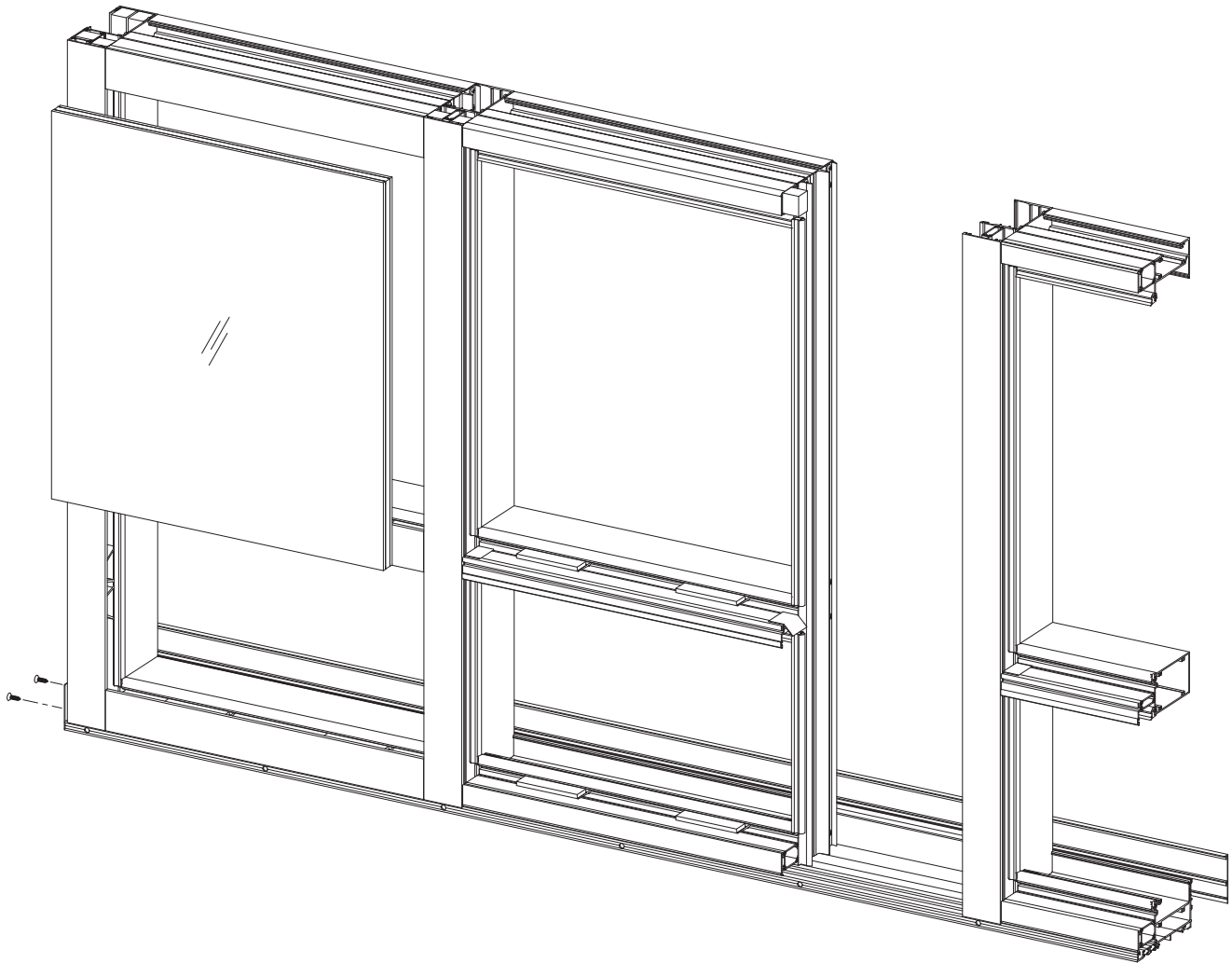


## YWW 60 XT Window Wall Installation Manual

### Field Glazed Captured






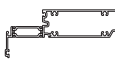

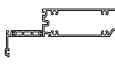

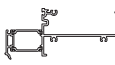

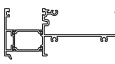
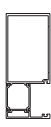




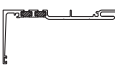

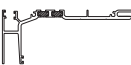
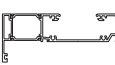

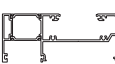

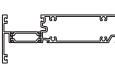

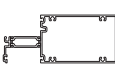
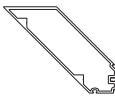
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
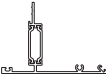



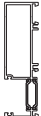

















## **Installation Notes**

1. Do not drop, roll or drag boxes of aluminum framing. Move and stack boxes with proper support to prevent distortion. If fork lifts are used, be especially careful about striking the boxes when lifting or moving.
2. Store in a dry, out of the way area. If rain exposure, condensation or any water contact is likely, then all packaging material should be removed. Wet packaging materials will discolor and may stain aluminum finishes and paints.
3. All materials should be checked for quality and quantity upon receipt, YKK AP must be notified immediately of any discrepancies in shipment. Check to make sure that you have the required shims, sealants, supplies and tools necessary for the installation.
4. Carefully check the openings and surrounding conditions that will receive your material. Remember, if the construction is not per the construction documents, it is your responsibility to notify the general contractor in writing. Any discrepancies must be brought to the general contractor's attention before you proceed with the installation.
5. Gather your shop drawings, materials, packing list, and this installation manual. Carefully review parts location, the sequence it goes therein, when you glaze it and how you seal it. Installation instructions are of a general nature and may not cover every condition you will encounter. The shop drawings and/or installation manuals were prepared specifically for the product.
6. Any material substitutions must be of equal or greater quality.
7. Make certain that material samples have been sent for compatibility testing for all manufacturer's sealants involved. Make certain sealants have been installed in strict accordance with the manufacturer's recommendations and specifications.
8. Remember to isolate, in an approved manner, all aluminum from uncured masonry or other incompatible materials.
9. System-to-structure fasteners are not supplied by YKK AP. Fasteners called out on shop drawings are to indicate minimum sizes for design loading.
10. If any questions arise concerning YKK AP products or their installation, contact YKK AP for clarification before proceeding.
11. YKK AP storefront and/or curtain wall framing is typically completed before drywall, flooring and other products which may still be in process. Take the extra time to wrap and protect the work produced.
12. Cutting tolerances are plus zero, minus one thirty second unless otherwise noted.
13. Check our website, [www.ykkap.com](http://www.ykkap.com), for the latest installation manual update prior to commencing work.



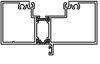

## YWW 60 XT FRAMING MEMBERS

	<b>Field Glaze Mullion</b> 2-1/2" x 6"	BE9-6360		<b>Optional Horizontal (IG/OG)</b> Not Re-glazable from Outside w/ Head Receptor	BE9-6351
	<b>Heavy Duty Field Glaze Mullion</b> 2-1/2" x 6"	BE9-6372		<b>Optional Horizontal (IG/OG)</b> For Reglaze	BE9-6324
	<b>Flat Filler</b> Use with BE9-6360	E9-6361		<b>Sill (IG/OG)</b>	BE9-6327
	<b>Jamb</b> 2-1/2" x 6"	BE9-6311		<b>Sill (IG)</b>	BE9-6353
	<b>Tubular Jamb</b> 2-1/2" x 6"	BE9-6313		<b>Sill Flashing</b>	BE9-6328
	<b>Female Mullion</b> For Expansion	BE9-6303		<b>Sill Flashing for Slab Edge</b>	BE9-6330
	<b>Female Tubular Mullion</b> For Expansion	BE9-6308		<b>Head Receptor</b>	BE9-6329
	<b>Male Mullion</b> For Expansion	BE9-6306		<b>Head Receptor w/ Plate Adaptor</b>	BE9-6331
	<b>Head (IG)</b> 2-1/2" x 6"	BE9-6347		<b>Receptor Snap Cover</b> Used with BE9-6329 & BE9-6331	E9-6343
	<b>Head (OG)</b>	BE9-6315		<b>Flashing Interior Face Cover</b> Used with BE9-6328 & BE9-6330	E9-6342
	<b>Horizontal (IG)</b>	BE9-6350		<b>Optional Sill Flashing Interior Face Cover</b> Used with BE9-6328 & BE9-6330	E9-6346
	<b>Horizontal (OG)</b>	BE9-6321		<b>90° Corner Mullion Half</b>	E9-6344


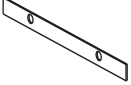
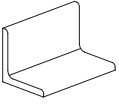
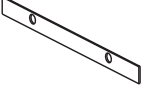
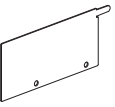
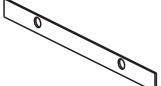
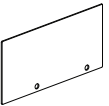
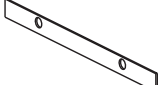
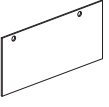
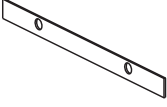
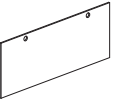
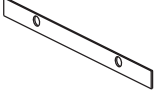

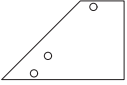

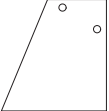
## YWW 60 XT FRAMING MEMBERS

	<b>135° Corner Mullion Half</b>	<b>E9-6345</b>		<b>Aluminum Plate Adaptor</b> For BE9-6330	<b>E9-8222</b>
	<b>90° Corner Cover</b>	<b>BE9-6334</b>		<b>6-1/8" Slab Edge Cover</b>	<b>E9-8059</b>
	<b>135° Corner Cover</b>	<b>BE9-6336</b>		<b>6-5/8" Slab Edge Cover</b>	<b>E9-7723</b>
	<b>Corner Mullion</b>	<b>BE9-6374</b>		<b>7-3/8" Slab Edge Cover</b>	<b>E9-8223</b>
	<b>90° Inside Corner Adaptor</b>	<b>BE9-6375</b>		<b>7-7/8" Slab Edge Cover</b>	<b>E9-8231</b>
	<b>135° Inside Corner Adaptor</b>	<b>BE9-6376</b>		<b>8" Slab Edge Cover</b>	<b>E9-8589</b>
	<b>90° Corner Cover (Large)</b>	<b>E9-2740</b>		<b>9" Slab Edge Cover</b>	<b>E9-8428</b>
	<b>135° Corner Cover (Large)</b>	<b>E9-2742</b>		<b>Head Anchor</b>	<b>E9-6340</b>
	<b>Glass Stop</b>	<b>E9-7852</b>		<b>Door Jamb Adaptor Subframe</b>	<b>E9-2344</b>
	<b>Interior Cover</b>	<b>E9-6339</b>		<b>4-1/2" x 2-1/4" Door Head O/P</b> For 35XT/50XT Doors E2-0051 Not Included	<b>BE9-1532</b>
	<b>Flush Filler</b>	<b>E9-6337</b>		<b>Door Jamb Adaptor</b> For 35XT/50XT Doors E2-0051 Not Included Use with BE9-1540	<b>BE9-1533</b>
	<b>Exterior Glass Stop</b>	<b>E9-6338</b>		<b>Narrow Door Jamb</b> For 35XT/50XT Doors Use with BE9-1533	<b>BE9-1540</b>





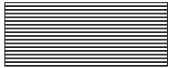




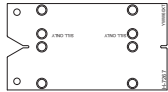







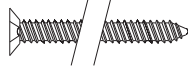








## YWW 60 XT FRAMING MEMBERS

	<b>Pocket Filler</b>	<b>BE9-6365</b>		<b>Door Jamb Flat Subframe</b> For 25T/35T/50T Doors Use with AS-1539	<b>BE9-1526</b>
	<b>Single Acting Transom Bar</b> For 25T/35T/50T Doors E2-0051 Not Included	<b>BE9-2582</b>		<b>Door Stop</b> For 25T/35T/50T Doors E2-0051 Included Use with BE9-1526	<b>AS-1539</b>

## ACCESSORIES

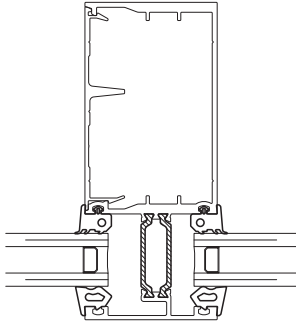
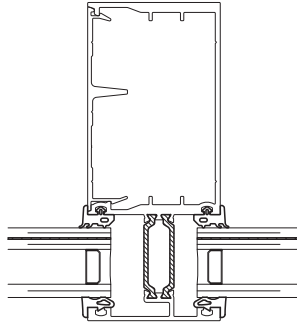




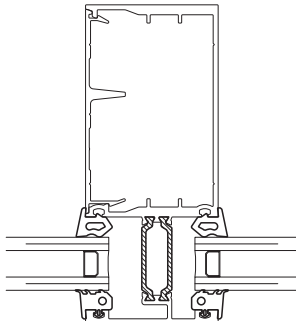
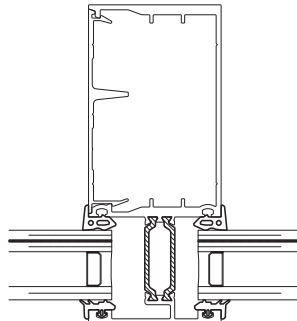




	<b>Head Anchor</b> 10" Cut Length	<b>E1-2830</b>		<b>End Cap</b> For E9-8059 Slab Edge Cover Plate	<b>E1-9984</b>
	<b>Door Jamb Anchor</b> (3-1/2")	<b>E1-2819</b>		<b>End Cap</b> For E9-7723 Slab Edge Cover Plate	<b>E1-9985</b>
	<b>End Dam</b> For Sill Flashing	<b>E1-2820</b>		<b>End Cap</b> For E9-8223 Slab Edge Cover Plate	<b>E1-9953</b>
	<b>End Dam</b> For Sill Flashing @ Door Jamb	<b>E1-2826</b>		<b>End Cap</b> For E9-8231 Slab Edge Cover Plate	<b>E1-9954</b>
	<b>End Cap</b> For BE9-6329 Head Recep- tor	<b>E1-2821</b>		<b>End Cap</b> For E9-8589 Slab Edge Cover Plate	<b>E1-9955</b>
	<b>End Cap</b> For BE9-6331 Head Recep- tor	<b>E1-2822</b>		<b>End Cap</b> For E9-8428 Slab Edge Cover Plate	<b>E1-9956</b>
	<b>End Cap</b> For Head Receptor	<b>E1-2823</b>		<b>90° Corner Half End Cap</b>	<b>E1-2824</b>
	<b>End Cap</b> For Slab Edge Sill Flashing Adaptor	<b>E1-1196</b>		<b>135° Corner Half End Cap</b>	<b>E9-2825</b>

## ACCESSORIES

	<b>PVC Back Jamb Filler</b>	<b>E3-3667</b>		<b>Side Block</b> For Male Mullion	<b>E2-0133</b>
	<b>Head Receptor Splice Sleeve</b> For Slab Edge	<b>E1-9961</b>		<b>Airtight Gasket</b>	<b>E2-0051</b>
	<b>Silicone Splice Sleeve</b>	<b>E2-0070</b>		<b>Weathering Gasket</b> For Slab Edge Cover & Female Mullion Halves	<b>E2-0065</b>
	<b>Setting Block Chair</b> For 1" Glazing	<b>E1-2831</b>		<b>Weep Baffle</b>	<b>E2-0099</b>
	<b>Setting Block Chair</b> For 1-5/16" Glazing	<b>E1-2833</b>		<b>Drill Fixture</b>	<b>H-7267</b>
	<b>Setting Block</b> For 1" Glazing	<b>E2-0704PC</b>		<b>Drill Fixture</b> For 90° Corner Mullion	<b>H-7268</b>
	<b>Setting Block</b> For 1-5/16" Glazing	<b>E2-0611</b>		<b>#10" x 3/8" PHMS</b> Stainless Steel, For Corner Cover Attachment	<b>PM-1006-SS</b>
	<b>Setting Block</b> For Slab Edge Cover	<b>E2-0054</b>		<b>#12 x 3/4" UFHSMS Type A</b> , Zinc Plated Steel, For End Dam Attachment	<b>UA-1212</b>
	<b>Water Deflector</b>	<b>E2-0049</b>		<b>#12 x 3-1/2" FHSMS Type AB</b> , Used at Door Transom Bar	<b>FC-1256</b>
	<b>1-1/2" Air Seal Plug</b>	<b>E3-1166</b>		<b>#10 x 1/2" PHSMS Type AB</b> , Zinc Plated Steel, For Sill Flashing Attachment	<b>PC-1008</b>
	<b>Foam Backer Tape</b> 1" x 1-1/4" (Roll)	<b>E2-0259</b>		<b>#12 x 5/8" PHSMS Type AB</b> , Zinc Plated Steel	<b>PC-1210</b>
	<b>1/4" x 1/4" Spacer Tape</b>	<b>E2-0110</b>		<b>#12 x 1-1/4" PHSMS Type AB</b> , Zinc Plated Steel, For Frame Assembly	<b>PC-1220</b>
	<b>Anti-Walk Block</b> For Female Mullion and Jamb Mullion	<b>E2-0546</b>		<b>#12 x 1-3/4" PHSMS Type AB</b> , Zinc Plated Steel, For Corner Frame Assembly	<b>PC-1228</b>



**GLAZING CHART**

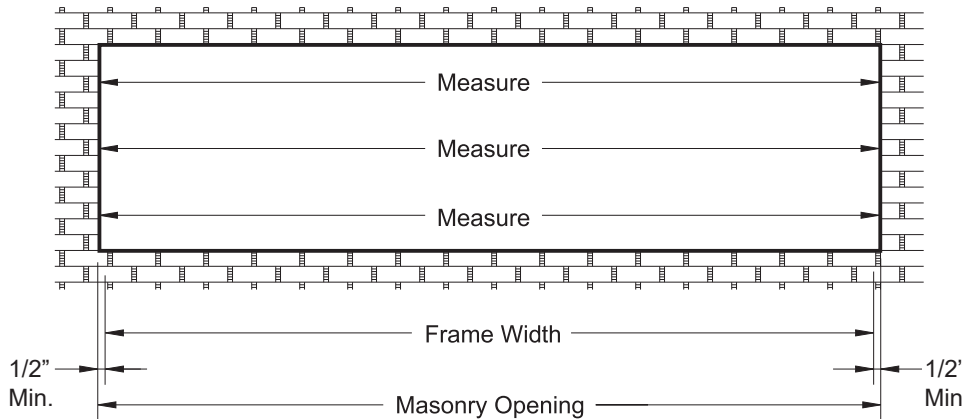
1" Insulating Glass			1-5/16" Laminated Insulating Glass		
<b>Outside Glazing</b> 			<b>Outside Glazing</b> 		
Interior Gasket		<b>E2-0811</b> <b>Dart Gasket (EPDM)</b> 3/8" F.C.	Interior Gasket		<b>E2-0801</b> <b>Dart Gasket (EPDM)</b> 1/4" F.C.
Exterior Gasket		<b>E2-0818</b> <b>Wedge Gasket (EPDM)</b> 3/8" F.C.	Exterior Gasket		<b>E2-0195</b> <b>Wedge Gasket (EPDM)</b> 3/16" F.C.
<b>Inside Glazing</b> 			<b>Inside Glazing</b> 		
Interior Gasket		<b>E2-0818</b> <b>Wedge Gasket (EPDM)</b> 3/8" F.C.	Interior Gasket		<b>E2-0802</b> <b>Wedge Gasket (EPDM)</b> 1/4" F.C.
Exterior Gasket		<b>E2-0811</b> <b>Dart Gasket (EPDM)</b> 3/8" F.C.	Exterior Gasket		<b>E2-9801</b> <b>Dart Gasket (EPDM)</b> 3/16" F.C.

## FRAME FABRICATION

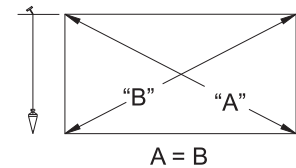
### STEP 1

#### DETERMINE FRAME SIZE

##### Determine Frame Width:



**Note:** Check opening for squareness of plumb at both ends, units must be installed in a true rectangle.

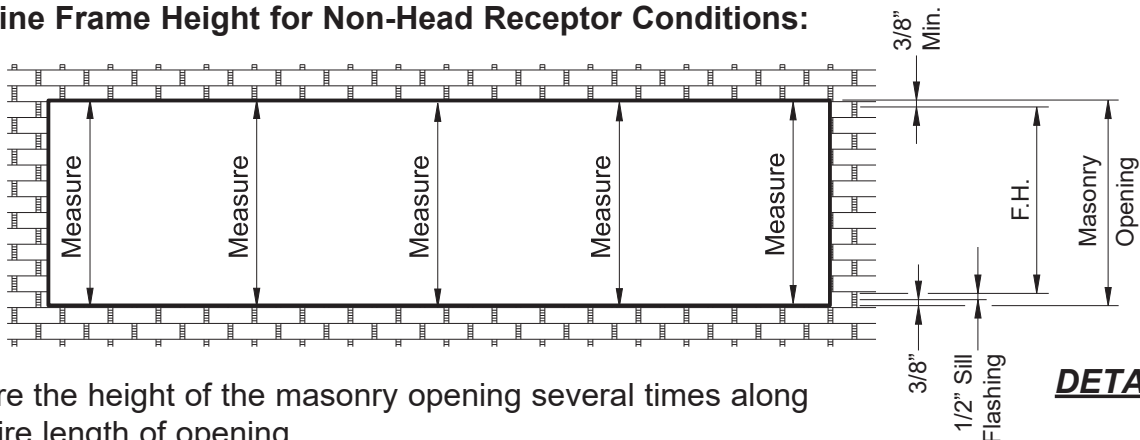


**DETAIL 1**

- Measure the width of the masonry opening at the top, middle, and bottom.
  - Select the smallest dimension measured and subtract 1" to determine the frame width.
- See **Detail 1**.

**Note:** For additional possibilities such as slab edge cover application, it is recommended to increase the caulk joint at the jambs to facilitate installation of the last framed unit. (Unit width will proportionally affect caulk joint width.)

##### Determine Frame Height for Non-Head Receptor Conditions:



**DETAIL 2**

- Measure the height of the masonry opening several times along the entire length of opening.
  - Select the smallest dimension measured and subtract 1-1/4" to determine the frame height to be used.
- Minimum of 3/8" shim/caulk joint at the head.
- 1/2" for the sill flashing.
- Minimum 3/8" shim/caulk joint below the sill flashing.

