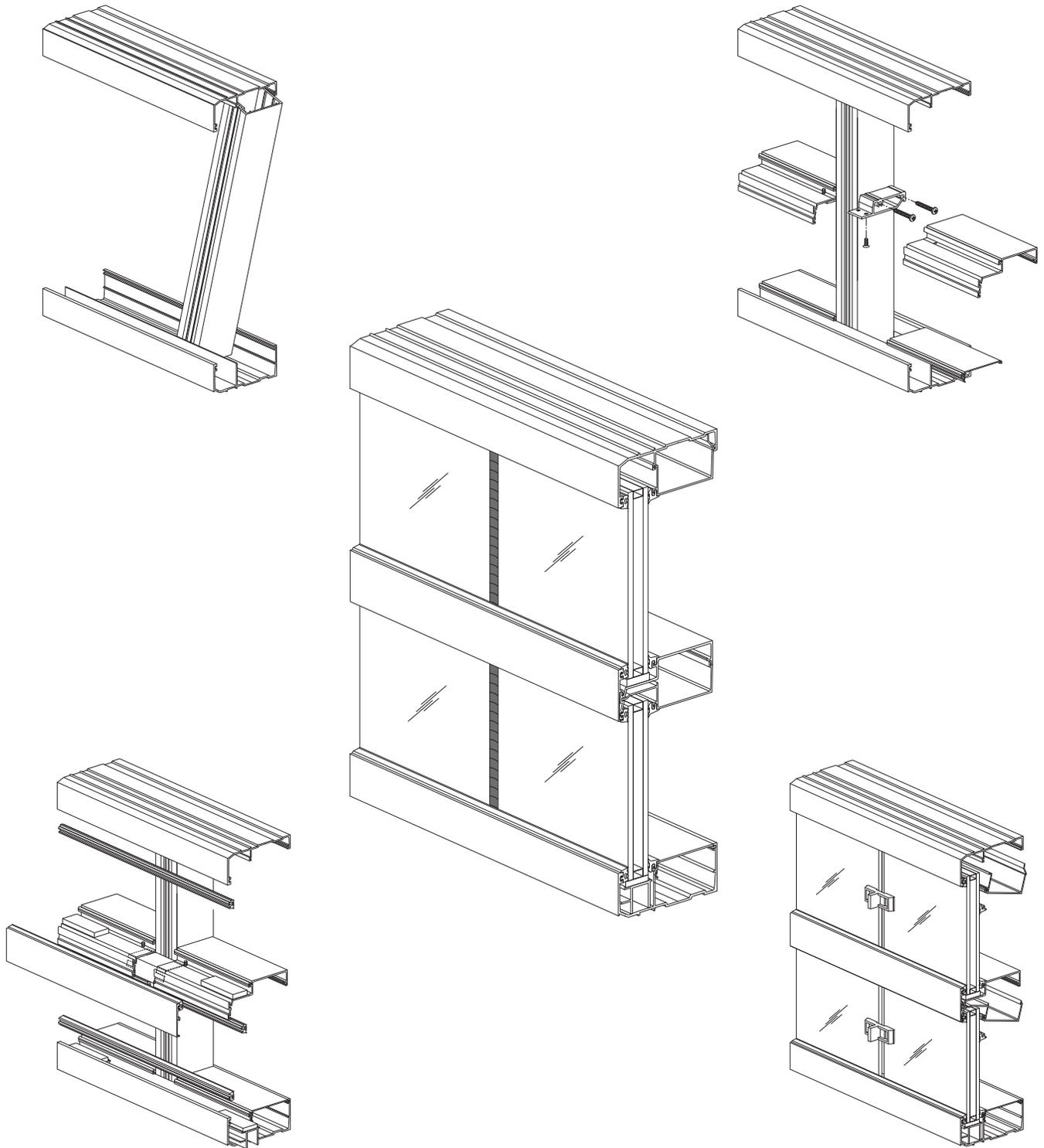


YSG 40/50/50T Window Wall System



Installation Manual

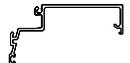
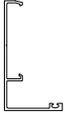
TABLE OF CONTENTS

Installation Notes	Page ii
PARTS DESCRIPTION	
YSG 40 Framing Members.....	Page 1
YSG 40 Accessories.....	Page 2
YSG 50/50T Framing Members	Pages 3 & 4
YSG 50/50T Accessories	Pages 5 & 6
FRAME FABRICATION	
Fabricate Head & Sill Receptors	Pages 7 to 9
Fabricate Weep Holes in Sill Receptors.....	Page 10
Fabricate Vertical & Jamb Mullions	Page 11
Fabricate Jamb Glass Stops	Page 12
Fabricate Vertical Mullions for Shear Blocks.....	Page 13
Fabricate Corner Members.....	Pages 14 & 15
Fabricate Intermediate Horizontals.....	Page 15
Fabricate Glass Stops for Horizontals & Head/Sill Receptors	Pages 16 & 17
Fabricate Exterior Face Covers.....	Pages 17 & 18
FRAME INSTALLATION	
Attach Head & Sill Receptor End Dams.....	Page 18
Install Head & Sill Receptors.....	Page 19
Install Sill Receptor Splice Sleeves	Pages 20 & 21
Install Head Receptor Splice Sleeves	Page 22
Install Jamb Mullions	Page 23
Install Vertical Mullions	Page 24
Install Corner Mullions	Page 25
Install Intermediate Horizontals	Page 26
Install Water Deflectors	Pages 26 & 27
GLAZING	
Install Exterior Glazing Gaskets	Page 28
Install Glass	Pages 29 & 30
Apply Interior Structural Silicone	Page 31
Apply Exterior Weatherseal	Page 32

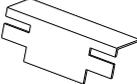
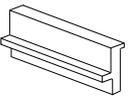
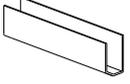
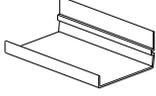
Installation Notes

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 quantity and quality 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 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 that 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. Entrances are to be installed plumb, square, level and true.
11. If any questions arise concerning YKK AP products or their installation, contact YKK AP for clarification before proceeding.
12. YKK AP store front and/or curtain wall framing is typically completed before drywall, flooring and other products that may still be in process. Take the extra time to wrap and protect the work produced.
13. Cutting tolerances are plus zero, minus one thirty second unless otherwise noted.
14. Check our website, www.ykkap.com, for the latest installation manual update prior to commencing work.

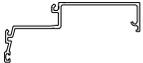
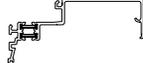
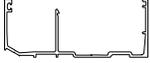
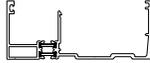
FRAMING MEMBERS

YSG 40 (2" x 4-3/16")			YSG 40 Corner Framing		
	Head Receptor	E9-2053		90° Corner Post	E9-2008
	Glass Stop for Head Use with E9-2053	E9-2055		90° inside Corner Vertical Use with E9-2008	E9-2015
	Intermediate Horizontal	E9-2056		135° Corner Post Use with E9-2017/E9-2018	E9-2016
	Interior Glass Stop for Intermediate Horizontal Use with E9-2056	E9-2058		135° Outside Corner Vertical Use with E9-2016	E9-2017
	Horizontal Exterior Face Cover Use with E9-2056	E9-2057		135° Inside Corner Vertical Use with E9-2016	E9-2018
	Sill Receptor	E9-2054		Hinged Mullion Female Use with E9-2024/E9-2025	E9-2023
	Glass Stop for Sill	E9-2004		Outside Hinged Mullion Male Use with E9-2023	E9-2024
	Jamb	E9-2051		Inside Hinged Mullion Male Use with E9-2023	E9-2025
	Glass Stop for Jamb	E9-2052			
	Vertical	E9-2001			

YSG 40 ACCESSORIES

 <p>Shear Block For intermediate Horizontal Use (2) PC-1228 & (2) FB-1008 Not Included</p>	E1-1021	 <p>SSG Temporary Glass Retainer For 1/4" Glazing</p>	E3-0006
 <p>Anchor Clip For 90° & 135° Corner Posts, Use (2) PC-1008 Not Included</p>	E1-1005	 <p>Water Deflector For Horizontals at Jamb</p>	E1-0048
 <p>Water Deflector For Intermediate Horizontals at SSG Verticals</p>	E1-1022	 <p>1/8" x 2-1/2" Steel Bar Reinforcing Use with E9-2001</p>	E1-0159
 <p>Setting Block For Intermediate Horizontal</p>	E2-0054	 <p>3/8" x 2-1/2" Steel Bar Reinforcing Use with E9-2001</p>	E1-0161
 <p>Setting Block For Sill</p>	E2-0131	 <p>SSG Glazing Spacer</p>	E2-0106
 <p>End Dam For Head & Sill Receptor</p>	E2-0132	 <p>Exterior Glazing Gasket</p>	E2-0107
 <p>Weep Baffle</p>	E2-0099	 <p>Interior Glazing Gasket</p>	E2-0108
 <p>Water Deflector For E9-2053 (Front Chamber)</p>	E3-0013	 <p>#10 x 1/2" FHSMS Type B Zinc Plated Steel For Attachment of Horizontal to Shear Block</p>	FB-1008
 <p>Setting Block For E9-2054 (Front Chamber)</p>	E3-0012	 <p>#10 x 1/2" PHSMS Type AB, Zinc Plated Steel For Attachment of Anchor Clip</p>	PC-1008
 <p>Head & Sill Splice Sleeve For E9-2053 & E9-2054 (Rear Chamber)</p>	E3-0011	 <p>#12 x 1-3/4" PHSMS Type AB, Zinc Plated Steel For Attachment of Shear Block to Vertical</p>	PC-1228

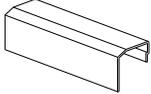
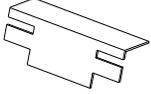
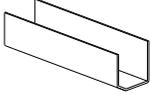
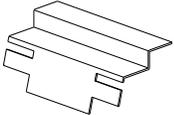
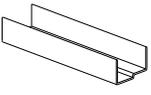
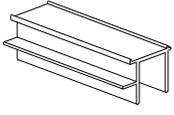
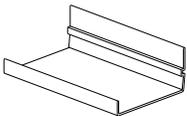
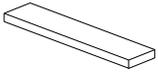
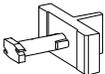
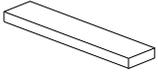
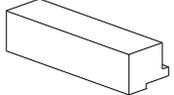
YSG 50/50T FRAMING MEMBERS

YSG 50 (2" x 4-15/16")		YSG 50 T (2" x 4-15/16")	
 Head Receptor	E9-2063	 90° Corner Post	E9-2008
 Glass Stop for Head Use with E9-2063	E9-2055	 90° inside Corner Vertical Use with E9-2008	E9-2015
 Intermediate Horizontal	E9-2066	 135° Corner Post Use with E9-2017/E9-2018	E9-2016
 Interior Glass Stop for Intermediate Horizontal Use with E9-2066	E9-2068	 135° Outside Corner Vertical Use with E9-2016	E9-2017
 Horizontal Exterior Face Cover Use with E9-2066	E9-2057	 135° Inside Corner Vertical Use with E9-2016	E9-2018
 Sill Receptor	E9-2003	 Hinged Mullion Female Use with E9-2024/E9-2025	E9-2023
 Glass Stop for Sill	E9-2004	 Outside Hinged Mullion Male Use with E9-2023	E9-2024
 Jamb	E9-2061	 Inside Hinged Mullion Male Use with E9-2023	E9-2025
 Glass Stop for Jamb	E9-2052		
 Vertical	E9-2001		

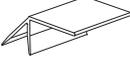
YSG 50/50 T CORNER & ADAPTOR FRAMING

 <p>90° Corner Post Use with E9-2008</p>	<p>E9-2008</p>	 <p>1/4" Vertical Glazing Adaptor Use with E9-2001</p>	<p>E9-2011</p>
 <p>90° Outside Corner Trim Use with E9-2008</p>	<p>E9-2009</p>	 <p>1/4" Glazing Adaptor For Head, Horizontal, & Jamb</p>	<p>E9-1040</p>
 <p>90° Outside Corner Vertical Use with E9-2008</p>	<p>E9-2015</p>	 <p>1/4" Glass Stop For Sill</p>	<p>E9-2014</p>
 <p>90° Inside Corner Adaptor Use with E9-2015</p>	<p>E9-2010</p>	 <p>1/4" Glazing Adaptor For Corner and Hinged Mullion</p>	<p>E9-2013</p>
 <p>135° Corner Post Use with E9-2017/E9-2018</p>	<p>E9-2016</p>		
 <p>135° Outside Corner Vertical Use with E9-2016</p>	<p>E9-2017</p>		
 <p>135° Inside Corner Vertical Use with E9-2016</p>	<p>E9-2018</p>		
 <p>Hinged Mullion Female Use with E9-2024/E9-2025</p>	<p>E9-2023</p>		
 <p>Outside Hinged Mullion Male, 5° to 22.5° Use with E9-2023</p>	<p>E9-2024</p>		
 <p>Inside Hinged Mullion Male, 1° to 15° Use with E9-2023</p>	<p>E9-2025</p>		

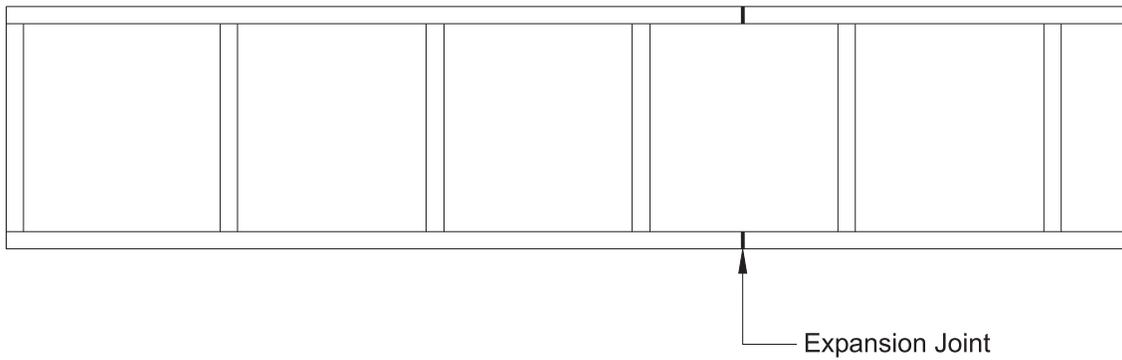
YSG 50/50 T ACCESSORIES

 <p>Shear Block For intermediate Horizontal Use (2) PC-1228 & (2) FB-1008 Not Included</p>	<p>E1-1021</p>	 <p>End Dam For YSG 50 T Head & Sill Receptor (Lower Chamber)</p>	<p>E3-0233</p>
 <p>Anchor Clip For 90° & 135° Corner Posts, Use (2) PC-1008 Not Included</p>	<p>E1-1005</p>	 <p>head Splice Sleeve For YSG 50 (Front Chamber)</p>	<p>E3-0016</p>
 <p>Water Deflector For YSG 50 Intermediate Horizontals at SSG Verticals</p>	<p>E1-1023</p>	 <p>Sill Splice Sleeve For YSG 50 (Front Chamber)</p>	<p>E3-0007</p>
 <p>Water Deflector For YSG 50 T Intermediate Horizontals at SSG Verticals</p>	<p>E1-1024</p>	 <p>Head & Sill Splice Sleeve For YSG 50 T (Front Chamber)</p>	<p>E3-0017</p>
 <p>Setting Block For YSG 50 Sill Use with E2-0177 Block</p>	<p>E1-1003</p>	 <p>Head & Sill Splice Sleeve For YSG 50/50 T (Rear Chamber)</p>	<p>E3-0011</p>
 <p>Setting Block For YSG 50 Sill Use with E1-1003 Chair</p>	<p>E2-0177</p>	 <p>SSG Temporary Glass Retainer For 1" Glazing</p>	<p>E3-0001</p>
 <p>Setting Block For YSG 50/50T Intermediate Horizontals</p>	<p>E2-0178</p>	 <p>SSG Temporary Glass Retainer For 1/4" Glazing</p>	<p>E3-0006</p>
 <p>Setting Block For YSG 50T Sill</p>	<p>E2-0180</p>	 <p>Weep Baffle</p>	<p>E2-0099</p>
 <p>End Dam YSG 50 Head & Sill Receptor</p>	<p>E2-0014</p>	 <p>1/8" x 2-1/2" Steel Bar Reinforcing Use with E9-2001</p>	<p>E1-0159</p>
 <p>End Dam For YSG 50 T Head & Sill Receptor (Upper Chamber)</p>	<p>E2-0280</p>	 <p>3/8" x 2-1/2" Steel Bar Reinforcing Use with E9-2001</p>	<p>E1-0161</p>

