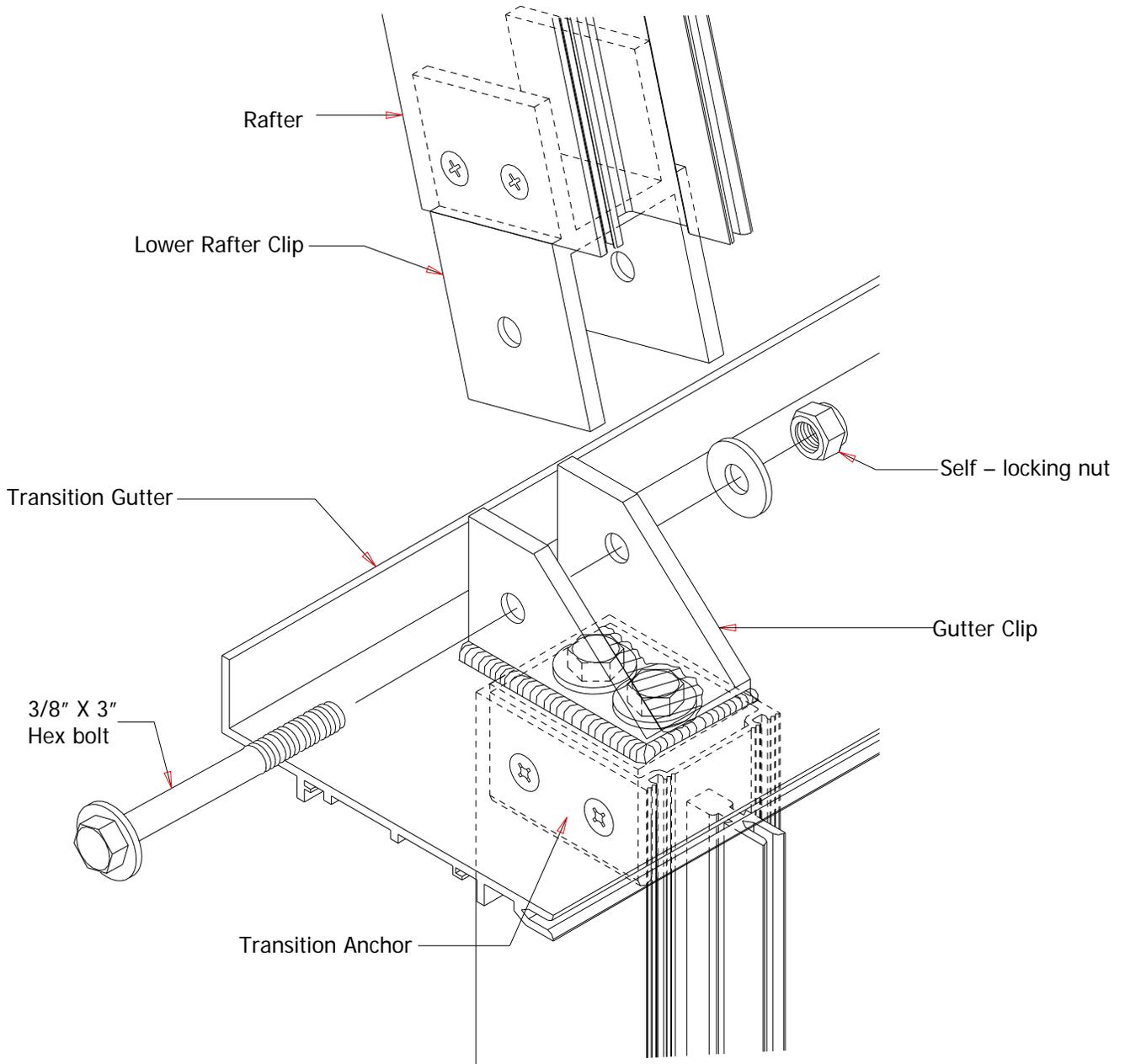
Note: Do not attach anchor clips to top of rafter with thru bolts until the rafter is secured in final position.

[FIG. 5]

Section IV: Rafter and Purlin Assembly

Rafter and Purlin Assembly

- C.) Slide rafter and lower rafter clip assembly over gutter clip and align pre-fabricated 3/8" through bolt holes, install 3/8" X 3" hex bolt, washers & self-locking nuts as shown in figure #6



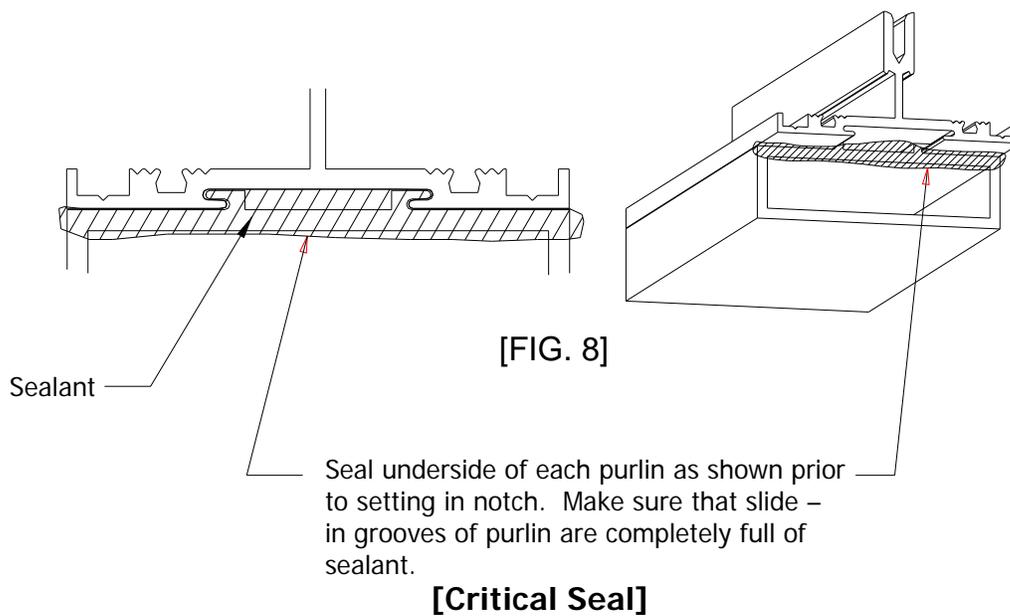
[FIG. 6]

Section V: Purlin Assembly

Purlin Assembly

Note: Slide purlin over stiffener tube where applicable prior to sealing.