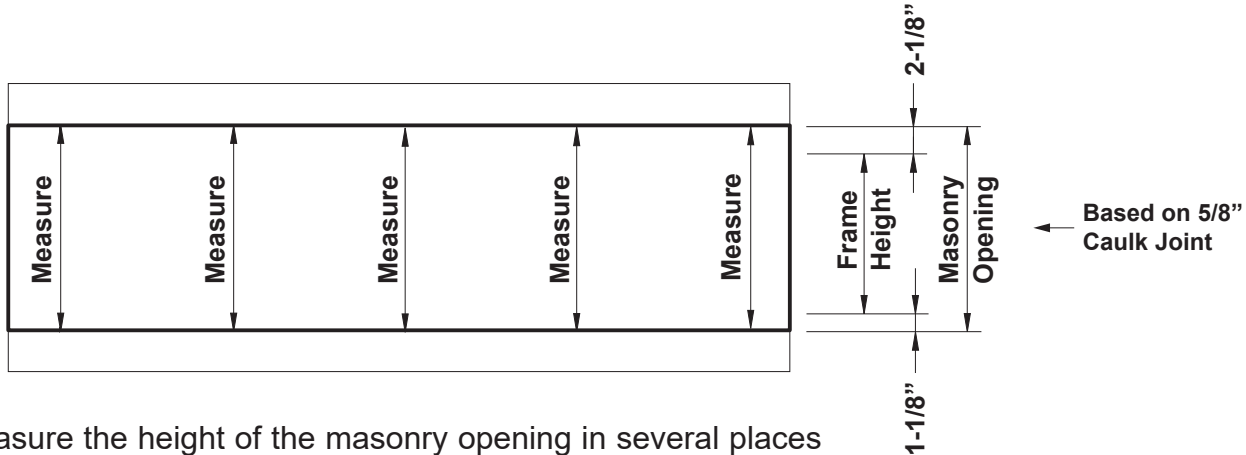
See **Detail 2**.

**Notes:** Vertical through frame widths over 24'-0" require expansion mullions every 12 to 15 feet (best location at vertical next to door jamb.) \*1-1/4" is based on 3/8" perimeter caulk joint, without use of head receptor, which can vary per project.

## FRAME FABRICATION

### STEP 1 (Continued) DETERMINE FRAME SIZE

Determine Frame Height for Slab Edge Cover Conditions:

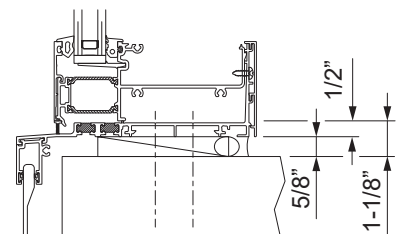
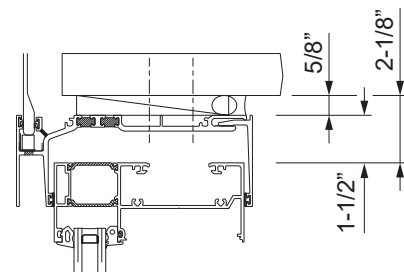


- Measure the height of the masonry opening in several places along the entire length of the opening.
- Select the smallest dimension measured and subtract \*3-1/4" to determine the frame height to be used:
  - 5/8" for the shim/caulk joint at the head.
  - 5/8" for the shim/caulk joint below the sill flashing.

See **Detail 3**.

\* **Note:** 3-1/4" is based on 5/8" perimeter caulk joint, which can vary per project.

### Detail 3



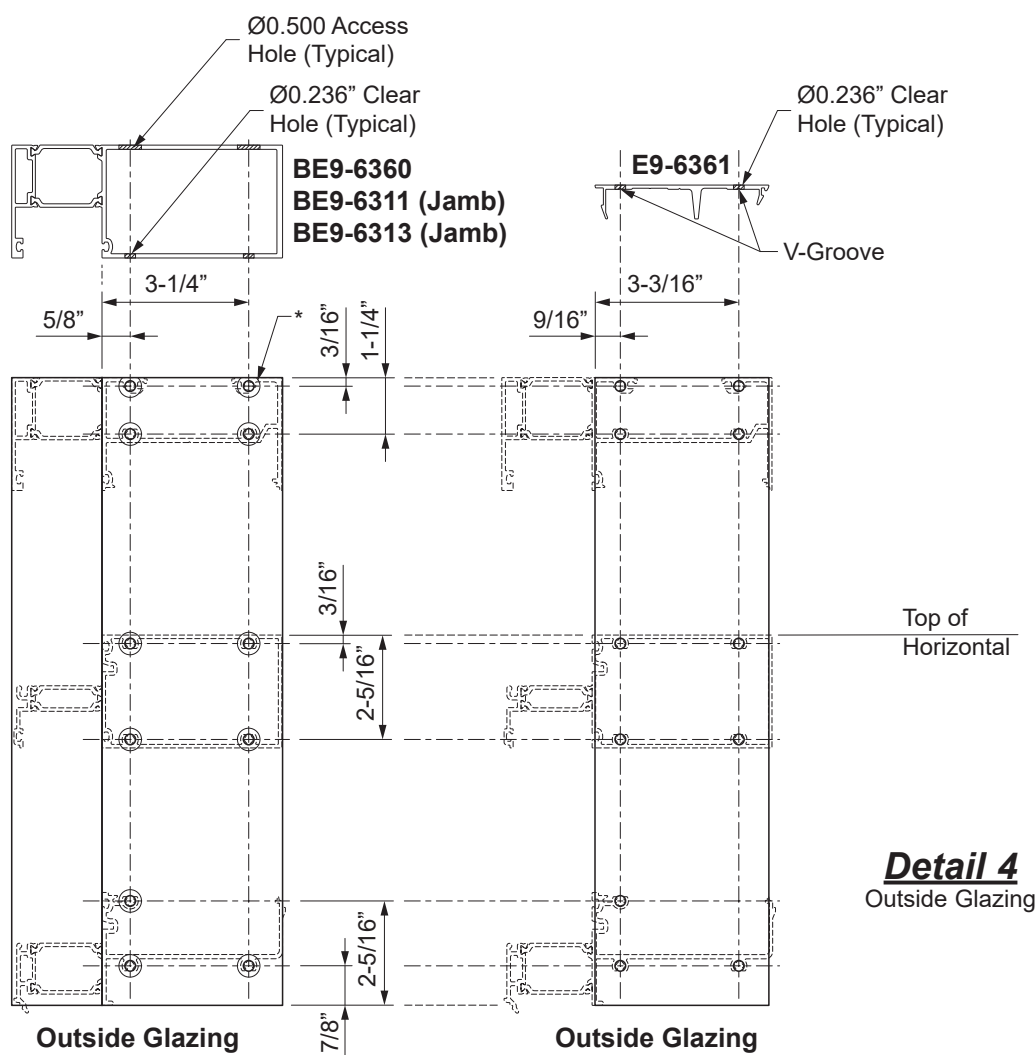
## STEP 2

## FABRICATE VERTICAL MEMBERS (OUTSIDE GLAZING)

- Cut all jamb and two piece vertical members to the frame height determined in **Step 1**.
  - Fabricate holes in the vertical members for screw spline attachment using one of the methods below:
    - Using the H-7267 drill fixture as a template, line up the glazing pockets on the vertical mullions and mark hole locations through the screw splines of the templates. For flat filler, align screw holes with the V-Grooves.
- OR**
- Layout hole locations on vertical members as shown in **Detail 4**.
  - Drill 0.236" diameter (#B drill bit) holes at each location marked.

**Notes:** Additional fabrication will be required for the inclusion of steel reinforcing. Drill fixture plate can be used.

\* Access holes at top of the mullions will have sharp edges.



## FRAME FABRICATION

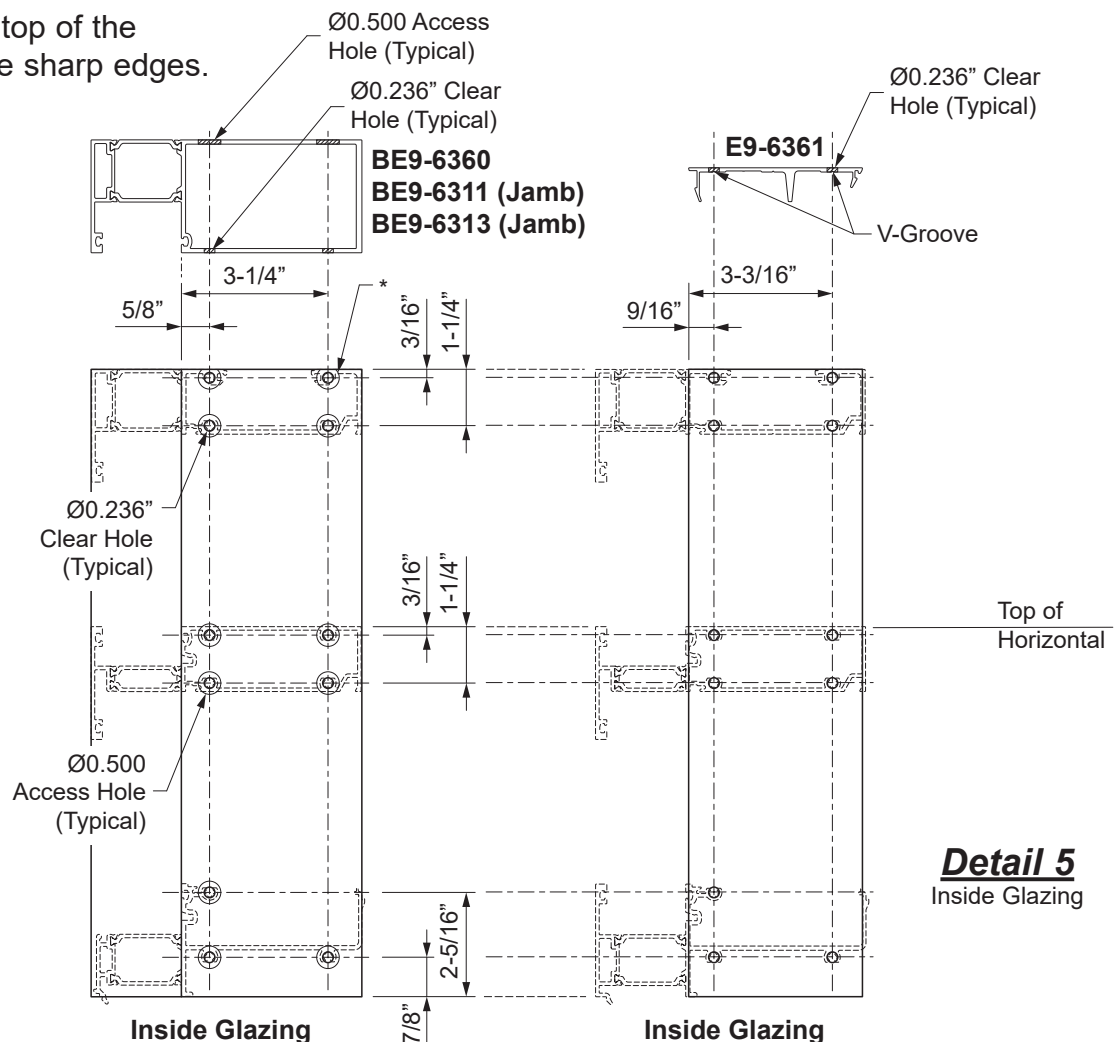
## STEP 2 (Continued)

## FABRICATE VERTICAL MEMBERS (INSIDE GLAZING)

- Cut all jamb and two piece vertical members to the frame height determined in **Step 1**.
- Fabricate holes in the vertical members for screw spline attachment using one of the methods below:
  - Using the H-7267 drill fixture as a template, line up the glazing pockets of the vertical mullions and mark hole locations through the screw splines of the templates. For flat filler, align screw holes with the V-Grooves.
- OR**
- Layout hole locations on vertical members as shown in **Detail 5**.
- Drill 0.236" diameter (#B drill bit) holes at each location marked.

**Notes:** Additional fabrication will be required for the inclusion of steel reinforcing. Drill fixture plate can be used.

\* Access holes at top of the mullions will have sharp edges.



**Detail 5**  
Inside Glazing

## FRAME FABRICATION

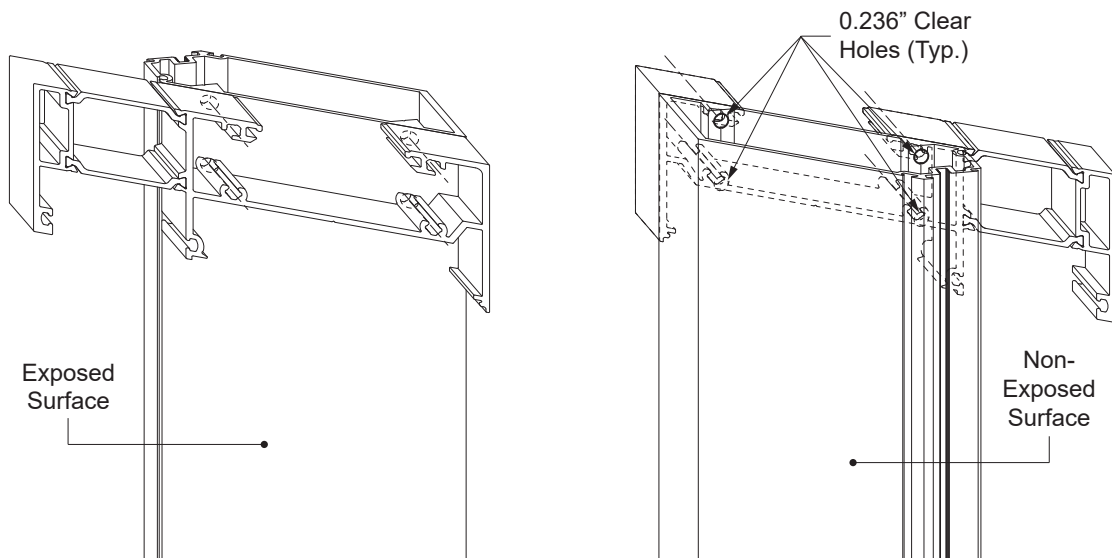
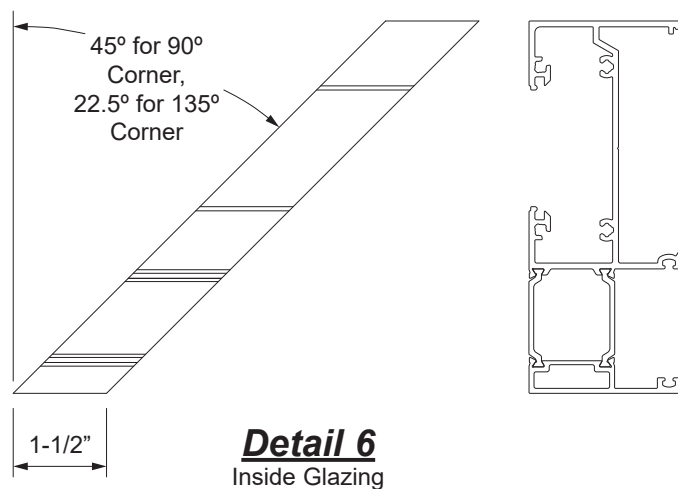
### STEP 2 (Continued) FABRICATE VERTICAL MEMBERS

To fabricate the clear holes for the 90° corner mullion half or 135° corner mullion half, the following procedure is recommended, if you don't have a suitable drill fixture.

- Cut a mitered piece of the head, horizontal, or sill and clamp it onto the mullion where the appropriate horizontal is intended to meet the corner mullion.
- Using a 0.236" drill bit, drill through the screw splines of the mitered piece into the corner mullion. The hole should align with the v-groove in the corner mullion.

See **Detail 6**.

**Note:** For 90° corner mullion, an H-7268 drill fixture can also be used.



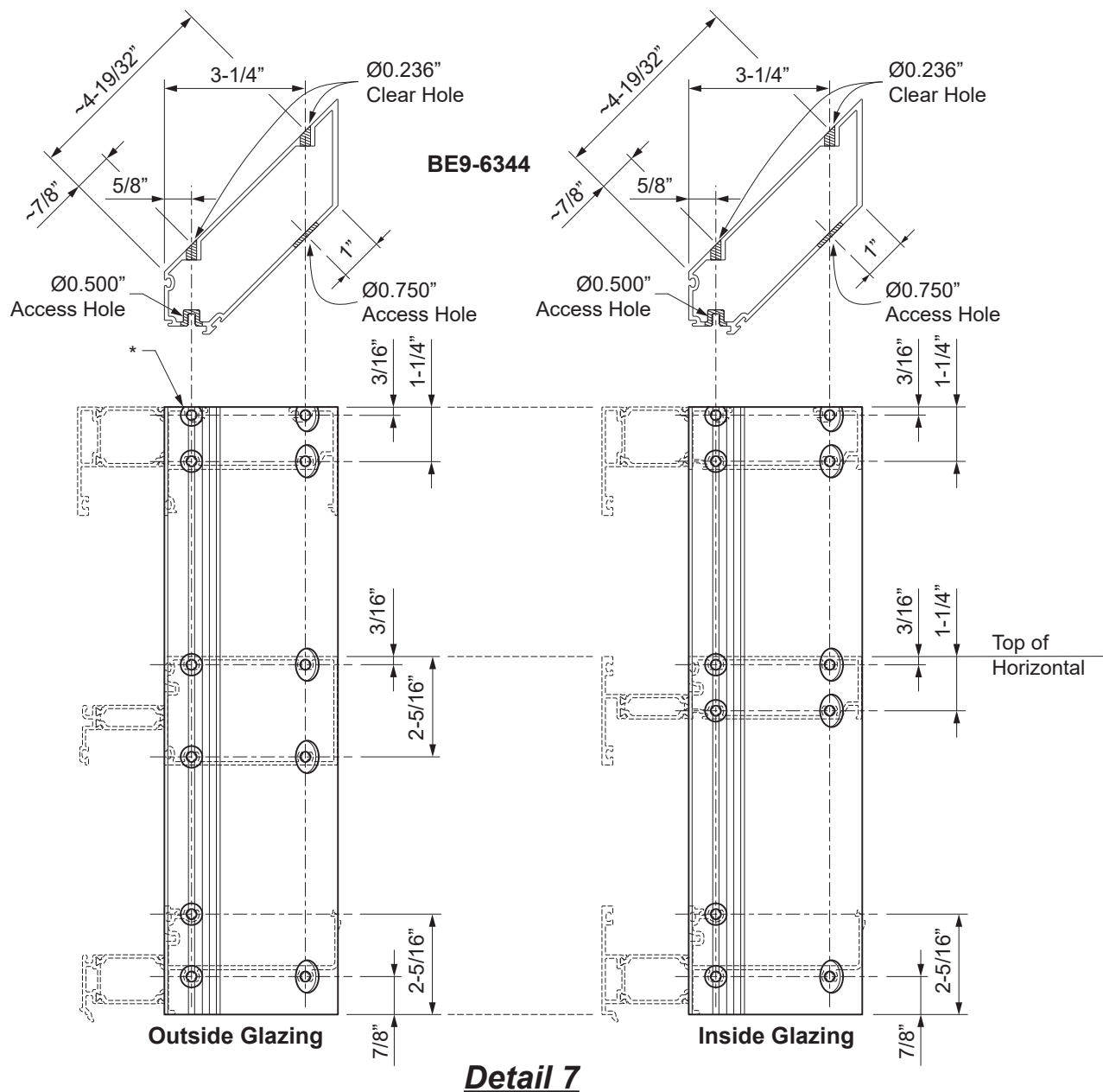
## FRAME FABRICATION

STEP 2 (Continued)  
FABRICATE VERTICAL MEMBERS

-Corner mullion halves also require access holes: 0.500" diameter for the front screw splines, and 0.750" for the rear screw splines as shown in **Detail 7**.

**Notes:** Additional fabrication will be required for the inclusion of steel reinforcing.

\* Access holes at the top of the mullion will have sharp edges.

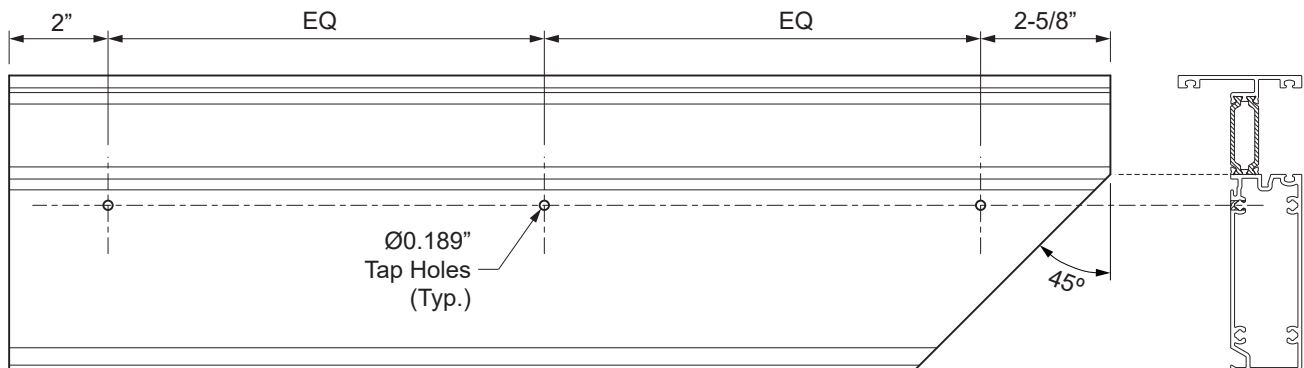
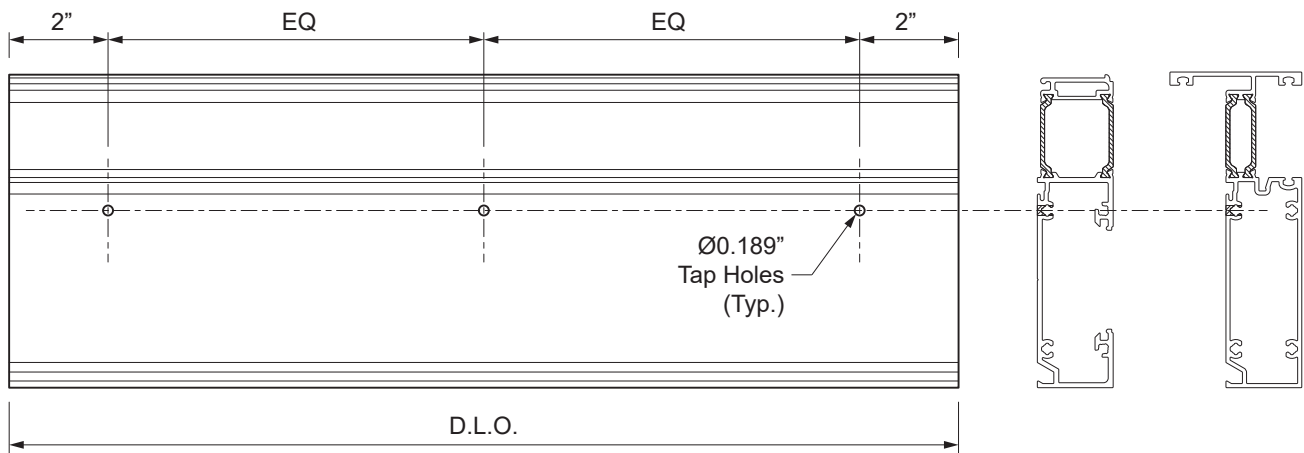


## FRAME FABRICATION

### STEP 3

### FABRICATE HORIZONTALS

- Cut all head members, immediate horizontals, and sill members to the horizontal daylight opening.
- Head and intermediate horizontal members will require 0.189" diameter holes for the glass stops, at 2" from the ends and one at the midpoint, as shown in **Detail 8**.