YSG 50/50 T ACCESSORIES

 <p>Water Deflector For Horizontals at Jambs</p>	<p>E1-0048</p>	 <p>#10 x 1/2" FHSMS Type B Zinc Plated Steel For Attachment of Horizontal to Shear Block</p>	<p>FB-1008</p>
 <p>SSG Glazing Spacer</p>	<p>E2-0106</p>	 <p>#10 x 3/8" PHSMS Type AB, Zinc Plated Steel For Attachment of E9-2008 to E9-2009</p>	<p>PC-1006</p>
 <p>Exterior Glazing Gasket</p>	<p>E2-0107</p>	 <p>#10 x 1/2" PHSMS Type AB, Zinc Plated Steel For Attachment of Anchor Clip</p>	<p>PC-1008</p>
 <p>Interior Glazing Gasket</p>	<p>E2-0108</p>	 <p>#10 x 3/8" PHMS Zinc Plated Steel For Attachment of E9-2010 to E9-2015</p>	<p>PM-1006</p>
		 <p>#10 x 1-1/4" PHSMS Type AB, Zinc Plated Steel For Attachment of 1/4" Adaptors to Vertical</p>	<p>PM-1006</p>
		 <p>#12 x 1-3/4" PHSMS Type AB, Zinc Plated Steel For Attachment of Shear Block to Vertical</p>	<p>PC-1228</p>

FRAME FABRICATION



This product is designed for long continuous runs of glazing. The head and sill receptors run as continuous glass and mullion retainers. Hence, the expansion and contraction of these receptors can be considerable and must be accounted for.

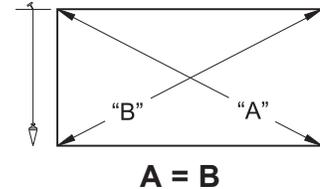
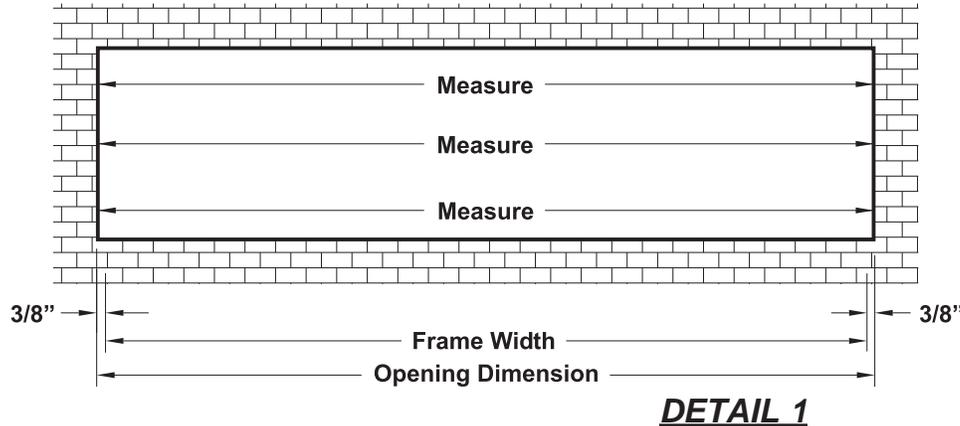
Horizontal masonry opening of 24 feet or less may be installed using single lengths of receptors since a large joint may be placed at each of the masonry jambs. These large (3/8" minimum) joints will adequately accommodate the thermal expansion.

Ribbon window installations longer than 24 feet should have expansion joints to accommodate for thermal expansion.

FRAME FABRICATION

STEP 1 FABRICATE HEAD & SILL RECEPTORS

Note: Check the opening for squareness and plumb at both ends. Units must be installed in a true rectangle.

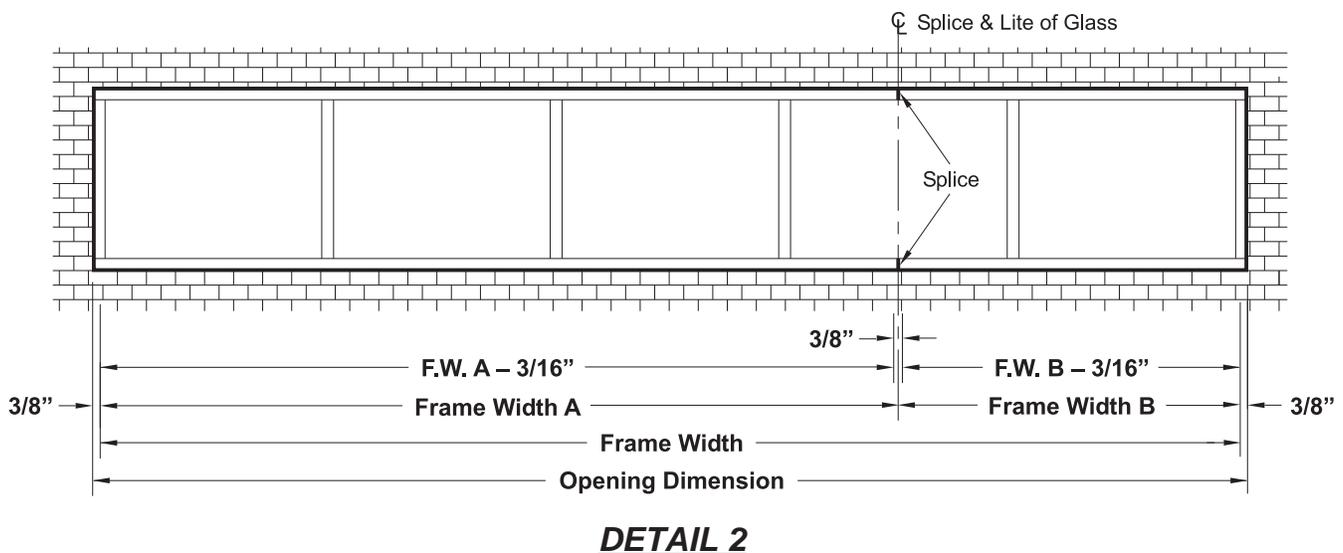


For openings less than 24'-0" (No Splices):

- Measure the opening width at the top, middle, and bottom of the opening. See **Detail 1**.
- Select the smallest dimension and subtract 3/4" of an inch (allows for 3/8" expansion at each jamb) to obtain the frame width.
- Cut the head and sill receptors to the frame width.

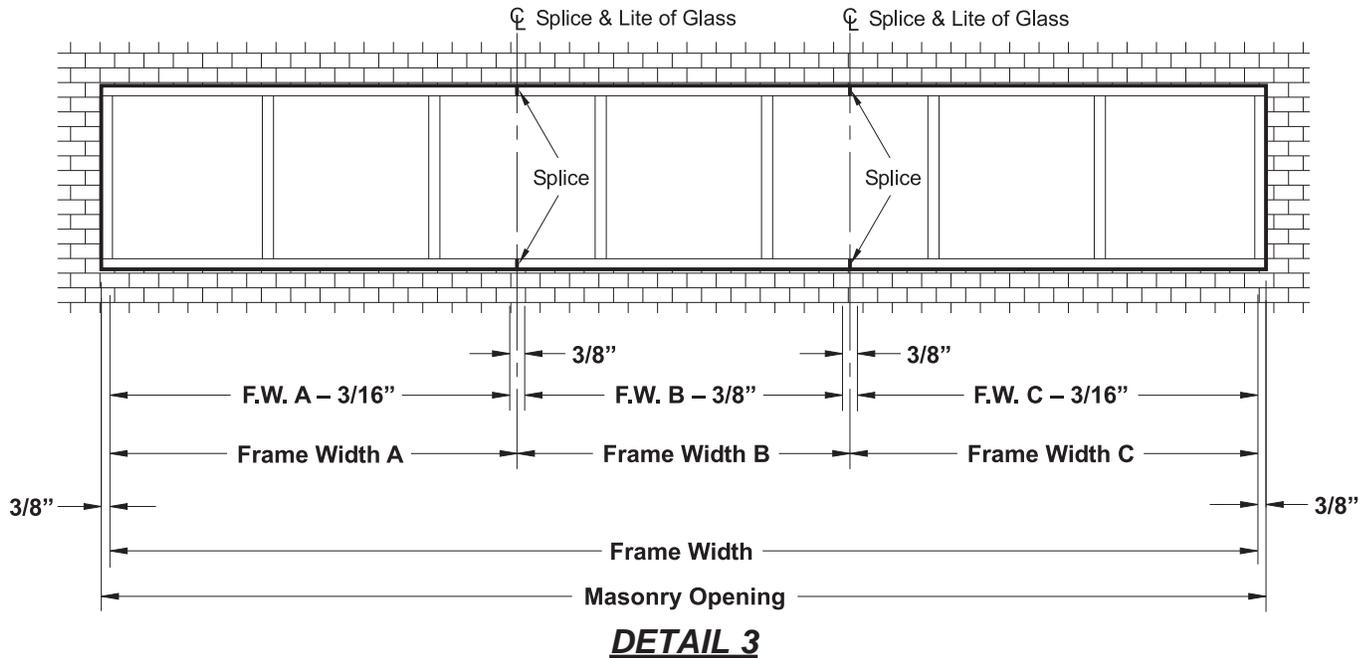
For openings greater than 24'-0" but less than 30'-0" (One Splice):

- Determine the frame width as previously shown above (subtract 3/8" at each jamb).
 - Splices should occur every 12' to 15', and at the center of a lite of glass. Head and sill members must always be spliced at the same location.
 - Measure from the end of the frame to the centerline of splice.
 - Subtract 3/16" from each half of the frame width.
 - Cut the head and sill receptors to their respective lengths.
- See **Detail 2**.



FRAME FABRICATION

STEP 1 (Continued)
FABRICATE HEAD & SILL RECEPTORS



For openings greater than 30'-0" (More than One Splice):

End Bays:

- Determine the frame width as previously shown above (subtract 3/8" at each jamb).
- Splices should occur every 12' to 15', and at the center of a lite of glass. Head and sill members must always be spliced at the same location.
- Measure from the end of the frame to the centerline of the first splice, and subtract 3/16".
- Cut the head and sill receptors to this dimension.

Center Bays:

- Measure from the centerline of one first splice to the centerline of the next splice and subtract 3/8".
- Cut the head and sill receptors to this dimension.

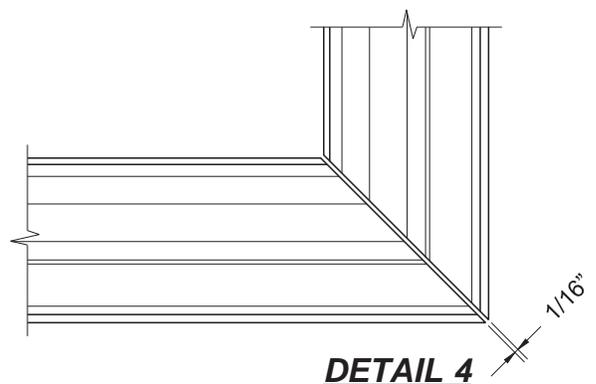
See **Detail 3**.

Receptors at Corners:

If your project has corners, then the head and sill receptors are to be mitered. Leave a 1/16" gap between the mitered edges.

See **Detail 4**.

Note: 90° corner shown, other angles similar.

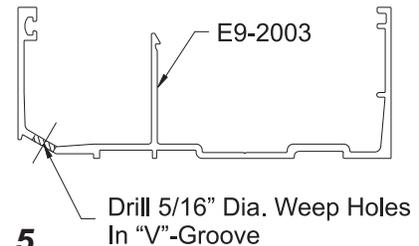


FRAME FABRICATION

STEP 2 FABRICATE WEEP HOLES IN SILL RECEPTOR

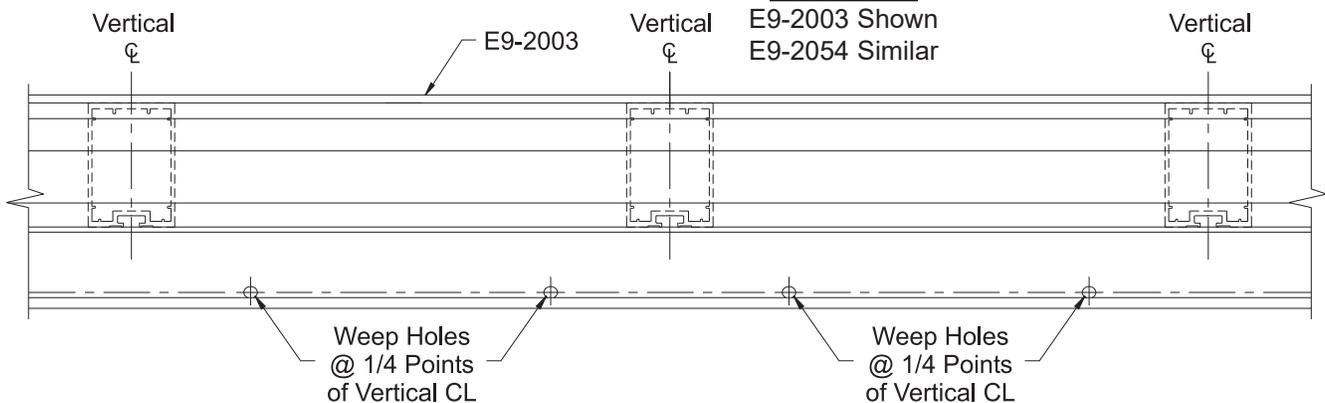
YSG 40/50 SILL

- Mark the center line of each vertical mullion on the inside of the sill receptor.
 - Drill 5/16" diameter weep holes at quarter points between the vertical center lines.
- See **Detail 5**.



