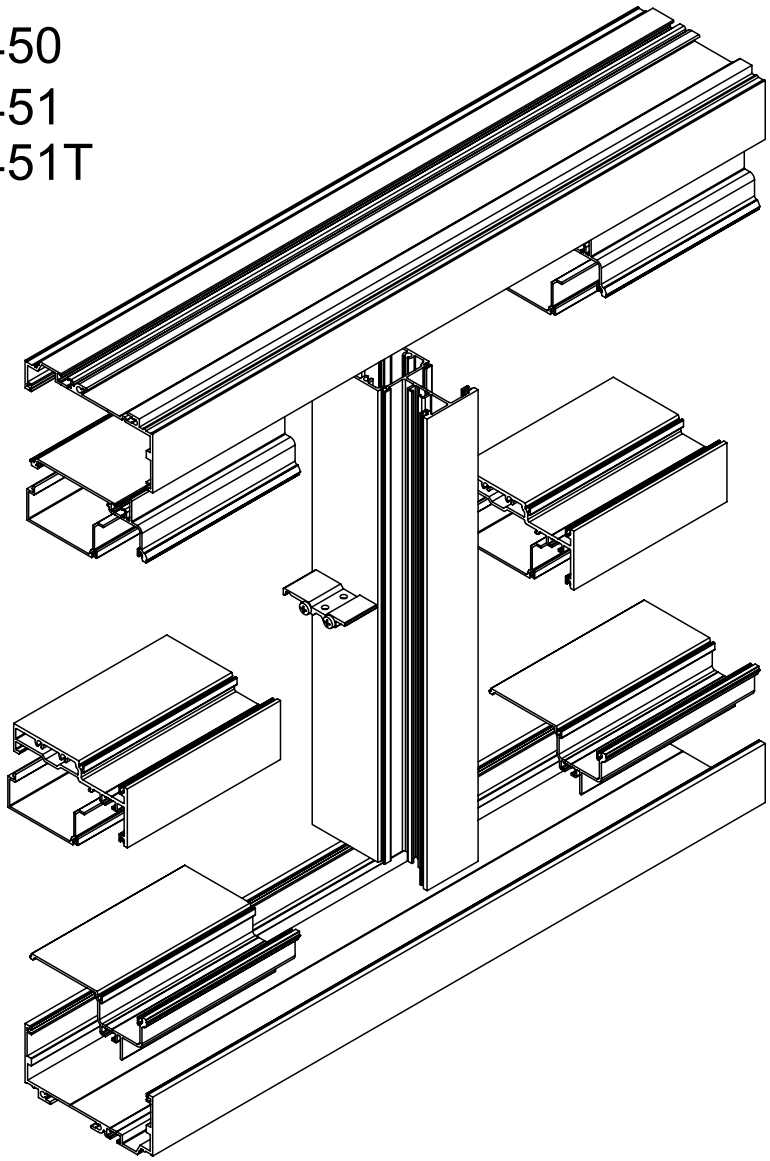
INSTALLATION

Trifab™ VG Framing System

CAPTURED STICK ASSEMBLY

- TRIFAB™ VG 450
- TRIFAB™ VG 451
- TRIFAB™ VG 451T



INSTRUCTIONS

These instructions show the general installation sequence and procedure for typical installation. They supplement the shop details and notations on installation and glazing.

NOTE:
FABRICATION, INSTALLATION & GLAZING ARTWORK DEPICTS TYPICAL 1" FRONT GLAZED MEMBERS. ALL ¼" INFILL AND 1" CENTER, BACK AND MULTI-PLANE APPLICATIONS ARE SIMILAR UNLESS OTHERWISE NOTED. INSIDE GLAZED IS TYPICALLY SHOWN UNLESS OTHERWISE NOTED.

HANDLING, STORING, AND PROTECTION OF ALUMINUM

The material must be protected against damage. The following precautions are recommended to assure early acceptance of your products and workmanship.

A. HANDLE CAREFULLY - Don't drop from the truck. Stack with adequate separation so material will not rub together. Store off the ground. Protect against elements and other construction trades. Wear hand protection to prevent injury due to sharp edges of cut extrusions.

B. KEEP MATERIAL AWAY FROM WATER, MUD AND SPRAY - Prevent cement, plaster, or other materials from damaging the finish.

C. PROTECT THE MATERIALS AFTER ERECTION - Protect by wrapping with Kraft paper or by erecting Visqueen or canvas splatter screen. Cement, plaster, terrazzo, other alkaline solutions and acid based materials used to clean masonry are very harmful to the finish and should be removed with water and mild soap IMMEDIATELY.

GENERAL INSTALLATION NOTES
The following practices are recommended for all installations:

A. CHECK SHOP DRAWINGS, INSTALLATION INSTRUCTIONS and GLAZING INSTRUCTIONS to become thoroughly familiar with the project. The SHOP DRAWINGS take precedence and include specific details for the project. The INSTALLATION INSTRUCTIONS are of a general nature and cover most common conditions.

B. All materials are to be INSTALLED PLUMB, LEVEL, AND TRUE.

C. All work should start from bench marks and/or column lines as established by the ARCHITECTURAL DRAWINGS and the GENERAL CONTRACTOR. Check mullion spacing from both ends of masonry opening to prevent dimensional build-up of day light opening.

D. Make certain that construction which will receive your materials is in accordance with the contract documents. If not, notify the GENERAL CONTRACTOR IN WRITING and resolve differences before proceeding with your work.

E. Isolate all aluminum to be placed directly in contact with uncured masonry or incompatible materials with a heavy coat of zinc chromate or bituminous paint.

F. Check all materials on arrival for quantity and be sure you have everything required to begin installation.

G. Sealants must be compatible with all materials with which they have contact, including other sealant surfaces. Consult with sealant manufacturer for recommendations relative to joint size, shelf life, compatibility, priming, tooling, adhesion, etc.

H. PERIMETER FASTENING - "Fastening" means any method of securing one part to another or to adjacent materials. These instructions specify only those fasteners used within the system. Due to varying perimeter conditions and job performance requirements, anchor fasteners are not specified in these instructions. Refer to the Shop Drawings or consult a structural engineer for fastener type, sizing, and location.

I. CHECK OPENINGS - Make certain that the opening which will receive your materials is in accordance with the contract documents. If not, notify the General Contractor in writing and resolve differences before proceeding with your work.

J. BUILDING CODES - Glass and glazing codes governing the design and use of products vary widely. Kawneer does not control the selection of product configurations, operating hardware, or glazing materials, and assumes no responsibility for these design considerations. It is the responsibility of the owner, specifier, architect, general contractor and the installer to make these selections in strict conformance with all applicable codes.

K. EXPANSION JOINTS - Expansion joints and perimeter seals shown in these instructions and in the shop drawings are shown at normal size. Actual dimensions may vary due to perimeter conditions and /or difference in metal temperature between the time of fabrication and time of installation. For example, a 12 foot unrestrained length of aluminum extrusion can expand or contract 3/32" over a 50° F temperature change. Any movement potential should be accounted for at the time of installation.

L. FIELD TESTING - It is recommended that a Water Hose Test be conducted once a sufficient portion of the framing is installed, glazed and caulked to ensure proper installation. The Water Hose Test shall be conducted in accordance with AAMA 501.2. In addition, larger projects should have periodic Water Hose Tests as additional precautionary measures.

M. GASKET INVENTORY ROTATION - These high quality rubber extrusions are coated with silicone lubricant. Silicone will dry over time leaving a white "chalky" residue. Please rotate your stock "FIRST IN - FIRST OUT". If the rubber becomes dry, you may use water ONE TIME to reconstitute the silicone, after that, use a soap water solution.

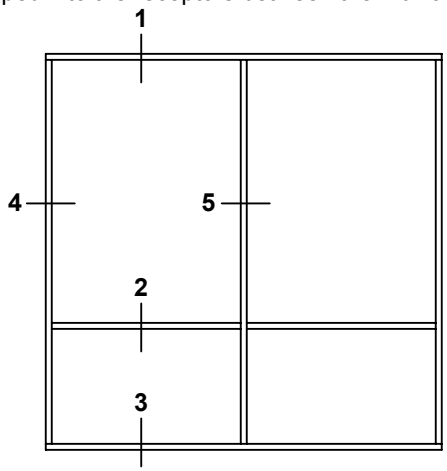
SILICONE GLAZING NOTE

This SSG system requires structural silicone. The glazing installer is responsible for selecting and contacting the silicone manufacturer to determine which type of silicone is to be used and what samples are required to be submitted for adhesion and compatibility testing. The silicone sealant shall not be applied to Kawneer products without the approval of the silicone manufacturer and until all required testing is completed and detailed application instructions have been delivered to the installer by the silicone manufacturer. If you find the silicone manufacturer's installation instructions are not in accordance with Kawneer's installation instructions, it is your responsibility to notify Kawneer of the conflict ***prior to glazing***.

Your glass supplier must be made aware that their glass will be used in an SSG application.
The application must be approved by the glass supplier ***prior to glazing***.

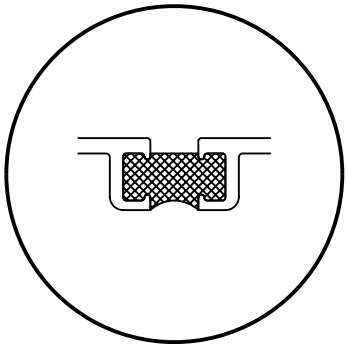
For any structural silicone glazed product application that is not shown in Kawneer's standard literature, the application must be approved.

The Stick System is a fabrication and erection method which permits on-site, "stick erection". Through the use of head and sill receptors the vertical mullions can be slipped easily into place. The mullions are then positioned and spaced by inserts which are snapped into the receptors between the mullions. Intermediate horizontals members are attached with shear blocks.



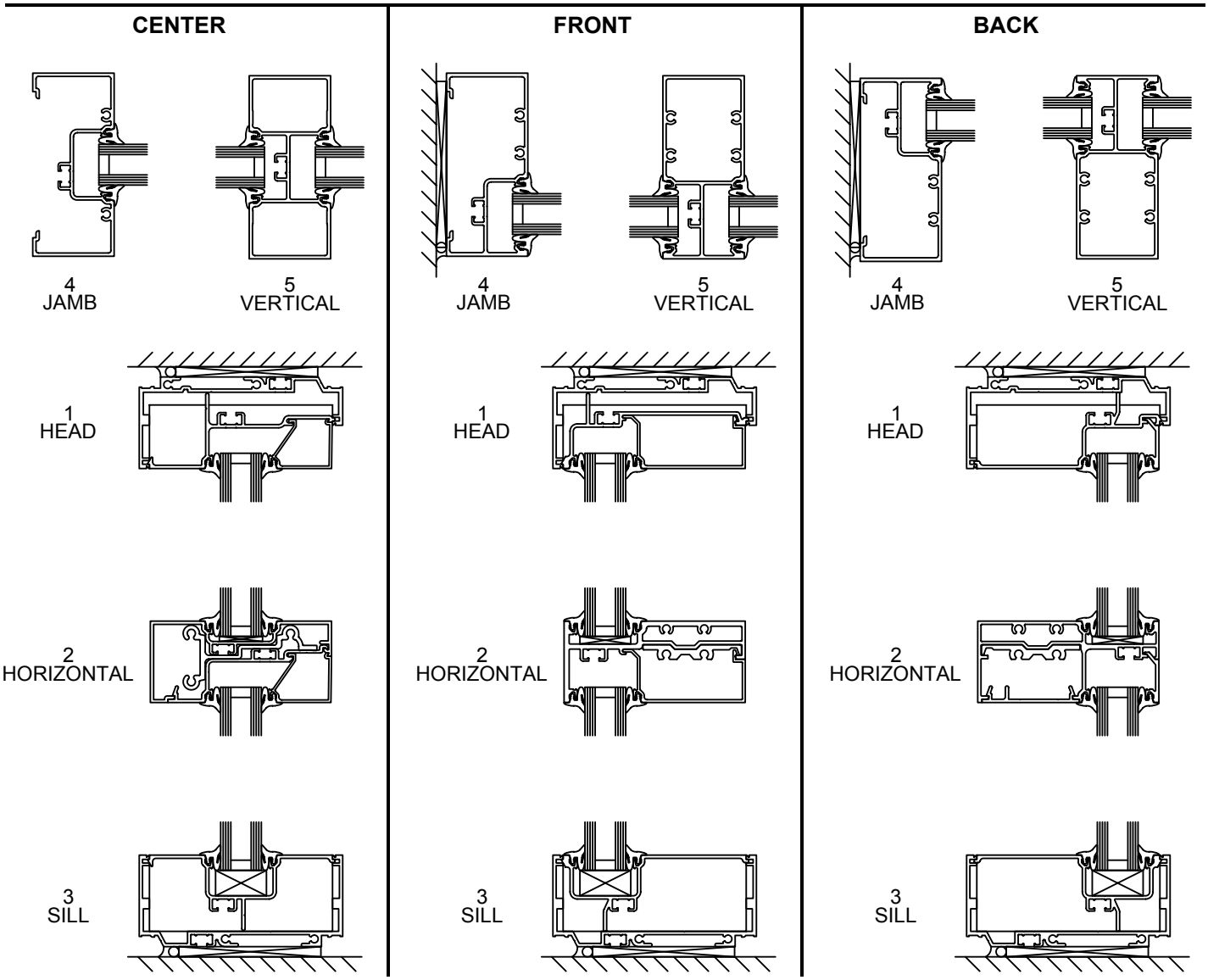
NOTES:
1) If the end reaction of the mullion (mullion spacing (ft.) times height (ft.) times specified windload (PSF) divided by two) is greater than 500 lbs., Application Engineering must be consulted.

2) If opening is over 24' wide, a splice joint is required every 12'. (See splice joint procedure on page 29)



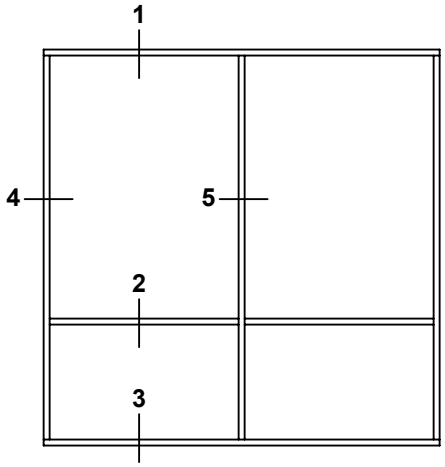
TRIFAB™ VG 451T
THERMALLY BROKEN MEMBERS

ELEVATION IS NUMBER KEYED TO DETAILS



TRIFAB™ VG 450 / 451 / 451T

SECTION II - 451 / 451T OUTSIDE GLAZED DETAILS



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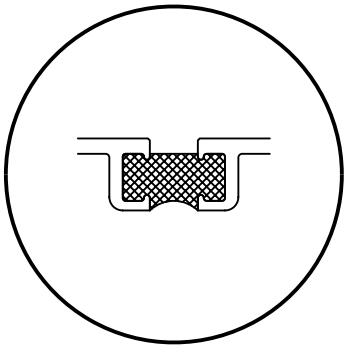
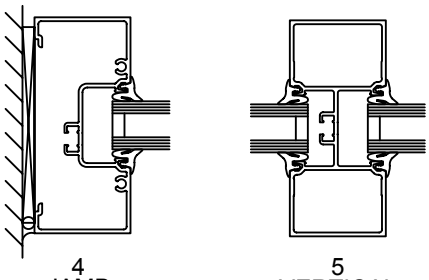
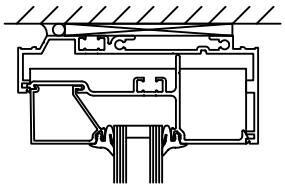


TRIFAB™ VG 451T
THERMALLY BROKEN MEMBERS

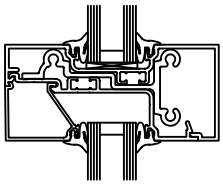
CENTER OUTSIDE GLAZED STANDARD RECEPTOR



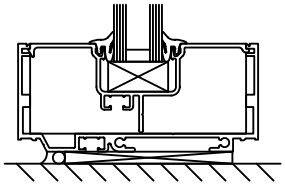
4 JAMB — 5 VERTICAL



1 HEAD

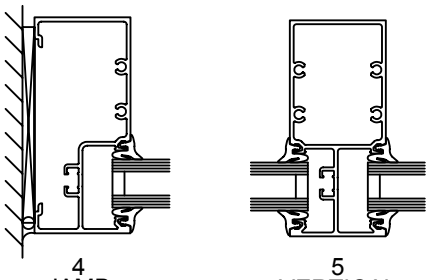


2 HORIZONTAL



3 SILL

FRONT OUTSIDE GLAZED STANDARD RECEPTOR



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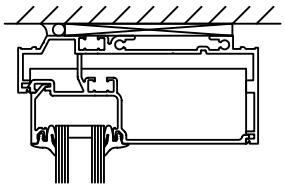
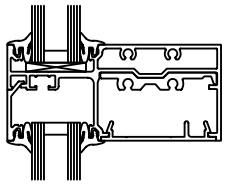


1 HEAD



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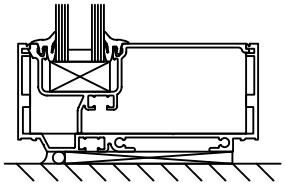
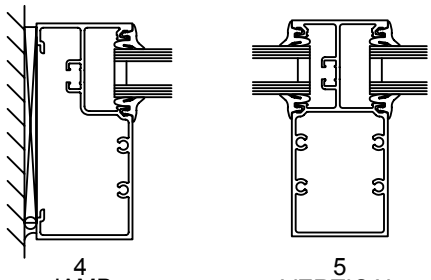


3 SILL

BACK OUTSIDE GLAZED STANDARD RECEPTOR



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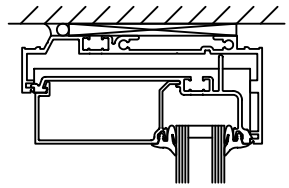
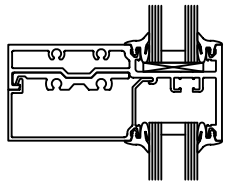
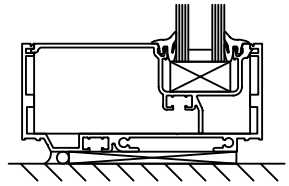


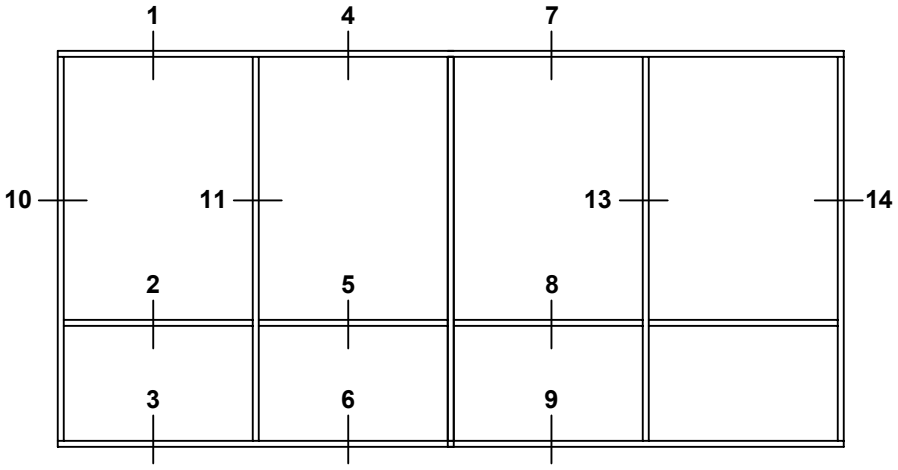
1 HEAD



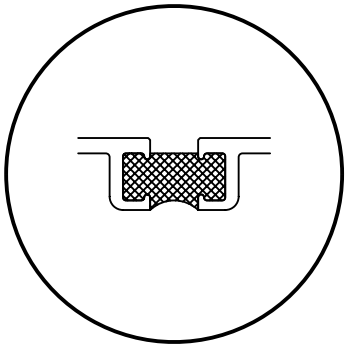
2 HORIZONTAL



3 SILL



ELEVATION IS NUMBER KEYED TO DETAILS



TRIFAB™ VG 451T
THERMALLY BROKEN MEMBERS

NOTES:

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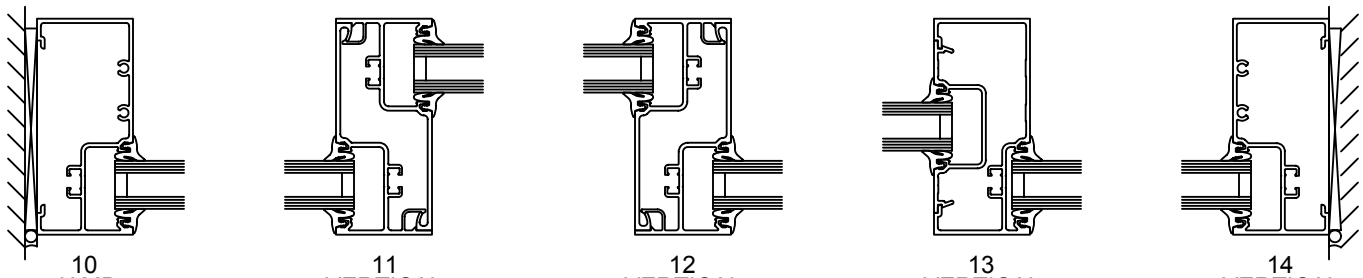
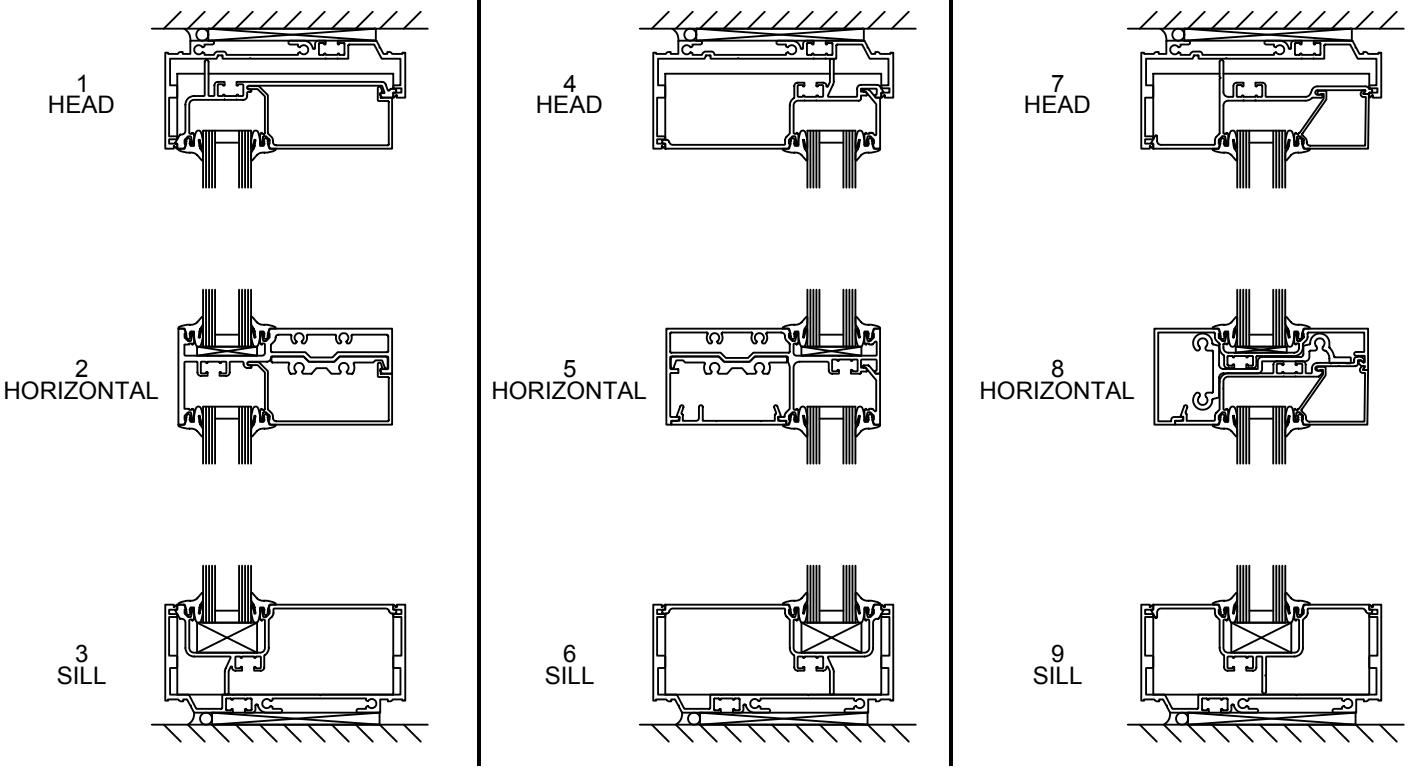
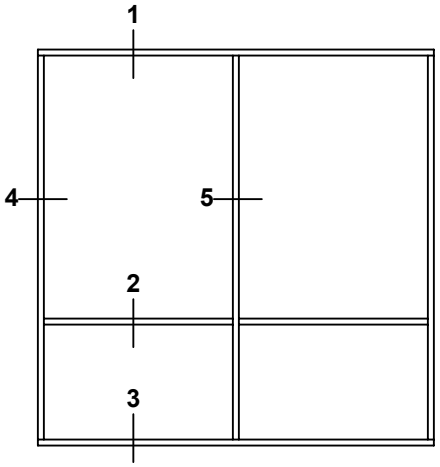


10 JAMB | 11 VERTICAL | 12 VERTICAL | 13 VERTICAL | 14 VERTICAL

FRONT	BACK	CENTER
1 HEAD	4 HEAD	7 HEAD
2 HORIZONTAL	5 HORIZONTAL	8 HORIZONTAL
3 SILL	6 SILL	9 SILL





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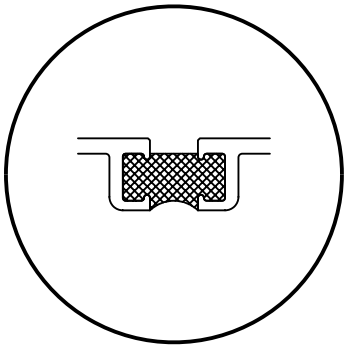
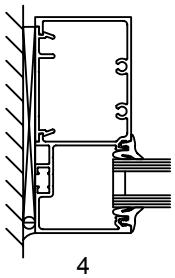
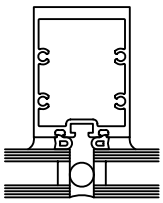


TRIFAB™ VG 451T
THERMALLY BROKEN MEMBERS

ADAPTED SSG OR WEATHERSEAL FRONT INSIDE GLAZED (STD RECEPTOR)

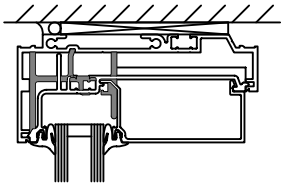


4
JAMB

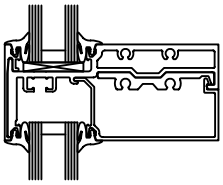


5
VERTICAL

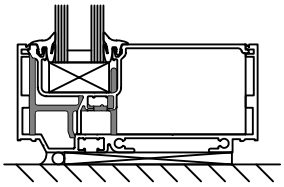
1
HEAD



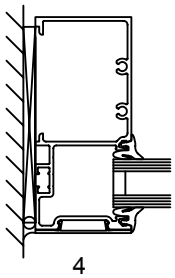
2
HORIZONTAL



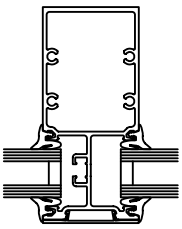
3
SILL



FRONT INSIDE GLAZED TWO COLOR (STD RECEPTOR)

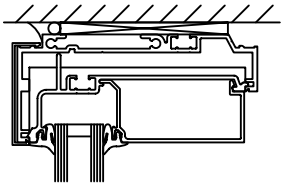


4
JAMB

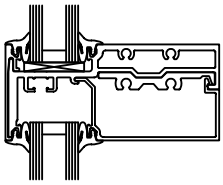


5
VERTICAL

1
HEAD



2
HORIZONTAL



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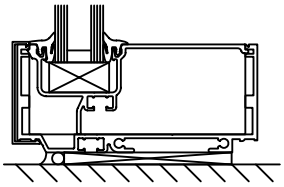
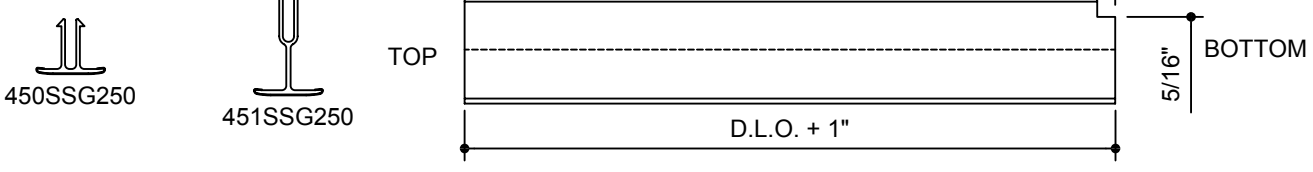


FRAMING MEMBER		CUT FORMULA
MULLIONS	LIGHTWEIGHT RECEPTOR	FRAME HEIGHT MINUS 9/16"
MULLIONS	STANDARD RECEPTOR	FRAME HEIGHT MINUS 1-1/16"
MULLIONS	STANDARD RECEPTOR WITH ANCHORS	FRAME HEIGHT MINUS 1-7/16"
JAMBS	LIGHTWEIGHT RECEPTOR	FRAME HEIGHT MINUS 9/16"
JAMBS	STANDARD RECEPTOR	FRAME HEIGHT MINUS 1-1/16"
CORNER MULLIONS	LIGHTWEIGHT RECEPTOR	FRAME HEIGHT MINUS 9/16"
CORNER MULLIONS	STANDARD RECEPTOR	FRAME HEIGHT MINUS 1-1/16"
MULLION, JAMB, OR CORNER COVERS FOR TWO COLOR OPTION		SAME AS THE MULLION, JAMB, OR CORNER MEMBER
STANDARD RECEPTORS		FRAME WIDTH PLUS 1/4" (SUBTRACT 1/2" FOR EACH SPLICE JOINT)
LIGHTWEIGHT RECEPTORS		FRAME WIDTH PLUS 1/4" (SUBTRACT 1/2" FOR EACH SPLICE JOINT)
COVER FOR STANDARD RECEPTOR FOR TWO COLOR OPTION		SAME AS THE RECEPTOR
HEAD AND SILL INSERTS *(SEE PAGES 20-27 FOR CORNER INSERT FORMULAS)*		DLO
HORIZONTALS & HORIZONTAL FILLERS *(SEE PAGES 20-27 FOR CORNER HORIZONTALS FORMULAS)*		DLO
HORIZONTAL COVER FOR TWO COLOR OPTION		JAMB TO JAMB MINUS 1/16" (SEE NOTE #1 BELOW)
GLASS STOPS		DLO-1/16"
VERTICAL GLAZING ADAPTORS		PARTIAL LENGTHS = DLO +1/2" FULL LENGTHS = SAME AS THE MULLION **(NOT SSG)**
HORIZONTAL GLAZING ADAPTORS		DLO
WEATHERSEAL		DLO + 1" (SEE NOTE #2 BELOW)

NOTE # 1
CUT HORIZONTAL COVER TO LENGTH. HORIZONTAL COVER RUNS FROM JAMB TO JAMB. HORIZONTAL COVER LENGTH SHOULD NOT EXCEED 10' FEET. IF OPENING EXCEEDS 10' FEET, SPLICE HORIZONTAL COVER AT CENTERLINE OF VERTICAL MULLION LEAVING A 1/4" GAP. REFERENCE PAGE 57 FOR SPLICE INFORMATION.

NOTE # 2
REQUIRED FABRICATION FOR WEATHERSEAL BELOW



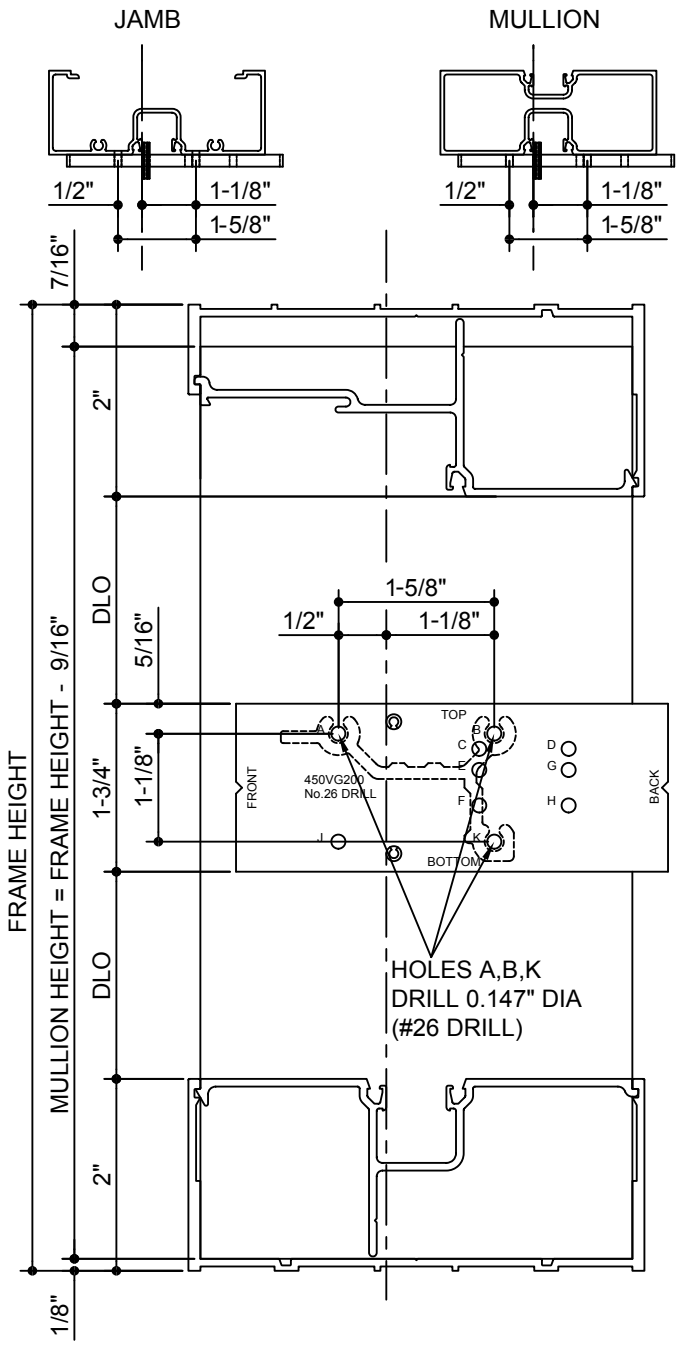
STEP A: Cut mullion members to required length for either Lightweight Receptor or Standard Receptor.

STEP B: At desired horizontal locations align the top of the drill jig with the top of the horizontal. Drill the proper holes in the vertical members for attachment of the shear blocks.

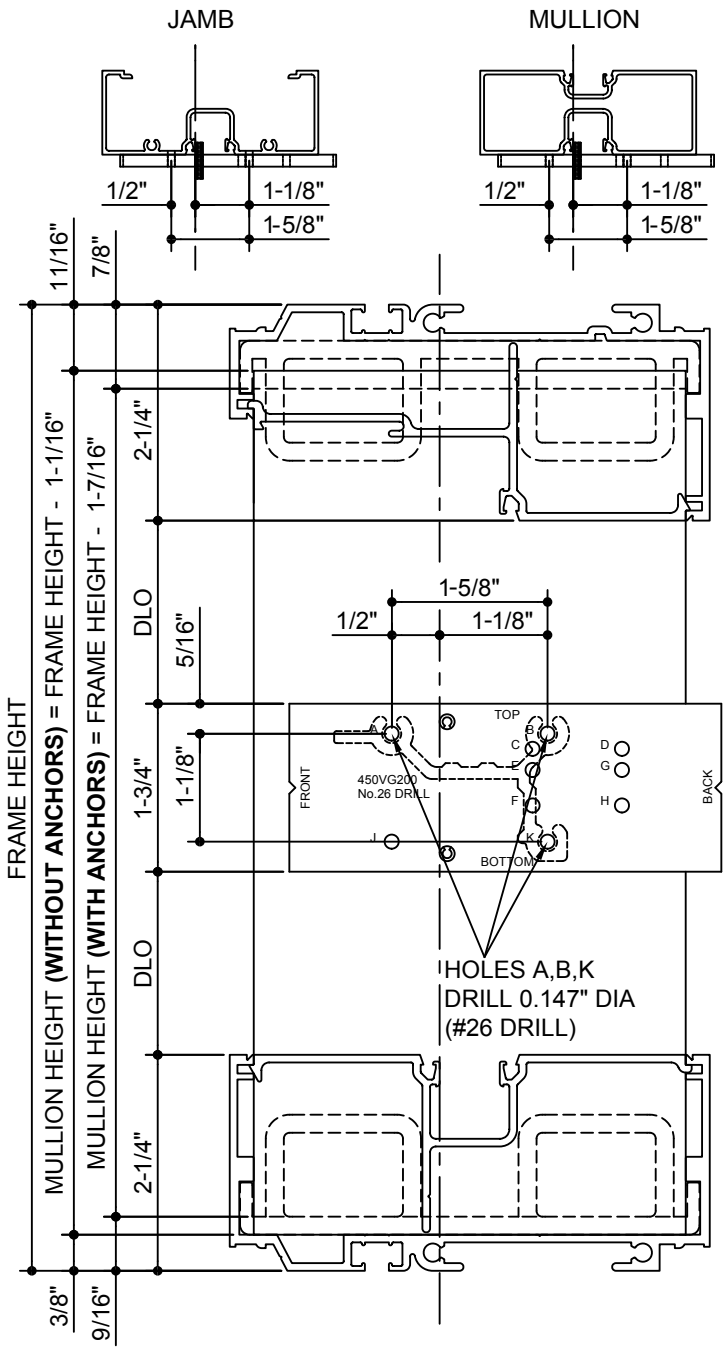
STEP C: Attach shear blocks to verticals using the three 028400 (#10 x 1-19/32" PH) supplied screws.

NOTE:
MULLION ANCHORS ARE NOT AVAILABLE FOR SYSTEMS WITH LIGHTWEIGHT RECEPTOR.

LIGHTWEIGHT RECEPTOR
INSIDE OR OUTSIDE GLAZED



STANDARD RECEPTOR
INSIDE OR OUTSIDE GLAZED



STEP A: Cut mullion members to required length for either Lightweight Receptor or Standard Receptor.

STEP B: At desired horizontal locations align the top of the drill jig with the top of the horizontal. Drill the proper holes in the vertical members for attachment of the shear blocks.

