Oldcastle BuildingEnvelope®

RELIANCE-IG SS CURTAIN WALL

INSTALLATION AND GLAZING MANUAL

Note:

The installation details found in this package are generic and are for representation only with the intent of giving the installation team a visual representation as to how the assemblies typically install. The shop drawings and details are the governing documents and as such this package is to be used only as a resource.

Follow sealant manufacturers recommendations for use and application of structural silicone sealant and weather seal silicone sealant.

Note: Customer / Project quality assurance procedures are separate dociments and are to be followed in conjunction with this manual.

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TABLE OF CONTENTS

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TABLE OF CONTENTS

Quick Reference Guide

1. Torque pressure plate screws to 60 IN-LBS

2. Glass Sizing:
   Field Glazing - 1/2" Glass Bite @ Captured Mullions
   1" Glass Bite @ SSG Verticals
   1/2" Glass Bite at Horizontals

3. Locate pressure plate screws @ 9" o.c. (1 1/2" from ends)

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GENERAL INFORMATION

PRODUCT USE

The **Reliance™-IG SS** curtain wall system is intended for fabrication, assembly, sealing, installation and glazing by professionals with appropriate knowledge and experience of the system(s) and their incorporation into various building conditions.

Consult sealant manufacturer for review and recommendation of sealant application. Follow sealant manufacturer's recommendations and literature for proper installation.

The fabrication and installation of a structural silicone-glazed (SSG) or wet glazed system requires more technical knowledge and experience than is required for a conventional pressure-glazed or dry glazed system. The glazing contractor should take all steps as outlined and required by the structural silicone sealant manufacturer, glass fabricator, framing manufacturer, and the project professional engineer of record as well as follow local building code requirements and industry best practices to ensure the proper installation and safe performance of the SSG system.

The glazing contractor for each project needs to ensure compliance with each step, including, but not limited to, design reviews, formal adhesion testing, formal compatibility testing, project specification compliance, validating procedures, field testing, and quality control validation of installed product and surrounding conditions.

Testing of component materials for use in a SSG or wet glazed system is mandatory to fulfill project specifications and warranty requirements and must be submitted by the glazing contractor to the structural silicone manufacturer. All materials that comprise the structural silicone joint, such as the framing system (with the job-specific finish) and job-specific glass must be tested by the structural silicone manufacturer for compatibility and adhesion. All other accessory materials in contact with the structural silicone, such as setting blocks, spacers, gaskets, sweeps, air seals and expansion joints, must also be submitted to the silicone sealant manufacturer for compatibility testing.

To ensure that nothing has changed in formulation or chemistry since the initial tests, subsequent testing during periodic time frames of the project is to be conducted to confirm continued acceptance of the material for use on the project. To ensure the structural performance and integrity of the insulating glass unit (IGU), the glazing contractor must submit the project shop drawings to the glass fabricator to obtain approval for use of their product(s) in any 2, 3 or 4-sided SSG applications.

Quality control procedures for field glazing are to be increased beyond those required for shop glazing. Job conditions will normally have dust, dirt, and other construction debris on the surfaces where structural silicone is to be applied. Great care should be exercised in cleaning and preparing these surfaces for silicone application. The recommendations of the silicone sealant manufacturer are to be strictly enforced and followed. The fabrication and installation of the SSG system and its components, whether shop or field glazed, should be governed by a quality control program, and all steps, procedures, and test reports should be documented throughout the project.

Prior to installation of any SSG system, refer to industry documents (e.g., AAMA Curtain Wall Design Guide Manual, ASTM C1401-14, and AAMA SSGDG-17) for detailed instructions and recommendations.

THE GLAZING CONTRACTOR ASSUMES FULL RESPONSIBILITY FOR ENSURING COMPLIANCE WITH THE ABOVE AND ASSUMES FULL LIABILITY FOR ANY ISSUES ARISING FROM NONCOMPLIANCE.

GLAZING PRACTICES

The air and water performance of the **Reliance™-IG SS** curtain wall system is directly related to the completeness and integrity of the installation process, including but not limited to the assembly seals of the framing joinery, the installed glazing gaskets, and the alignment of the framing joinery glazing plane. Before glazing, verify the glazing pocket width and glazing infill thickness, as both must be in tolerance to assure adequate edge pressure and to achieve the desired air and water performance levels. (In general, framing systems utilizing 1" insulating glass are designed to accommodate a thickness variance of +/- 1/32"). Note: Excessive pressure can cause glass breakage and/or IGU failure. Consult the glass manufacturer for their recommended edge pressure per lineal inch. To achieve the designed and tested air and water performance, best practices include:

1. Surfaces to be sealed should be cleaned with isopropyl alcohol or solvent and dried as recommended by sealant manufacturer to remove all dirt and cutting oils. Sealant at shear blocks should be a minimum 3/16" diameter nominal placed completely around the top, face and bottom of the shear block without gaps in the sealant. Exposed surfaces should be cleaned after installing the horizontal. Inspect joint for complete sealant contact, especially where the horizontal meets the face of the vertical member. Repair joint as required.
2. Glazing gaskets should be cut ¼" longer per foot, and lay flat, preferably for 24 hours.
3. Gaskets should be cut as single monolithic pieces and "crowded" during their installation to avoid corner gaps caused by post-installation relaxation.
4. The interior glazing gasket should be installed so as to avoid stretching, buckles, or tears.
5. Corners must be cut square, and at a slight angle when required to conform to the bevel on the intersecting gasket; sealed and butted together.
6. Gasket corner joinery must also be crowded, and sealant applied onto the gasket contact frame surface and into gasket reglet raceway where applicable.
7. Gasket corner seals are to be done just prior to installing glass, while the sealant is still wet and uncured, and ensure exterior gaskets are installed so as to place the glass into it's final in service condition and allow the sealant to conform to optimum configuration. Note: If the sealant cures prior to glazing, the cured sealant could create excessive edge pressure onto the glass and has the potential to cause glass breakage.
8. The glass must be checked for squareness, size dimension, and thickness along the edges paying attention to any variances from center edge to corner edge.
9. Check the placement of the installed glass and verify there is proper edge bite into the pocket, and proper edge clearance from framing elements.
10. After sealant has set and a representative amount of the wall has been installed and glazed (250 square feet or more) run a water hose test in accordance with AAMA 501.2 specifications to check installation. On large projects the hose test should be repeated during the glazing operation. Consult and follow NGA's GANA Manual and FGMA Glazing Manual for proper glazing technique and procedure.

Vertical movement of mullion at intermediate floors requires special expansion joints and glazing materials. See page 37 - 38 for details which permit 1/4" movement. For designs and applications that may require greater movement or special considerations please contact your local Oldcastle BuildingEnvelope® facility.

Variations on the details shown are inevitable and are not the responsibility of Oldcastle BuildingEnvelope when drawn by others. Oldcastle BuildingEnvelope strongly encourages its customers to utilize Oldcastle BuildingEnvelope® supplied calculations and shop drawings.

For Structural Silicone Glazing applications, the stress on the silicone should not exceed 20 PSI. Consult sealant manufacturer for specific applications to ensure proper loading on silicone joint. Alternate spacer gaskets are available to accommodate larger sealant contact widths. Consult your nearest Oldcastle BuildingEnvelope facility for assistance.

Consult glass manufacturer for correct setting block location and length for glass sizes in excess of 40 sq.ft.

BUILDING CODES

Oldcastle BuildingEnvelope® does not control the application nor selection of its product configurations, sealant, or glazing materials, and assumes no responsibility thereof. It is the responsibility of the owner, architect, and installer to make these selections in strict compliance with applicable laws and building codes.

PROTECTION AND STORAGE

Handle all material carefully. Do not drop from the truck. Stack with adequate separation so the material will not rub together. Store material off the ground, protecting against the elements and other construction hazards by using a well ventilated covering. Remove material from package if wet or located in a damp area. For further guidelines consult AAMA publication CW-10 “Care and Handling of Architectural Aluminum From Shop to Site.”

CHECK MATERIAL

Check glass dimensions for overall size as well as thickness. Oldcastle BuildingEnvelope cannot be held responsible for gaskets that are not watertight due to extreme glass tolerances. The Reliance -IG SS curtain wall system is designed to accommodate glass or panels measuring 1" and 1/4" in thickness (+/- 1/32").

Check all material upon arrival at job site for quality and to determine any shipping damage.

Using the contract documents, completely check the surrounding conditions that will receive your materials. Notify the general contractor by letter of any discrepancies before proceeding with the work. Failure to do so constitutes acceptance of work by other trades.

Check shop drawings, installation instructions, architectural drawings and shipping lists to become familiar with the project. The shop drawings take precedence and include specific details for the project. The installation instructions are of a general nature and cover the most common conditions. Due to varying job conditions all sealant used must be approved by the sealant manufacturer to ensure it will perform per the conditions shown on the instructions and shop drawings. The sealant must be compatible with all surfaces in which adhesion is required, including other sealant surfaces. Use primers where directed by sealant manufacturer. Properly store sealant at the recommended temperatures and check sealant for remainder of shelf life before using.

FIELD CONDITIONS

All material to be installed must be plumb, level and true. Aluminum to be placed in direct contact with masonry or incompatible material should be isolated with a heavy coat of zinc chromate, bituminous paint or non-metallic material.

After sealant is set and a representative amount of the wall has been glazed (250 square feet or more), run a water hose test in accordance with AAMA 501.2 specifications to check installation. On large projects the hose test should be repeated during the glazing operation.

CLEANING MATERIALS

Cement, plaster terrazzo, alkaline and acid-based materials used to clean masonry are very harmful to finishes. Any residue should be removed with water and mild soap immediately or permanent staining will occur. A spot test is recommended before any cleaning agent is used. Refer to the Architectural Finish Guide in the Detail Catalog.

EXPANSION JOINTS

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

SUGGESTIONS FOR IMPROVING SYSTEM THERMAL PERFORMANCE

To maintain or improve your wall installation the following items should be considered.

A. Blinds or drapes prevent warm air from adequately flowing over the window surface.

B. Warm air ventilators too far from the window will not adequately wash the window with air to prevent condensation.

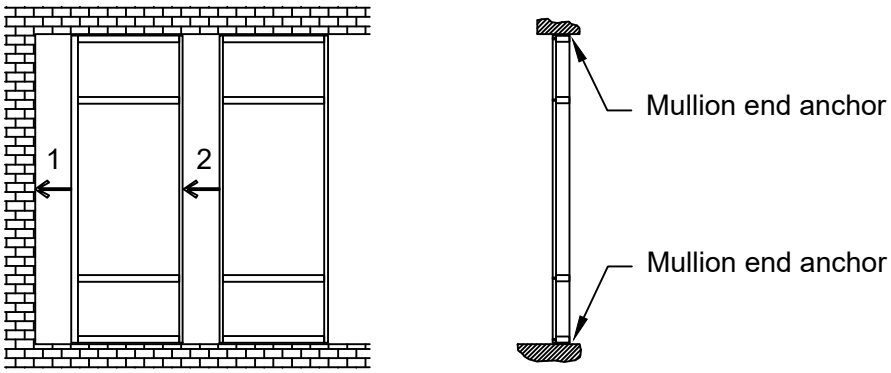
C. In extreme conditions the fan of the heating system should not cycle on and off but should run continuously.

D. Some heating systems have a water injection feature that can raise humidity levels. The higher the humidity levels the more likely condensation or frost will form. Raising the temperature and reducing humidity will usually solve the problem.

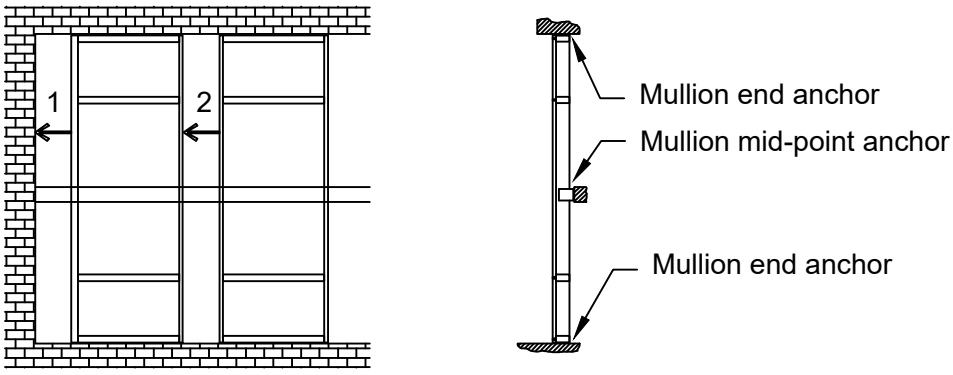
E. On rare occasions an extremely cold storm may cause frost to appear on the glass framing. A space heater and electric fan blowing along the plane of the window wall can reduce or eliminate this temporary condition.

INSTALLATION TYPES

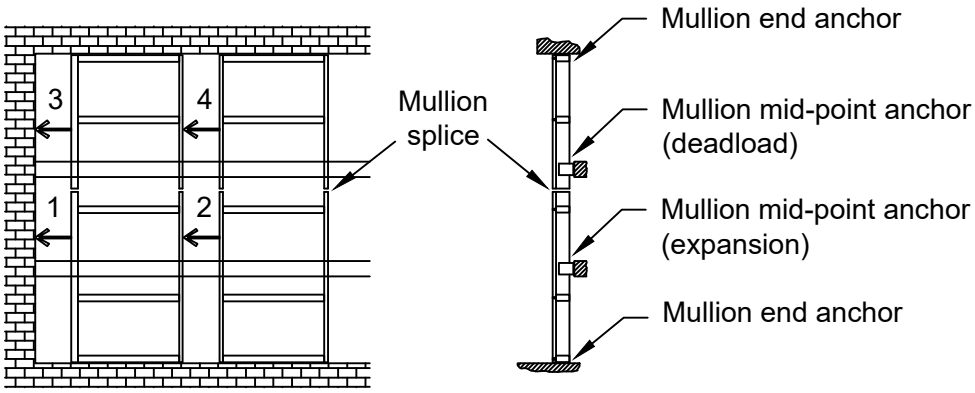
The following diagrams represent common types of installations for this product. Refer to approved shop drawings for specifics regarding splicing and anchoring of frame.



Single Span



Twin Span



Multi-Span

FRAME FABRICATION

Unless otherwise noted, the details shown in these instructions reflect the 7 1/2" system. Part numbers and dimensions in parentheses ( ) refer to the 6 1/4" system, unless noted otherwise. Instructions for other backmember depths are similar. NOTE: Structural silicone glazed vertical mullion is referred to as "SSG Mullion"

1.1. Measure ROUGH OPENING to determine FRAME WIDTH and FRAME HEIGHT dimensions. Allow 1/2" minimum clearance for shimming and caulking around perimeter of frame

1.2. Cut material to size. SEE FIGURE 1, page 7 for guide.

Frame Members

Verticals	FRAME HEIGHT (ROUGH OPENING minus top & bottom joints)
Vertical Face Covers	FRAME HEIGHT (vertical covers run through)
Intermediate Horizontals	Daylight Opening (D.L.O.)
Head and Sill Members	D.L.O.
Horizontal Pressure Plates	D.L.O. minus 1/4"
Horizontal Face Covers	D.L.O. minus 1/16"
Head & Sill Interior Covers	D.L.O. minus 1/16"

Accessories

Glazing Gaskets

Exterior Vertical	D.L.O. plus 1" plus allowance* (vertical gaskets run through)
Exterior Horizontal	D.L.O. plus allowance*
Exterior Pressure Plate	Pressure Plate length plus allowance*
Interior at Verticals	D.L.O. plus allowance* (vertical gaskets run through)
Interior at Horizontals	D.L.O. plus allowance*
Silicone Spacer Gaskets	D.L.O. plus 1" plus allowance*
Thermal Isolator @ exterior glazed	Horizontal length (crowd in place to avoid gaps at ends)

* Glazing gaskets should be 1/4" longer per foot of aluminum extrusion. Set aside and lay flat until ready to glaze.

Other Members (as required)

Glazing Adaptors

Horizontal	D.L.O. minus 1/32"
Vertical	D.L.O. plus 1"

Door Subframe

Jamb	DOOR OPENING plus 3/4"
Header	DOOR OPENING minus 1/32"

Glass Sizing

Field Glazing

Captured Mullions	1/2" glass bite typical (D.L.O. plus 1")
SSG Verticals	1" glass bite at verticals (D.L.O. plus 2") 1/2" glass bite at horizontals (D.L.O. plus 1")

FRAME FABRICATION

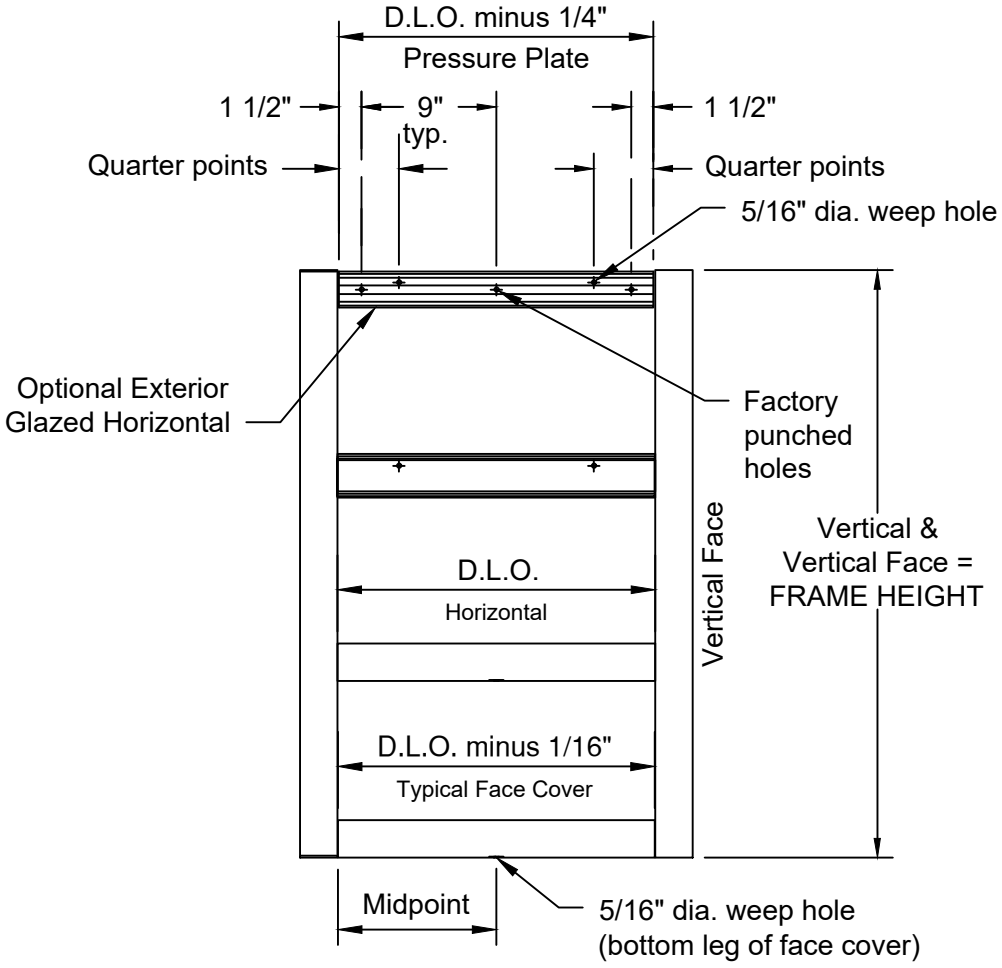


FIGURE 1
Material Fabrication Guide

1.3 Fabricate vertical mullions for horizontal members with EZ Punch tooling or DJ-108 drill jig. See FIGURE 2, page 8 for hole locations. Use 'F' drill (.257 dia.) for assembly screws. Prep for head and sill will be drilled by aligning drill jig with ends of mullions. Prep at intermediate horizontals, mark line at top of horizontal and align drill jig with that line as shown in FIGURE 2, page 8. Use DJ-105 for fabrication of WW-542 exterior glazed horizontal, drill all four holes.

1.4 Drill 5/16" dia. weep holes at 1/4 points in horizontal and sill members as shown in FIGURE 3, page 9. Where incidental water control is required, drill one 5/16" diameter weep hole at mid-lite of head member. Locate HP-1004 baffle and snap SPW-295 baffle retainer behind weep hole. See FIGURE 3.

1.5 Drill (1) 5/16" dia. weep hole at the bottom of each horizontal face cover at the centerline of the D.L.O. SEE FIGURE 4, page 9. NOTE: For SSG applications, face covers typically run across SSG mullions, so there will be multiple holes in each horizontal face cover. Maximum length of horizontal face covers at SSG applications should be 20 feet.

FRAME FABRICATION

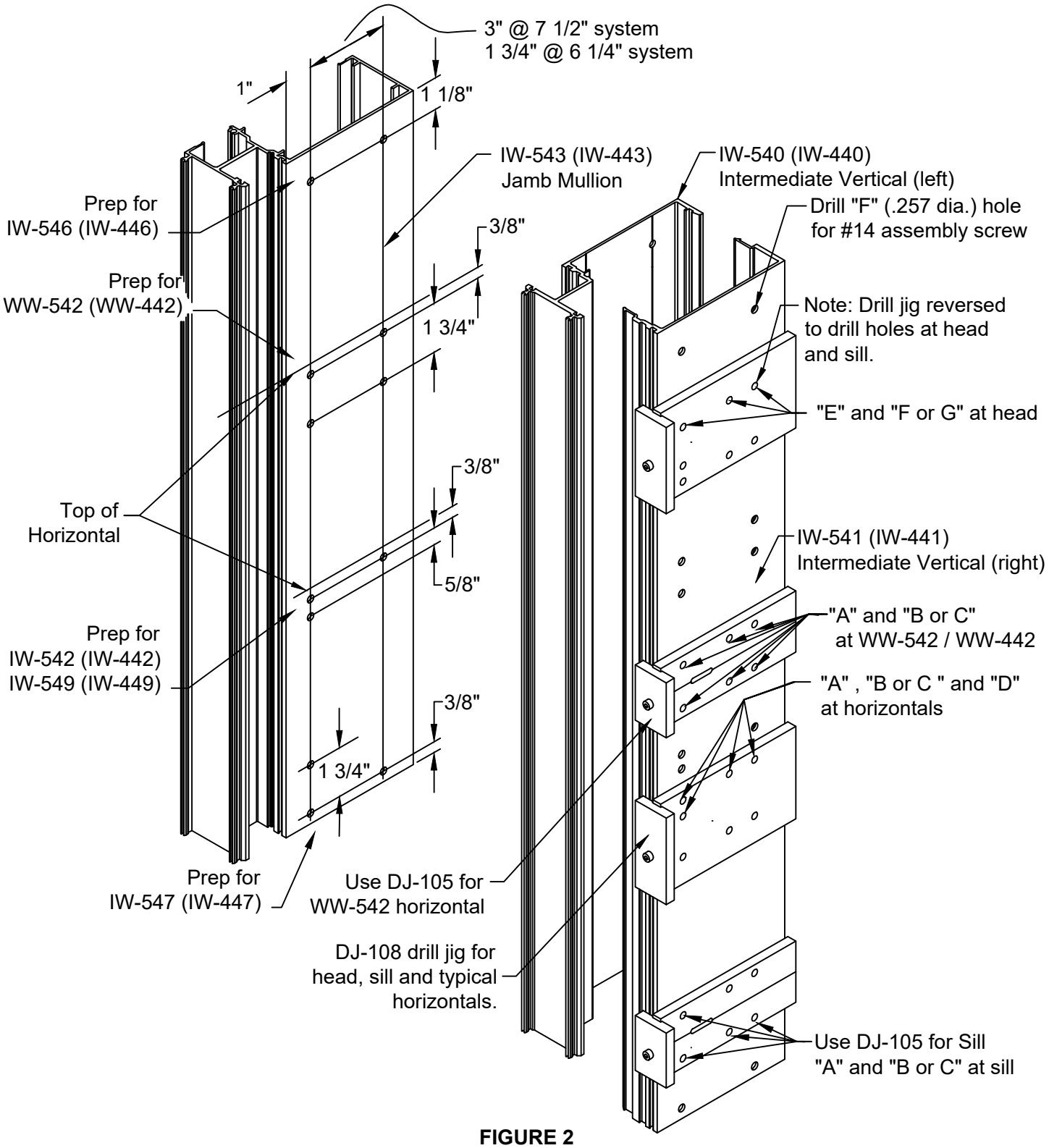


FIGURE 2
Vertical Fabrication

1.6 In areas requiring exterior glazed horizontals. Drill 5/16" dia. weep holes at 1/4 points in the horizontal pressure plates. All pressure plates have factory punched holes for screws at 9" O.C. To ensure proper pressure on the glazing, 7/32" dia. holes may need to be drilled at the ends of each horizontal pressure plate as required. Locate holes at 1 1/2" maximum from the ends of the pressure plate. SEE FIGURE 5, page 10

1.7 If glazing SSG mullion using 1/4" glass, fabricate IW-131 glazing adaptor for #10 (.191Ø) holes at 12" o.c. SEE FIGURE 6, page 10.