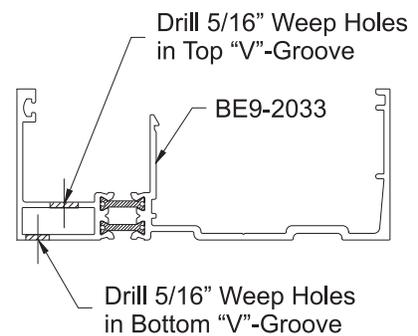
DETAIL 5

E9-2003 Shown
E9-2054 Similar

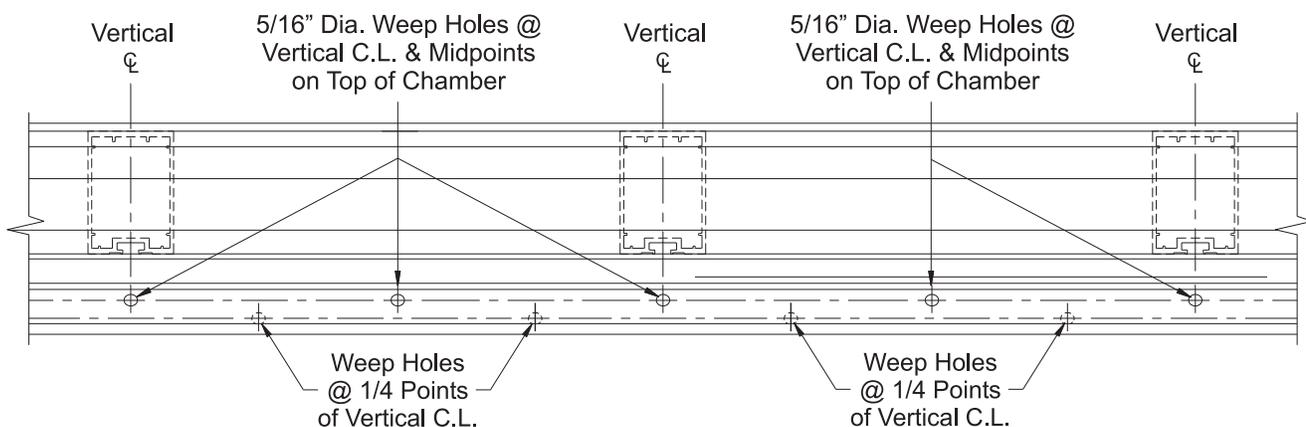


YSG 50 T SILL

- Mark this center line of each vertical mullion on the inside of the sill receptor.
- Drill 5/16" diameter weep holes at each vertical center line and midpoint along "V"-groove on the top of the chamber.
- Drill 5/16" diameter weep holes at quarter points between vertical center lines along the "V"-groove on the bottom.



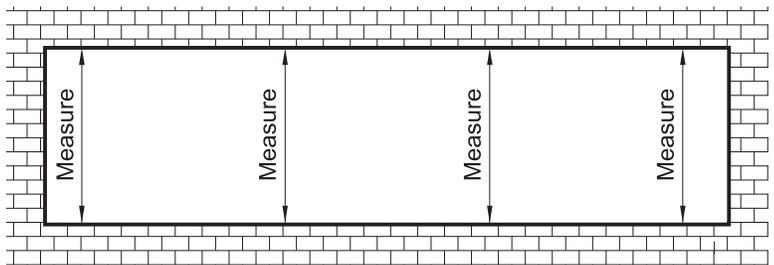
DETAIL 6



FRAME FABRICATION

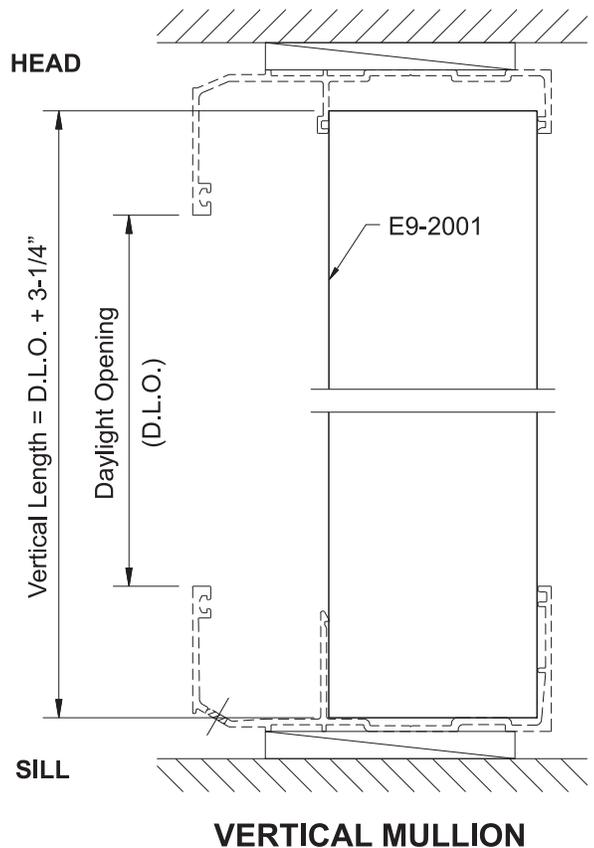
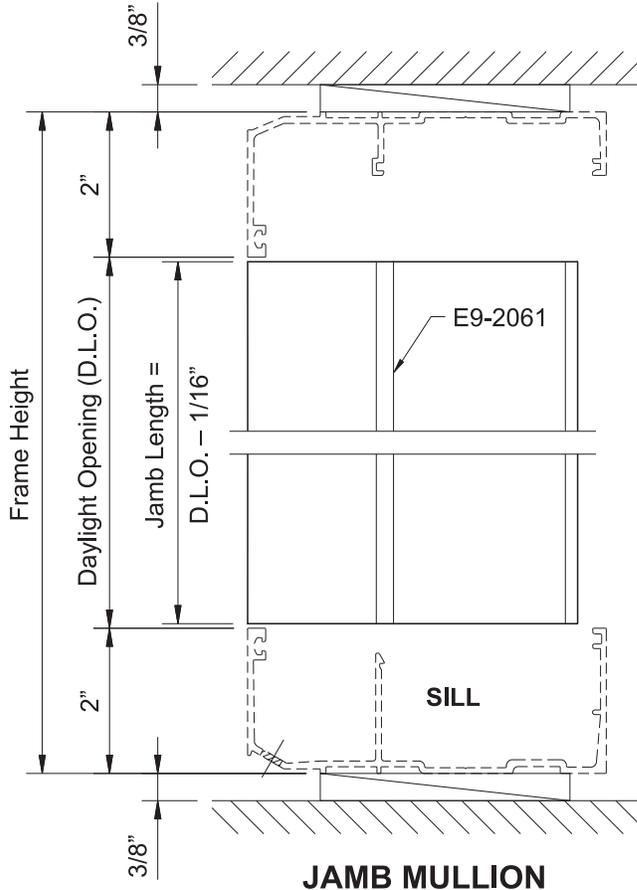
**STEP 3
FABRICATE VERTICAL & JAMB MULLIONS**

- Determine the frame height:
 - Measure the masonry opening height several times along the length of the opening to obtain the smallest vertical dimension.
 - Frame Height equals the smallest vertical dimension minus(-) 3/4".
(Allow 3/8" minimum caulk joint at both the head and the sill.)
- Daylight Opening = Frame Height minus(-) 4".
- Jamb members fit between the head and sill receptors. Cut jamb members to Daylight Opening minus(-) 1/16".
- Vertical members fit into the head and sill receptors. Cut vertical members to the Daylight Opening plus(+) 3-1/4".



See **Detail 7**.

DETAIL 7
YSG 50 Shown
Others Similar



FRAME FABRICATION

STEP 4 FABRICATE JAMB GLASS STOPS

Jamb glass stops must be fabricated to fit into the head and sill receptors.

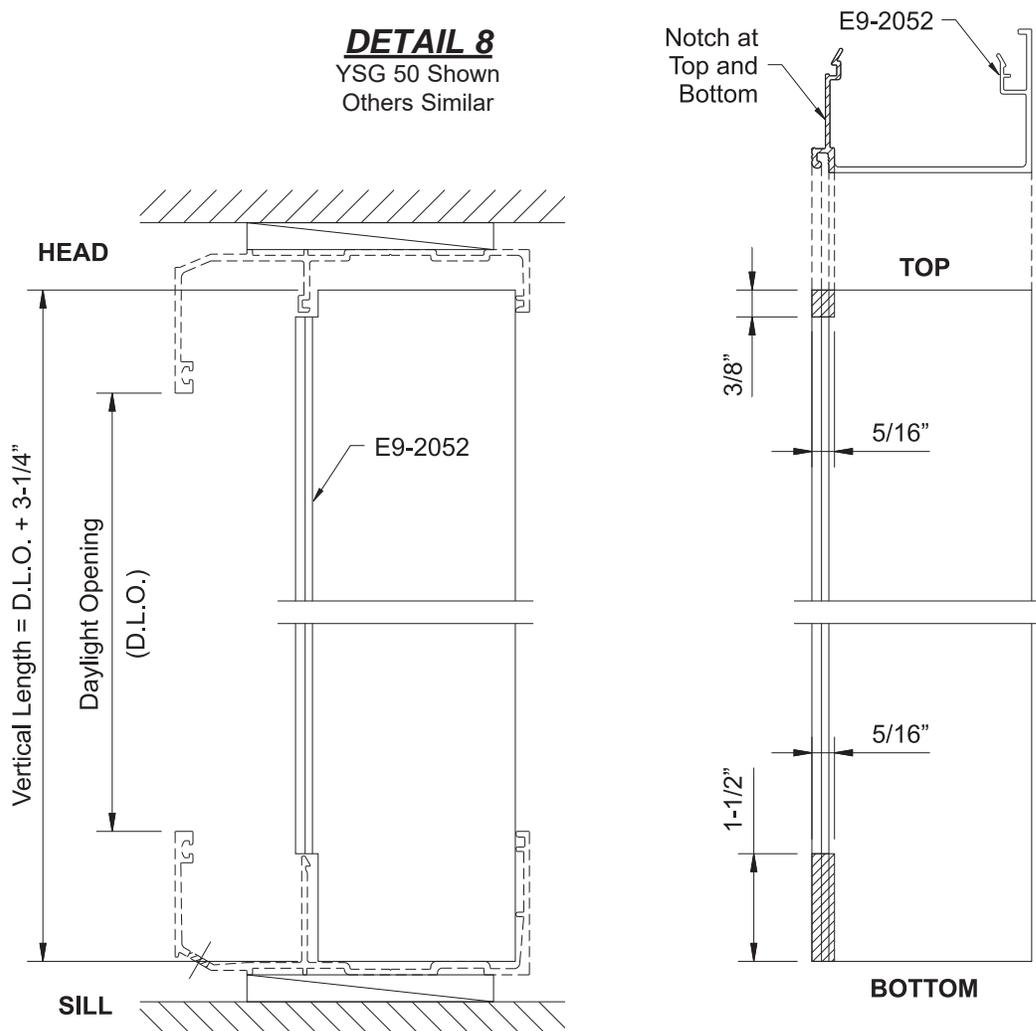
-Cut the jamb glass stops to the Daylight Opening plus(+) 3-1/4".

For the jamb glass stops, E9-2052, to fit properly into the head and sill receptors, they must be notched at the glazing gasket reglet.

-Make a 3/8" notch at the top of the glass stop.

-Make a 1-1/2" notch at the bottom of the glass stop.

See **Detail 8**.



FRAME FABRICATION

**STEP 5
FABRICATE INTERIOR GLASS STOPS**

Shear blocks, E1-1021, are required to attach horizontals to vertical and jamb member.

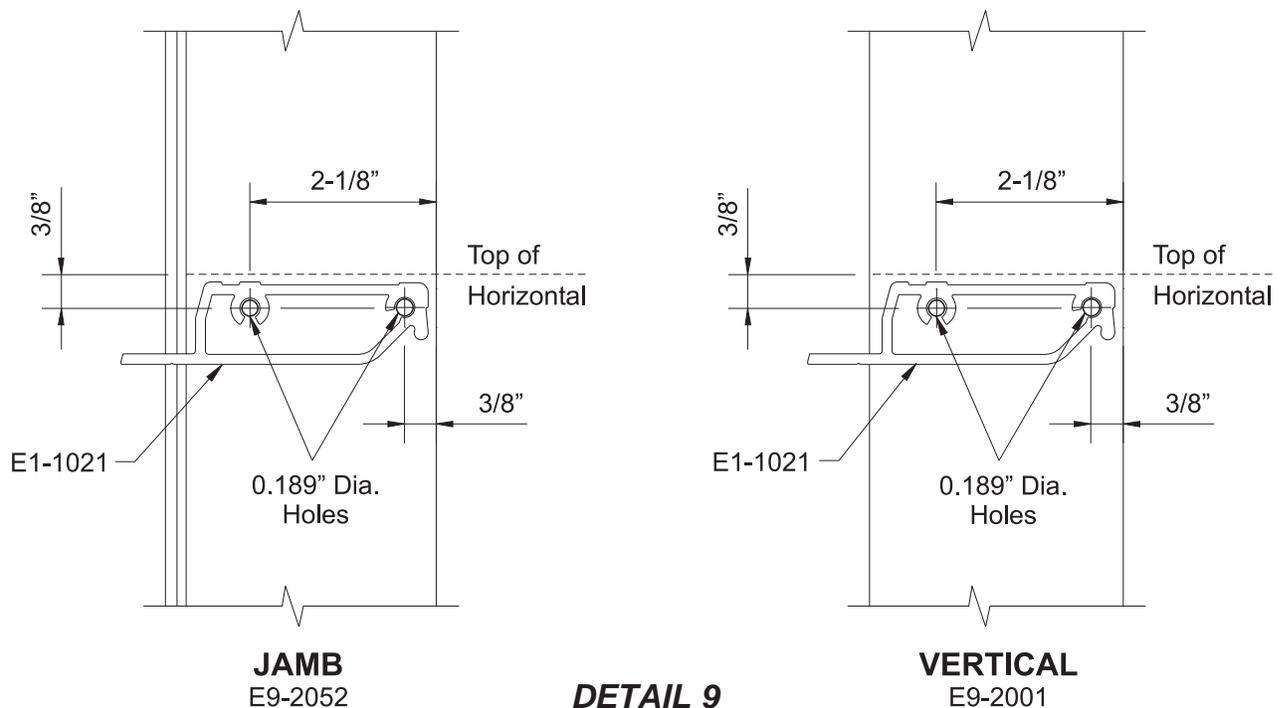
- Refer to shop drawings and mark a line on the side of the verticals at the top of each horizontal.
- Use a small piece of horizontal with a shear block attached as a template.
- Align the front edges of the mullions and mark the shear block hole locations onto the vertical.
Drill a 0.189" (#12) diameter hole at each location marked.

OR

- Locate the top of the horizontal, measure down 3/8" and draw a line across the side of the vertical using a small T-square.
- Mark the hole location for the back fastener 3/8" from the back of the mullion along this line.
- Mark the hole location for the front fastener 2-1/8" from the back of the mullion along this line.
Use extreme care; the horizontal must be installed level.
- Drill a 0.189" (#12) diameter hole at each location marked.

-Attach horizontal shear blocks with two PC-1228 fasteners per block.

See **Detail 9**.



FRAME FABRICATION

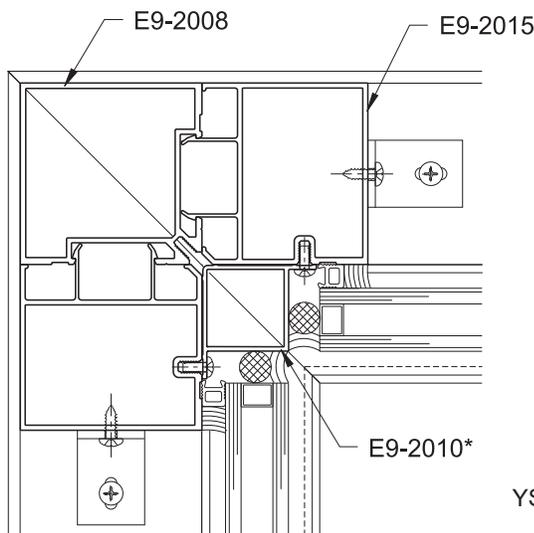
STEP 6 FABRICATE CORNER MEMBERS

Your project may have inside or outside corners. The following pages show the selection of corners that are available for the YSG 40/50/50T systems.