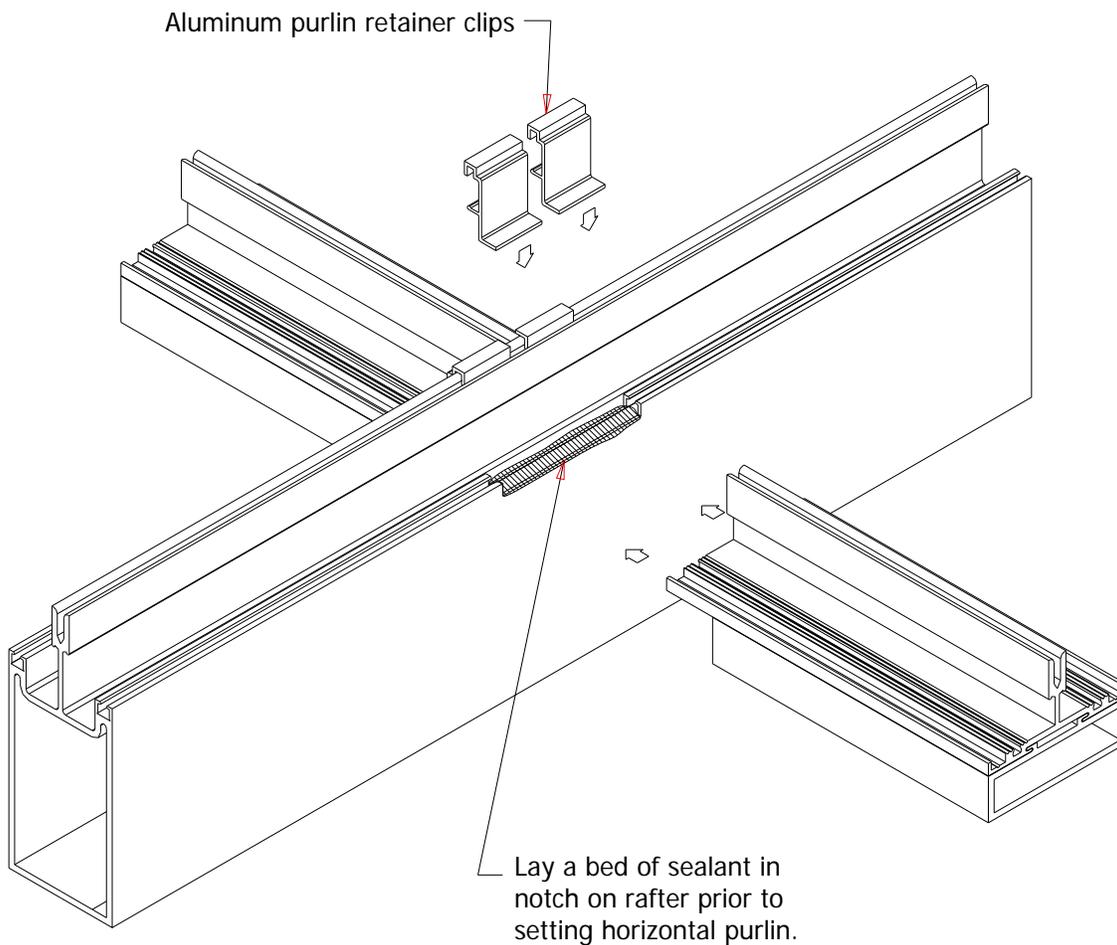
- A.) Install all horizontal purlins at head, intermediates and transition, being careful to seal as indicated. (Ref. Figs. #8, 9, 10, 11, & 12)



Section V: Purlin Assembly

Purlin Assembly

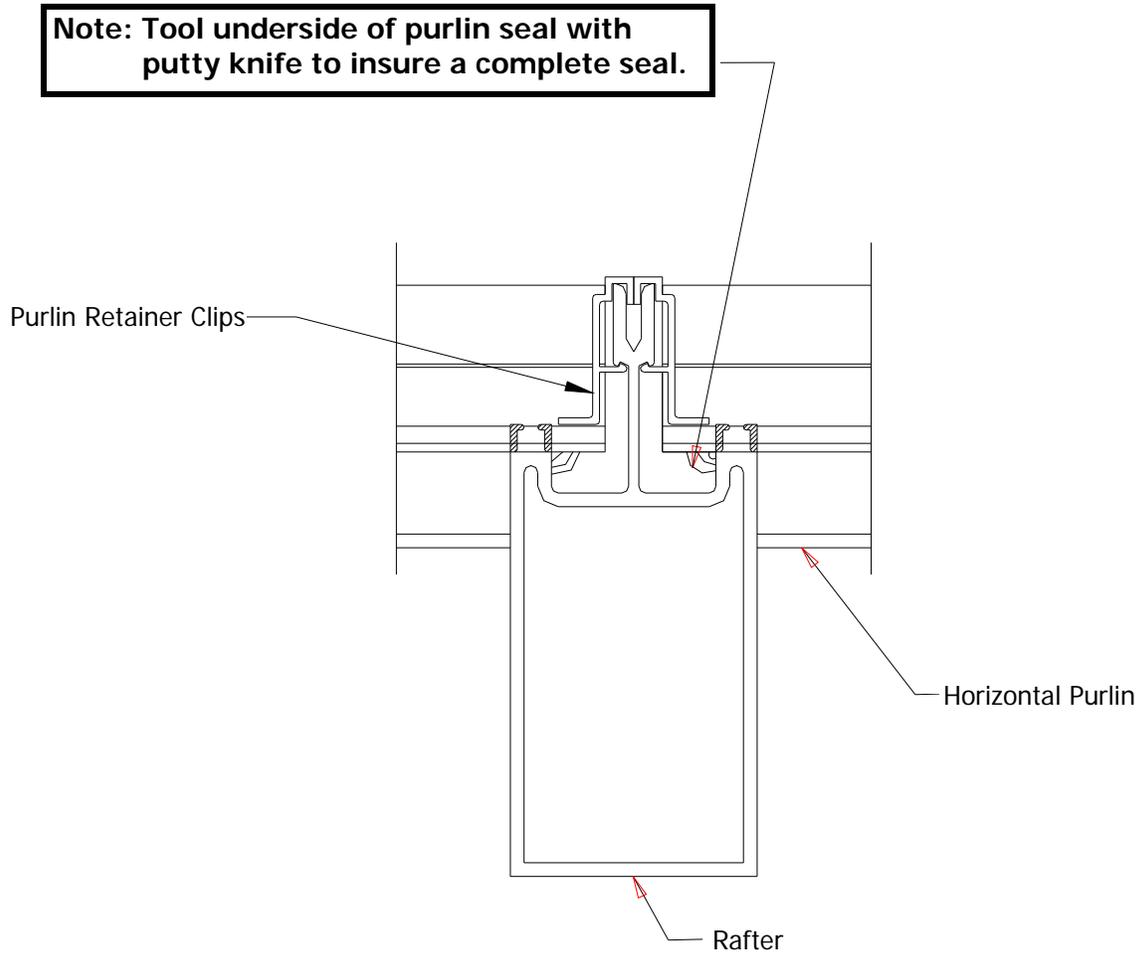
- B.) Snap-on purlin retainer clips at each end of purlin as shown. (Ref. Figs. #9 & 10)