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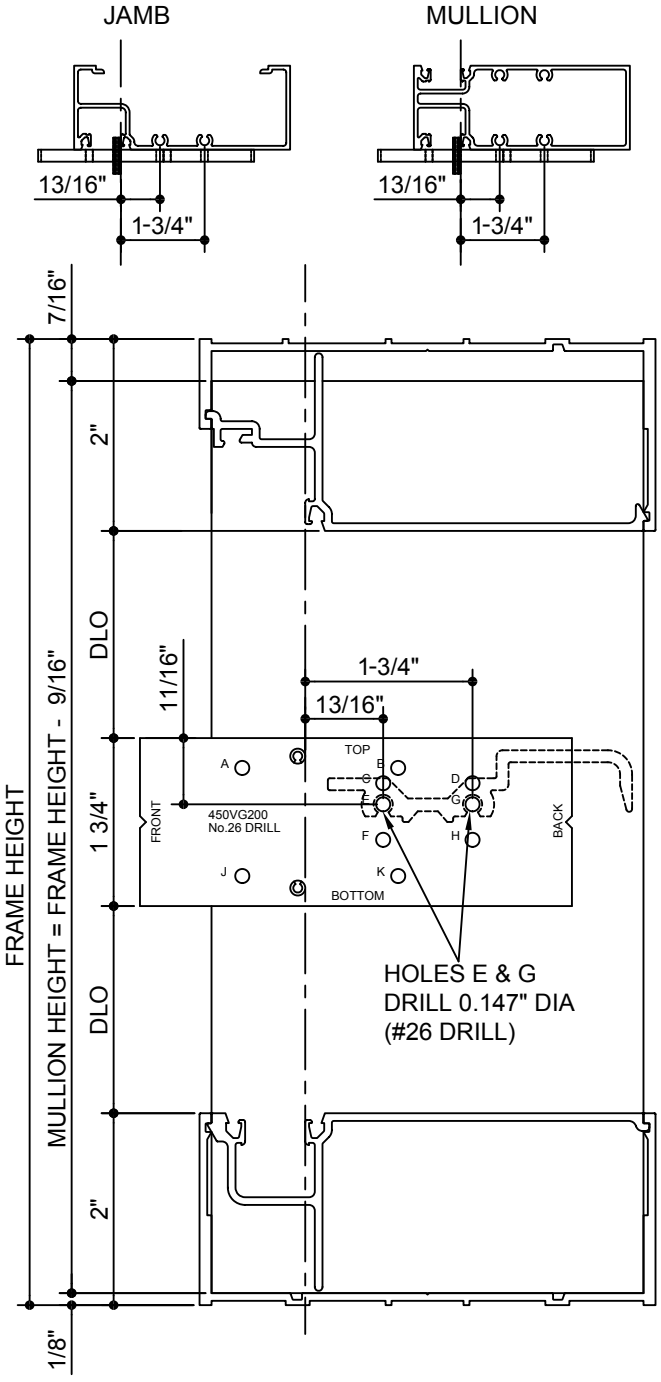
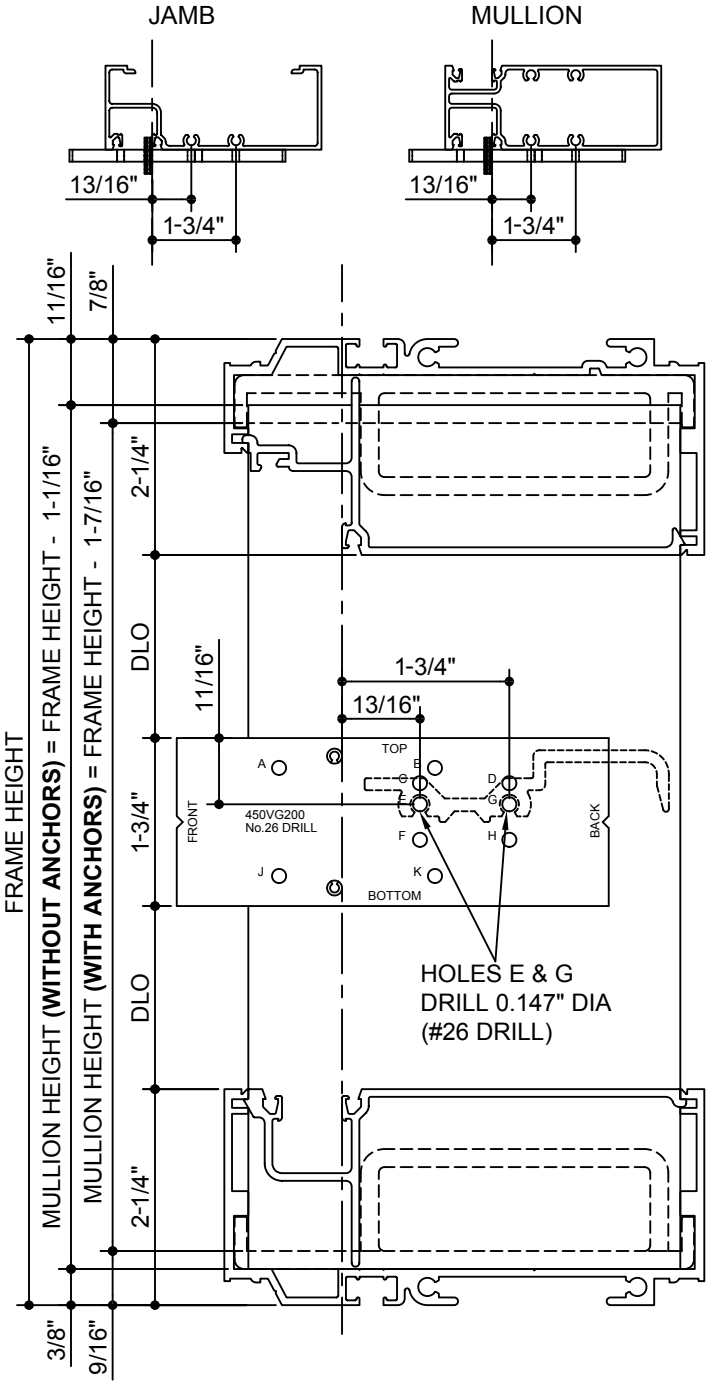
LIGHTWEIGHT RECEPTOR
INSIDE OR OUTSIDE GLAZED



STANDARD RECEPTOR
INSIDE OR OUTSIDE GLAZED



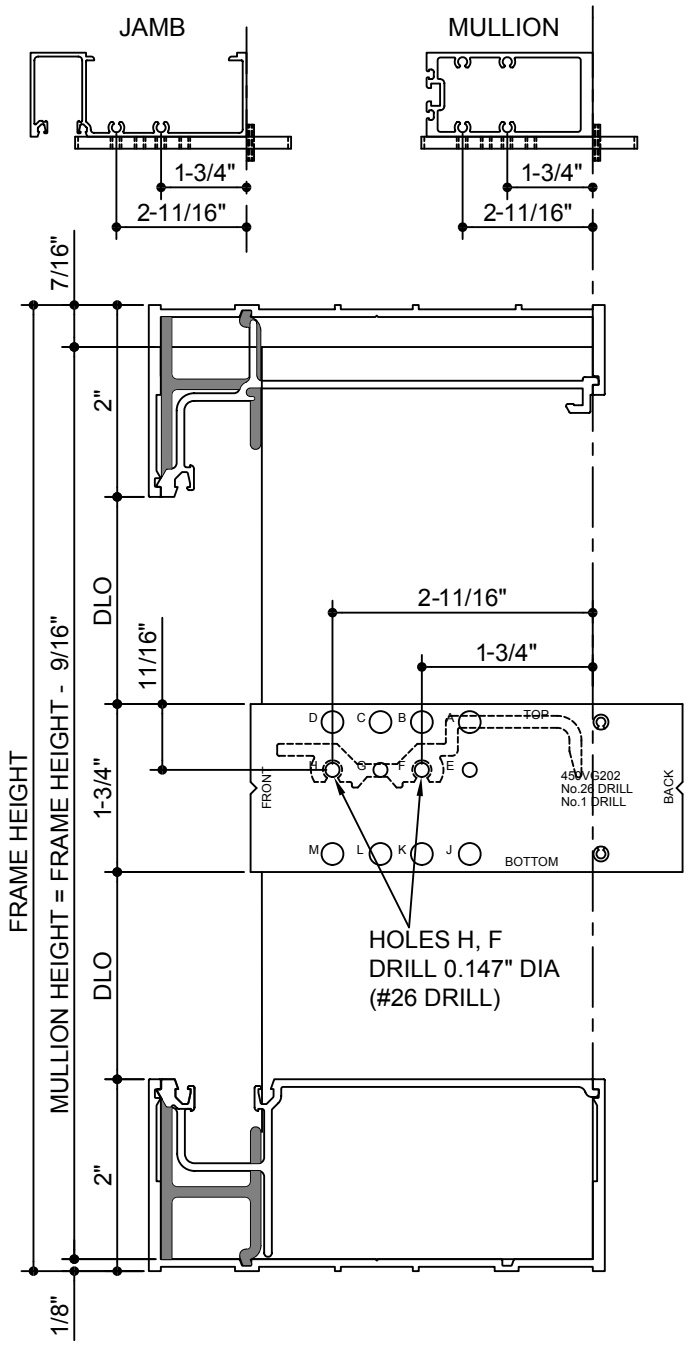
STEP A: Cut mullion members to required length for either Lightweight Receptor or Standard Receptor.

STEP B: At desired horizontal locations align the top of the drill jig with the top of the horizontal. Drill the proper holes in the vertical members for attachment of the shear blocks.

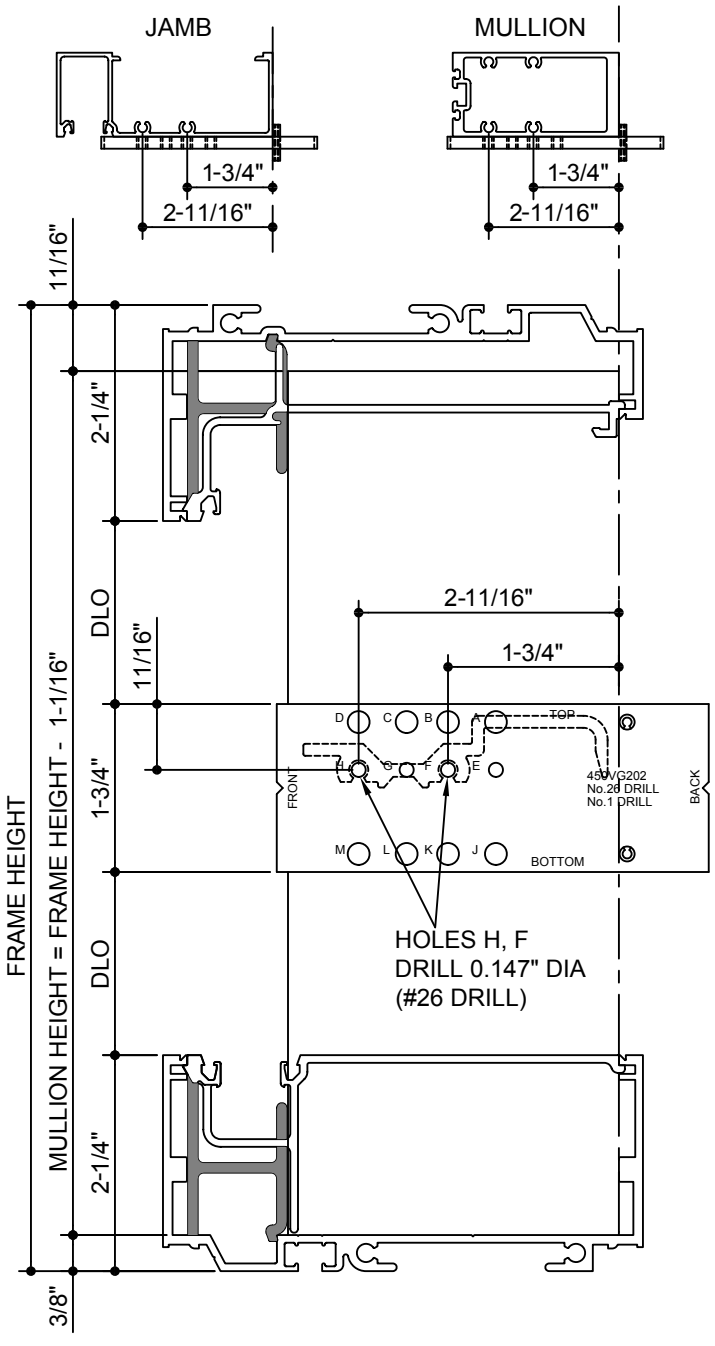
STEP C: Attach shear blocks to verticals using the two 028400 (#10 x 1-19/32" PH) supplied screws.

NOTE:
MULLION ANCHORS ARE NOT AVAILABLE FOR SYSTEMS WITH LIGHTWEIGHT RECEPTOR.

LIGHTWEIGHT RECEPTOR
INSIDE OR OUTSIDE GLAZED



STANDARD RECEPTOR
INSIDE OR OUTSIDE GLAZED



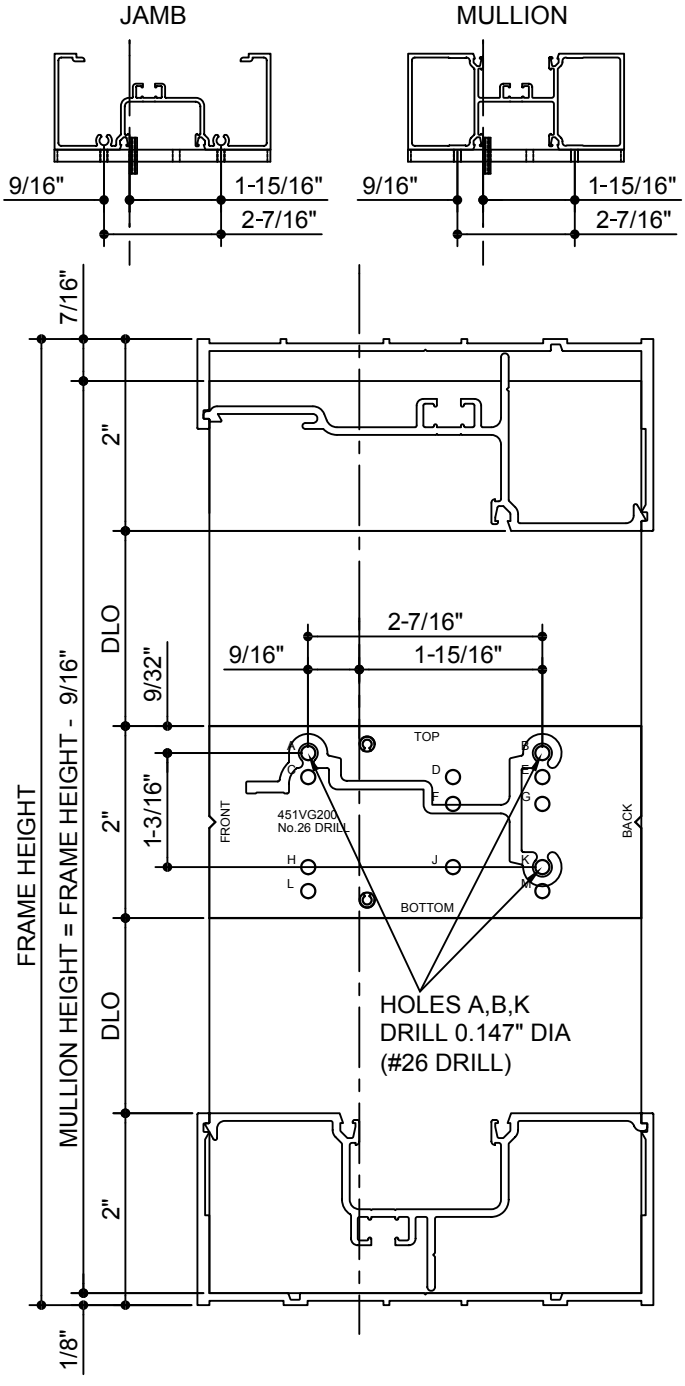
STEP A: Cut mullion members to required length for either Lightweight Receptor or Standard Receptor.

STEP B: At desired horizontal locations align the top of the drill jig with the top of the horizontal. Drill the proper holes in the vertical members for attachment of the shear blocks.

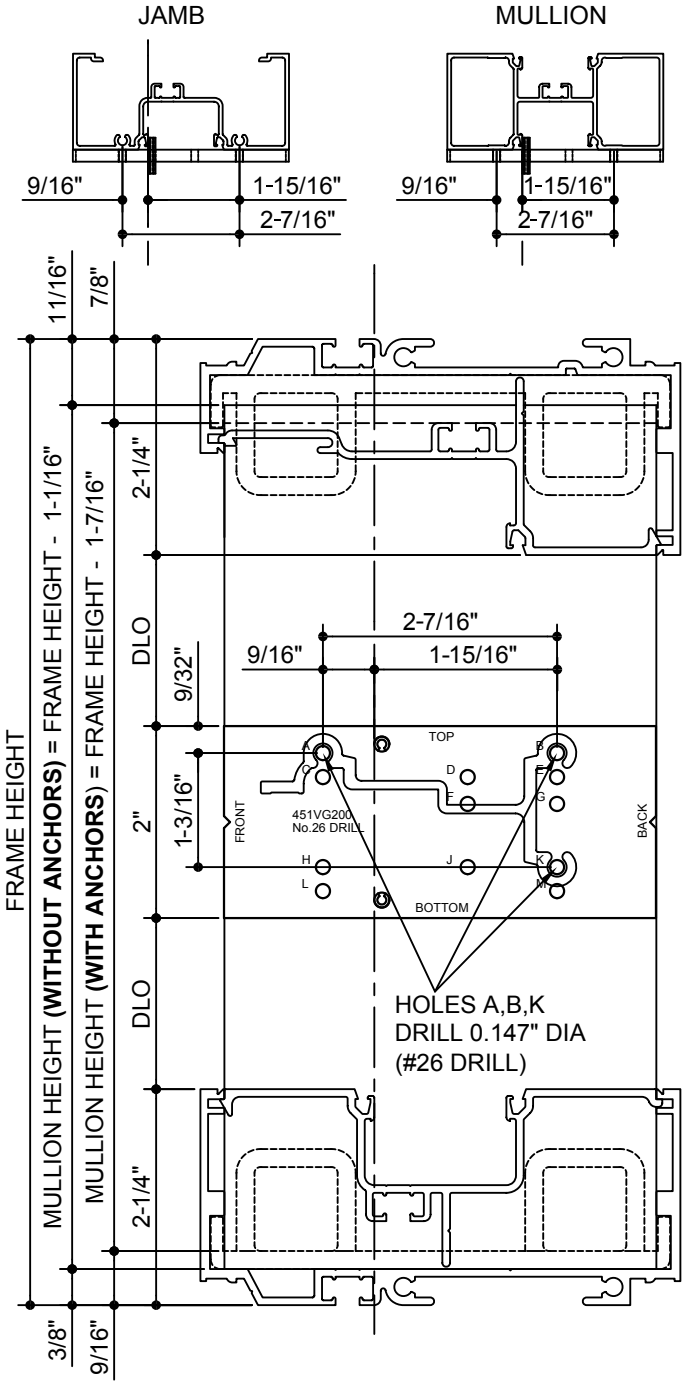
STEP C: Attach shear blocks to verticals using the three 028400 (#10 x 1-19/32" PH) supplied screws.

NOTE:
MULLION ANCHORS ARE NOT AVAILABLE FOR SYSTEMS WITH LIGHTWEIGHT RECEPTOR.

LIGHTWEIGHT RECEPTOR
INSIDE OR OUTSIDE GLAZED



STANDARD RECEPTOR
INSIDE OR OUTSIDE GLAZED



TRIFAB™ VG 450 / 451 / 451T

SECTION III - TRIFAB™ VG 451 / 451T FRONT / BACK CAPTURED VERTICAL FABRICATIONS

STEP A: Cut mullion members to required length for either Lightweight Receptor or Standard Receptor.

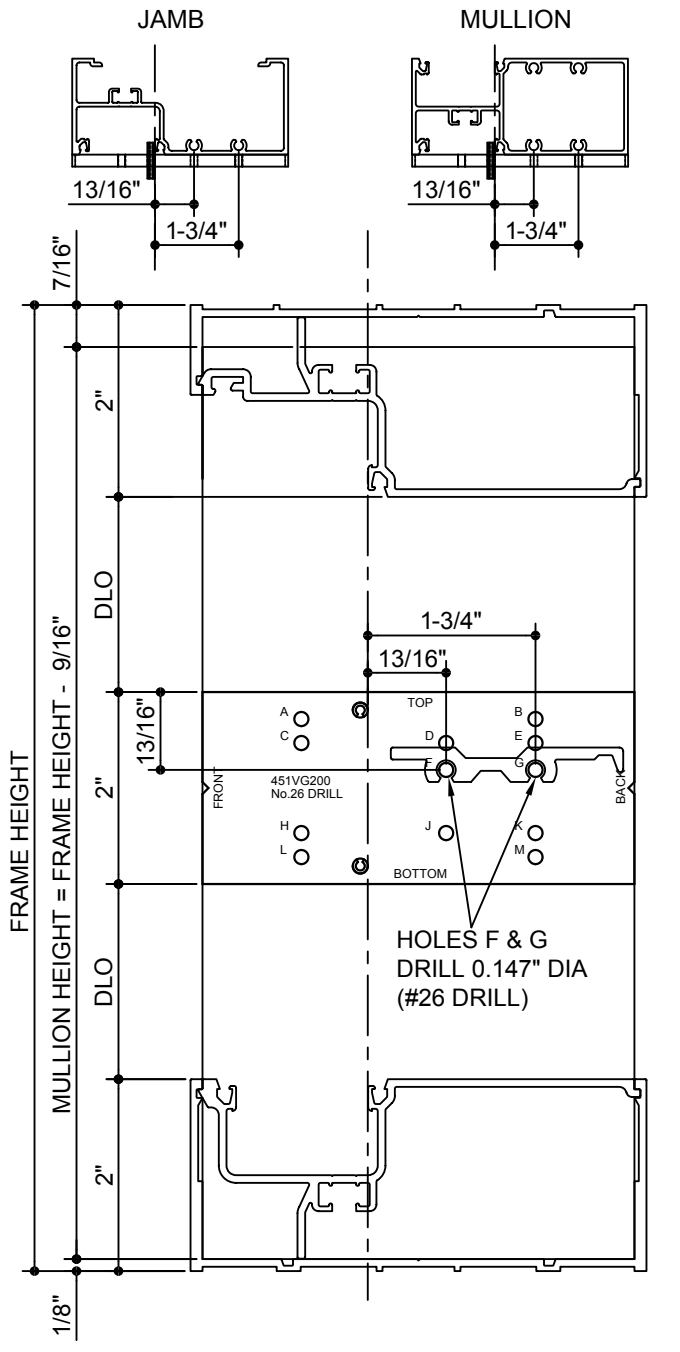
STEP B: At desired horizontal locations align the top of the drill jig

with the top of the horizontal. Drill the proper holes in the vertical members for attachment of the shear blocks.

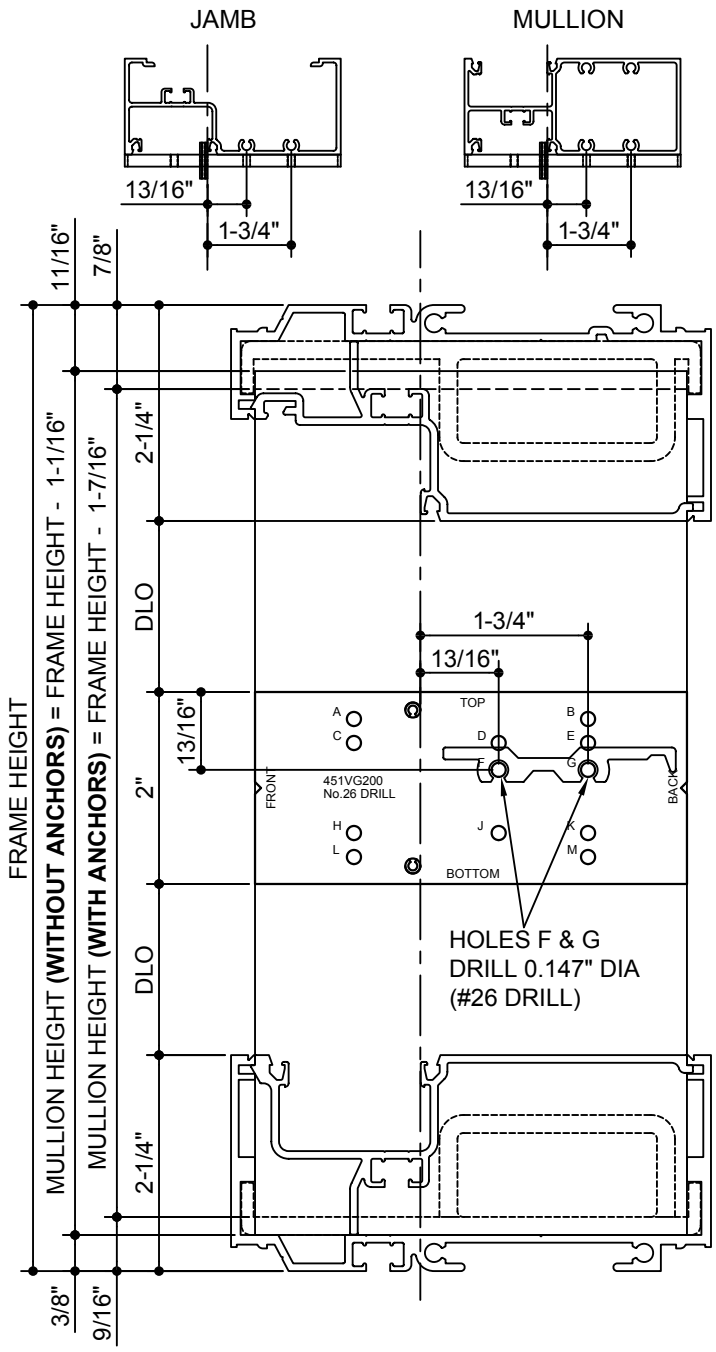
STEP C: Attach shear blocks to verticals using the two 028400 (#10 x 1-19/32" PH) supplied screws.

NOTE:
MULLION ANCHORS ARE NOT AVAILABLE FOR SYSTEMS WITH LIGHTWEIGHT RECEPTOR.

LIGHTWEIGHT RECEPTOR
INSIDE OR OUTSIDE GLAZED



STANDARD RECEPTOR
INSIDE OR OUTSIDE GLAZED



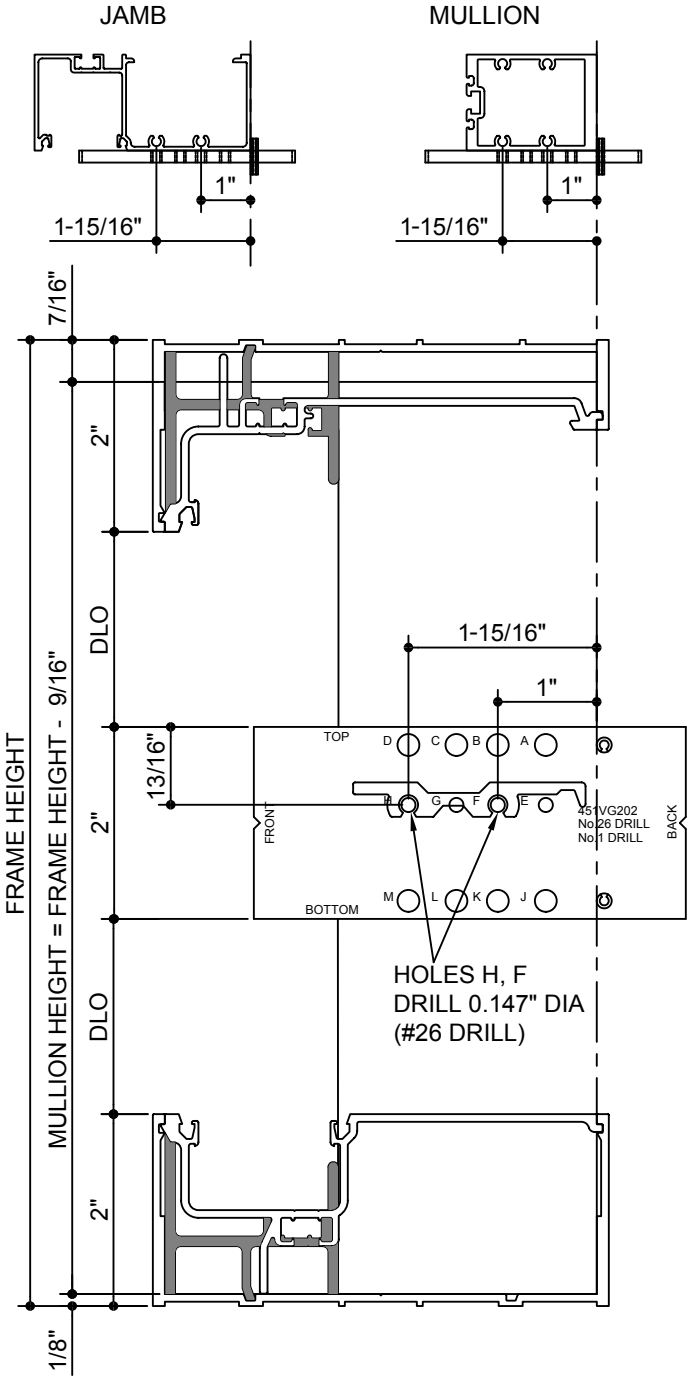
STEP A: Cut mullion members to required length for either Lightweight Receptor or Standard Receptor.

STEP B: At desired horizontal locations align the top of the drill jig with the top of the horizontal. Drill the proper holes in the vertical members for attachment of the shear blocks.

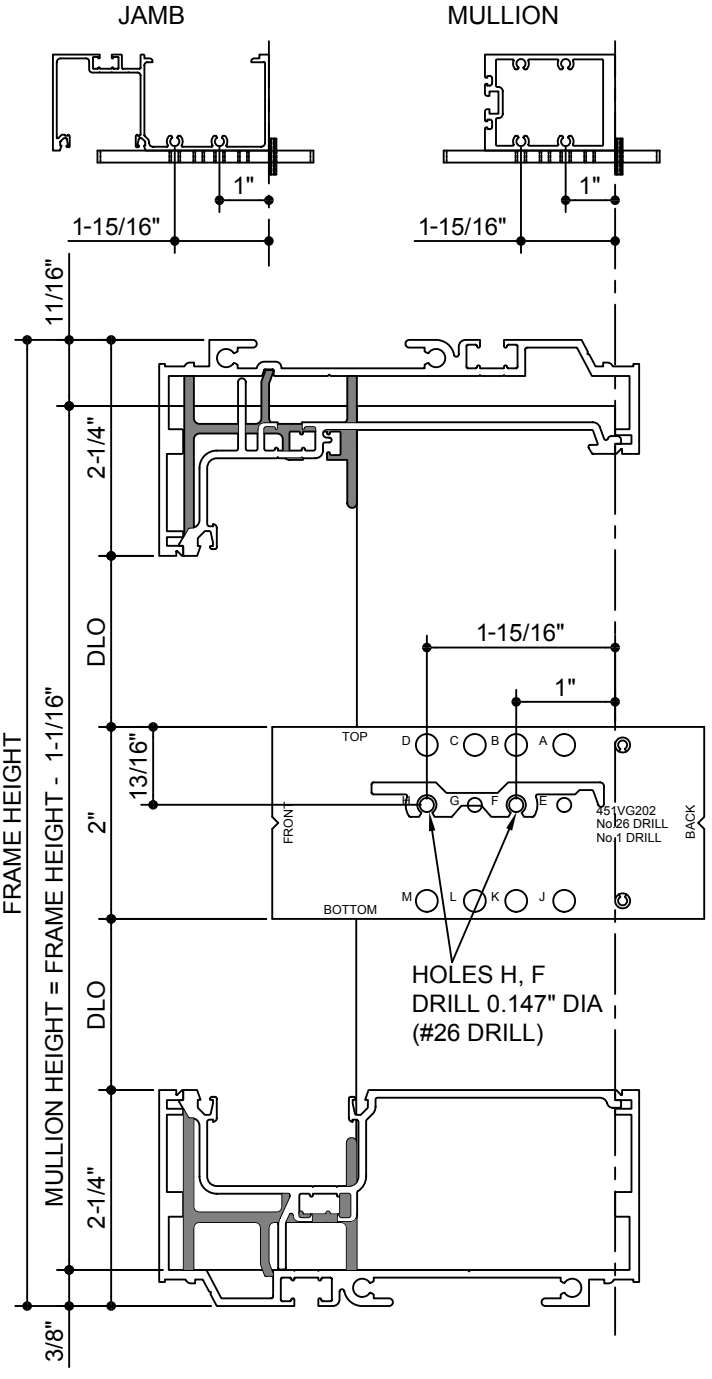
STEP C: Attach shear blocks to verticals using the two 028400 (#10 x 1-19/32" PH) supplied screws.

NOTE:
MULLION ANCHORS ARE NOT AVAILABLE FOR SYSTEMS WITH LIGHTWEIGHT RECEPTOR.

LIGHTWEIGHT RECEPTOR
INSIDE OR OUTSIDE GLAZED



STANDARD RECEPTOR
INSIDE OR OUTSIDE GLAZED



Measure the opening to determine length of vertical and horizontal framing members. Allow 1/4" minimum clearance at the head, sill, and each jamb to facilitate installation and provide space for caulking. If job conditions are uncertain, or masonry openings are irregular, allow extra clearance to accommodate construction tolerance.

HEAD RECEPTORS:

STEP A: Cut Head Receptor to length.

STEP B: Drill anchor clear holes in receptors as required.

STEP C: Apply sealant to ends of receptor. (Figure 1)

STEP D: Apply end dams to receptor. Tool sealant along outside edges *and* inside corners between end dam and receptor. Pin end dam to receptors and seal over pins. (Figure 2)

NOTE:
1) REFER TO SHOP DRAWINGS OR CONSULT ENGINEERING FOR PERIMETER FASTENER SIZE AND LOCATIONS.

2) IF OPENING IS OVER 24' WIDE, A SPLICE JOINT IS REQUIRED EVERY 12'. SEE SPLICE JOINT INSTALLATION ON PAGE 30. IF AN ENTRANCE IS REQUIRED, SEE ENTRANCE INSTALLATION ON PAGES 49-52.

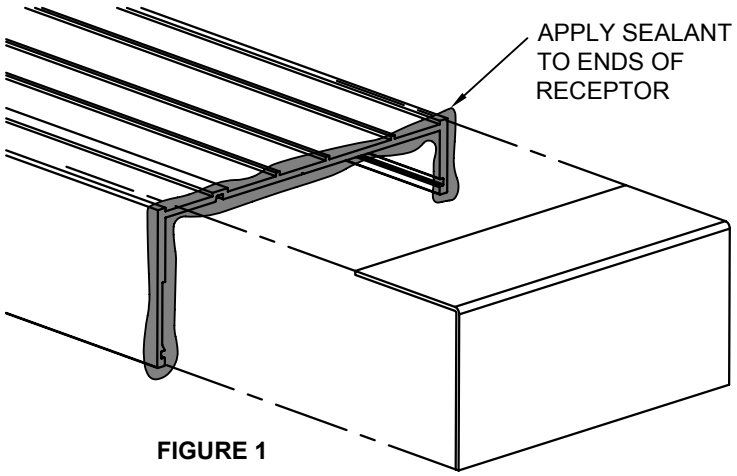


FIGURE 1

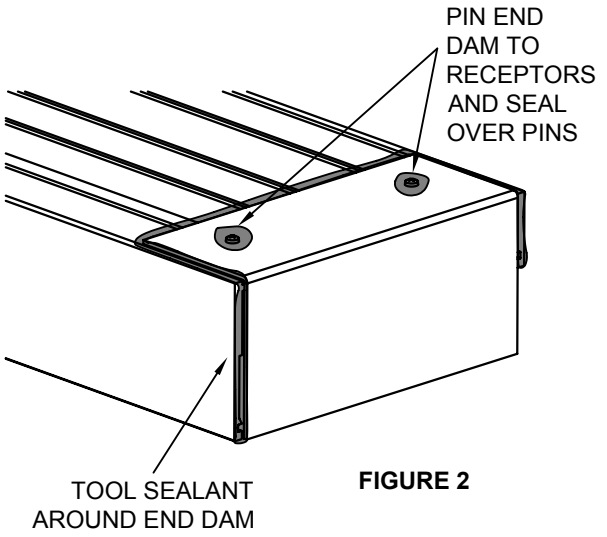


FIGURE 2

SILL RECEPTORS:

STEP A: Cut Sill Receptor to length.

STEP B: Drill anchor clear holes in receptors as required.

STEP C: Drill one 5/16" weep hole at centerline of each D.L.O. in exterior face of sill receptor as shown below.

STEP D: Apply sealant to ends of receptor. (Figure 3)

STEP E: Apply end dams to receptor. Tool sealant along outside edges *and* inside corners between end dam and receptor. Pin end dam to receptors and seal over pins. (Figure 4)

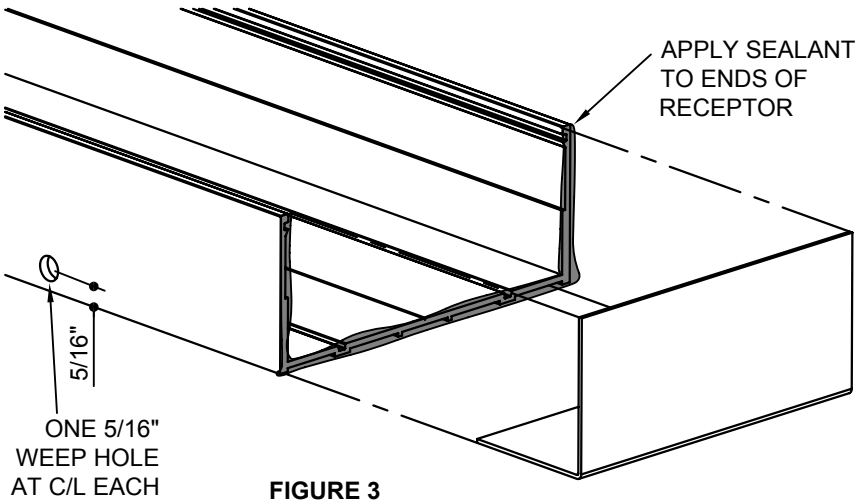


FIGURE 3

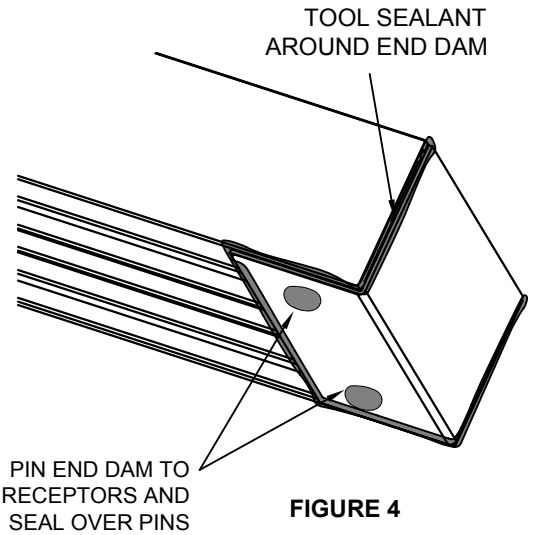


FIGURE 4

Measure the opening to determine length of vertical and horizontal framing members. Allow 1/4" minimum clearance at the head, sill, and each jamb to facilitate installation and provide space for caulking. If job conditions are uncertain, or masonry openings are irregular, allow extra clearance to accommodate construction tolerance.

HEAD RECEPTORS:

STEP A: Cut Head Receptor to length.
STEP B: Drill anchor clear holes in receptors as required.
STEP C: Apply sealant to ends of receptor. (Figure 1)
STEP D: Apply end dams to receptor with two 028856 (#12 x 1-1/8" PHTF) supplied screws, and seal over heads. Tool sealant along outside edges *and* inside corners between end dam and receptor. (Figure 2)

NOTE:
1) REFER TO SHOP DRAWINGS OR CONSULT ENGINEERING FOR PERIMETER FASTENER SIZE AND LOCATIONS.

2) IF OPENING IS OVER 24' WIDE, A SPLICE JOINT IS REQUIRED EVERY 12'. SEE SPLICE JOINT INSTALLATION ON PAGE 29. IF AN ENTRANCE IS REQUIRED, SEE ENTRANCE INSTALLATION ON PAGES 49-52.