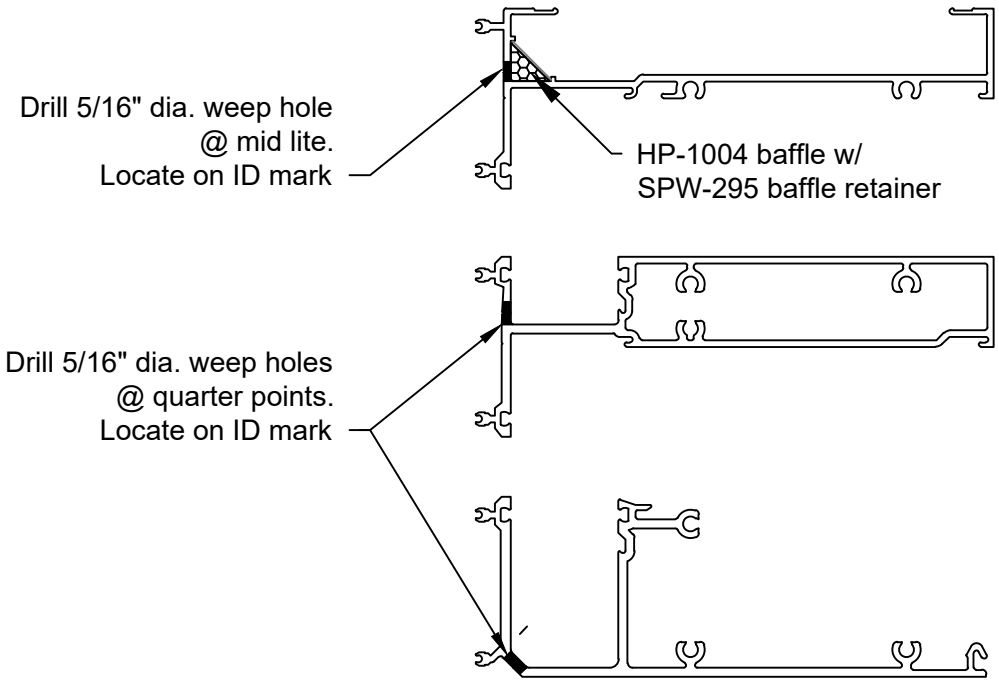


FIGURE 3
Horizontal Weep Hole Fabrication

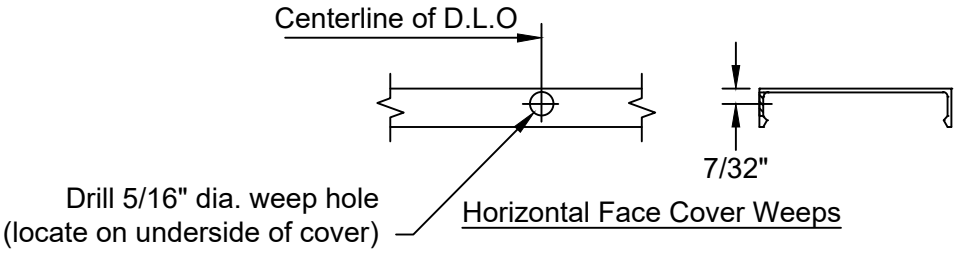


FIGURE 4
Horizontal Weep Holes

FRAME FABRICATION

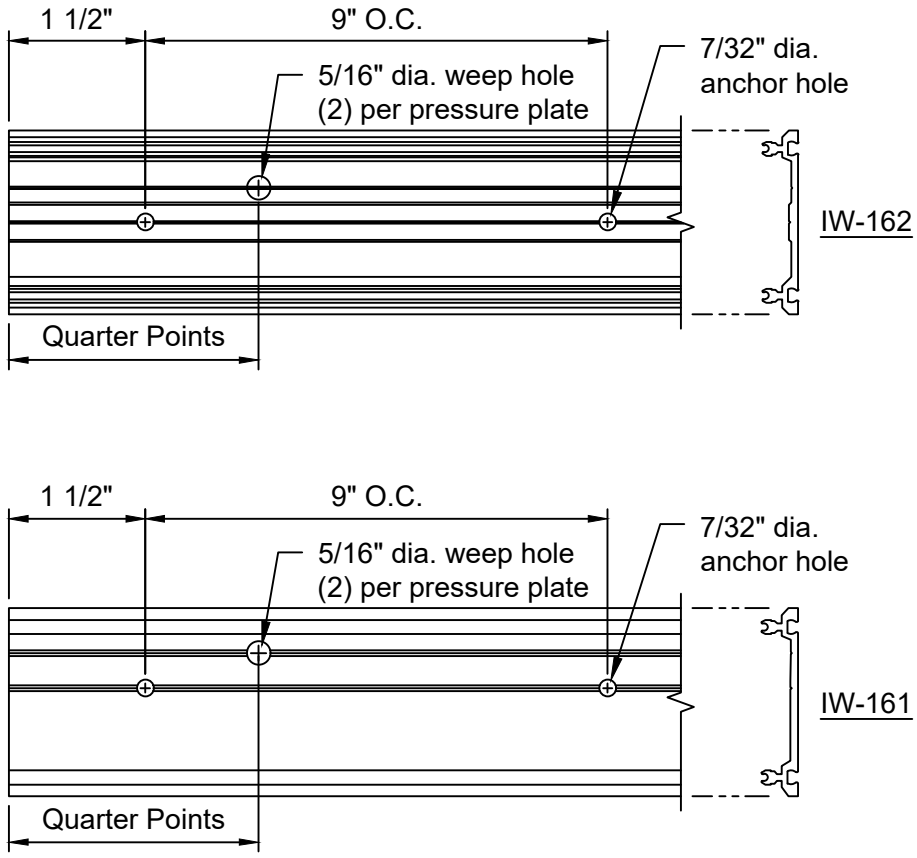


FIGURE 5
Horizontal Pressure
Plate Fabrication

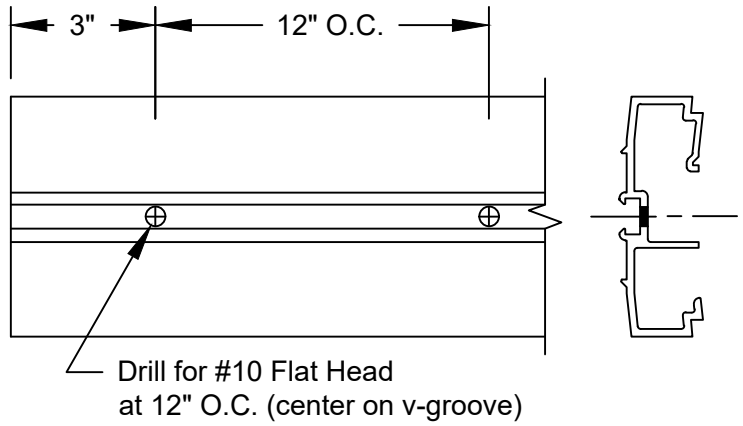


FIGURE 6
SSG Glazing Adaptors

FRAME ASSEMBLY

2.1 Starting with the left jamb of the opening, lay out verticals and horizontals for assembly of the bay. SEE FIGURE 7.

2.2 Apply sealant to ends of horizontals prior to attaching to verticals. SEE FIGURE 8,page 10.

2.3 If steel reinforcing is required, install now. SEE FIGURE 10, page 14

2.4 Install IW-193-01 (IW-183-01) head anchor sleeve into top of IW-540 (IW-440) or IW-544 (IW-444) mullion. Sleeve to be installed prior to attaching head member. Sleeve attached using FS-9 assemble screws fastened into head extrusion. SEE FIGURE 8, page 12

2.5 Attach head to vertical using two FS-9 fasteners. Attach intermediate horizontals and sill members using FS-8 fasteners. SEE FIGURE 8, page 10. Tool excess sealant at horizontal-to-vertical joints. Optional exterior glazed horizontal may require additional fasteners. SEE FIGURE 18, page 19 for optional horizontal information.

2.6 If mullions are spliced, slide splice sleeves into the bottom of the upper bay mullion. Secure with tape. Install one (1) FS-322 #14 x 1" TEK screw into the top of the lower bay mullion to act as a stop screw for the splices during frame installation. SEE FIGURE 41, page 37.

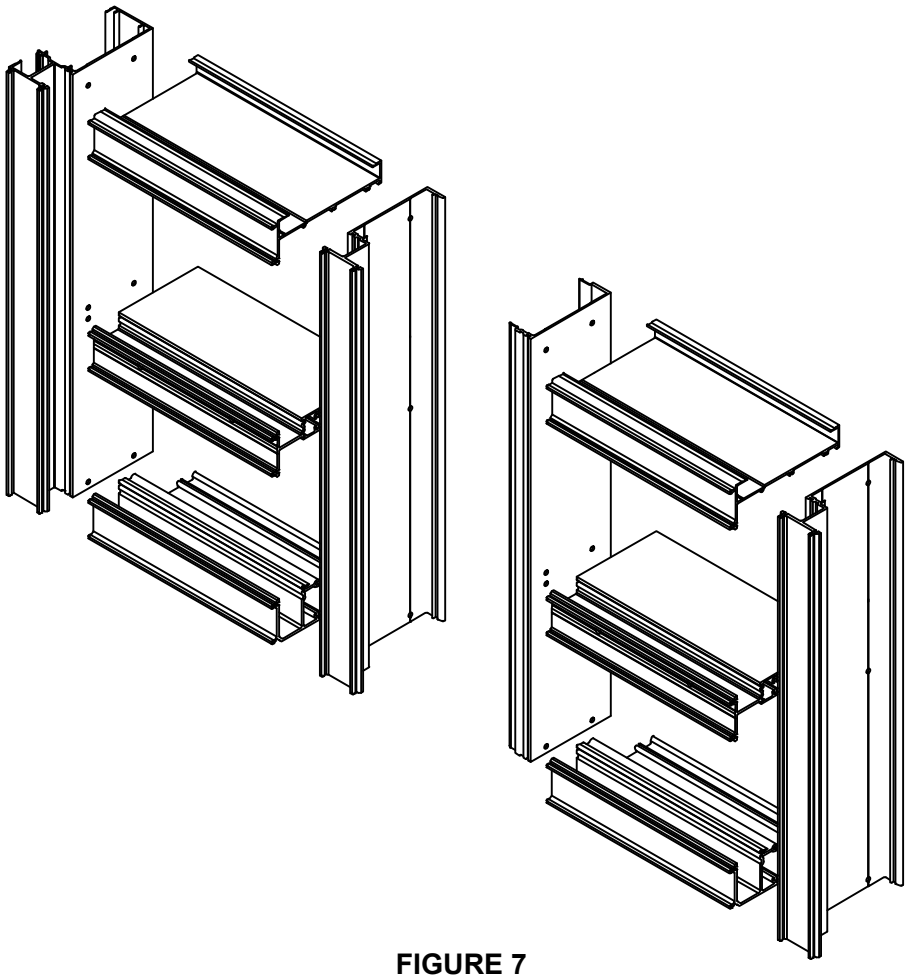


FIGURE 7
Frame Assembly

FRAME ASSEMBLY

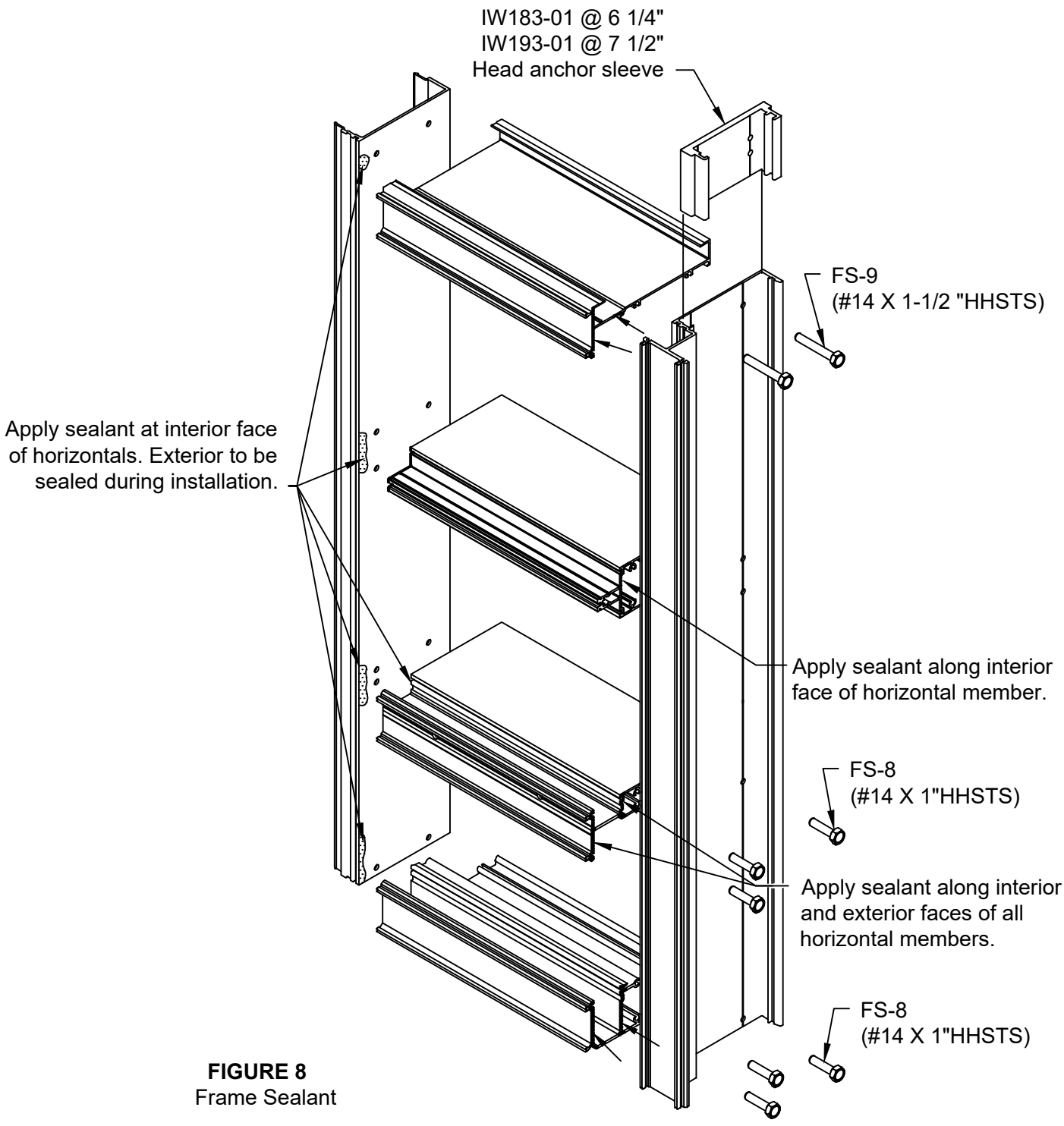


FIGURE 8
Frame Sealant

2.7 After units are assembled. Install mull caps to each end of vertical mullions and jambs. IW-325 & IW-326 cap will be bed in sealant and attached to mullion with FS-320 drive screws. Sealant must be tooled around inside of glazing pocket and on mating surfaces between mull cap, head/sill and verticals. See FIGURE 9. Note: SSG mullions will not use mull caps. Bridges will be field installed at SSG verticals as noted on sheet 30.

2.8 Isolator clips for face cap installation may be installed in the shop or field. If installed in shop care must be taken in transporting units not to break or disengage clips from mullion. Clips are installed by starting one end and rotating into position. Clips will snap over clip stem. Clip tool, part # ICW-FP-74 may be used to speed up installation process. GP-141 baffle clips must be installed over weep holes at all intermediate horizontals. ICW-12 clips are to be installed at 12" on center and staggered to prevent bowing of face cap at clips. SEE FIGURE 10, page 14.

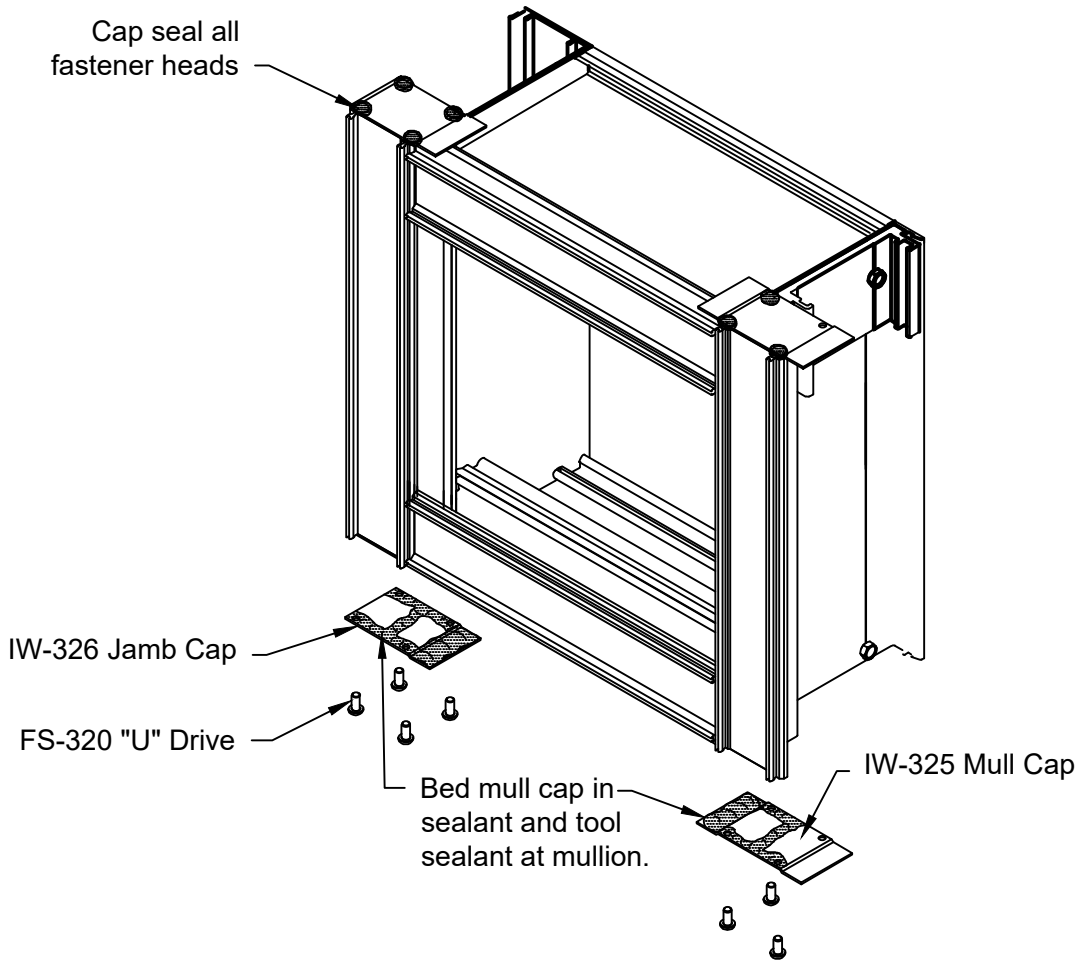


FIGURE 9
Mull Cap Installation
(SSG mullions do not use mull caps)