[FIG. 9]

Section V: Purlin Assembly

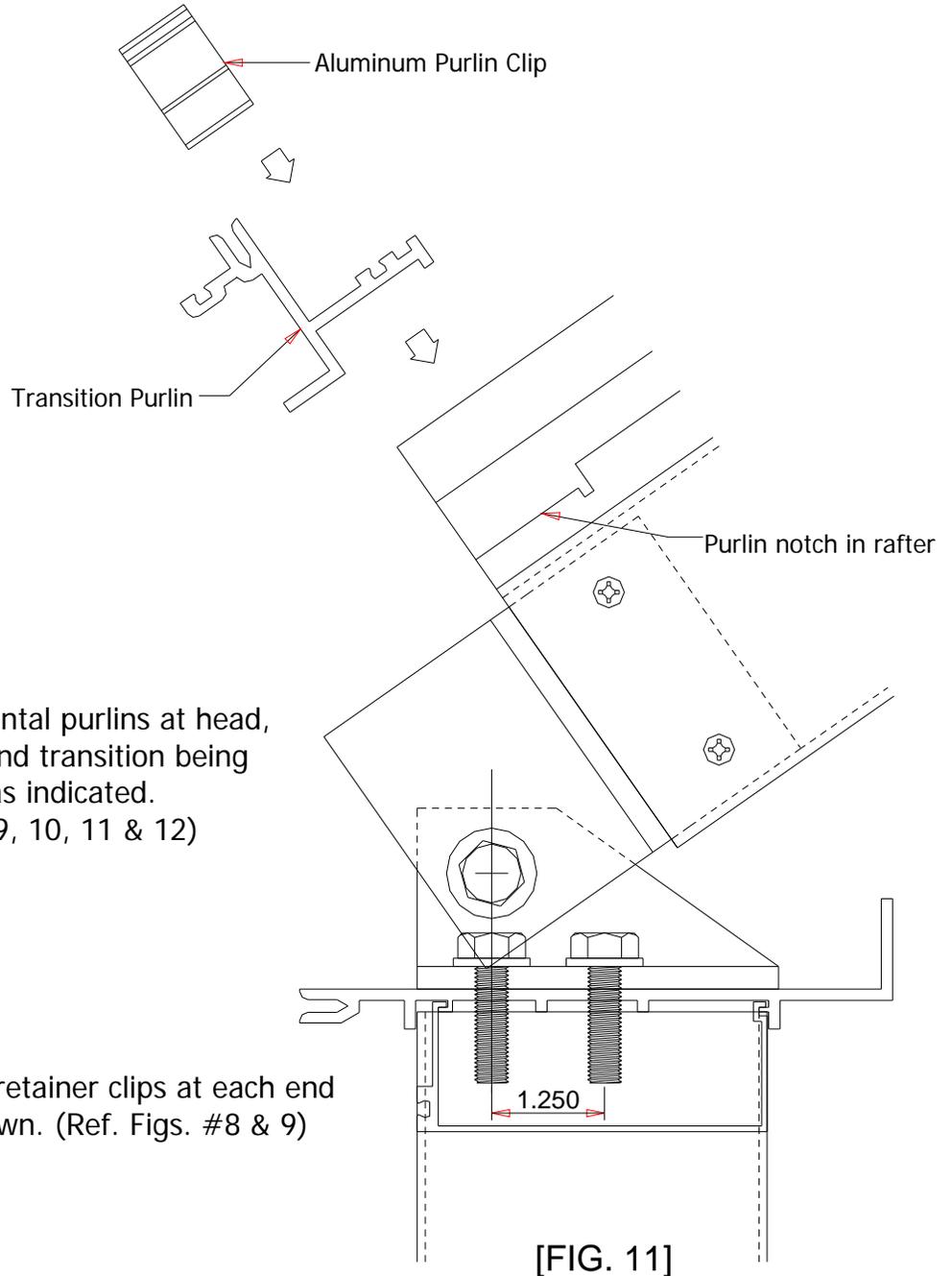
Purlin Assembly



[FIG. 10]

Section V: Purlin Assembly

Purlin Assembly



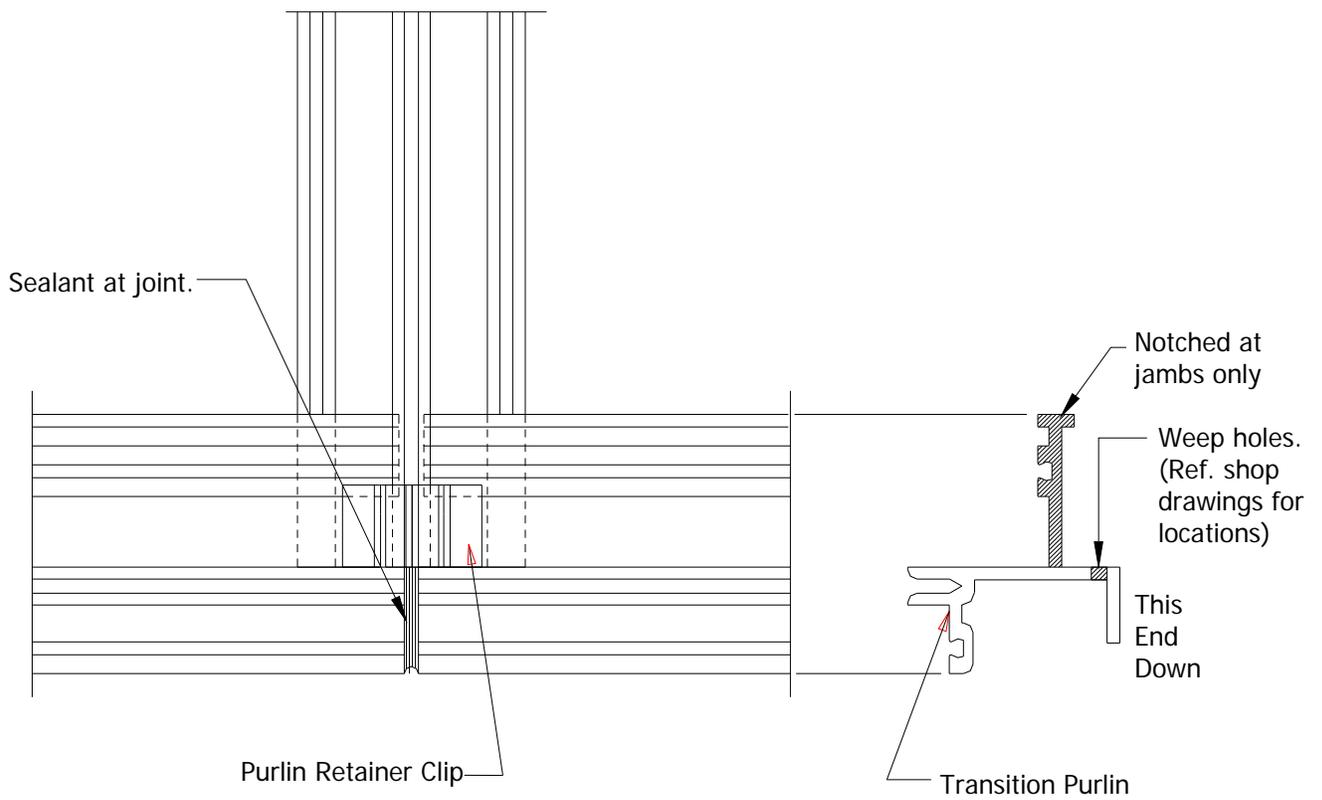
- C.) Install all horizontal purlins at head, intermediates and transition being careful to seal as indicated. (Ref. Figs. #8, 9, 10, 11 & 12)