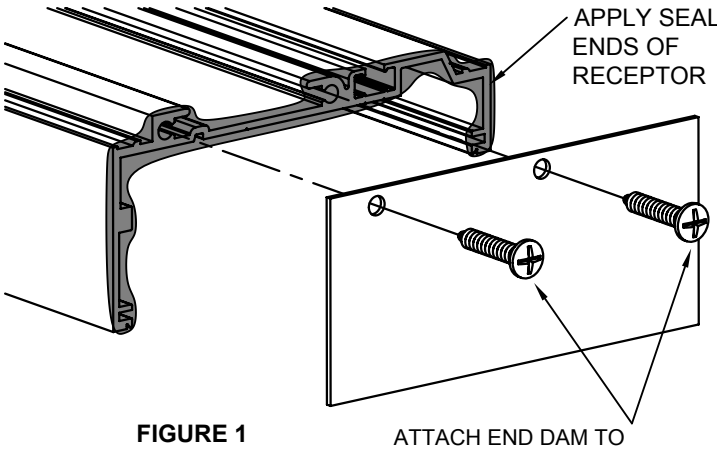


FIGURE 1

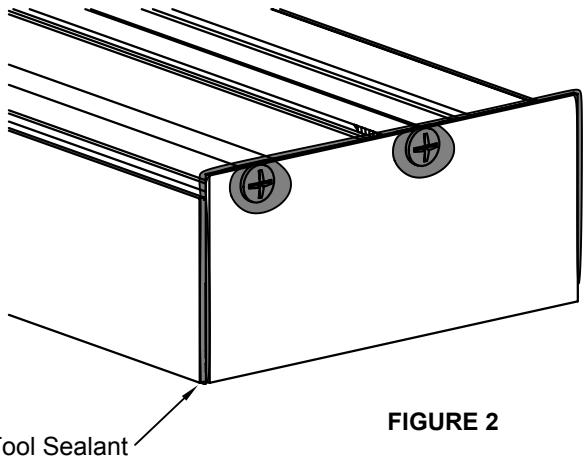


FIGURE 2

SILL RECEPTORS:

STEP A: Cut Sill Receptor to length.
STEP B: Drill anchor clear holes in receptors as required.
STEP C: Drill one 5/16" weep hole at centerline of each D.L.O. in exterior face of sill receptor as shown below.
STEP D: Apply sealant to ends of receptor. (Figure 3)
STEP E: Apply end dams to receptor with two 028856 (#12 x 1-1/8" PHTF) supplied screws, and seal over heads. Tool sealant along outside edges *and* inside corners between end dam and receptor. (Figure 4)

NOTE:
PERIMETER STRAP ANCHORS MUST BE INSTALLED PRIOR TO INSTALLING END DAMS AND INSTALLING IN THE OPENING.

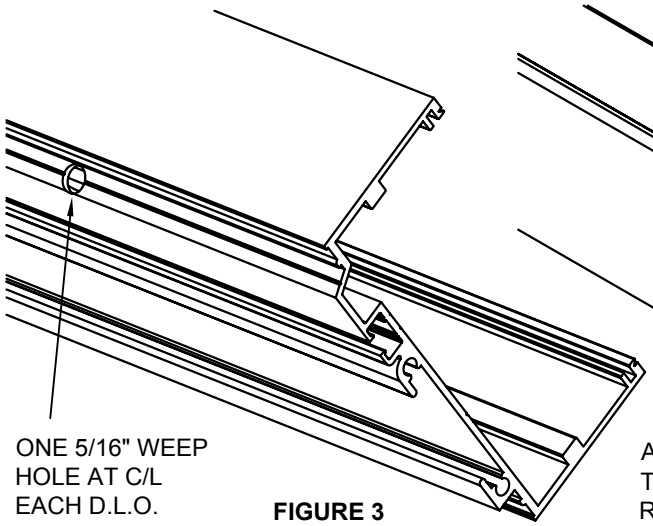


FIGURE 3

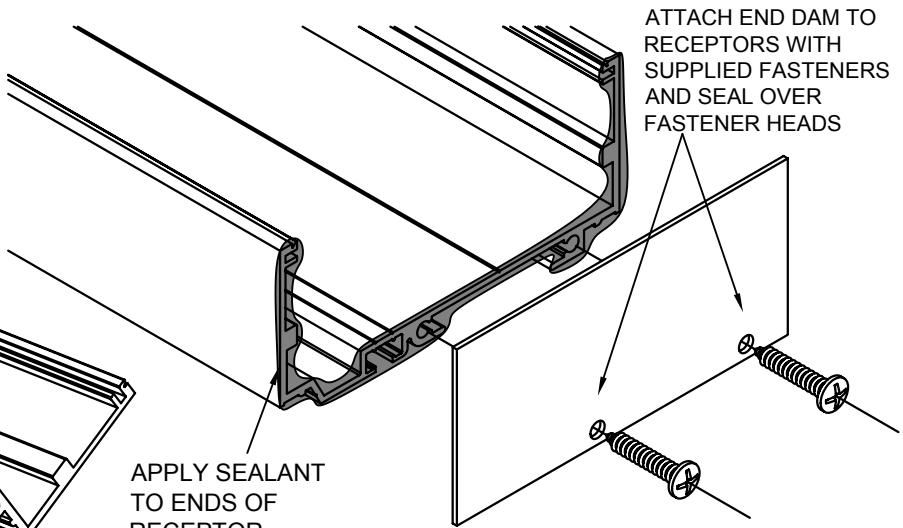


FIGURE 4

TYPICAL JAMB ASSEMBLY

STEP A: Cut jamb to required length.
STEP B: Prep for horizontals if required. Refer to pages 10-15 for locations.
STEP C: Drill and countersink perimeter fasteners.
STEP D: Snap shim support into back of jamb and crimp in place (Figure 2). Match drill hole in shim support for perimeter fastener.
STEP E: Apply sealant to top end of jamb member.
STEP F: Position jamb cap on top of jamb member and fasten with two 028856 (#12 x 1-1/8" PHTF) supplied screws.
STEP G: Apply and tool sealant over heads of fasteners and additional holes.

NOTE:
REFER TO SHOP DRAWINGS OR CONSULT ENGINEERING FOR PERIMETER FASTENER SIZE AND LOCATIONS.

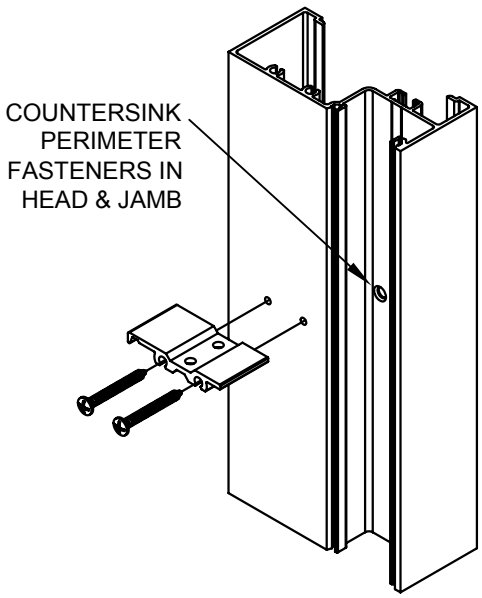


FIGURE 1

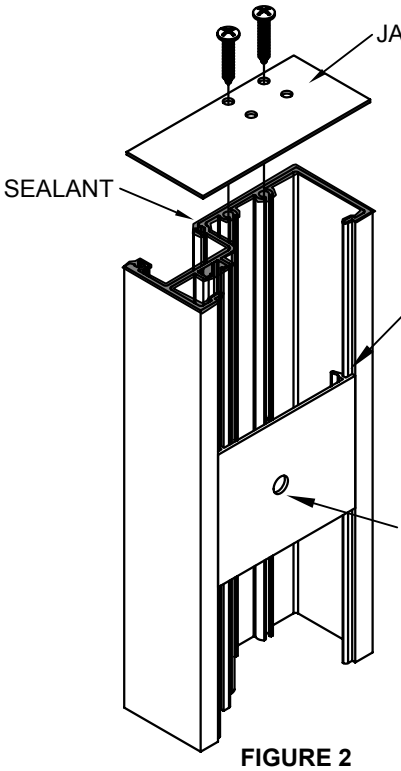


FIGURE 2

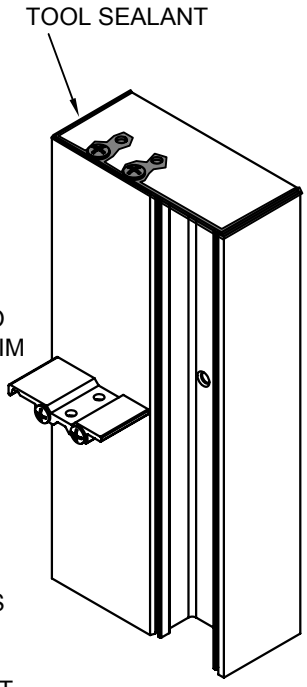


FIGURE 3

JAMB FOR TWO-COLOR - MULLION SIMILAR

STEP A: Cut cover same length as mullion and jamb.
STEP B: Apply sealant to top and bottom of mullion as shown.
STEP C: Apply sealant along mullion every 12".
STEP D: Snap cover onto mullion.
STEP E: Tool sealant flush at ends.

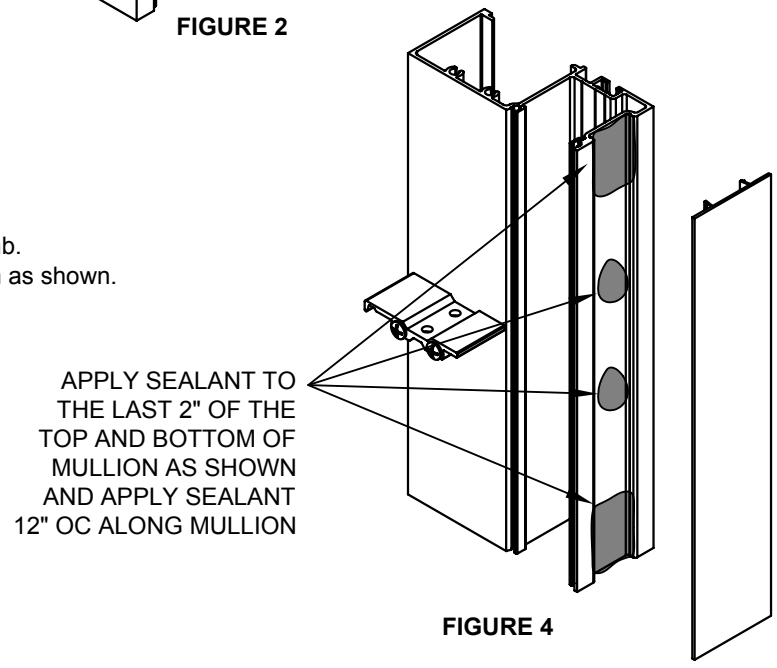


FIGURE 4

450 CG INTERMEDIATE HORIZONTAL FABRICATION

STEP A: Cut horizontals to length = Daylight Opening. (Glass Stops should be D.L.O. - 1/16").
STEP B: Fabricate intermediate horizontals by drilling and countersinking for #10 F.H. screws.

NOTE:
NO HORIZONTAL FABRICATION REQUIRED FOR FRONT AND BACK SYSTEMS

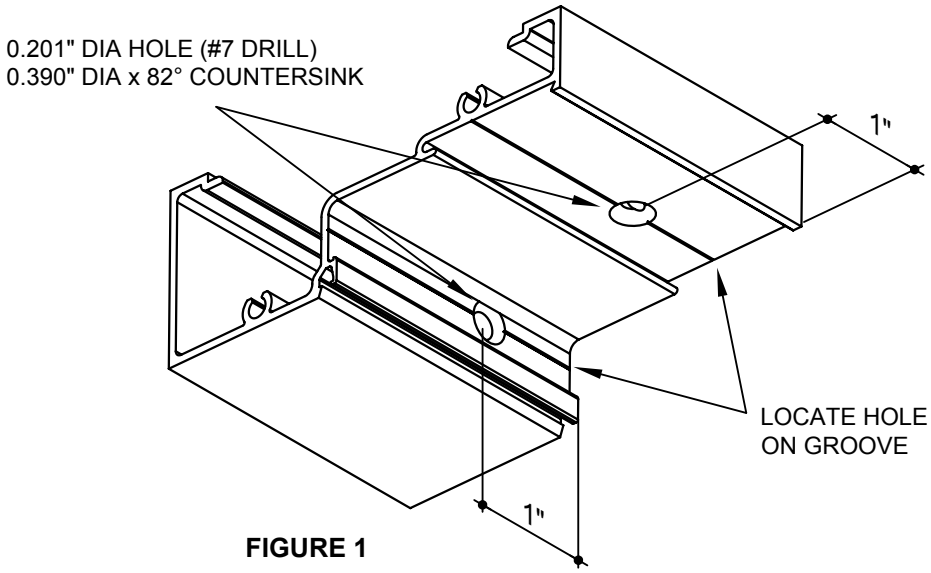


FIGURE 1

451 \ 451T CG INTERMEDIATE HORIZONTAL FABRICATION

STEP A: Cut horizontals to length = Daylight Opening. (Glass Stops should be D.L.O. - 1/16").
STEP B: Fabricate intermediate horizontal by drilling and countersinking for #8 F.H. screws. (See Figure 2)
STEP C: Fabricate intermediate horizontal filler by drilling and countersinking for #10 F.H. screws. (See Figure 3)

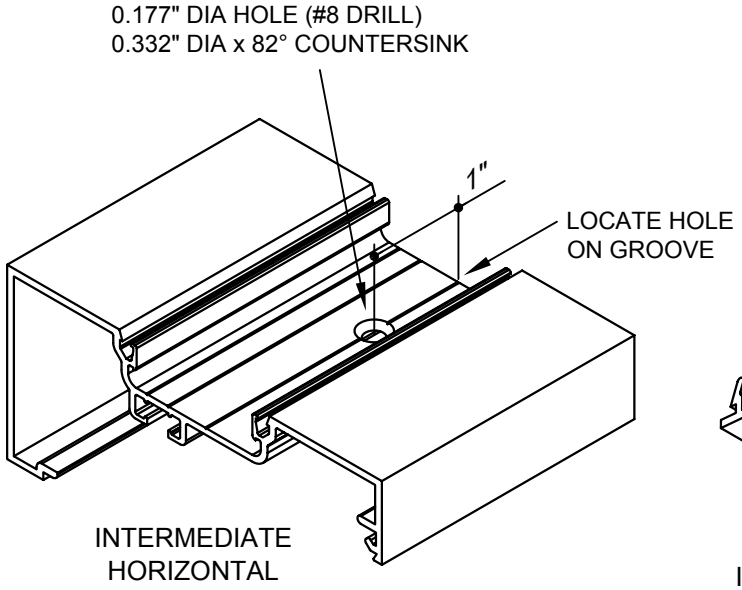


FIGURE 2

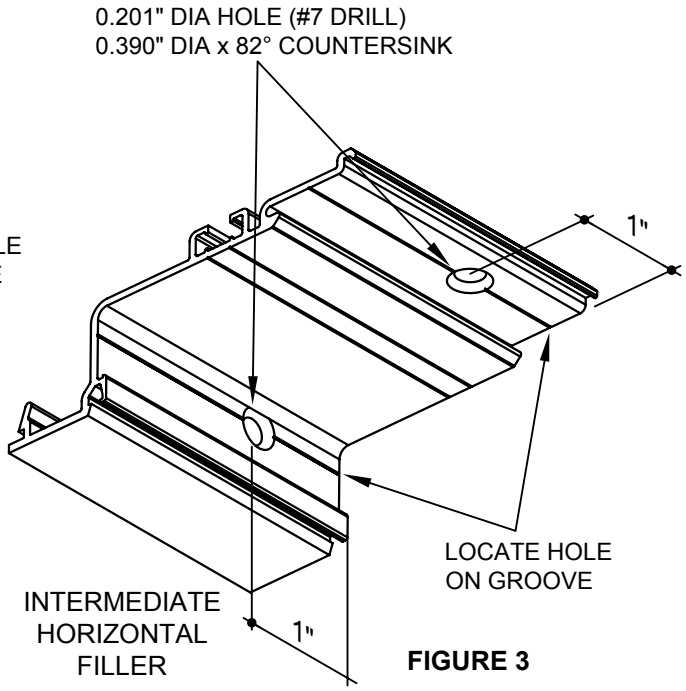


FIGURE 3

***STEP A*:** Cut mullion halves and cover to required length (Refer to page 9).

STEP B: Fabricate horizontals as shown on page 21.

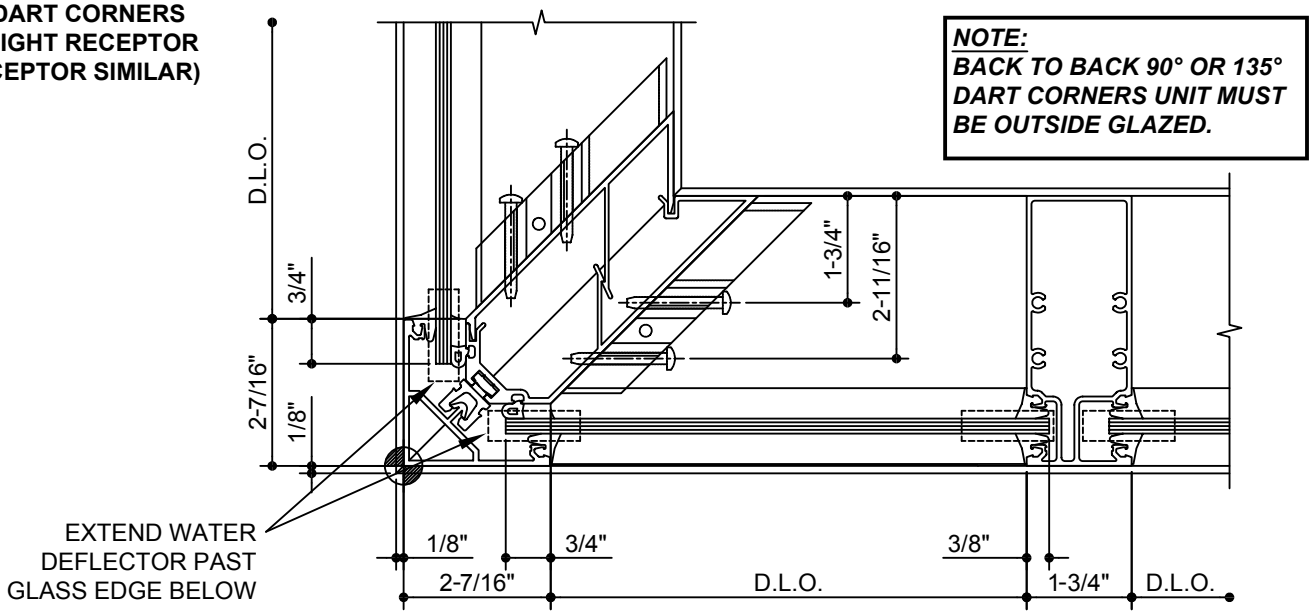
STEP C: Cut outside glazed glass stops to length (Refer to page 9). Miter inside glazed glass stop as shown on page 21.

STEP D: Drill mullion halves for shear blocks as shown below. Use the actual fabricated clip as a template.

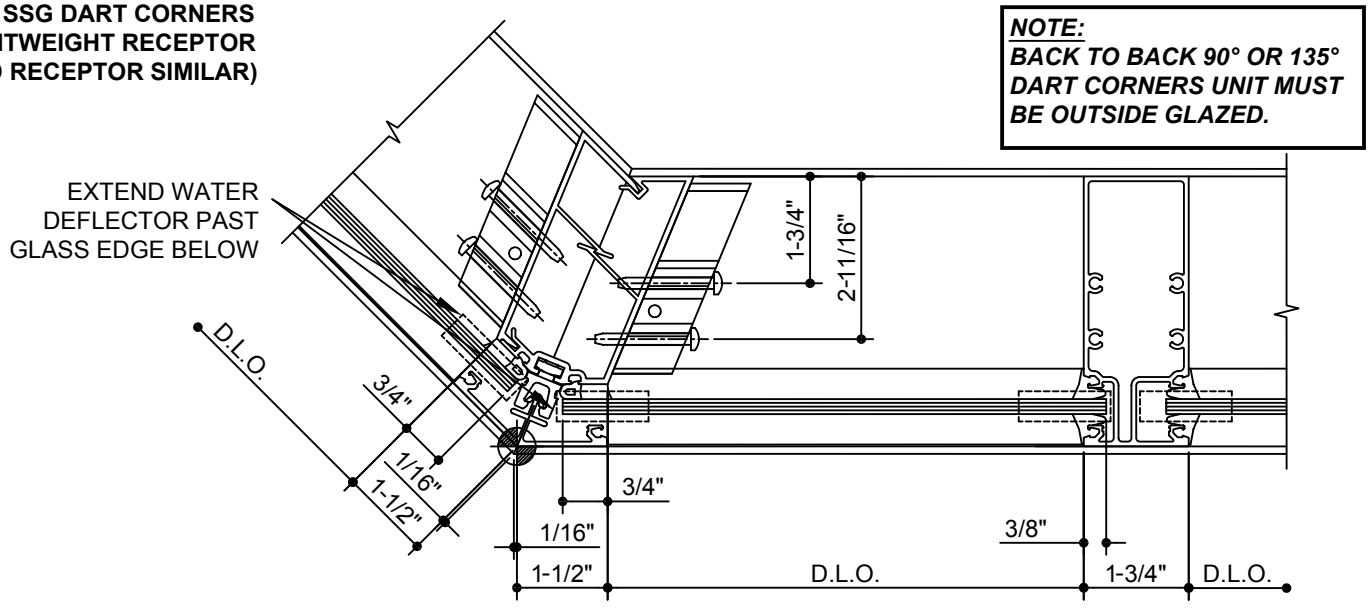
STEP E: Attach shear blocks using (2) 028400 (#10 x 1-19/32") pan head screws.

STEP F: Fabricate horizontals for (1) 128345 (#10 x 9/16") flat head screw as shown on page 21.

**90° SSG DART CORNERS
LIGHTWEIGHT RECEPTOR
(STD RECEPTOR SIMILAR)**

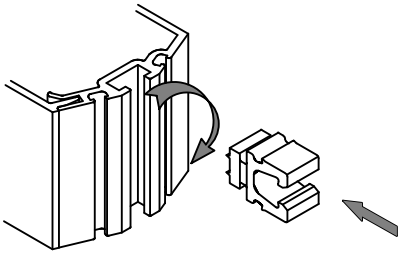


**135° SSG DART CORNERS
LIGHTWEIGHT RECEPTOR
(STD RECEPTOR SIMILAR)**

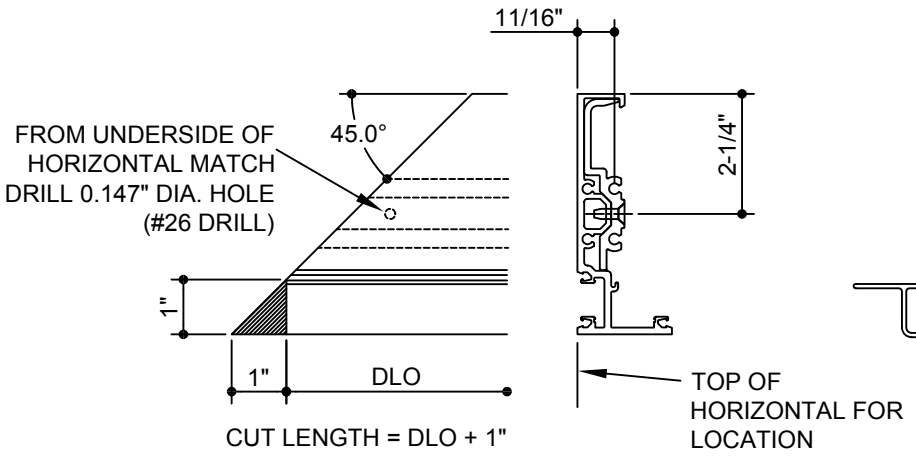


STEP G: Prior to installing cover, install 250299 glazing clip into vertical as shown. These clips should be located no more than 6" O.C. and no more than 3" from the ends of the mullions.

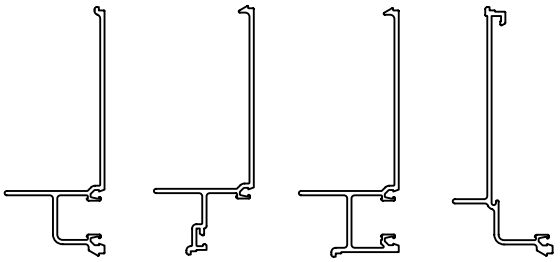
1) Push clip (250299) into mullion reglet.
2) Twist clip 1/4 turn clockwise to lock In place.



HORIZONTAL AND HEAD / SILL INSERT PREPS FOR 90° DART CORNERS

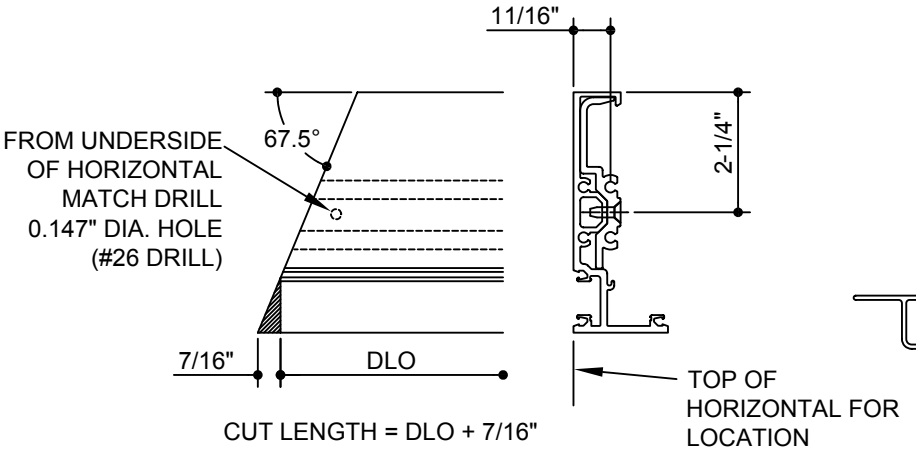


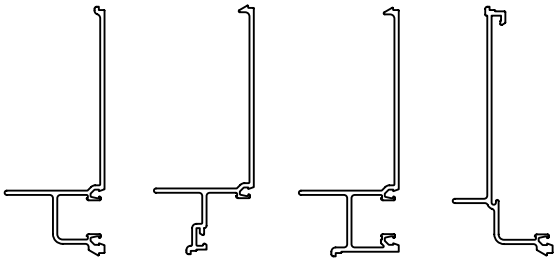
NOTE:
HOLE NOT REQUIRED ON INSERTS



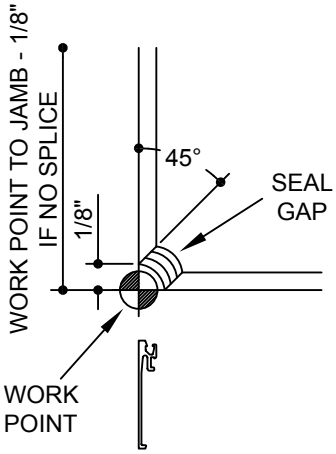
HORIZONTAL AND HEAD / SILL INSERT PREPS FOR 135° DART CORNERS

NOTE:
HOLE NOT REQUIRED ON INSERTS

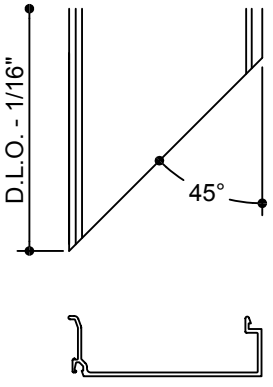




90° GLASS STOP PREPS

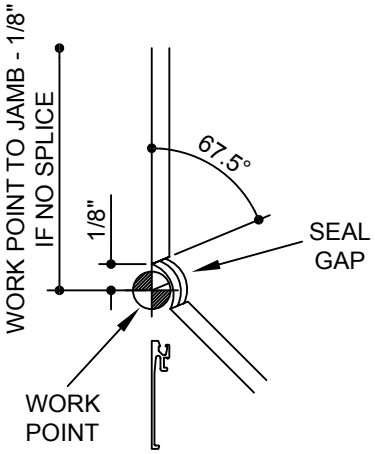


SSG HORIZONTAL COVER

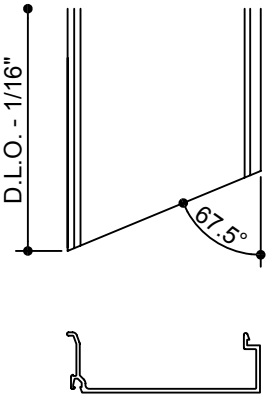


INSIDE GLAZED GLASS STOP CUT LENGTH = DLO - 1/16"

135° GLASS STOP PREPS



SSG HORIZONTAL COVER



INSIDE GLAZED GLASS STOP CUT LENGTH = DLO - 1/16"

STEP A: Cut mullion halves to required length (Refer to page 9).

STEP B: Fabricate horizontals as shown on page 23.

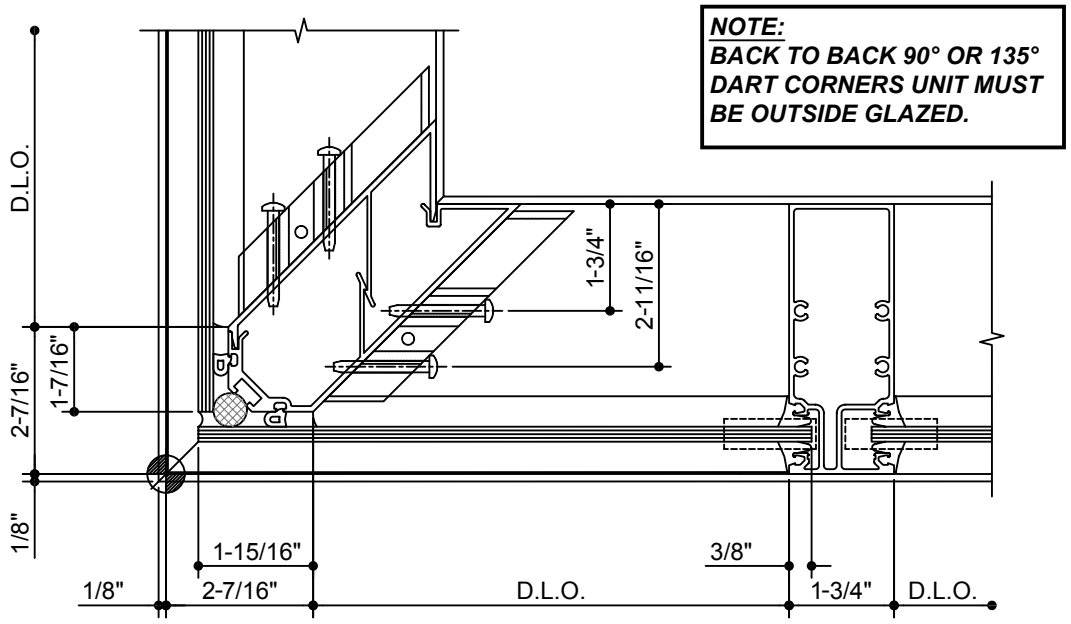
STEP C: Cut outside glazed glass stops to length (Refer to page 9). Miter inside glazed glass stop as shown on page 23.

STEP D: Drill mullion halves for shear blocks as shown below. Use the actual fabricated clip as a template.

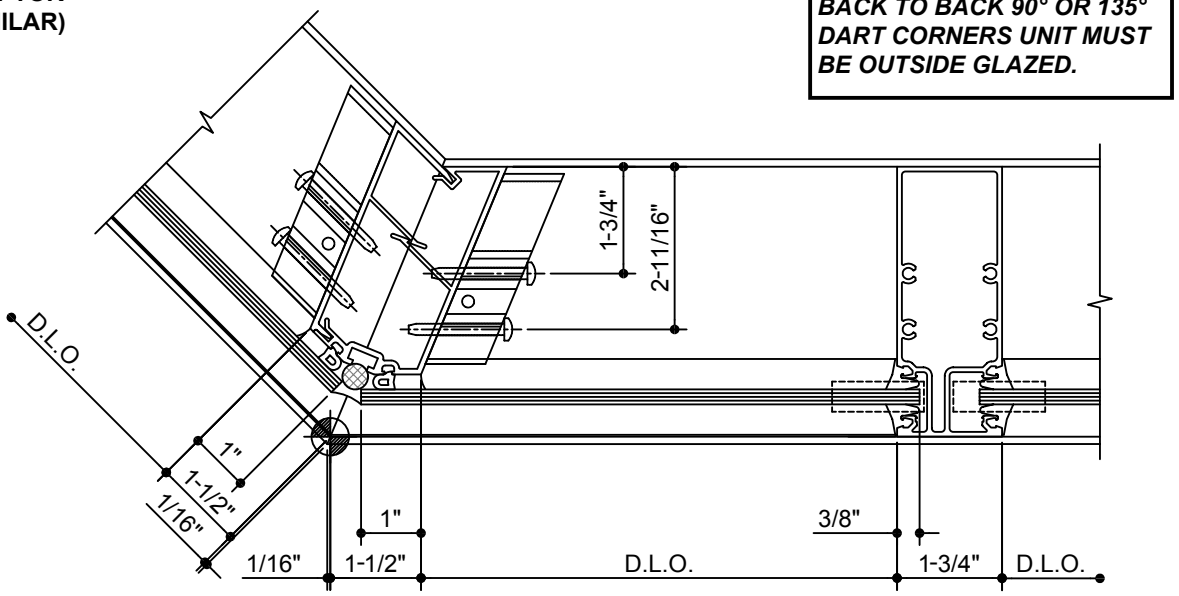
STEP E: Attach shear blocks using (2) 028400 (#10 x 1-19/32") pan head screws.

STEP F: Fabricate horizontals for (1) 128345 (#10 x 9/16") flat head screw as shown on page 23.

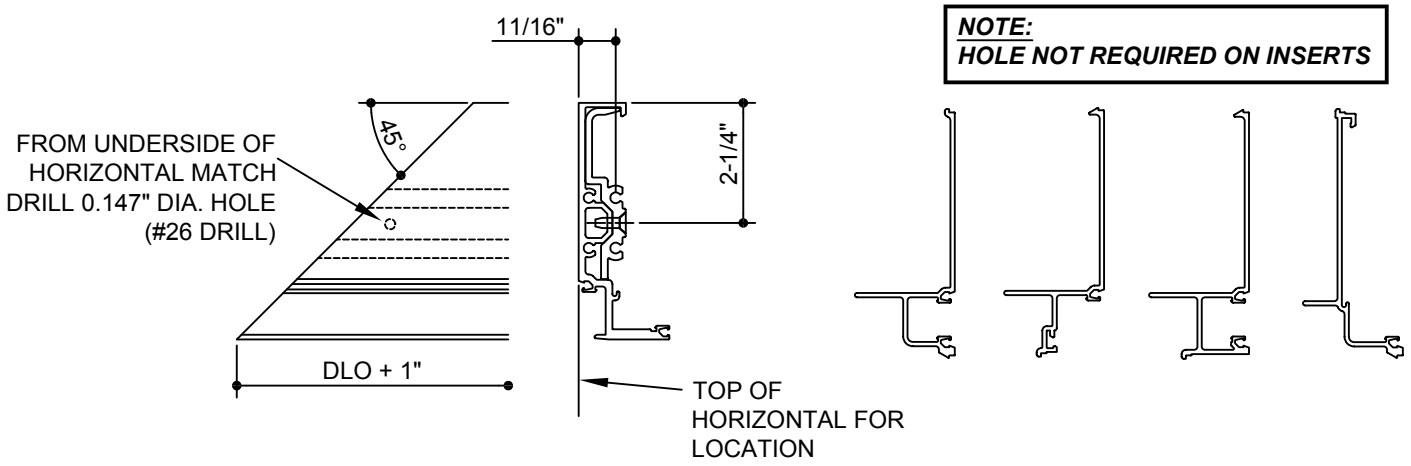
90° SSG DART CORNERS
LIGHTWEIGHT RECEPTOR
(STD RECEPTOR SIMILAR)



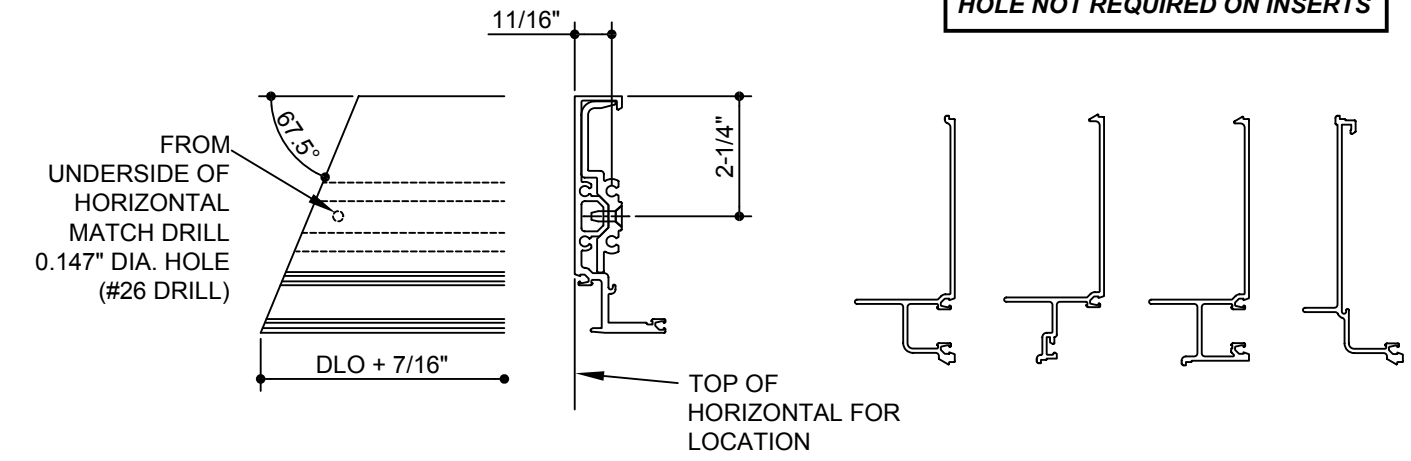
135° SSG DART CORNERS
LIGHTWEIGHT RECEPTOR
(STD RECEPTOR SIMILAR)



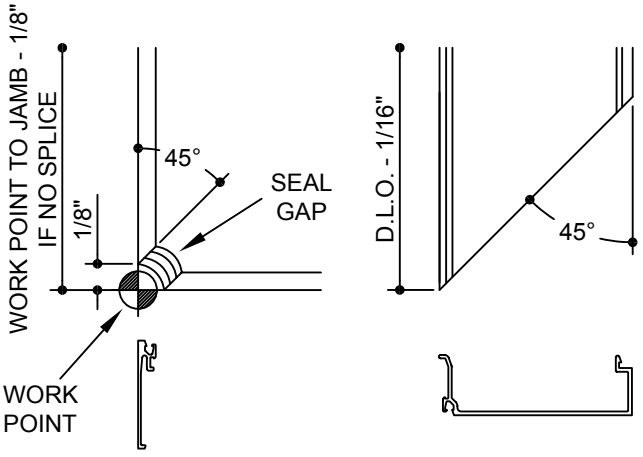
HORIZONTAL AND HEAD / SILL INSERT PREPS FOR 90° DART CORNERS



HORIZONTAL AND HEAD / SILL INSERT PREPS FOR 135° DART CORNERS



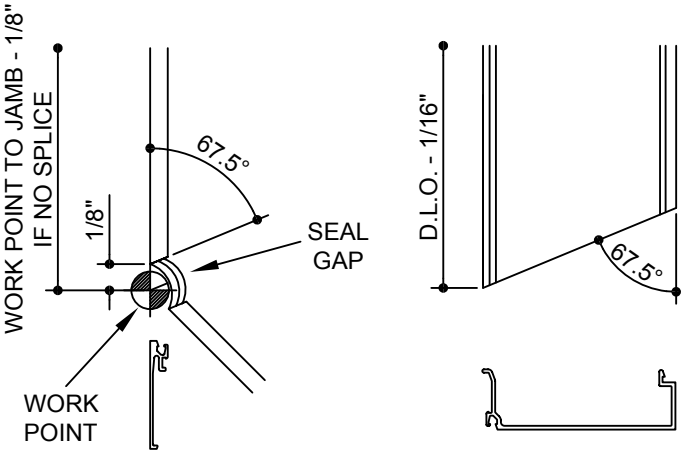
90° GLASS STOP PREPS



SSG HORIZONTAL COVER

INSIDE GLAZED GLASS STOP CUT LENGTH = DLO - 1/16"

135° GLASS STOP PREPS



SSG HORIZONTAL COVER

INSIDE GLAZED GLASS STOP CUT LENGTH = DLO - 1/16"

STEP A: Cut mullion halves and cover to required length (Refer to page 9).

STEP B: Fabricate horizontals as shown on page 25.

STEP C: Cut outside glazed glass stops to length (Refer to page 9). Miter inside glazed glass stop as shown on page 25.