FRAME ASSEMBLY

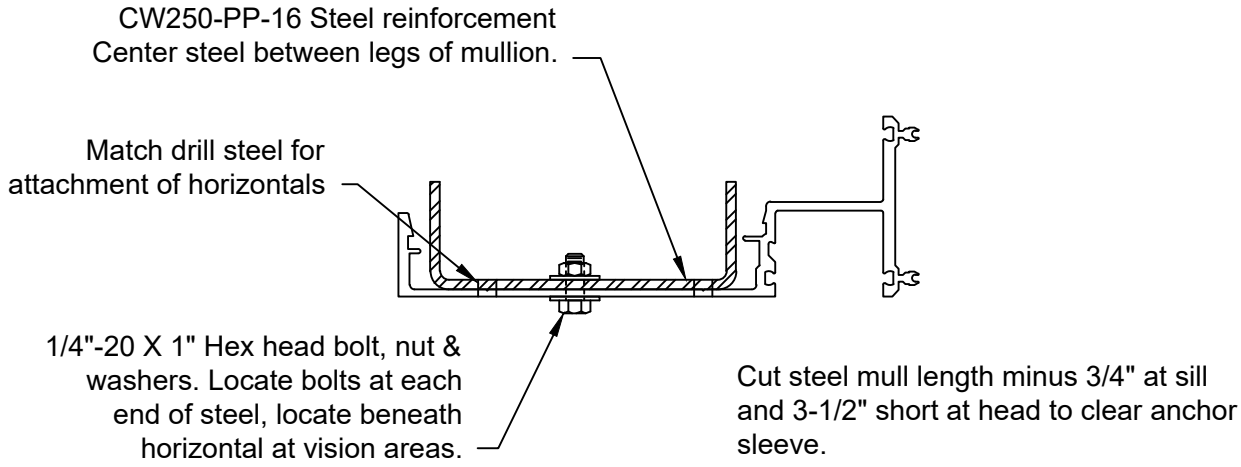


FIGURE 10
STEEL INSTALLATION

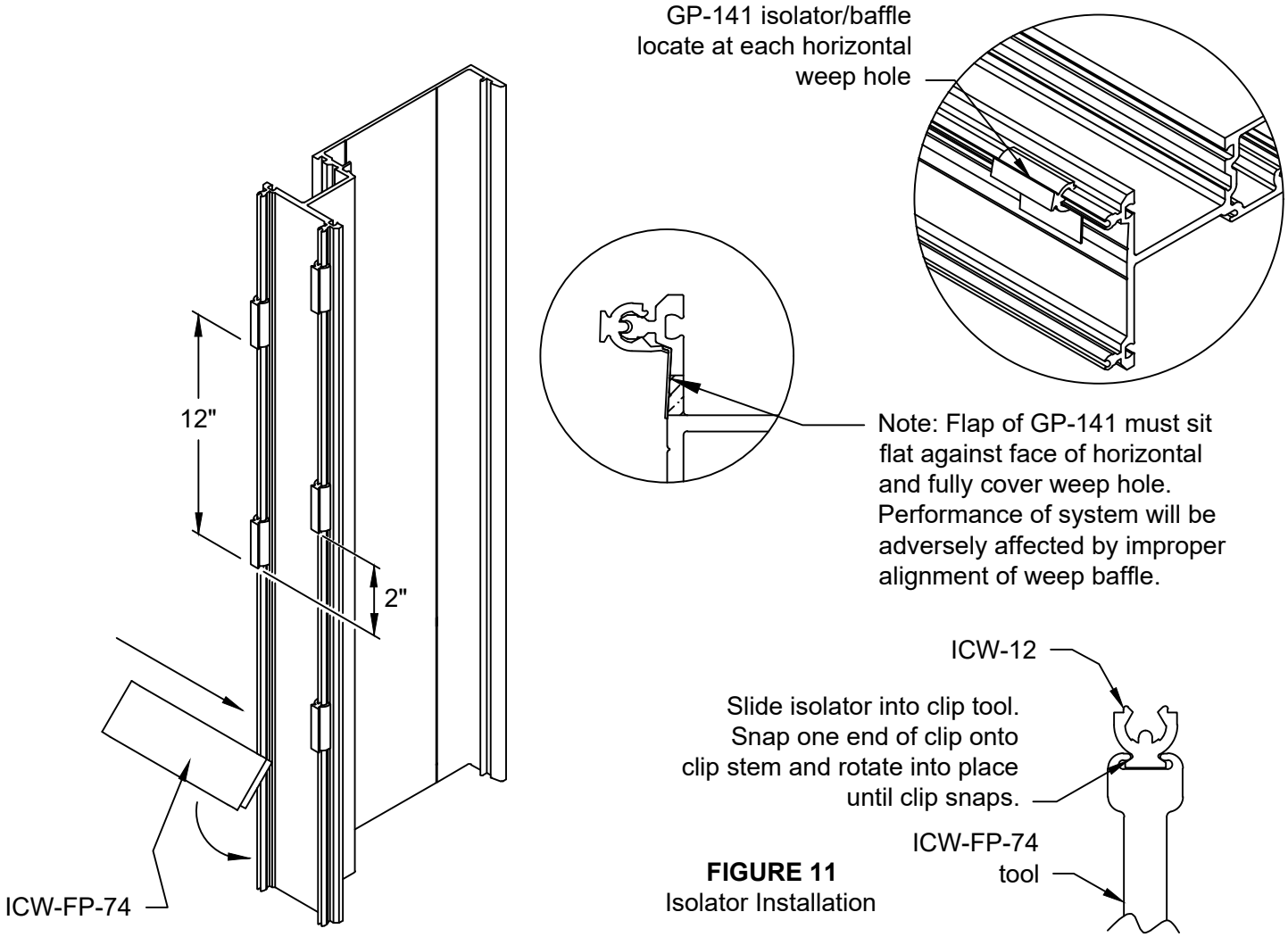


FIGURE 11
Isolator Installation

FRAME INSTALLATION

Anchor type and sizes vary per job requirements. Details shown in these instructions are to be used as a guide only. Refer to approved shop drawings for actual conditions.

3.1 Reliance-IG SS sill member can be anchored to the building condition by either hard fastening directly through the sill member or slide-in mullion anchors that fit inside the vertical mullions. SEE FIGURE 12, page 14. If using the slide-in anchors, install into ends of mullions prior to erecting the frame.

3.2 Reliance-IG SS head member must be anchored to the building condition using the slide-in anchor that fits inside the vertical mullions. SEE FIGURE 12, page 16.

3.3 Starting with the first bay, install into opening plumb and level. Check perimeter to maintain proper caulk joint. Anchor to structure per approved shop drawings. SEE FIGURE 16, page 18.

3.4 Seal mull caps at head and sill. SEE FIGURE 15, page 16. This is a critical seal and care must be taken to insure that a proper seal is formed. Excess sealant should be tooled around glazing pocket and from the joint side of the connection to insure a full seal is made between the mull cap and horizontal member. SEE FIGURE 14, page 17.

3.5 Sealant must be applied to end of horizontal, head and sill or on intersecting surface prior to assembly of units. Once sealant is applied set next bay into opening by engaging mullion halves together. Ensure that bottom of mullion halves align. Anchor this bay to structure. SEE FIGURE 16, page 18.

3.6 Repeat steps 3.4 and 3.5 until all bays are installed. Check D.L.O. and diagonal dimensions every four bays to ensure correct spacing and frame squareness to prevent dimensional buildup.

3.7 If mullions are spliced, release splice sleeves from upper mullions and allow to fall onto the set screws at the lower mullions. Attach to lower mullions with (2) FS-322 #14 x 1" TEK screws. Refer to "VERTICAL SPLICING" section, page 35 & 36, for splice installation and sealing instructions.

3.8 Apply continuous bead of sealant between all intermediate vertical mullion halves and tool into space provided. SEE FIGURE 13, sheet 17.

3.9 At SSG mullions, apply sealant to all contact surfaces on vertical and horizontal mullions where zone bridges will be installed. Apply sealant to horizontal tongue receptor on zone bridge and install at the end of each horizontal, head and sill members. Tool any excess sealant around front end of zone bridge where the thermal isolator runs through. Tool sealant in the glazing pockets to ensure a watertight fit. See FIGURES 33 & 34, page 32, FIGURE 35,page 31 & FIGURE 36, page 33..

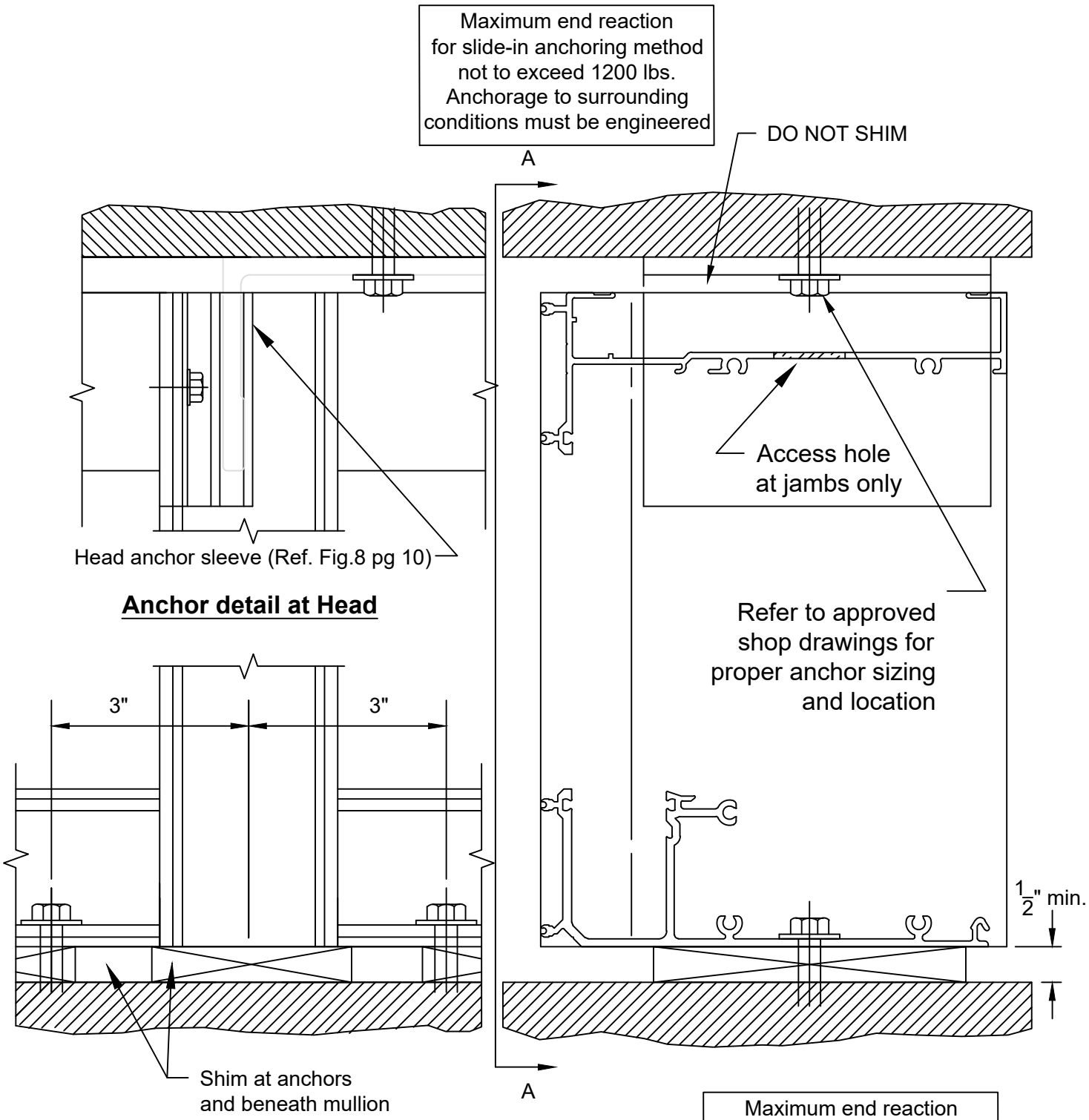
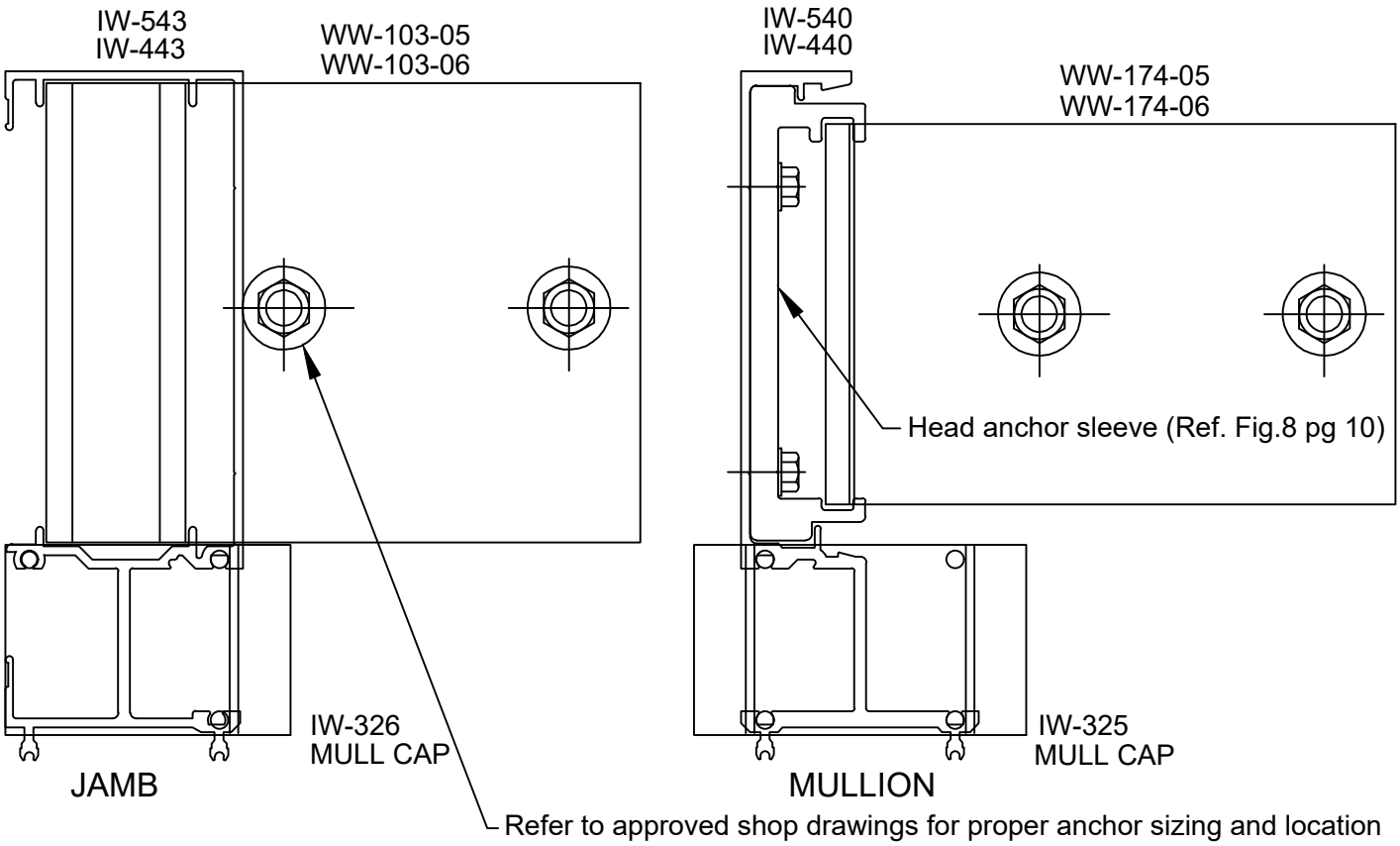
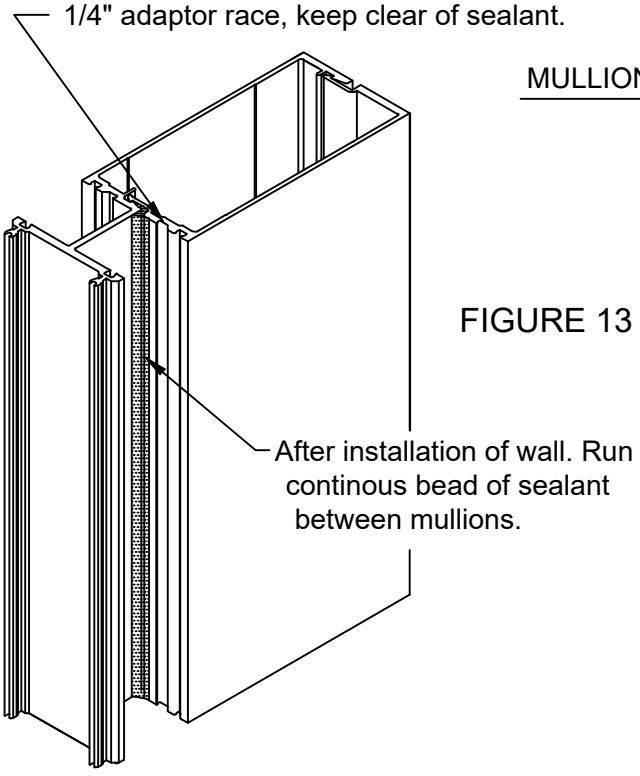


FIGURE 12
Anchor Methods

ANCHOR METHODS





MULLION SEALANT

FIGURE 13

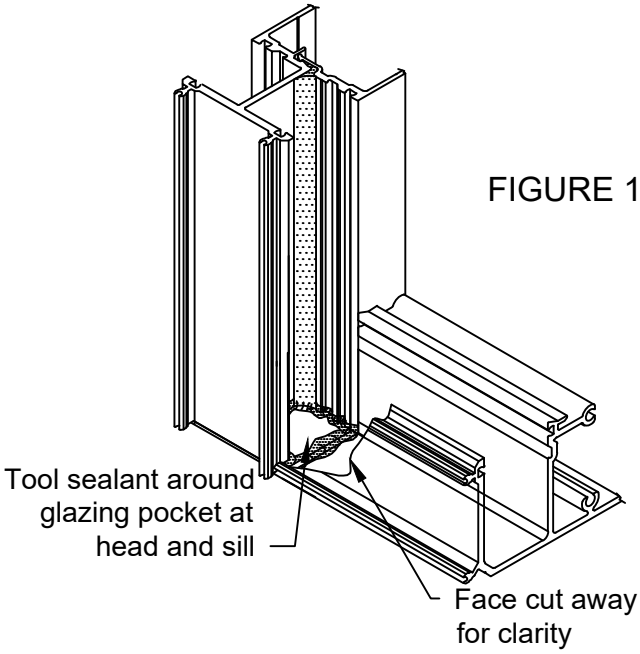


FIGURE 14

FRAME INSTALLATION

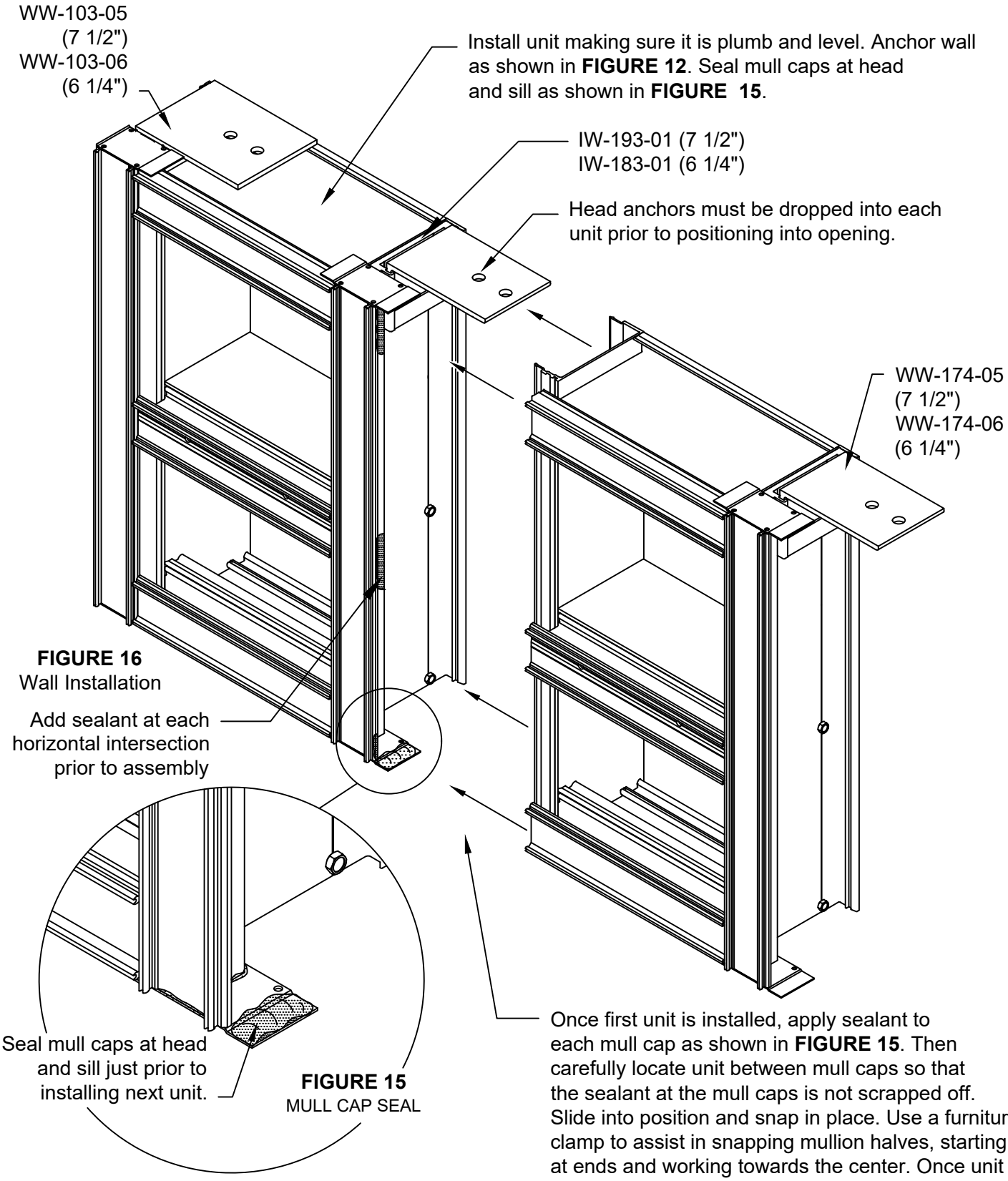


FIGURE 16
Wall Installation

FIGURE 15
MULL CAP SEAL

SYSTEM ANCHORAGE AT MID SPAN

Anchor type and sizes vary per job requirements. Details shown in these instructions are to be used as a guide only. Refer to approved shop drawings for actual conditions.

3.10 Mid span anchors will be located based on engineer's calculations. Typical anchors are shown in FIGURE 19, Size and design of anchor, as well as, bolt size and quantity to be based on project requirements and engineer's calculations.

3.11 When glazing areas of wall requiring mid span anchors it will be necessary to exterior glaze. Reliance-IG SS offers two exterior glazed horizontals for this purpose. The horizontal shown in FIGURE 17 is for areas where interior and exterior glazing may be required such as at the upper horizontal of an area with mid span anchors or may be used for easy reglazing. The horizontal in FIGURE 18 is for exterior glazed areas only and may also be used at the upper horizontal of areas with mid span anchors.