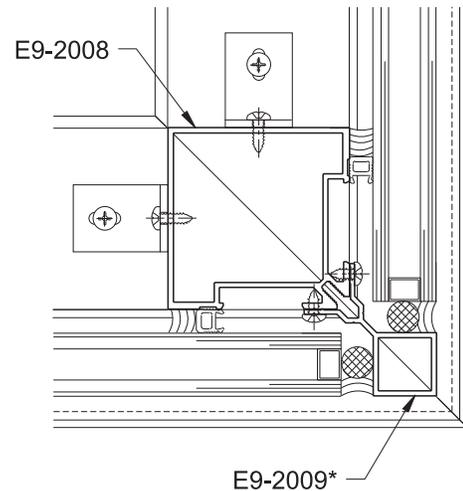
- Cut all corner posts and mullions that sit in the back pocket of the receptors to the Daylight Opening plus(+) 3-1/4".
- Cut components that are in the glass plane such as E9-2009 & E9-2010 to the Daylight Opening plus(+) 3/4".

See **Details 10 & 11.**

Note: *Components that are in the glass plane are not as long as those in the back pocket of the receptors.

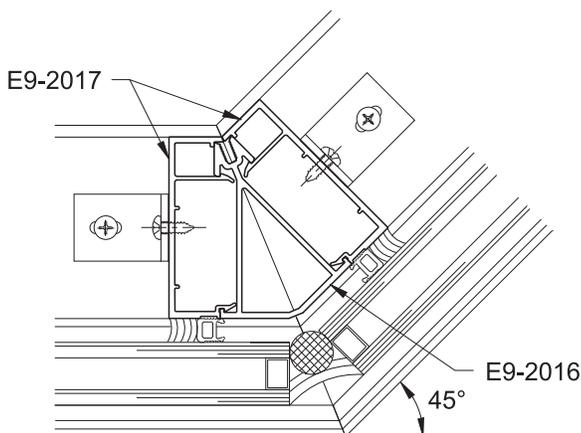


90° Inside Corner

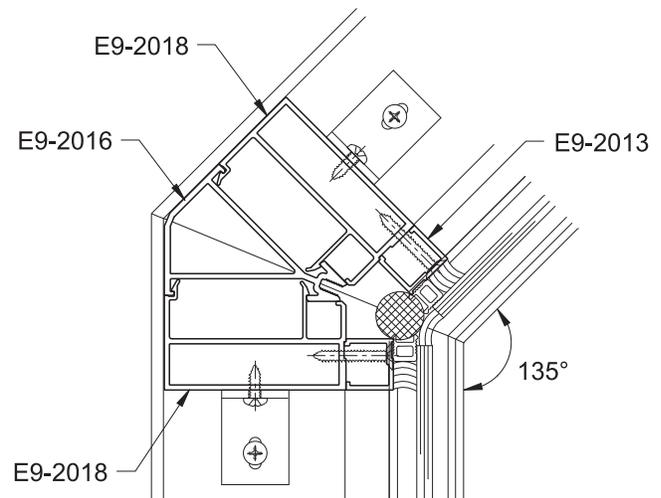


90° Outside Corner

DETAIL 10
YSG 50/50T Shown
YSG 40 Similar



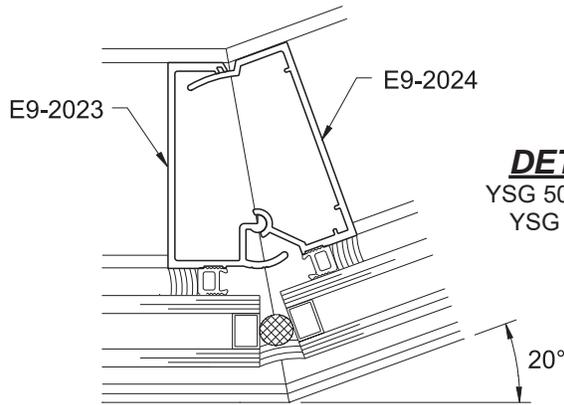
135° Outside Corner



135° Inside Corner

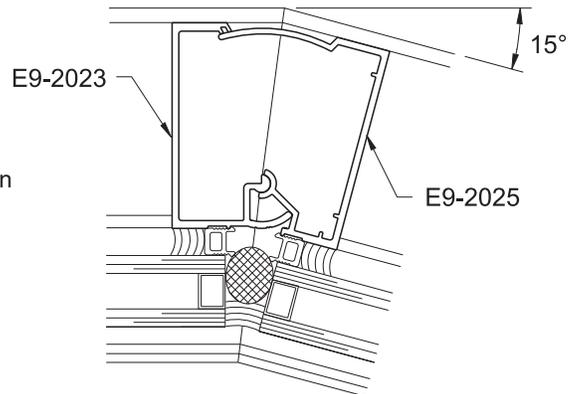
FRAME FABRICATION

STEP 6 (Continued)
FABRICATE CORNER MEMBERS



**Hinged Mullion
5° to 22.5° Outside Corner**

DETAIL 11
YSG 50/50T Shown
YSG 40 Similar

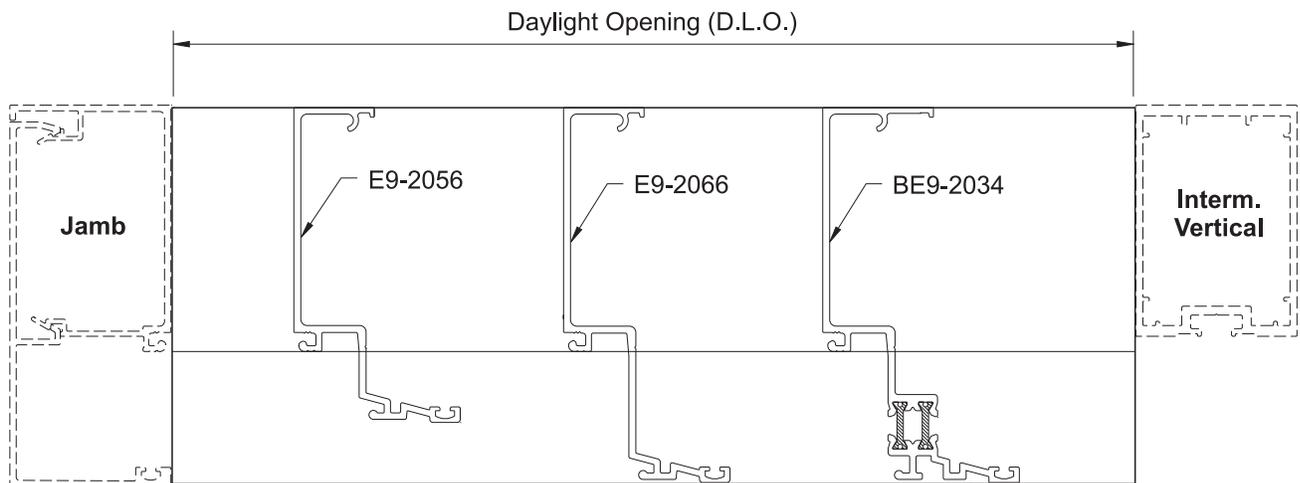


**Hinged Mullion
1° to 15° Inside Corner**

STEP 7
FABRICATE CORNER MEMBERS

-Cut intermediate horizontal member E9-2056, E9-2066, and BE9-2034 to the Daylight Opening dimension between vertical and/or jamb mullion. (Tolerance is +0", -1/32".)

See **Detail 12**.



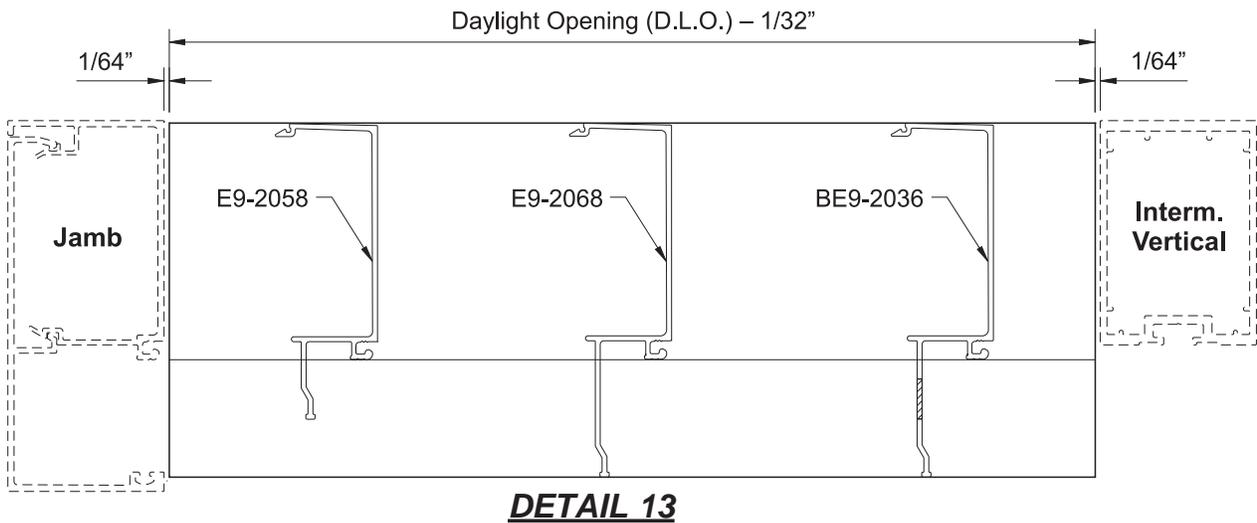
DETAIL 12

FRAME FABRICATION

**STEP 8
FABRICATE INTERMEDIATE HORIZONTAL GLASS STOPS**

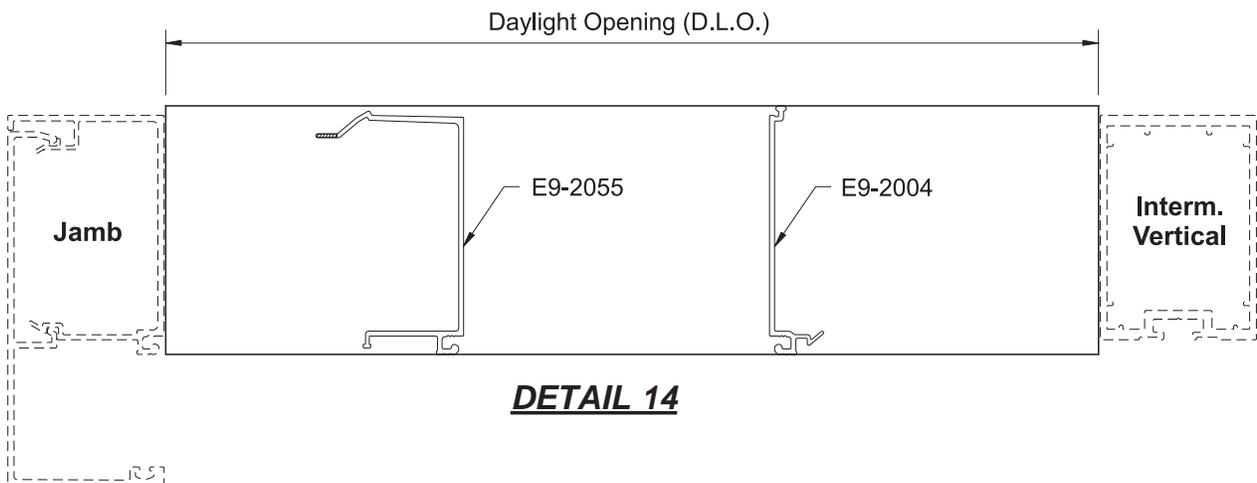
Vertical Through Frames:

-Cut intermediate horizontal glass stops E9-2058 (YSG 40), E9-2068 (YSG 50), and BE9-2036 (YSG 50 T) to the daylight opening dimension minus(-) 1/32".
See **Detail 16**.



**STEP 9
FABRICATE HEAD & SILL RECEPTOR GLASS STOPS**

-Cut receptor glass stops E9-2055 (head) and E9-2004 (sill) to the Daylight Opening dimension between the vertical and/or jamb mullions. (Tolerance is +0", -1/32".)
See **Detail 16**.



FRAME FABRICATION

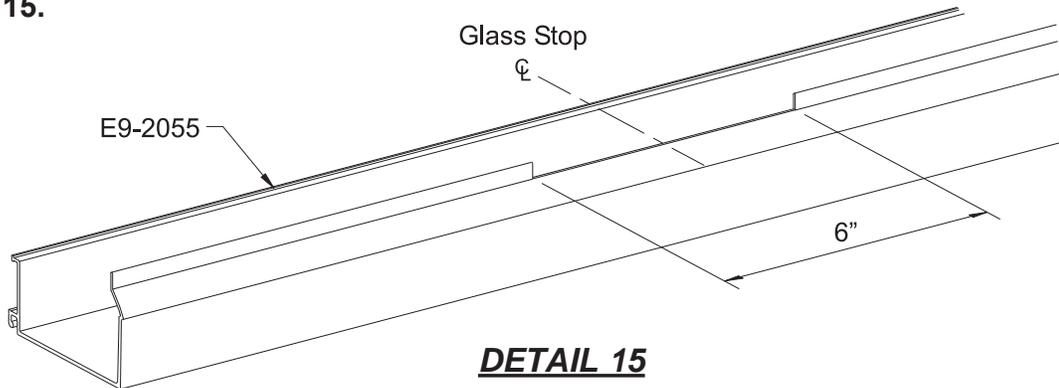
STEP 9 (Continued)

FABRICATE HEAD & SILL RECEPTOR GLASS STOPS

The head receptor glass stop must be notched to clear any splice sleeves in the rear chamber.

- Determine the glass stops(s) that will occur at a splice and make a 6" long notch in the back leg. The notch is centered on the glass stop so that it lines up with the splice sleeve attached to the head receptor.

See **Detail 15**.



STEP 10

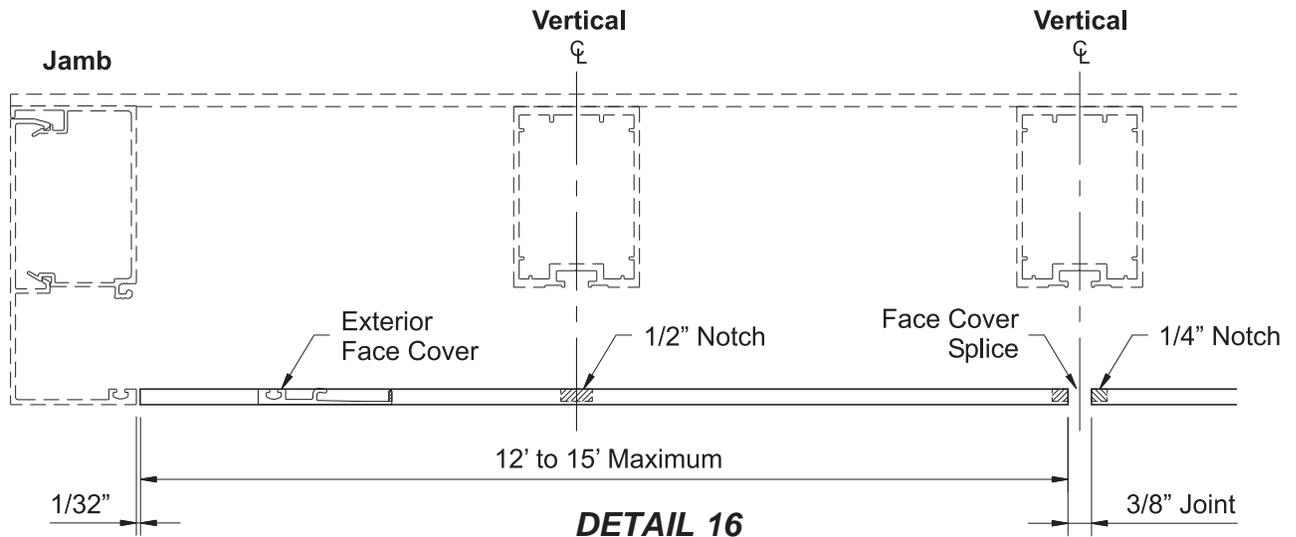
FABRICATE EXTERIOR FACE COVERS

Intermediate horizontals require exterior face covers E9-2057 for YSG 40/50 and E9-2035 for YSG 50 T frames.