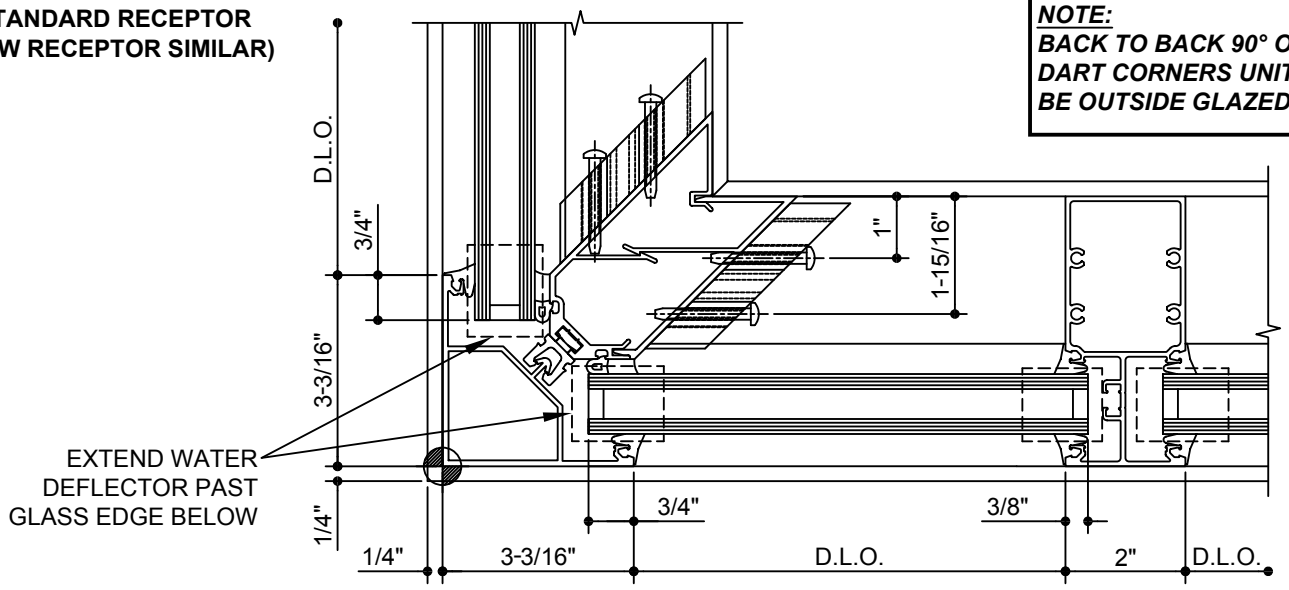
STEP D: Drill mullion halves for shear blocks as shown below. Use the actual fabricated clip as a template.

STEP E: Attach shear blocks using (2) 028400 (#10 x 1-19/32") pan head screws.

STEP F: Fabricate horizontals for (1) 128345 (#10 x 9/16") flat head screw as shown on page 25.

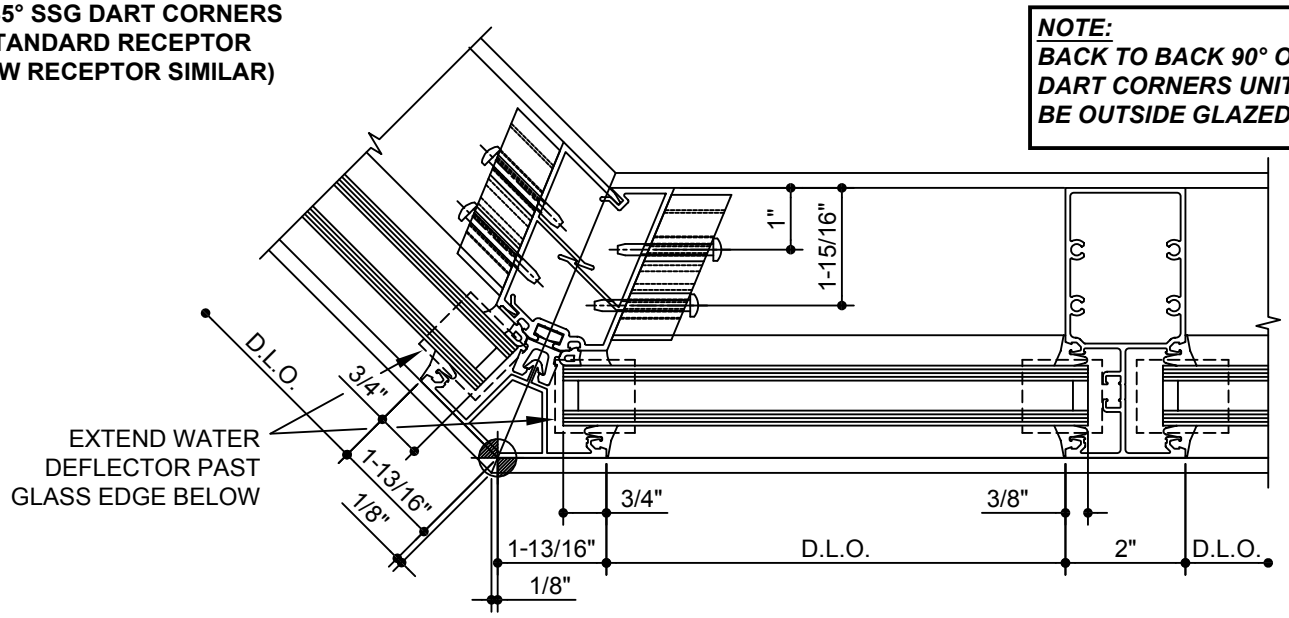
90° SSG DART CORNERS
STANDARD RECEPTOR
(LW RECEPTOR SIMILAR)

NOTE:
BACK TO BACK 90° OR 135° DART CORNERS UNIT MUST BE OUTSIDE GLAZED.



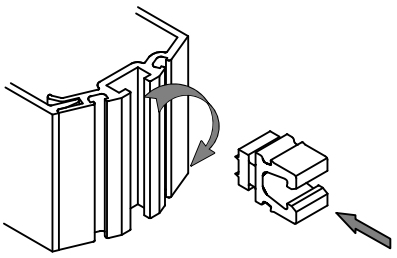
135° SSG DART CORNERS
STANDARD RECEPTOR
(LW RECEPTOR SIMILAR)

NOTE:
BACK TO BACK 90° OR 135° DART CORNERS UNIT MUST BE OUTSIDE GLAZED.

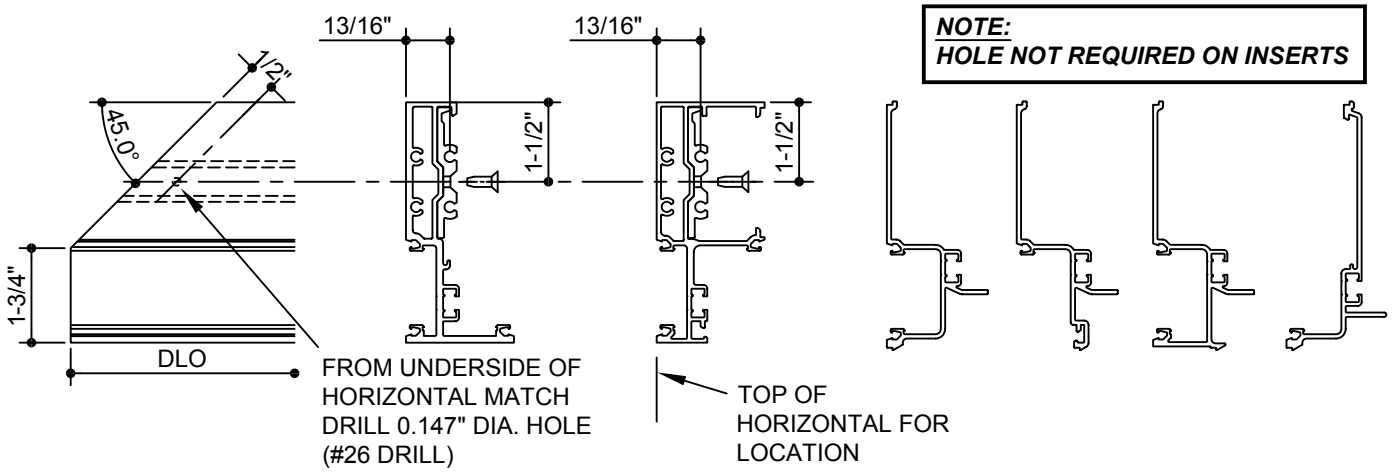


STEP G: Prior to installing cover, install 250299 glazing clip into vertical as shown. These clips should be located no more than 6" O.C. and no more than 3" from the ends of the mullions.

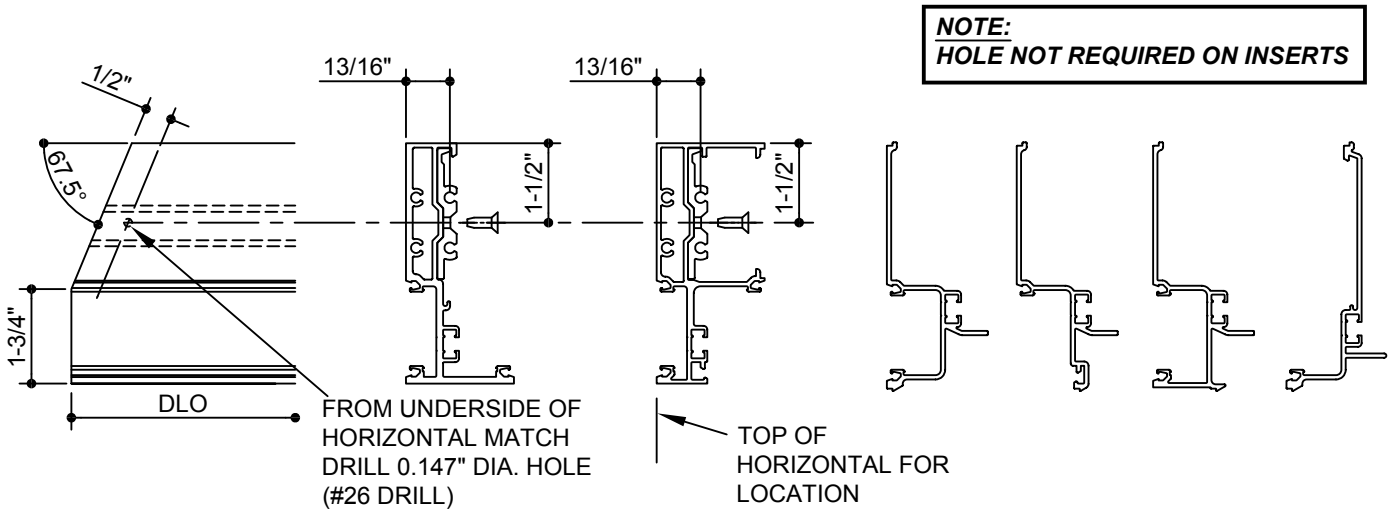
1) Push clip (250299) into mullion reglet.
2) Twist clip 1/4 turn clockwise to lock In place.



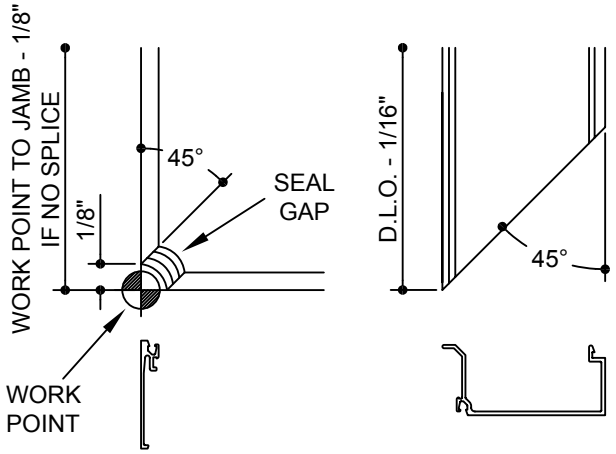
HORIZONTAL AND HEAD / SILL INSERT PREPS FOR 90° DART CORNERS



HORIZONTAL AND HEAD / SILL INSERT PREPS FOR 135° DART CORNERS



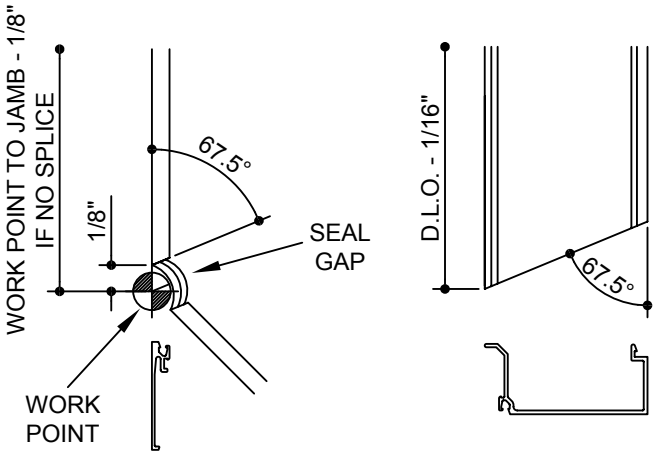
90° GLASS STOP PREPS



SSG HORIZONTAL COVER

INSIDE GLAZED GLASS STOP CUT LENGTH = DLO - 1/16"

135° GLASS STOP PREPS



SSG HORIZONTAL COVER

INSIDE GLAZED GLASS STOP CUT LENGTH = DLO - 1/16"

STEP A: Cut mullion halves to required length (Refer to page 9).

STEP B: Fabricate horizontals as shown on page 27.

STEP C: Cut outside glazed glass stops to length (Refer to page 9). Miter inside glazed glass stop as shown on page 27.

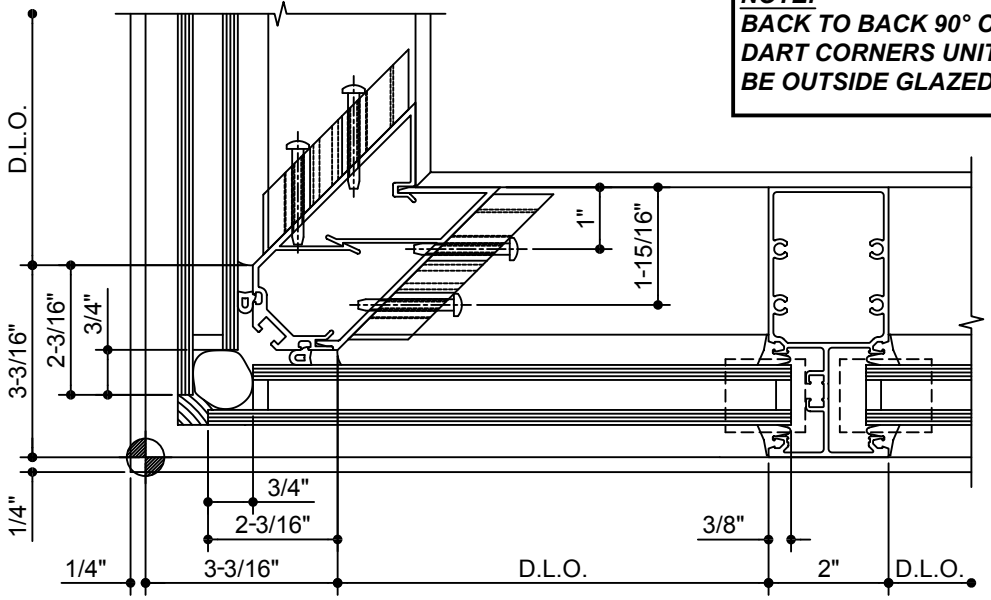
STEP D: Drill mullion halves for shear blocks as shown below. Use the actual fabricated clip as a template.

STEP E: Attach shear blocks using (2) 028400 (#10 x 1-19/32") pan head screws.

STEP F: Fabricate horizontals for (1) 128345 (#10 x 9/16") flat head screw as shown on page 27.

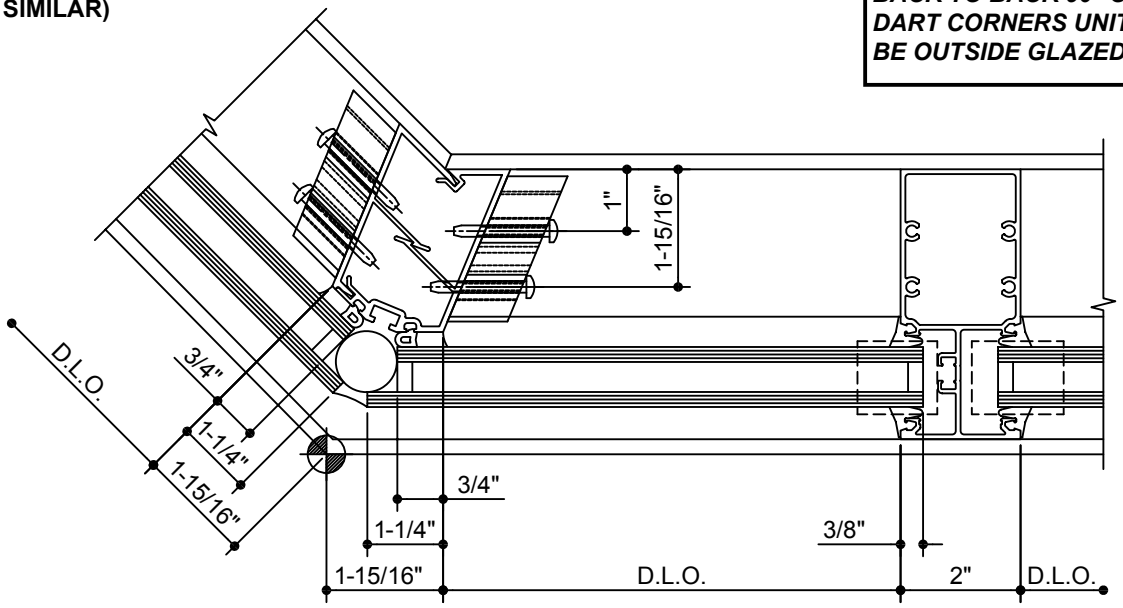
90° SSG DART CORNERS
STANDARD RECEPTOR
(LW RECEPTOR SIMILAR)

NOTE:
BACK TO BACK 90° OR 135° DART CORNERS UNIT MUST BE OUTSIDE GLAZED.

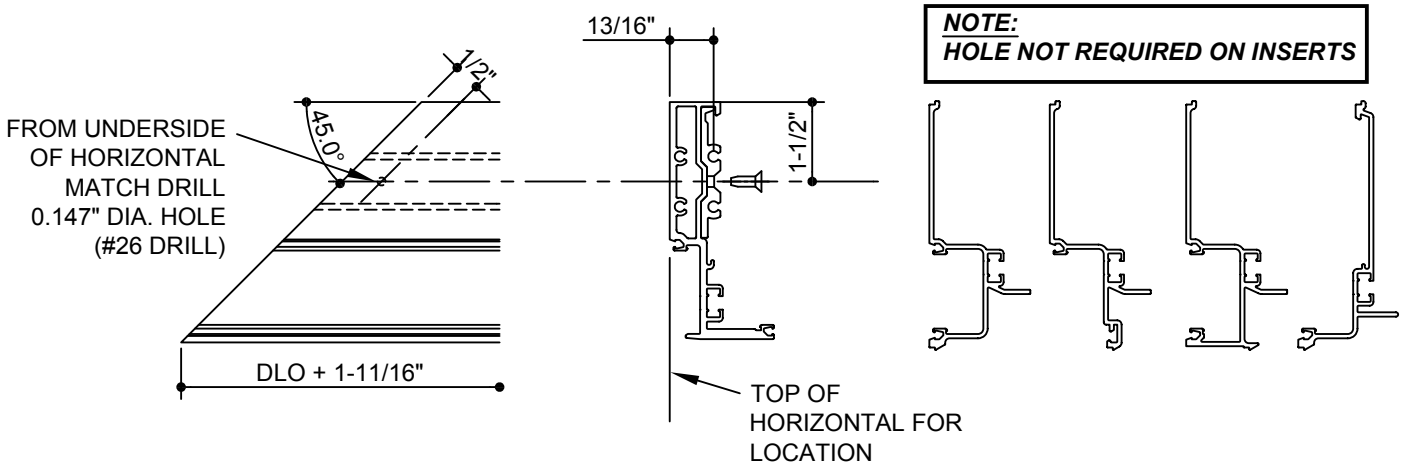


135° SSG DART CORNERS
STANDARD RECEPTOR
(LW RECEPTOR SIMILAR)

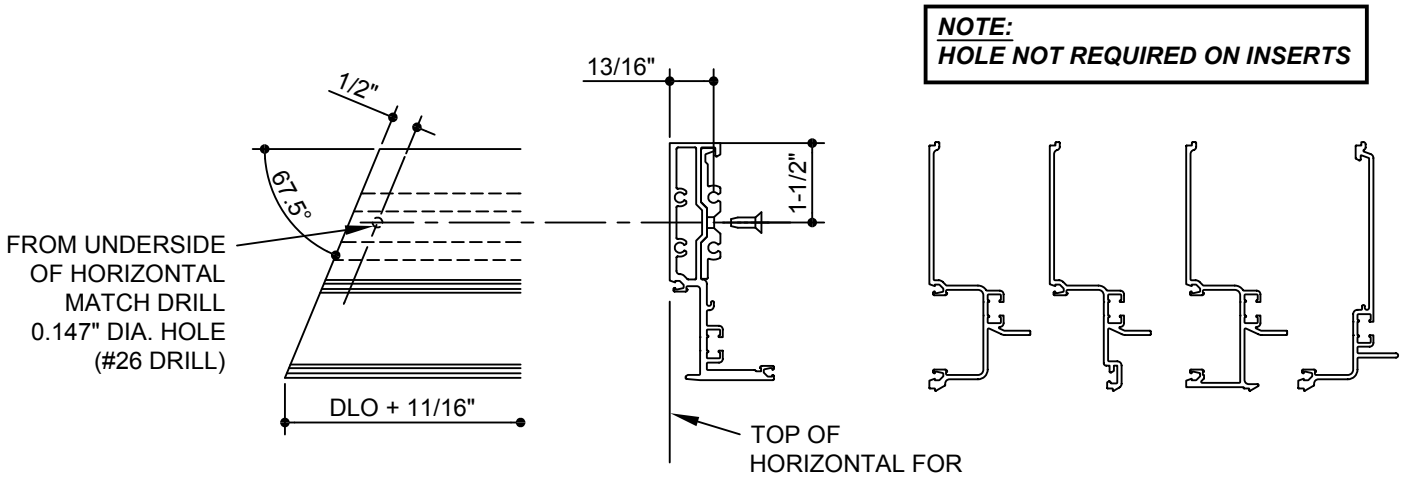
NOTE:
BACK TO BACK 90° OR 135° DART CORNERS UNIT MUST BE OUTSIDE GLAZED.



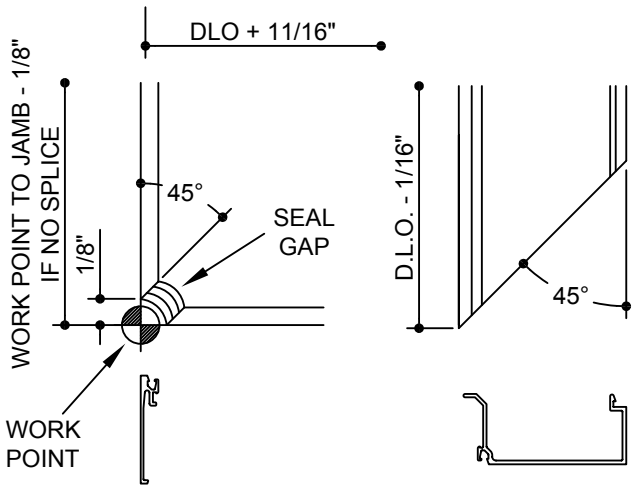
HORIZONTAL AND HEAD / SILL INSERT PREPS FOR 90° DART CORNERS



HORIZONTAL AND HEAD / SILL INSERT PREPS FOR 135° DART CORNERS



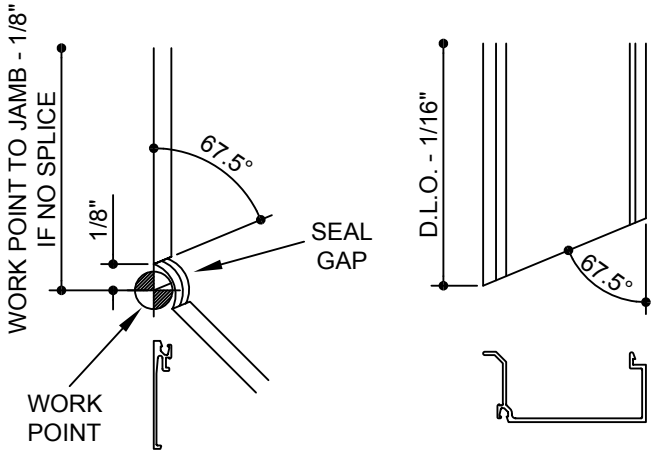
90° GLASS STOP PREPS



SSG HORIZONTAL COVER

INSIDE GLAZED GLASS STOP CUT LENGTH = DLO - 1/16"

135° GLASS STOP PREPS



SSG HORIZONTAL COVER

INSIDE GLAZED GLASS STOP CUT LENGTH = DLO - 1/16"

STEP A: Install Head and Sill receptors level and true in opening. The sill receptor should be shimmed up a minimum of 1/4" as required at each fastener and under the location of each mullion to level receptor. Seal the ends of the Head and Sill receptor and seal over all fasteners at sill. Seal end dam to perimeter condition. (Figure 1)

STEP B: Starting at one end of the opening, apply bead of sealant along front and rear of top and bottom jamb locations. (Figure 1)

STEP C: Install the jamb, plumb and shim as required. Drill and countersink anchor holes as required in the glass pocket. Apply sealant along edge of jamb and sill receptor and into glazing pocket, tool as required. (Figure 2) Apply sealant between the top of the jamb and the head receptor and tool as required. (Figure 5)

STEP D: Snap in head and sill inserts tight against jamb member using a mallet and a block of wood to prevent denting of inserts. Tight snaps may be waxed to make engagement easier. ***Head and sill inserts are not designed to be unsnapped.***

STEP E: Apply bead of sealant along front and rear of top and bottom mullion locations. Tip mullion into place in the head and sill channels. Tap mullion toward head and sill inserts to get a tight joint. Every lite must have at least one deep vertical pocket.

STEP F: Continue with Steps D and E until final bay. At the last bay, the head and sill inserts ***SHOULD NOT*** be snapped into place until the jamb is installed.

STEP G: After final jamb is installed, apply sealant as in ***STEP C***. Snap in the last head and sill inserts. Shim jamb tight against head and sill insert. Then anchor jamb to perimeter as shown. (Figure 3)

NOTES:
1) IF THERE IS AN ENTRANCE, BEGIN INSTALLATION AT THE DOOR JAMB. IF THERE ARE CORNERS, START AT CORNERS AND WORK TOWARD OTHER ENDS.

2) IF SSG MULLIONS ARE USED, SNAP MULLION ADAPTOR INTO HEAD & SILL RECEPTORS FIRST. (FIGURE 4) IF MULLION ANCHORS ARE REQUIRED, REFER TO PAGE 42 FOR INSTALLATION INSTRUCTIONS.

3) REFER TO SHOP DRAWINGS OR CONSULT ENGINEERING FOR PERIMETER FASTENER SIZE AND LOCATIONS.

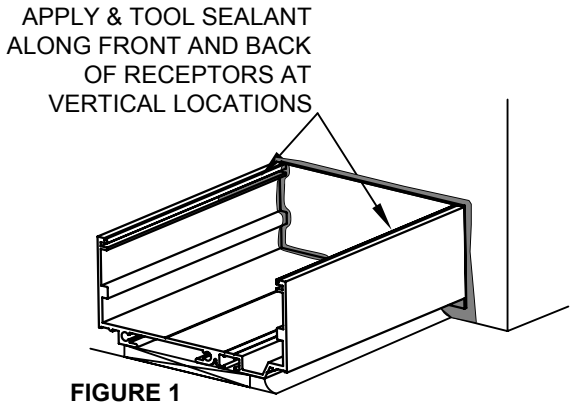


FIGURE 1

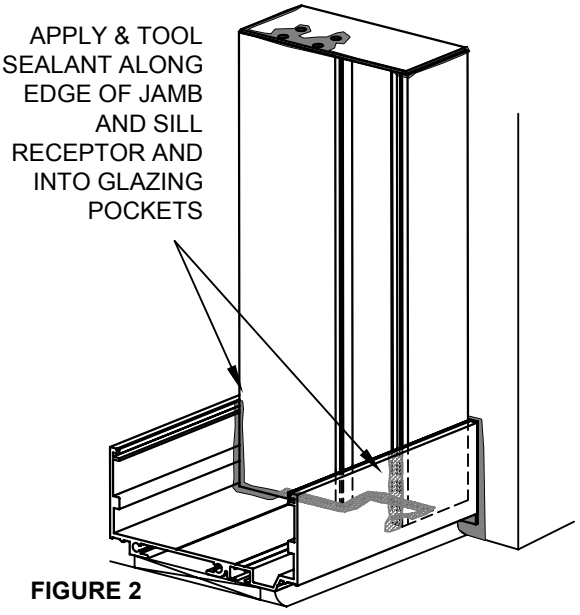


FIGURE 2

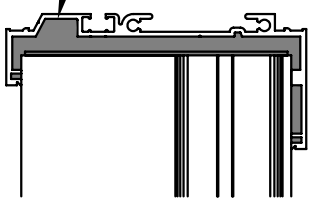
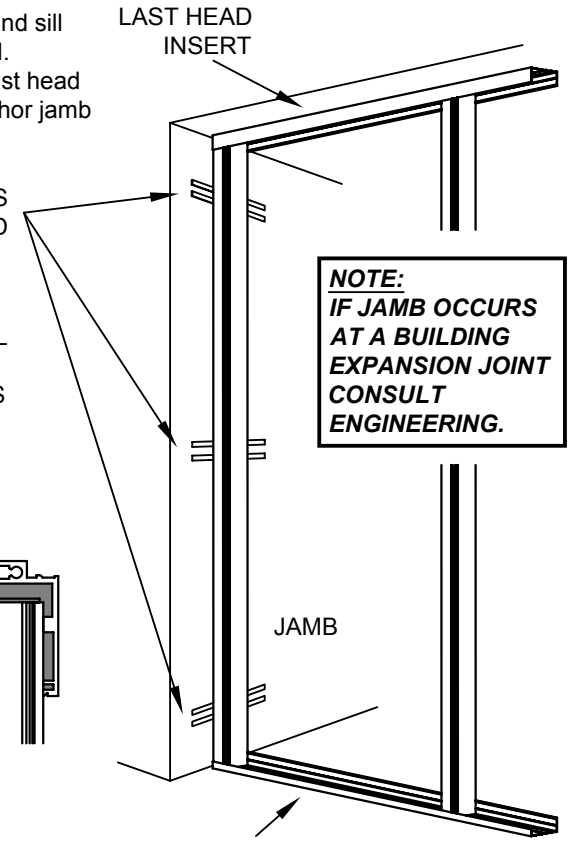


FIGURE 5



NOTE:
IF JAMB OCCURS AT A BUILDING EXPANSION JOINT CONSULT ENGINEERING.

FIGURE 3

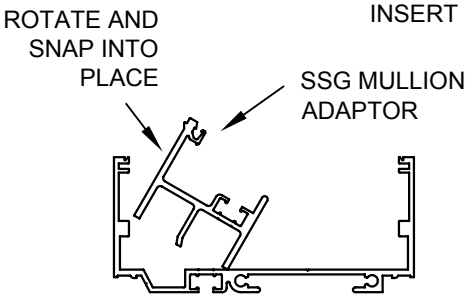


FIGURE 4

STEP A: Apply bond breaker tape to bottom of aluminum splice sleeve as shown. (Figure 1)

STEP B: Apply heavy bead of silicone sealant on one receptor and bead of non-skinning, non-hardening sealant on the other receptor. Install splice sleeve so that bond breaker tape aligns with splice joint as shown. (Figure 2)

STEP C: Pin splice sleeve on the side with the silicone joint and seal over heads of pins. ***Do not pin thru the thermal break***. Apply a secondary silicone seal on the pinned side as shown. (Figure 3)

STEP D: Apply bond breaker tape over the joint between the splice and receptor on the bead of non-skinning, non-hardening sealant side of splice (Figure 3). Apply silicone sealant over the bond breaker tape to create a water tight joint as shown. (Figure 4)

STEP E: Cut a 1/2" by 8" notch in downturn leg of insert to provide clearance for the splice sleeve as shown. (Figure 4)

NOTES:
SPLICE SLEEVES SHOULD BE INSTALLED EVERY 12 ft. WHEN RECEPTORS ARE OVER 24 ft. SPLICE SLEEVES ARE TO BE LOCATED AT THE CENTER OF D.L.O..

DO NOT LOCATE SPLICE SLEEVES AT MULLIONS.

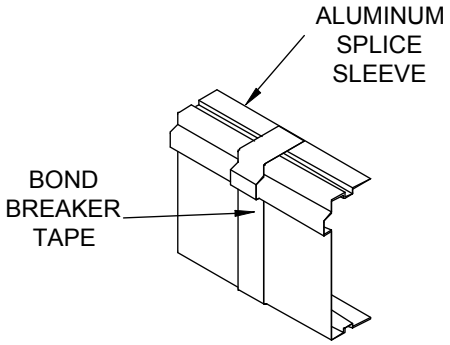


FIGURE 1

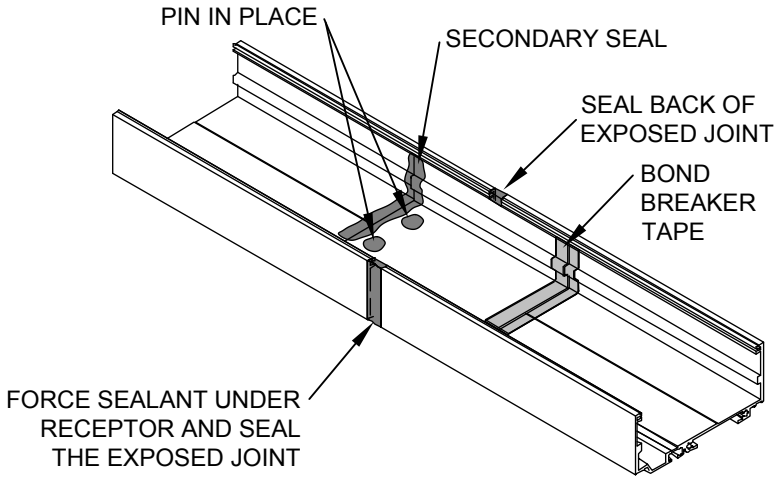


FIGURE 3

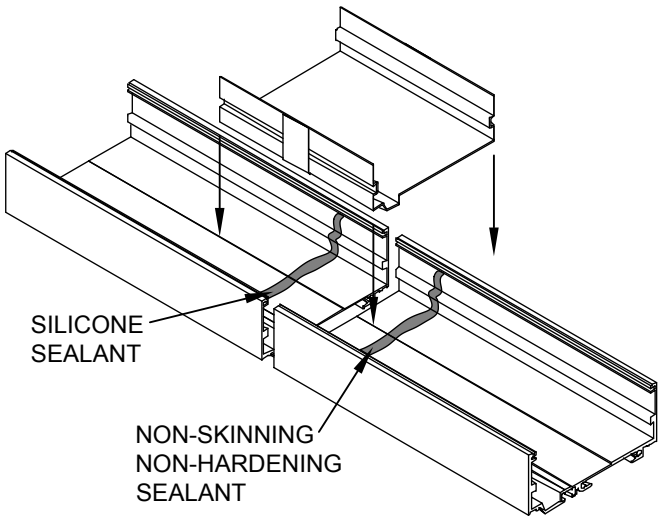


FIGURE 2

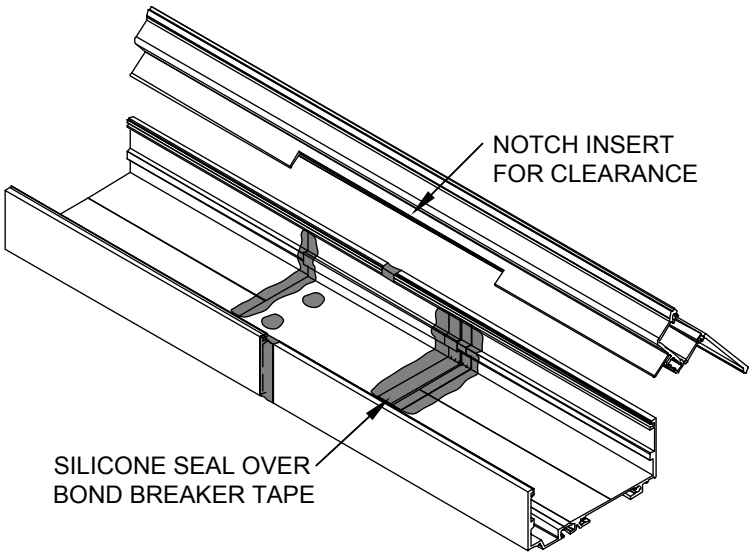


FIGURE 4

NOTE: ***SILL CONDITION SHOWN, HEAD CONDITION SIMILAR***

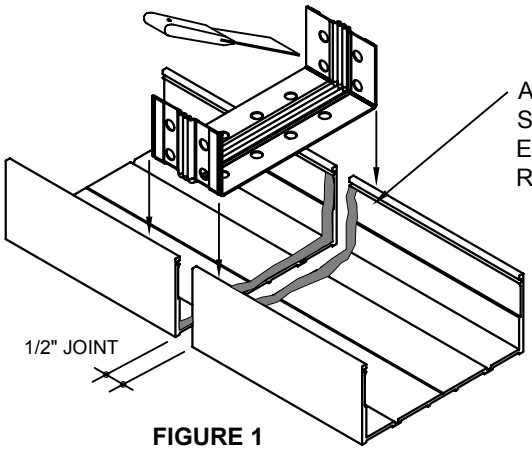


FIGURE 1

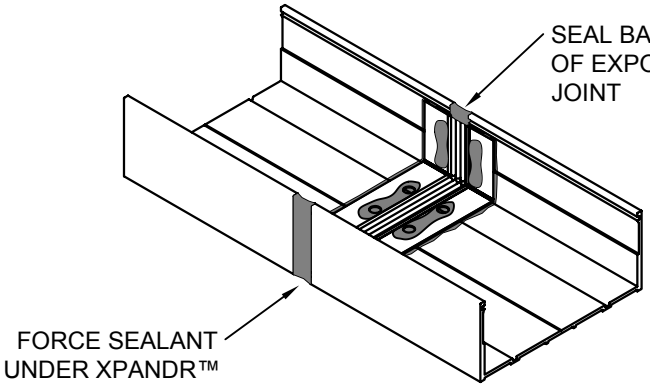


FIGURE 2

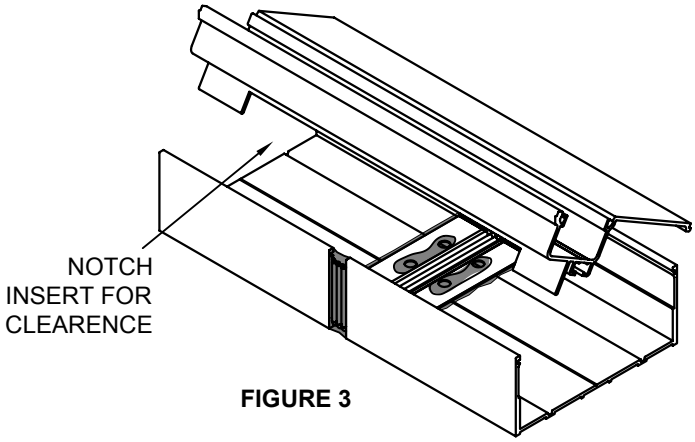


FIGURE 3

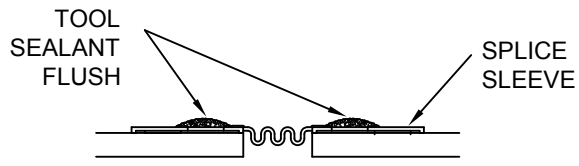


FIGURE 4

NOTE:

1) SPLICES SHOULD BE INSTALLED EVERY 12' WHEN RECEPTORS ARE OVER 24'. SPLICE SLEEVES ARE TO BE LOCATED AT THE CENTER OF A DLO.

DO NOT LOCATE SPLICE SLEEVES AT MULLIONS.