**Detail 8**



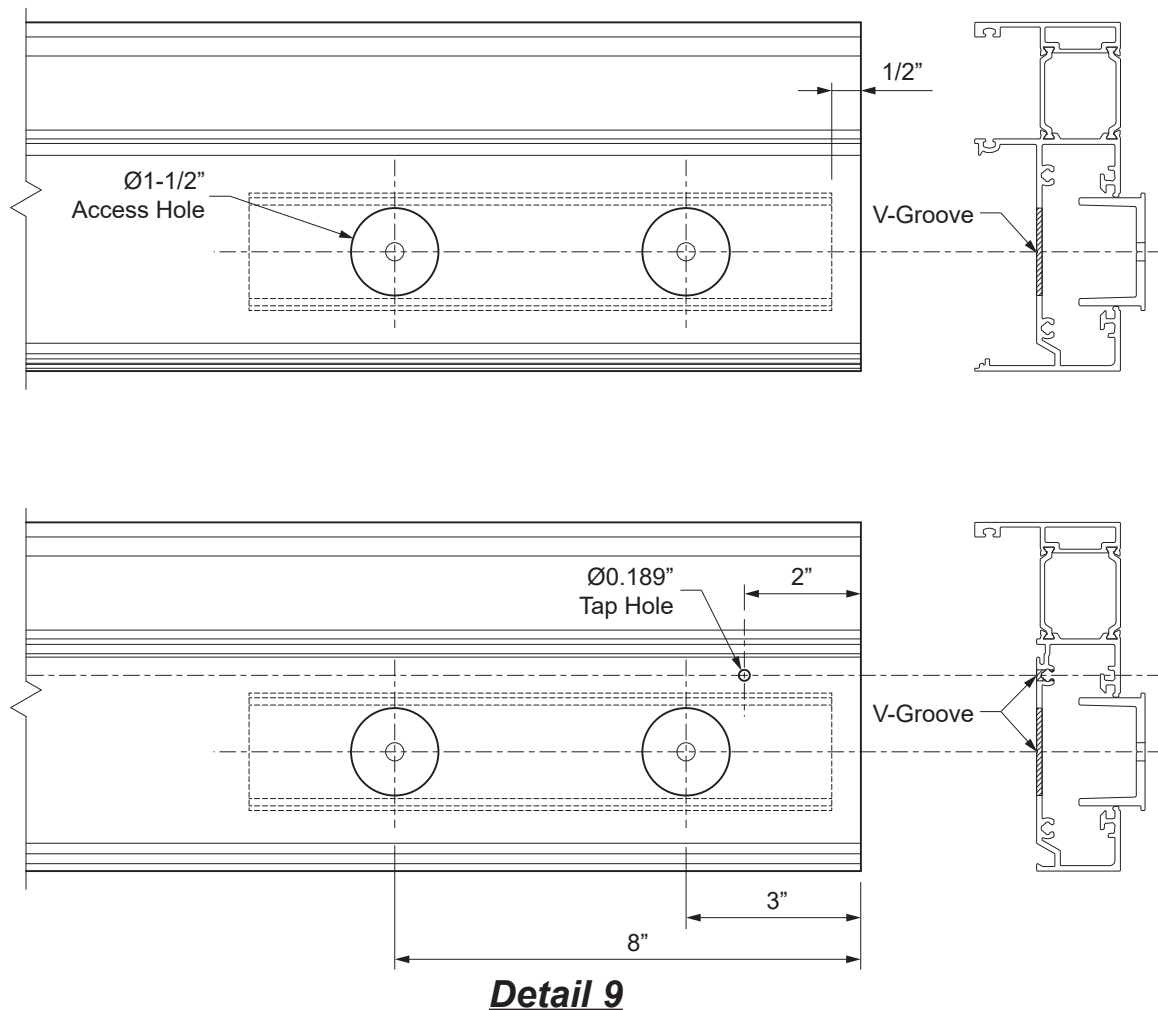
**FRAME FABRICATION****STEP 3 (Continued)**  
**FABRICATE HORIZONTALS**

When the head is anchored to the substrate with the E1-2830 anchor, access holes will need to be drilled into the head member.

- Temporarily clamp the E1-2830 anchor onto the head where it will be in relation to the head member once anchored to the substrate.
- Drill 5/16" diameter holes into the head in line with the holes in the anchor. Unclamp the anchor. Then drill the access holes out to 1-1/2" diameter.

**Notes:** This is in addition to the 0.189" diameter tap holes for the glass stop. Refer to approved shop drawings for appropriate fastener and hole locations as determined by a qualified engineer.

See **Detail 9**.



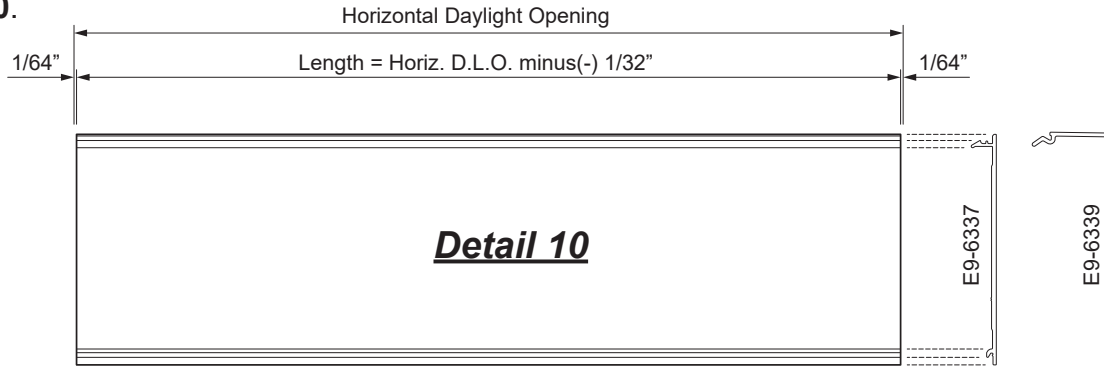
## FRAME FABRICATION

### STEP 4

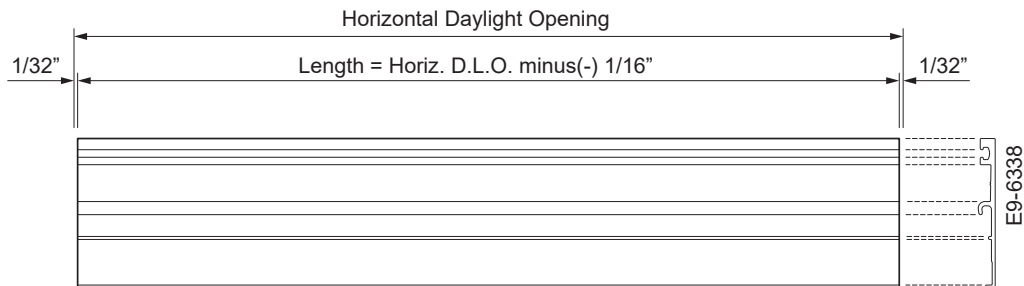
#### FABRICATE FILLERS & GLASS STOPS

-Cut all horizontal flush fillers, flat fillers, interior covers, and E9-6338 exterior glass stops to horizontal daylight opening minus(-) 1/32".

See **Detail 10**.



-Cut exterior glass stops to horizontal daylight opening minus(-) 1/16". See **Detail 10A**.



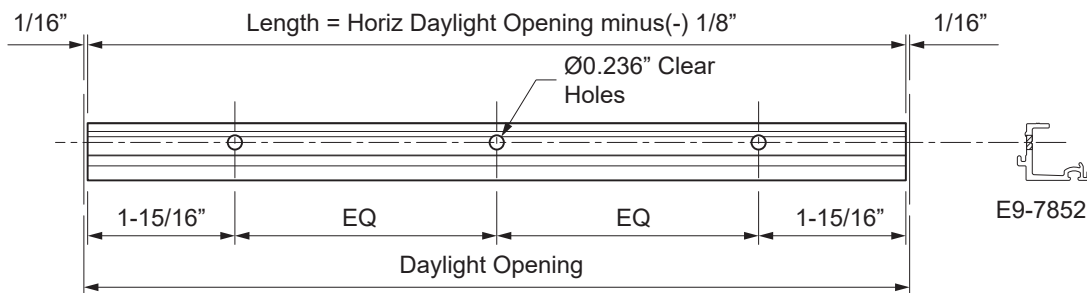
**Detail 10A**

-Cut glass stops to horizontal daylight opening minus(-) 1/8".

-For the E9-7852 interior glass stops, drill two 0.236" diameter clear holes along the v-groove in the glass stop as shown in **Detail 11**.

-Add a third hole at centerline for glass stops over 48" in length.

**Note:**  $\varnothing 0.236"$  clear hole is 2-9/16" from the end at 90° and 135° corner.



**Detail 11**

## FRAME FABRICATION

## STEP 5

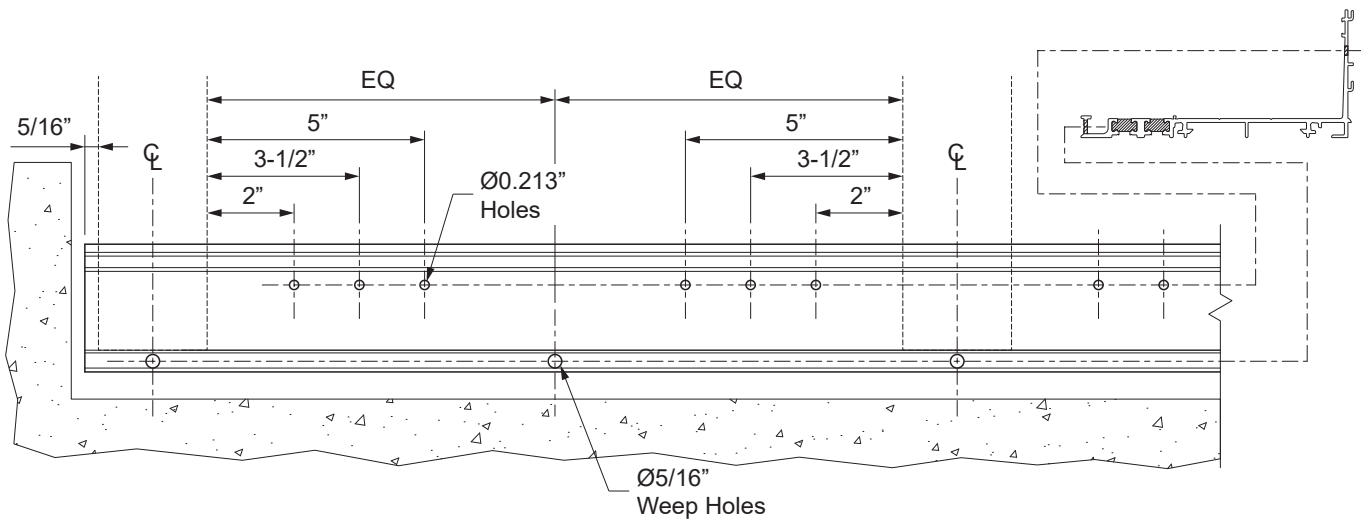
## FABRICATE SILL FLASHING &amp; FLASHING FACE COVER

- Cut the sill flashing to the frame width plus(+) 5/16" at each jamb.
- For door jambs, allow the sill flashing extend beyond the YWW framing by 1/8".
- Cut the E9-6342 flashing face cover to the same dimension as the interior of the flashing.

**Note:** For additional possibilities such as slab edge cover application, it is recommended to provide additional space between the edge of the sill flashing and the jamb substrate.

- For frame openings longer than 24'-0", allow for a 3/8" splice joint between sill flashing members every twelve to fifteen feet at the center of a daylight opening.
- Mark the front face of the sill flashing at the center of each vertical location and the midpoint of the daylight opening between the verticals.
- Drill a 5/16" diameter weep hole in the face of the sill flashing at each location marked.
- Drill a Ø0.213" clear hole in the back of the sill flashing at each location marked.

See **Detail 11**.



**Detail 12**

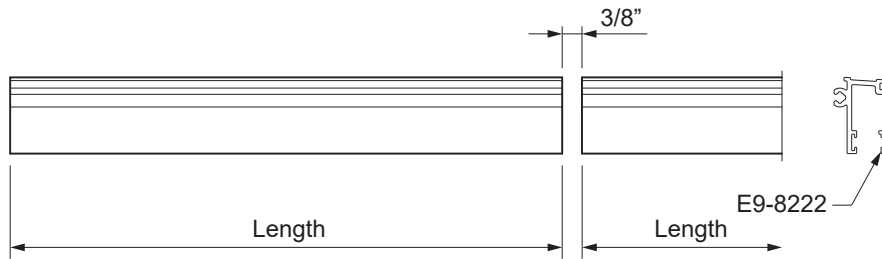
## FRAME FABRICATION

### STEP 5A

#### FABRICATE SLAB EDGE PLATE ADAPTOR

- Cut the aluminum plate adaptor E9-8222 to the same length as the sill flashing.
- Cut slab edge cover plates to length as indicated on the approved shop drawings.

See **Detail 13**.



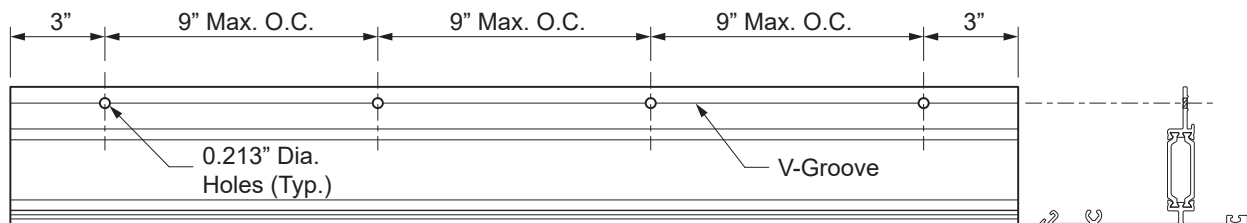
**Detail 13**

### STEP 6

#### FABRICATE CORNER ADAPTOR

- Cut the corner adaptor components to the mullion length. Drill 0.213" diameter holes into the cover at the v-groove where the adaptor will be fastened to the mullion at 3" from each end and at 9" maximum on center.

See **Detail 14**.



**Detail 14**

E9-2741 Shown,  
Others Similar

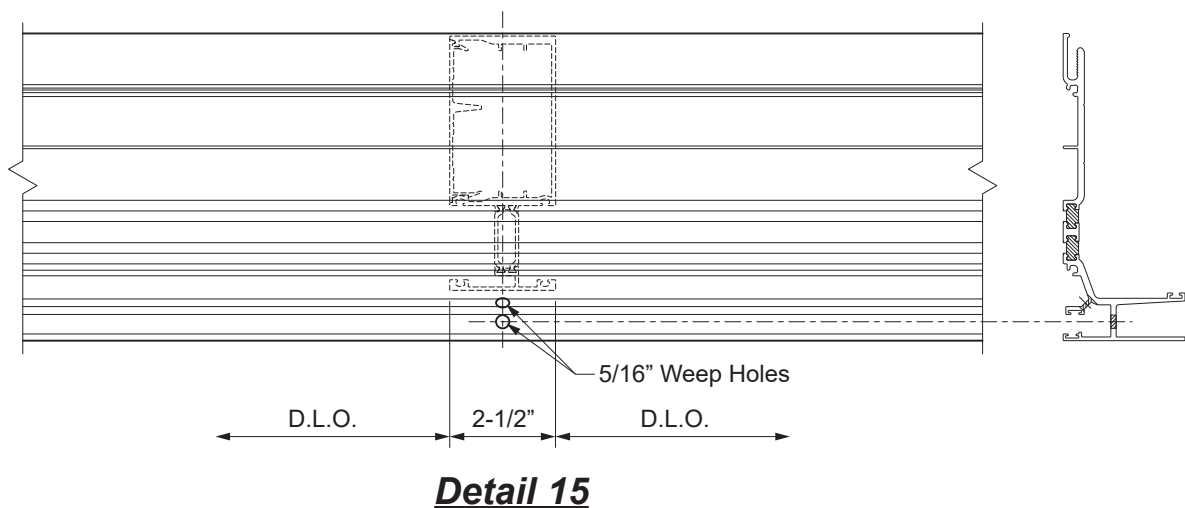
**FRAME FABRICATION****STEP 7****FABRICATE HEAD RECEPTOR**

- Cut the head receptor to the frame width plus(+) 5/16" at each jamb.
- Cut the E9-6343 receptor snap cover to the frame with plus(+) 5/16" at each jamb.

**Note:** For additional possibilities such as slab edge cover application, it is recommended to provide additional space between the edge of the head receptor and the jamb substrate.

- For frame openings longer than 24'-0", allow for a 3/8" splice joint between sill flashing members every twelve to fifteen feet at the center of a D.L.O.
- Mark the front face of the head receptor at the center of each vertical location and the midpoint of the daylight opening between the verticals.
- Drill a 5/16" diameter weep holes in the head receptor at each location marked.
- Drill clear holes for anchor fasteners into the head receptor as indicated on the approved shop drawings and or P.E. calculations.

See **Detail 15**.

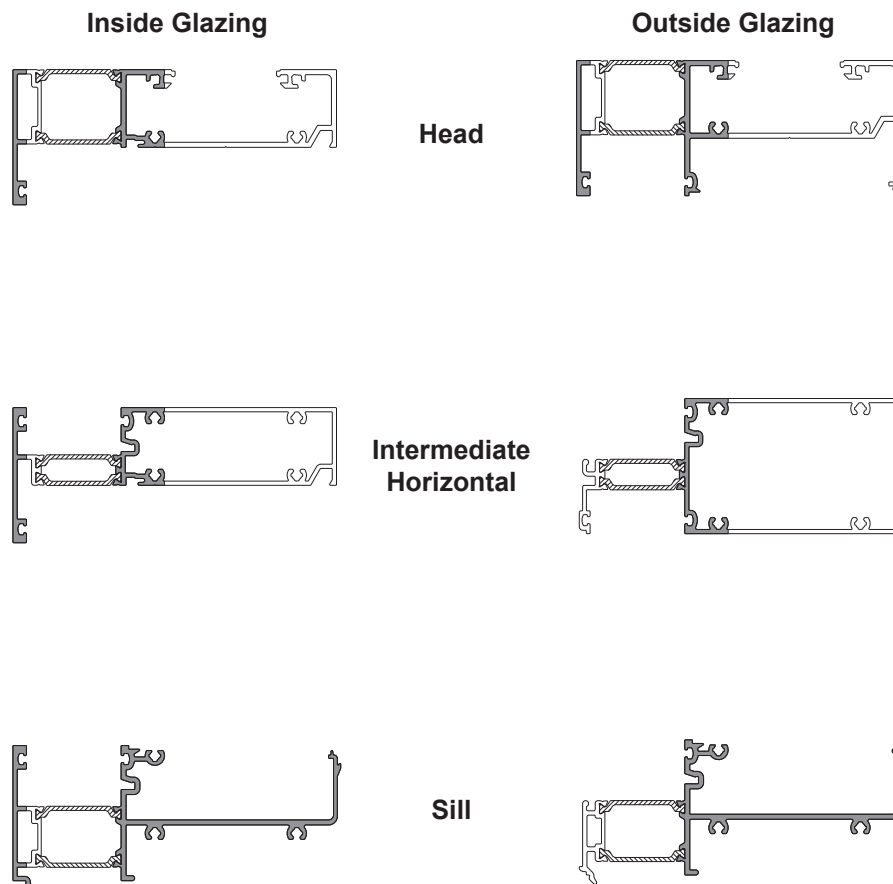


## FRAME ASSEMBLY

### STEP 8 ASSEMBLE FRAME

- Clean all joint surfaces using cleaner approved by the sealant manufacturer.
- Apply sealant to the end of the head, horizontals, and sill that is to be attached to the second mullion or jamb as previously shown in **Detail 17**.

See **Detail 17**.



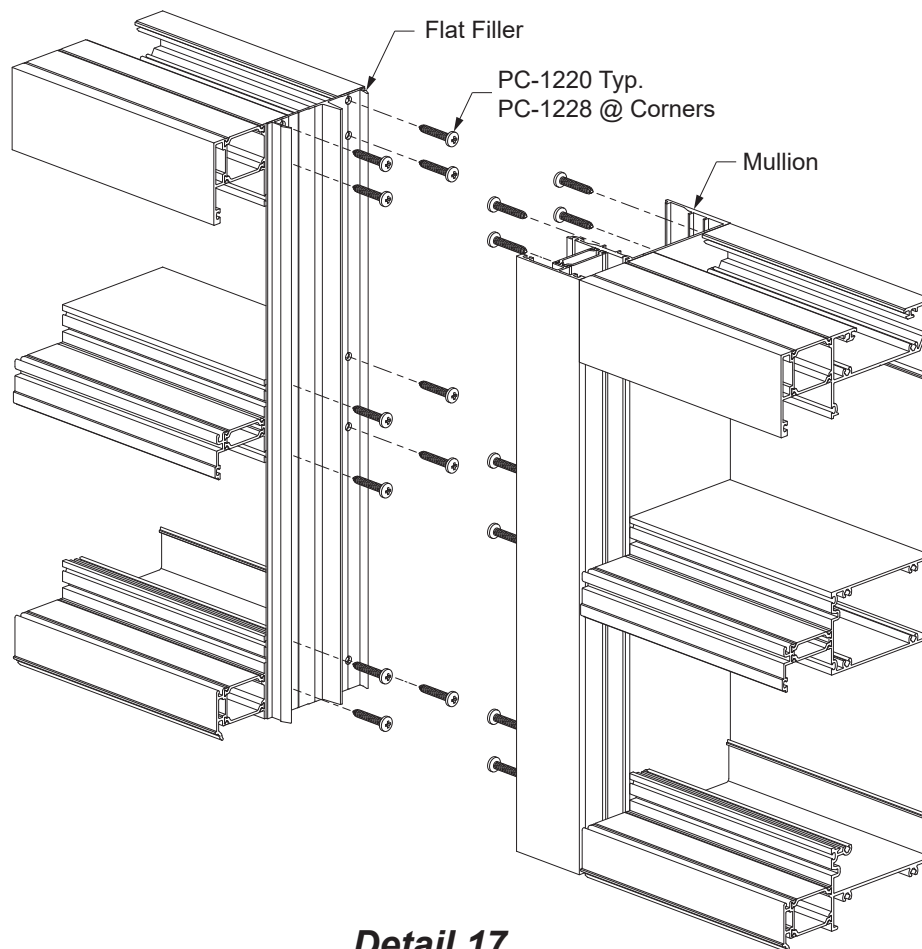
**Detail 16**

## FRAME ASSEMBLY

### STEP 8 (Continued) ASSEMBLE FRAME

- Attach the horizontal members to the mullion or flat filler using PC-1220 screws.
- For corner mullions, use PC-1228 screws.