- For frame widths 24'-0" or smaller, cut the face covers to the Daylight Opening minus(-) 1/16".
- For frame widths greater than 24'-0", and expansion joint is required every 12 to 15 feet at the centerline of an intermediate vertical.

- Allow for a 1/32" joint at each jamb and a 3/8" joint between face cover splices.

See **Detail 16**.



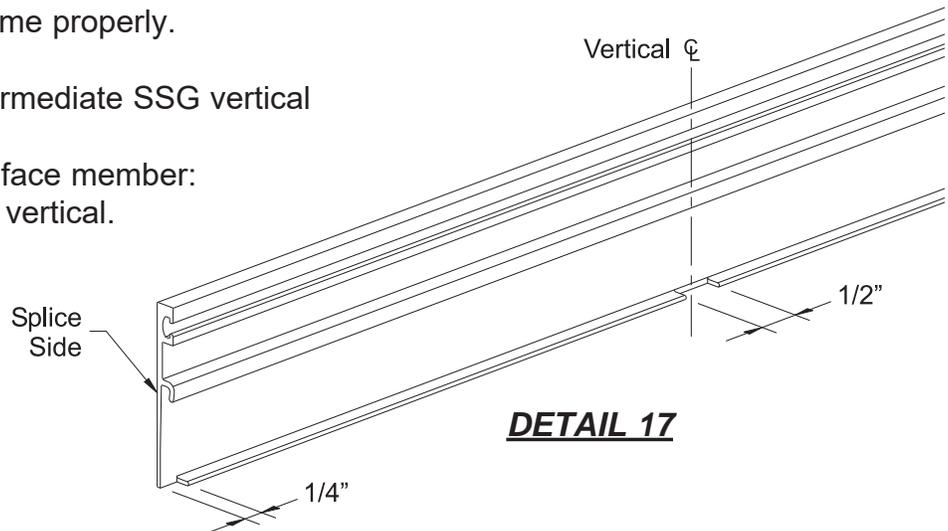
FRAME FABRICATION

**STEP 10 (Continued)
FABRICATE EXTERIOR FACE COVERS**

The interior face covers also need to be notched to allow water to weep away from the frame properly.

- Mark the centerline of each intermediate SSG vertical along the exterior face covers.
- Notch out the bottom leg of the face member:
1/2" at the centerline of each vertical.
1/4" at the splice side ends.

See **Detail 17**.



**STEP 11
INSTALL HEAD & SILL RECEPTOR END DAMS**

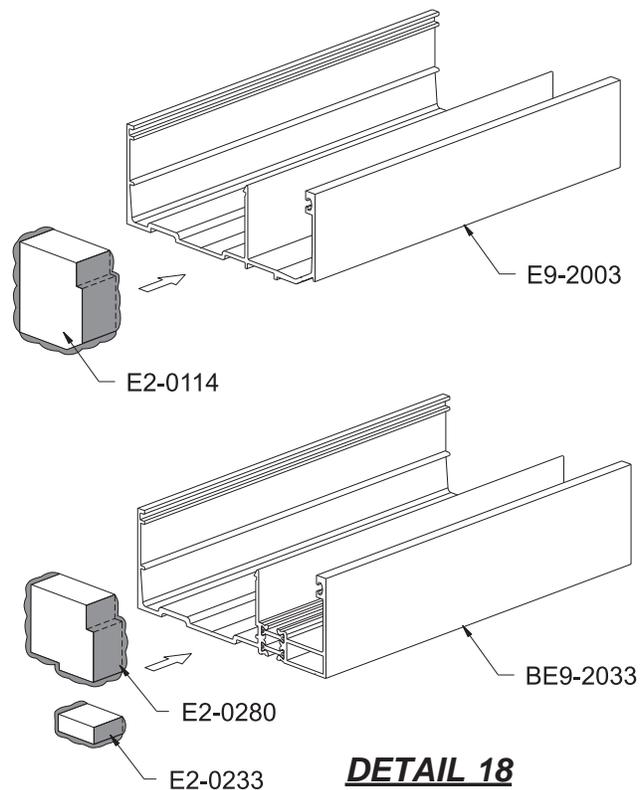
The ends of head and sill receptors must be plugged using end dams:

- E2-0132 for YSG 40 receptors.
- E2-0114 for YSG 50 receptors.
- E2-0280 / E2-0233 for YSG 50 T receptors.

Use the following technique to install end dams at the head and sill receptors:

- Clean the ends of the head and sill members with cleaner and method approved by sealant manufacturer.
- Apply sealant to all contact sides of the end dam.
- Insert the end dam into each end.
- Apply sealant to the end dams, and tool the sealant flush with the ends of the mullion.

See **Detail 18**.

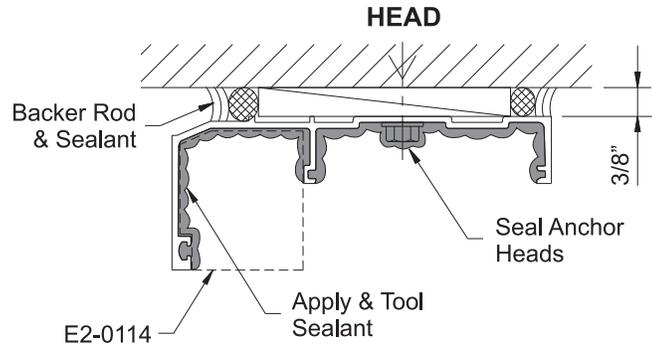
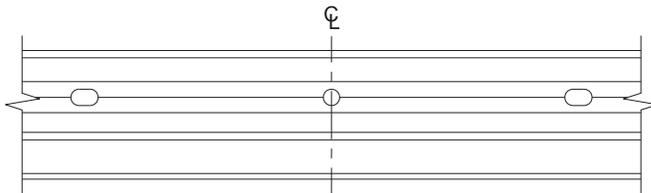


DETAIL 18
Sill Shown,
Head Similar

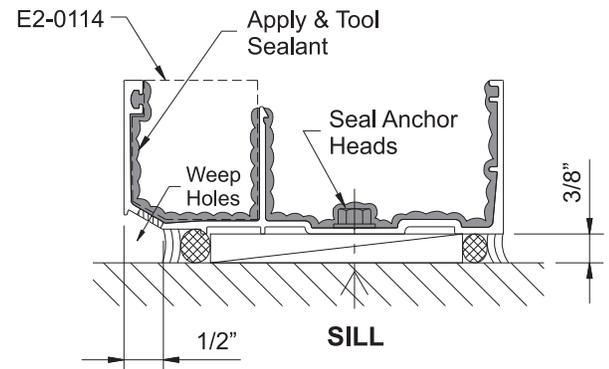
FRAME INSTALLATION

STEP 12
INSTALL HEAD & SILL RECEPTORS

- Using building control lines, locate the inside face of the head and sill receptors.
- Begin installation at the smallest opening height. Shim the receptors level with a 3/8" minimum shim.
- Locate anchors within 6" from each end of the receptor, within 6" of each side of vertical center line, and 24" maximum on center.
- Locate the approximate center of each receptor and drill a clear hole for the center anchor bolt. Check approved shop drawings / P.E. calculations for anchor bolt and clear hole sizes or contact YKK AP.
- All other anchor holes are to be oblong to allow for expansion and contraction. Do not simply drill larger clear holes.

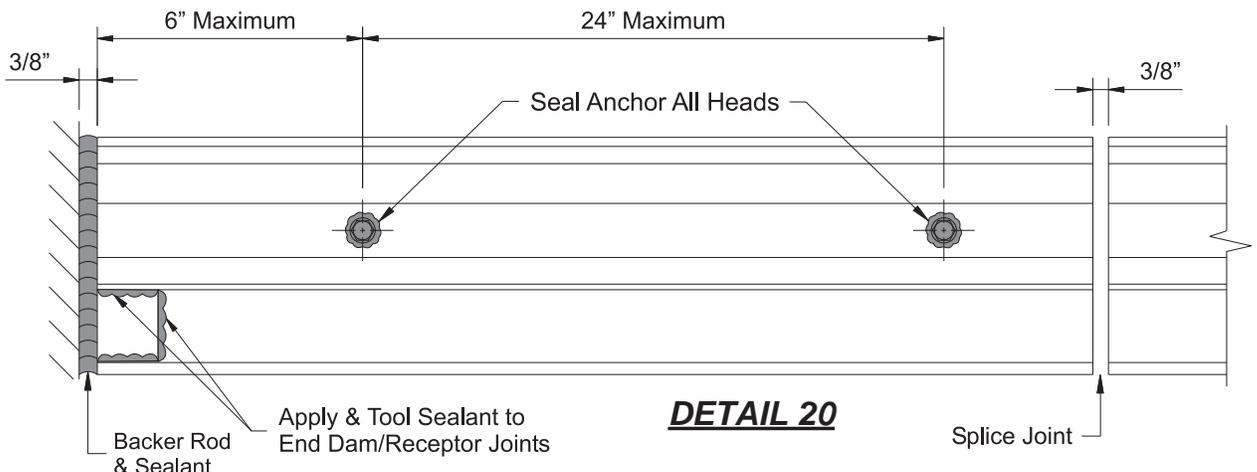


DETAIL 19
YSG 50 Shown
YSG 40/50T Similar



- Apply and tool sealant to all exposed anchor head and end dam/receptor joints.
- Install backer rod underneath and at the ends of the receptor between the structure and the receptor. Apply and tool perimeter sealant along this area. At the sill receptors, hold the sealant back from the face at least 1/2" to keep the weep holes clear.

See **Details 19 & 20**.



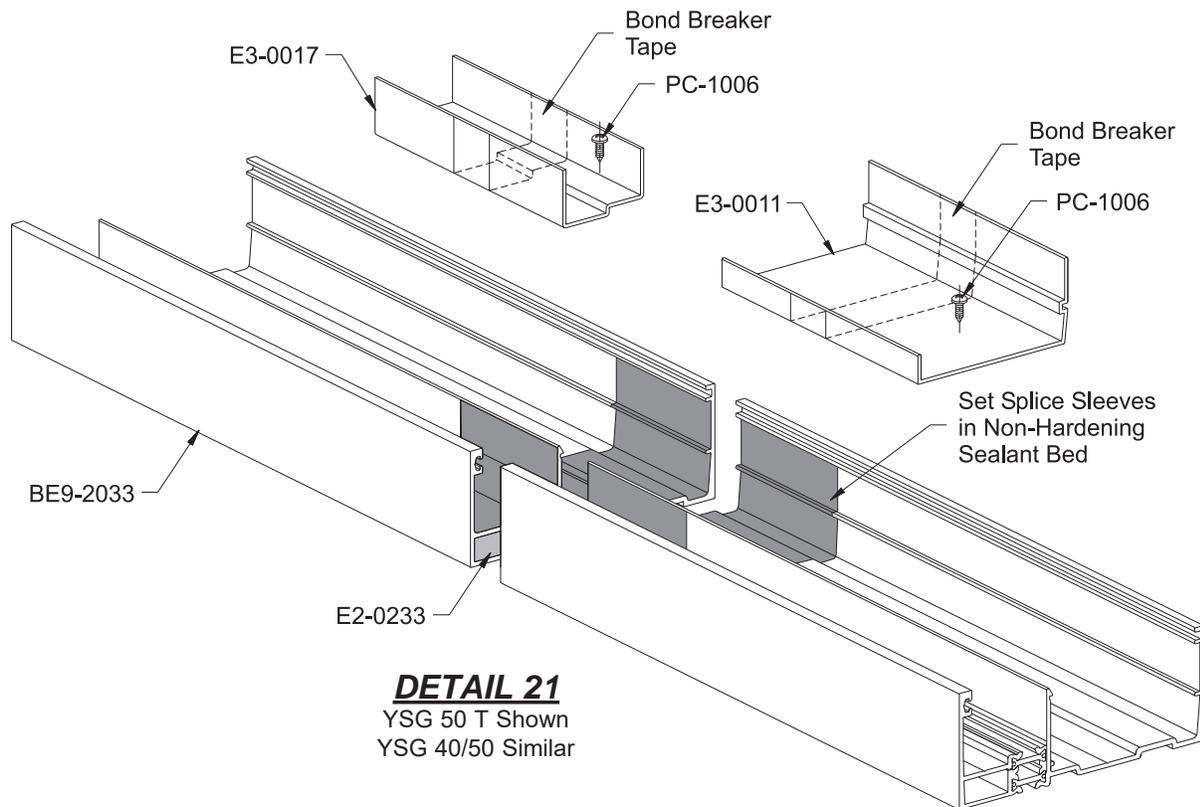
DETAIL 20

FRAME INSTALLATION

STEP 13 INSTALL SILL RECEPTOR SPLICE SLEEVES

Expansion Joints at Sill Receptors:

The expansion joint gaps in the sill receptor must be bridged with splice sleeves E3-0012 (YSG 40), E3-0007 (YSG 50), and E3-0017 (YSG 50 T) at the front chamber and E3-0011 (YSG 40/50/50T) at the rear chamber.