- D.) Snap-on purlin retainer clips at each end of purlin as shown. (Ref. Figs. #8 & 9)

Note: Make sure the clips are secured in position in order to hold down purlins.

Section V: Purlin Assembly

Purlin Assembly

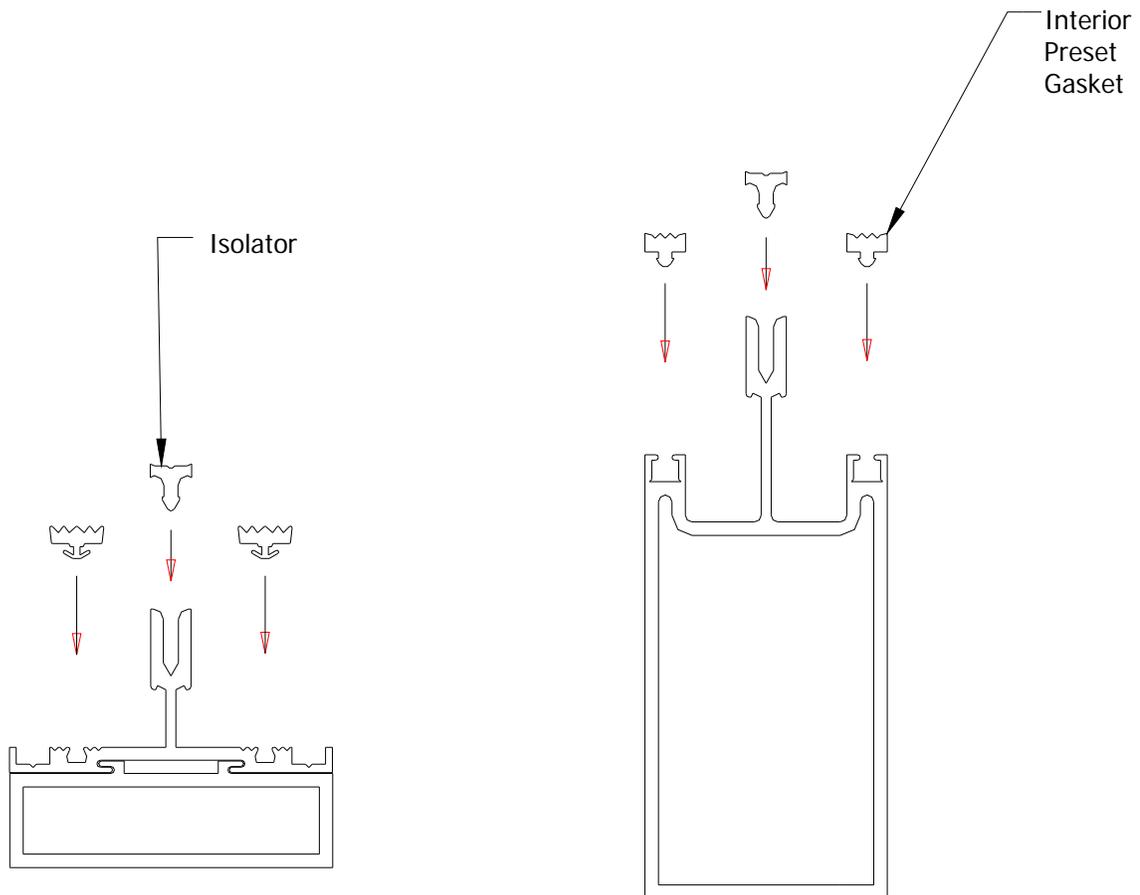


[FIG. 12]

Section VI: PVC Isolator & Gasket

PVC Isolator and Gasket Application

- A.) Insert appropriate gasket and isolator into rafter and purlins as shown. (Ref. Figs. 13A & 13B)
- B.) Gaskets can become somewhat deformed during storage in cartons. They should be removed from cartons and / or rolls several hours prior to use, lay flat or hang so as to allow for recovery of correct shape. Temperatures should be at least 50 degree to allow for recovery.
- C.) * DO NOT STRETCH GASKETS out of shape. Cut approximately 1/8" longer per foot and work from ends to the center. Then trim off excess. (Ref. Fig. 14)