See **Detail 17**.



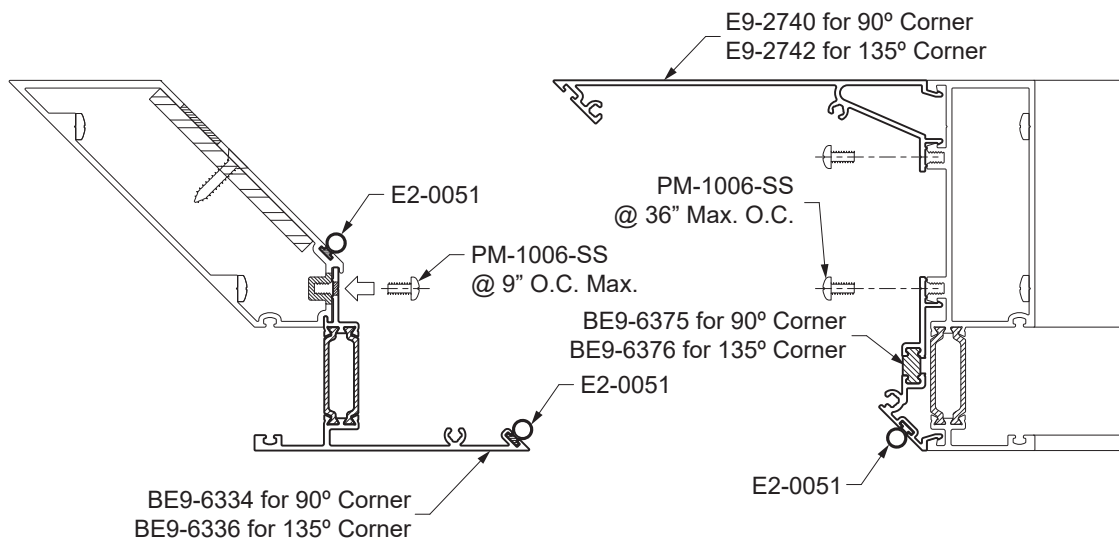
## FRAME ASSEMBLY

## STEP 8 (Continued)

## ASSEMBLE FRAME -- CORNER MULLION

- Apply sealant to the interior snap interface of the interior corner cover, 6" up from the bottom of the mullion. Snap the cover pieces onto the corner mullion half. Fasten with PM-1006-SS fasteners at the holes previously drilled in fabrication.
- The exterior corner covers will require E2-0051 bulb gaskets cut to the length of the mullion. Apply dabs of sealant to the bottom of the bulb gasket to adhere it to the cover so that it will not slide out during unit installation. Do not overseal. Insert the gasket into the reglet at the cover.

See **Detail 18**.



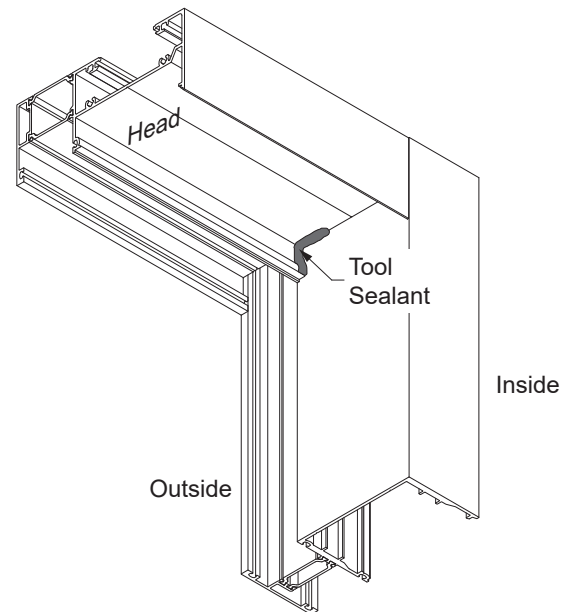
**Detail 18**



## FRAME FABRICATION

### STEP 8 (Continued) ASSEMBLE FRAME

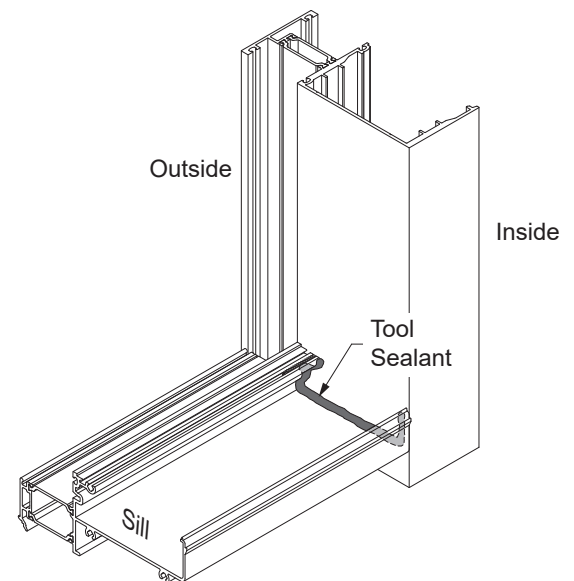
-Apply sealant and tool additional sealant to the head and sill as shown in **Details 19 & 20**.



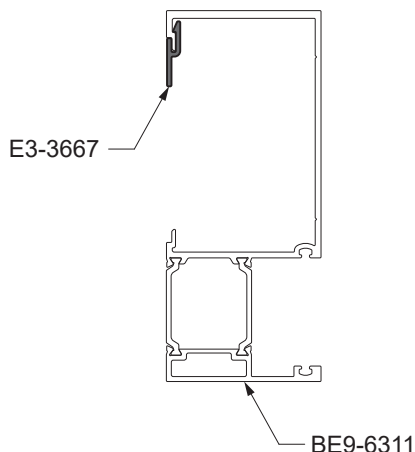
**Detail 19**

### STEP 9 INSTALL PERIMETER FILLERS

-At the BE9-6311 open back jamb, cut the E3-3667 PVC back jamb filler to length of vertical and install it into the jamb as shown in **Detail 21**.



**Detail 20**



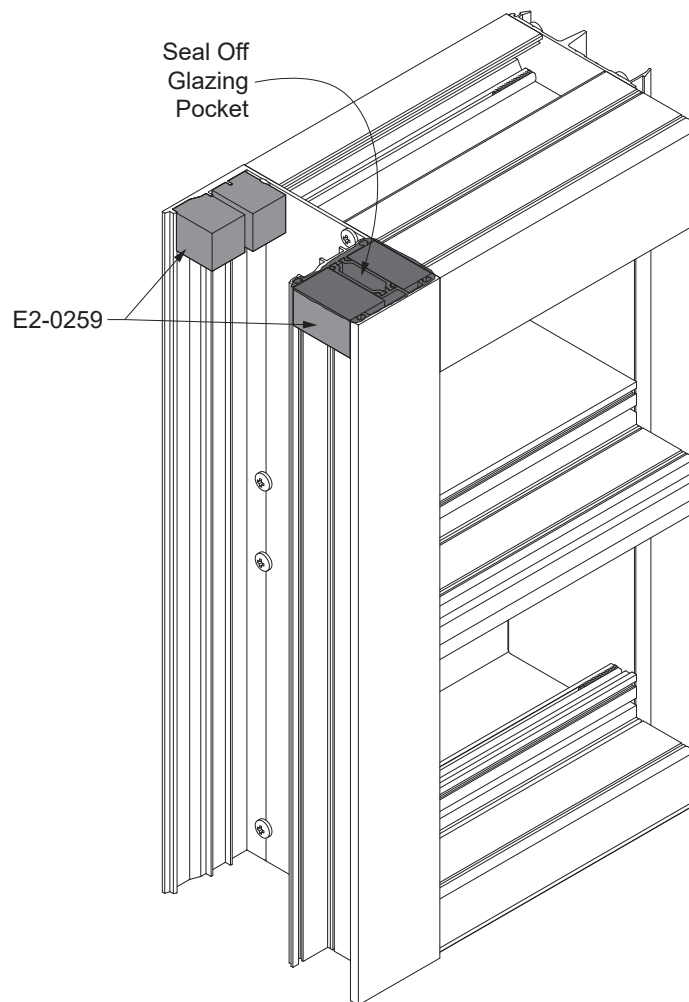
**Detail 21**

## FRAME ASSEMBLY

### STEP 10 (Optional, Not Necessary with Head Receptor) INSTALL FOAM PLUGS AT HEAD

- Cut E2-0259 foam backer tape (maximum 1-1/4" long) to be adhered at the head only. These will act as end caps for perimeter backer rods and sealant.
- Peel the adhesive tape from the foam and adhere it the mullion as shown in **Detail 22**. The foam can be easily compressed around physical obstacles in the assembled verticals.
- In the case where steel reinforcing is present at the head, the foam plugs may be adhered to the steel.
- Fill the cavities at the front of the mullion with sealant.

**Notes:** For best adhesion, make sure the contact surfaces of the verticals and or steel members are clean and dry.  
Also, take care to ensure the interior foam plug does not interfere with mullion engagement.



**Detail 22**

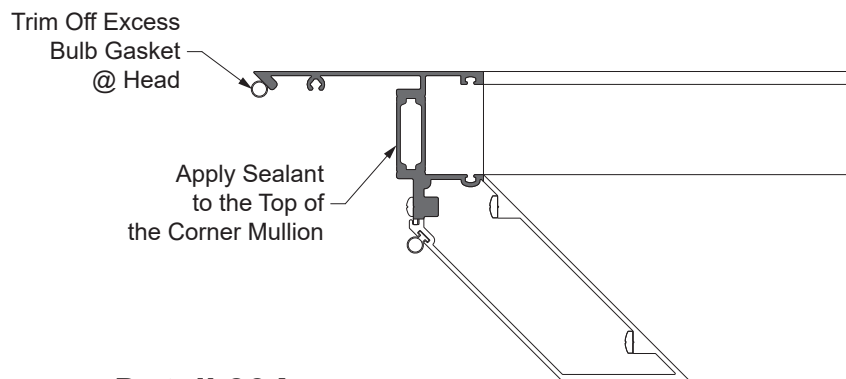
## FRAME ASSEMBLY

### STEP 11

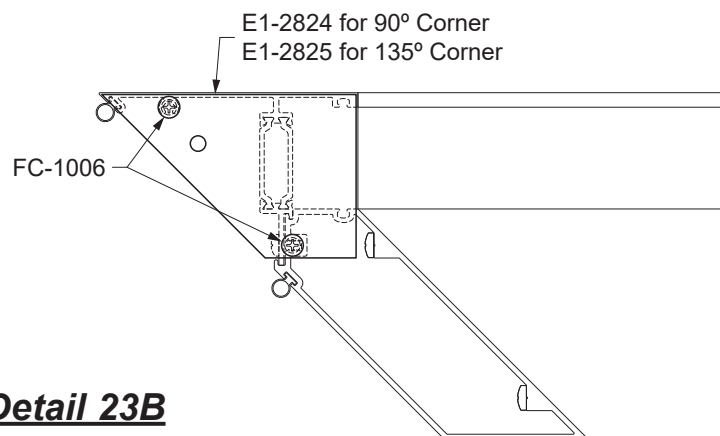
#### INSTALL OUTSIDE CORNER END CAPS

- Prior to attaching outside corner end caps at the head, trim off the excess bulb gasket.
- Apply sealant to the top of the mullion as shown in **Detail 23A**.

Attach the corner end cap using (2) FC-1006 screws. See **Detail 23B**.



**Detail 23A**



**Detail 23B**

**Note:** Inside corner members utilize E2-0259 foam backer tape as previously shown on **Page 22**.

## FRAME INSTALLATION

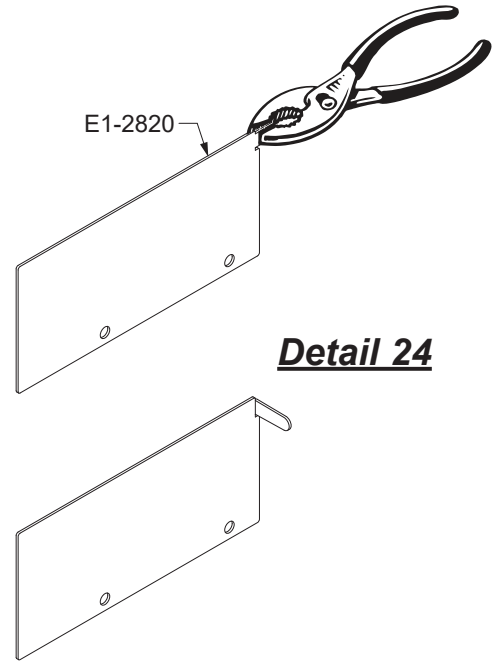
### STEP 12

#### INSTALL SILL FLASHING END DAMS

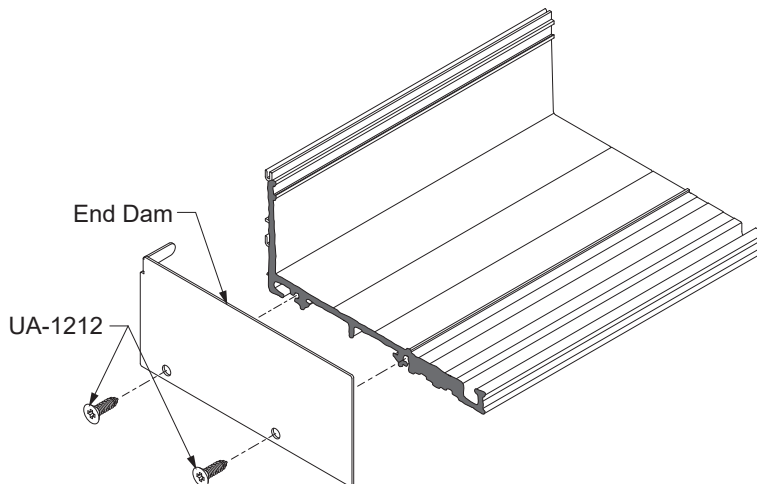
-Bend the end dam tab left or right 90 degrees in order to “hand” the end dam for the left or right end of the flashing.

See **Detail 24**.

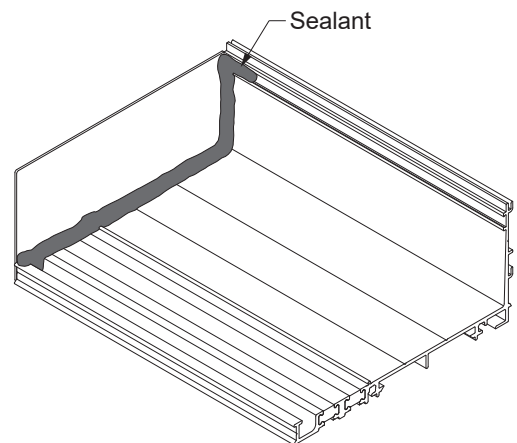
- Clean all joint surfaces using cleaner approved by sealant manufacturer.
- Apply sealant to the end of the sill flashing as shown in **Detail 25**.
- Slide the tab into the top portion of the sill flashing.
- Tap the tab into place with a small tool until the end dam is snug against the end of the flashing.
- Fasten the end dam to the sill flashing with two UA-1212 screws, starting at the back, followed by the front as shown in **Detail 25**.
- Tool sealant along the joint between the end dam and the sill flashing as shown in **Detail 26**.



**Detail 24**



**Detail 25**



**Detail 26**

## FRAME INSTALLATION

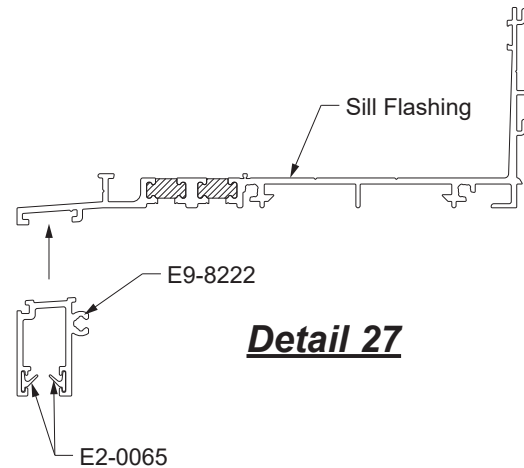
### STEP 12A INSTALL SILL FLASHING END DAMS FOR SLAB EDGE COVER

- Sill flashings with slab edge covers will require an aluminum plate adaptor E9-8222 to be attached prior to field installation.
- Insert (2) E2-0065 weathering gaskets cut to the length of the reglets on the adaptor.
- Slide the slab edge adaptor onto the sill flashing.

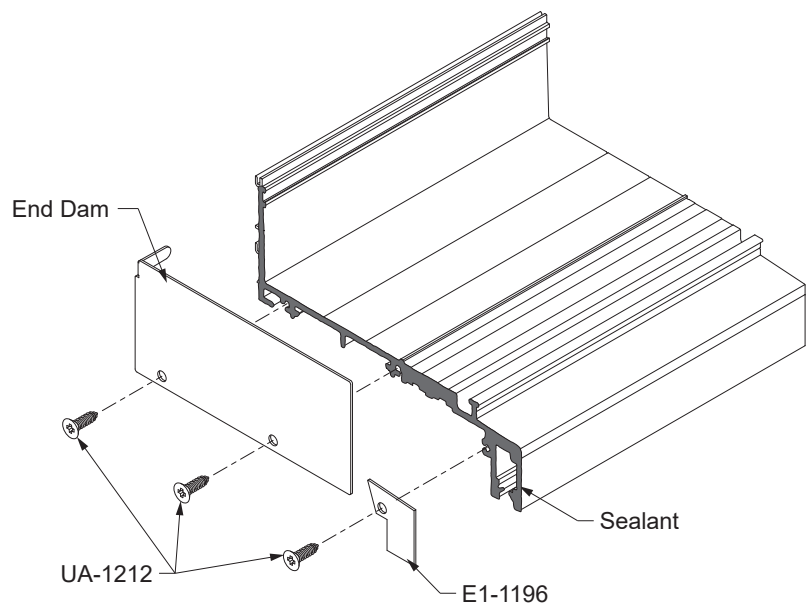
See **Detail 27**.

- Installation of the E1-1196 end dam is the same as illustrated in the previous page, except that the end of the installed slab edge adaptor will also require sealant.
- Fasten an E1-1196 end cap onto the slab edge assembly using an additional UA-1212 screw.

See **Detail 28**.



**Detail 27**



**Detail 28**

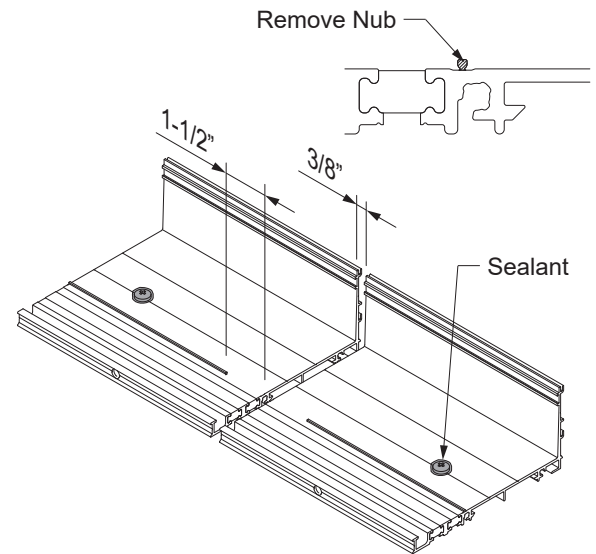
## FRAME INSTALLATION

### STEP 13 INSTALL BE9-6328 SILL FLASHING

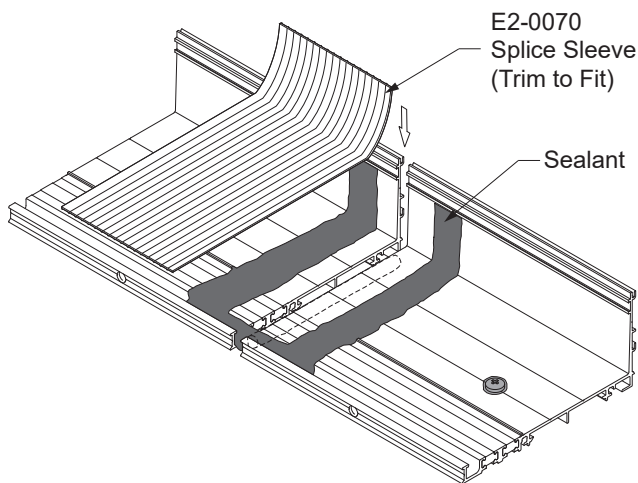
- Install the sill flashing with a minimum of 3/8" shim space underneath. Sill flashing must be installed level.
- Anchor the sill flashing to the structure a maximum of 4" from each end and then 18" to 24" on center or per P.E. calculations.
- Apply and tool sealant to cover the heads of all anchors and screws.

### STEP 14 INSTALL SILL FLASHING SPLICE SLEEVE

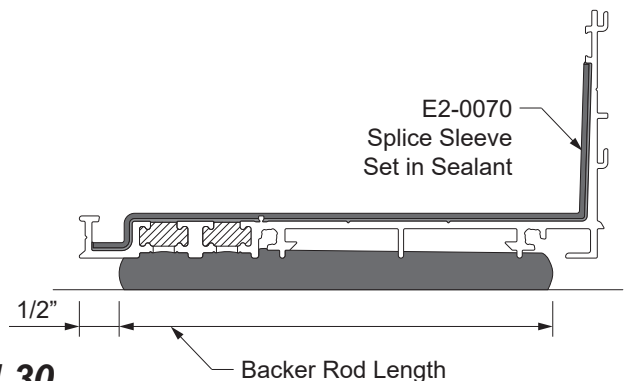
- Remove the nub with a chisel or pliers on both sides of the splice joint 1-1/2" as shown in **Detail 29**.
- After the sill flashing has been shimmed and anchored to the building structure, insert a small backer rod under the sill flashing as shown in **Detail 30**.
- Position the Silicone Splice Sleeve against the back wall below the groove.
- Bend the Silicone Splice Sleeve into the front on the channel as shown. Mark and cut the sleeve at this position.
- Clean Sill Flashing and Silicone Splice Sleeve with isopropyl alcohol at the splice location.
- Seal the flashing at the splice location as shown in **Detail 30**, before positioning the flashing. Set the Silicone Splice Sleeve into the sealant.
- Tool sealant tight as shown in **Detail 30**, squeezing the sheet flat with a seam roller.