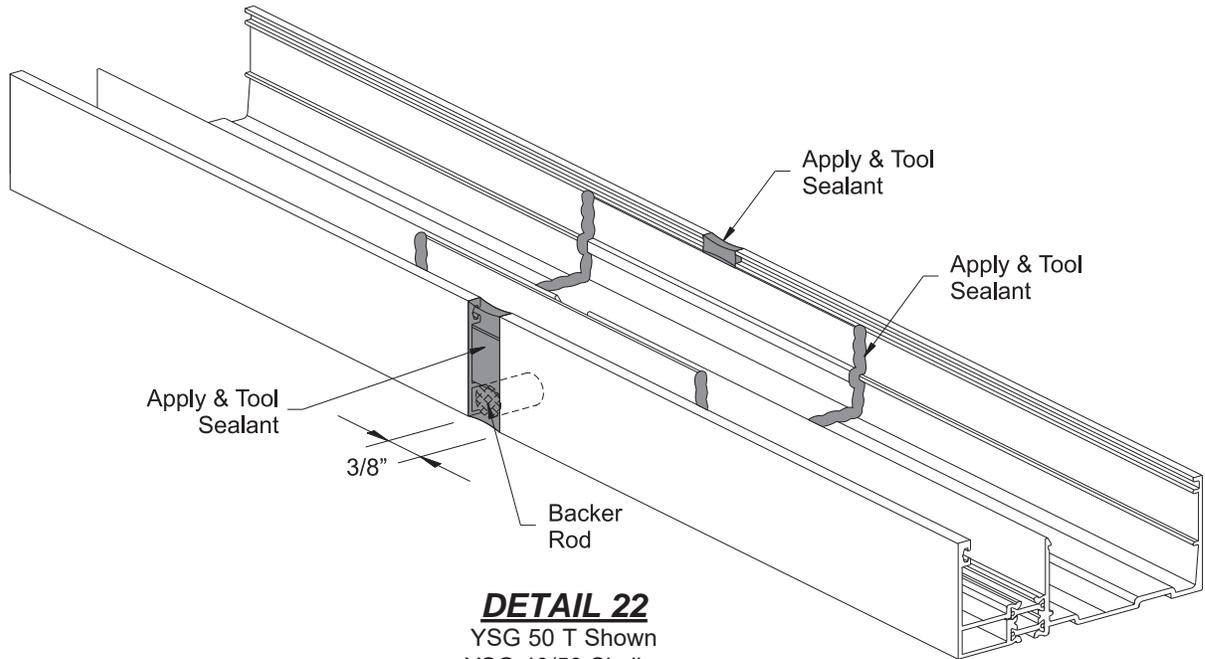
DETAIL 21
YSG 50 T Shown
YSG 40/50 Similar

- Clean all sealant contact surface with cleaner and method approved by sealant manufacturer.
- For YSG 50 T frames, insert end dam, E2-0233 into the bottom, front chamber of the receptor at each end of the splice, and seal flush with sealant.
- Apply bond breaker tape to the splice sleeves along the midpoint of the side facing the receptors.
- Apply a bead of non-hardening, non-curing sealant on the base and inside walls of the receptor where the splice sleeves will be placed.
- Place the splice sleeves into position, center the bond breaker tape over the joint, apply pressure, and tool the excess sealant over the edges of the splice sleeve.
- Fasten splice sleeves, on one side only, to the receptor with one PC-1006 fastener.
- Seal the exposed screw heads.

See **Details 21 & 22**.

FRAME INSTALLATION

STEP 13 (Continued)
INSTALL SILL RECEPTOR SPLICE SLEEVES



DETAIL 22
YSG 50 T Shown
YSG 40/50 Similar

- For YSG 50 T frames, place a small piece of backer rod into the cavity underneath the front receptor splice sleeve.
 - Apply a bead of sealant along the expansion joint at the front and back of the receptor.
 - Tool the sealant to ensure a watertight joint.
- See **Detail 22**.

FRAME INSTALLATION

STEP 14 INSTALL HEAD RECEPTOR SPLICE SLEEVES

The expansion joint gaps in the head receptor must be bridged with splice sleeves E3-0013 (YSG 40), E3-0016 (YSG 50), and E3-0017 (YSG 50 T) at the front chamber and E3-0011 (YSG/50/50T) at the rear chamber.

-Splice sleeve E3-0011 and E3-0017 must be modified as shown in order to fit into the head receptors.

-Clean all sealant contact surfaces using method and cleaner approved by sealant manufacturer.

-Apply bond breaker tape to the splice sleeve along the midpoint of the side facing the receptor.

-Apply bed of non-hardening, non-curing sealant to the head receptor using the same technique used for the sill receptor splice.

-For YSG 50 T frames, insert end dam, E2-0233, into the bottom front chamber of the receptor at each end of the splice, and seal flush with sealant.

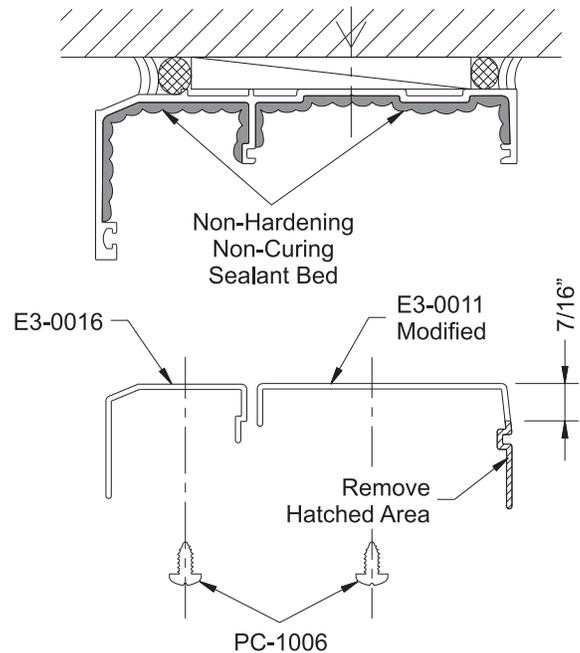
-Secure the splice sleeve, on one side only, to the head receptor with one PC-1006 fastener.

-Seal all exposed screw heads.

-For YSG 50 T frames, place a small piece of backer rod into the frame cavity underneath the front receptor splice sleeve.

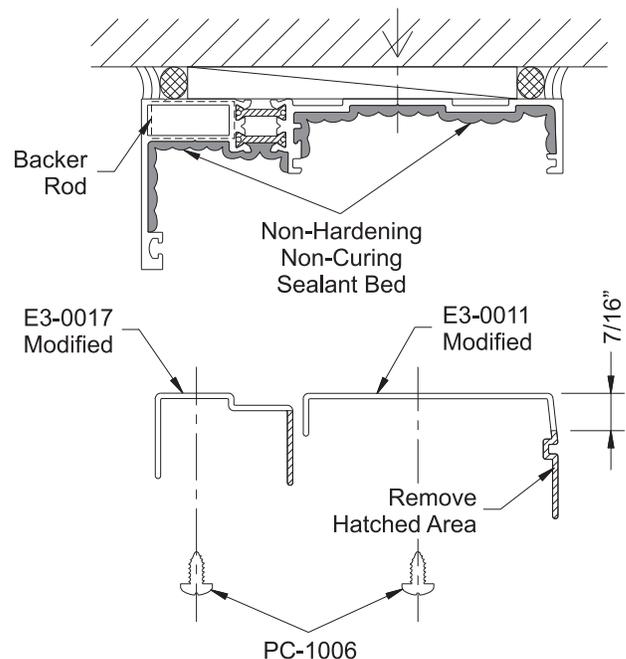
-Apply sealant to the expansion joint at the front and back of the head receptor similar to the sill receptor.

See **Details 23 & 24**.



DETAIL 23

YSG 50 Shown
YSG 40 Similar



DETAIL 24

YSG 50 T Shown

FRAME INSTALLATION

STEP 15
INSTALL JAMB MULLIONS

- Align the face of the jamb member with the face of the receptors. Align the flat back of the jamb with the ends of the receptors.
- Shim between the jamb and the structure to ensure that it is installed plumb and square.
- Install anchors within 6" of each end and no more than 24" on center.

-On the inside of the receptors, apply and tool sealant to the intersection of the exterior legs of the jamb and the receptors.

See **Detail 25**.

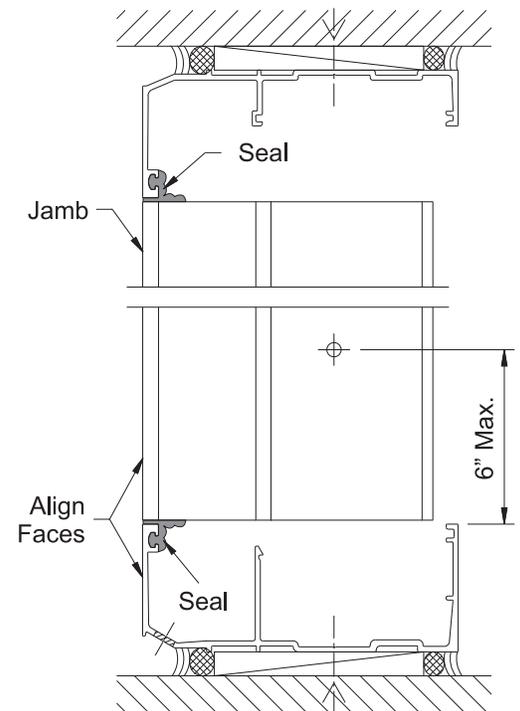
-Snap the modified jamb glass stop, E9-2052, onto the jamb.

-In the glazing pocket, seal between the jamb member, glass stop, and the interior legs of the receptor.

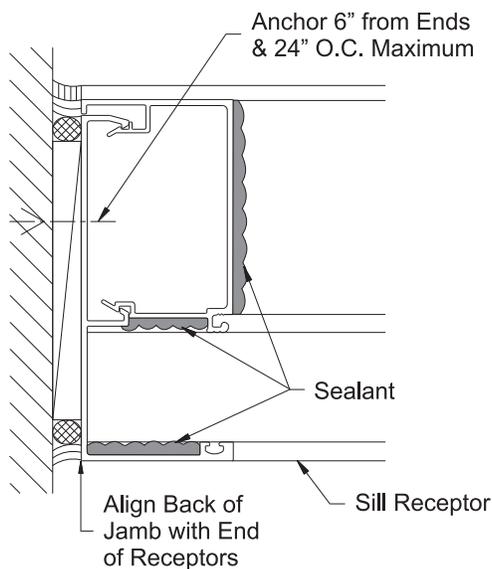
See **Details 25 & 27**.

-Seal across the intersection of the glass stop and the sill receptor.

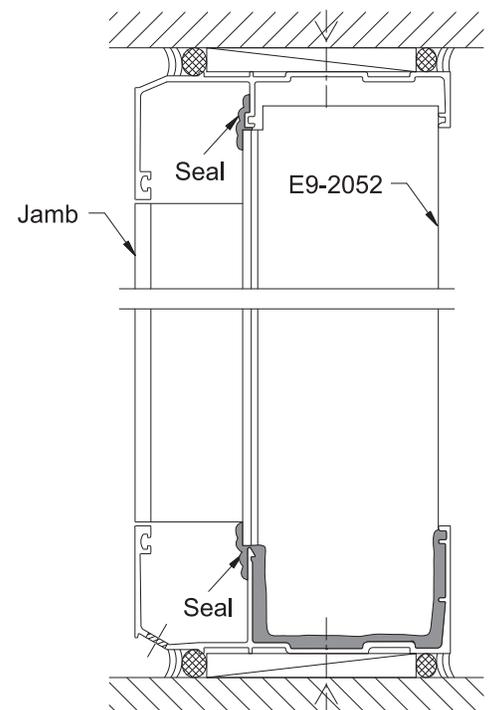
See **Details 26 & 27**.



DETAIL 25



DETAIL 26



DETAIL 27

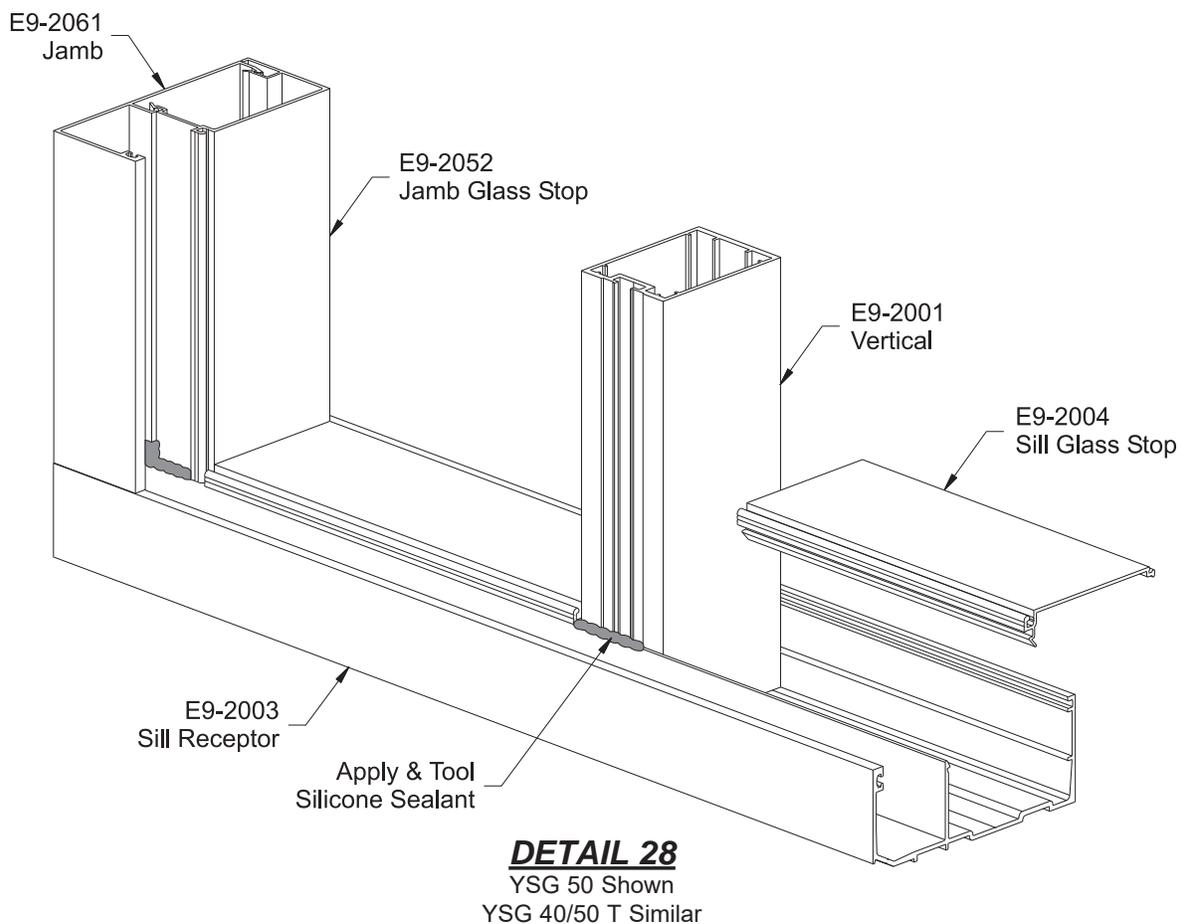
FRAME INSTALLATION

STEP 16 INSTALL VERTICAL MULLIONS

Once the jamb is anchored and sealed, proceed with the installation of the vertical mullions.

- Snap in the first sill glass stop, E9-2004, and slide it tight against the jamb glass stop.
- Stand the first vertical up into the head and sill receptors making sure that it is installed plumb and square.
- Snap in the next sill glass stop and slide it tight against the vertical mullion.
- Install the rest of the verticals and sill glass stops using the same technique described above. All verticals must be erected plumb and square.
- Apply and tool silicone sealant to the intersection of all verticals to the head and sill receptors. See **Detail 28**.