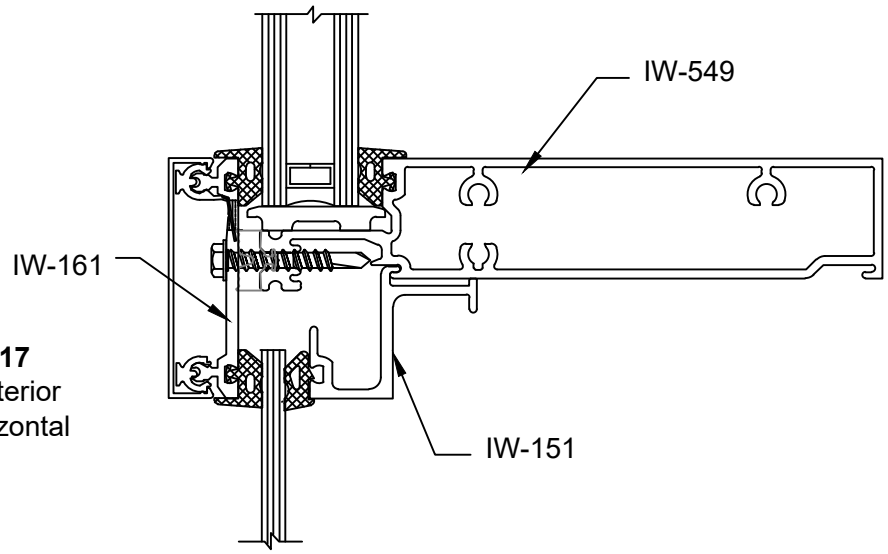


FIGURE 17
Interior / Exterior
Glazed Horizontal

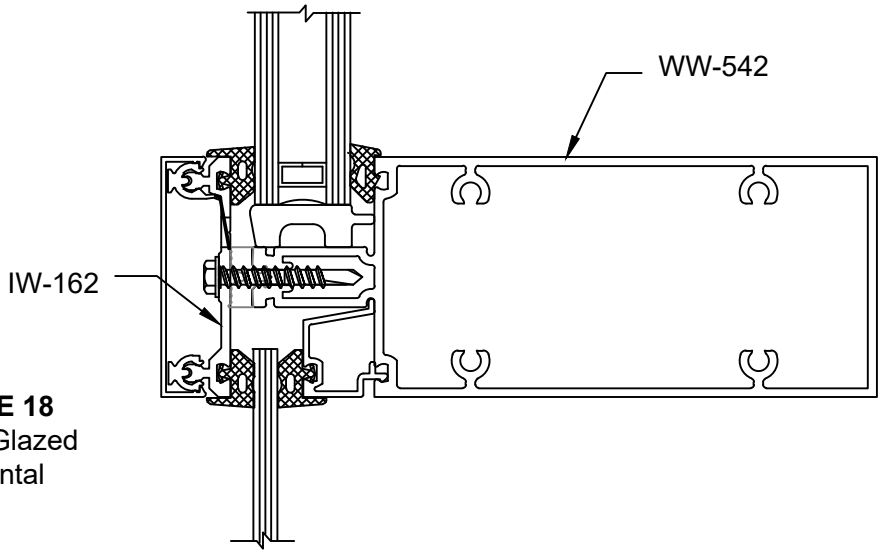


FIGURE 18
Exterior Glazed
Horizontal

SYSTEM ANCHORAGE AT MID SPAN

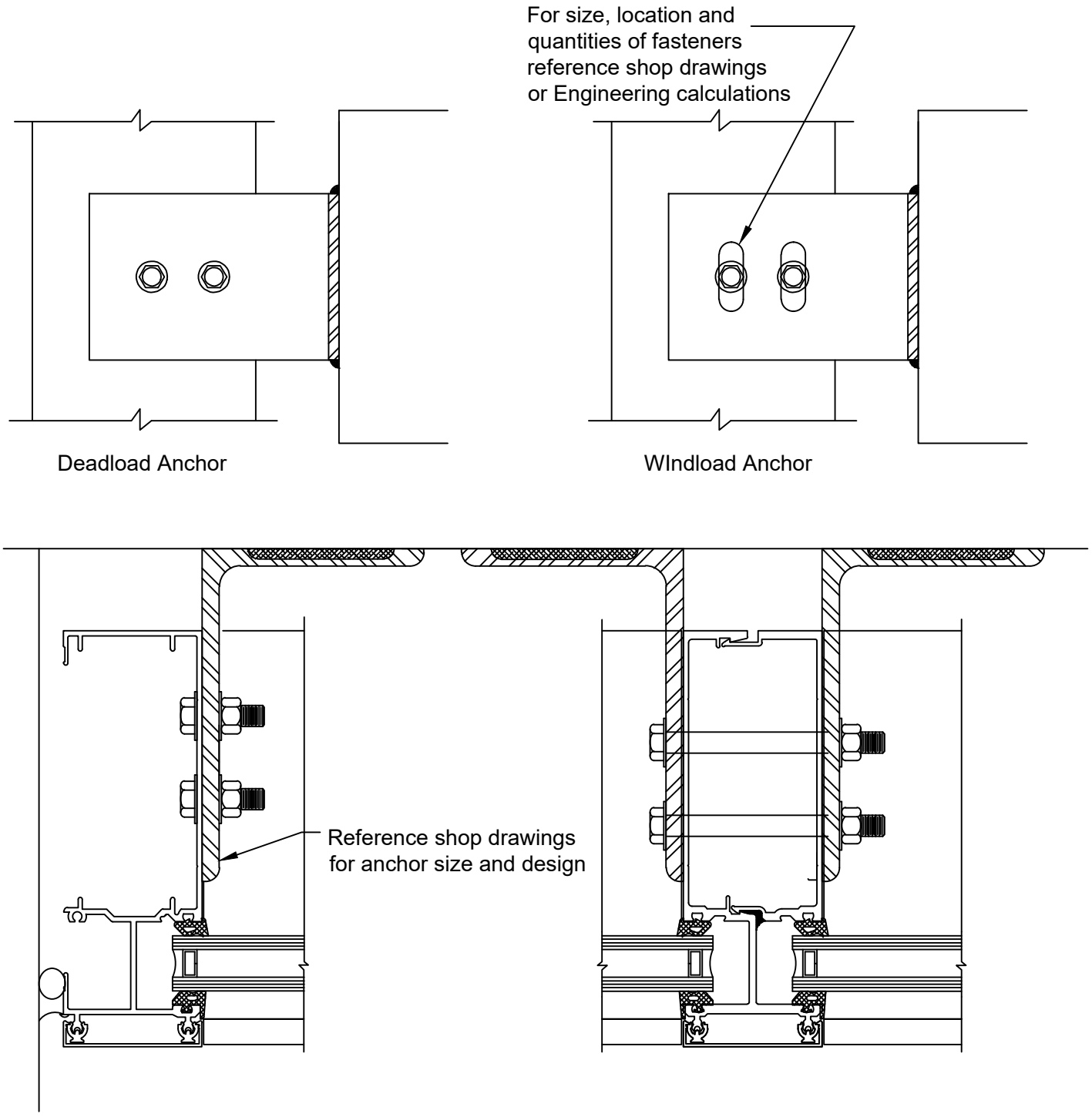


FIGURE 19
Mid Span Anchors

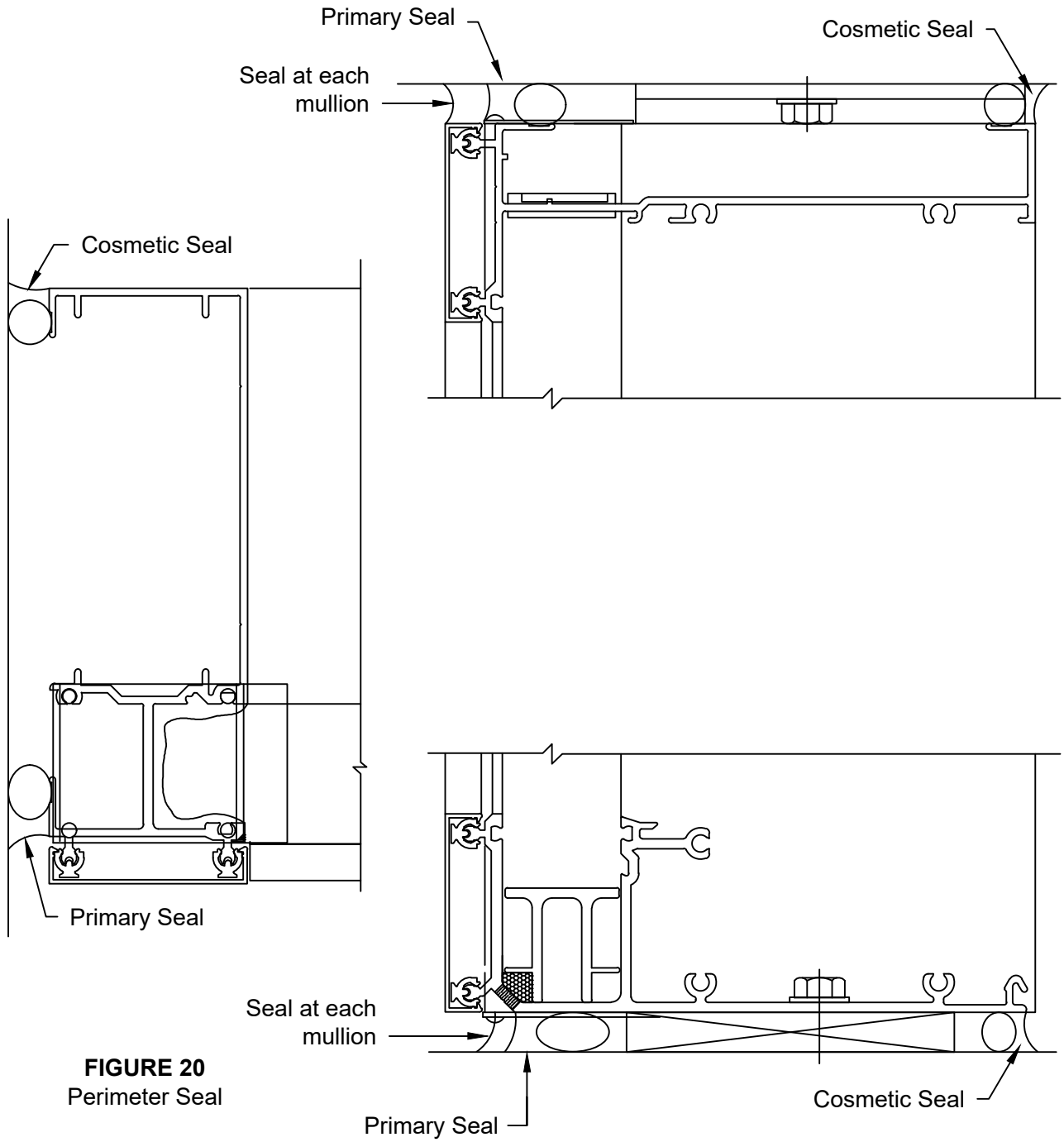


FIGURE 20
Perimeter Seal

3.12 When all framing members are installed, apply perimeter seal. **SEE FIGURE 20**. The interior perimeter seal is not required for system performance, but can be installed for cosmetic purposes.

ZONE PLUG INSTALLATION

3.13 Step 1. Seal gasket races and adaptor tracks. Proper sealant of these tracks is critical to insure water does not drain through the tracks into glazing pocket below or penetrate interior of building at glass stops.SEE FIGURE 22.

3.14 Step 2. Place bead of sealant around glazing pocket at location where zone plug will be located prior to inserted into pocket. Also lay bead of sealant across top of stem of horizontal. Place ICR-107-01 zone plug into pocket so that it may rotate over stem and snap into position. SEE FIGURE 23, page 22.

3.15 Apply additional sealant around top of zone plug at mullion and horizontal. Marry sealant with sealant previously applied into gasket races and tracks.

3.16 Step 3. Tool sealant between zone plug, mullion and horizontal to insure a proper seal. SEE FIGURE 24.

3.17 Once sealant is cured. It is recommended that weep holes in horzontal be plugged and each horizontal pocket filled with water. If water leaks through at any connection, drain pocket, dry and reseal. Then repeat until leaks have been resolved.

3.18 Exterior glazed horizontal will require sealant be applied along face of zone plug and horizontal stem prior to installing pressure plate. Since water testing of these area is not possible, special care needs to be taken to seal the zone plug to prevent leaks. See FIGURE 21

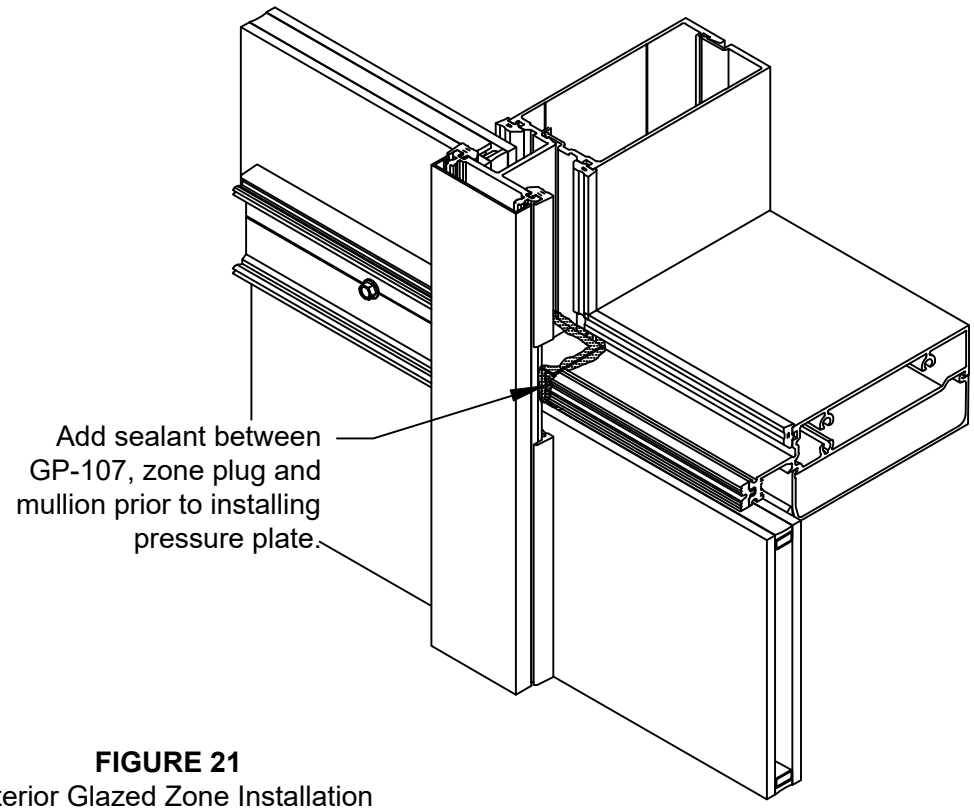


FIGURE 21
Exterior Glazed Zone Installation

ZONE PLUG INSTALLATION

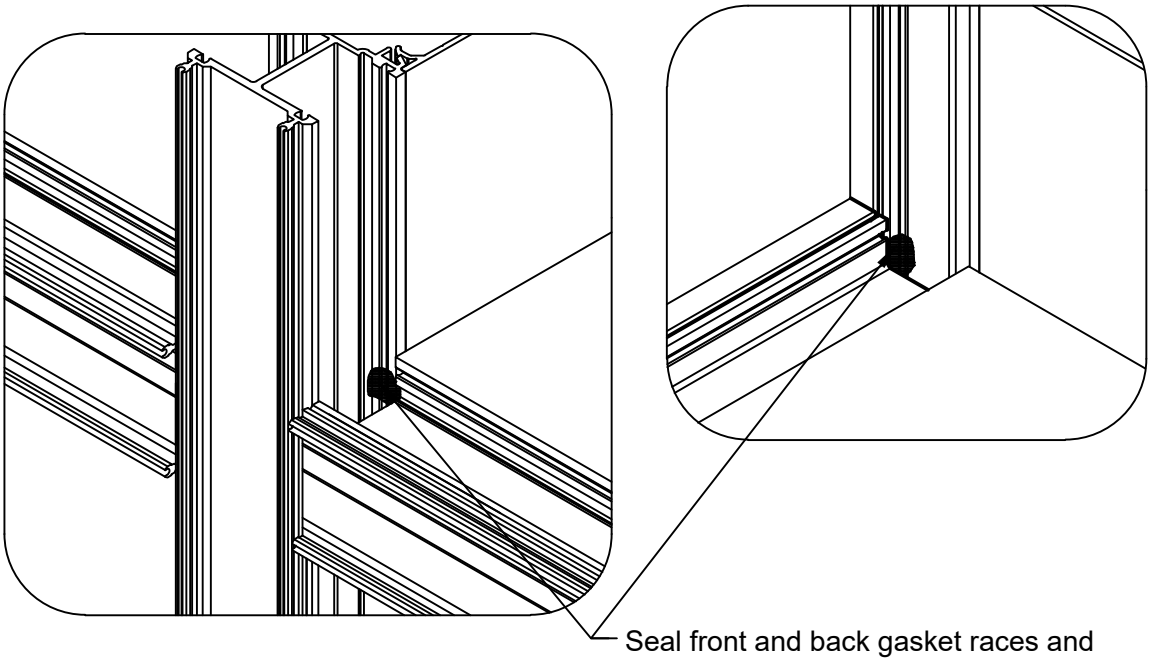


FIGURE 22
Step 1 sealant detail

ZONE PLUG INSTALLATION

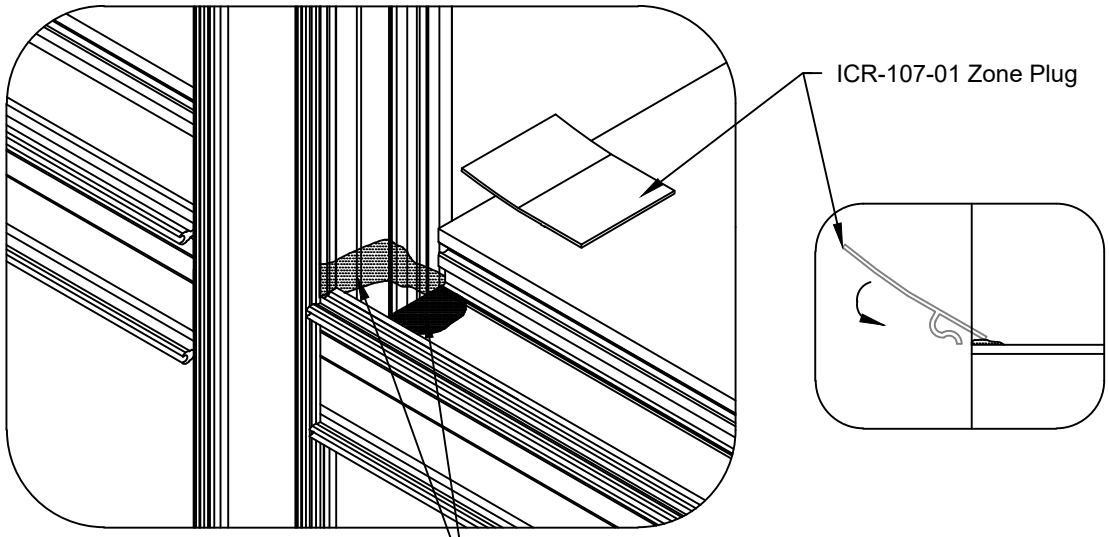


FIGURE 23
Step 2 sealant detail

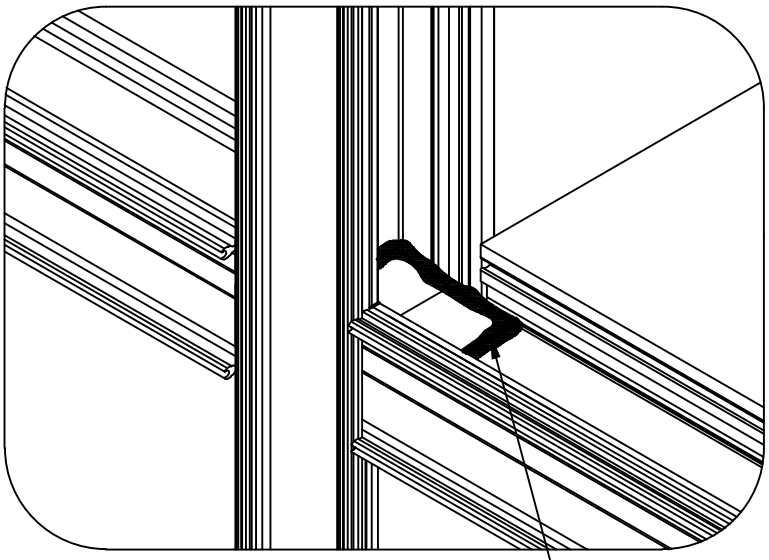


FIGURE 24
Step 3 sealant detail

GLAZING INSTRUCTIONS

4.1 Note: To avoid silicone curing before glass is set in place and contamination from job-site debris, glazing prep must be performed as each opening is glazed. Gasket should be cut 1/4" per foot longer than openings to allow for relaxation prior to installing. Do not pre-seal the gaskets in the entire frame; install and seal gaskets as you are ready to set glass in each opening Install exterior gaskets, both horizontal and vertical, installing vertical gaskets first. If the vertical mullion is spliced, run gasket through the splice joint, setting gasket in fresh silicone at splice joint, trimming the gasket dart as necessary to form an airtight seal. Glazing gaskets at verticals run through; horizontal gaskets butt into vertical gaskets. Crowd the gaskets into corners, cutting the horizontal gaskets at an angle to match bevel on vertical gaskets. Pulling the horizontal gasket back, seal joint between the corners of the gaskets just prior to setting the glass. Release the gasket back to its original position, making sure sealant fills the entire joint. SEE FIGURE 25

4.2 Position setting blocks at correct location (two per lite). Refer to approved shop drawings or deadload charts. Lubricating the top of the setting block will help insure proper setting of glass.
Note: Consult glass manufacturer for correct setting block location and length for glass sizes in excess of 40 sq. ft . SEE FIGURE 26.

4.3 Set glass in opening from the interior. System should be glazed from bottom to top. Place one edge of the glass into the deep pocket of the vertical. Swing the glass into the adjacent vertical pocket and lower onto setting blocks, ensuring that the glass bite is equal on all sides.SEE FIGURE 26, page 24.
CAUTION: Be certain that glass is placed firmly against exterior gasket to ensure a proper seal and to avoid binding of the glass on the setting block.