**Detail 29**



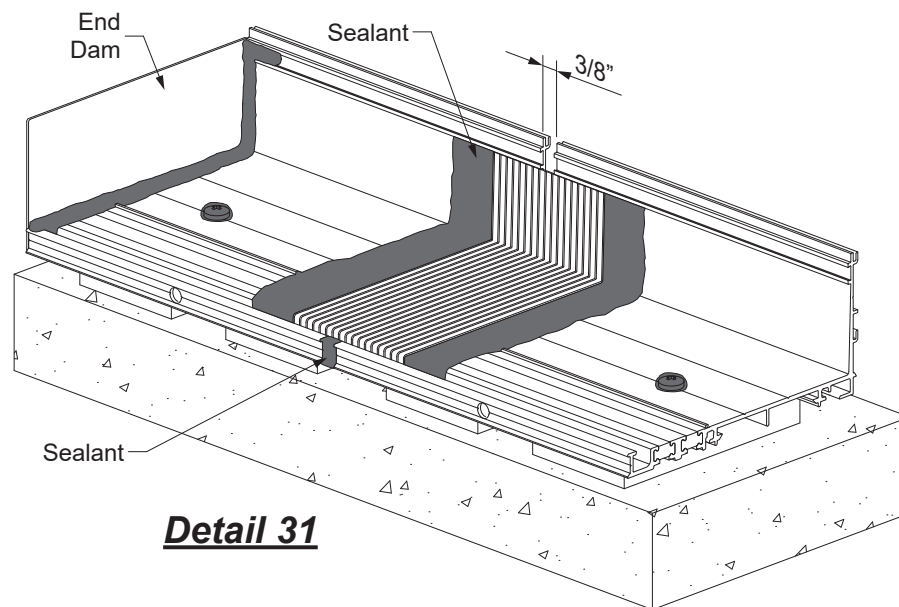
**Detail 30**



## FRAME INSTALLATION

### STEP 14 (Continued) INSTALL SILL FLASHING SPLICE SLEEVE

-Thoroughly seal the small joint directly in front of the Silicone Splice Sleeve as shown in **Detail 31**.



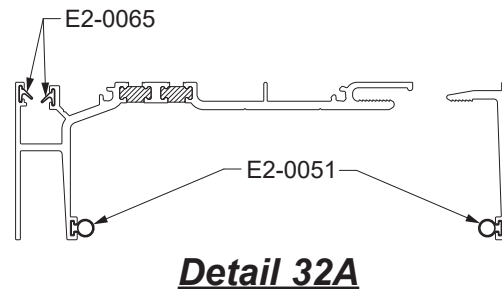
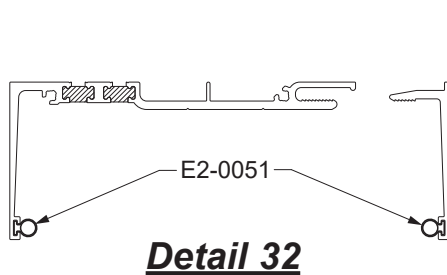
## FRAME INSTALLATION

### STEP 15 SLAB EDGE COVER INSTALLATION

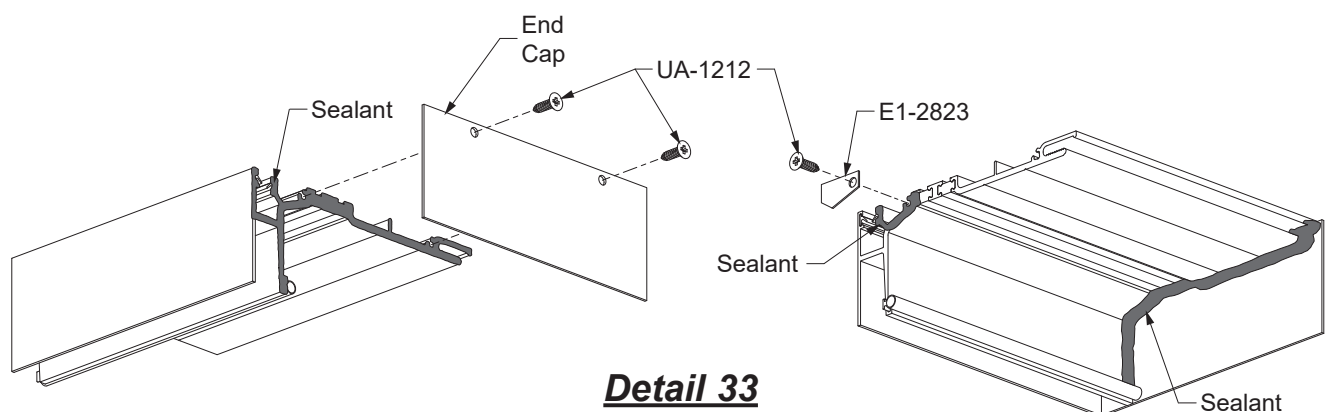
Slab edge covers are installed from the head of the lowest elevation on upward. The BE9-6331 head receptors are installed first, then slab edge plates, then the BE9-6330 sill flashings with the E9-8222 slab edge adaptors.

### STEP 15A INSTALL HEAD RECEPTOR END DAMS & WEATHERING GASKETS

- Cut the E2-0051 airtight gasket to head receptor length plus 3/16" at each end for the splice joint, and insert it into its reglet for both the receptor and snap cover as shown in **Details 32 & 32A**.
- Cut the E2-0065 slab edge weathering gaskets to head receptor length. Insert the gaskets into the slab edge reglets in the orientation as shown in **Details 32A**.



- Clean all joint surfaces using cleaner approved by sealant manufacturer.
- Apply sealant to the end of the head receptor as shown in **Detail 33**.
- Fasten the end dam to the head receptor with two UA-1212 screws, starting at the back, followed by the front.
- Tool sealant along the joint between the end dam and the head receptor as shown in **Detail 33**.
- Tape down the top corners to hold the end cap in place until the sealant cures.



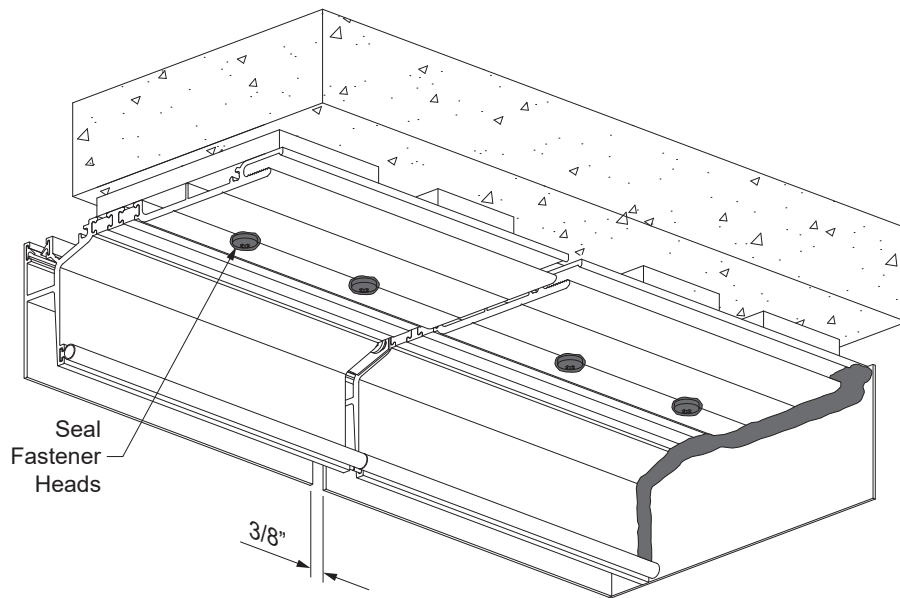


## FRAME INSTALLATION

### STEP 15B INSTALL HEAD RECEPTOR

- Starting at the smallest opening height, install the head receptor with the appropriate shim to ensure the dimensions from the approved shop drawings. Head receptor must be installed level.
- Anchor the head receptor to the structure according to approved shop drawings and or P.E. calculations.
- Apply and tool sealant to the heads of all fasteners.

See **Detail 34**.

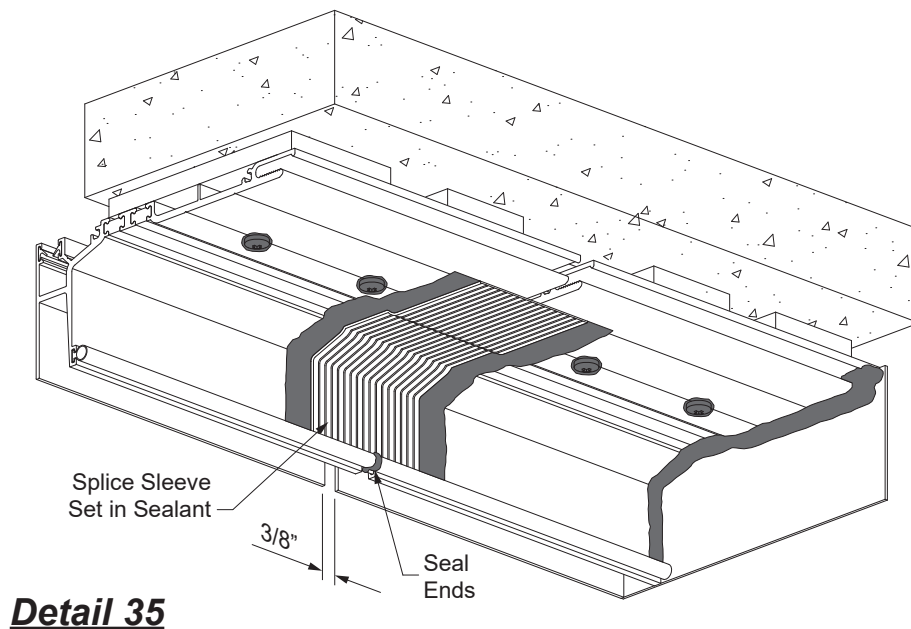


**Detail 34**

## FRAME INSTALLATION

**STEP 15B (Continued)**  
**INSTALL HEAD RECEPTOR**

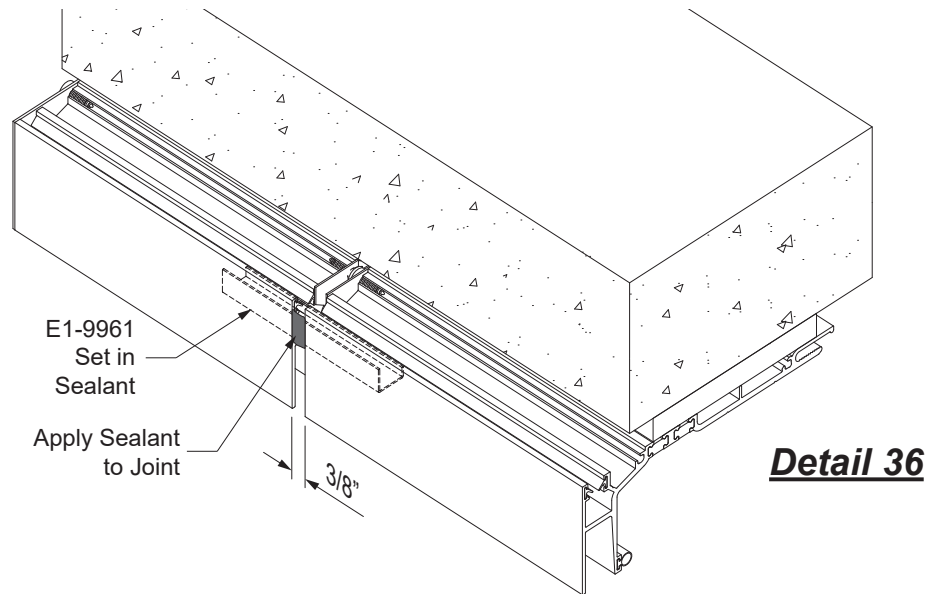
- Prior to installing the Silicone Splice Sleeve, clean head receptor and Splice Sleeve with isopropyl alcohol at the splice location.
- Position the Splice Sleeve, E2-0070, against the front wall inside the head receptor, set in sealant centered on the splice joint as shown in **Detail 35**. Trim as necessary to fit.
- Tool the sealant. Use a seam roller to press the sheet tight against the receptor.
- Seal the ends of the E2-0051 gasket together at the splice.



**FRAME INSTALLATION****STEP 15B (Continued)****INSTALL HEAD RECEPTOR SPLICE SLEEVE**

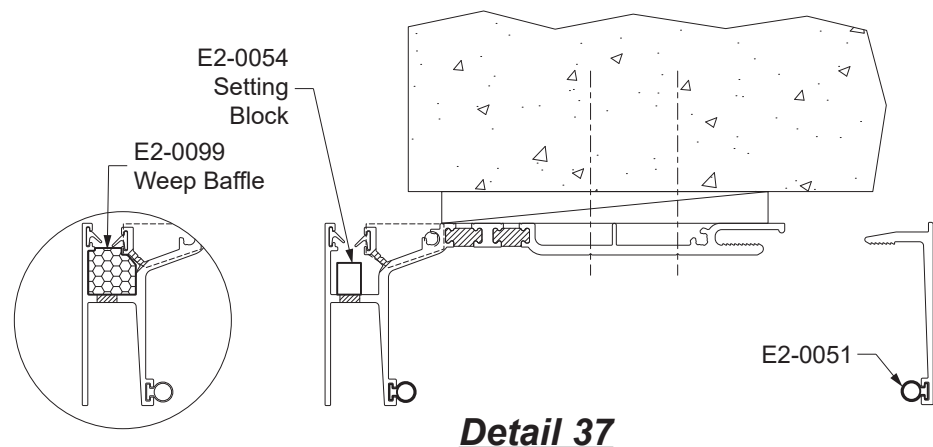
-At the slab edge receptacle of the head receptor, position an E1-9961 splice sleeve centered on the splice joint. Set the splice sleeve in sealant, similar to the procedure previously outlined for the underside of the head receptor.

See **Detail 36**.



- Install E2-0054 setting blocks at 1/4 points of the aluminum plate.
- Install a weep baffle, E2-0099, over every weep hole location.
- Do not install the snap cover yet.

See **Detail 37**.



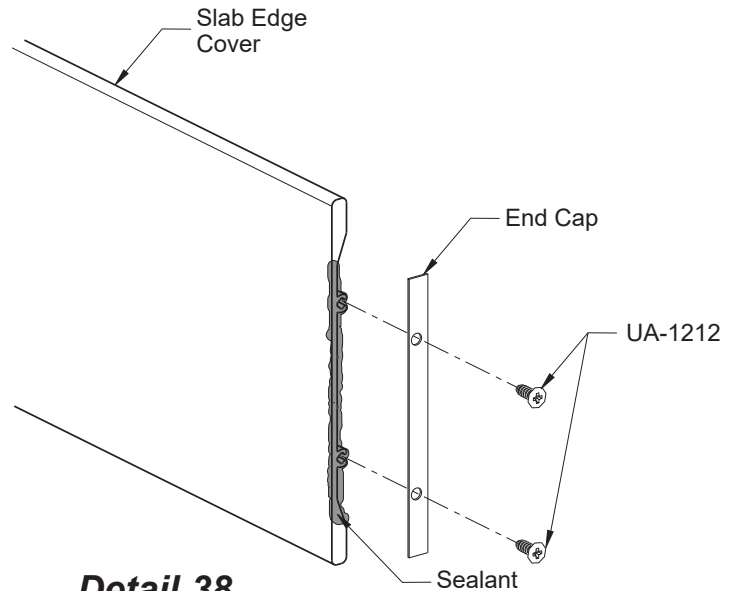
## FRAME INSTALLATION

### STEP 15C

#### ASSEMBLE SLAB EDGE COVER PLATES

- Clean the ends of the slab edge cover and attachment areas of end caps using a cleaner approved by sealant manufacturer.
- Apply and tool sealant to each end of the slab edge cover prior to attaching the end caps.
- Attach end caps to each end of the slab edge cover using (2) UA-1212 fasteners.
- Tool and wipe away any excess sealant at the joints.

See **Detail 38**.



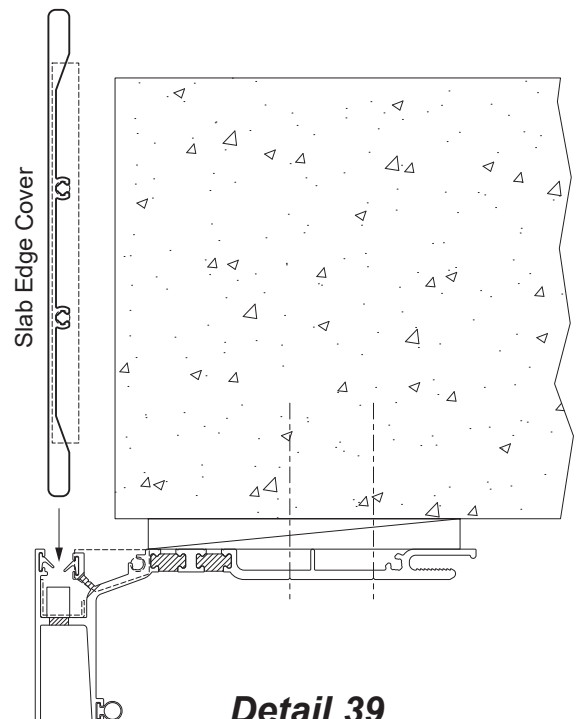
**Detail 38**

### STEP 15D

#### INSTALL SLAB EDGE COVER FASCIA

- Slide the slab edge cover plate into the head receptor receptacle, seating it on top of the setting blocks.
- Be sure to leave a 3/8" joint between the plates for runs longer than 24'-0".

See **Detail 39**.



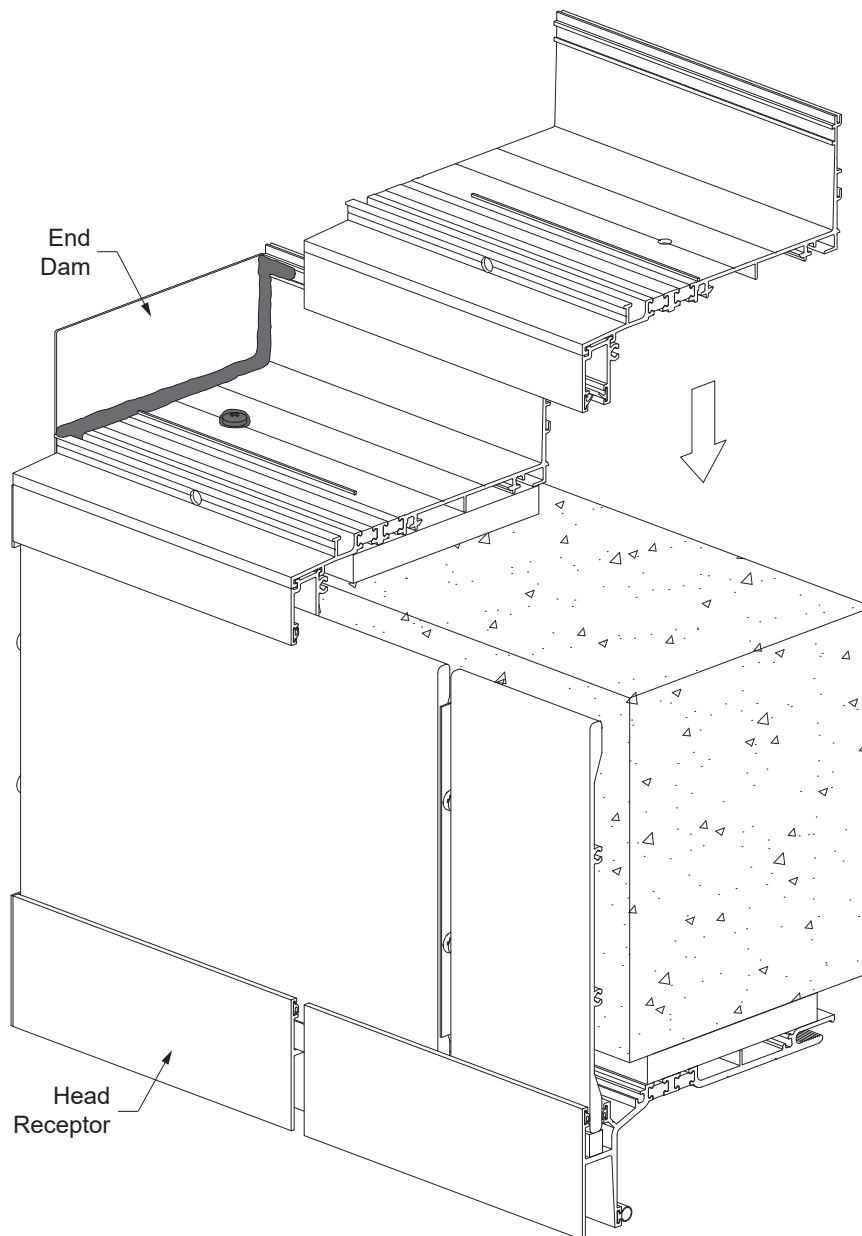
**Detail 39**

## FRAME INSTALLATION

### STEP 15E (Continued)

#### INSTALL SILL FLASHING SPLICE SLEEVE AT SLAB EDGE

- Install the sill flashing assembly onto the substrate, engaging the slab edge cover plates below and sealing all anchor fastener heads.
- Install the next slab edge sill flashing assembly onto the splice sleeve as shown in **Detail 40**. Be sure to leave a 3/8" joint between the sill flashing assemblies.