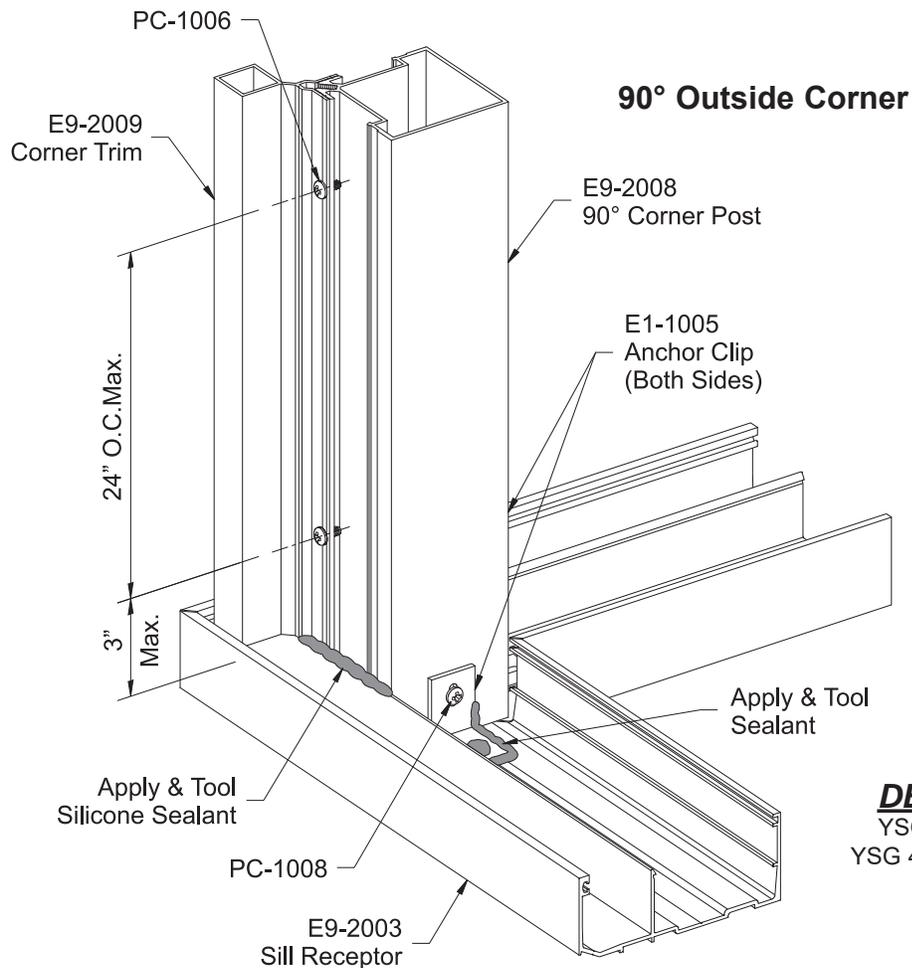
Caution: Check the centerline to centerline dimension every fifth vertical to avoid accumulating dimensional errors.
Do not install the head glass stop at this time.



FRAME INSTALLATION

STEP 17
INSTALL CORNER MULLIONS

- Prior to installing the last sill glass stop, install the base corner post, E9-2008, into the head and sill receptors.
 - Assemble the corner framing members as shown in the shop drawings.
See **Pages 14 & 15** for available corner configurations.
 - At all corners, attach the corner assemblies to the head and sill receptors with E1-1005 anchor clips on each side of the corner post with two PC-1008 fasteners per clip.
 - Apply and tool sealant around the bottom anchor clip and the fasteners penetrating the sill.
 - Apply and tool silicone sealant to the intersection of the corner assembly and the head and sill receptor.
- See **Detail 29**.
- Continue installing the rest of the verticals and sill glass stops using the same method previously described in **Step 16**.



DETAIL 29
YSG 50 Shown
YSG 40/50 T Similar

FRAME INSTALLATION

STEP 18 INSTALL INTERMEDIATE HORIZONTALS

-Water deflectors, E1-1022 (YSG 40), E1-1023 (YSG 50), and E1-1024 (YSG 50 T), must be installed under the shear block at all intermediate verticals.

Do not install these at the jambs.

-Bend the bottom leg of the water deflector back 15°.

-Apply sealant along the top of the shear block, E1-1021, where it meets the vertical.

-Apply sealant to the top of the water deflector and center it between the two shear blocks.

See **Detail 30**.

-Immediately after applying the sealant, rotate the horizontal onto the shear block. Make sure that the horizontal and vertical glazing pockets are aligned.

-The shear block has two countersunk holes drilled in the underside of the leg. Using the farthest hole from the vertical, match drill a 0.161" diameter (#20 bit) hole at each end of the horizontal.

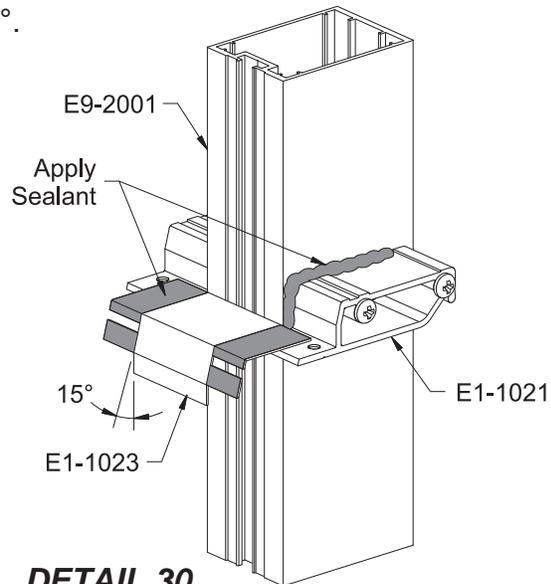
-Attach the horizontal to the shear block using one FB-1008 fastener at each end.

See **Detail 31**.

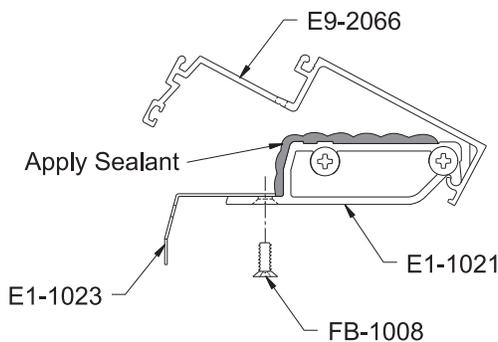
-Apply and tool sealant to all joints between the water deflector and the vertical and horizontals.

-Seal the ends for the fasteners that penetrate the glazing pocket of the horizontal.

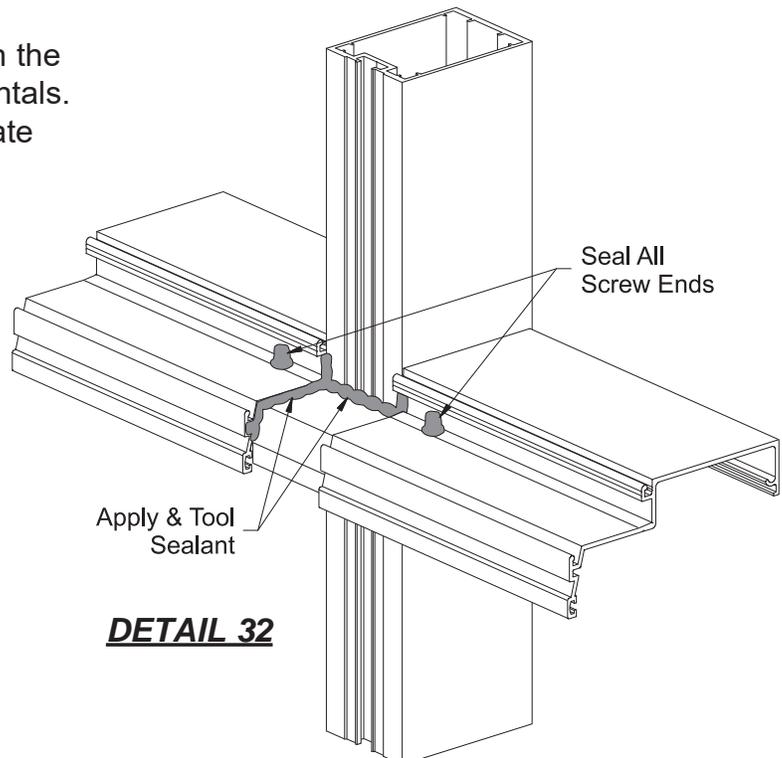
See **Detail 32**.



DETAIL 30



DETAIL 31



DETAIL 32

FRAME INSTALLATION

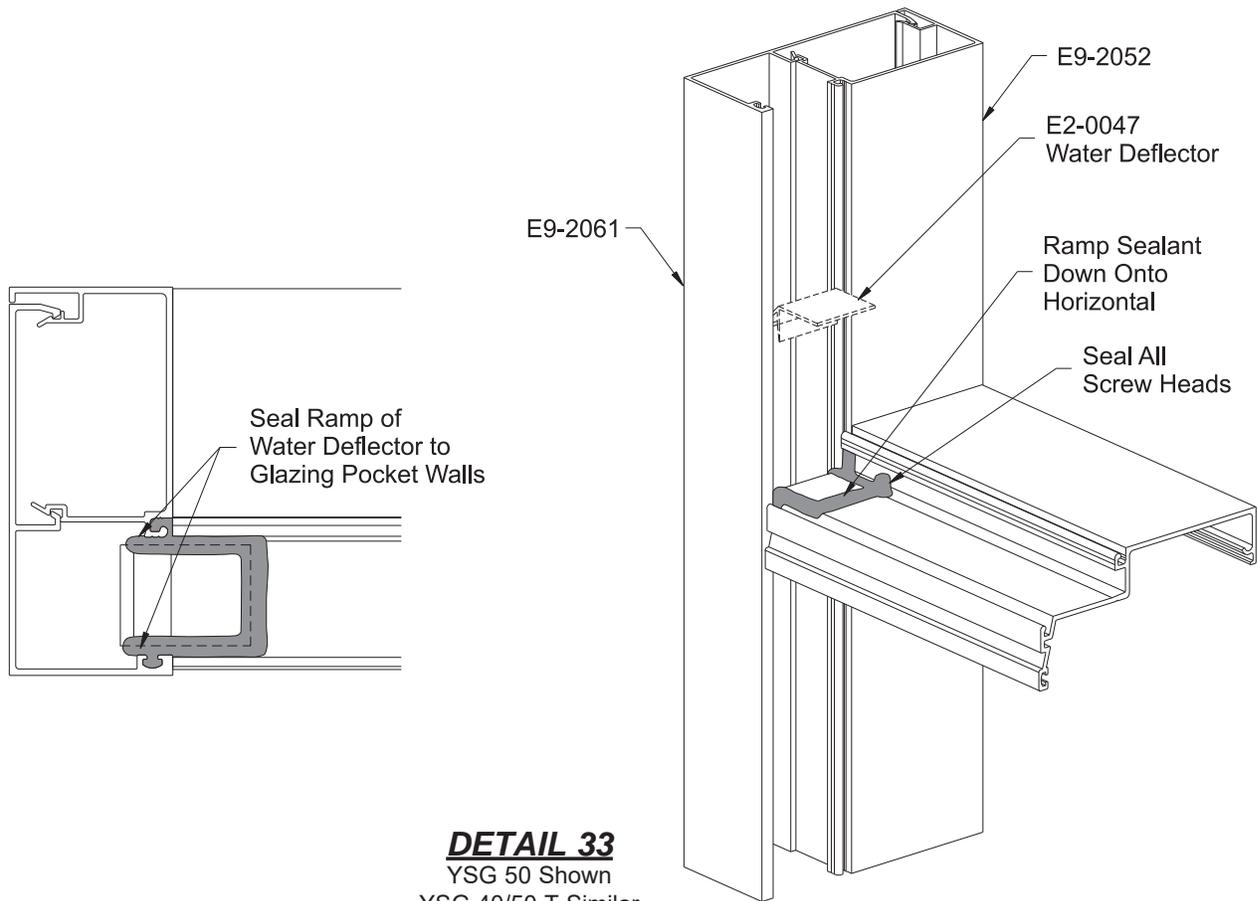
STEP 19
INSTALL WATER DEFLECTORS AT JAMBS

The installation of another type of water deflector, E2-0047, is required at each end of the intermediate horizontals. Water deflectors aid to properly divert water away from the framing system.

- Clean and dry off the glazing pocket of each horizontal at the ends.
- Peel off the protective paper and install the water deflector at the jamb end of the horizontal.
- Position the vertical leg fo the deflector against the end of the horizontal.
- Apply and tool sealant along the edges of the water deflector down onto the horizontal.
- Seal all horizontal to vertical joints in the glazing pocket.
- Seal the ramp of the water deflector to the sides of the glazing pocket wall.

See **Detail 33**.

Note: For YSG 40 frames water deflector, E2-0048 should be used instead due to the smaller glazing pocket.



DETAIL 33
YSG 50 Shown
YSG 40/50 T Similar

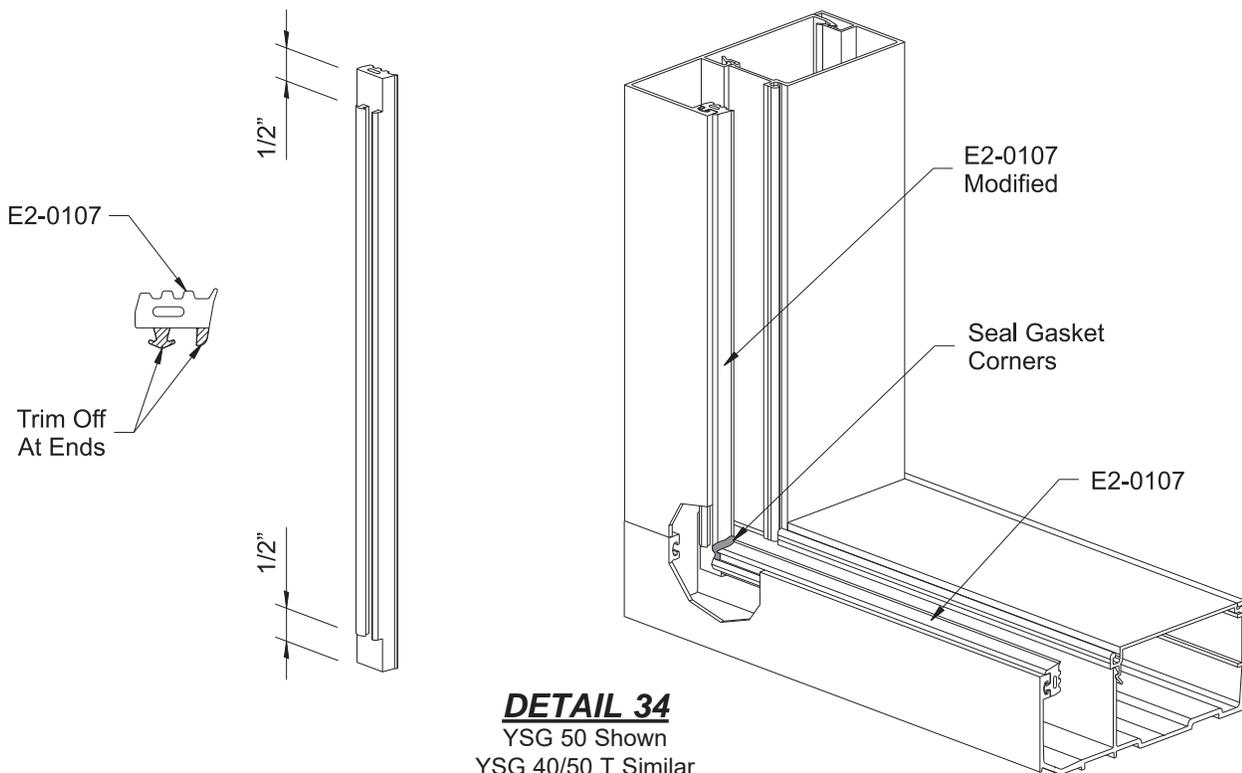
GLAZING

STEP 20 INSTALL EXTERIOR GLAZING GASKET

The exterior glazing gaskets must be installed prior to beginning the glazing process.