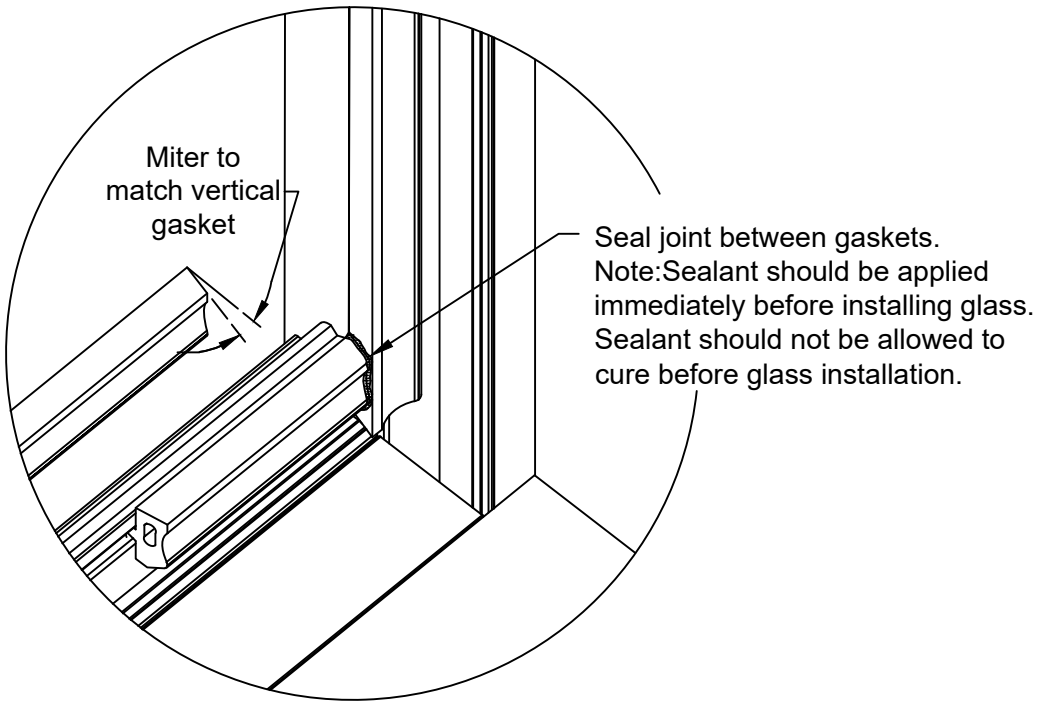


FIGURE 25
Seal @ Gasket Corners

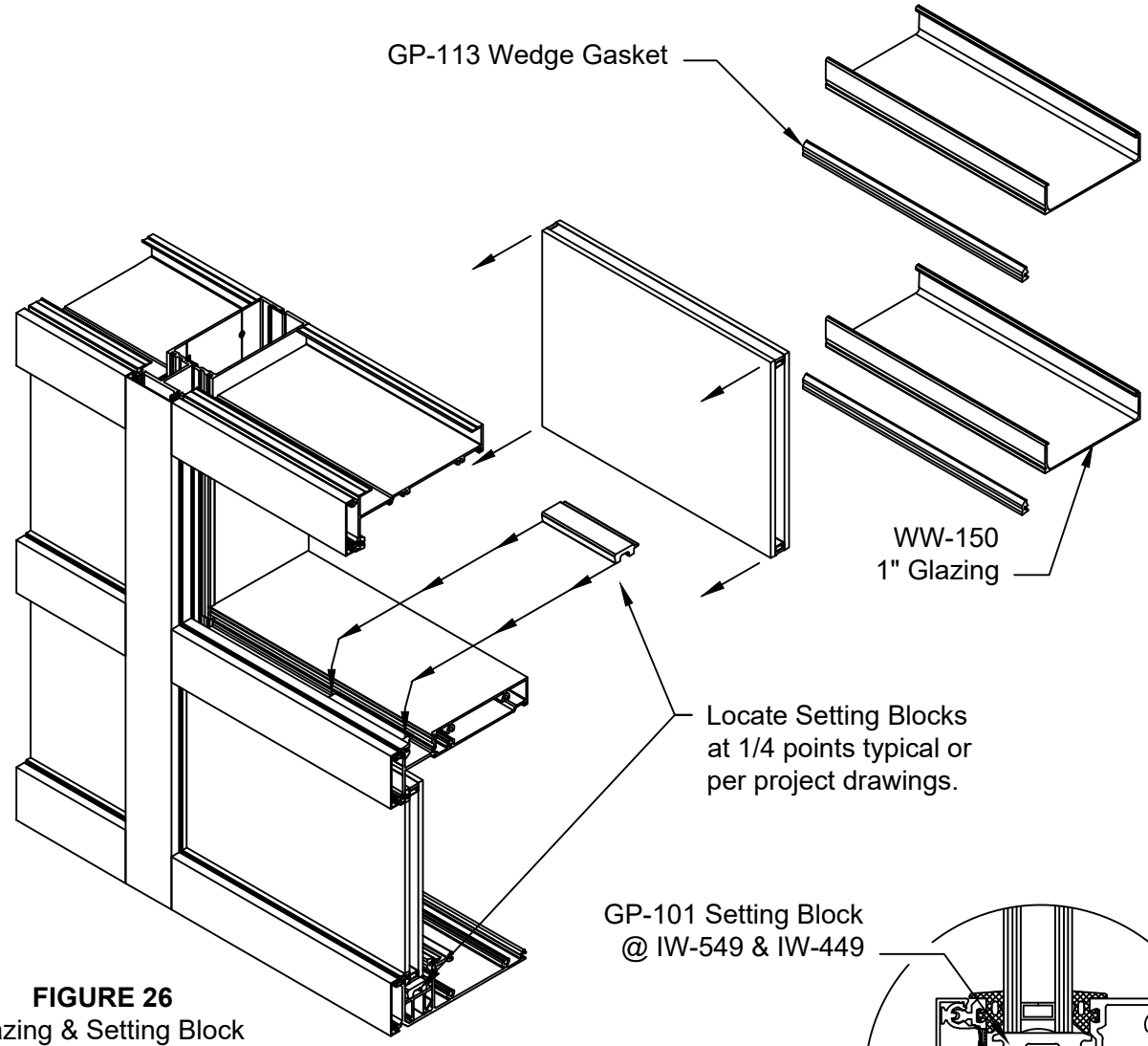
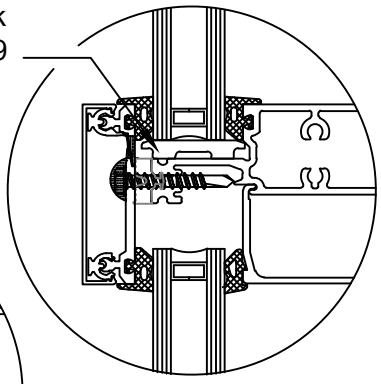
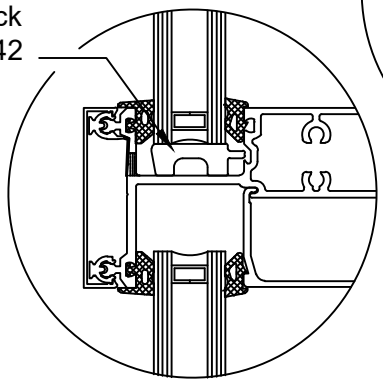
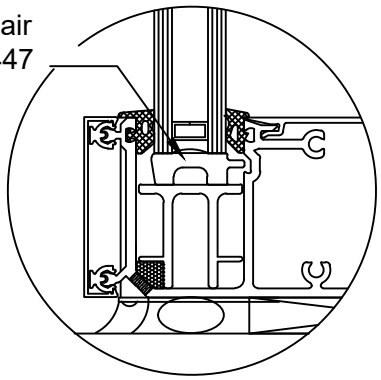


FIGURE 26
Glazing & Setting Block
Placement







4.4 Temporarily hold glass in place at each corner with 4" long interior wedge gaskets. Locate at the corners for proper sealing of gasket joint. Temporary pieces of wedge may also be required at the center of each horizontal if glass edges are greater than 4' in length.

4.5 Install GP-115 "W" blocks at centerline of each lite along vertical edges. For framing that may be subject to seismic events, consult glass manufacturer for preferred location.

4.6 Repeat steps 4.1 through 4.5 until all glass is set, working row by row up the elevation.

For elevations requiring vertical mullion splices, refer to the **VERTICAL SPLICING section, page 37 & 3**8, before continuing the installation.

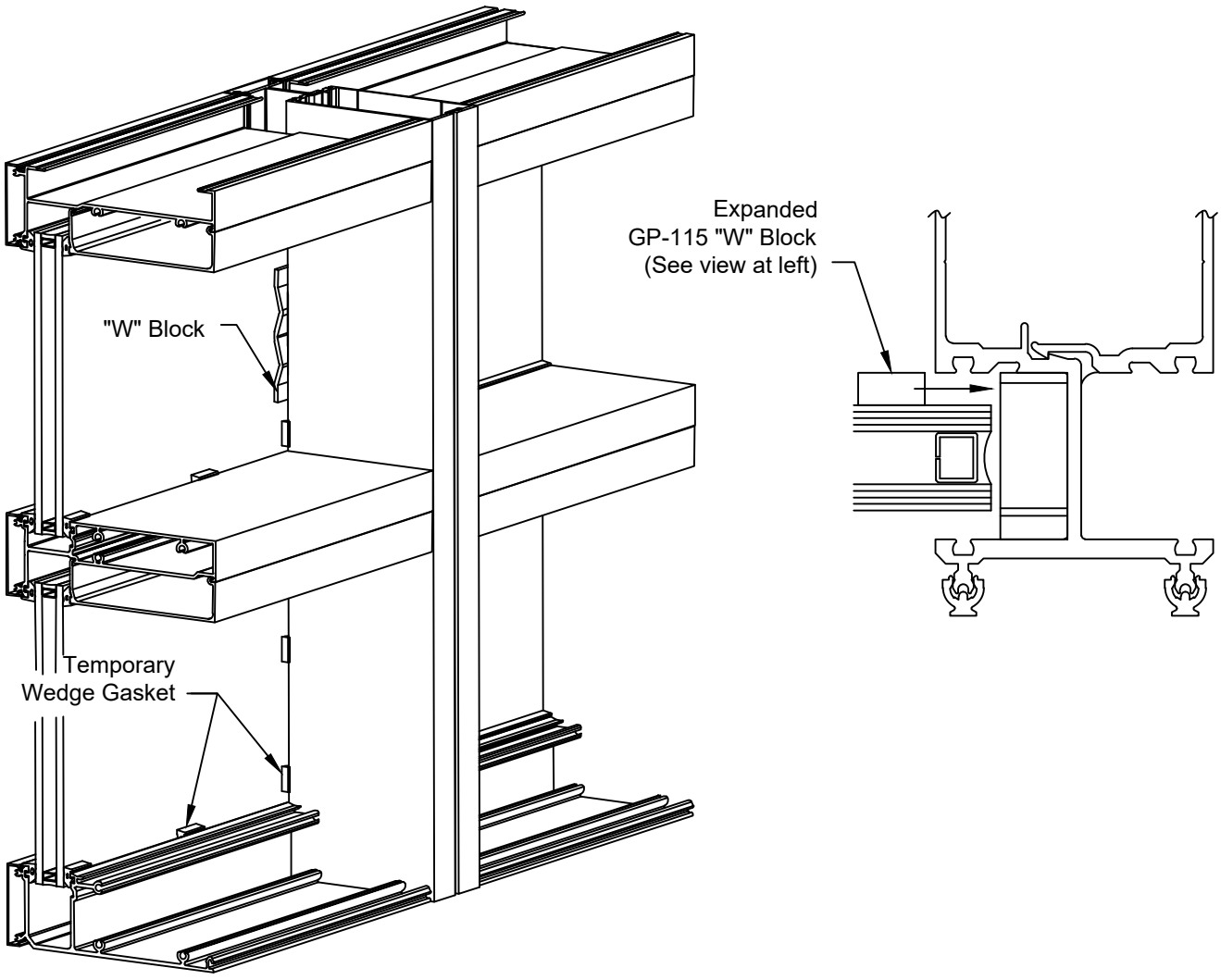


Figure 27
Glazing Retainers

GLAZING INSTRUCTIONS

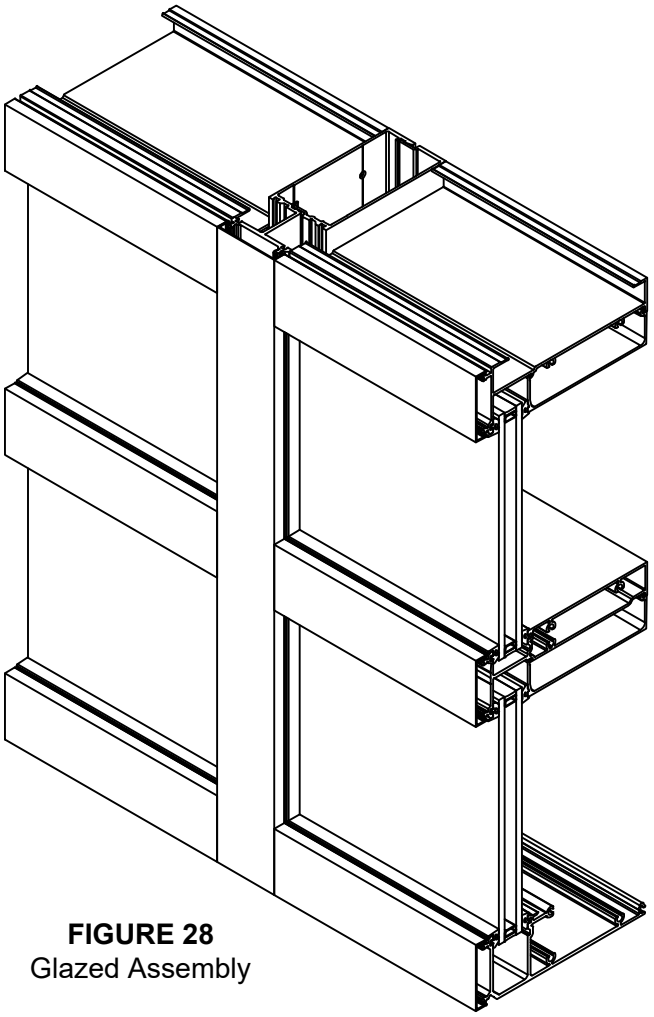
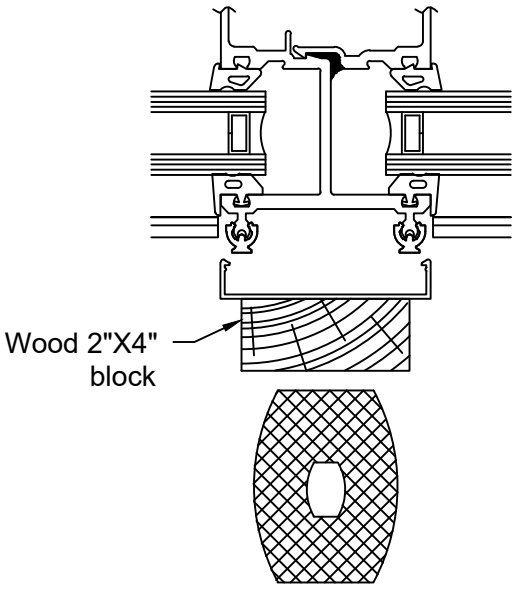
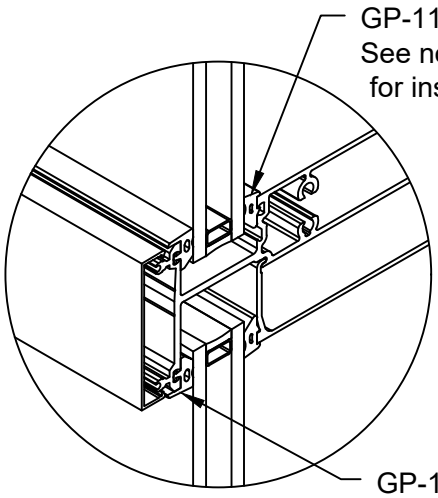


FIGURE 28
Glazed Assembly



Detail A



Glazing Notes:

1) Interior Gaskets: GP-113 Wedge Gasket
   Exterior Gaskets: GP-123 Push-In Gasket
2) Remove gaskets from reels and allow to relax overnight before installing.
3) Cut gaskets 1/4" longer per foot of aluminum extrusion to allow for relaxation.

4.7 Install vertical face covers, then horizontal face covers leaving equal gap at the ends. Make sure weep hole is on bottom. To prevent damaging snap-on face caps during installation, hold a short piece of 2 x4 wood block over the cap and strike with a Stanley 3 lbs Compo-cast dead blow soft face hammer. Strike cap at clip locations. Do not hit the face cap directly with a mallet. See Details "A".

EXTERIOR GLAZING INSTRUCTIONS

4.8 Exterior glazing will be necessary on lites located adjacent to mid-span anchors and may also be required at building floors. Horizontals with a removable pressure plate must be used at top and bottom of lite to allow for exterior glazing. See FIGURE 17 & 18, page 19 . If exterior glazing SSG system, WW-300 bridges will be installed at each horizontal. See FIGURES 33,34 & 35, pages 32 & 33.

4.9 Position setting blocks at correct location (two per lite). Refer to approved shop drawings or dead load charts. Lubricating the top of setting block will help insure proper setting of glass. Note: Consult glass manufacturer for correct setting block location and length for glass sizes in excess of 40 sq. ft .

4.10 Glazing captured system: Install interior gaskets running the vertical gasket through and butting horizontal gaskets between. Joint between vertical and horizontal gaskets must be sealed. Horizontal gaskets should be mitered per FIGURE 25. page 25. Crowd gasket using the formula of 1/4" per foot of aluminum extrusion. Note: Interior gaskets will be installed prior to setting glass at exterior glazed areas.

4.11 Glazing SSG system: Install horizontal gaskets continuous across opening at upper and lower horizontal. Crowd gasket using formula of 1/4" per foot of aluminum extrusion.

4.12 Set glass in opening from the exterior. Place one edge of glass in deep vertical pocket or in front of the SSG mullion and swing the glass into the adjacent vertical pocket. Lower onto setting blocks. When glazing captured system, slide glass until centered in opening which should provide 1/2" glass bite on all edges. It may be necessary to leave glass offset in openings on the SSG system until the end of the run is complete, then slide each lite over to center into openings. The glass for SSG system should be positioned to leave a 1/2" joint between each lite of glass. GP-113 wedge should be installed at exterior of captured verticals, cutting length 1" longer than day light opening.

4.13 Install pressure plate on horizontal at top and bottom of opening. These will be installed after glass has been centered in opening. Gaskets should be installed into pressure plates prior to installation. The GP-108 spacer gasket must be installed onto horizontal prior to attaching pressure plate. Attach pressure plate using FS-322(#12-14 x 1" HWH Drill Flex) @ 9" O.C. and torque to 60 in/lbs.

4.14 Seal ends of pressure plate to sides of vertical mullions and seal ends of horizontal gaskets to vertical gaskets. SEE FIGURE 29, page 28.

4.15 After installation of glass is complete for SSG system install GP-102 spacer along each side of vertical mullion at interior, pushing spacer behind glass to create a sealant joint of minimum 3/8" depth. SEE FIGURE 30, page 28. Spacer should be cut vertical opening plus 1" and placed in opening to extend 1/2" above and below edge of horizontal. This joint should then cleaned using isopropyl alcohol and sealed using a structural silicone. When using pressure plates for SSG system, cut a maximum length of three bays or not greater than 24 feet, then seal between pressure plates as shown in FIGURE 30, page 30.

4.16 When exterior glazing a spandrel area you may use the IW-151, 1/4" glass stop or IW-152, 1" spandrel glass stop. Using the appropriate spandrel glass stop, the GP-123 gasket will be pre-installed on the interior of each lite in place of wedge gasket. Once glass is installed, GP-113 wedge will be used on the exterior of vertical mullions. The pressure plate will be installed with GP-123 gasket pre-installed. SEE FIGURE 29 B, page 30.

4.17 On SSG system, seal the exterior joint between the glass by installing backer rod and sealant between the lites. Marry this seal into the gaskets or sealant joint on each end.

4.18 Horizontal face caps should be installed centered in opening. The face caps on SSG system should be spliced every three bays and have a minimum 1/4" joint between each cap. This joint should be sealed by installing backer rod and sealant between caps. SEE FIGURE 31.

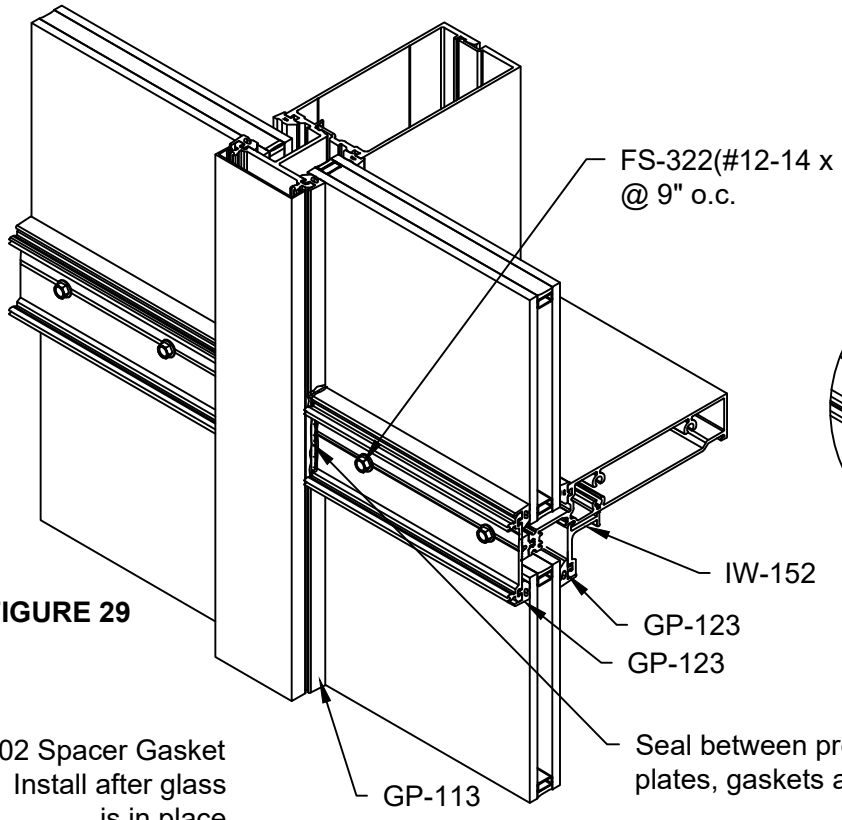


FIGURE 29

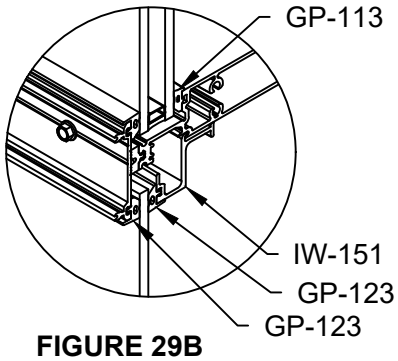


FIGURE 29B

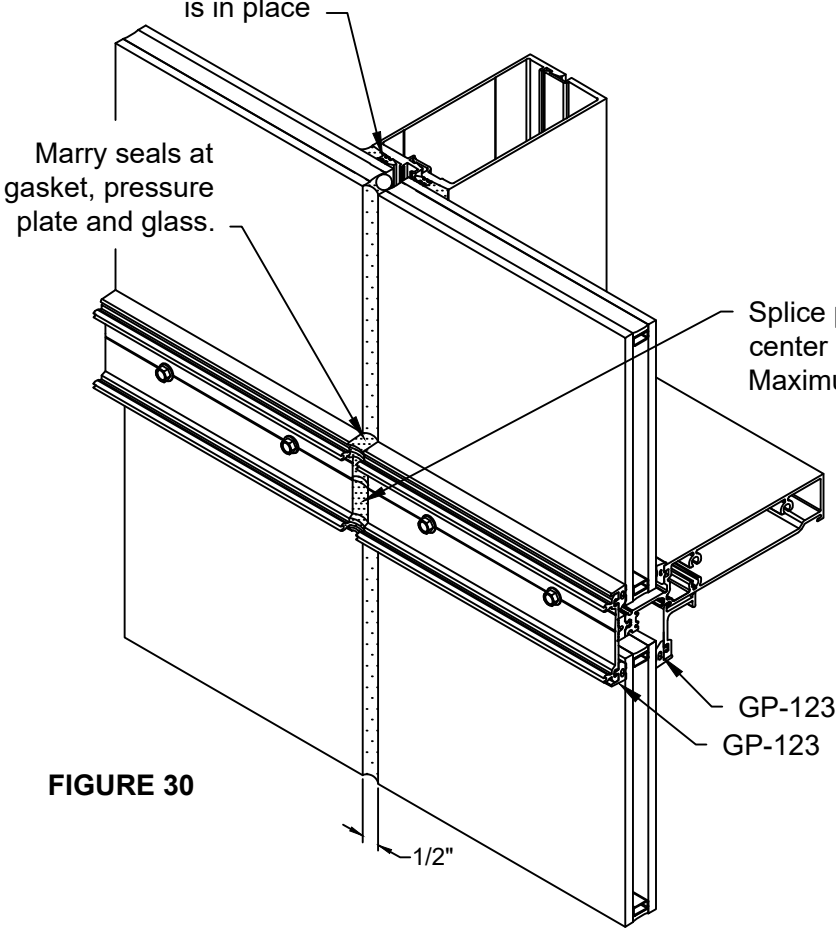


FIGURE 30

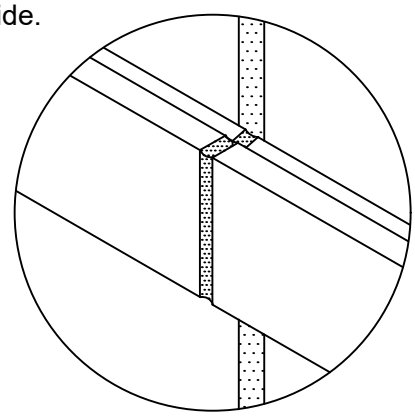


FIGURE 31

4.19 Glazing using the SSG mullions typically will be accomplished by setting glass from the interior of the building. If special conditions exist which mandate setting glass from exterior, see page 19.