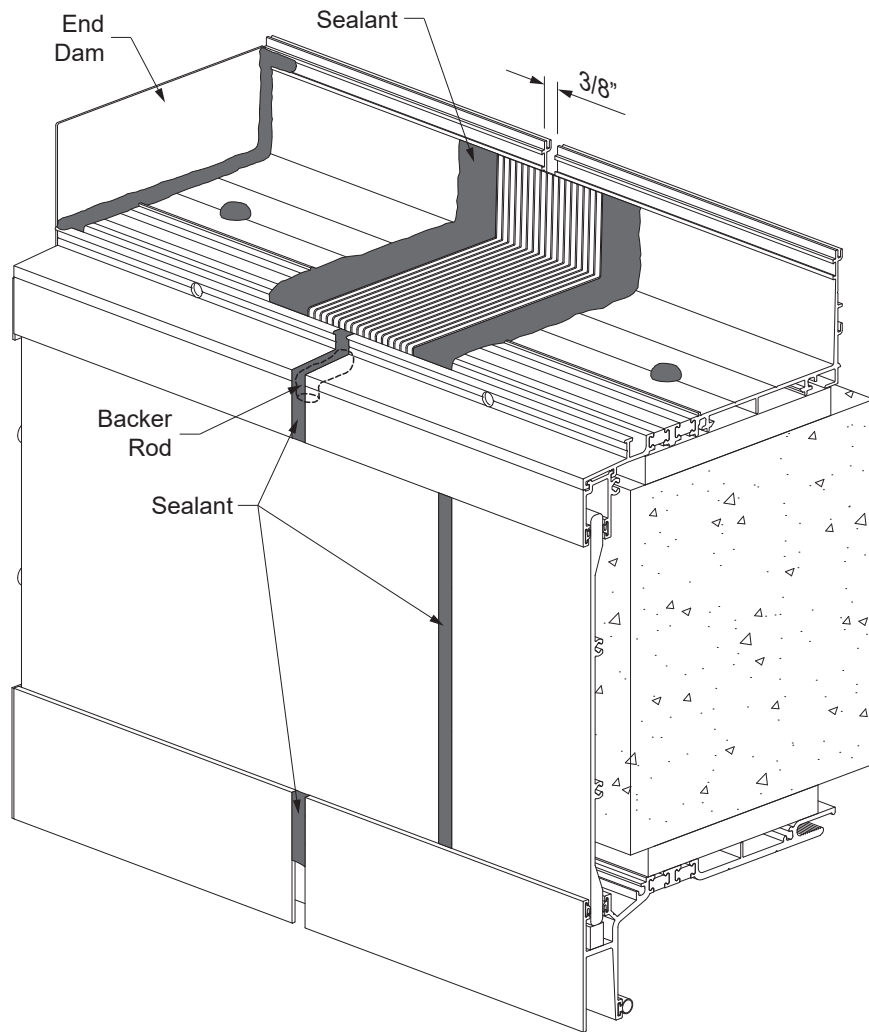
**Detail 40**

## FRAME INSTALLATION

## STEP 15E (Continued)

## INSTALL SILL FLASHING SPLICE SLEEVE AT SLAB EDGE

-Installation of the E2-0070 splice sleeve is the same as previously outlined in **Step 14**, except to apply sealant to the joint at the slab edge cover plate, adaptor, and head receptor as shown in **Detail 41**.

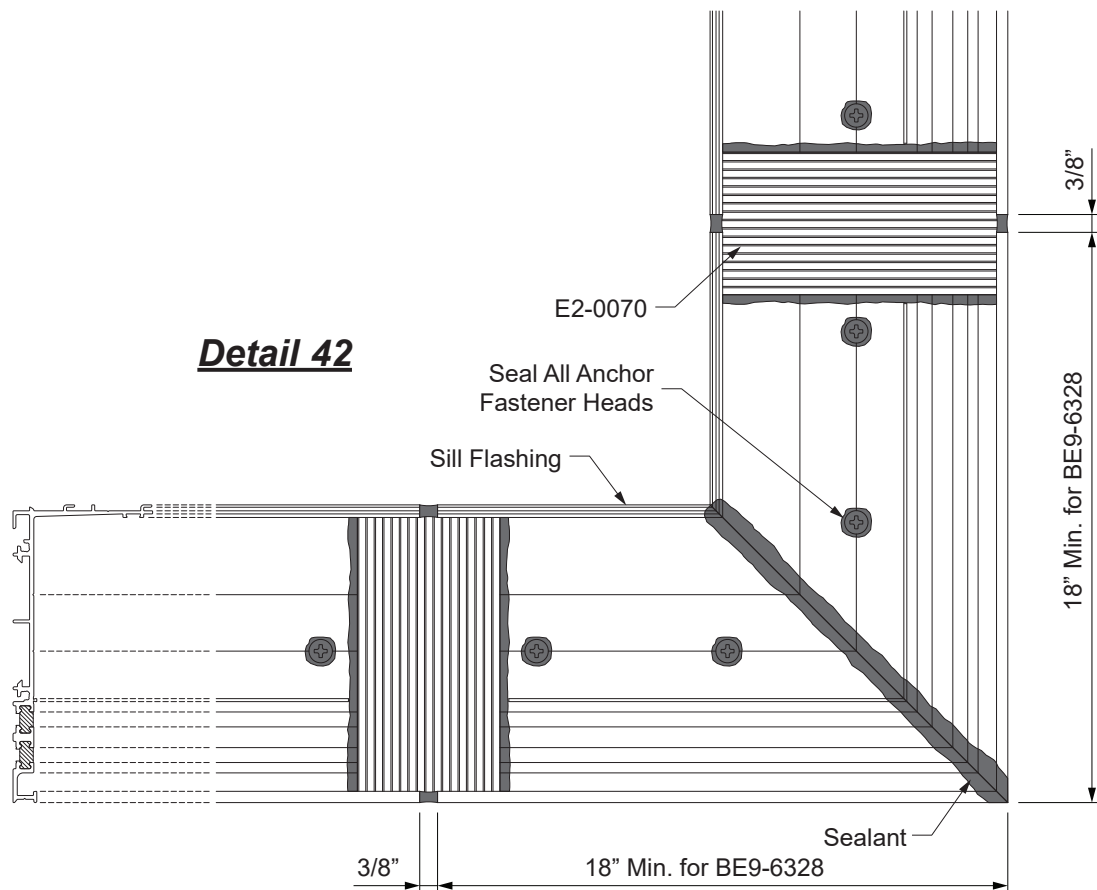
**Detail 41**

**FRAME INSTALLATION****STEP 16****INSTALL SILL FLASHING AT CORNERS**

- Cut two 18" minimum long pieces of BE9-6328 sill flashing and miter (45° for 90° corners).
- Align the two pieces at the corner condition with the mitered ends pushed together tight and anchor the sill flashing as indicated on the approved shop drawings and or P.E. calculations.
- Apply and tool sealant to the mitered joint and anchor heads.

See **Detail 42**.

- Continue installing the rest of the sill flashing providing a 3/8" expansion joint at splices as shown in **Step 13 & 14** on **Page 26 & 27**.



## FRAME INSTALLATION

### STEP 16A

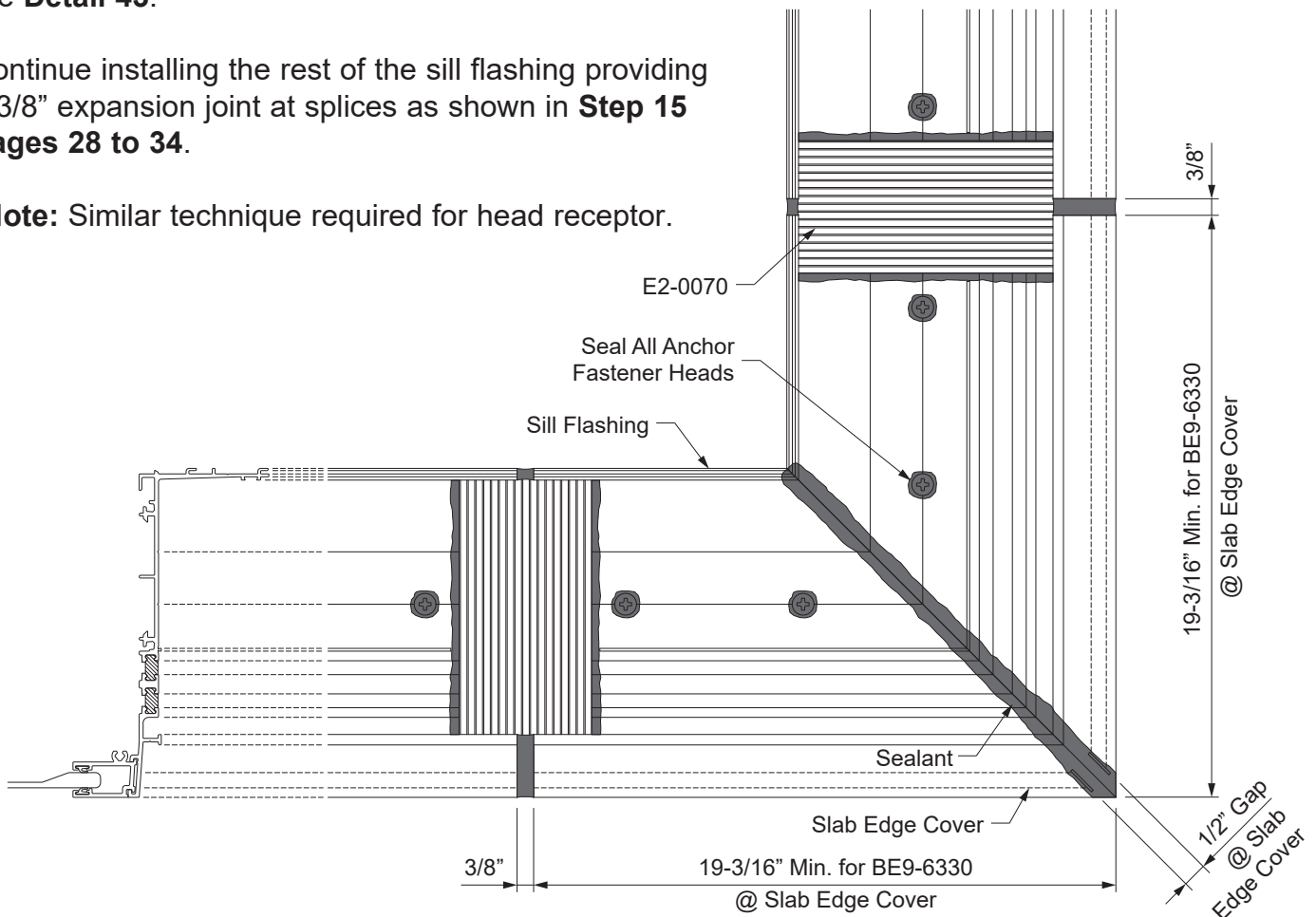
#### INSTALL SILL FLASHING FOR SLAB EDGE COVER AT CORNERS \*

- Cut two minimum 19-3/16" long pieces of BE9-6330 sill flashing and E9-8222 slab edge cover adaptor, and miter (45° for 90° corners). The head receptor that is to be installed below will also receive the same miter cut fabrication.
- Install the head receptor using similar procedure as previously described for the sill flashing.
- Miter cut the slab edge cover plates 45° for 90° corners, such that upon installation, they leave a 1/2" gap at the corner.
- Fasten end caps onto the edge of the slab edge cover plates.
- Install the slab edge plates onto the setting blocks of the head receptor below.
- Align the two pieces of the sill flashing at the corner condition with the mitered ends pushed together tight and anchor the sill flashing as indicated on the approved shop drawings and or P.E. calculations.
- Apply and tool sealant to the mitered joint and anchor heads.

See **Detail 43**.

- Continue installing the rest of the sill flashing providing a 3/8" expansion joint at splices as shown in **Step 15 Pages 28 to 34**.

\* **Note:** Similar technique required for head receptor.



**Detail 43**

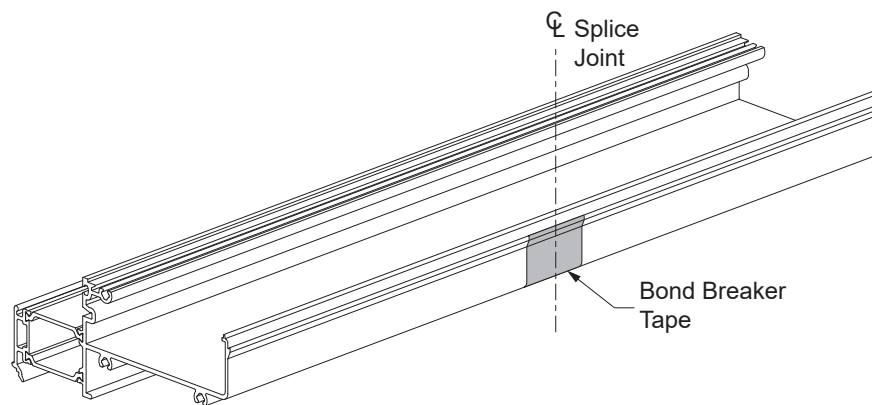


## FRAME INSTALLATION

### STEP 17 SILL PREPARATION

At every splice condition, apply bond breaker tape to the back of the sill member before the joint is sealed between the sill and sill flashing.

See **Detail 44**.



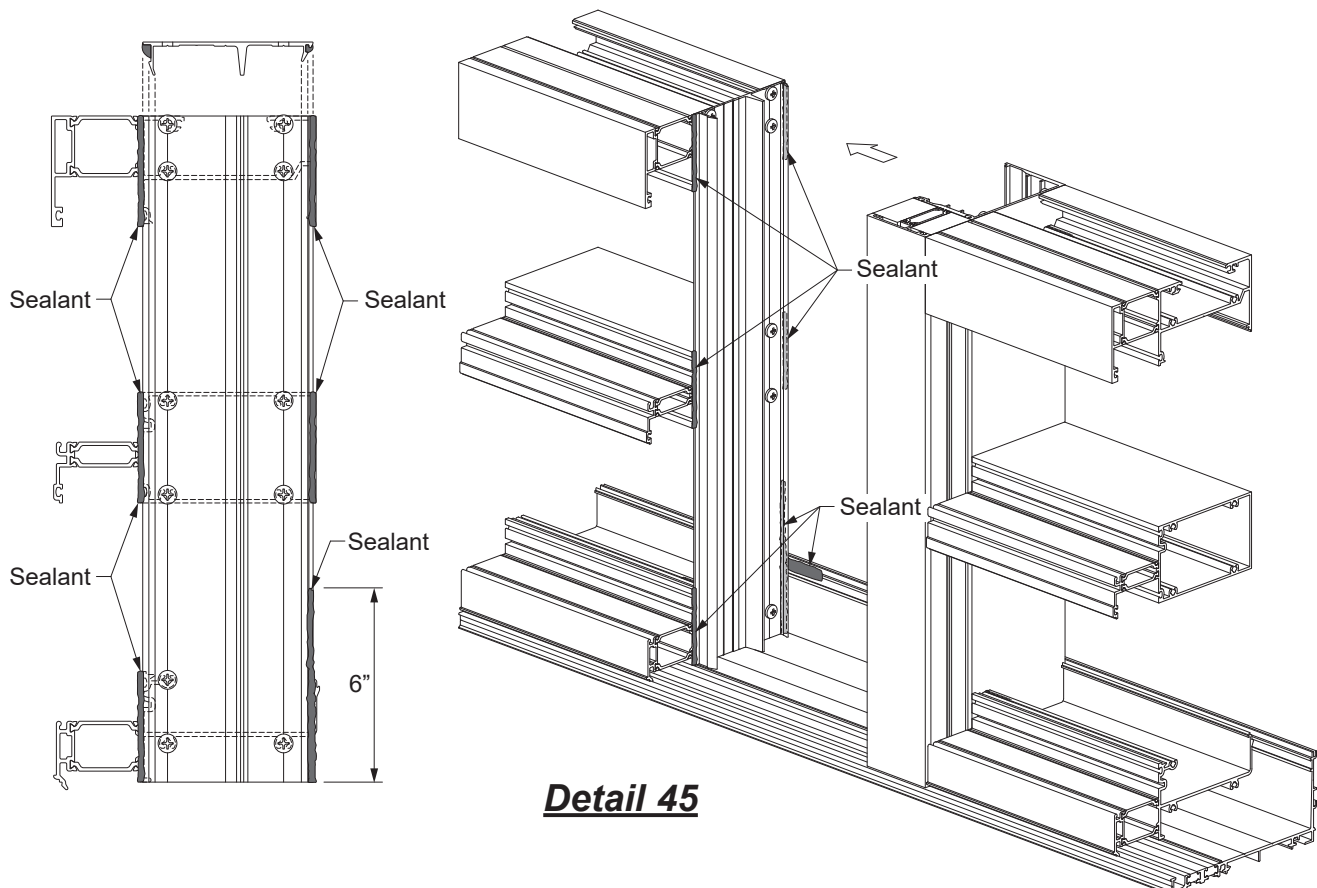
**Detail 44**

## FRAME INSTALLATION

### STEP 18 INSTALL ASSEMBLED FRAMES

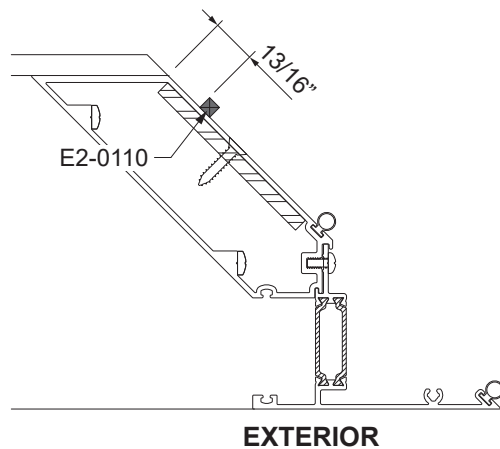
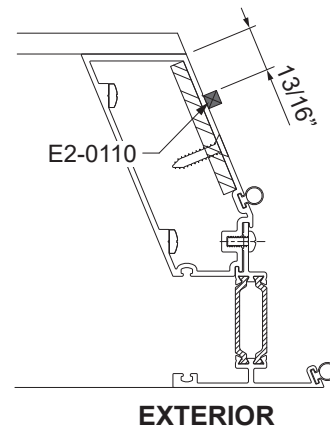
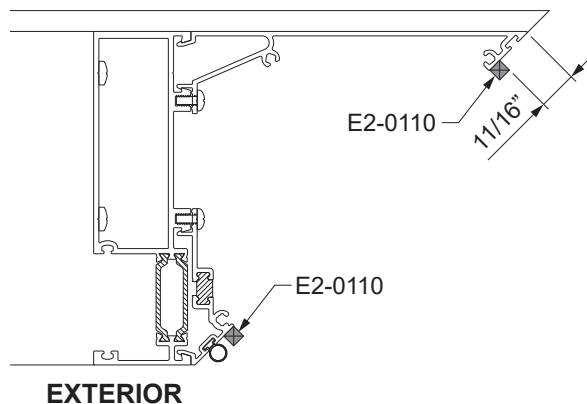
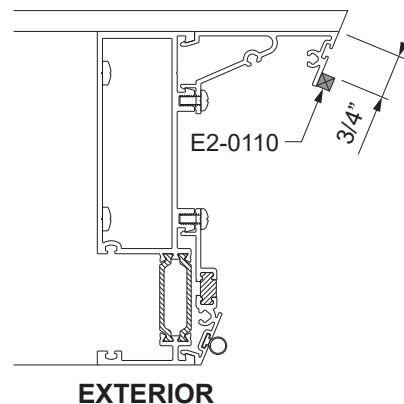
- Clean the ends of horizontal members and attachment areas of the vertical members using a cleaner approved by the sealant manufacturer.
- Immediately before installing the frames, apply a bead of sealant to the back leg of the sill flashing at the mullion. Make sure all the surfaces are clean.
- Apply and tool sealant to the shaded areas just prior to snapping the mullion together. Ensure the sealant does not get into the glass stop reglets of the head, horizontal, and sill.
- Snap the mullion filler into the mullion.
- Tool excess sealant at the joints.

#### Detail 45.



**FRAME INSTALLATION****STEP 18 (Continued)****APPLY CORNER MULLION SPACER TAPE**

-For the first unit at the corner, apply E2-0110 spacer tape to the corner mullion, the full height of the mullion as shown in **Detail 46**. Do not apply the spacer tape to the corner mullion of the adjoining unit.

**INTERIOR****EXTERIOR****INTERIOR****EXTERIOR****Detail 46****INTERIOR****EXTERIOR****INTERIOR****EXTERIOR**

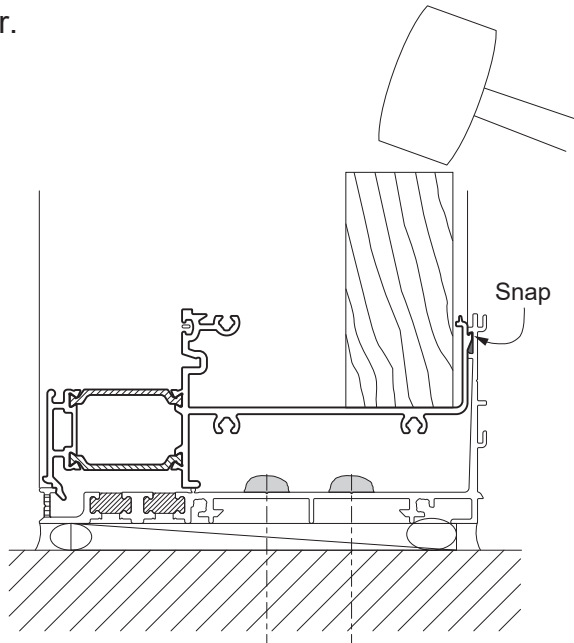
## FRAME INSTALLATION

### STEP 19 SEAL SILL TO SILL FLASHING

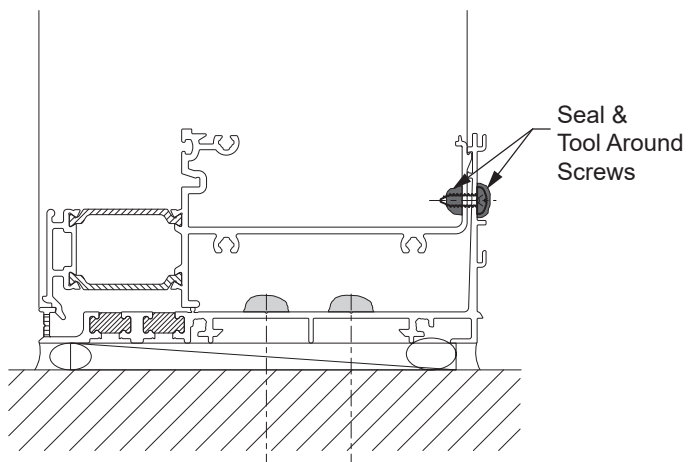
**Note:** if sill has not fully engaged into the sill flashing, tap down with a block of wood to ensure proper engagement prior to sealing.

- Once the unit is set in place, use the holes in the back of the sill flashing to as pilot holes for 0.161" diameter tap holes in the sill. Fasten the sill into the back of the sill flashing with PC-1008 fasteners.
- Apply and tool sealant to both the fastener heads and the fastener threads at the back of the sill member.

See **Detail 47**.