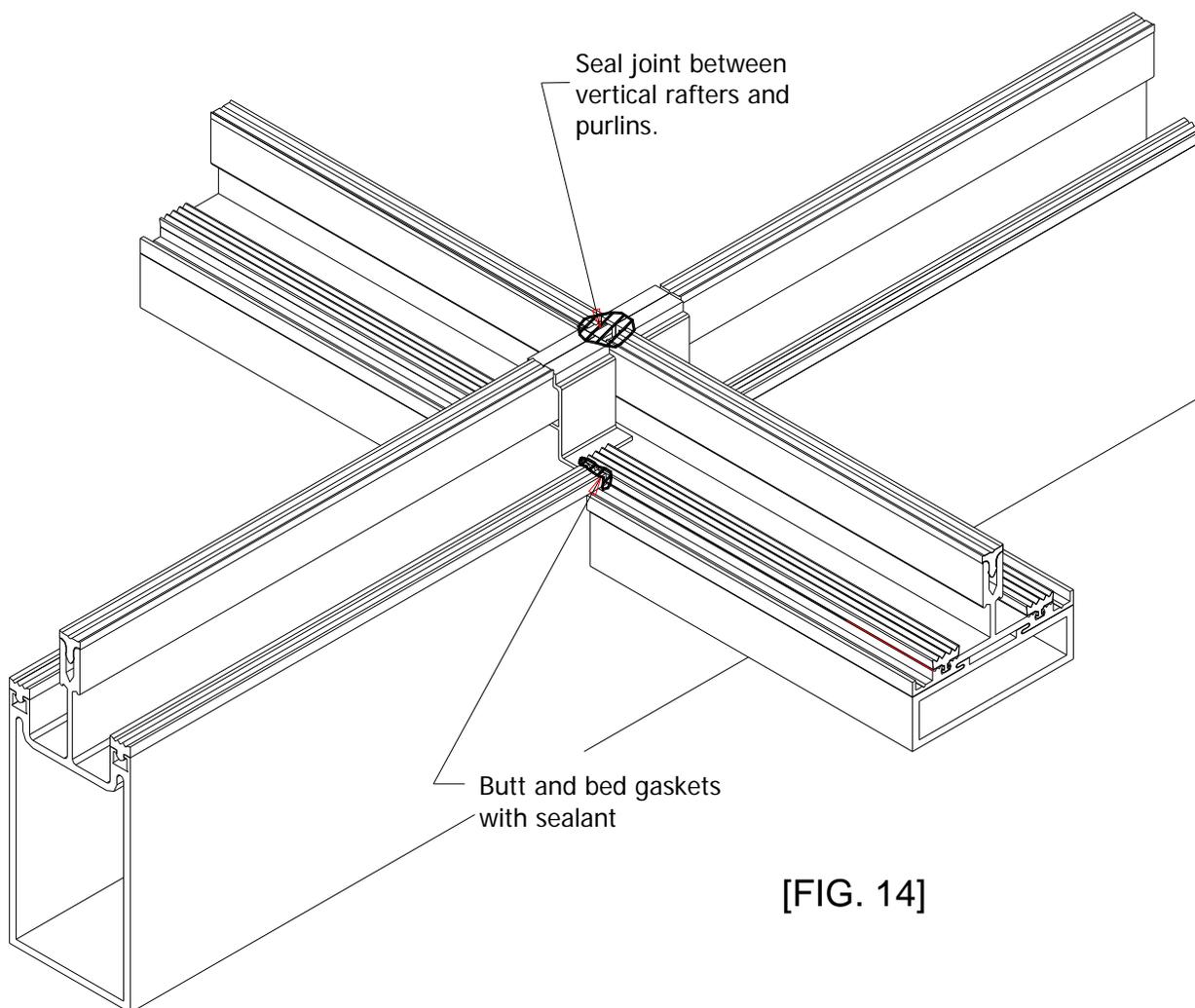
[FIG. 13B]

[FIG. 13A]

Section VI: PVC Isolator & Gasket

PVC Isolator and Gasket Application

- D.) Fit gaskets and isolators between purlin retainer clips. (Ref. Fig. #14)
- E.) Seal joints as indicated.



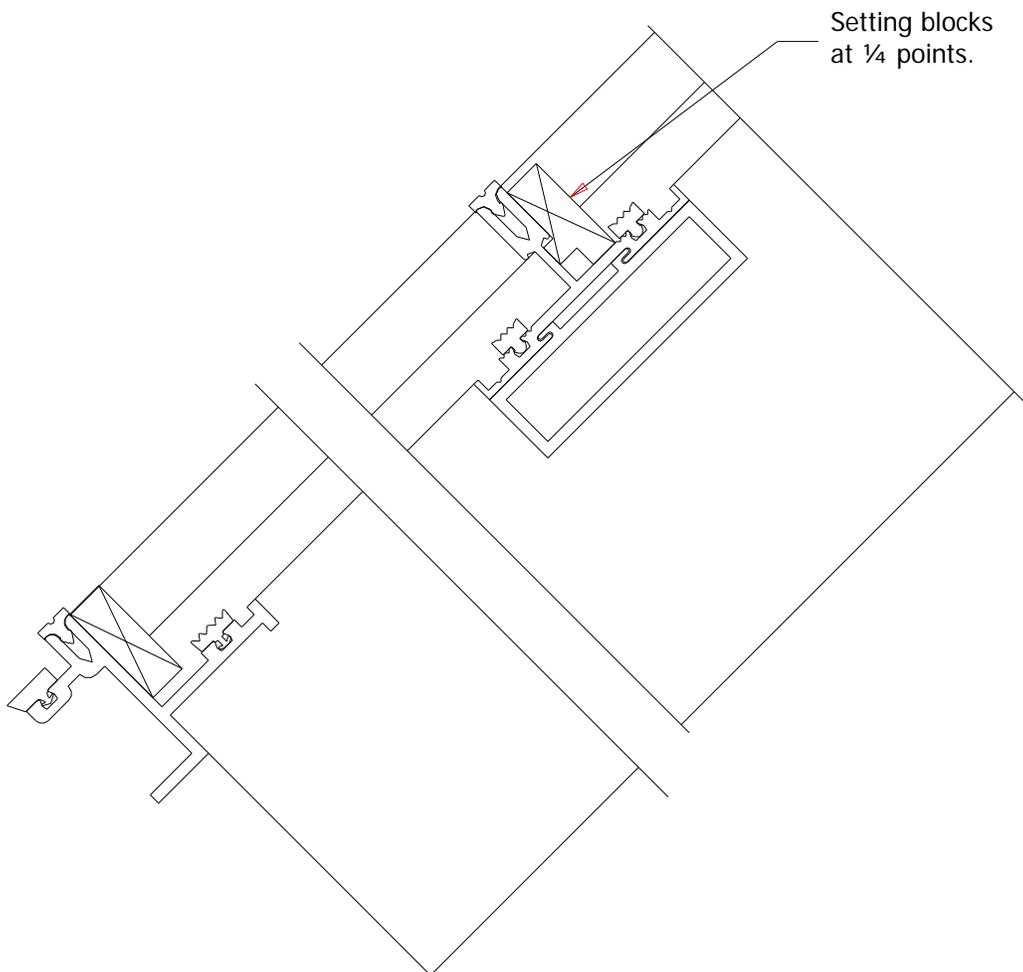
[FIG. 14]

Section VII: Glazing Instructions

Glazing Instructions

- A.) Place setting blocks in position at $\frac{1}{4}$ points in intermediate and transition purlins.
(Ref. Fig. #15)

Customer / Installer Note: EFCO setting blocks are typically 4" in length with different depths. If the glazing infill is "NOT BY EFCO" and glazing sizes are larger than 40 square feet, then the glazing details must be reviewed by the glazing manufacturer for proper setting block size.