2) IF THERE IS AN ENTRANCE, THE ENTRANCE FRAME AND ATTACHED SIDELITE(S) SHOULD BE INSTALLED FIRST, BEING CAREFUL TO LOCATE THEM ACCURATELY IN THE OPENING. FASTEN THE ENTRANCE FRAME TO THE PERIMETER CONDITION AS NECESSARY USING THE REQUIRED PERIMETER FASTENERS.

3) ALTERNATE SILICONES MUST BE TESTED AND APPROVED FOR COMPATIBILITY BY THE SEALANT MANUFACTURER.

PROCEDURE FOR INSTALLING KAWNEER XPANDR™ SPLICE SLEEVE

1. Cut XPANDR™ Splice Sleeve (027094) to length and bend the material square, making a sharp corner. (Figure 1)
2. Clean splice area with solvent.
3. Apply bead of silicone within 1/4" of the edge of the sill members on each side of the 1/2" joint. (Figure 1)
4. Remove protective liner from adhesive tape. ***(For cold weather applications see note below.)***
5. Center the XPANDR™ Splice Sleeve over the joint. Then, using a putty knife, seat the XPANDR™ into the corner and onto the surface of the sill member. (Figure 2)
6. Silicone will squeeze out through the holes. Use putty knife to tool off excess silicone. (Figure 4)
7. Seal back of exposed joint and apply perimeter seals. Be sure to force sealant up under the XPANDR™ Splice Sleeve in front. Seal the exposed joint. (Figure 2)
8. Cut a 1/2" by 8" notch in downturn leg of insert to provide clearance for the splice sleeve as shown. (Figure 3)

COLD WEATHER NOTE:
FOR TEMPERATURES BELOW 40° THE FOLLOWING PRECAUTIONS SHOULD BE TAKEN. JUST PRIOR TO INSTALLING THE XPANDR™ , WIPE RECEPTOR WITH A SOLVENT OR CLEANING SOLUTION RECOMMENDED BY THE SEALANT MANUFACTURER.
****CAUTION:***
CAREFULLY FOLLOW THE RECOMMENDATIONS CONTAINED IN THE MATERIAL SAFETY DATA SHEET PROVIDED BY THE SOLVENT/CLEANING SOLUTION MANUFACTURER REGARDING HEALTH AND FIRE/EXPLOSION RISKS.

STEP A: Miter two 16" sections of Head and Sill receptors to correct angle.

STEP B: Drill two 0.228" dia clear holes with a #1 drill bit in each mitered section at the locations shown on pages 33-35.

STEP C: Locate the corner plate under the mitered section. Match drill with #11 (0.191" dia hole) drill bit and fasten with 028312 (#12 x 1/2" PHTF "AB") screws. (Figure 1)

STEP D: Apply sealant to end of the mitered section and over the heads of the fasteners.

STEP E: Place the other mitered section on the corner plate and fasten with supplied screws. Seal over heads of fasteners. (Figure 3)

STEP F: Apply sealant to the front and back upturned legs of the receptor and also along the bottom of the receptors at the mitered joint. Tool as required. (Figure 4)

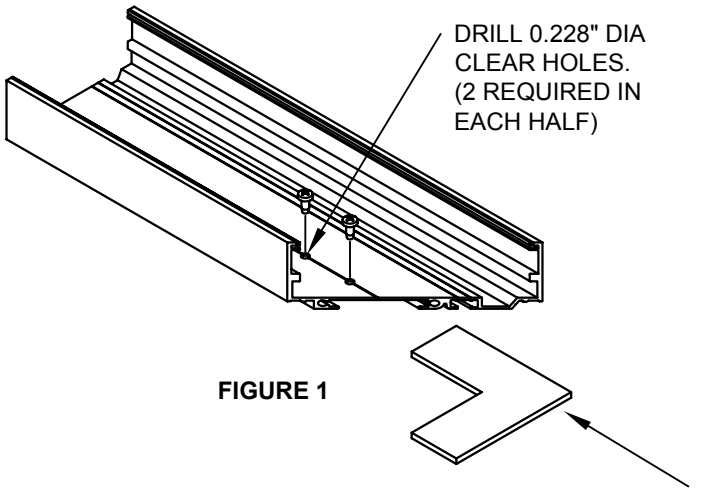


FIGURE 1

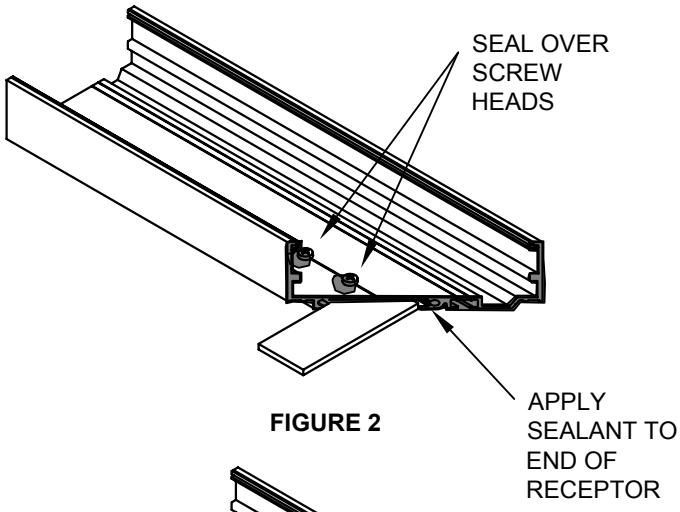


FIGURE 2

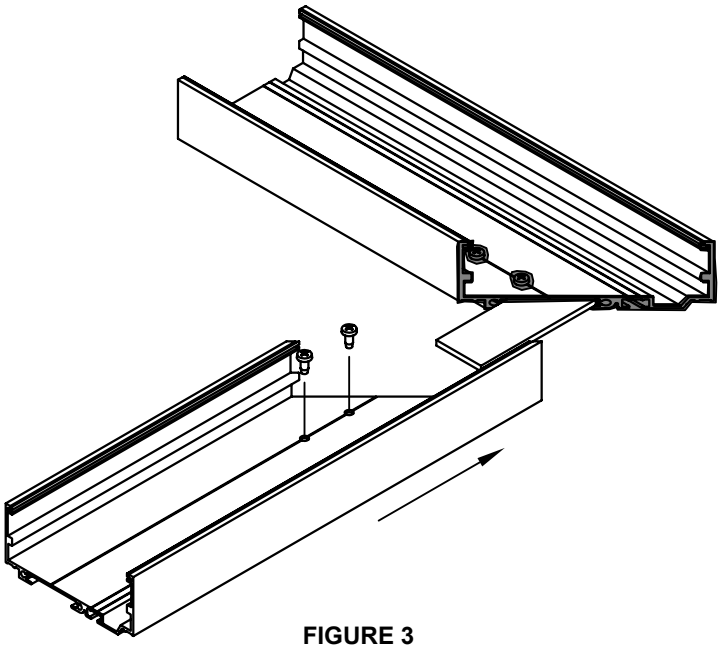


FIGURE 3

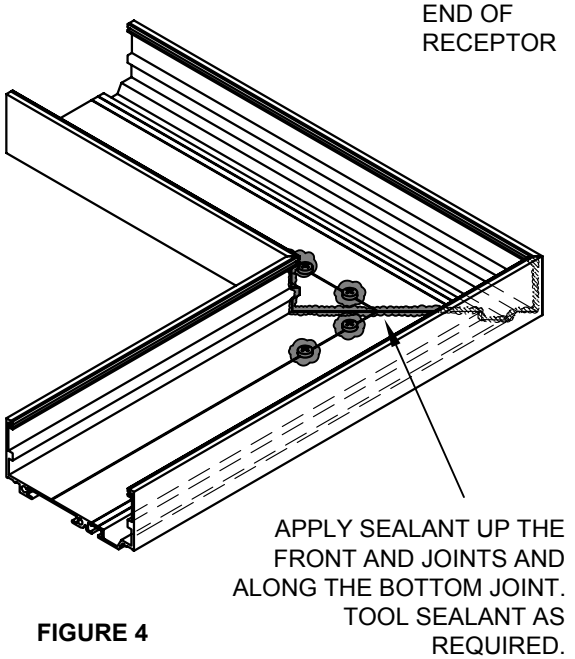


FIGURE 4

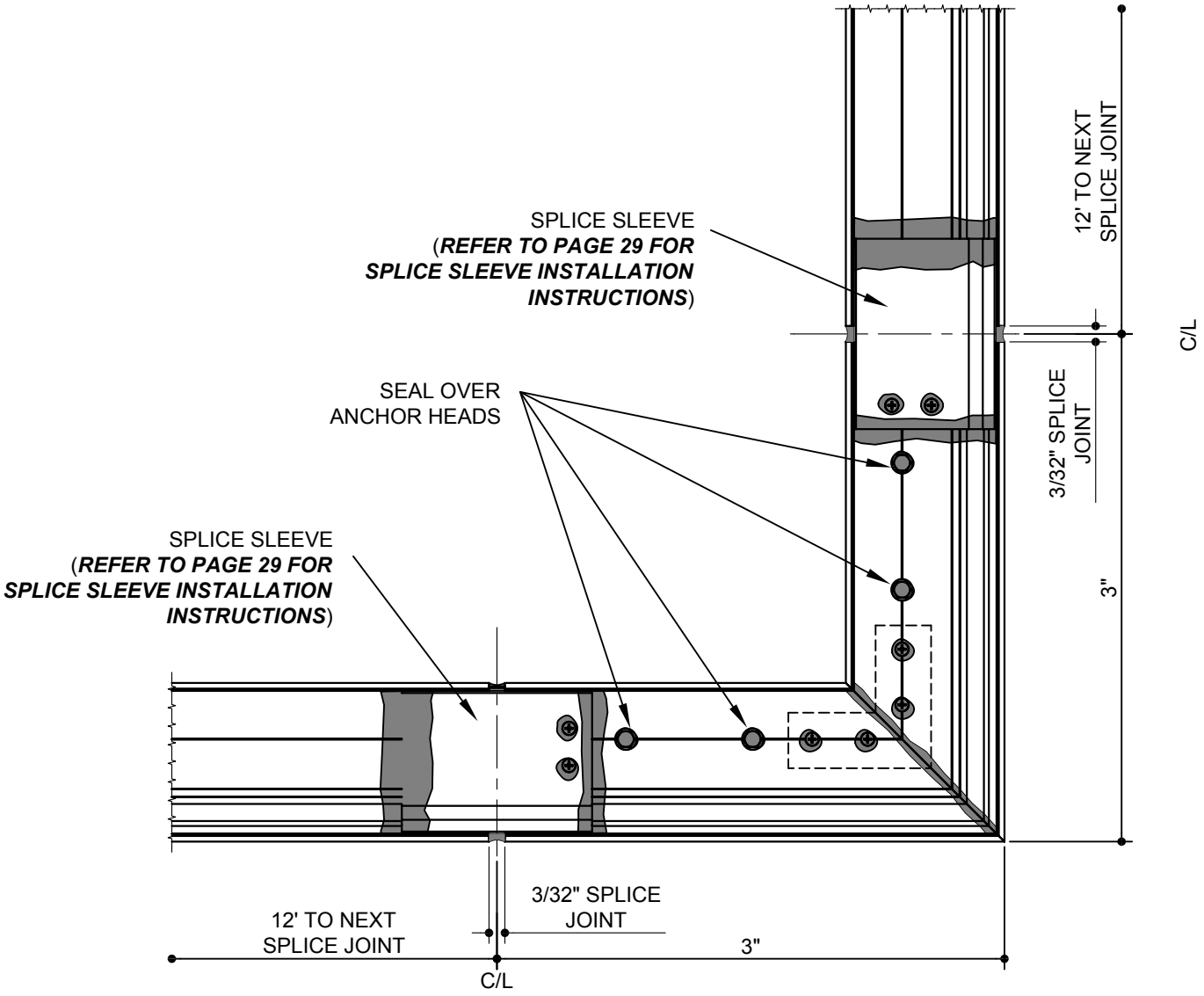
STEP A: Set Prefabricated Corner in a bed of sealant, level, and securely anchor into place. Refer to shop drawings or consult a structural engineer for anchoring requirements.

STEP B: Completely seal non-moving mitered joint and fastener heads.

STEP C: Install 12 foot lengths of receptor on either side of corner wing leaving 1/2" gap between for expansion.

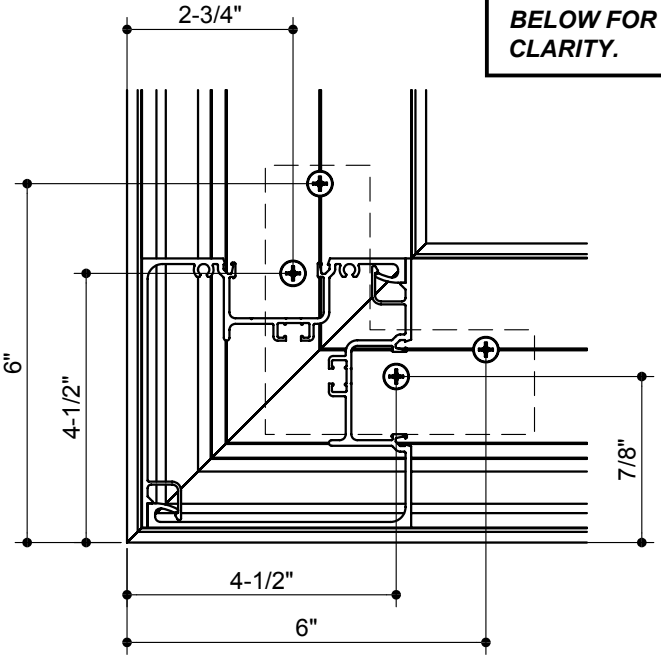
STEP D: Install splice sleeves. Refer to page 29 for splice sleeve installation instructions.

NOTE:
REFER TO SHOP DRAWINGS OR CONSULT ENGINEERING FOR PERIMETER FASTENER SIZE AND LOCATIONS.

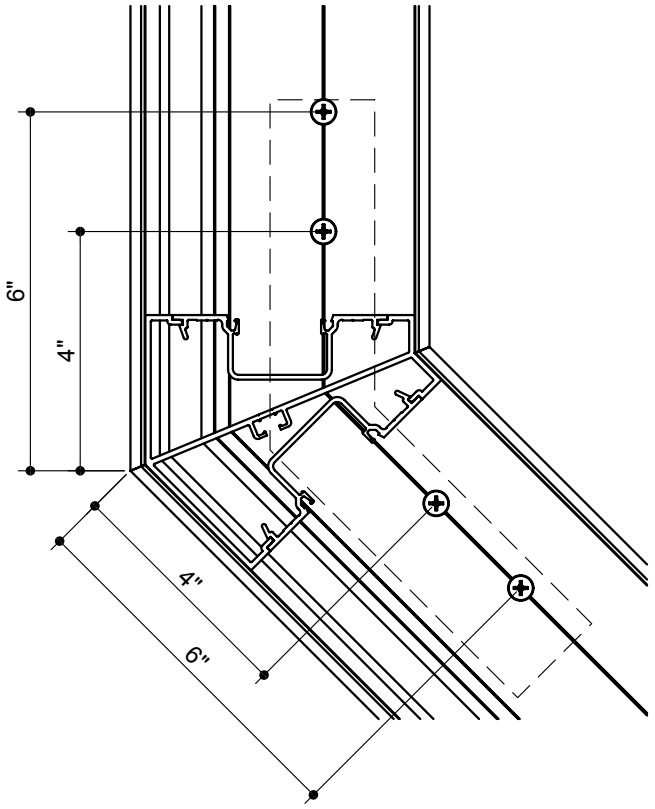


90° OUTSIDE CORNER

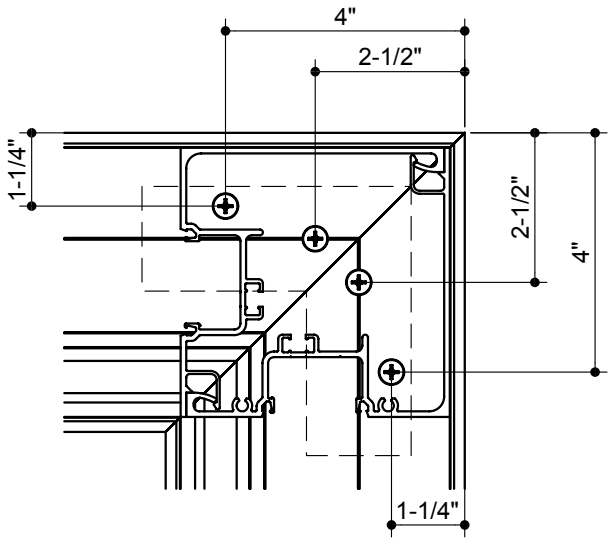
NOTE:
SEALANT NOT SHOWN ON DETAILS BELOW FOR CLARITY.



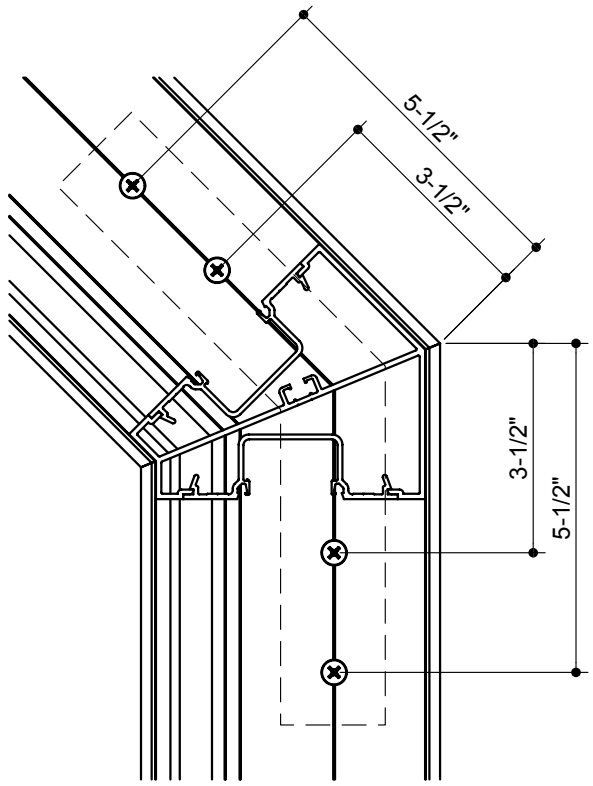
135° OUTSIDE CORNER



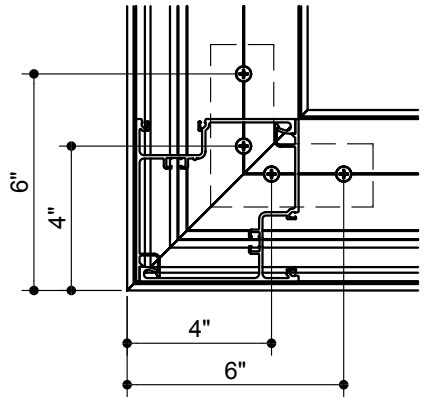
90° INSIDE CORNER



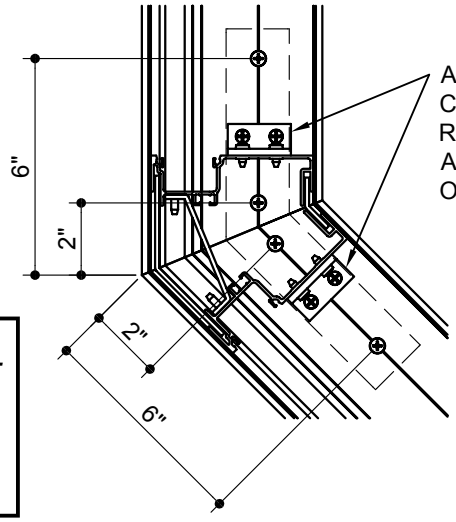
135° INSIDE CORNER



90° OUTSIDE CORNER

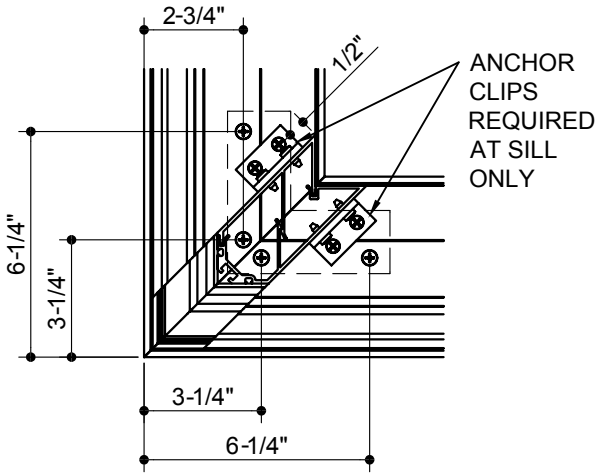


135° OUTSIDE CORNER

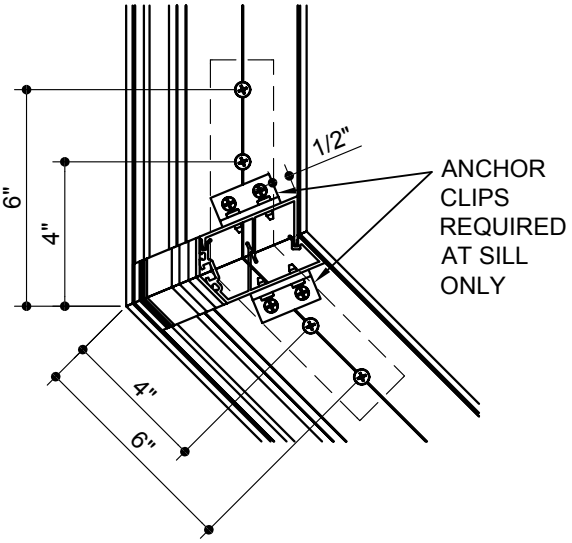


NOTE:
SEALANT NOT SHOWN ON DETAILS BELOW FOR CLARITY.

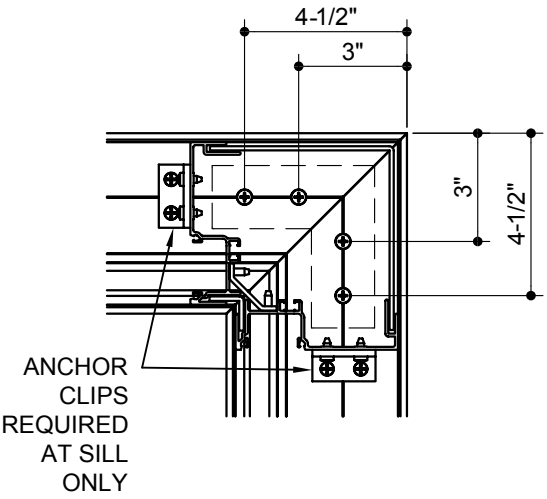
90° OUTSIDE CORNER
ADAPTED SSG



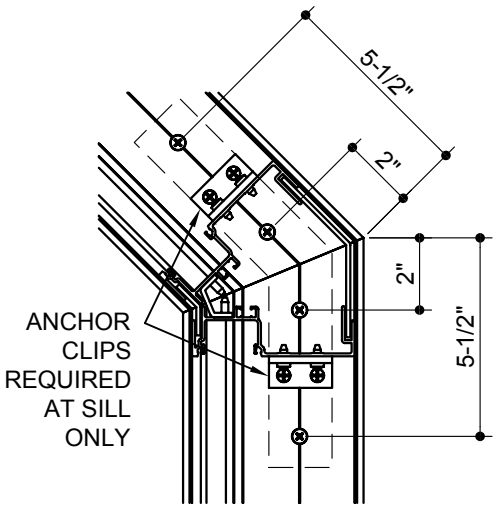
135° OUTSIDE CORNER
ADAPTED SSG



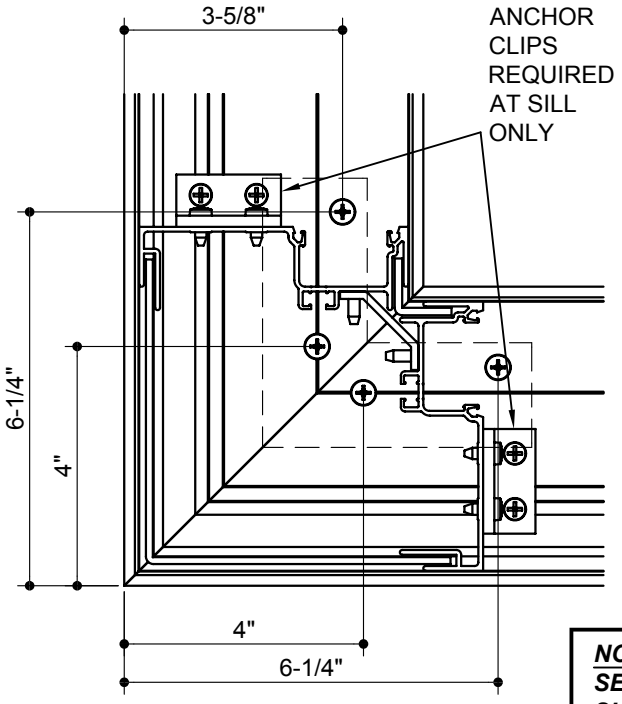
90° INSIDE CORNER



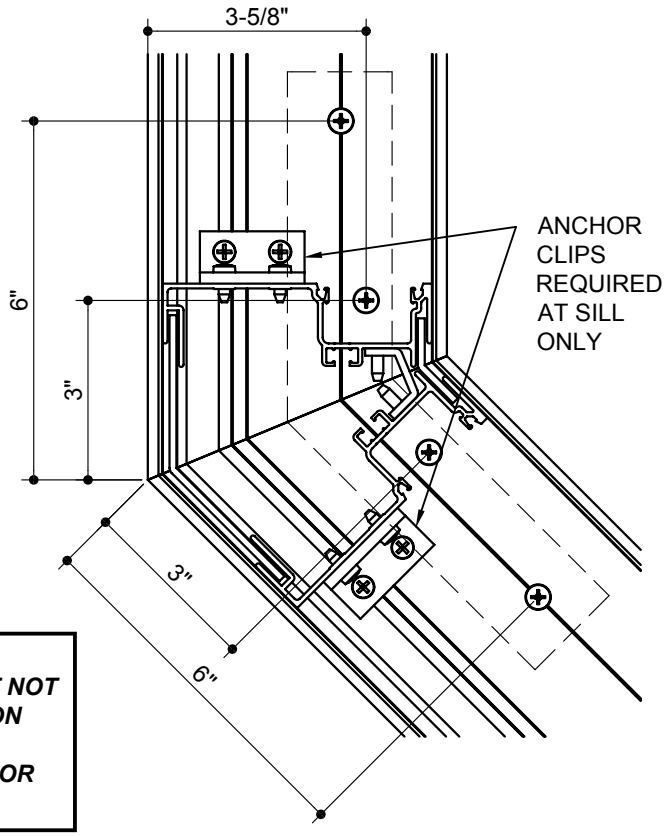
135° INSIDE CORNER



90° OUTSIDE CORNER

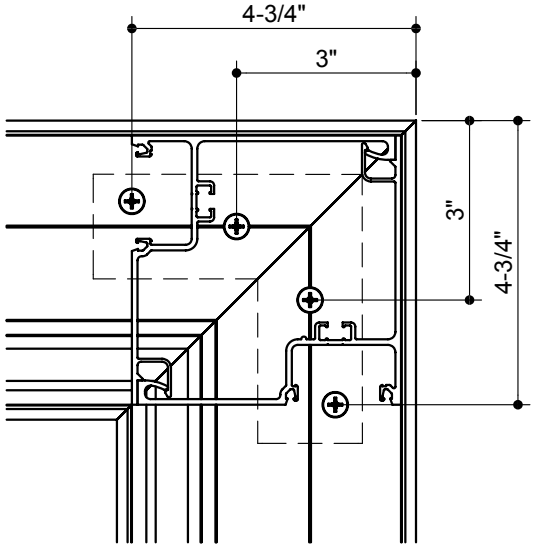


135° OUTSIDE CORNER

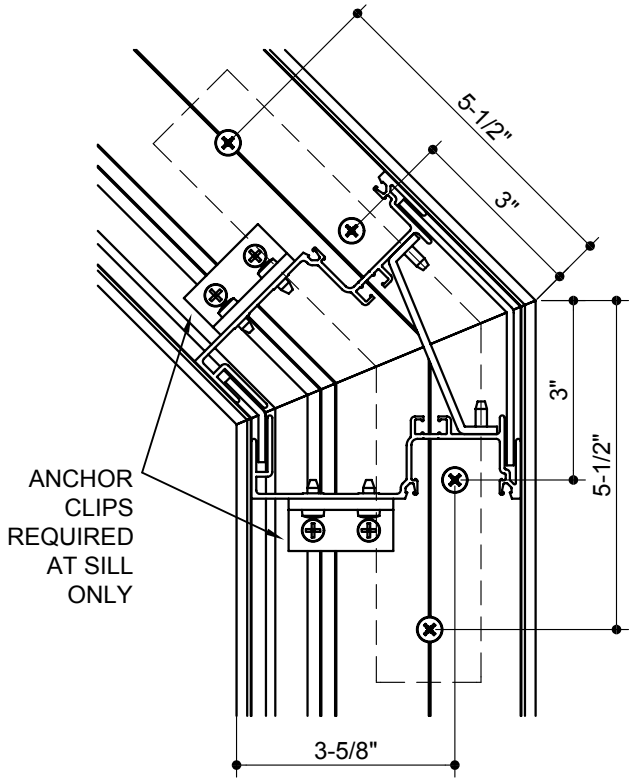


NOTE:
SEALANT NOT SHOWN ON DETAILS BELOW FOR CLARITY.

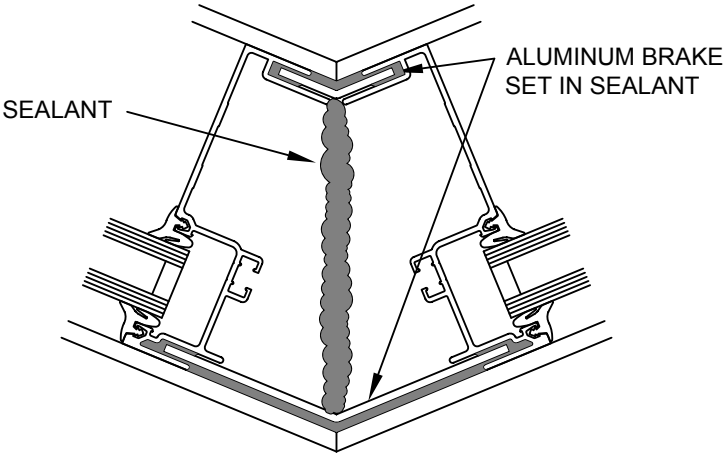
90° INSIDE CORNER



135° INSIDE CORNER



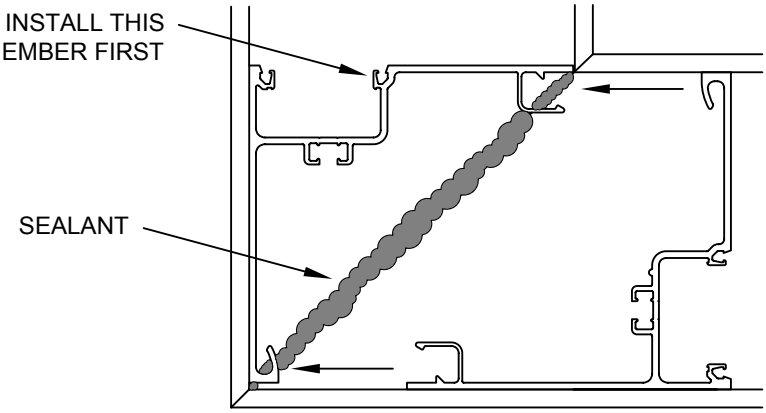
ADJUSTABLE BRAKE METAL CORNERS
(Front shown; Center & Back similar)
Use the same preps as are required for the standard vertical, refer to page 10-15.



135° CORNER

SNAP CORNERS
(Front shown; Center & Back similar)
Use the same preps as are required for the standard vertical, refer to page 10-15.
Snap corners together as shown.

NOTE:
TIGHT SNAPS MAY BE WAXED TO MAKE ENGAGEMENT EASIER. CORNERS ARE NOT DESIGNED TO BE UNSNAPPED.



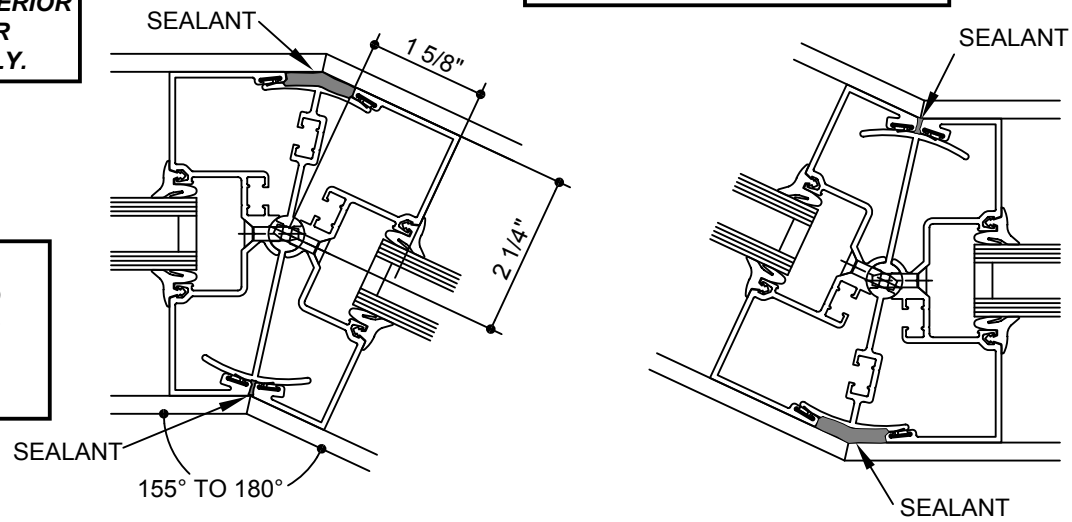
90° CORNER

PIVOTED INSIDE AND OUTSIDE CORNERS
(Center Applications Only)
Use the same preps as are required for the standard vertical, refer to page 10-15. Drill 0.147" diameter holes (#26 drill bit) for assembly screws (#10 x 3/4"). Fasten together with supplied screws. Screws should be located 6" from each end and 24" on center.

NOTE:
CONTINUOUS WEATHERING INSTALLED INTO BOTH INTERIOR AND EXTERIOR OF CORNER HALVES BEFORE ASSEMBLY.

NOTE:
LAYOUT AND CUT SIZES CAN BE DETERMINED USING PIVOT CENTER LINES.

NOTE:
SEAL BOTH INTERIOR AND EXTERIOR VOIDS AT HEAD AND SILL RECEPTOR MITERED CORNERS



STEP A: Snap cover to female half of dart corner mullion using mullion clips.

STEP B: Install into head and sill receptors and position in corner. Do not damage the sill receptor splice joint. (Figure 1)

STEP C: Install male half of dart corner mullion.