**Detail 47**



## FRAME INSTALLATION

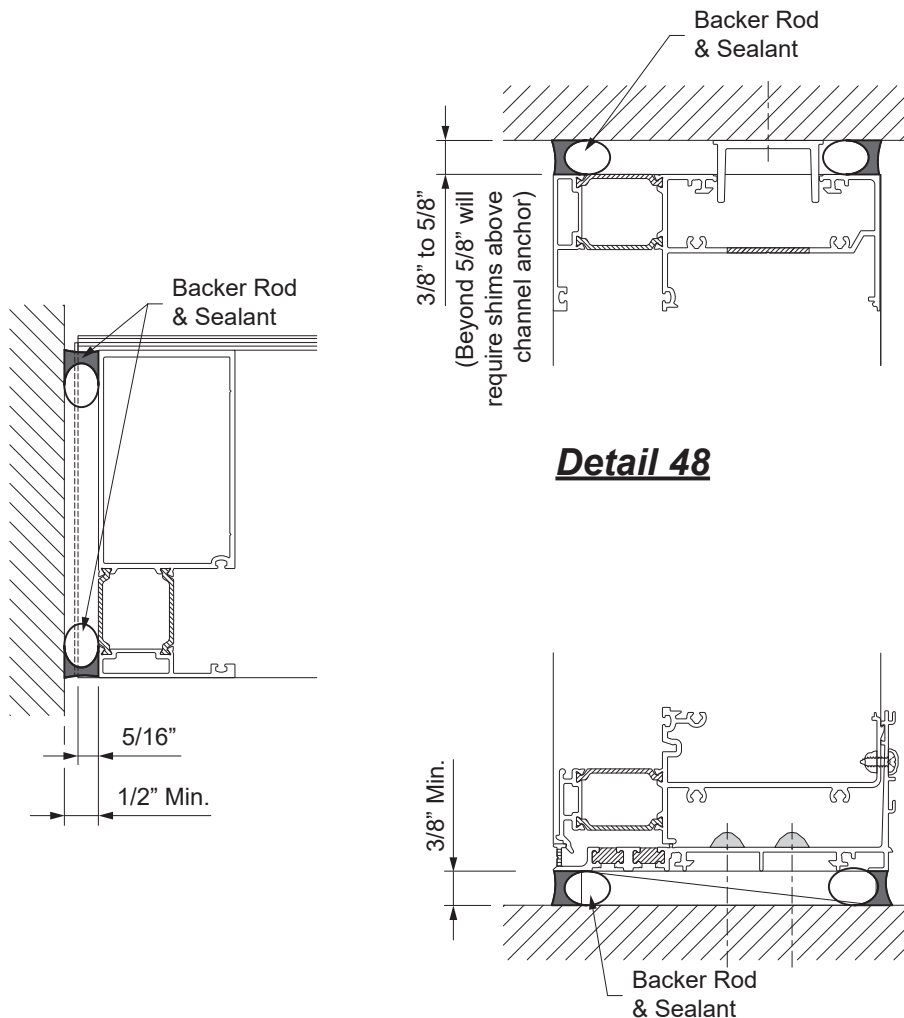
### STEP 20

#### ANCHOR / SEAL FRAMES

- Anchor frames at the head and jambs per fasteners as specified by approved shop drawings and or P.E. calculations, providing a minimum of 3/8" shim space at the head and sill, and 1/2" minimum shim space at the jambs.
- Install backer rods around the perimeter of the frame.
- Apply and tool sealant to ensure a watertight seal.

**Note:** Interior and exterior seals are required.

See **Detail 48**.



## FRAME INSTALLATION

### STEP 20 (Continued)

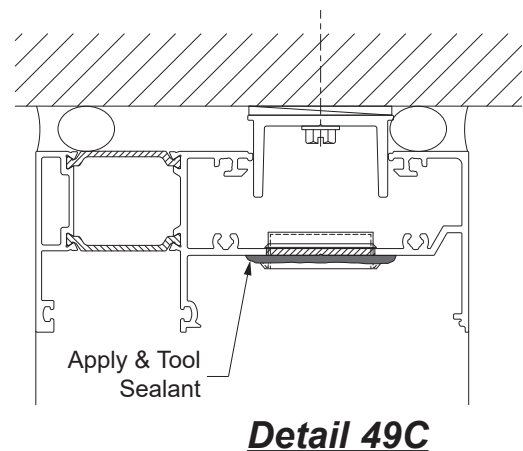
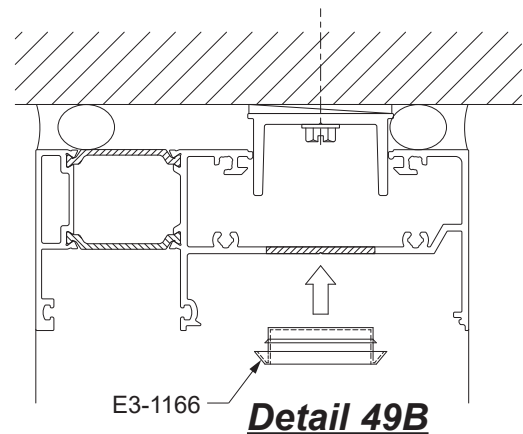
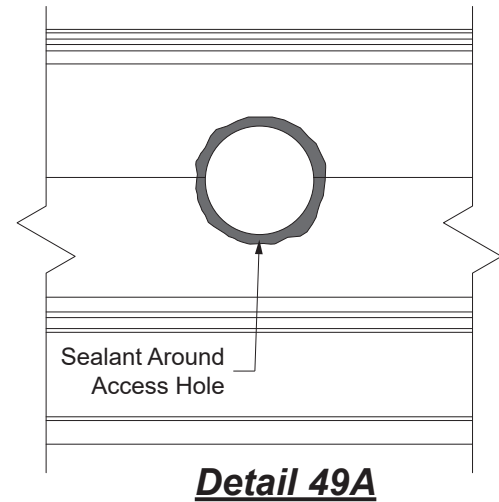
#### SEAL HEAD ANCHOR ACCESS HOLES

**Note:** This is for only when E1-2830 channel anchors are used at the head.

-To plug the anchor access holes, apply sealant on the underside surface around the perimeter of the access hole as shown in **Detail 49A**.

-Then immediately insert the plug as shown in **Detail 49B**.

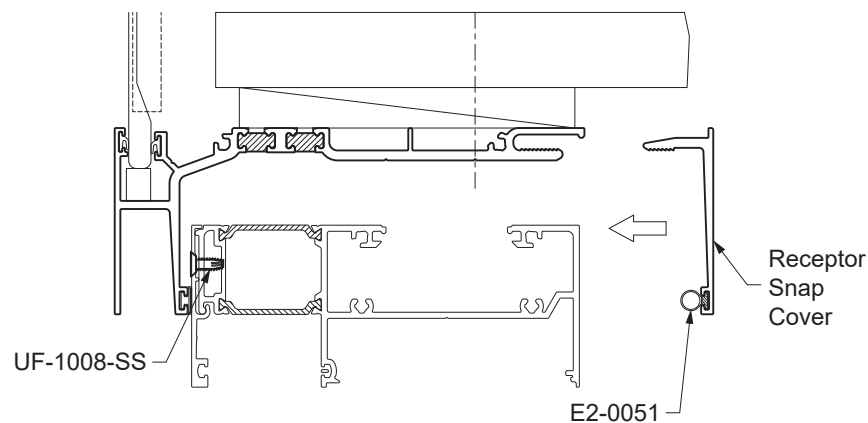
-Apply and tool sealant completely over and around the plug after inserting and seating in place. See **Detail 49**.



**FRAME INSTALLATION****STEP 20A****ANHCOR / SEAL FRAMES AT HEAD RECEPTOR**

-In the case of where a head receptor is used in conjunction with the E9-6338 exterior glass stop, secure the glass stop to the head member with two UF-1008-SS fasteners (each at 2" from each end of the glass stop) prior to attaching the receptor snap cover and its E2-0051 bulb gasket.

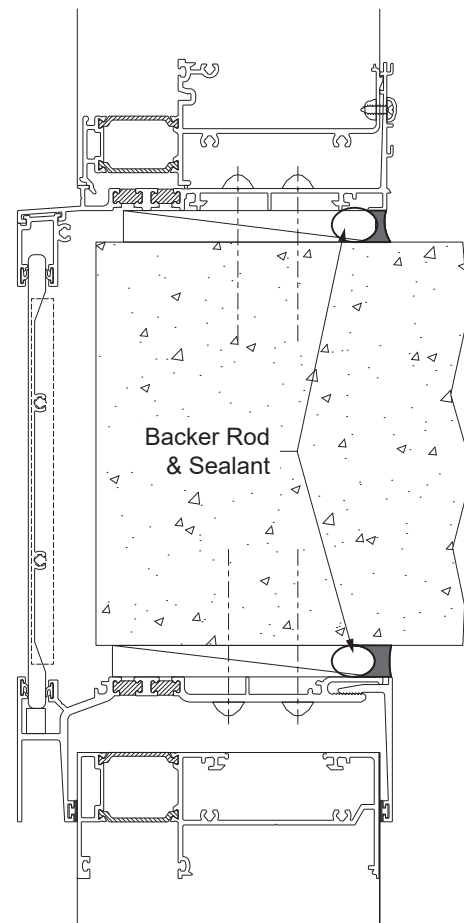
See **Detail 50**.



**Detail 50**

- At slab edge covers, install a backer rod at the interior of the sill flashing and head receptor.
- Apply and tool sealant to ensure a watertight seal.

See **Detail 51**.



**Detail 51**

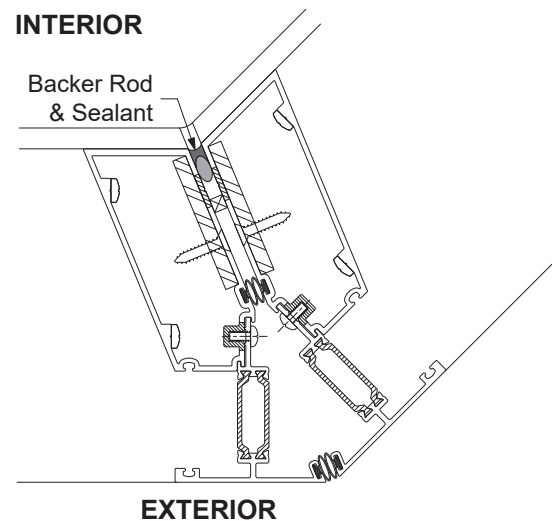
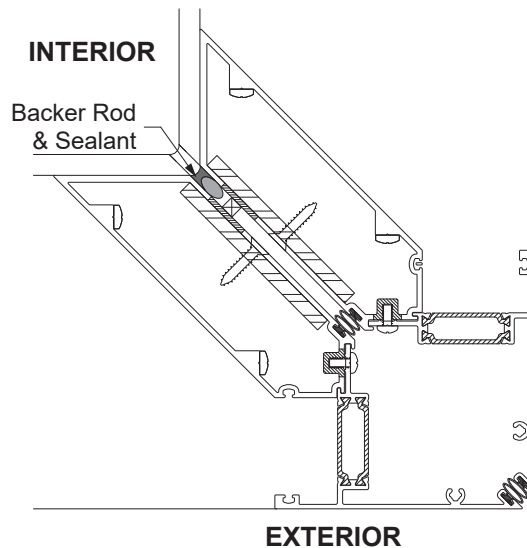
## FRAME INSTALLATION

### STEP 21

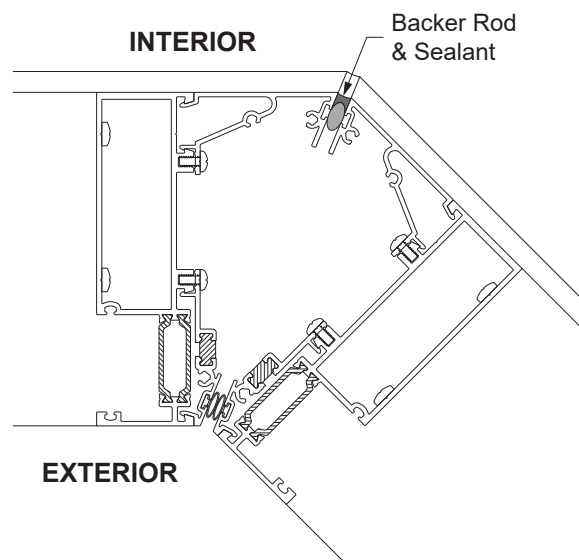
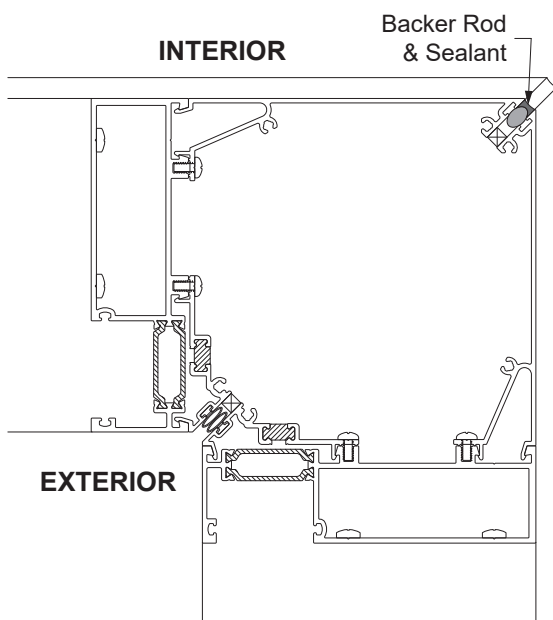
#### APPLY SEALANT AT CORNER MULLIONS

-Apply backer rod and sealant the at the interior of the corner mullion, the full height of the mullion.  
Do not seal the exterior side.

See **Detail 52**.



### **Detail 52**





## FRAME INSTALLATION

### STEP 22 INSTALL WATER DEFLECTOR

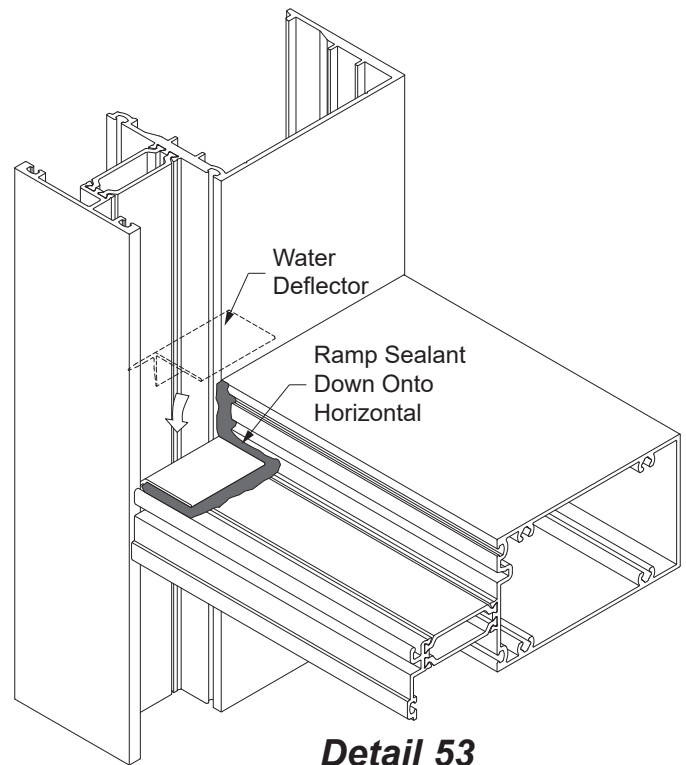
YWW 60 XT require the installation of a water deflector, E2-0049, at the ends of every intermediate horizontal to keep water off of the insulating glass units.

-Peel away the protective paper from the bottom of the water deflector, and install the water deflector at the ends of each horizontal. See **Detail 53**.

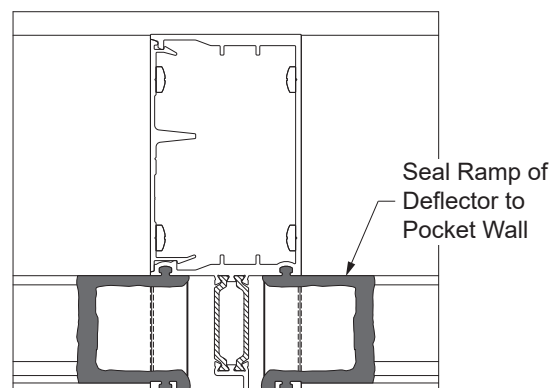
-Position the vertical leg of the water deflector against the end of the horizontal.

**Note:** For best adhesion, make sure that the horizontal is clean and dry.

-Apply and tool sealant along the edges of the deflector and down onto the horizontal. Seal the ramp of the water deflector to the glazing pocket, filling the gap at the thermal isolator as shown on **Detail 54**.



**Detail 53**



**Detail 54**

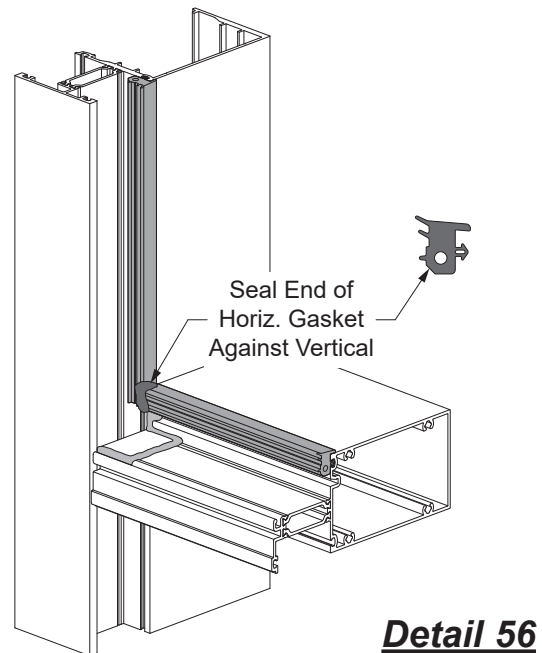
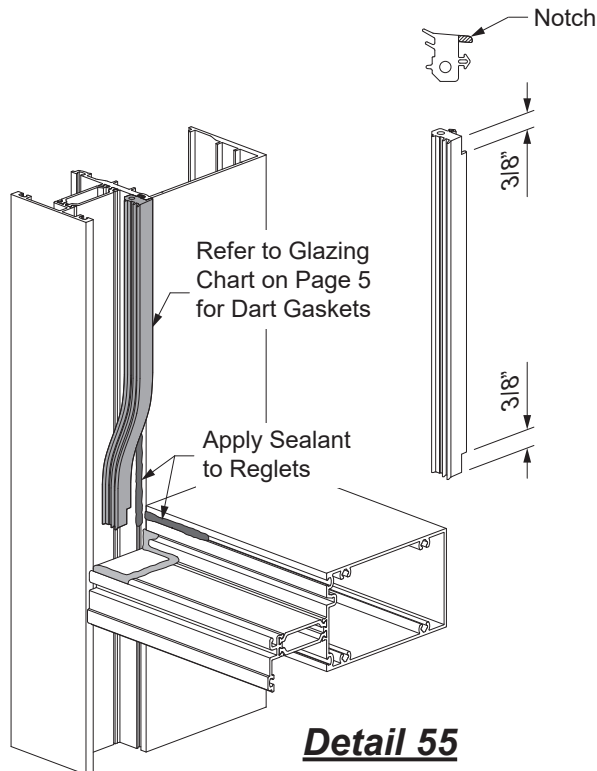
## GLAZING

### STEP 23 INSTALL DART GASKETS

-Using a small brush, clean out any dirt that may have accumulated in the gasket reglets.

#### Vertical glazing gaskets must be installed first:

- Cut vertical gaskets to the Daylight Opening plus(+) 3/4" plus(+) an additional 1/4" for each foot of length. Notch the ends of the vertical gasket as shown in **Detail 55**.
- Insert the gasket into the reglets at each end first; then insert the gasket at the midpoint of the opening.
- Push the gasket into the reglet starting at the ends and work towards the midpoint.



#### Install horizontal glazing gaskets next:

- Cut horizontal glazing gaskets to Daylight Opening plus(+) 1/4" for each foot of length.
- Apply sealant to each end of the horizontal glazing gasket prior to inserting into the reglet.
- Insert the gasket into the reglet at each end first; then insert the gasket at the midpoint of the opening.
- Tool the excess sealant at the gasket corners to ensure a watertight seal.

See **Detail 56**.

## GLAZING

### STEP 24 INSTALL SETTING / SIDE BLOCKS

Determine the glass size:

	Width	Height
Standard Glazing	D.L.O. + 7/8"	D.L.O. + 7/8"

-Apply setting blocks and setting blocks at 1/4 points of the Daylight opening or according to P.E. calculations.

E1-2831 with E2-0704PC for 1" Glazing

E1-2833 with E2-0611 for 1-5/16" Glazing

See **Detail 57**.

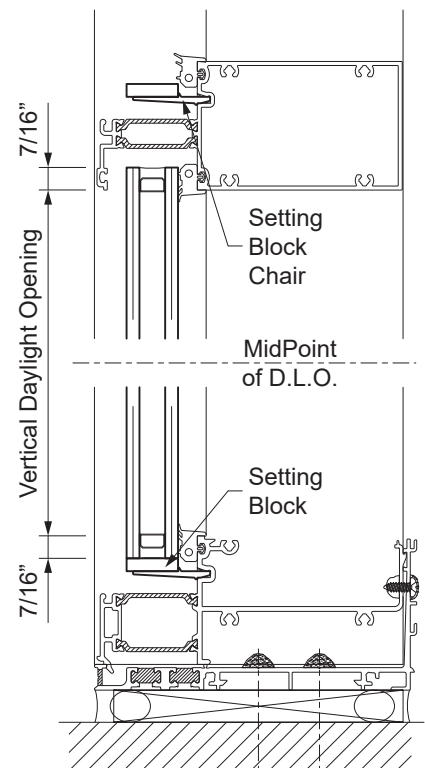
-Install Side blocks E2-0019 in the shallow glazing pocket of each vertical of daylight opening. (Use E2-0133 in the case of expansion mullions.)

-Carefully install the glass into the frame, making sure the setting and side blocks are aligned with the glass.

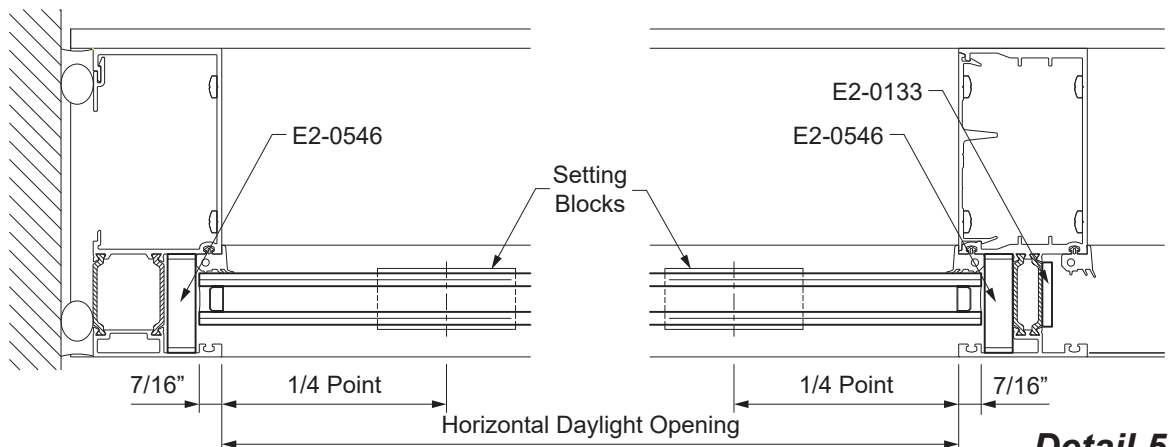
Note: Be careful not to disengage any gaskets that have already been installed when installing the glass.