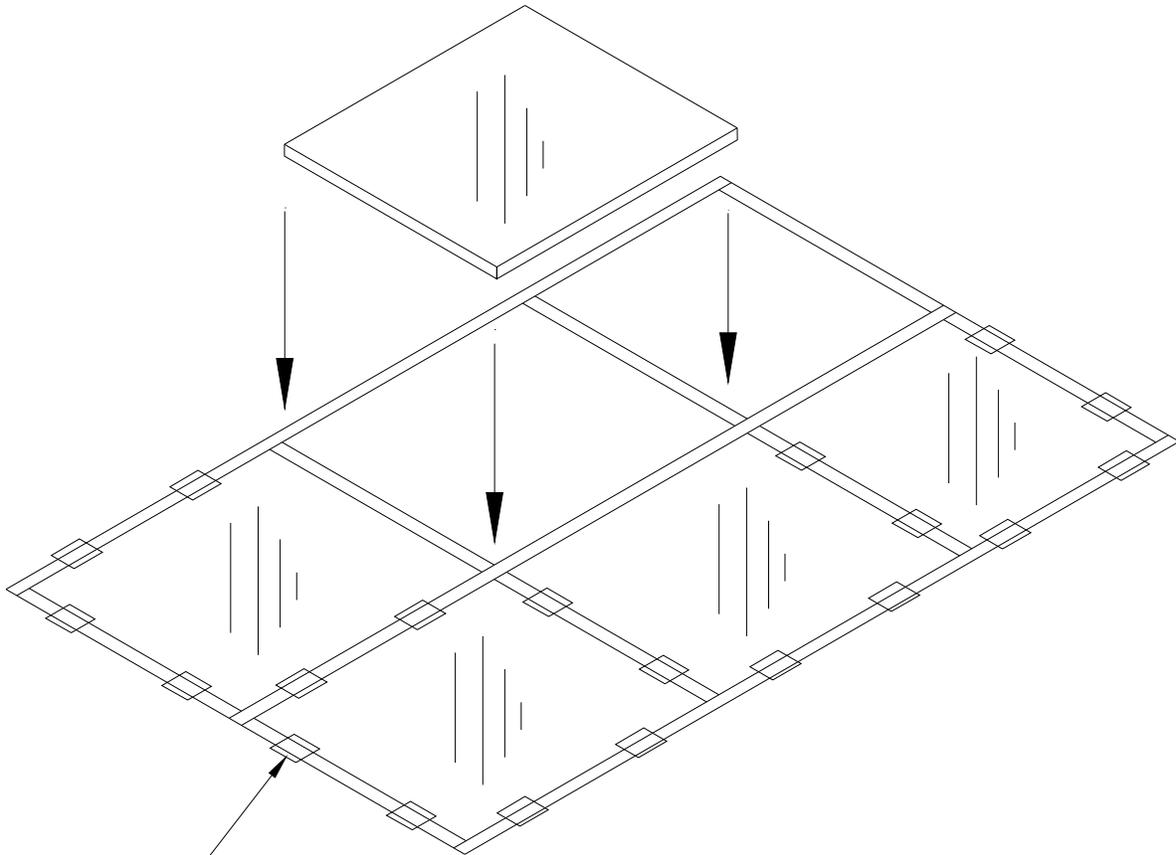


[FIG. 15]

Section VII: Glazing Instructions

Glazing Instructions

- B.) Set all glass units in position, being careful to center in D.L.O.
(Typical glass bite is $\frac{1}{2}$ " (Glass size = D.L.O. + 1"))



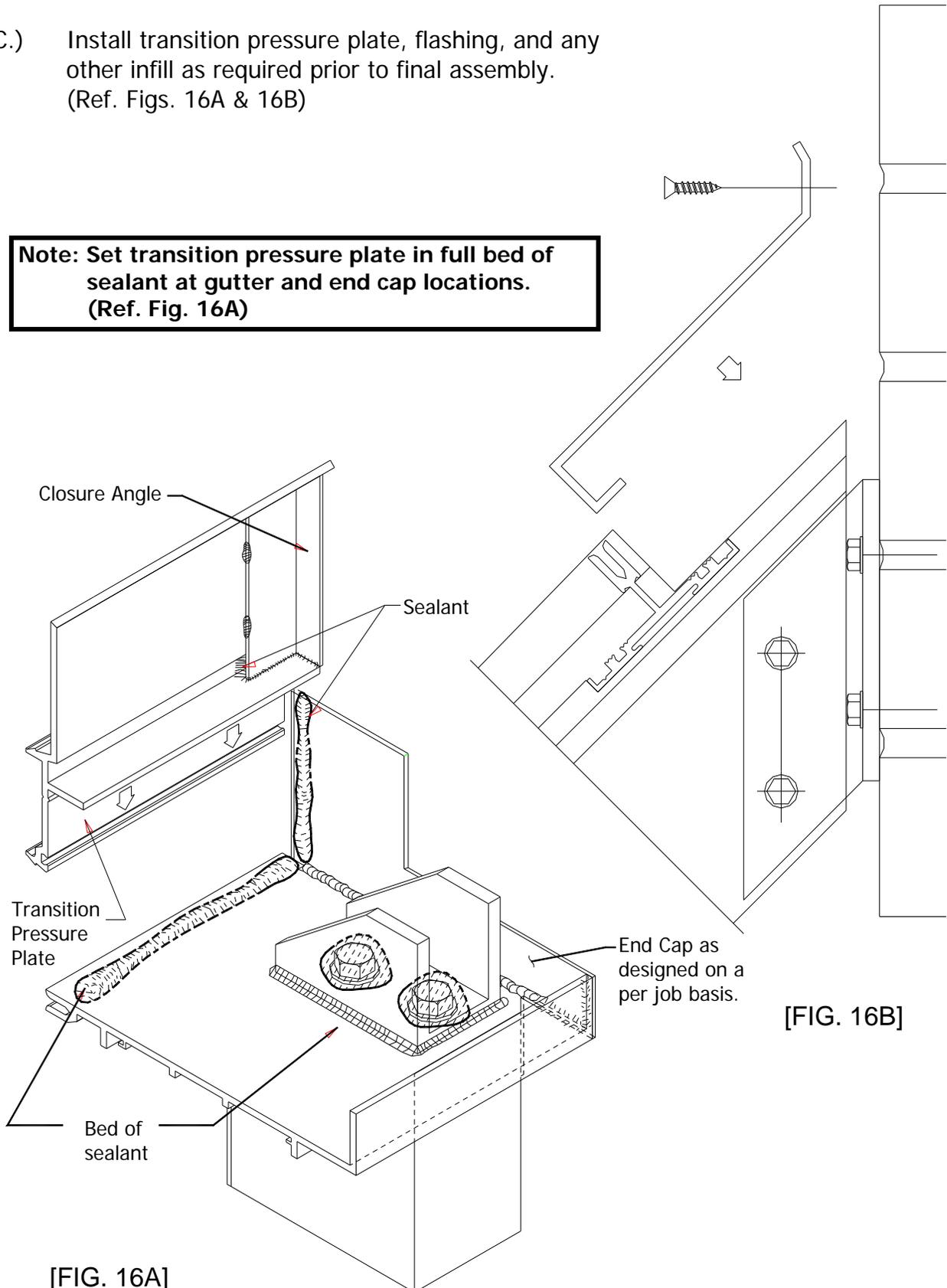
Note: Temporary Glazing Retainers are available from EFCO. These retainers are considered an extra, and can be provided at customer's request.