STEP D: Locate angle clips at bottom of each side of dart corner mullion at dimension shown. Match drill holes and fasten with supplied screws. (Figure 2)

STEP E: Apply sealant to corner where the mullion meets the receptor. Seal over heads of angle clip fasteners. Tool all sealant. (Figure 2 and 3)

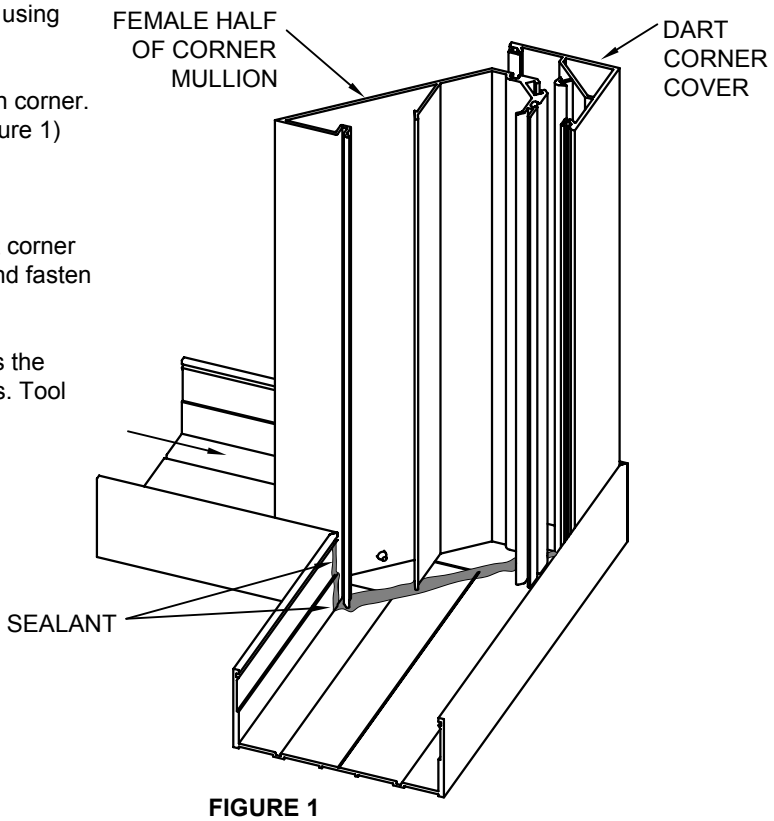


FIGURE 1

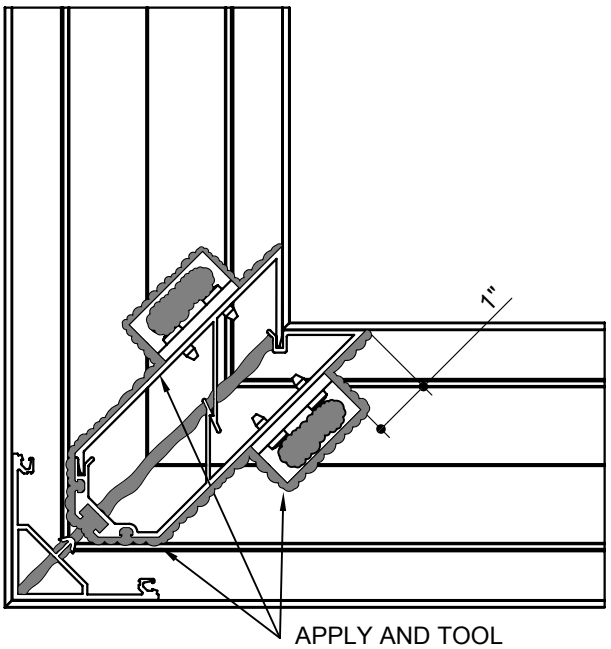


FIGURE 2

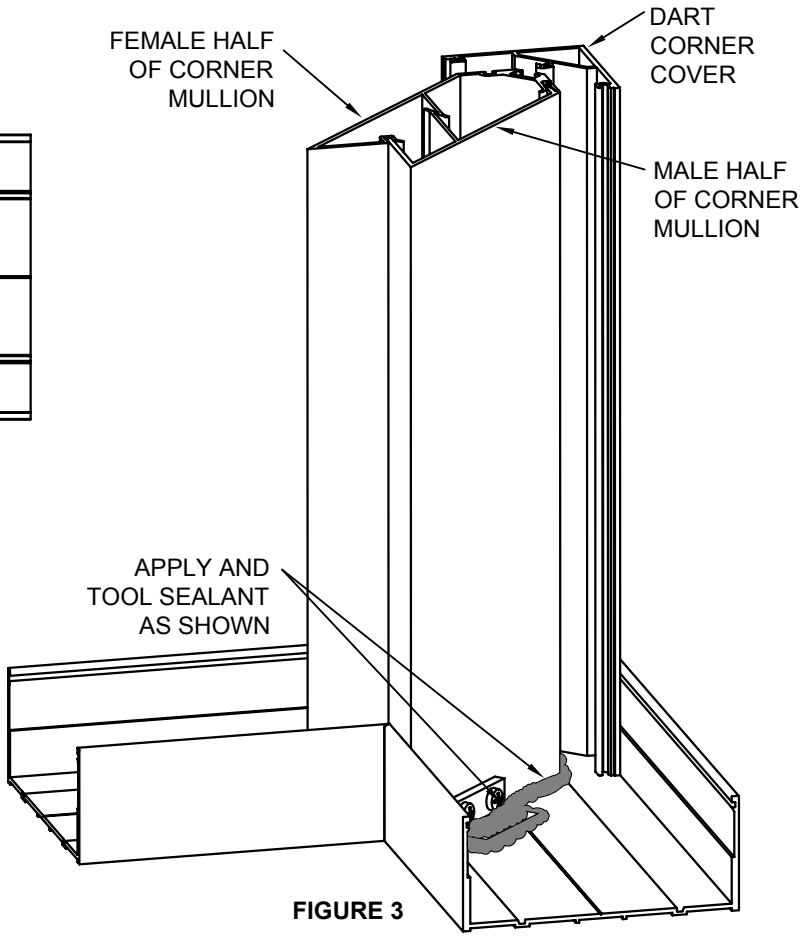


FIGURE 3

NOTE: **90° CORNER SHOWN, 135° CORNER SIMILAR**

STEP A: Snap mullion adaptors into head and sill receptors. (Figure 1)

STEP B: Install female dart corner half into head and sill receptors and position in corner. Do not damage the sill receptor splice joint. (Figure 3)

STEP C: Install male half of dart corner mullion. (Figure 5)

STEP D: Locate angle clips at bottom of each side of dart corner mullion. Match drill holes and fasten with supplied fasteners. (Figure 5)

STEP E: Apply sealant to corner where the mullion meets the receptor. Seal over heads of angle clip fasteners. Tool all sealant. (Figure 4 and 5)

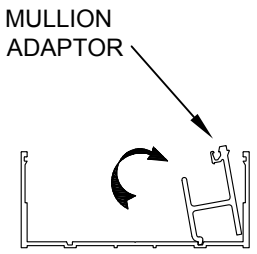


FIGURE 1

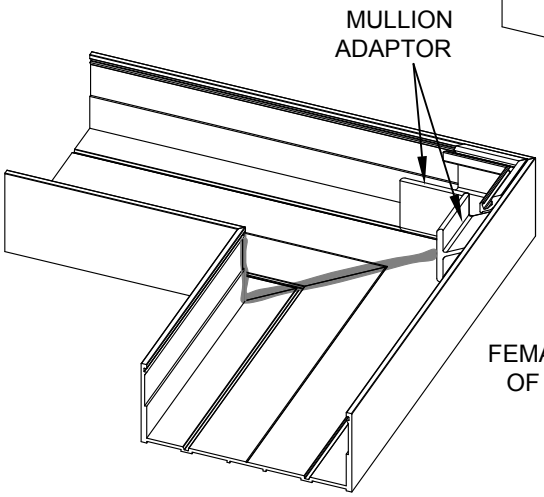


FIGURE 2

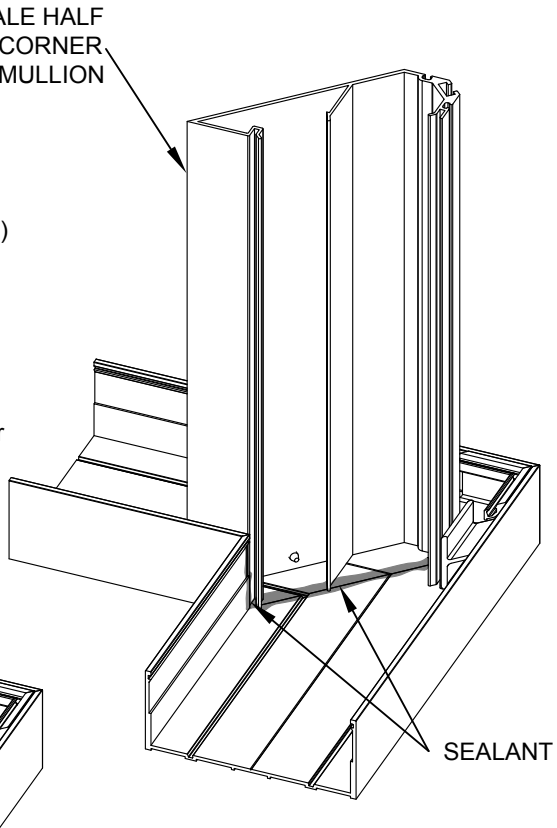


FIGURE 3

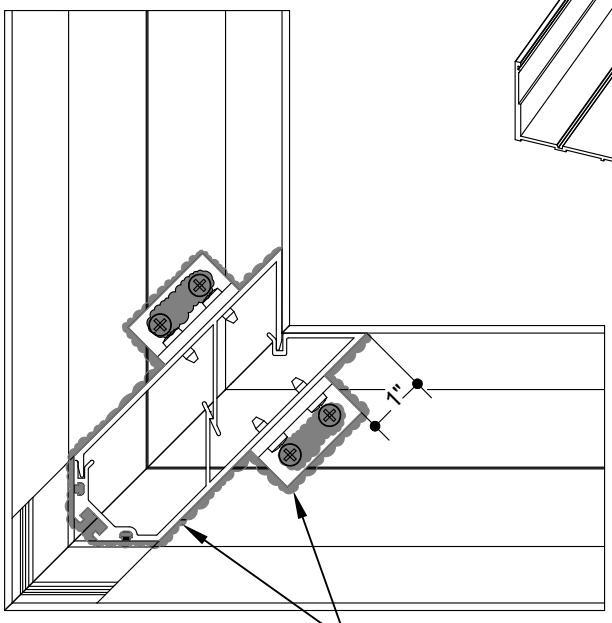


FIGURE 4

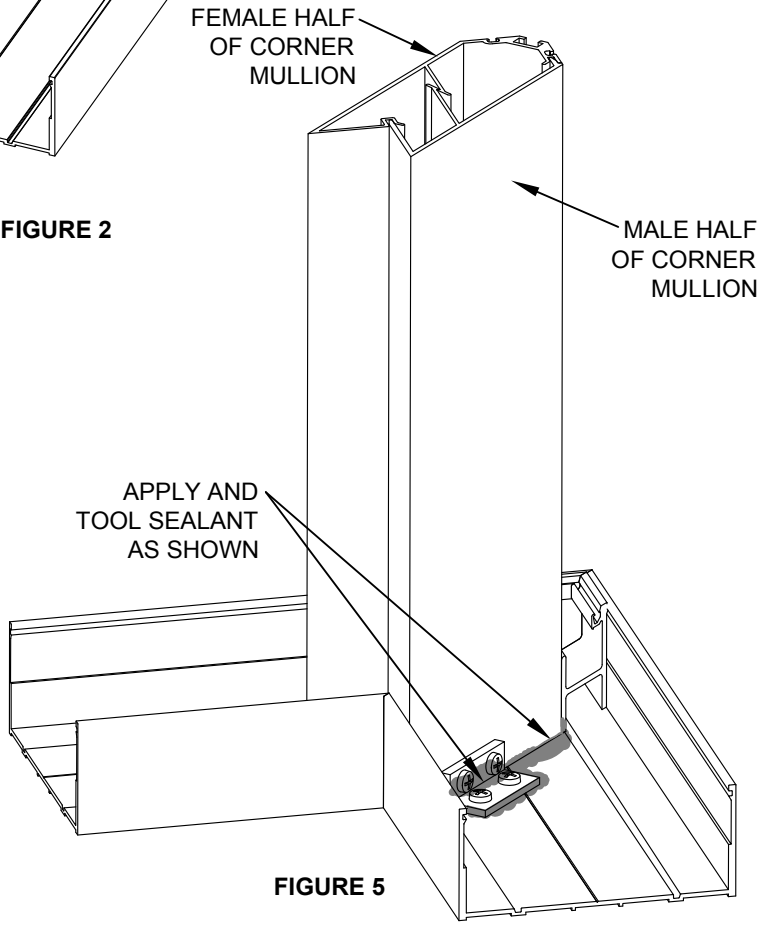


FIGURE 5

STEP A: Snap cover to female half of dart corner mullion using mullion clips.

STEP B: Install into head and sill receptors and position in corner. Do not damage the sill receptor splice joint. (Figure 1)

STEP C: Install male half of dart corner mullion.

STEP D: Locate angle clips at bottom of each side of dart corner mullion. Match drill holes and fasten with supplied screws. (Figure 2)

STEP E: Apply sealant to corner where the mullion meets the receptor. Seal over heads of angle clip fasteners. Tool all sealant. (Figure 2 and 3)

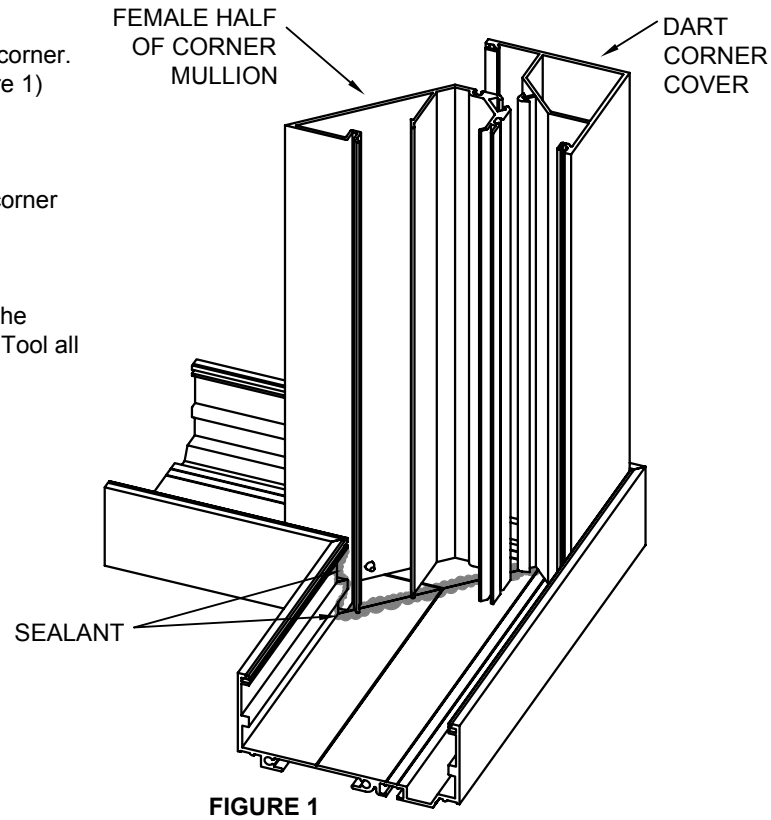


FIGURE 1

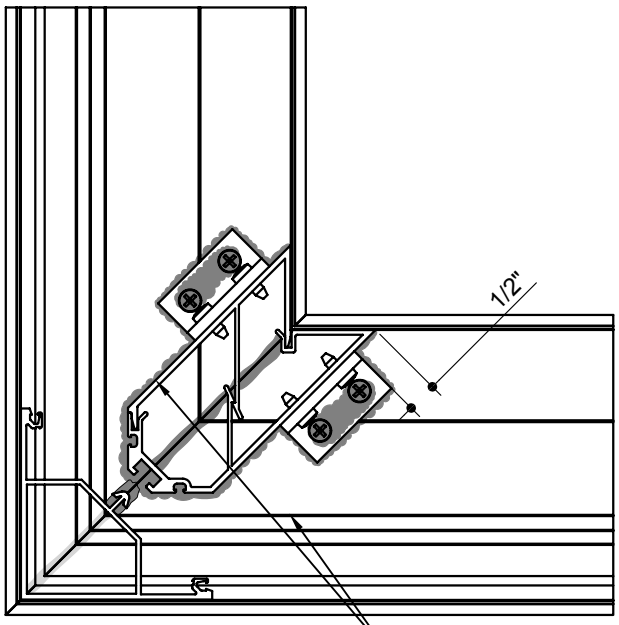


FIGURE 2

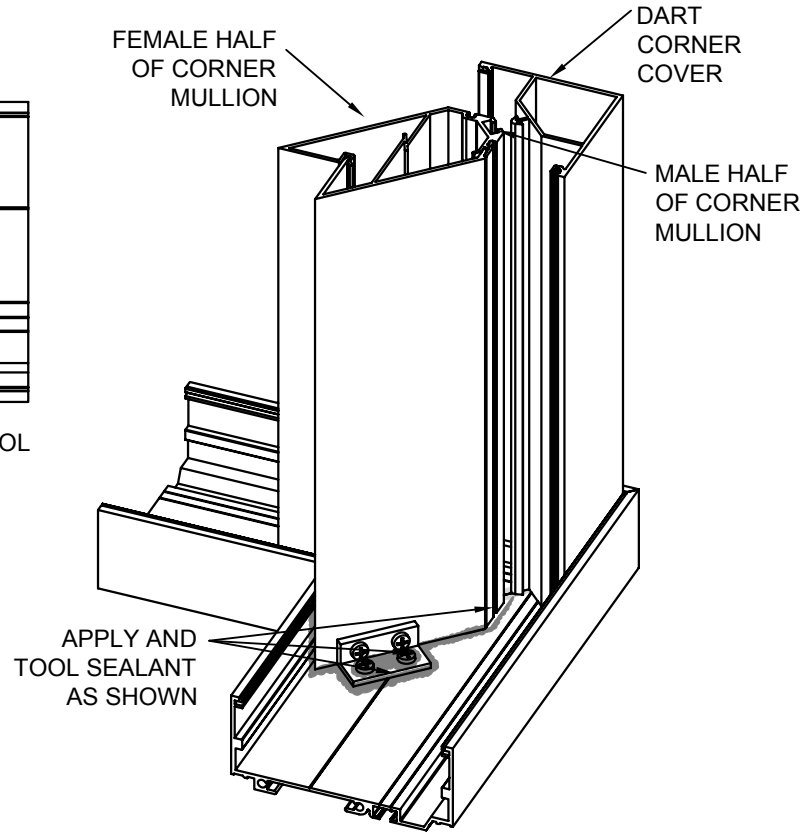


FIGURE 3

NOTE: ***90° CORNER SHOWN, 135° CORNER SIMILAR***

STEP A: Snap mullion adaptors into head and sill receptors. (Figure 1)

STEP B: Install female dart corner half into head and sill receptors and position in corner. Do not damage the sill receptor splice joint. (Figure 3)

STEP C: Install male half of dart corner mullion.

STEP D: Locate angle clips at bottom of each side of dart corner mullion. Match drill holes and fasten with supplied screws. (Figure 4)

STEP E: Apply sealant to corner where the mullion meets the receptor. Seal over heads of angle clip fasteners. Tool all sealant. (Figure 4 and 5)

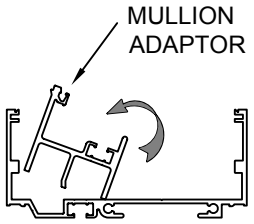


FIGURE 1

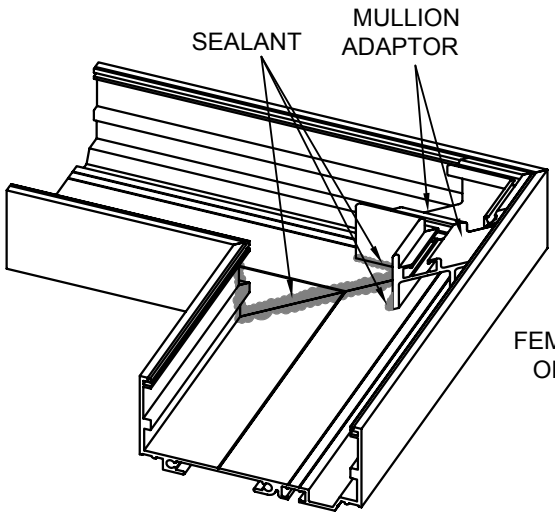


FIGURE 2

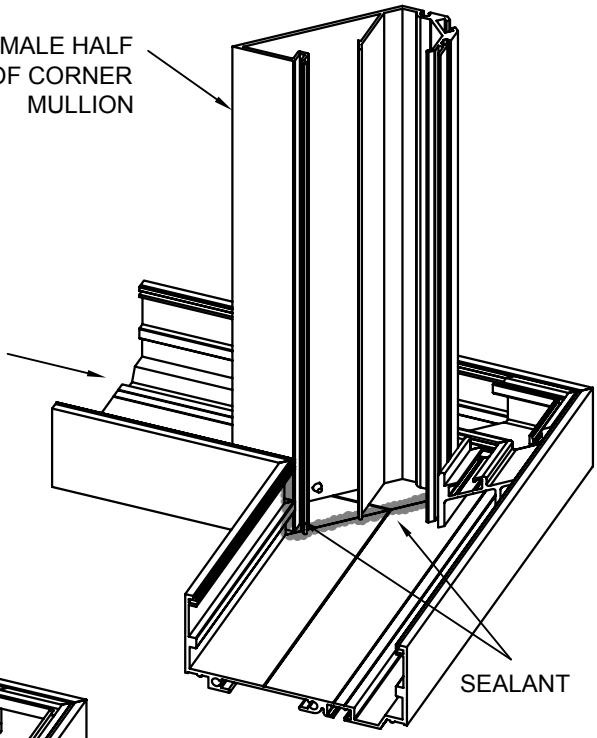


FIGURE 3

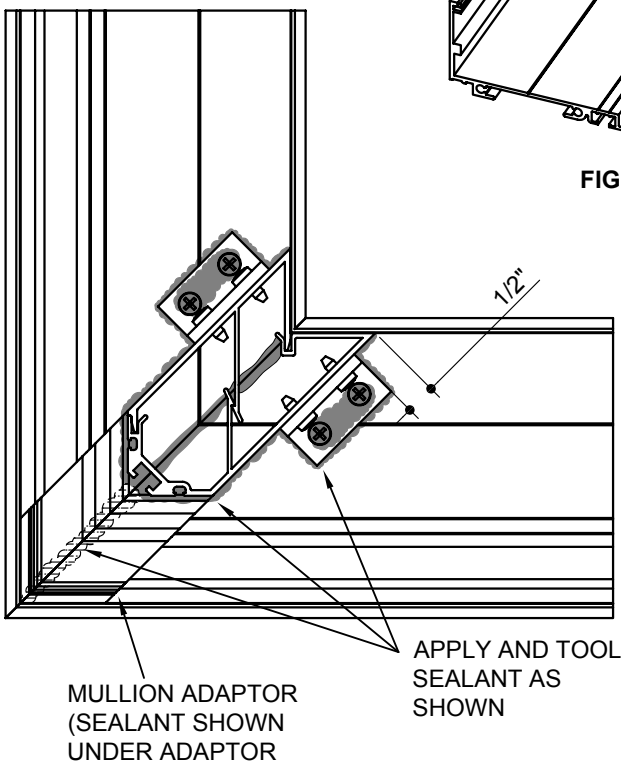


FIGURE 4

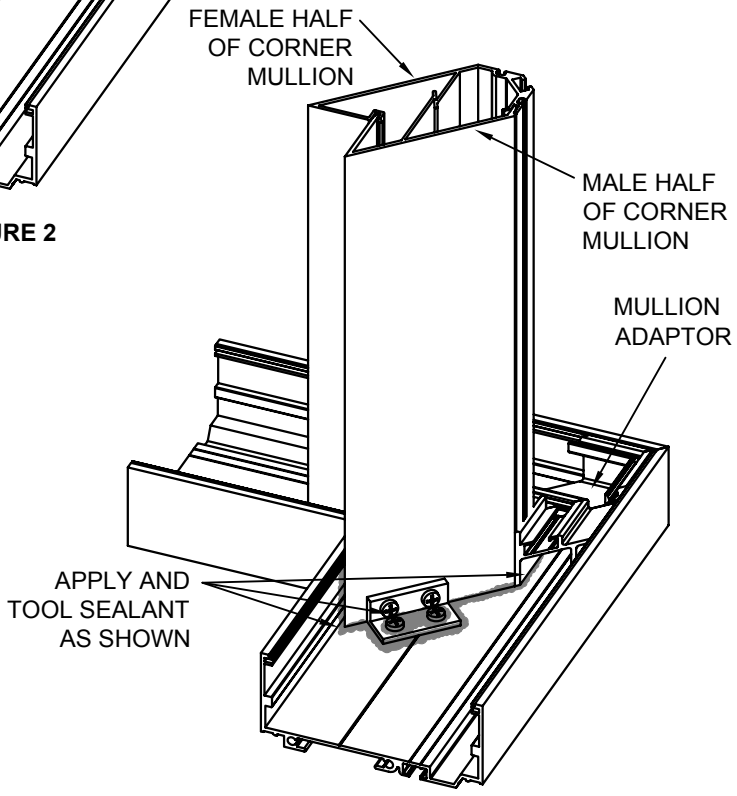
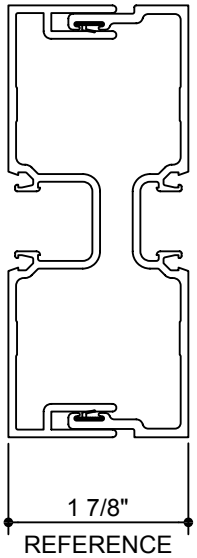


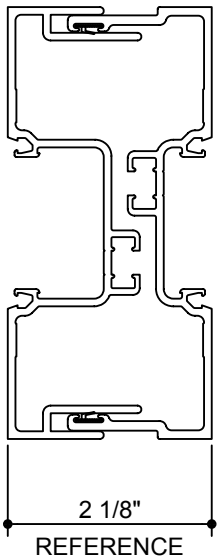
FIGURE 5

EXPANSION MULLIONS

Expansion mullions are required on Center and Back Plane systems ***only*** when intermediate horizontals are used. Front Plane systems do not require expansion mullions. An expansion mullion is to be used every 20' in large openings. The dimension of the assembly should be adjusted based on the temperature at the time of assembly and expected high and low service temperatures use reference dimension. (For example, the sight line will be reduced slightly when installed in hot weather and increased slightly when installed in cold weather).



REFERENCE DIMENSION
TRIFAB™ VG 450

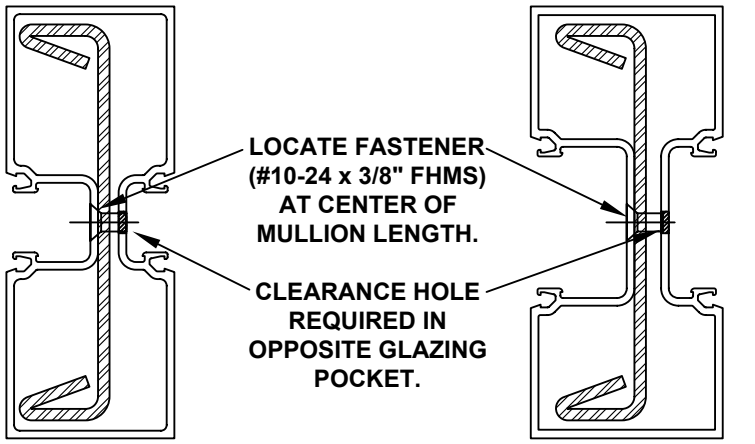


REFERENCE DIMENSION
TRIFAB™ VG 451 \ 451T

NOTE:
DO NOT LINE UP EXPANSION MULLIONS WITH THE SPLICE JOINT OF THE HEAD AND SILL RECEPTORS

STEEL REINFORCING

Steel reinforcement should be cut to mullion length minus 12" and fastened into place to prevent movement of the steel in the mullion. Position steel 6" from top of mullion and 6" from bottom of mullion, providing room for the mullion anchors. The cut ends of the steel reinforcing must be coated with a corrosion-inhibiting primer before installation.



TUBE MULLION WITH 450110 STEEL REINFORCING

TUBE MULLION WITH 450110 STEEL REINFORCING

NOTE:
CONSULT APPLICATION ENGINEERING FOR FRONT AND BACK PLANE SYSTEMS WITH STEEL REINFORCING

STEP A: Mullion anchors are installed after the head and sill receptors have been installed. Anchors are placed in the receptor after adjacent inserts have been installed and twisted to lock them into place. (Figure 1 and 2)

STEP B: Install the head mullion anchor.

STEP C: Install the sill mullion anchor.

STEP D: Position the mullion onto the sill anchor first. While tilting the mullion up, slide the head anchor into the top of the mullion.

STEP E: Install head and sill inserts. Repeat STEPS D and E until all mullions have been installed.

NOTE:
CONSULT APPLICATION ENGINEERING FOR MULLION ANCHOR REQUIREMENTS.

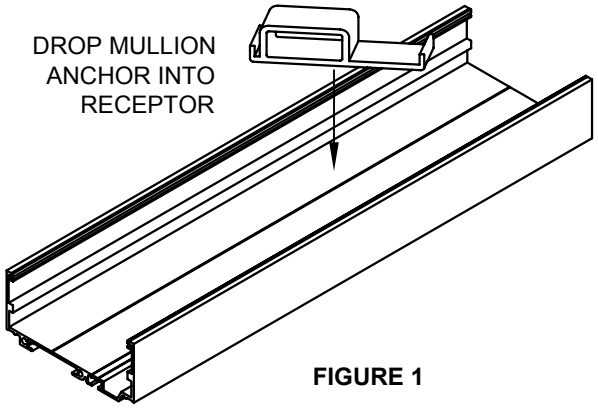


FIGURE 1

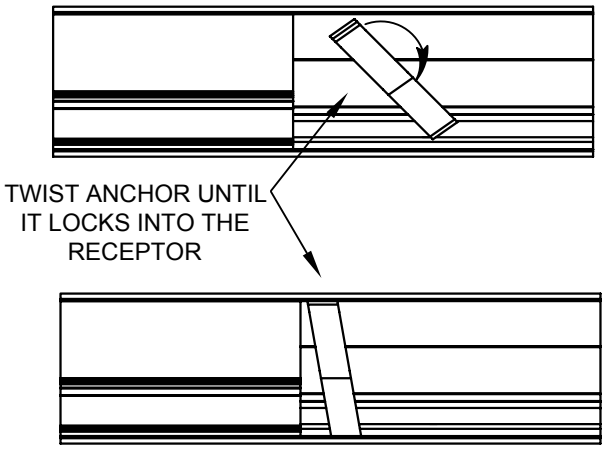


FIGURE 2

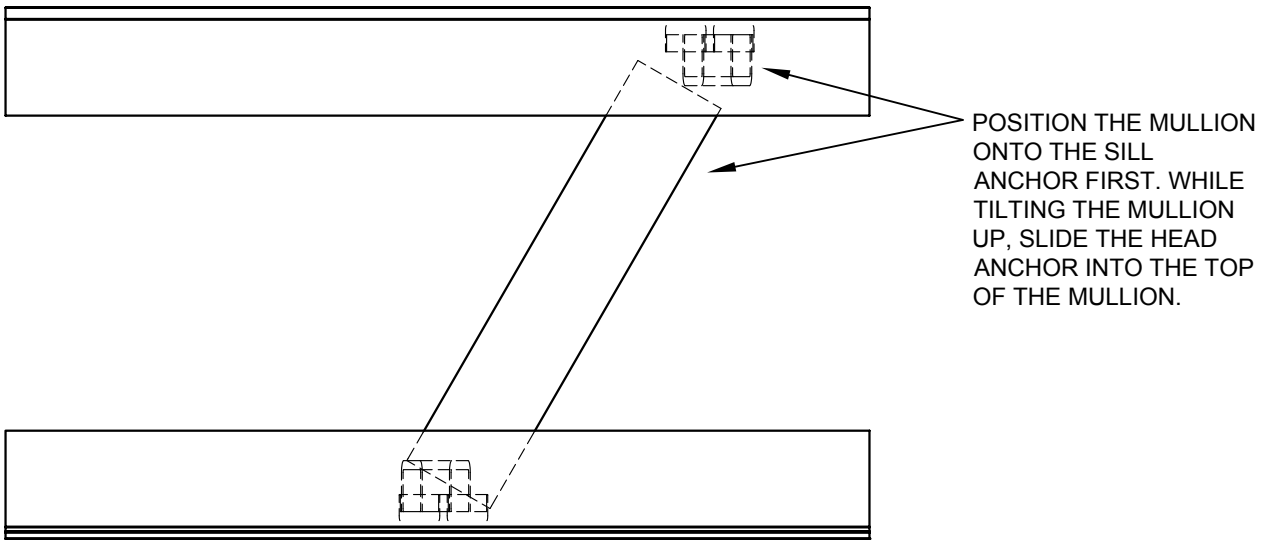


FIGURE 3

STEP A: Apply sealant to the ends of the horizontal members, shear blocks, and into glazing reglets. (Figure 1)

STEP B: Roll horizontal member over shear block. Hold fabricated horizontal member in place over shear block and tight against vertical member. Match drill tap hole in horizontal with #26 drill (0.147") slightly offset to D.L.O. side of hole in the shear block so as to pull the joint tight when assembled. (Figure 3)

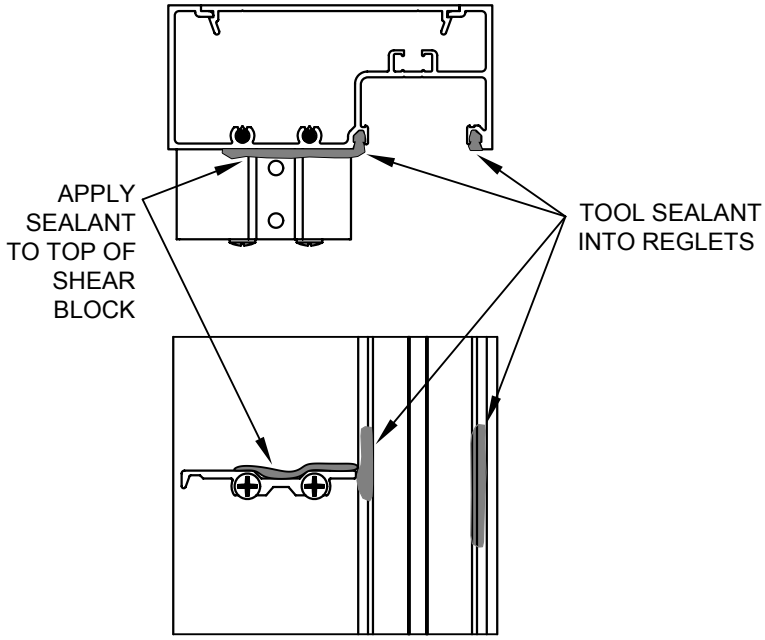


FIGURE 1

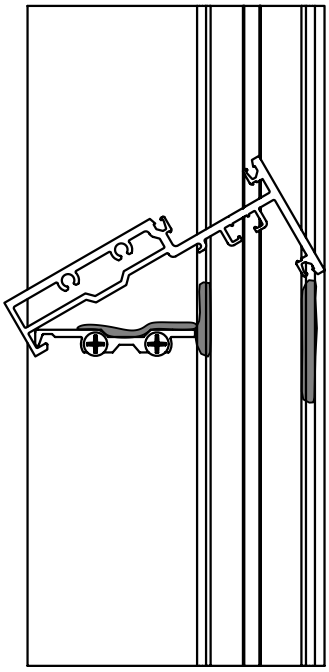


FIGURE 2

STEP C: Secure horizontal to shear block with supplied fasteners. After horizontal has been installed, check for proper sealing between vertical and horizontal, tool sealant if necessary. (Figure 4)

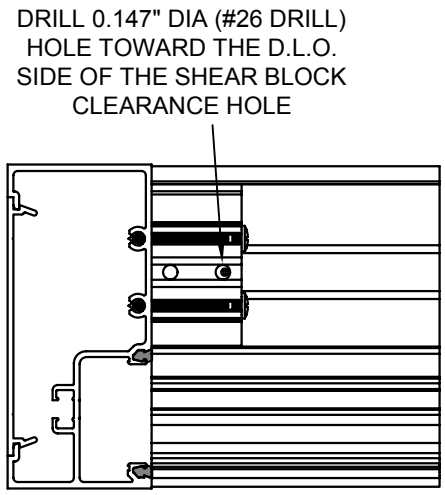


FIGURE 3

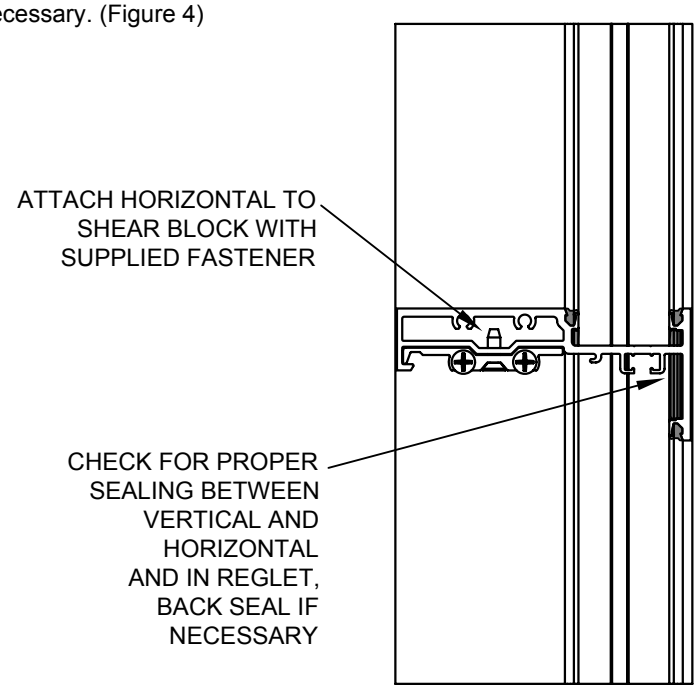


FIGURE 4

STEP A: Apply sealant to shear blocks, and into glazing reglets. (Figure 1)

STEP B: Drop horizontal member over shear block. Hold fabricated horizontal member in place over shear block and tight against vertical member. Match drill 0.136" dia hole (#29 drill bit) in shear block slightly offset to mullion side of hole in horizontal, this will pull the joint tight when assembled. (Figure 2) Fasten horizontal to shearblock with supplied fasteners. (Figure 3)

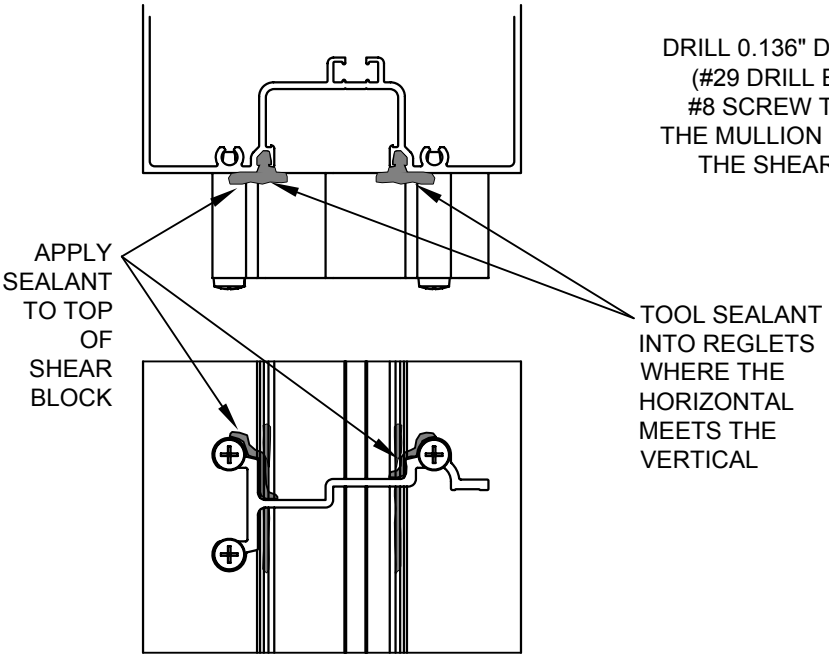


FIGURE 1

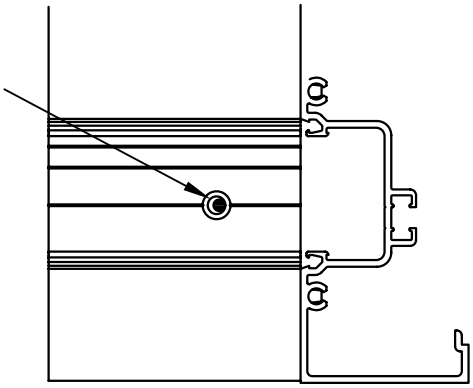


FIGURE 2

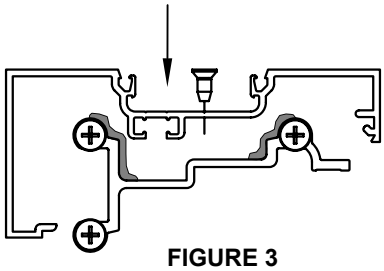


FIGURE 3

STEP C: Apply and tool sealant where the horizontal meets the vertical. (Figure 4)

STEP D: Engage horizontal filler into raceway as shown. (Figure 5) Rotate until horizontal filler snaps into horizontal member (Figure 6).

STEP E: Match drill tap hole in shear block with #26 drill (.147") slightly offset to mullion side of hole in horizontal, this will pull the joint tight when assembled, similar to Figure 2.

STEP F: Secure horizontal filler to shear block with supplied fasteners. After horizontal has been installed, check for proper sealing between vertical and horizontal, tool sealant if necessary. (Figure 7)

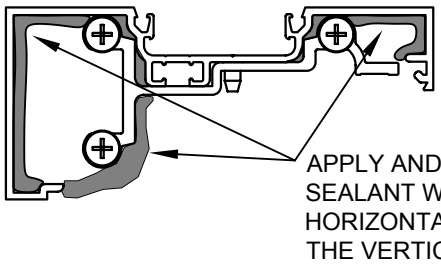


FIGURE 4

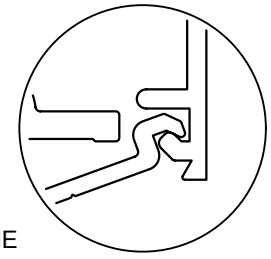


FIGURE 5

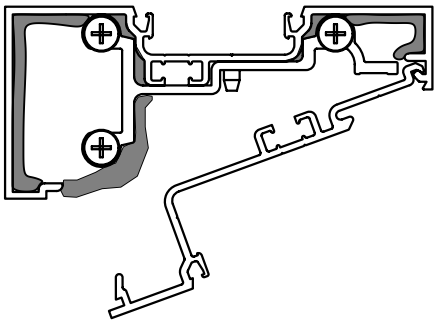


FIGURE 6

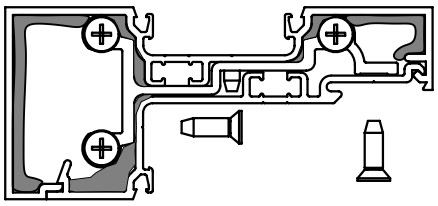


FIGURE 7

Install water deflectors on Intermediate Horizontals by removing the paper backing from the water deflectors. Install on a clean, dry surface centered in the glazing pocket and seal. (Figure 1) Be sure to extend Water Deflector past glass edge below. (Figure 2)

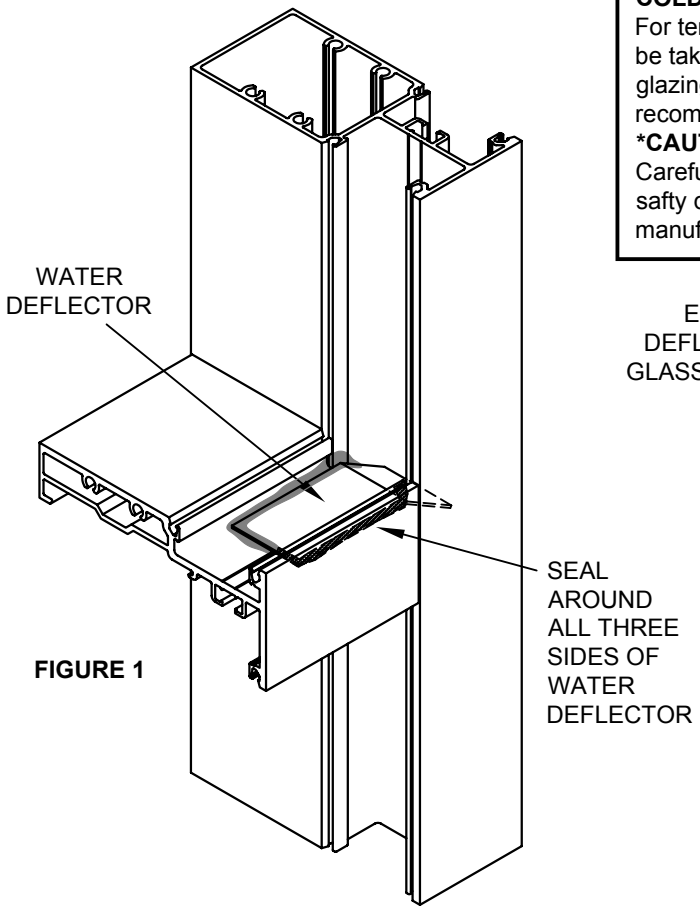


FIGURE 1

COLD WEATHER NOTE:
For temperatures below 40° the following precautions should be taken. Just prior to installing the water deflector, wipe glazing pocket with a solvent or cleaning solution recommended by the sealant manufacturer.
***CAUTION:**
Carefully follow the recommendations contained in the material safty data sheet provided by the solvent/cleaning solution manufacturer regarding health and fire/explosion risks.