- Using a small brush, clean out any dirt that may have accumulated in the gasket reglets.
- Install the glazing gaskets at the jamb first:
 - Cut the jamb exterior glazing gaskets to the Daylight Opening plus(+) 1-1/2".
 - Trim the dart and flap of the jamb gasket back 1/2" at each end to allow the gasket to run through the horizontal member.
 - Insert the gasket into the reglets at each end first; then insert the gasket into the midpoint of the opening.
 - Push the gasket into the reglet starting at the midpoint and work towards each end.
- Install horizontal glazing gaskets next:
 - Cut horizontal glazing gaskets to Daylight Opening between the jambs plus(+) 3/16" for each foot of horizontal.
 - Apply sealant to each end of the horizontal glazing gasket and insert the gasket into the reglet at each end first.
 - Then insert the gasket at the midpoint of the opening and push the gasket into the reglet starting at the midpoint and work towards each end.
 - Tool the excess sealant at the gasket corners to ensure a watertight seal.

See **Detail 34**.



DETAIL 34
YSG 50 Shown
YSG 40/50 T Similar

GLAZING

**STEP 21
INSTALL GLASS**

-Determine the glass size:

	Width	Height
Jamb to SSG	D.L.O. + 1-3/16"	D.L.O. + 7/8"
SSG to SSG	D.L.O. + 1-1/2"	D.L.O. + 7/8"

-Clean the sill receptor of debris to clear weep holes.
 -Install setting block at 1/4 points or according to engineering calculations. For YSG 50, setting block chair, E1-1003, is required at the sill. Weep baffles, E2-0099, are required at each setting block chair and over the weep holes for YSG 40/50.

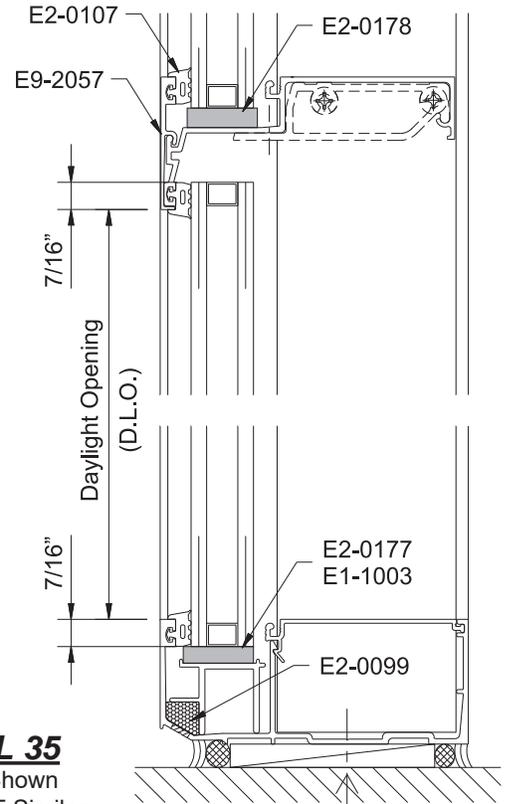
-Install exterior horizontal face covers, E9-2057 or E9-2035, at intermediate horizontals.

-Install glazing gaskets in the top part of the face members as instructed in **Step 20** on **Page-28**.

-Install glazing gaskets in the bottom part of the intermediate horizontals similarly but leave a 1/2" gap where the face members are notched.

This will allow the frame to weep properly.

See **Detail 35**.

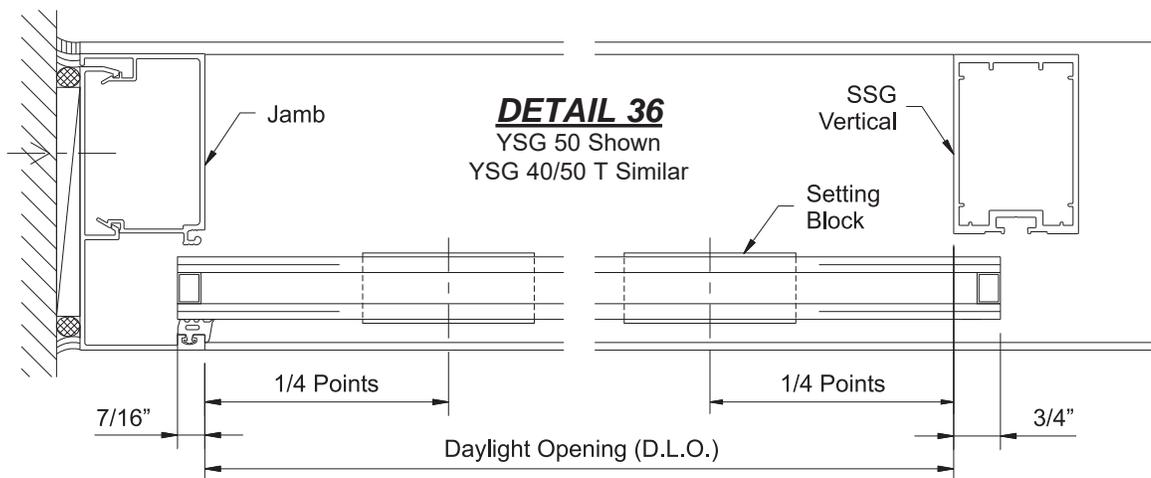


DETAIL 35
 YSG 50 Shown
 YSG 40/50 T Similar

-Carefully install the first lite of glass from the interior starting at one of the jambs.

-Slide the glass into the glazing pocket of the jamb until it clears the SSG vertical; slide the glass back 3/4" over in front of the first SSG vertical.

See **Detail 36**.



DETAIL 36
 YSG 50 Shown
 YSG 40/50 T Similar

GLAZING

STEP 21 (Continued) INSTALL GLASS

Interior glass stops are required at all head and intermediate horizontal conditions:

E9-2055 at the head for YSG 40/50/50T.

E9-2058 (YSG 40), E9-2058 (YSG 50), and BE9-2036 (YSG 50 T) at the horizontal.

- Apply non-hardening sealant to each end of the glass stop and snap it into position.
- Tool the sealant into the joint between the glass stop and the vertical to ensure a watertight seal.
- Wipe away any excess sealant. See **Detail 37**.

-Cut the silicone glazing spacers, E2-0106, to the same dimension as the glass plus(+) 1/4" per foot.

-Using a putty knife, carefully install the silicone glazing spacer behind the first lite installed:

- Insert the bottom of the spacer so that it is aligned with the bottom of the lite of glass.
- Push the spacer in until it locks into place and work your way up the vertical.

-Install interior glazing gaskets, E2-0108, at the jamb, horizontal members, and glass stops using the same technique described in **Step 20** on **Page-28**.

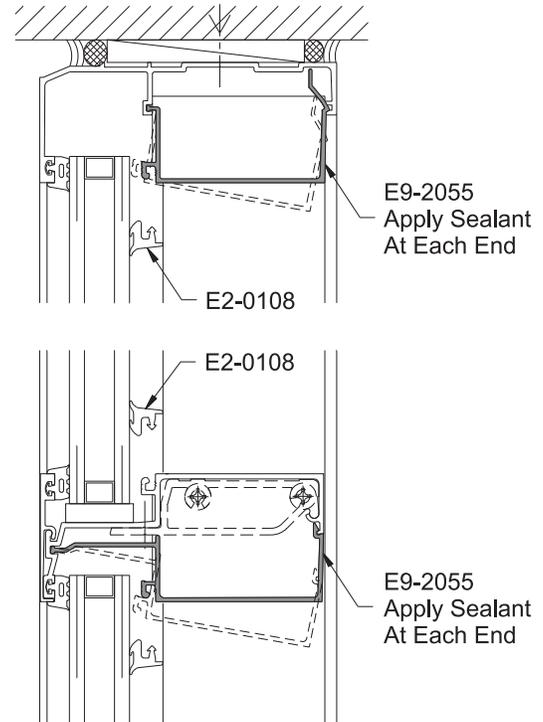
-From the open side, reach around the vertical, insert the temporary glass retainers, E3-0006, and twist them 90° clockwise to engage. Locate temporary glass retainers 18" to 24" on center.

-Install the next lite of glass and center it to maintain a 1/2" joint between the lites.

-Install the silicone glazing spacers on both sides of the unit just installed.

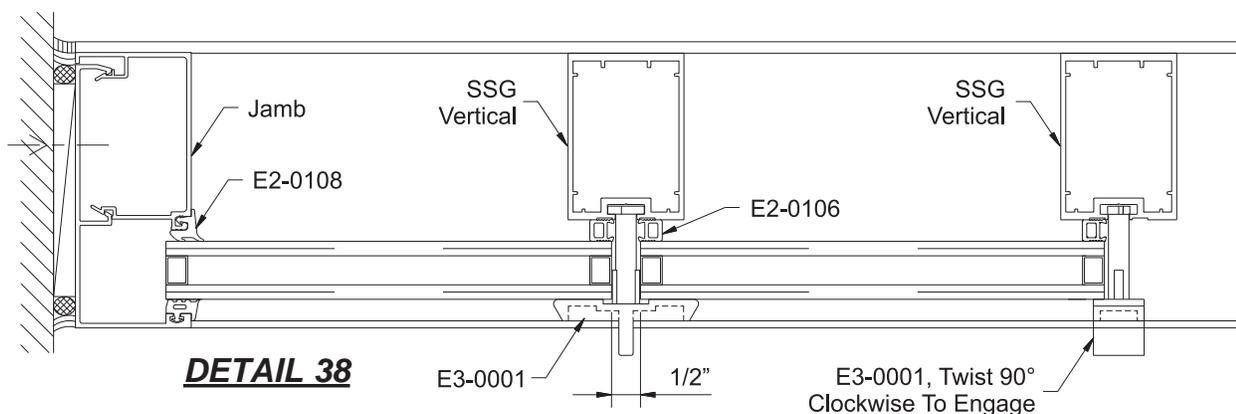
See **Detail 38**.

-Repeat this step until all lites of glass have been installed.



DETAIL 37

YSG 50 Shown
YSG 40/50 T Similar

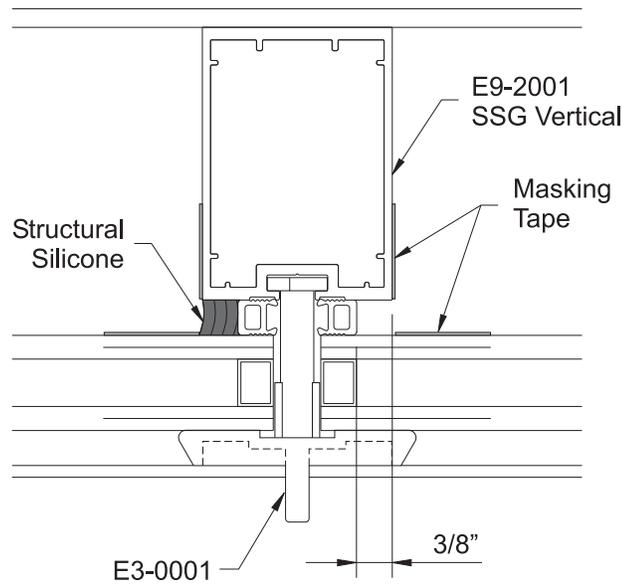


DETAIL 38

GLAZING

**STEP 22
APPLY INTERIOR STRUCTURAL SILICONE**

- Run masking tape vertically on the glass with one edge in line with the side of the mullion.
- Run another piece of masking tape vertically along the edge of the vertical next to the glass.
- Check to make sure that the structural silicone spacers are 3/8" from the edge of the vertical in order to obtain the proper structural joint size.



DETAIL 39

- Prior to applying structural silicone, clean all contact surfaces using method and cleaner recommended by sealant manufacturer.
 - Apply an approved structural silicone from the bottom to the top of the joint. Use positive pressure to completely fill the cavity between the glass and the vertical mullion.
 - Using a nylon spatula or other non-scratching implement, tool the silicone immediately after running the vertical joint. Exert positive pressure while tooling to ensure that the silicone completely fills the cavity.
 - Be careful not to remove too much silicone. The silicone should make complete contact with the glass and the aluminum surfaces. The finished joint should be flush with the edge of the vertical.
- See **Detail 39**.

Caution: Do not permit the silicone to skin over before it is tooled. Immediately remove masking tape after tooling the silicone.

GLAZING

STEP 23

APPLY EXTERIOR WEATHERSEAL

Once the interior structural silicone has cured, it is necessary to seal the 1/2" wide exterior joint between the lites of glass. Please consult the sealant manufacturer for recommended cure time.

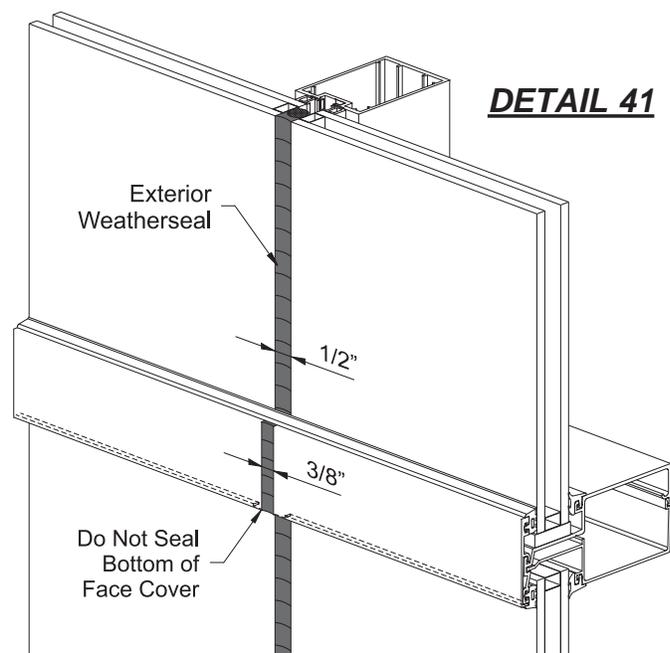
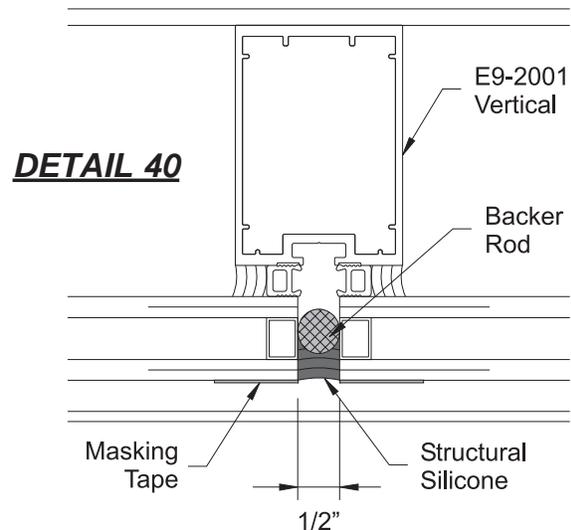
- Remove the temporary glass retainers and insert an approved open cell polyurethane backer rod between the lites of glass.
- Clean all contact surfaces with an approved cleaner and apply masking tape to both vertical edges of the glass.
- Starting at the bottom of the lite, pump an approved structural silicone into the joint between the lites of glass. Apply moderate pressure so that the void is completely filled. See **Detail 40**.

Caution: Be careful not to puncture the backer rod or push it out of the way.

- At face cover splices, carry the sealant down over the face cover without sealing off the bottom to allow the system to weep properly.

- Using a nylon spatula or other non-scratching implement, tool the silicone immediately after running the vertical joint. Exert positive pressure while tooling to ensure that the silicone completely fills the cavity.
- Be careful not to remove too much silicone. The silicone should make complete contact with the glass and aluminum surfaces. The finished joint should be flush with the edge of the vertical.

See **Detail 41**.



Caution: Do not permit the silicone to skin over before it is tooled. Immediately remove masking tape after tooling the silicone.



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