After the glass is set, install one (1) E2-0546 anti-walk block at the deep pocket locations.

See **Details 57 & 58**.



**Detail 57**



**Detail 58**

## GLAZING

### STEP 25 INSTALL GLASS FOR STANDARD GLAZING

#### For Interior Glazing:

E9-7852 Interior glass stops are required at all head and intermediate horizontals:

- Prior to hooking the glass stops into the horizontal and head, apply continuous sealant into the glass stop reglet.
- Apply sealant to each end of the glass stops and hook them into position.
- Tool the sealant into the joint between the glass stop and the vertical to ensure a watertight seal and wipe away any excess sealant.

See **Detail 59**.

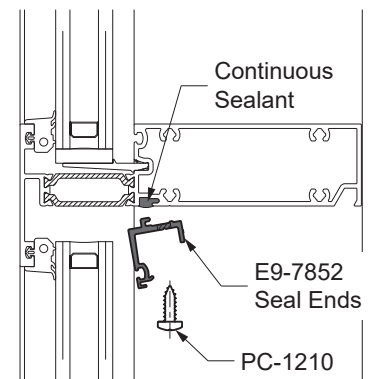
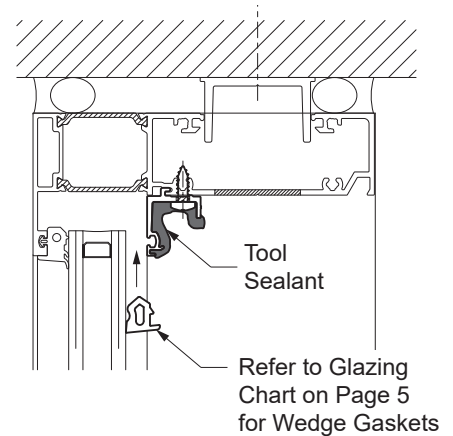
- Cut the vertical wedge gasket to vertical Daylight Opening plus (+) 3/4", plus 1/4" for each foot of length. Notch the ends of the gasket as shown in **Detail 60**.

- Insert the vertical gasket into the glazing pocket, pushing the notched ends into the horizontals first, then working towards the mid point.

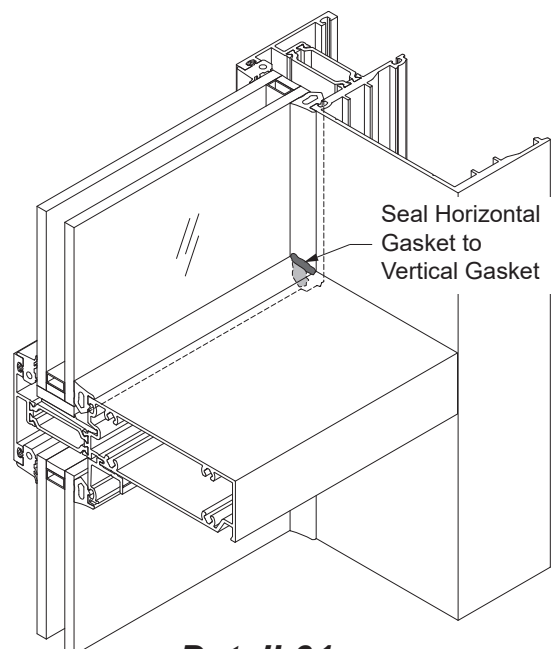
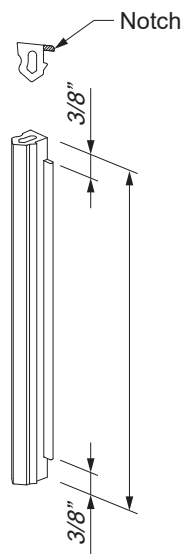
- Install the interior horizontal wedge gaskets, to the Daylight Opening plus(+) 1/4" for each foot of length, starting at the ends first and working towards the midpoint.

- Apply sealant to the ends of the horizontal wedge gaskets and finish inserting them into the glazing pocket against the vertical wedge gaskets.

See **Detail 61**.



#### **Detail 59**



#### **Detail 61**

#### **Detail 60**

## GLAZING

### STEP 25 (Continued) INSTALL GLASS FOR STANDARD GLAZING

#### For Outside Glazing:

E9-6338 Exterior glass stops are required at all head and intermediate horizontals:

-Apply sealant to the ends of the exterior glass stop, and engage the hook of the glass stop with the ball of the horizontal members and rotate them into position.

See **Detail 62**.

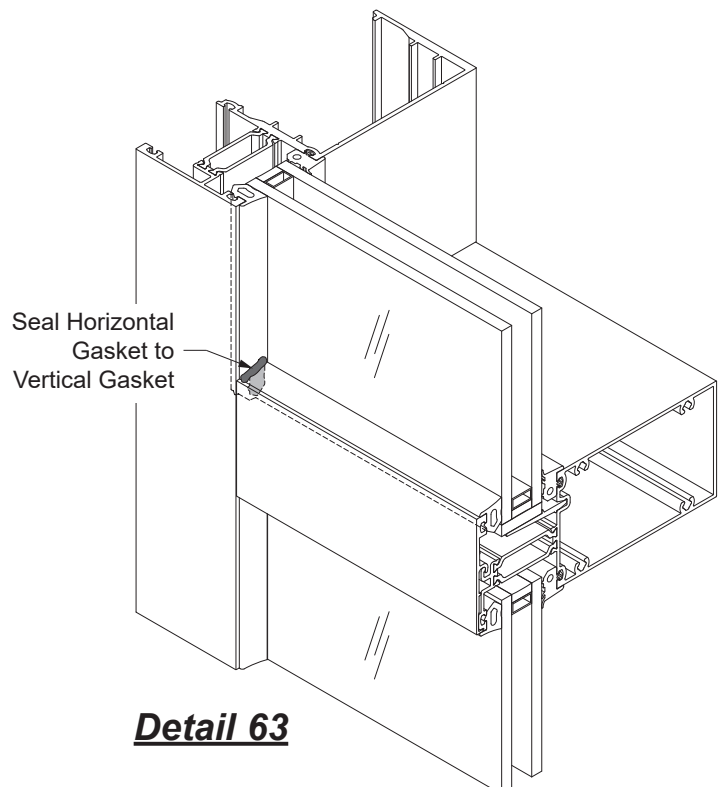
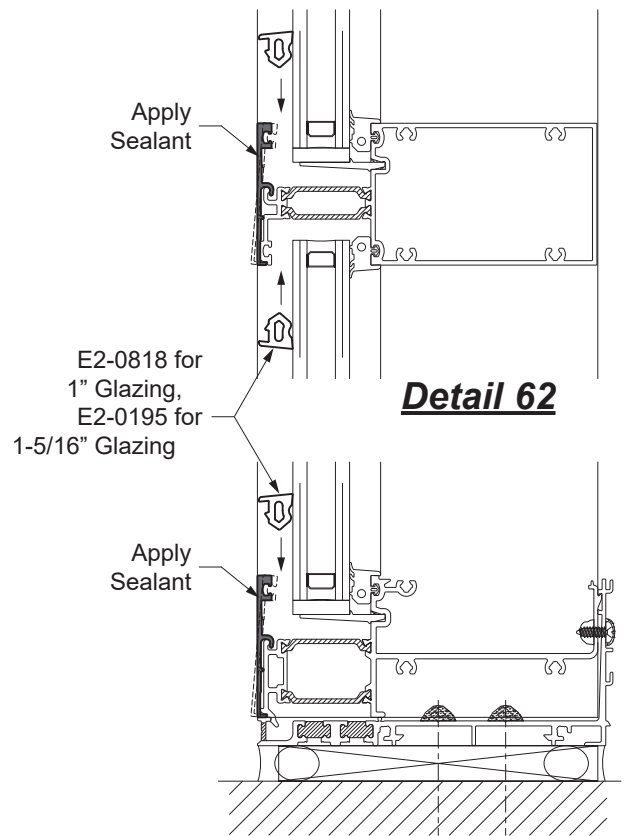
-Cut the vertical wedge gasket to vertical Daylight Opening plus (+) 3/4". Notch the ends of the gasket as previously shown in **Detail 60**.

-Insert the vertical gasket into the glazing pocket, pushing the notched ends into the horizontals.

-Install the exterior horizontal wedge gaskets to the Daylight Opening plus(+) 1/4" for each foot of length, starting at the ends first and working towards the midpoint.

-Apply sealant to the ends of the horizontal wedge gaskets and finish inserting them into the glazing pocket against the vertical wedge gaskets.

See **Detail 63**.



## GLAZING

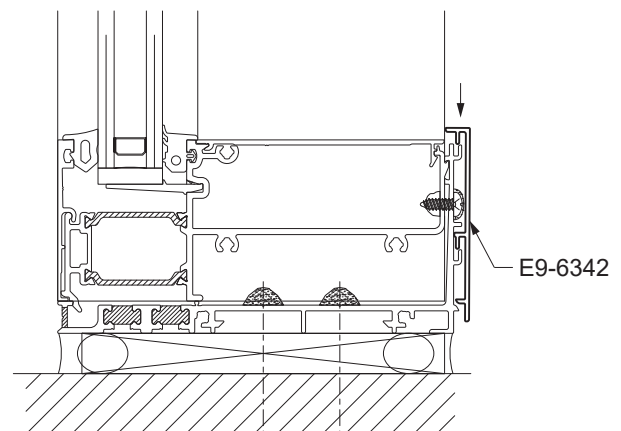
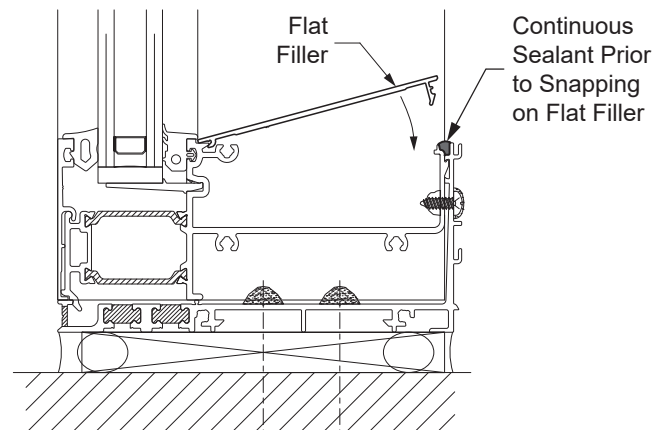
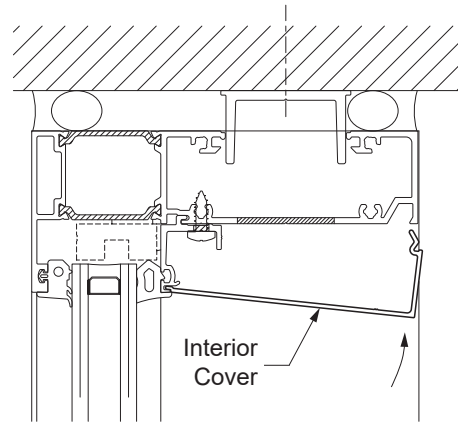
### STEP 26 INSTALL INTERIOR COVERS

- Immediately prior to installing the interior covers, apply continuous sealant to top of the sill at the sill flashing across the sill.
- Snap on the interior covers at the head, horizontals, and sills.

E9-6339 IG head & IG horizontals  
E9-6337 sill and OG head

- Snap on the E9-6342 face cover onto the interior of the sill flashing.

See **Details 64**.



**Detail 64**

## DOOR FRAME INSTALLATION

### STEP 27 INSTALL DOOR FRAME

Doors are shipped assembled, and door frames will be fabricated and shipped knocked down. Please refer to the 20D, 35D, & 50D **Entrances Installation Manual** for door installation.

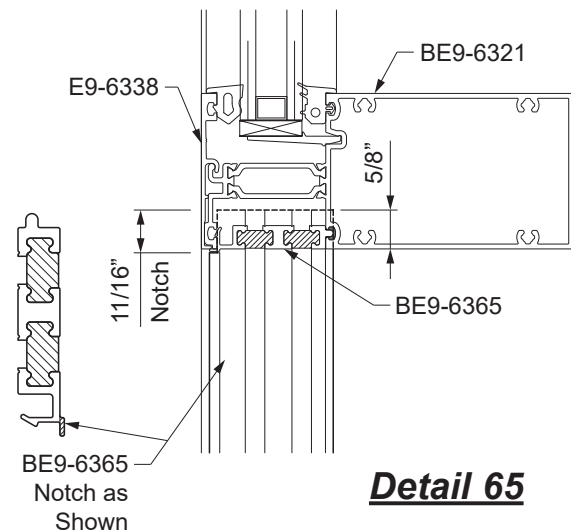
-Door jamb mullions are made from BE9-6372 and E9-6361 flat filler for the field glaze application, shimmed and fastened together as shown below in **Detail 66**. Spacing of fasteners to be determined by approved shop drawings and or P.E. calculations. Door transoms bars are made with tubular horizontals and BE9-6365 pocket filler (cut to transom horizontal length minus(-) 1/32") and E9-6338 glass stop.

-Install the BE9-6365 flat filler (cut to length and notched as shown in **Detail 65**) into the door jamb mullions.

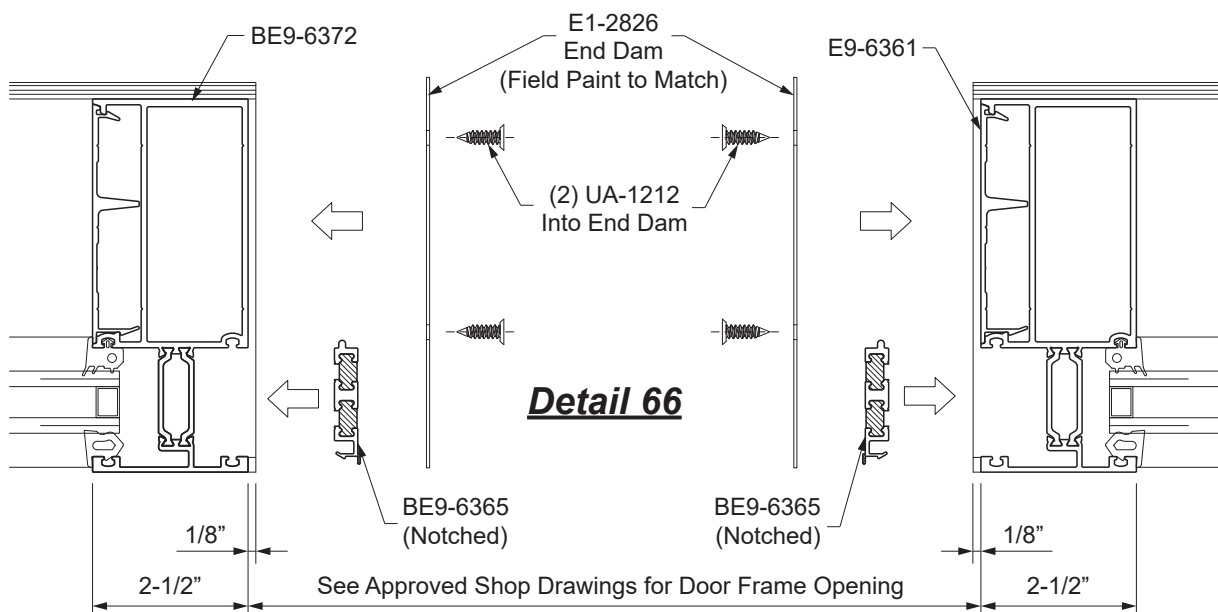
-Install the E9-6338 glass stop and flat filler onto the transom bar.

-Install E1-2826 sill flashing end dams into the ends of the sill flashing using the same method as previously shown in **Step 12 on Page 24**.

See **Detail 66**.



**Detail 65**



**Detail 66**

## DOOR FRAME INSTALLATION

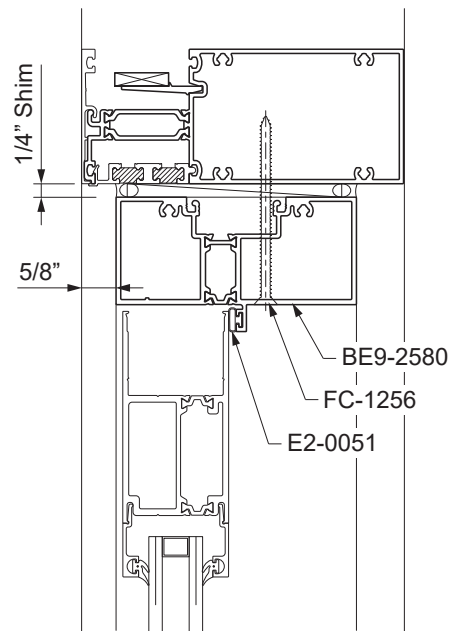
### STEP 27 (Continued) INSTALL DOOR FRAME

- Assemble the door subframe and install the door jamb subframes to the door jambs with PC-1228 fasteners, spaced according to the approved shop drawings and or P.E. calculations. Provide a 3/8" shim space between the jamb subframes and the jamb mullions, 1/4" shim space at the transom bar. Maintain a 5/8" inset between the subframe and the front of the window wall framing.
- Snap in the door stops into the door jamb subframes.

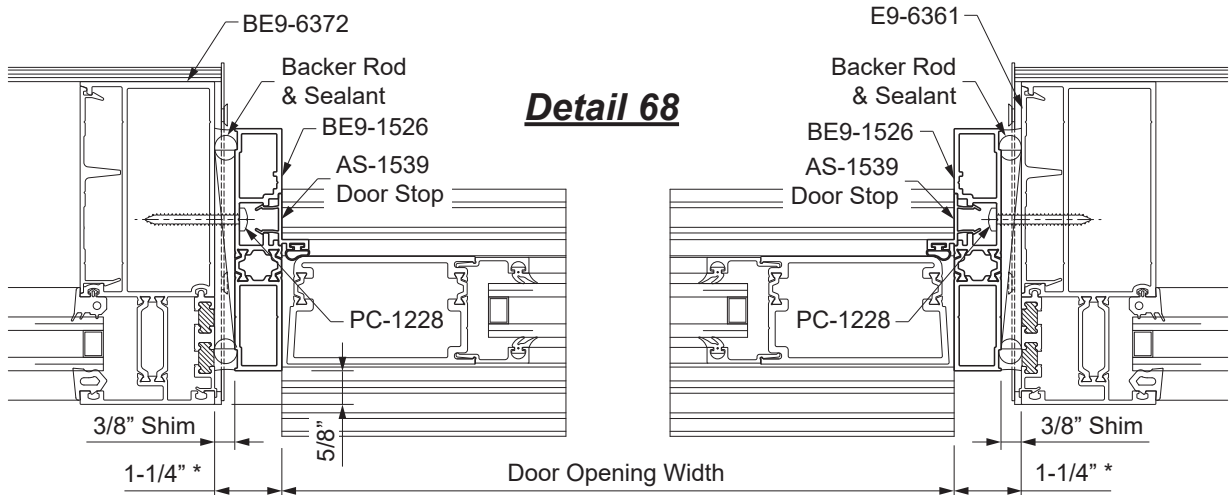
See **Details 67 & 68**.

- Install backer rods between the subframes and the window wall framing, both front and back. Apply and tool sealant to the backer rods to ensure a water-tight seal.

\* **Note:** The 1-1/4" dimension is shown for when BE9-1526 jamb subframe is used. This dimension may vary if other subframes are used.



**Detail 67**



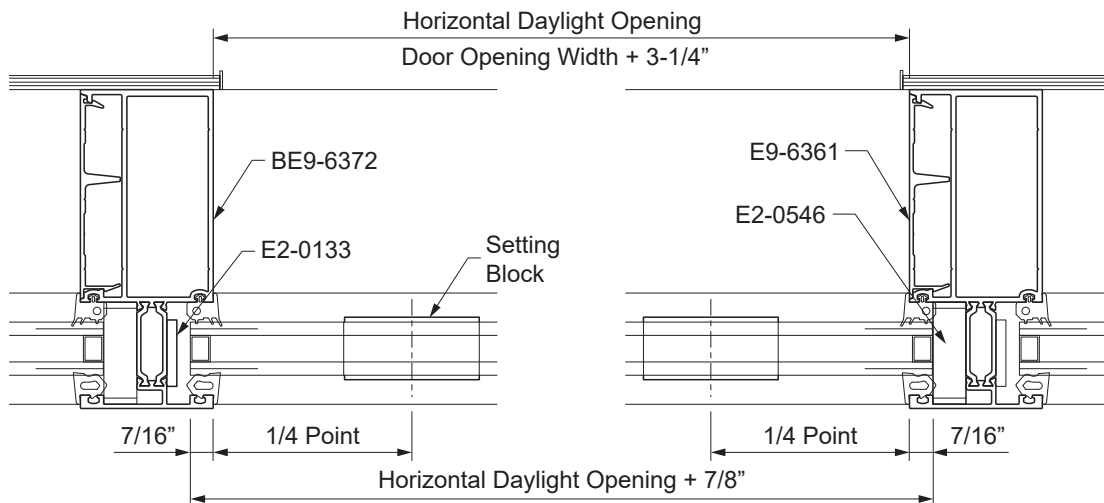
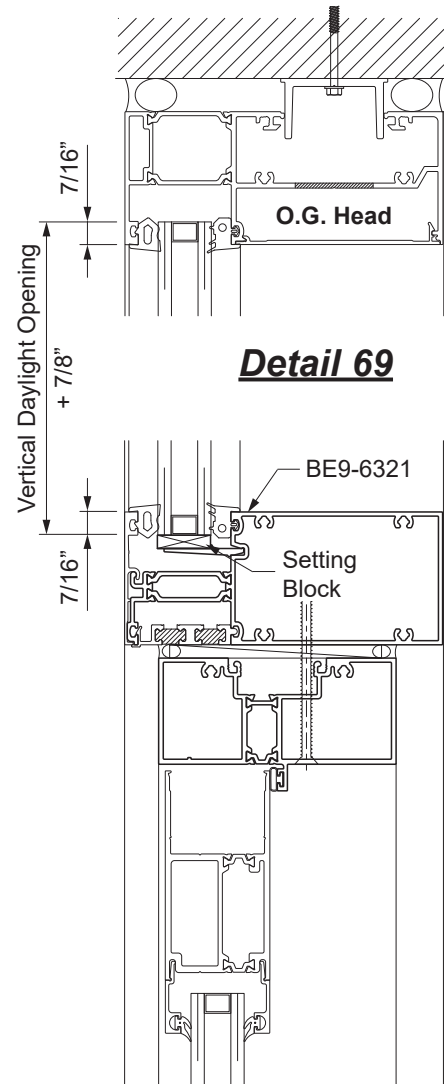


## DOOR FRAME INSTALLATION

### STEP 28 GLAZE DOOR TRANSOM

-Repeat **Steps 24** and **25** for gasket, setting block, and glazing instructions for the transom.

See **Details 69 & 70**.



**Detail 70**



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