4.20 Prior to installing glass, horizontal bridges must be installed and sealed. Head and sill bridges will be installed as shown in FIGURES 33 & 34. Intermediate horizontals will use two different bridges based on interior or exterior glazing. SEE FIGURES 33, 34 & 35, page 32 & 33.

4.21 Horizontal face caps should be installed before glass. The face caps should be spliced every three bays and have a minimum 1/4" joint between each cap. This joint should be sealed by installing backer rod between caps and then applying sealant. SEE FIGURE 31.

4.22 Position setting blocks at correct location (two per lite). Refer to approved shop drawings or deadload charts. Lubricating the top of setting block will help insure proper setting of glass. Note: Consult glass manufacturer for correct setting block location and length for glass sizes in excess of 40 sq. ft .

4.23 Install horizontal exterior gaskets running the gasket continuous across horizontals and bridges. Apply sealant along top edge of gasket at each bridge, at upper and lower gasket, just prior to installing glass. See Detail "A" below. If a gasket must be spliced, ends must be sealed and butted together. Cut gaskets 1/4" longer per foot of aluminum extrusion to allow for relaxation.

4.24 Set glass in opening from the interior. Place one edge of glass in front of the SSG mullion and swing the glass into the adjacent vertical pocket. Lower onto setting blocks. It may be necessary to leave glass offset in openings until the end of the run is complete, then slide each lite over to center into openings. The glass should be positioned to leave a 1/2" joint between each lite of glass.

4.25 Once glass is centered into opening, install temporary clips (SPW-PP-3) at 24" o.c. or minumum 3 per lite. Install GP-102 spacer along each side of vertical mullion pushing spacer behind glass to create a sealant joint of minimum 3/8" depth. Spacer should be cut vertical opening plus 1" and placed in opening to extend 1/2" above and below edge of horizontals. This joint should then cleaned using isopropyl alcohol and sealed using an approved structural silicone. SEE FIGURE 32

4.26 The exterior joint between the glass should be sealed by installing backer rod and sealant into the joint.

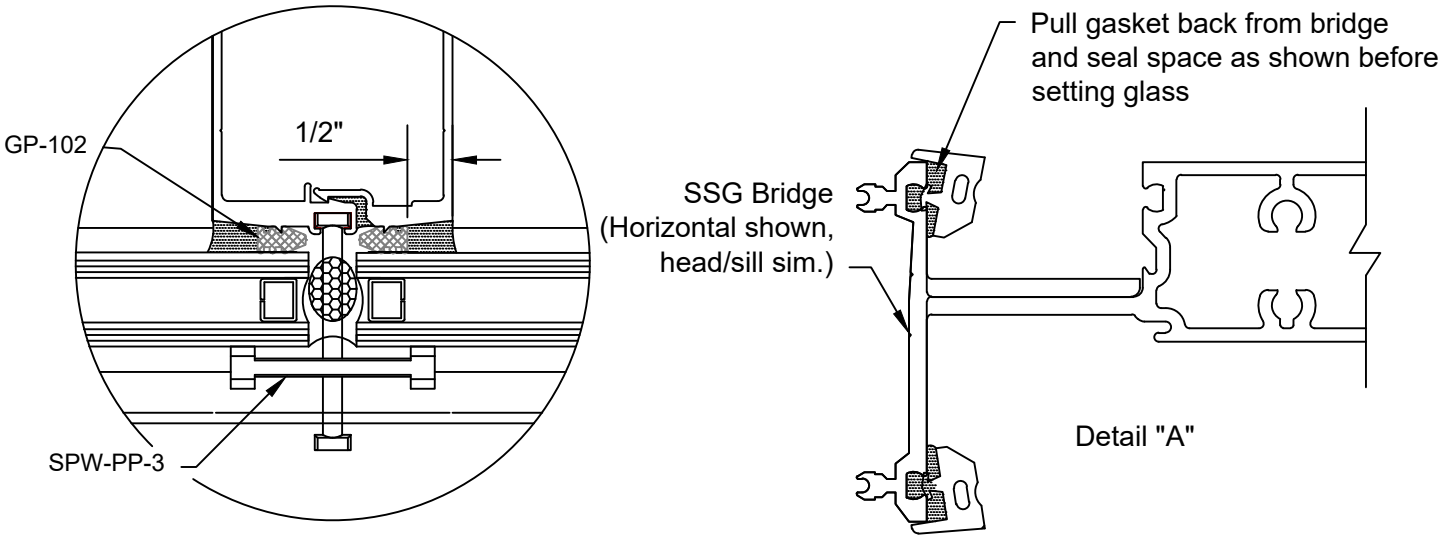


FIGURE 32

SSG BRIDGE INSTALLATION

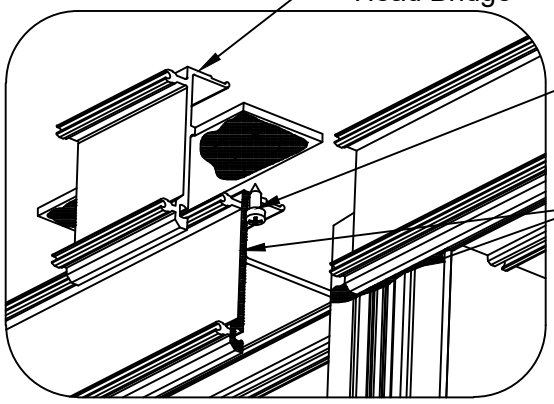
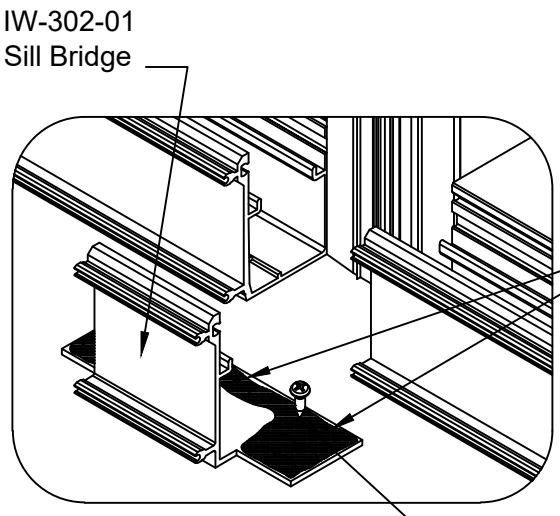


FIGURE 33
Head Bridge Installation



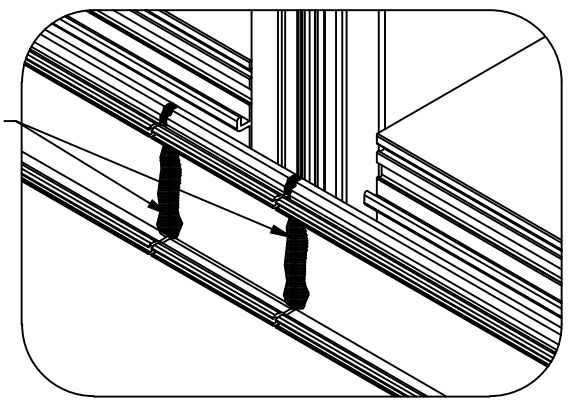


FIGURE 34
Sill Bridge Installation

NOTE: Cap seal all fasteners after installation of bridges.

SSG BRIDGE INSTALLATION

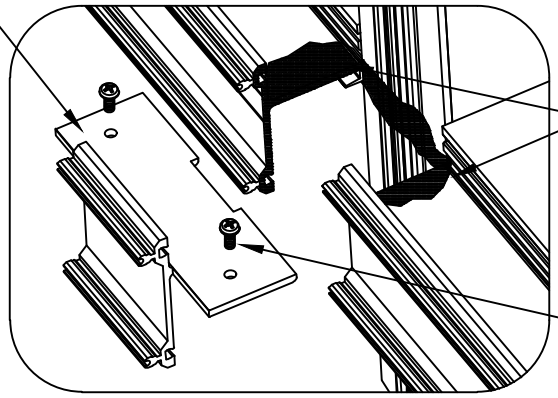
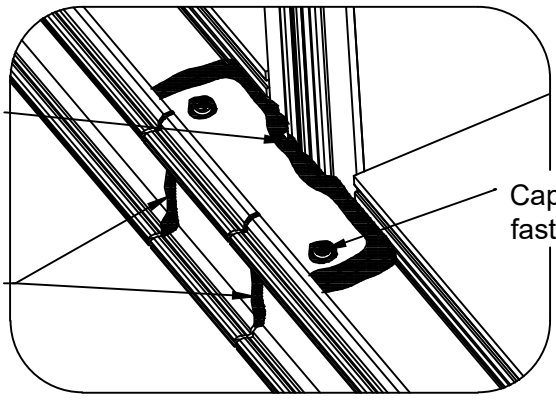


FIGURE 35
Interior Glazed Horizontal Bridge Installation at SSG mullion



SSG BRIDGE INSTALLATION

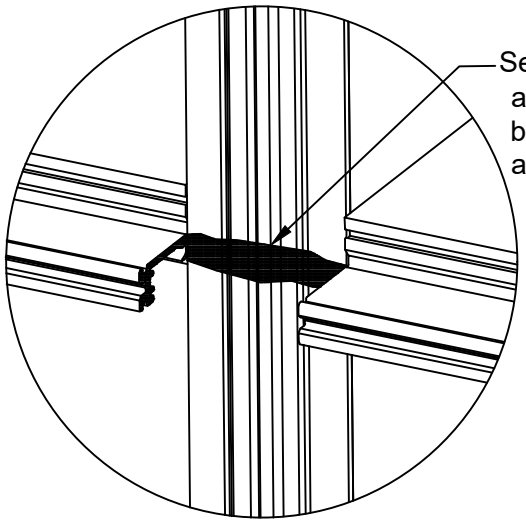
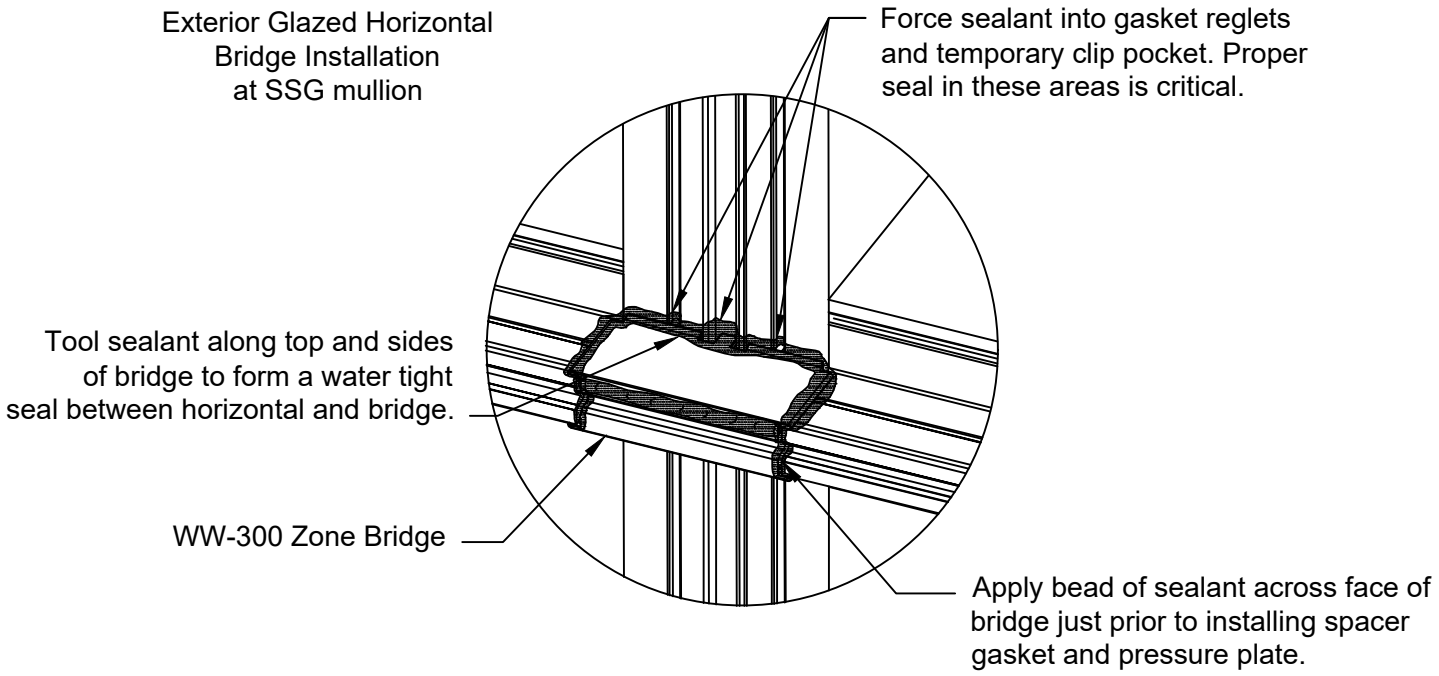


FIGURE 36
Exterior Glazed Horizontal Bridge Installation at SSG mullion



GLAZING ADAPTOR INSTALLATION

Note: Glazing adaptors to be installed after wall has been erected and zone plugs have been installed and sealed in place. Water testing of glazing pockets is recommended prior to installing the adaptors.

T.1 Glazing adaptors at captured vertical mullions and jambs and horizontals require the WW-145 adaptor to be hooked into the notch (Step 1) at the mullion stem and then rotated and snapped into place (step 2). SEE FIGURE 37

T.2 Glazing adaptor at SSG vertical mullions will be attached using FS-201 (#10 x 1 1/2" pfh) fasteners at 12" on center. Mullion will be match drilled using #11 (.191Ø) drill bit. Holes in mullion must have sealant injected into the tap holes just prior to attaching the adaptor to the mullion. SEE FIGURE 39

T.3 All adaptors must have bead of sealant (Step 3) around the interior perimeter SEE FIGURES 37, 38, 39 & 40, sealant tooled and corner of adaptors sealed.

T.4 Exterior glazed horizontal WW-442 and WW-542 require glazing adaptor WW-175 for 1/4" glazing. SEE FIGURE 40

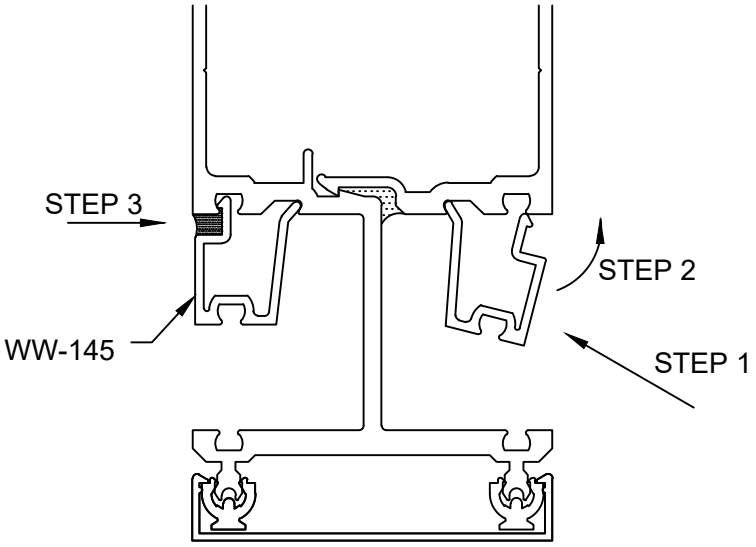


FIGURE 37
Adaptor at Typical Vertical Mullion

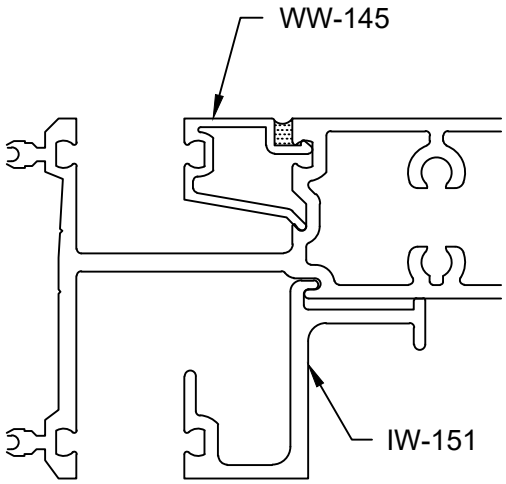


FIGURE 38
Adaptor at Typical Horizontals

GLAZING ADAPTOR INSTALLATION

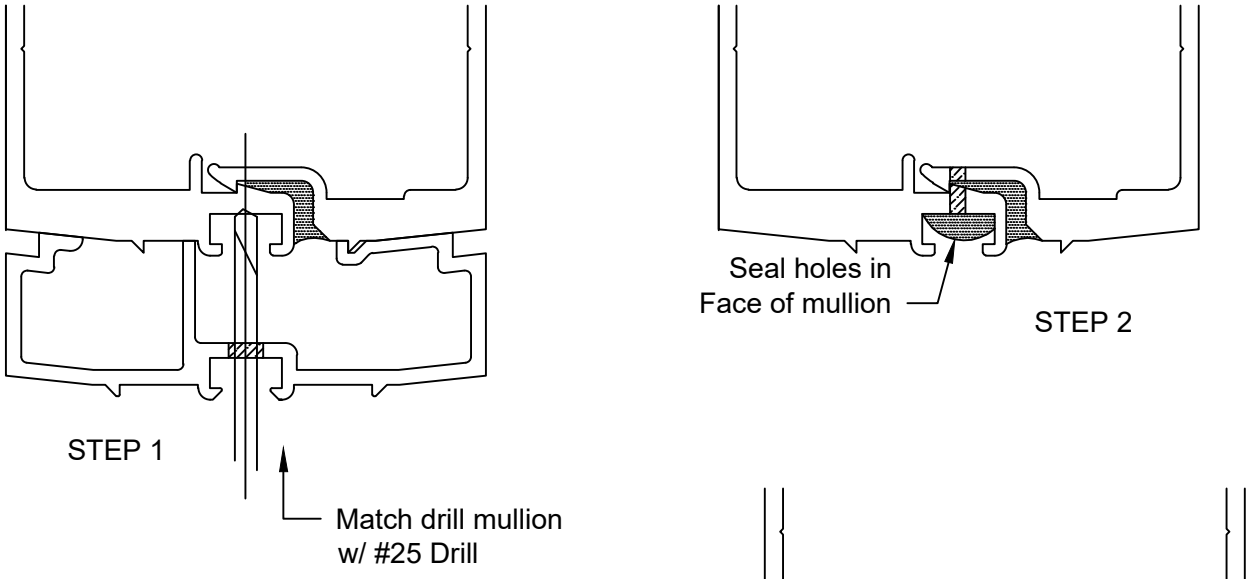


FIGURE 39
IW-131 SSG Adaptor

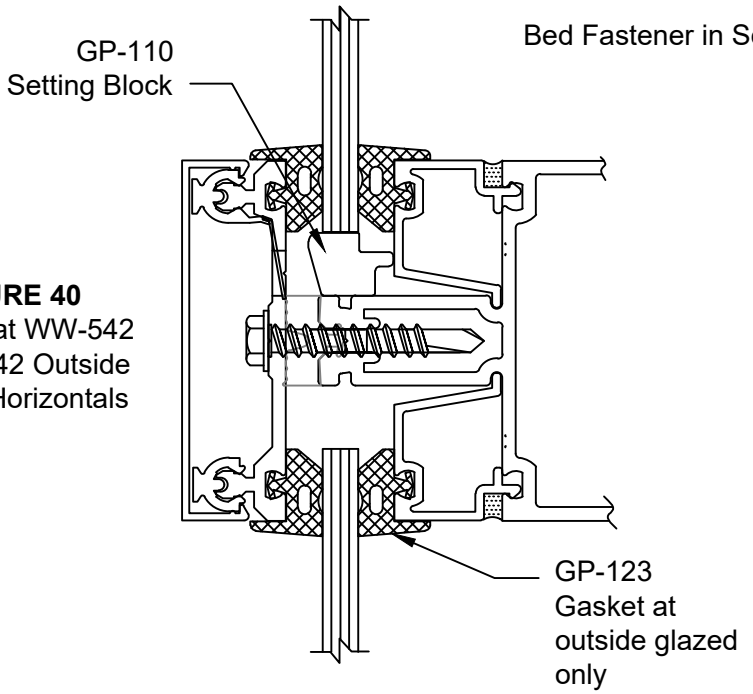


FIGURE 40
Adaptor at WW-542
& WW-442 Outside
Glazed Horizontals

VERTICAL SPLICE ASSEMBLY

SP.1 Tape splice sleeve into upper section of vertical mullion. Weld or seal IW-122-01 or BA-2-01 caulk stop blocks to both sides of splice joint to provide adequate sealant backer at face of mullion.SEE FIGURE 41

SP.2 Drill (2) 9/32" dia. holes in lower mullion for splice attachment and one 7/32" hole in lower mullion stop screw. SEE FIGURE 41. Install (1) FS-322 drill flex fastener into lower mullion for splice stop. SEE FIGURE 42.