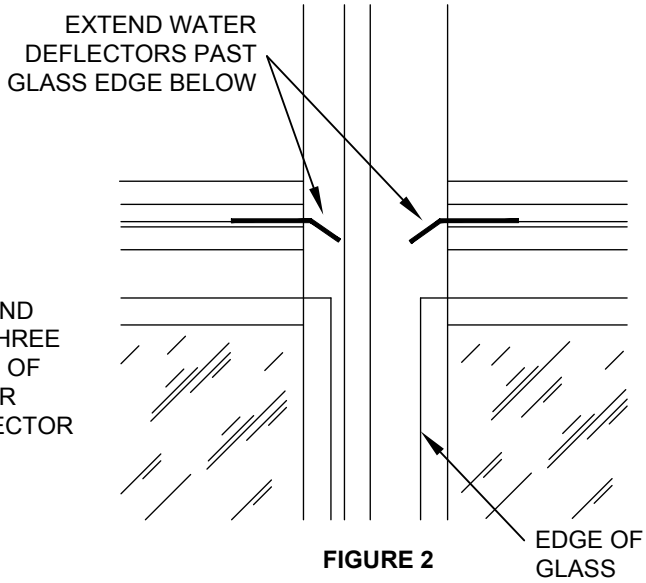


FIGURE 2

After the water deflector is installed, seal the joint between the back leg of the Horizontal and the vertical.Make sure to fill the gasket reglets i the area to prevent water from running down the lite below. (Figure 3 and 4)

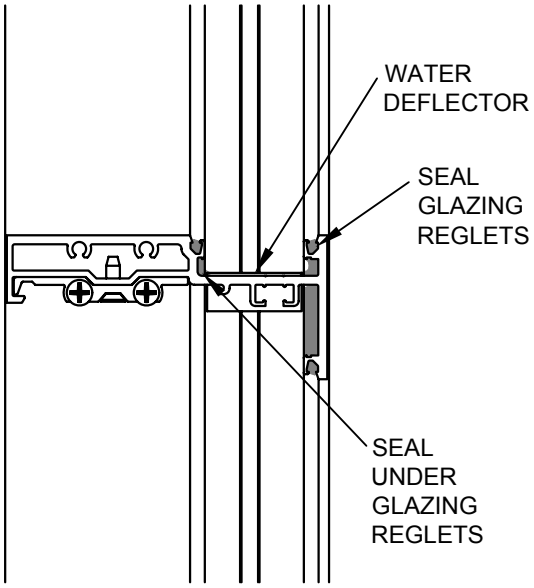


FIGURE 3

NOTE:
FOR THERMAL MEMBERS, SEAL UNDER DEFLECTOR FILLING CAVITY WITH SEALANT. (FIGURE 3)

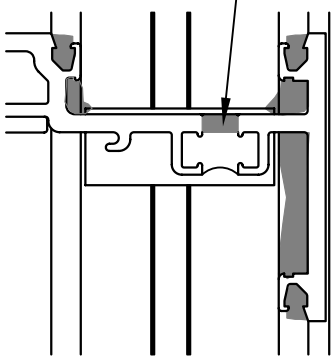


FIGURE 4

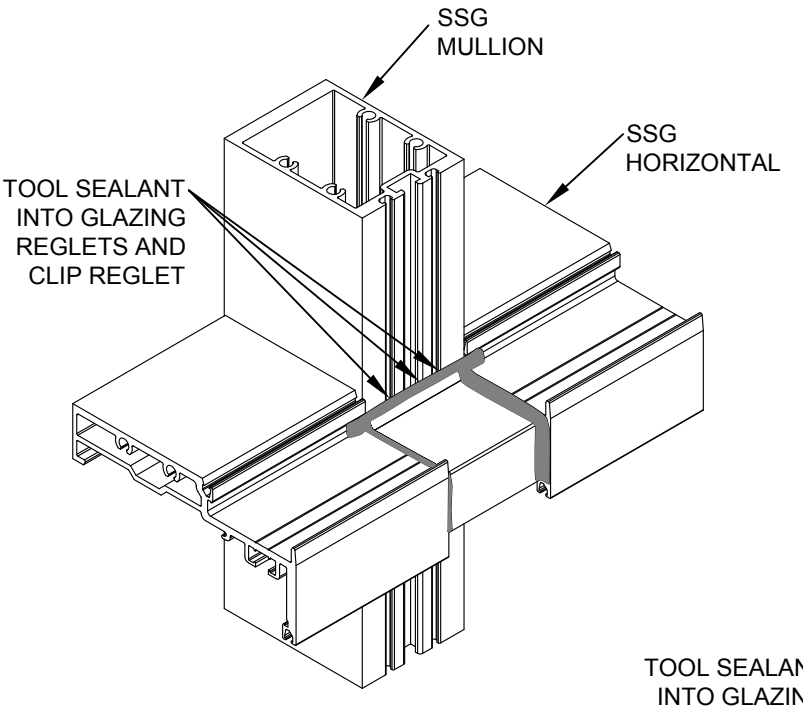


FIGURE 1
(1" OVER 1")

NOTE:
TRIFAB™ VG 451 / 451T SHOWN,
TRIFAB™ VG 450 SIMILAR

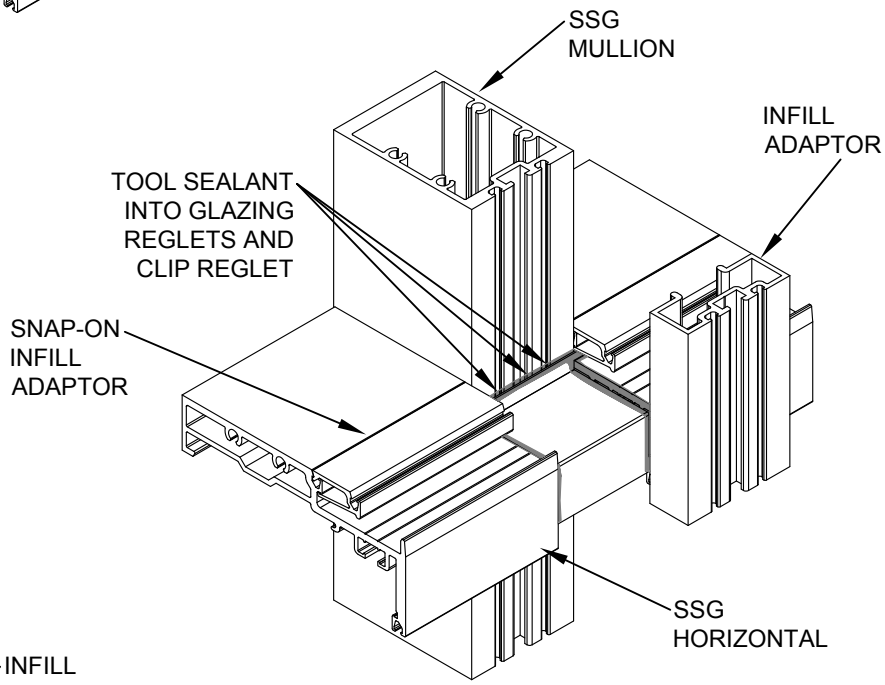


FIGURE 2
(¼" OVER 1")

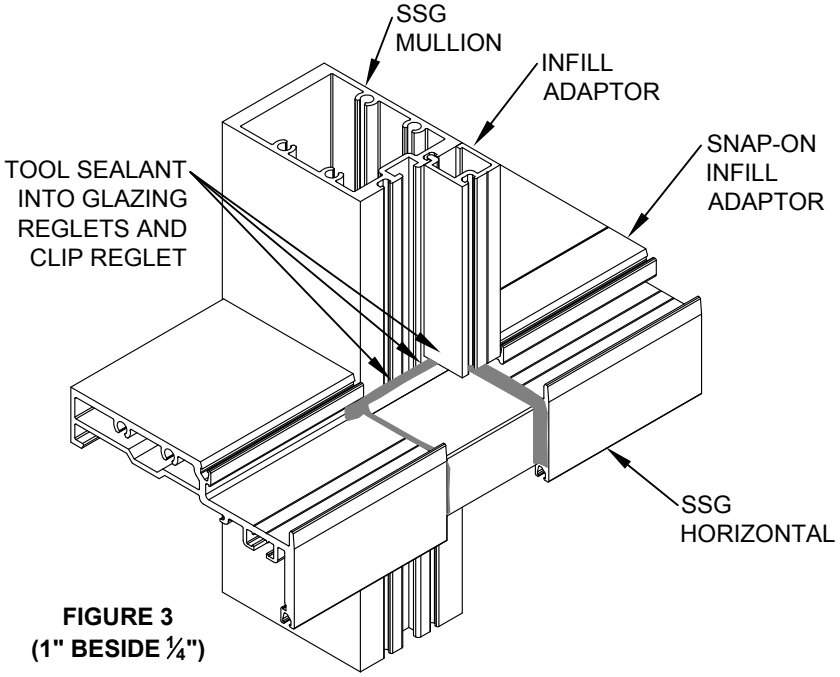


FIGURE 3
(1" BESIDE ¼")

NOTE:
FOR WATER DEFLECTORS AT JAMBS,
REFER TO PAGE 45.

ADJUSTABLE WATER DEFLECTOR FOR 450 SSG DART CORNER WITHOUT COVERS.

NOTE:
FOR DART CORNERS WITH COVERS REFER TO PAGE 45 FOR WATER DEFLECTOR INSTALLATION INSTRUCTIONS.

STEP A: Cut or bend along dividing line until rear half is broken off. (Figure 1)

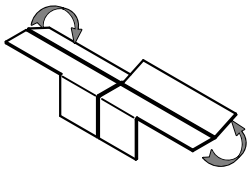


FIGURE 1

STEP B: Bend along dividing line on front face of water deflector to the required angle. One top side will have to be bent down slightly to let the other side fold over it. (Figure 3 and 4)

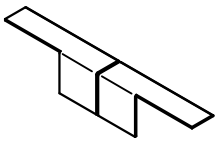


FIGURE 2

STEP C: Trial fit the modified water deflector and adjust if required.

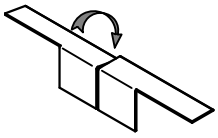


FIGURE 3

STEP D: Apply sealant around the top and down the sides of the water deflector and overlap area. Also apply sealant in the glazing reglets and clip reglets. Tool sealant. (Figure 5)

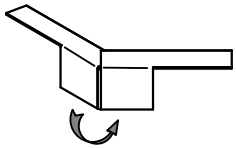


FIGURE 4

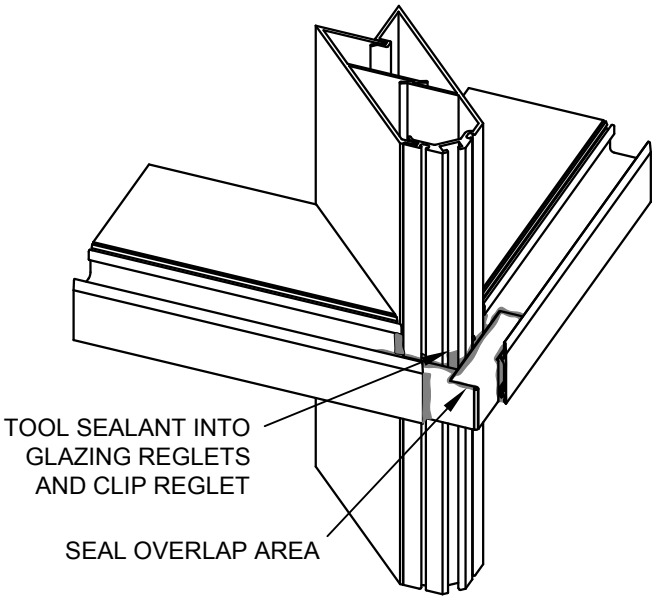


FIGURE 5

ADJUSTABLE WATER DEFLECTOR FOR 451/451T SSG DART CORNER WITHOUT COVERS

STEP A: Bend along dividing line on front face of water deflector to the required angle. One top side will have to be bent down slightly to let the other side fold over it. (Figure 2 and 3)

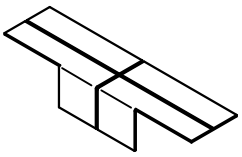


FIGURE 1

STEP B: Trial fit the modified water deflector and adjust if required.

STEP C: Apply sealant around the top and down the sides of the water deflector and overlap area. Also apply sealant in the glazing reglets and clip reglets. Tool sealant. (Figure 4)

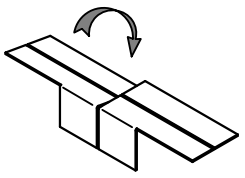


FIGURE 2

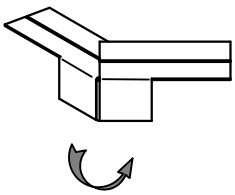


FIGURE 3

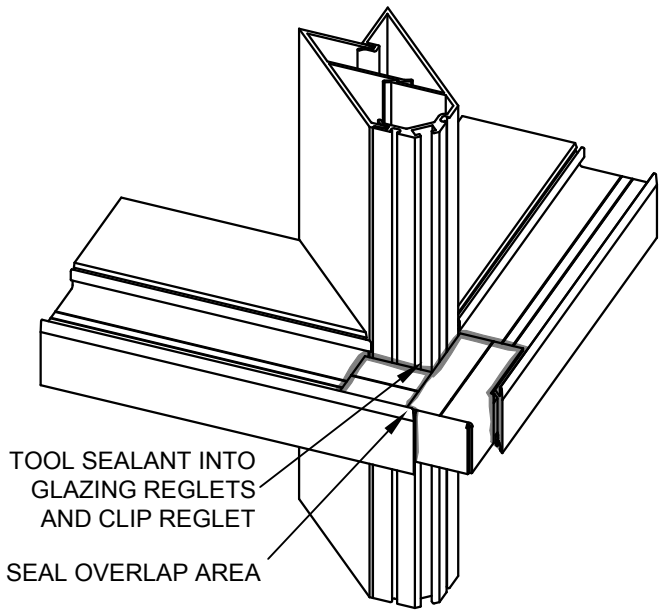


FIGURE 4

TYPICAL INSTALLATION OF PARTIAL OR FULL LENGTH VERTICAL GLAZING ADAPTORS - PRIOR TO FRAME ASSEMBLY

Vertical glazing adaptors may be installed for partial, (Figure 1) or full-length, (Figure 2) applications at the time the frames are assembled.

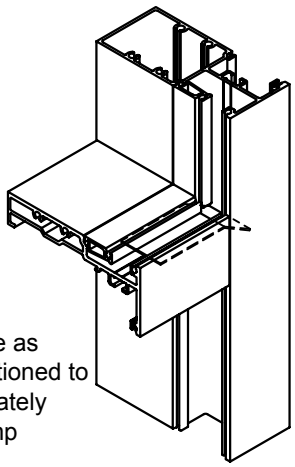


FIGURE 1
(1/4" over 1")

STEP A: Cut VERTICAL glazing adaptors to D.L.O. Plus 1/2" for partial length applications or to Vertical member length for full-length applications.

STEP B: Cut HORIZONTAL glazing adaptors to D.L.O.

STEP C: Snap vertical adaptors into glazing reglets of frame and assemble frame as instructed. In partial length applications, vertical adaptor should be positioned to allow sealing of the horizontal adaptor to the vertical adaptor (approximately 1/4" projection into horizontal pocket) It may be necessary to lightly crimp vertical adaptor in place to prevent sliding.

SPECIAL NOTE:
When using pre-installed vertical glazing adaptors, care should be taken at the time of the frame assembly, to seal the vertical glazing reglets where they meet the intermediate horizontals. The 1/4" water deflector should also be used on all full-length applications (Figure 4), and installed as shown on page 45. 1" water deflectors are used for partial adaptor applications as long as the adaptor does not impede water evacuation of the intermediate horizontal. The water deflector must allow water to drain into the vertical pocket beyond the edge of the glass below.

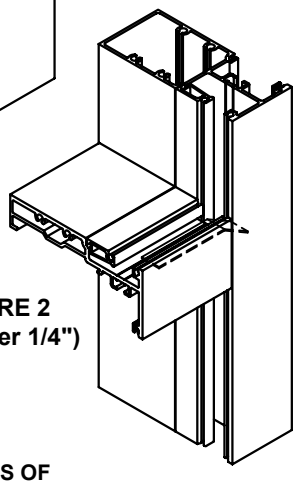


FIGURE 2
(1/4" over 1/4")

STEP D: Apply sealant to vertical adaptor at the final position of the snapped-in horizontal adaptor.

STEP E: Snap the HORIZONTAL glazing adaptors Into the glazing reglet allowing the adaptor to rotate into the pocket and contact the sealant at the vertical adaptor.

INSTALLATION OF GLAZING ADAPTORS - AFTER FRAME ASSEMBLY AND FOR FIELD RETROFIT APPLICATIONS

STEP A: Cut VERTICAL glazing adaptors to D.L.O. + 1/2".

STEP B: Make a 1/4" by 1/4" notch at each end of the vertical glazing adaptor. Notch should be made on the face side of the adaptor nearest the gasket reglet as shown. (Figure 5)

STEP C: Cut HORIZONTAL glazing adaptors to D.L.O.

STEP D: Snap vertical adaptors into glazing reglets of frame. Adaptor should be positioned to allow sealing of horizontal adaptor to the vertical adaptor (approximately 1/4" Projection into horizontal pocket) (Figure 3)

SPECIAL CARE NOTE:
Care should be taken to insure that the glazing adaptor does not impede water evacuation at the intermediate horizontal. The previously installed 1" water deflector must allow water to drain into the vertical pocket the edge of the glass below.

STEP E: Apply sealant to vertical adaptor at the final position of the snapped-in horizontal adaptor.

STEP F: Snap the HORIZONTAL glazing adaptors in the glazing reglet allowing the adaptor to rotate into the pocket and contact the sealant at the vertical adaptor.

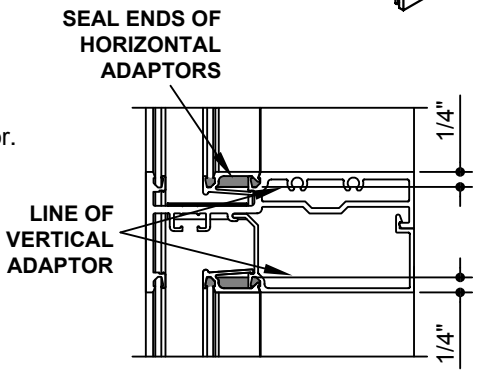


FIGURE 3

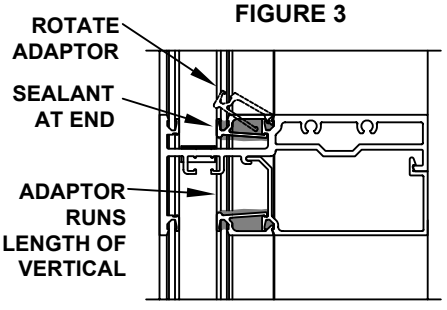


FIGURE 4

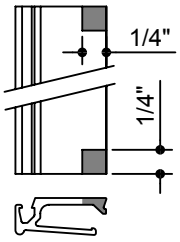
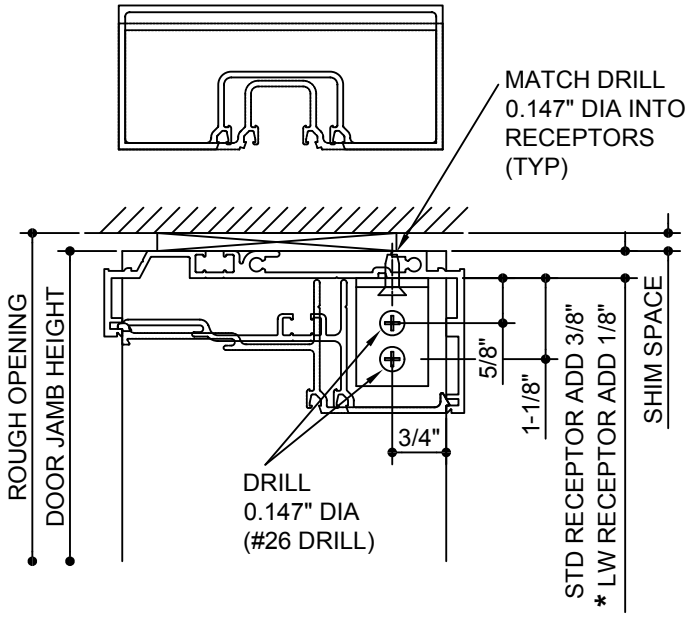
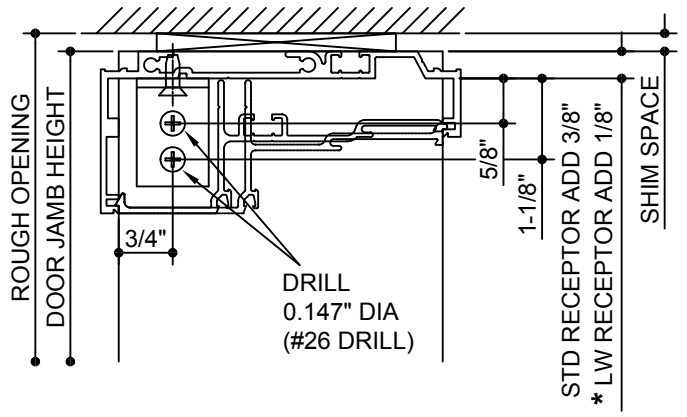


FIGURE 5

DOOR JAMB WITHOUT TRANSOM

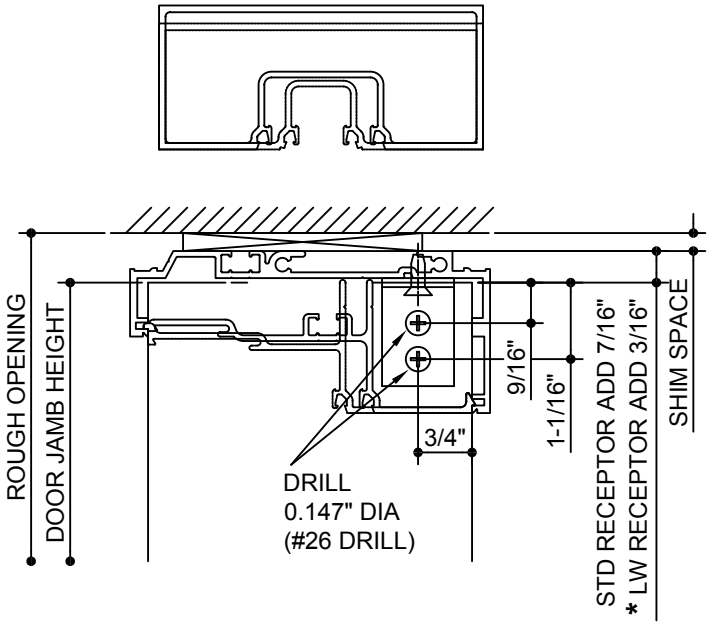


OUTSIDE GLAZED HEAD PREPS

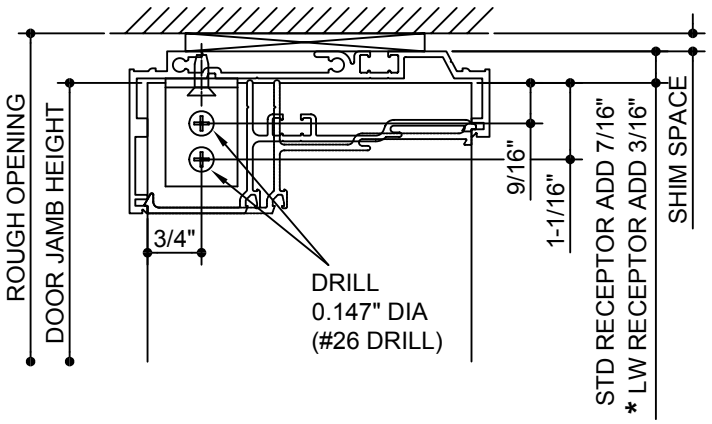


INSIDE GLAZED HEAD PREPS

DOOR JAMB WITH TRANSOM

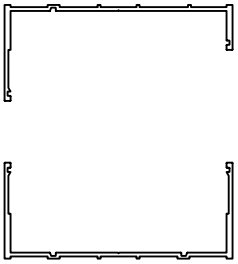


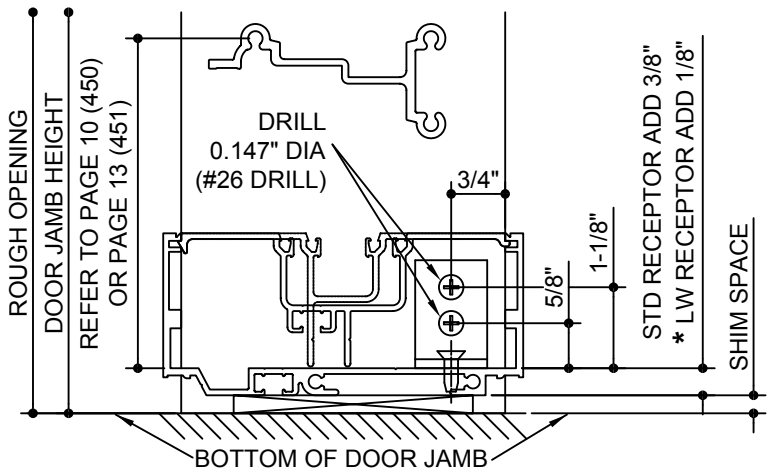
OUTSIDE GLAZED HEAD PREPS



INSIDE GLAZED HEAD PREPS

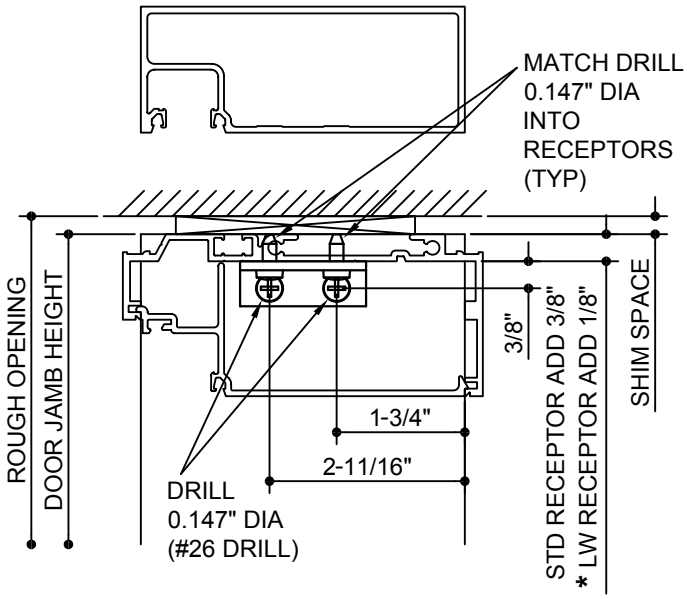
NOTE :
DIMENSIONAL CHANGES WHEN USING LIGHT WEIGHT RECEPTORS





OUTSIDE OR INSIDE GLAZED - WITH OR WITHOUT TRANSOM SILL PREPS

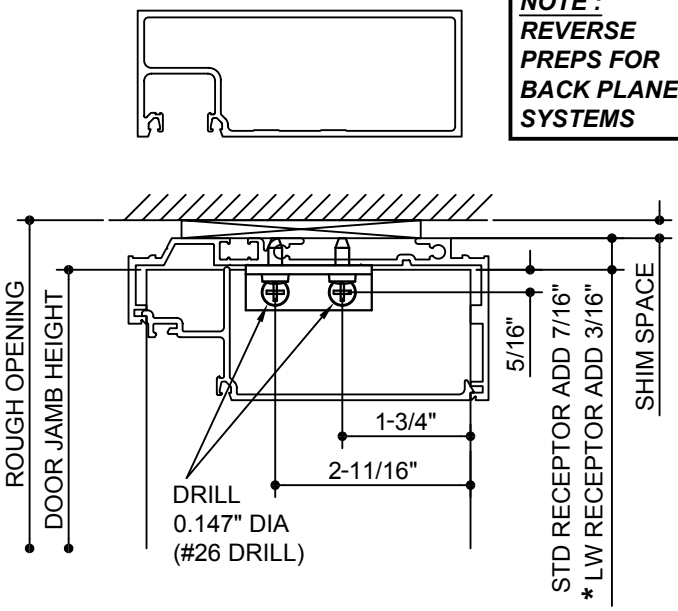
DOOR JAMB WITHOUT TRANSOM



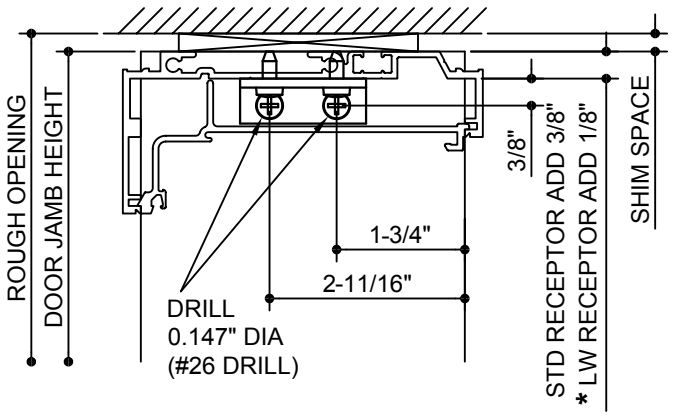
OUTSIDE GLAZED HEAD PREPS

DOOR JAMB WITH TRANSOM

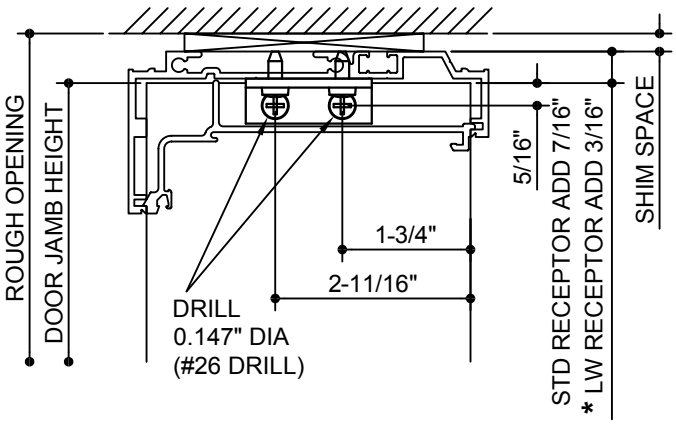
NOTE :
REVERSE PREPS FOR BACK PLANE SYSTEMS



OUTSIDE GLAZED HEAD PREPS

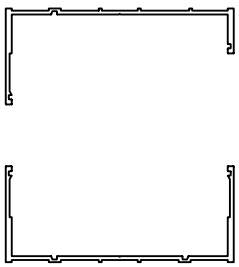


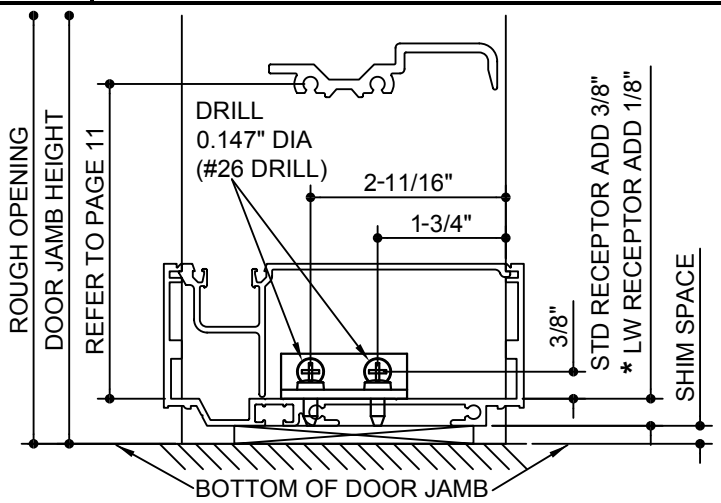
INSIDE GLAZED HEAD PREPS



INSIDE GLAZED HEAD PREPS

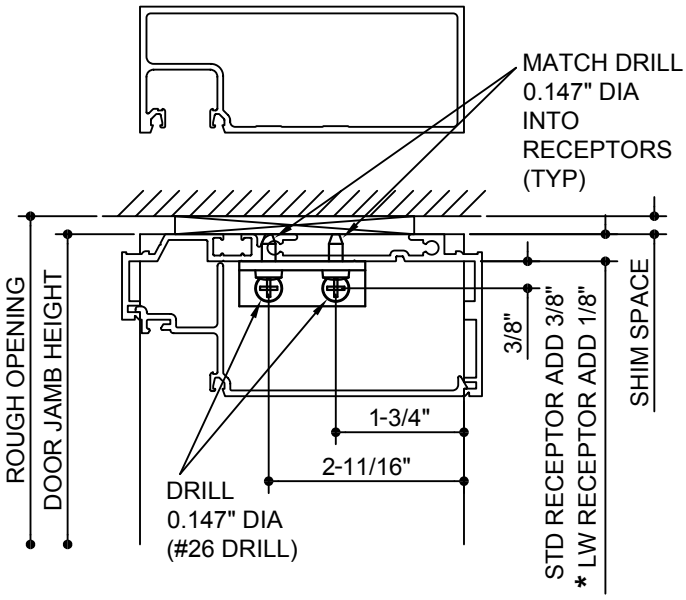
***NOTE :**
DIMENSIONAL CHANGES WHEN USING LIGHT WEIGHT RECEPTORS





OUTSIDE OR INSIDE GLAZED - WITH OR WITHOUT TRANSOM SILL PREPS

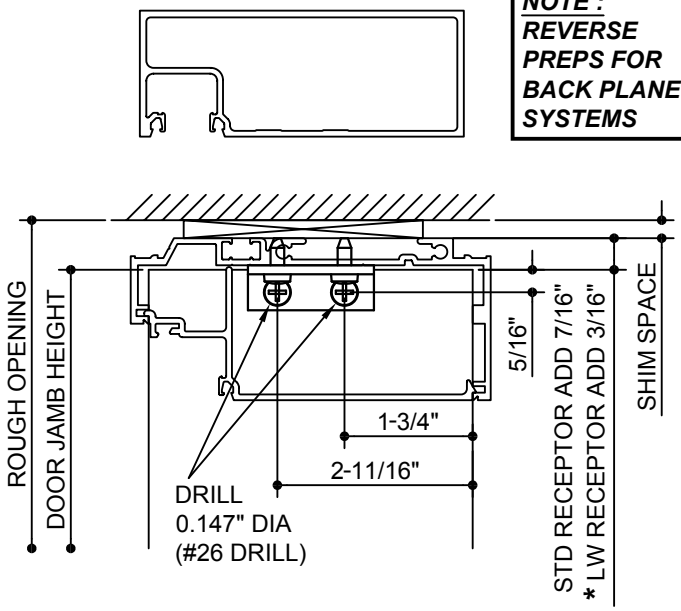
DOOR JAMB WITHOUT TRANSOM



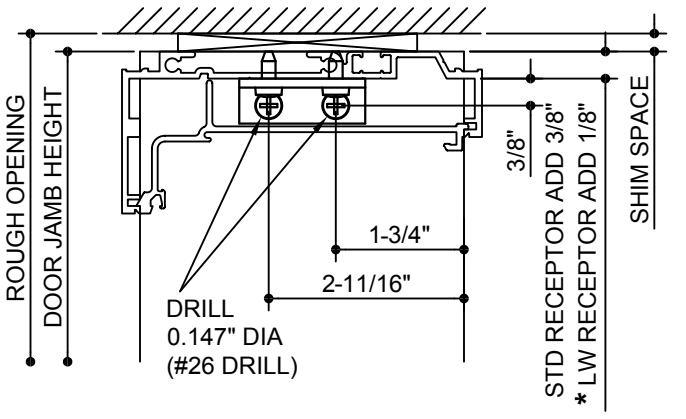
OUTSIDE GLAZED HEAD PREPS

DOOR JAMB WITH TRANSOM

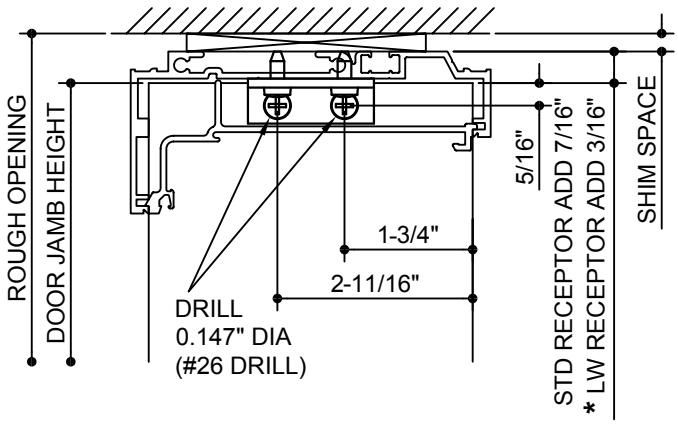
NOTE : REVERSE PREPS FOR BACK PLANE SYSTEMS



OUTSIDE GLAZED HEAD PREPS

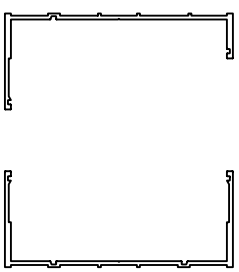


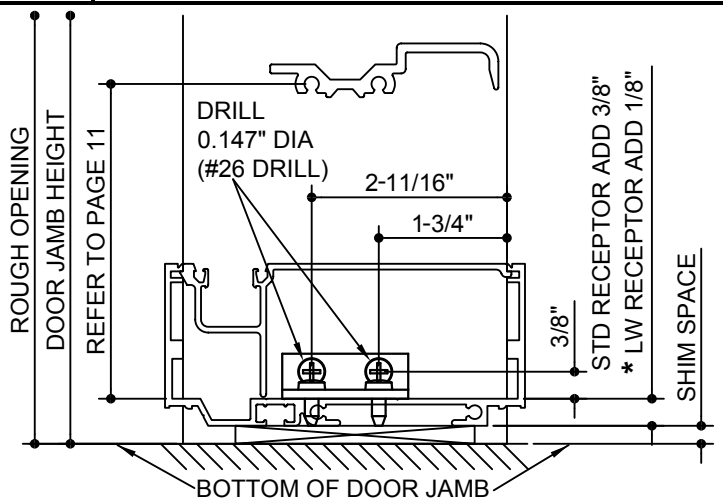
INSIDE GLAZED HEAD PREPS



INSIDE GLAZED HEAD PREPS

***NOTE :**
DIMENSIONAL CHANGES WHEN USING LIGHT WEIGHT RECEPTORS





OUTSIDE OR INSIDE GLAZED - WITH OR WITHOUT TRANSOM SILL PREPS

STEP A: Install clip anchors onto door jamb at the specified locations. Refer to page 27.

STEP B: Apply sealant to ends of the head and sill receptors. Place door jamb into position and anchor to receptors.

STEP C: Install horizontals as outlined on page 23.

STEP D: Apply sealant to the bottom glazing pocket of the door jamb and the receptor as shown. (Figure 1)

STEP E: Apply sealant to the top glazing pocket of the door jamb and the receptor as shown. (Figure 2)

STEP F: Complete typical frame installation and glazing as outlined on pages 29-33.