Section VII: Glazing Instructions

Glazing Instructions

- C.) Install transition pressure plate, flashing, and any other infill as required prior to final assembly.
(Ref. Figs. 16A & 16B)

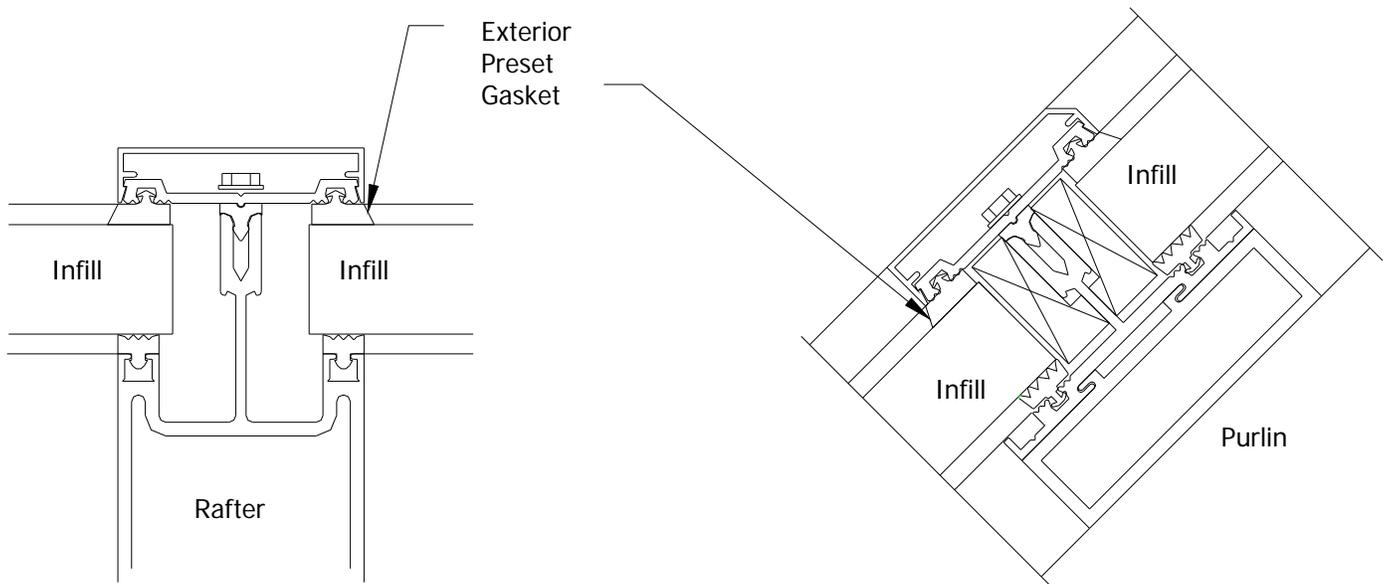
Note: Set transition pressure plate in full bed of sealant at gutter and end cap locations.
(Ref. Fig. 16A)



Section VII: Glazing Instructions

Glazing Instructions

- D.) Apply glazing gaskets to pressure plate. Gaskets applied to rafter pressure plate must be cut flush at both ends. Gaskets applied to purlin pressure plates cut $\frac{1}{4}$ " long both ends maximum.



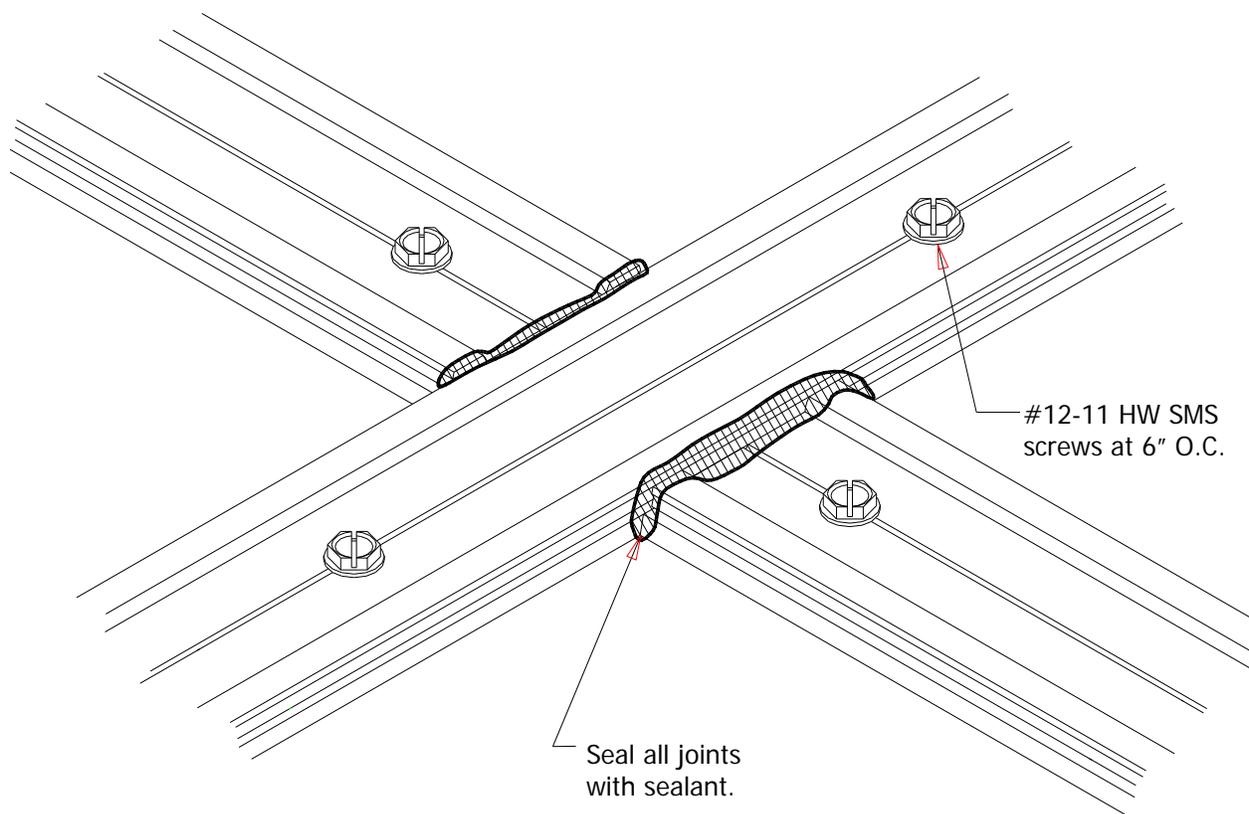
- E.) Refer to Fig. #14 to insure that sealant is at rafter to purlin joinery as illustrated.

Section VII: Glazing Instructions

Glazing Instructions

- F.) Install pressure plates. Attach pressure plate to rafters and purlin with screws at 6" O.C. typical.