SP.3 When erecting wall, lower splice sleeve into lower mullion until it contacts stop screw. Attach splice to mullion with (2) FS-8 fasteners. SEE FIGURE 42.
Add (2) FS-8 fasteners to upper mullion for hard splice conditions.SEE FIGURE 43.
(Note: Hard splice connections should be engineered)

SP.4 Apply bond breaker tape to face of splice on interior face of mullion. SEE FIGURE 42, page 36.

SP.5 Seal splice joint along interior face of mullion back 1" on each side and seal exterior face of mullion between ends of mullion and caulk blocks. SEE FIGURE 43.

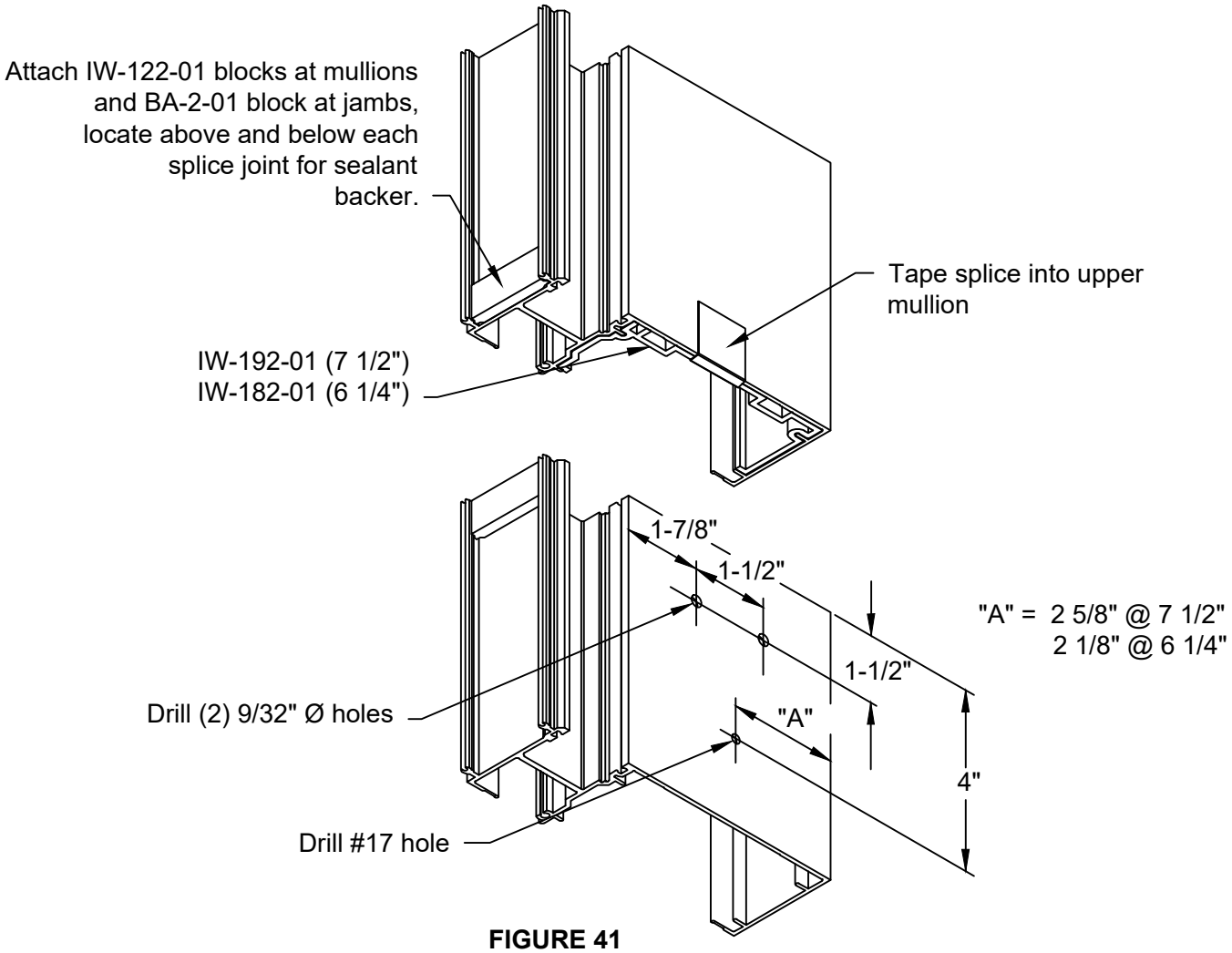
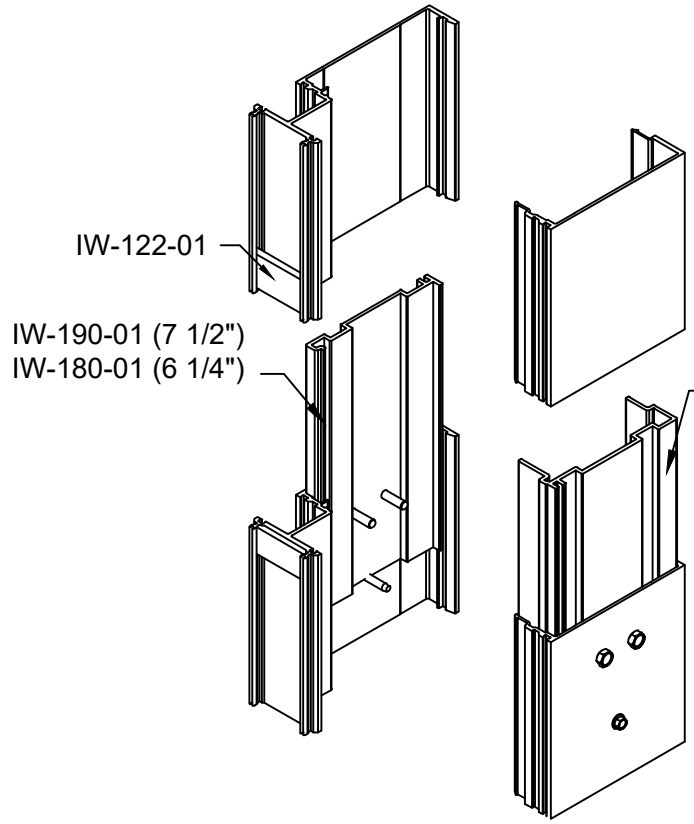
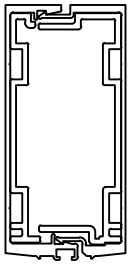


FIGURE 41
Splice Fabrication

VERTICAL SPLICE ASSEMBLY





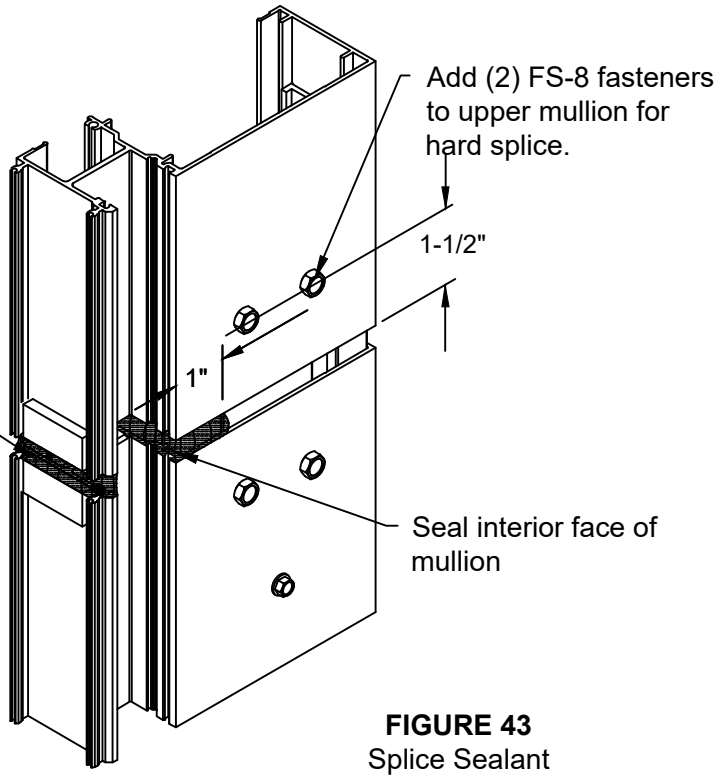
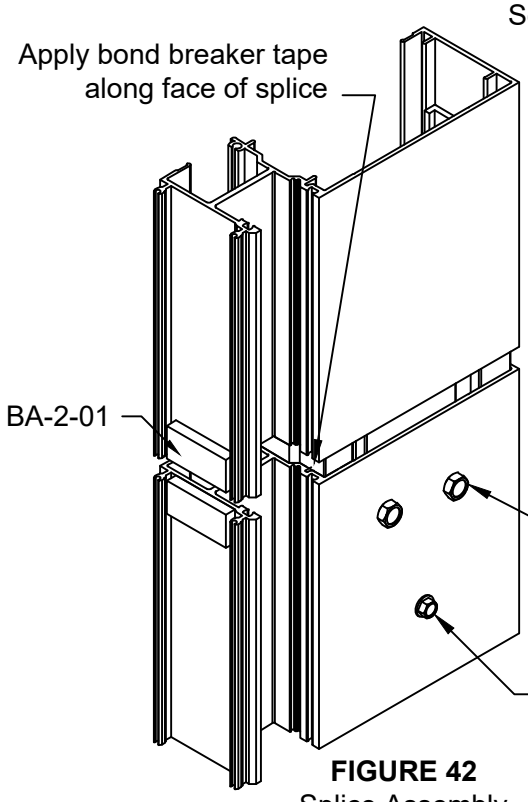


FIGURE 43
Splice Sealant



Attach splice to lower mullion after assembly with (2) FS-8 fasteners. Match drill splice using #11 (.191 Ø) drill.

Install FS-322 fastener into lower mullion. Fastener used as stop for splice.

FIGURE 42
Splice Assembly

SUNSHADE ANCHOR INSTALLATION AND FABRICATION

S.1 Mill cutouts from stem of mullion at location of each anchor bolt, 4 bolts shown are for standard application and your project may require additional fasteners based on engineers review. Cutouts will be 1-1/2" wide by 1" deep and must be flush with back of mullion face. Location will vary depending on project requirements, pattern shown is for standard anchor only. SEE FIGURE 44

S.2 Drill face of mullion with 7/16" Ø holes for 3/8" anchor bolts. SEE FIGURE 44

S.3 Debur bolt holes on exterior and interior face of mullion to insure proper fit of anchor and bolts.

S.4 A bead of sealant must be applied around each hole in face of mullion prior to attaching anchor. SEE FIGURE 45

S.5 Attach anchor to face of mullion with 3/8"-16 x 1" hex head bolt, nut, flat and lock washers. Cap seal bolts once installed. SEE FIGURE 45.

S.6 ICW-111 face cap required for projects with sunshade installation. Face cap will be notched at each anchor. SEE FIGURE 44

NOTE: All sunshade installations must be reviewed by a structural engineer for anchor design and attachment.

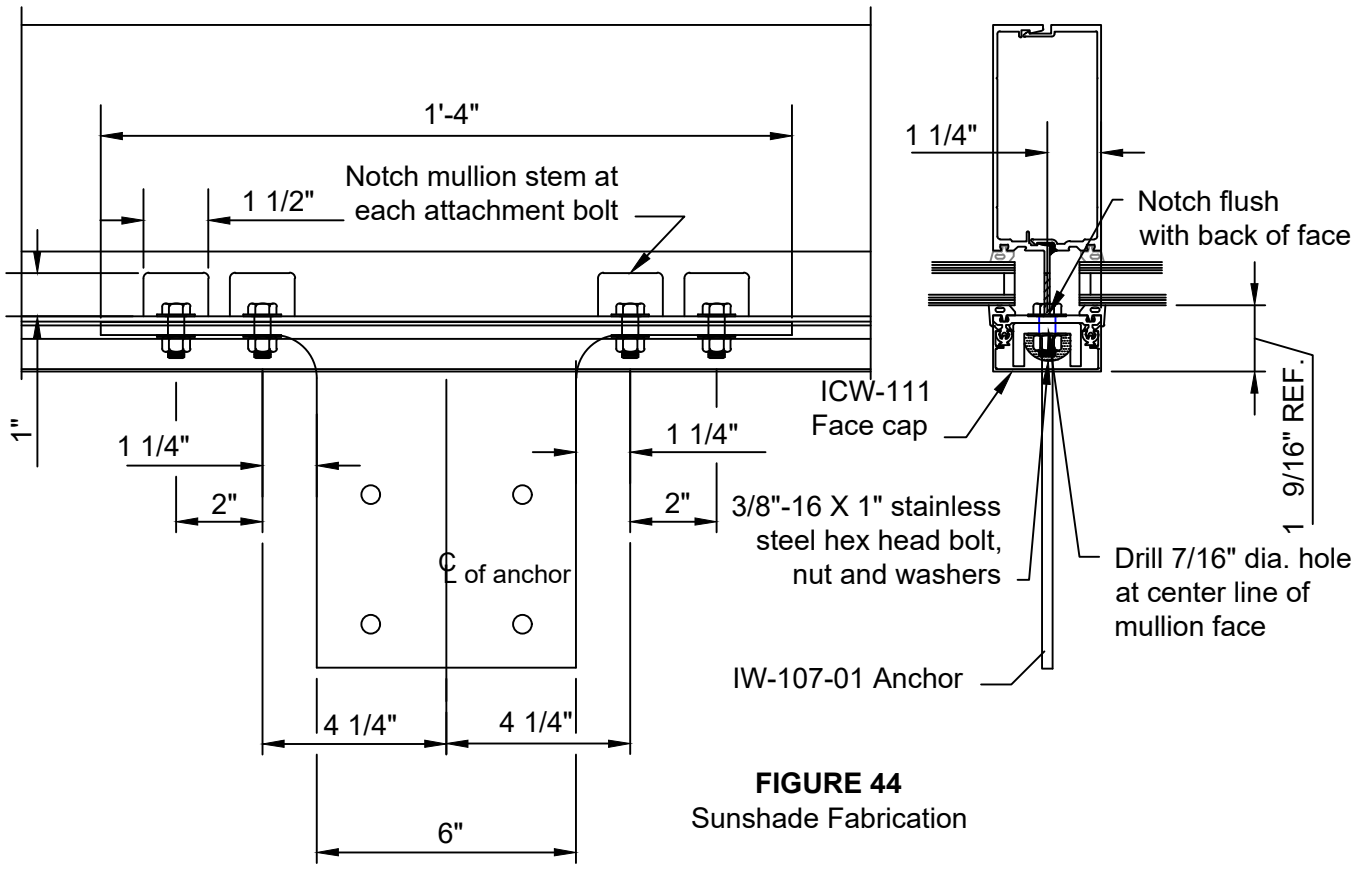
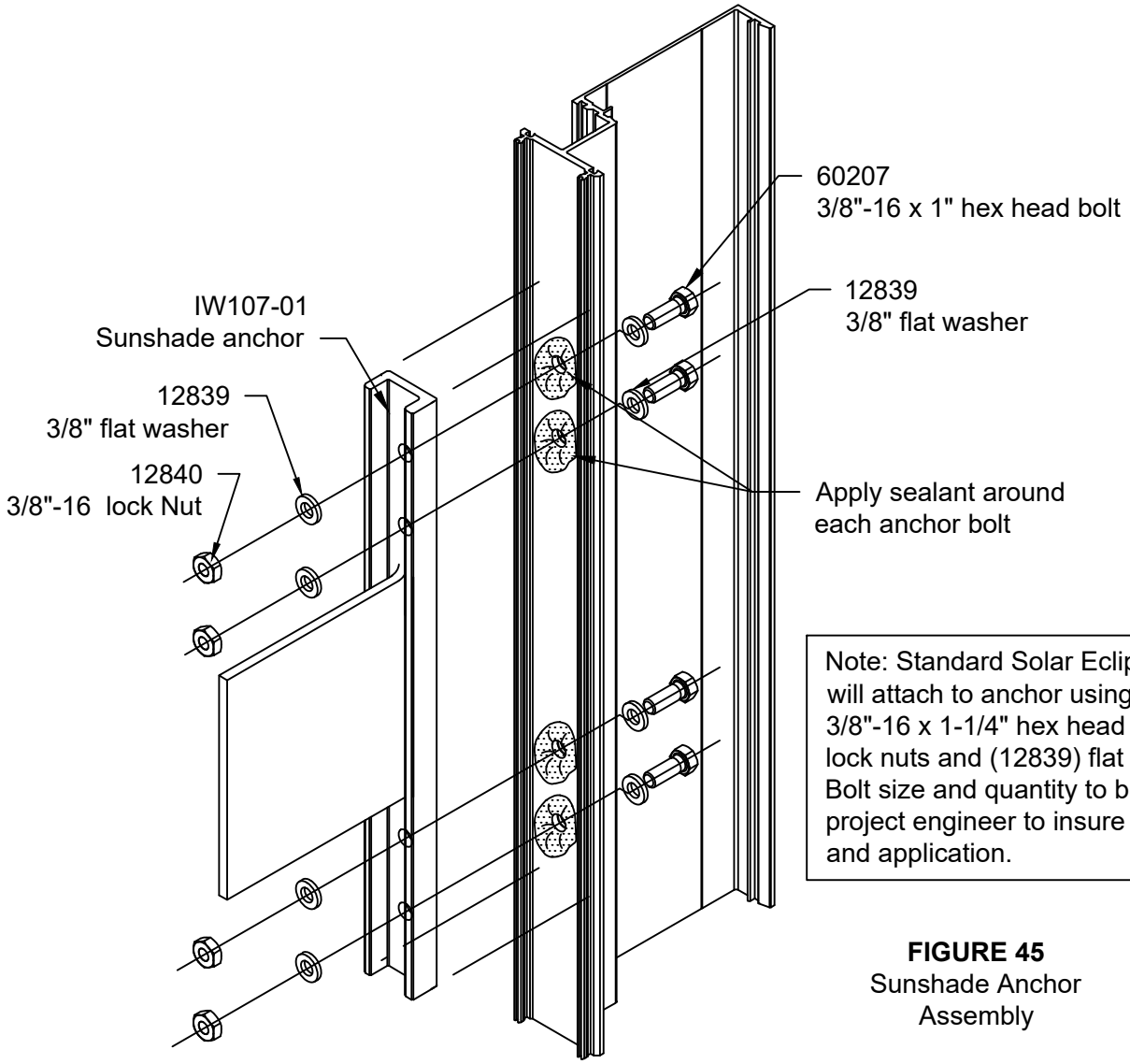


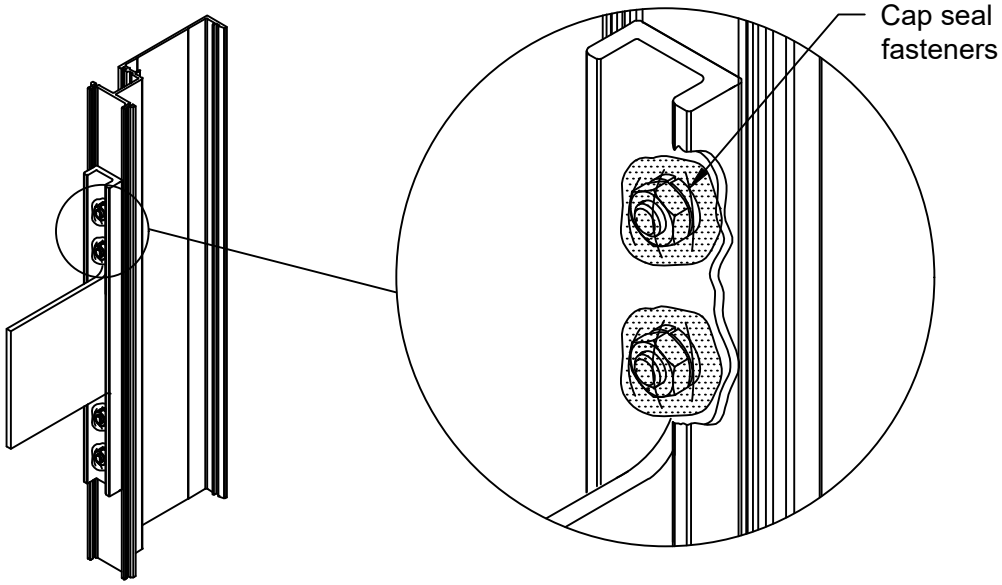
FIGURE 44
Sunshade Fabrication

SUNSHADE ANCHOR INSTALLATION AND FABRICATION



Note: Standard Solar Eclipse outriggers will attach to anchor using four (12838) 3/8"-16 x 1-1/4" hex head bolts, (12840) lock nuts and (12839) flat washers. Bolt size and quantity to be reviewed by project engineer to insure proper size and application.

FIGURE 45
Sunshade Anchor
Assembly



DOOR INSTALLATION

All door framing components are shipped fabricated from the factory. The main curtain wall framing can be erected prior to installing the doors.

D.1 Curtain wall verticals and door subframes run through to finish floor. Bed adjacent curtain wall verticals in sealant and anchor to floor per approved shop drawings.

D.2 SUBFRAME INSTALLATION:

D.2.1 Attach TH-44 threshold clip to bottom of each jamb subframe with two (2) FS-256 #8 x 1 1/2" Phillips Round Head Screws.

D.2.2 Install WW-341 pocket filler into pocket of vertical facing the door opening. Install horizontal glass stop, then install CH-93 channel and attach channel with FS-55 (#10 x 1/2" pph) at 12" o.c. through face of horizontal. Cap seal all fasteners, then install the horizontal face cap.

D.2.3 Bed subframes in sealant and anchor to curtain wall framing members with FS-316 1/4"-20 x 2" Drillflex at 18" O.C. Seal joint between jamb and header subframes. Seal also the tops of the jamb subframes. SEE FIGURE 46.