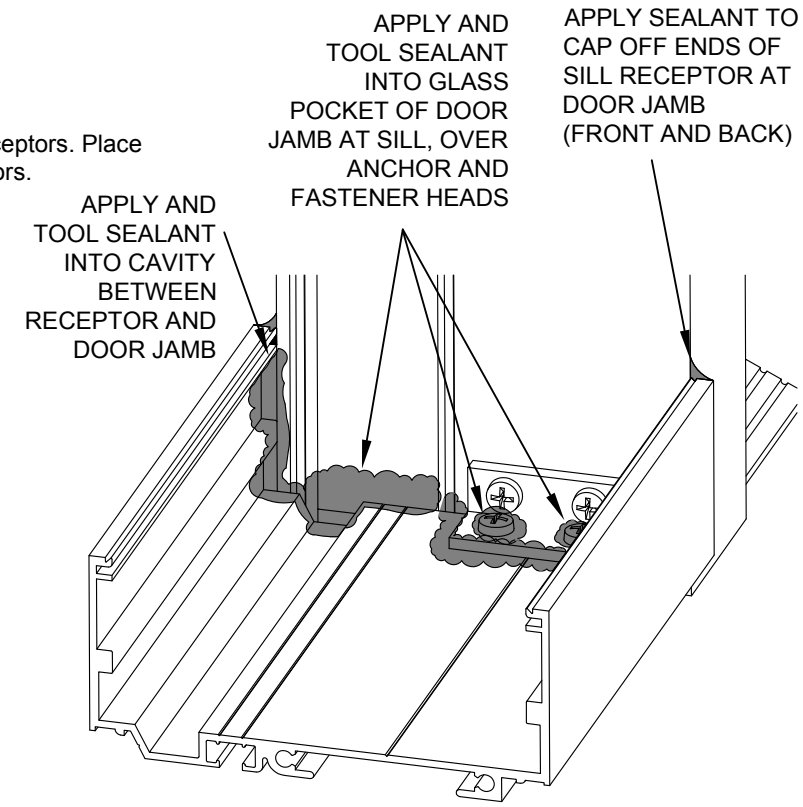


FIGURE 1

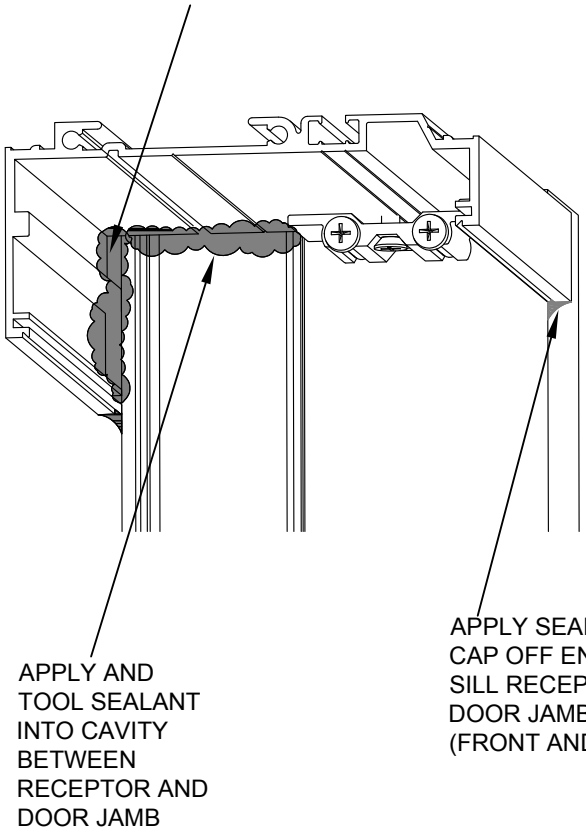


FIGURE 2
WITHOUT TRANSOM

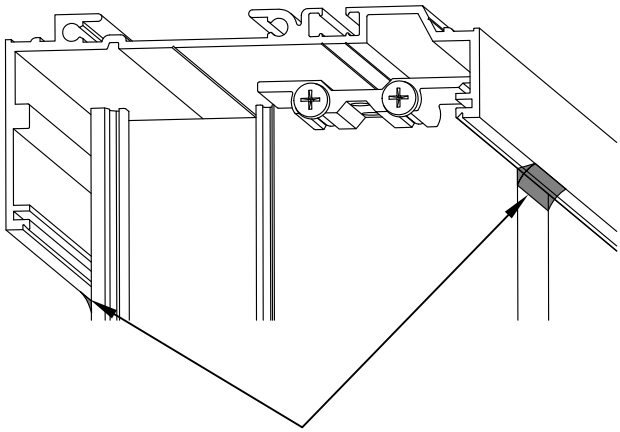


FIGURE 3
WITH TRANSOM

TYPICAL INSTALLATION OF PARTIAL OR FULL LENGTH VERTICAL GLAZING ADAPTORS- PRIOR TO FRAME ASSEMBLY

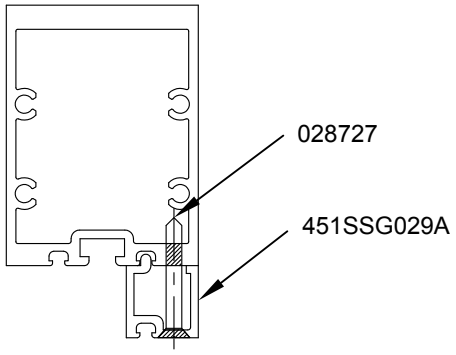
STEP A: Cut VERTICAL glazing adaptors to D.L.O. plus 1/2" for Partial length applications or to vertical member length minus 2-15/16" for full length applications. Cut HORIZONTAL glazing adaptors to D.L.O.

STEP B: Drill attachment clearance holes in the vertical adaptor 6" from each end and every 12" on center with a #16 (0.177) bit and counter sink. Locate adaptor on mullion and match drill with #26 (0.147) bit. Fasten adaptor to mullion using 028727 (#8 x 1-1/4" F.H.T.F.S.). In partial length applications, Vertical adaptor should be positioned to allow sealing of the horizontal adaptor. (Approximlately 1/4" projection into horizontal pocket).

STEP C: Apply sealant to vertical adaptor at the final position of the snapped-in horizontal adaptor.

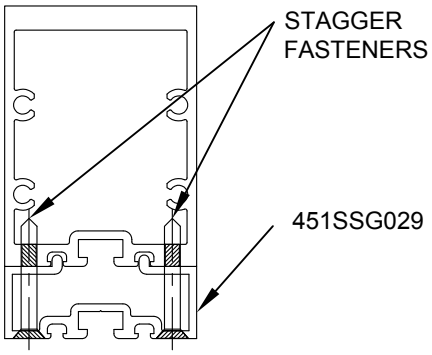
STEP D: Snap the HORIZONTAL glazing adaptors into the in glazing reglet allowing the adaptor to rotate into the pocket and contact the sealant at the vertical adaptors.

NOTE:
WHEN USING PRE-INSTALLED VERTICAL GLAZING ADAPTORS, CARE SHOULD BE TAKEN, AT THE TIME OF THE FRAME ASSEMBLY, TO SEAL THE VERTICAL GLAZNG REGLETS WHERE THEY MEET THE INTERMEDIATE HORIZONTALS. THE ¼" WATER DELECTOR SHOULD ALSO BE USED ON ALL FULL-LENGTH APPLICATIONS AND INSTALLED AS SHOWN ON PAGE 45. 1" WATER DEFLECTORS ARE USED FOR PARTIAL ADAPTOR APPLICATIONS A LONG AS THE ADAPTOR DOES NOT IMPED WATER EVACUATION OF THE INTER MEDIATE HORIZONTAL.



TRIFAB™ VG 451 /451T
1/4" INFILL BESIDE 1"
INFILL GLAZING ADAPTOR

FIGURE 1



TRIFAB™ VG 451 /451T
1" INFILL BESIDE 1"
INFILL GLAZING ADAPTOR

FIGURE 2

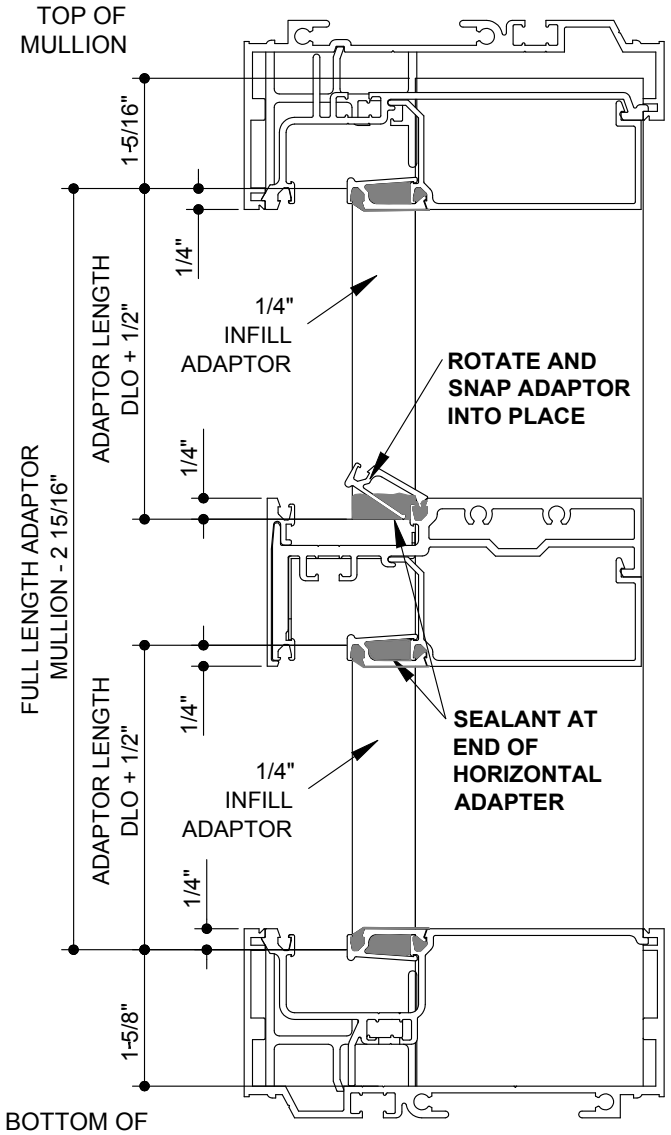


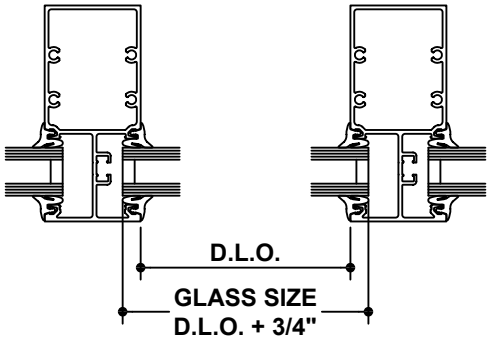
FIGURE 3

NOTES:
1) ***THESE FORMULAS DO NOT ALLOW FOR UNDERSIZE OR OUT OF SQUARE DAYLITE OPENINGS.***
2) ***THE GLASS MANUFACTURER MUST INDICATE THE SPECIFIC GLAZING REQUIREMENTS FOR THE MATERIAL BEING USED.***

NOTE:
IF PERIMETER SEAL WAS NOT INSTALLED PREVIOUSLY, INSTALL IT NOW, MAKING SURE IT MARRIES TO ALL RECEPTORS, JAMBS, END DAMS, AND SPLICES.

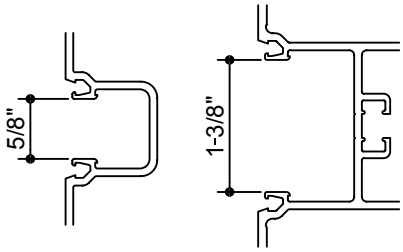
STEP A: All pockets for 1" infill are 1-3/8" in width and will accept up to 1-1/8" glass dry glazed. All pockets for 1/4" infill are 5/8" in width, and will accept up to 3/8" glass dry glazed.

STEP B: Glass size is D.L.O. (Daylight Opening) + 3/4" for captured systems.



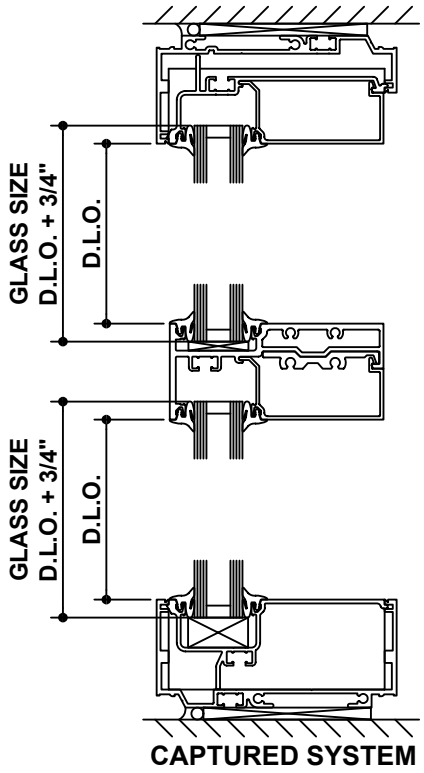
CAPTURED SYSTEM GLAZING CHART FOR 1/4" SYSTEM

Infill Thickness	Weathering (Both Sides)
1/8"	027077 (Heavy)
1/4"	027074 (Standard)
3/8"	027076 (Light)



GLAZING CHART FOR 1" SYSTEM

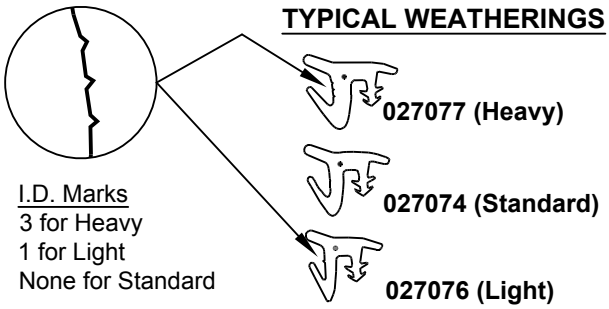
Infill Thickness	*Adaptor	Weathering for Typical Systems	Head & Sill Receptor Weathering for Two-Color System
1/8"	451VG029	027077 (Both Sides)	027077C (Exterior @ Head & Sill Only)
1/4"	451VG029	027074 (Both Sides)	027074C (Exterior @ Head & Sill Only)
3/8"	451VG029	027076 (Both Sides)	027076C (Exterior @ Head & Sill Only)
1/2"	451VG030	027077 (Both Sides)	027077C (Exterior @ Head & Sill Only)
5/8"	451VG030	027074 (Both Sides)	027074C (Exterior @ Head & Sill Only)
3/4"	451VG030	027076 (Both Sides)	027076C (Exterior @ Head & Sill Only)
7/8"	———	027077 (Both Sides)	027077C (Exterior @ Head & Sill Only)
1"	———	027074 (Both Sides)	027074C (Exterior @ Head & Sill Only)
1-1/8"	———	027076 (Both Sides)	027076C (Exterior @ Head & Sill Only)



CAPTURED SYSTEM

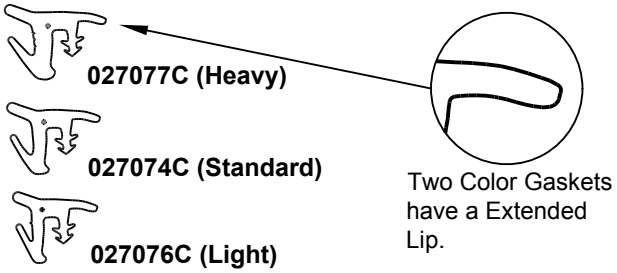
NOTE: *For infill thickness in 1/16" increments or oversize and undersize glass, use a combination of the standard (027074) with either the light (027076) or heavy (027077) gaskets.*

TYPICAL WEATHERINGS



I.D. Marks
3 for Heavy
1 for Light
None for Standard

EXTERIOR HEAD & SILL WEATHERINGS FOR TWO- COLOR SYSTEM

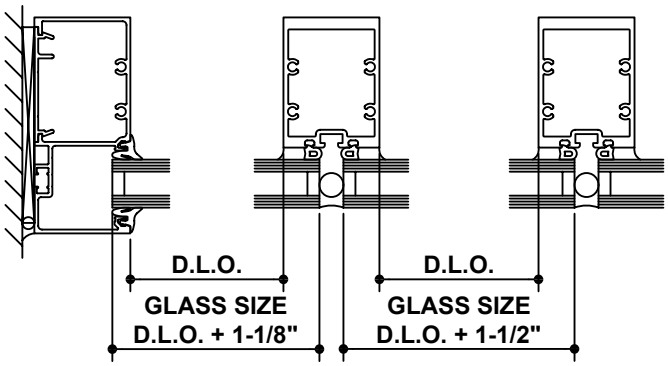


Two Color Gaskets have a Extended Lip.

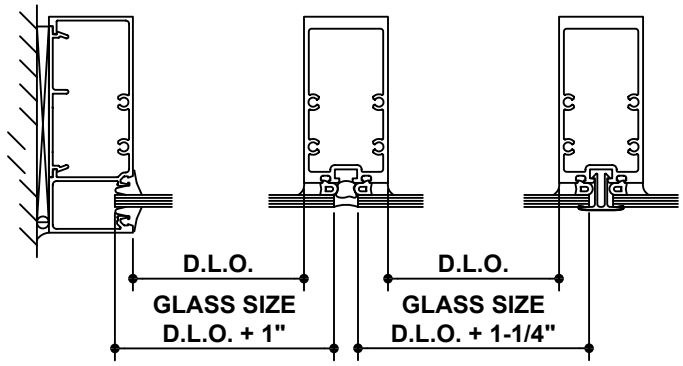
****NOTE:***
Snap-in glazing adaptors 451VG029 and 451VG030 are provided for applications requiring infills less than 1" in thickness at adaptation. Reference Page 48, Glazing Adaptors, for adaptor cut lengths and seal information.

SSG AND WEATHERSEAL SYSTEMS WILL ACCEPT 1/4" OR 1" VISION AND 1/4" OR 1" SPANDREL INFILLS.

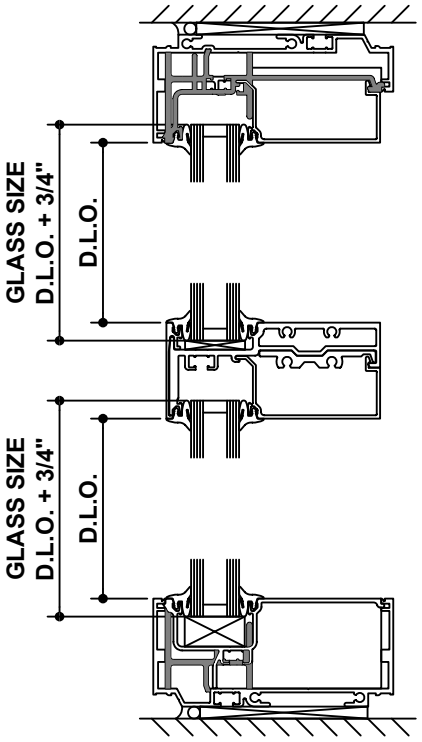
NOTES:
1) ***THESE FORMULAS DO NOT ALLOW FOR UNDERSIZE OR OUT OF SQUARE DAYLITE OPENINGS.***
2) ***THE GLASS MANUFACTURER MUST INDICATE THE SPECIFIC GLAZING REQUIREMENTS FOR THE MATERIAL BEING USED.***



SSG / WEATHERSEAL
TRIFAB™ VG 451/451T



SSG / WEATHERSEAL
TRIFAB™ VG 450



SSG / WEATHERSEAL
ALL SYSTEMS

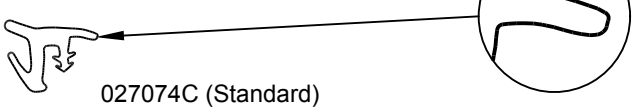
SSG / WEATHERSEAL GLAZING CHART

INFILL THICKNESS	*VERTICAL ADAPTOR	* HEAD, JAMB & SILL ADAPTOR	VERTICAL SPACER	HEAD, JAMB & SILL GASKET	EXTERIOR HEAD & SILL TWO-COLOR GASKET	WEATHERSEAL
1/4"	———	———	127008	027074	027074C	450SSG250
1/4" Adapted	451SSG029 or 451SSG029A	451VG029	127008	027074	027074C	450SSG250
1"	———	———	127008	027074	027074C	451SSG250

TYPICAL WEATHERING

027074 (Standard)

EXTERIOR HEAD & SILL WEATHERINGS FOR TWO- COLOR SYSTEM



027074C (Standard)

Two Color Gaskets have a Extended Lip.

STEP A: Cut horizontal and vertical gaskets to an approximate length of D.L.O. + 1/4" per foot of D.L.O.

STEP B: Install gaskets on the side of frame opposite glass stops first. Insert gaskets into the horizontal members first, starting at the ends and work toward the center as shown. Install vertical gaskets into the same side of frame after horizontal gaskets are in place, in the same manner. (Figure 1)

STEP C: Position setting blocks into horizontal members as required.

STEP D: Install glass into frame using standard flush glazing technique.

NOTE:
CHECK DEADLOAD CHARTS IN ARCHITECTURAL DETAIL MANUAL FOR PROPER SETTING BLOCK SPACING.

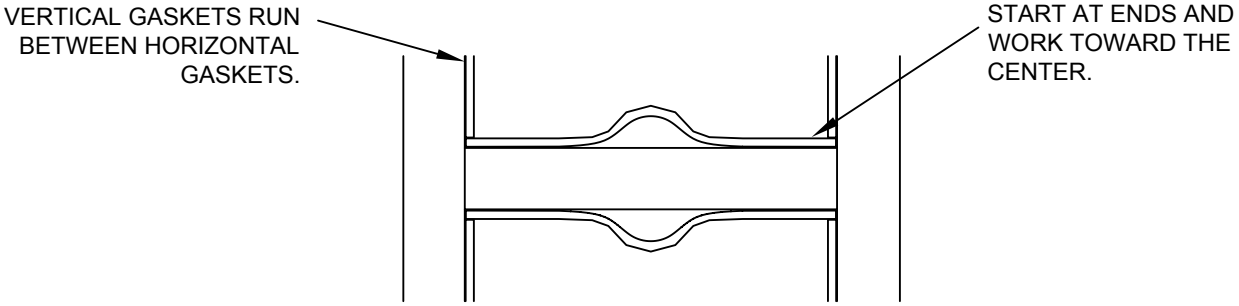


FIGURE 1

STEP E: Apply bead of sealant along vertical reglets where glass stop meets vertical, then install glass stop. (Figure 2)

STEP F: Install horizontal and vertical gaskets into glass stop side of frame in the same manner as described in Step B.

STEP G: At the head condition, apply a bead of sealant along the vertical where the glass stop meets the vertical and also along the joint between the head insert and the vertical. (Figure 3)

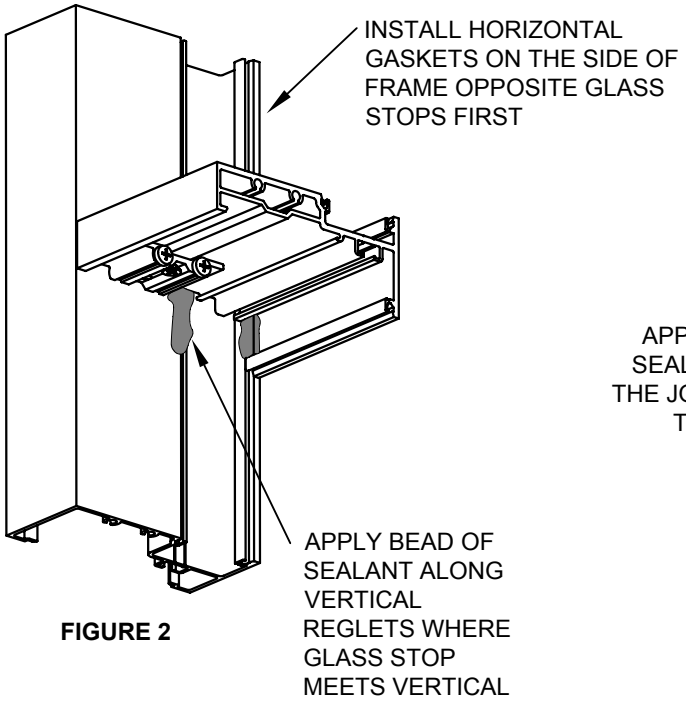


FIGURE 2

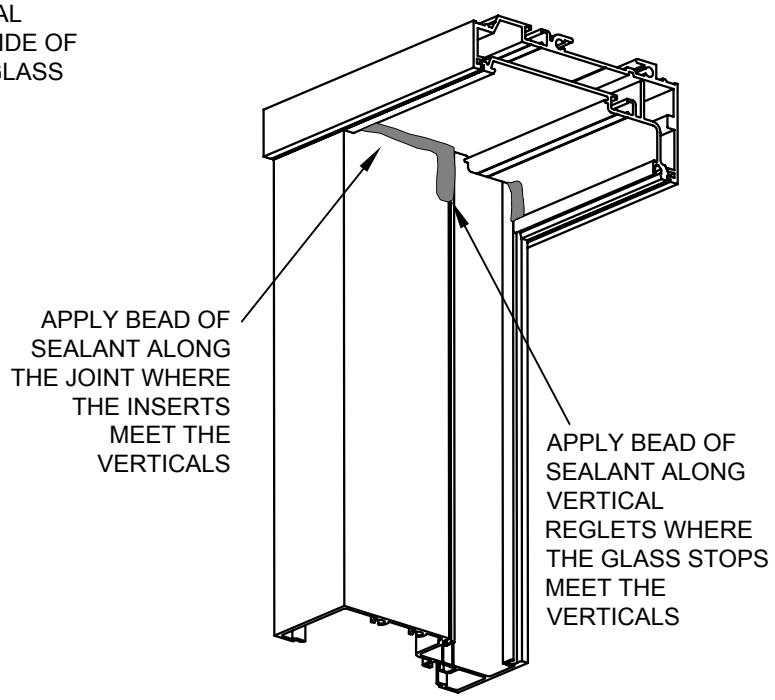


FIGURE 3

STEP A: Cut horizontal and vertical gaskets, and SSG spacer to approximate length of D.L.O. + 1/4" per foot of D.L.O..

STEP B: Install setting blocks and/or setting block chairs into the horizontal members. ***CHECK DEADLOAD CHARTS IN ARCHITECTURAL DETAIL MANUAL FOR PROPER SETTING BLOCK SPACER.***

STEP C: At all intermediate horizontal water deflectors, cut the dart back leg off of exterior weathering (Figure 1). This will create a weep slot after the horozontal cover is installed.

STEP D: Install exterior horizontal covers. Covers should not exceed a maximum of 10 feet. If an elevation is longer than 10 feet, splice the horizontal covers at mullions as shown (Figure 2).

STEP E: Install gasket on the side opposite glass stop first. Insert gaskets into horizontal members first starting at the ends and working towards the center. Install vertical gaskets in the same manner.

STEP F: Install glass in the frame opening (Figure 3). Install temporary glass retainers to hold glass in place. Retainers should be spaced a maximum of 30" on center. If high wind load conditions are anticipated, additional retainers may be needed. Consult your sealant and glass supplier for spacing recommendations.

NOTE: EXTERIOR HORIZONTAL GASKETS RUN CONTINUOUS ACROSS OPENING. CUT GASKET TO APPROXIMATE LENGTH OF OPENING WIDTH + 1/4" PER FOOT OF OPENING.

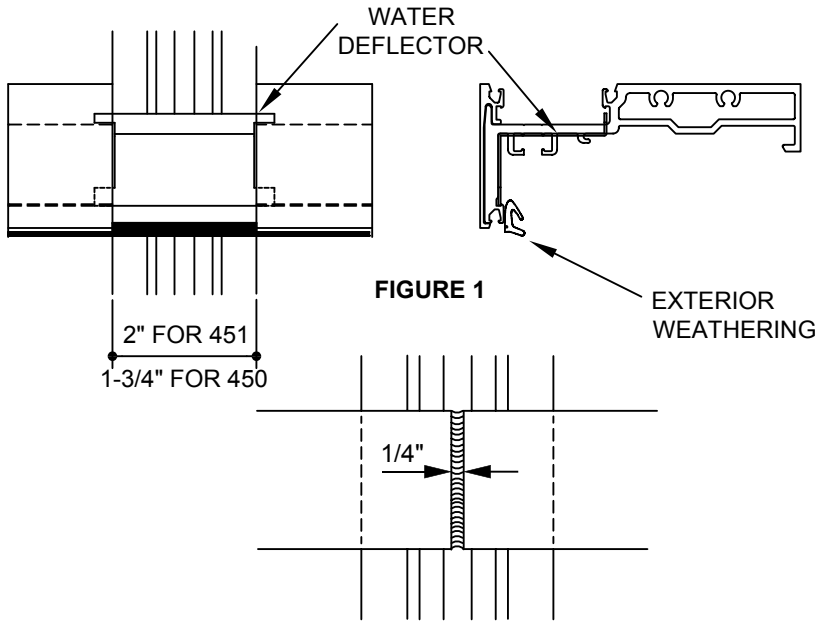


FIGURE 1

FIGURE 2

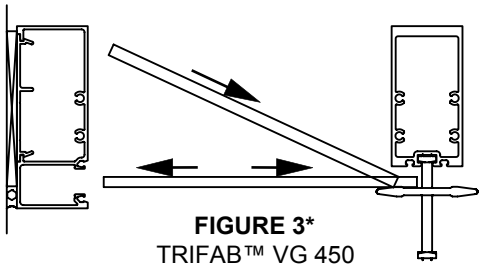


FIGURE 3*
TRIFAB™ VG 450

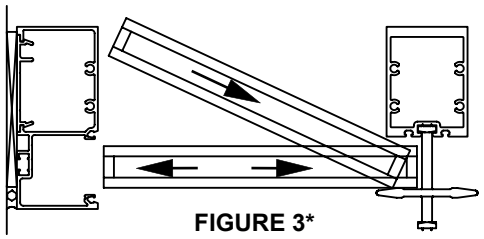


FIGURE 3*
TRIFAB™ VG 451/451T

NOTE:
LAST BAY GLASS INSERTION REVERSED

STEP G: Install adjacent glass lite and then install SSG glazing spacer along mullion at each lite.

STEP H: Apply sealant along verticals where glass stop meets, then install glass stops (Figure 4).

STEP I: Install interior push-on gasket.

STEP J: Mask SSG mullion and glass as required. Install the interior, vertical structural seal.

STEP K: Apply exterior seal at the butt glass joint.

NOTE:
KAWNEER DOES NOT SUPPLY THE STRUCTURAL SILICONE SEALANT. THIS SEALANT IS TO BE RECOMMENDED BY THE SEALANT MANUFACTURER. REFERENCE THE SSG GLAZING NOTE FOUND IN THE GENERAL NOTES SECTION OF THIS MANUAL.

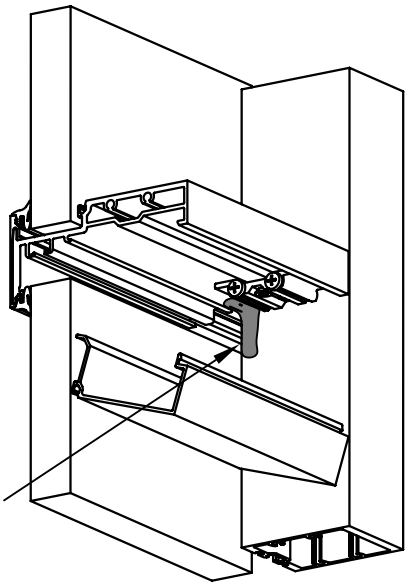


FIGURE 4

STEP A: Cut horizontal and vertical gaskets, and SSG spacer to approximate length of D.L.O. + 1/4" per foot of D.L.O.

STEP B: Install setting blocks and/or setting block chairs into the horizontal members. ***CHECK DEADLOAD CHARTS IN ARCHITECTURAL DETAIL MANUAL FOR PROPER SETTING BLOCK SPACING.***

STEP C: At all intermediate horizontal water deflectors, cut the dart and back leg off of exterior weathering, (Figure 1). This will create a weep slot after the horizontal cover is installed.

STEP D: Install exterior horizontal covers. Covers should not exceed a maximum of 10 feet. If an elevation is longer than 10 feet, splice the horizontal covers at mullions as shown (Figure 2).

STEP E: Install gasket on the side opposite glass stop first. Insert gaskets into horizontal members first starting at the ends and working towards the center. Install vertical gaskets in the same manner.

STEP F: Install glass in the frame opening (Figure 3). Install snap-in Weatherseal to hold glass in place.

NOTE:
EXTERIOR HORIZONTAL GASKETS RUN CONTINUOUS ACROSS OPENING. CUT THIS GASKET TO APPROXIMATE LENGTH OF OPENING WIDTH + 1/4" PER FOOT OF OPENING.

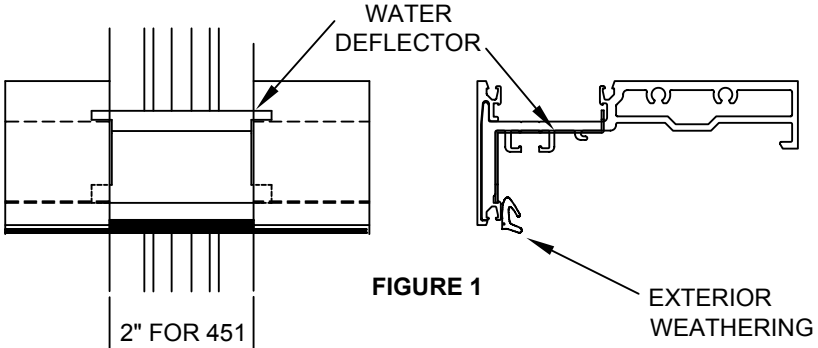


FIGURE 1

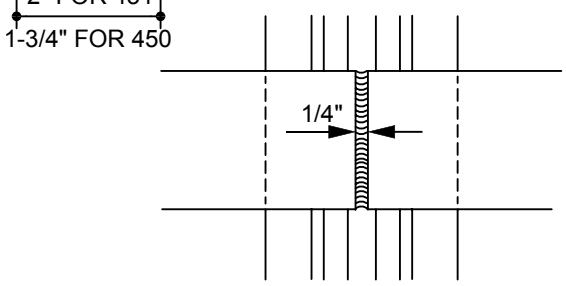


FIGURE 2

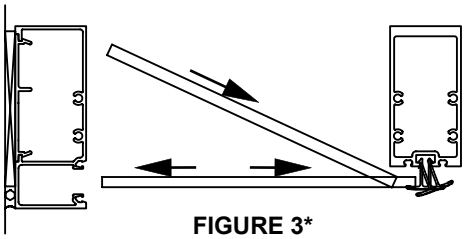


FIGURE 3*
TRIFAB™ VG 450

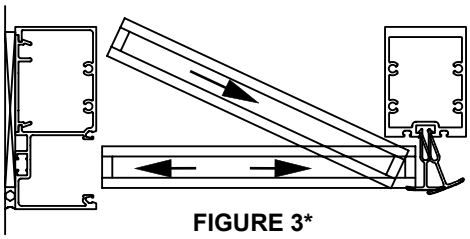


FIGURE 3*
TRIFAB™ VG 451/451T

NOTE:
LAST BAY GLASS INSERTION REVERSED

STEP G: Install adjacent glass light and then install SSG glazing spacer along mullion at each light.

STEP H: Apply sealant along verticals where glass stop meets, then install glass stops (Figure 4).

STEP I: Install interior push-on gasket.

STEP J: Mask SSG mullion and glass as required. Install the interior, vertical structural seal.

NOTE:
KAWNEER DOES NOT SUPPLY THE STRUCTURAL SILICONE SEALANT. THIS SEALANT IS TO BE RECOMMENDED BY THE SEALANT MANUFACTURER. REFERENCE THE SSG GLAZING NOTE FOUND IN THE GENERAL NOTES SECTION OF THIS MANUAL.

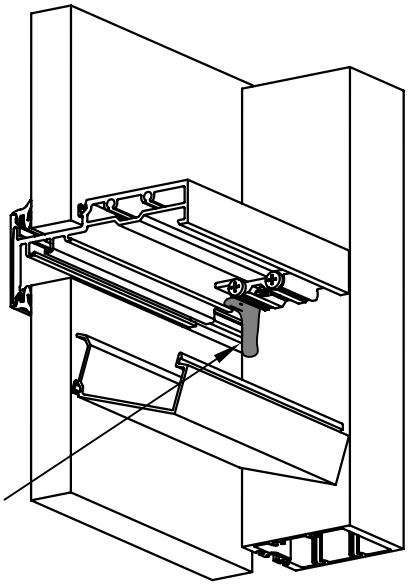
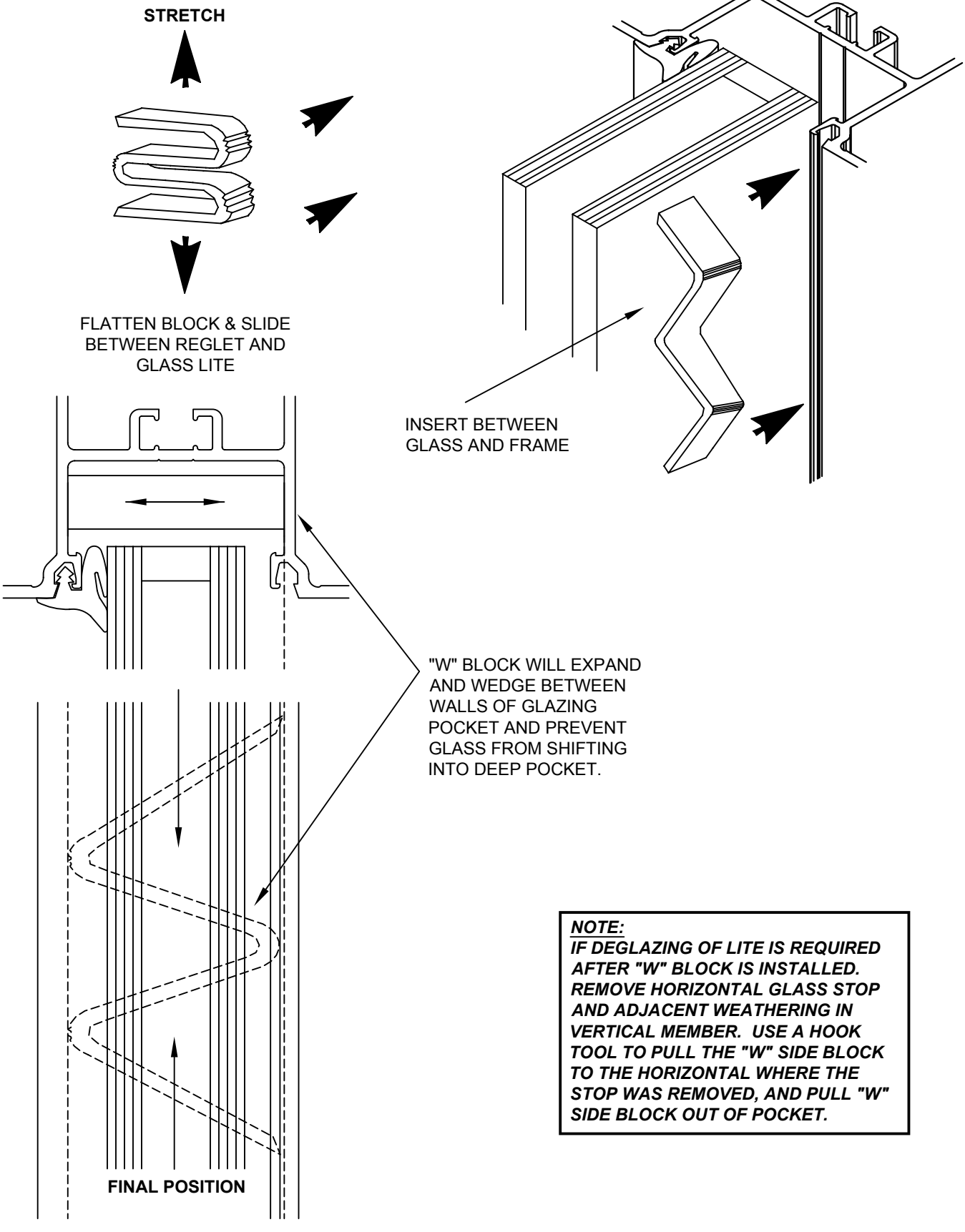


FIGURE 4

One "W" Side Block should be installed into the deep pocket of the mullion of each lite of glass in the opening.



NOTE:
IF DEGLAZING OF LITE IS REQUIRED AFTER "W" BLOCK IS INSTALLED. REMOVE HORIZONTAL GLASS STOP AND ADJACENT WEATHERING IN VERTICAL MEMBER. USE A HOOK TOOL TO PULL THE "W" SIDE BLOCK TO THE HORIZONTAL WHERE THE STOP WAS REMOVED, AND PULL "W" SIDE BLOCK OUT OF POCKET.

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