Note: In cold weather, first torque all pressure plate fasteners at 40 inch pounds. When possible work from center outward on purlins and from transition upwards on rafters. Then torque all screws to 80 inch pounds. After all four sides all four sides of opening having been clamped



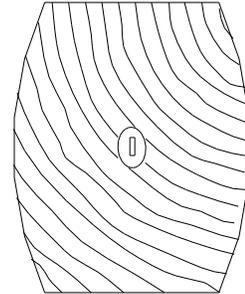
Section VIII: Snap-On Exterior Covers

Snap-On Exterior Covers

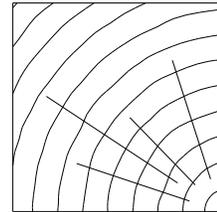
A.) Install Vertical Rafter Covers...

Caution: Care must be taken to avoid damage to covers during installation. Use a nominal 12" long 2 X 2 or 2 X 4 and mallet to seat covers.

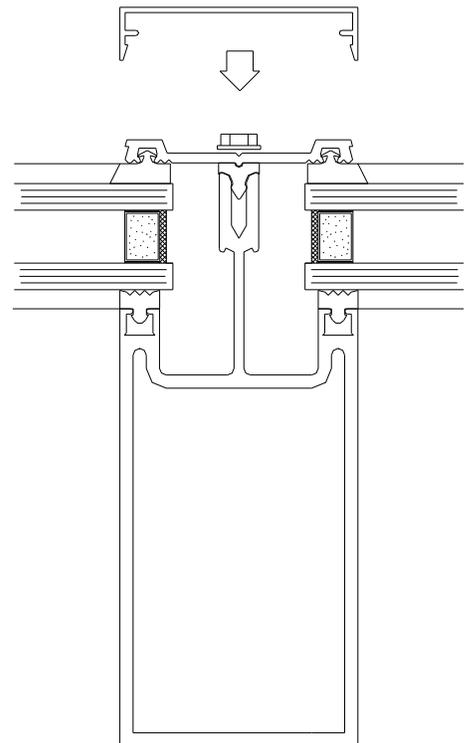
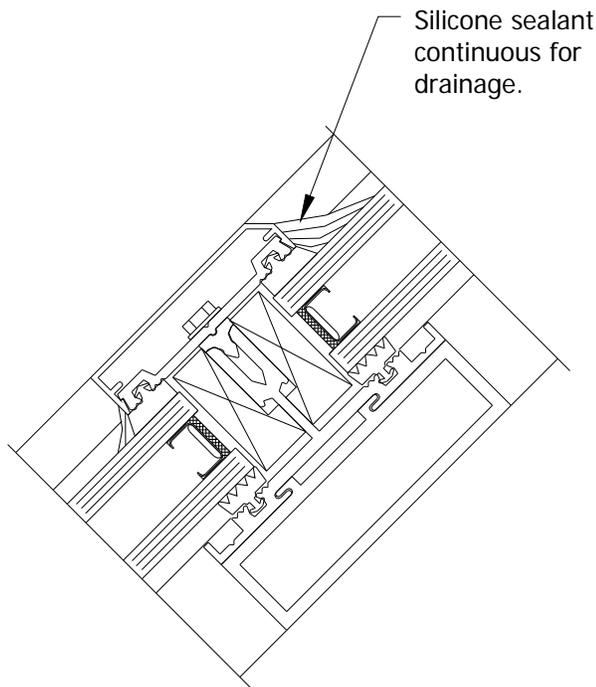
Mallet or hammer.



Approximately 12" long block of wood.



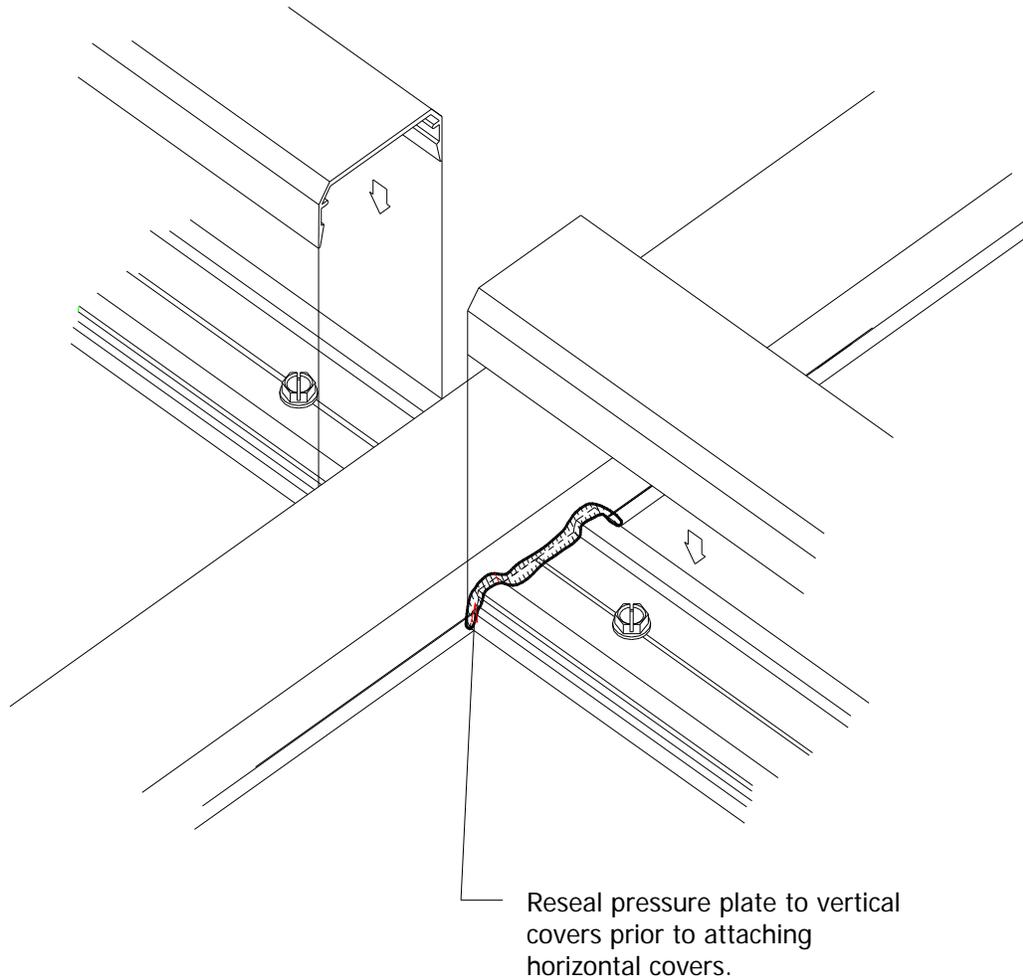
B.) Install Horizontal Purlin Covers...



Section VIII: Snap-On Exterior Covers

Snap-On Exterior Covers

- C.) After installation of purlin covers, seal as shown above for water drainage.



- D.) Center horizontal snap cover in opening; engage one side, then use block and mallet to engage opposite side. Gaps at ends should be equalized, and are provided to allow installation, to allow thermal movement, and provide weepage.