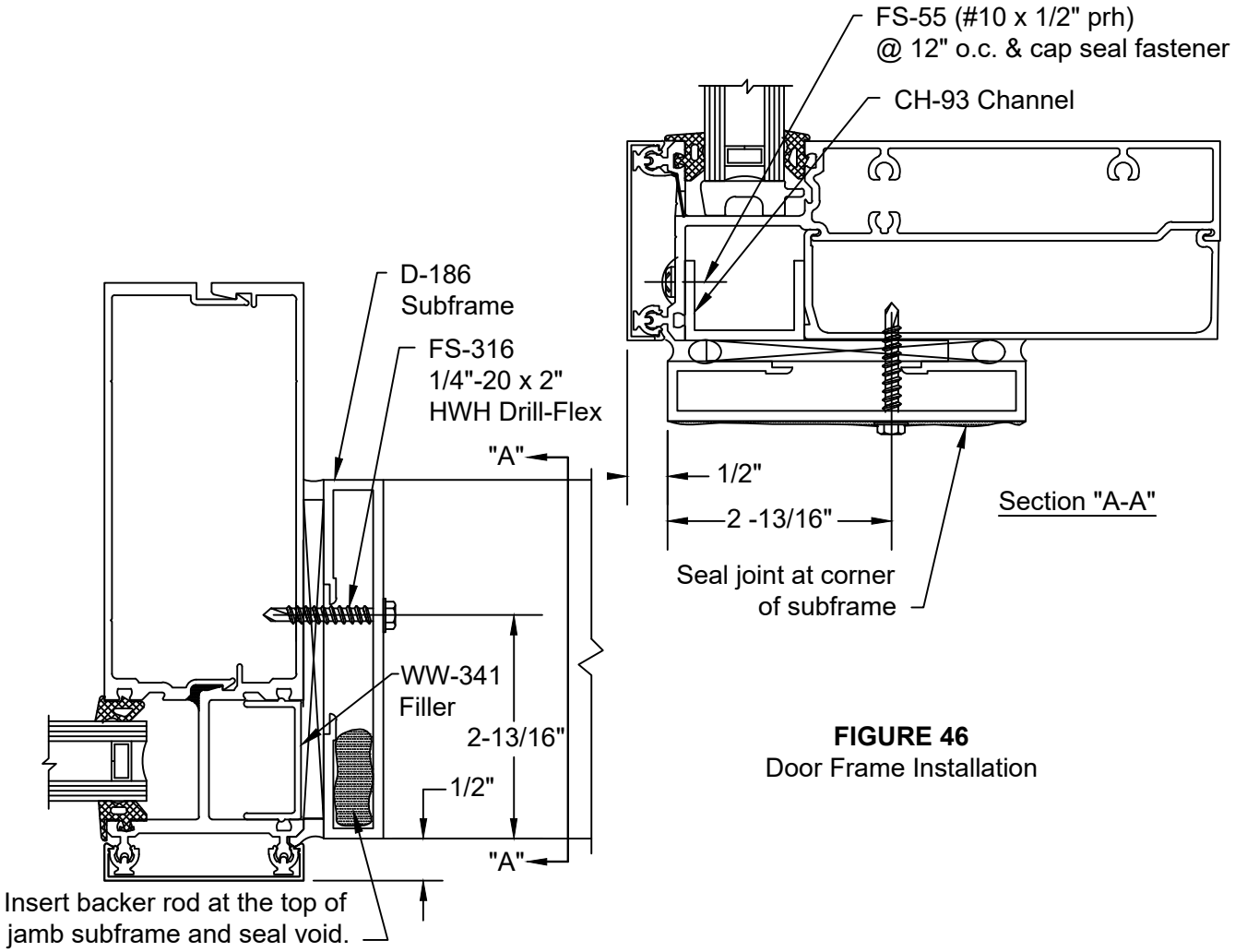


FIGURE 46
Door Frame Installation

Phone: 1-866-OLDCASTLE (653-2278)
Web Address: www.oldcastlebe.com

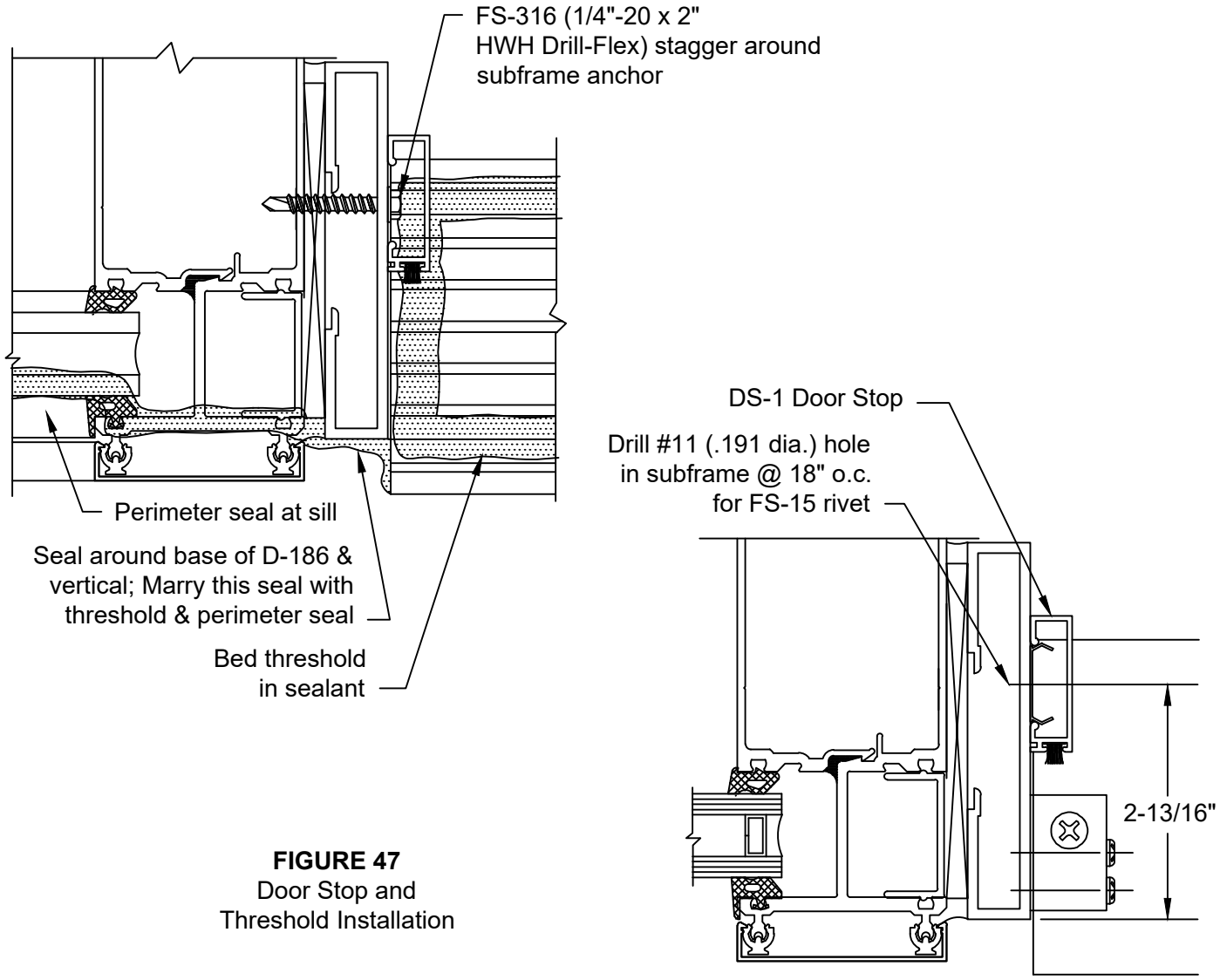


FIGURE 47
Door Stop and
Threshold Installation

D.2.4 Bed threshold in sealant, attaching to TH-44 clips with FS-42, #12 x 1/2" Phillips Flat Head screws. Marry threshold seal with subframe and main system seal. SEE FIGURE 47.

D.2.5 Drill #11, .191 diameter holes in D-186 subframe for FS-15 rivets. Install door stops onto subframe with SC-1 clips at 18" O.C. Locate clips around the subframe anchor screws. SEE FIGURE 47. Vertical stops run through.

D.2.6 Install door per DOOR AND FRAME INSTALLATION AND GLAZING MANUAL.

REGLAZE PROCEDURES

WHEN REGLAZING FROM THE INTERIOR. Remove interior wedge, remove old glass and clean glazing pocket of any debris or glass and reglaze per glazing instruction on pages 23 thru 26.

WHEN REGLAZING FROM THE EXTERIOR FOLLOW STEPS R.1 THRU R.5

R.1 Carefully remove horizontal face covers surrounding the lite of glass to be deglazed. SEE FIGURE 48

R.2 Remove lower section of upper horizontal as shown in FIGURE 49.

R.3 Remove lite of glass and existing interior gaskets from the opening. Clean debris and sealant from the framing members.

R.4 Install GP-101 gaskets into framing. Set new lite of glass, centered in opening.

R.5 Install IW-132 or IW-133 reglaze leg. Set in continuous bead of sealant and attach with FS-55 fastener @ 12" o.c.,cap seal all fasteners. GP-143 Baffle Clip used at reglaze areas. See FIGURE 50.

WHEN REGLAZING SSG FROM EXTERIOR FOLLOW STEPS R.6 THRU R.12

R.6 Carefully remove horizontal face caps surrounding the lite of glass to be deglazed. SEE FIGURE 48.

R.7 Remove pressure plate and isolator gasket from top of damaged lite at exterior glazed . At interior glazed; remove lower section of upper horizontal. SEE FIGURE 49.

R.8 Vertical structural silicone joints must be cut to remove broken lite of glass. SEE FIGURE 51.

R.9 Remove lite of glass and existing interior gaskets from the opening Clean debris and sealant from the framing members and horizontal pressure plates.

R.10 Install GP-101 gaskets into framing. Set new lite of glass, centered in opening. SEE FIGURE 52.

R.11 Re-install new GP-108 isolator gasket across face of horizontal and bridge. Seal per instructions page 28.

R.12 Reattach pressure plate using FS-322 fasteners. Torque fastener to 60 in/lbs. Seal ends of pressure plates to vertical face or joints as shown on page 15. Reinstall face cap allowing equal gap at each end.

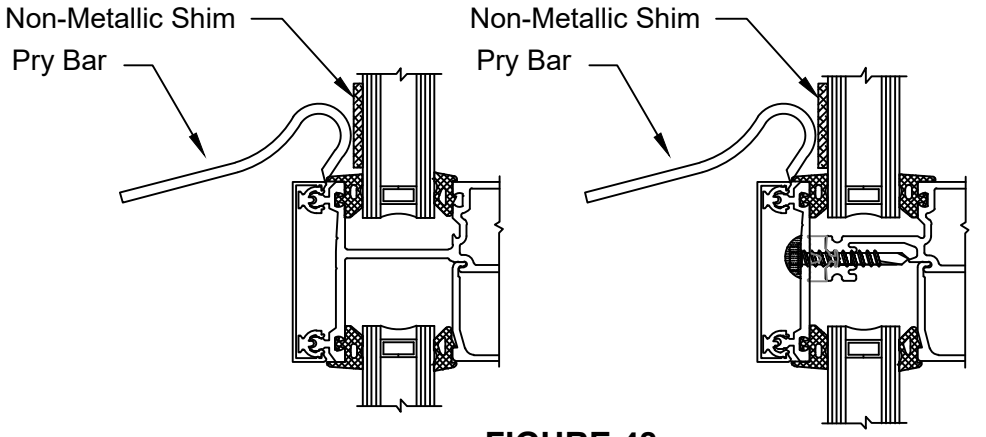
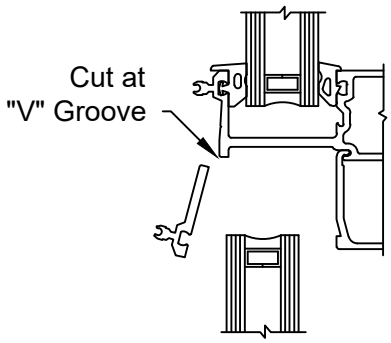
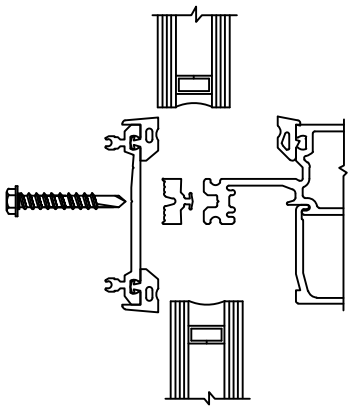


FIGURE 48
Cap Removal

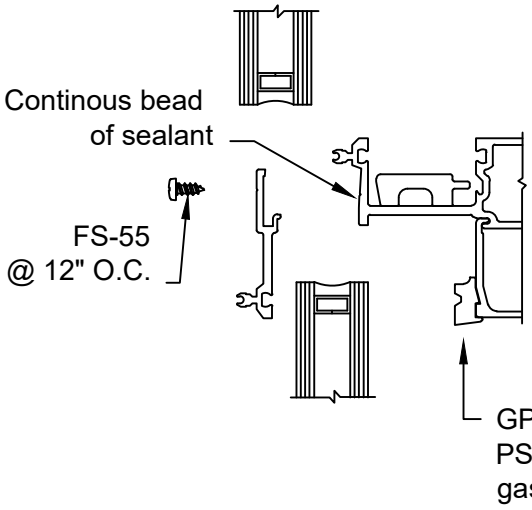


Interior Glazed Condition

FIGURE 49
Deglazing



Exterior Glazed Condition



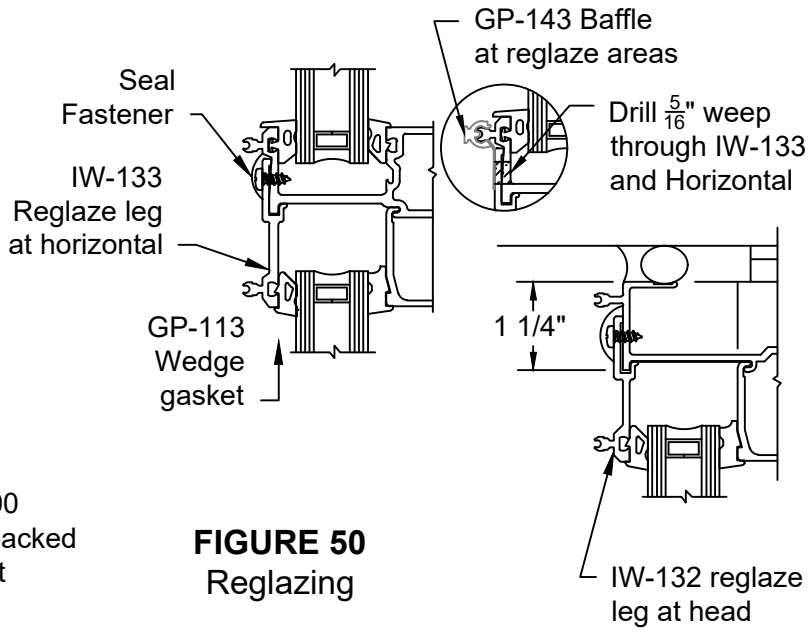


FIGURE 50
Reglazing

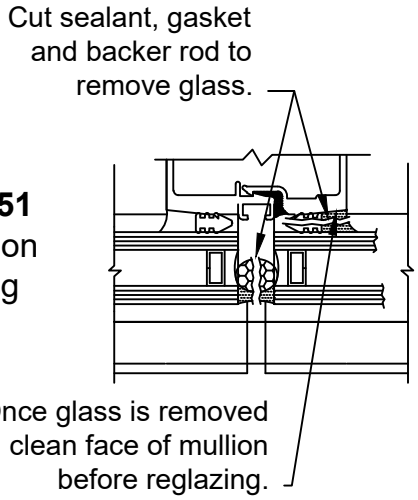


FIGURE 51
SSG Mullion
Deglazing

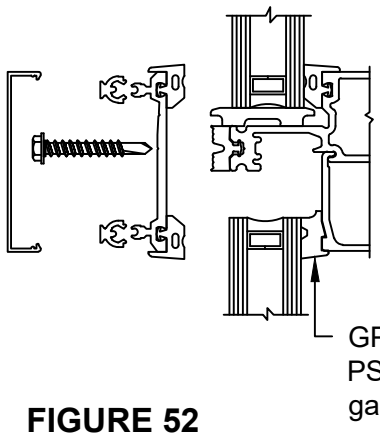


FIGURE 52
Outside Glazed
Horizontal Reglazing

FIGURE 53 through FIGURE 55 show the typical attachment method for reinforcing in the vertical mullion. Refer to approved shop drawings for placement, size and quantity of reinforcing required.

Refer to wind load charts on www.oldcastlebe.com for single span and equal twin span conditions. (unbraced lengths less than 8.11 feet). For all other conditions such as unequal twin spans, knee brace and multi-span conditions reference shop drawings and Engineer's calculations.

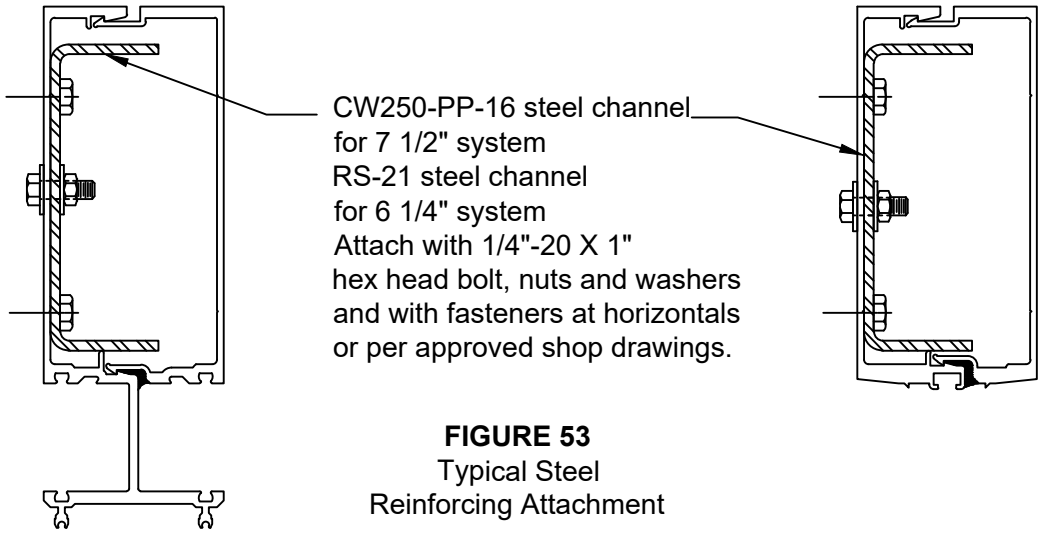


FIGURE 53
Typical Steel
Reinforcing Attachment

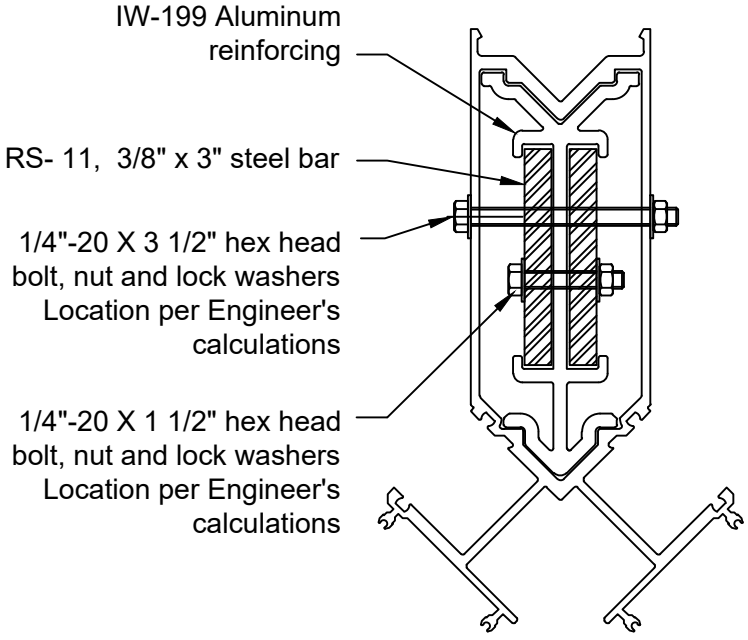


Figure 54
Outside 90 Corner
Mullion Reinforcing

MULLION REINFORCEMENT & CORNER INSTALLATION

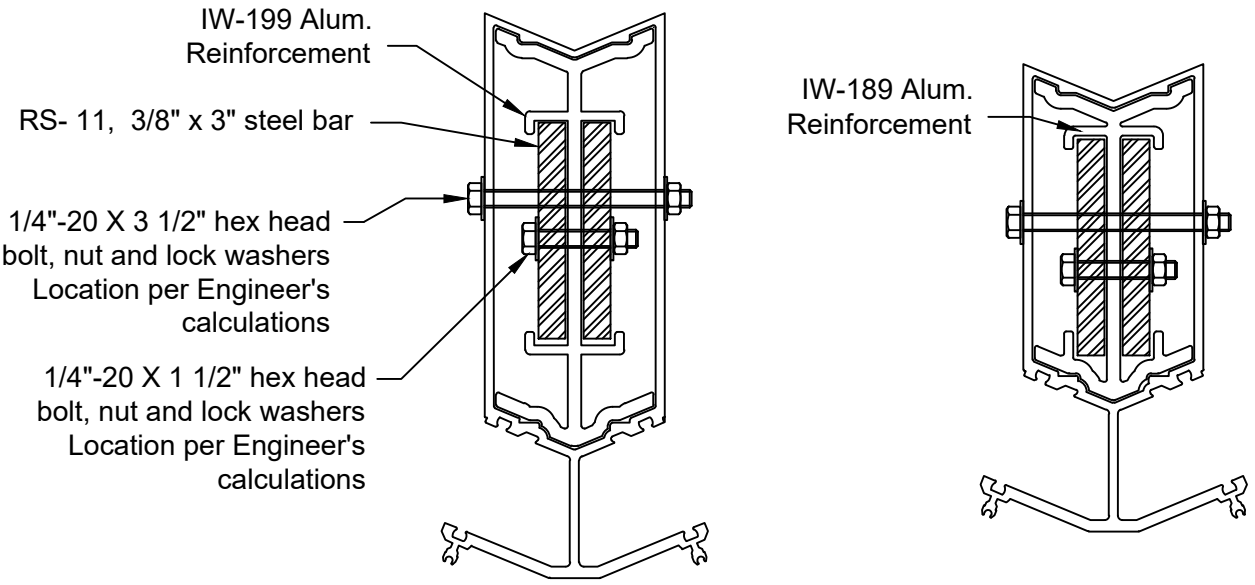


Figure 55
Outside 135 Corner
Mullion Reinforcing

CORNER MULLIONS

FIGURE 56 through FIGURE 59, page 50 show the basic layout of the standard corner mullion assemblies. The outside corners will be an one-piece configuration, while inside corners will be two mullion corners utilizing corner closures to connect the opposing mullions. These details are for general reference and do not necessarily reflect all conditions. For specific assembly, sealing and anchoring notes, refer to approved shop drawings. When installing any of the outside corners it will be required to add an additional fillet bead of sealant at the interior of the vertical leg of the glazing pocket adjacent to the corner mullion. This sealant will assist in preventing any water infiltration since this leg is not attached to the corner mullion.

Using a one-piece corner mullion in the Reliance™-IG SS system requires the pre-assembly of corner sections. For the first bay on either side of the corner mullions, attach the standard screw spline horizontal members to a 90° corner mullion with the special shear blocks shown in FIGURE 56, page 45. Similar assembly is required at the one-piece 135° corners as noted in FIGURE 57, page 47. The other half of the horizontal members can be attached to the intermediate mullion halves using the screw splines.

OUTSIDE 90 CORNER INSTALLATION

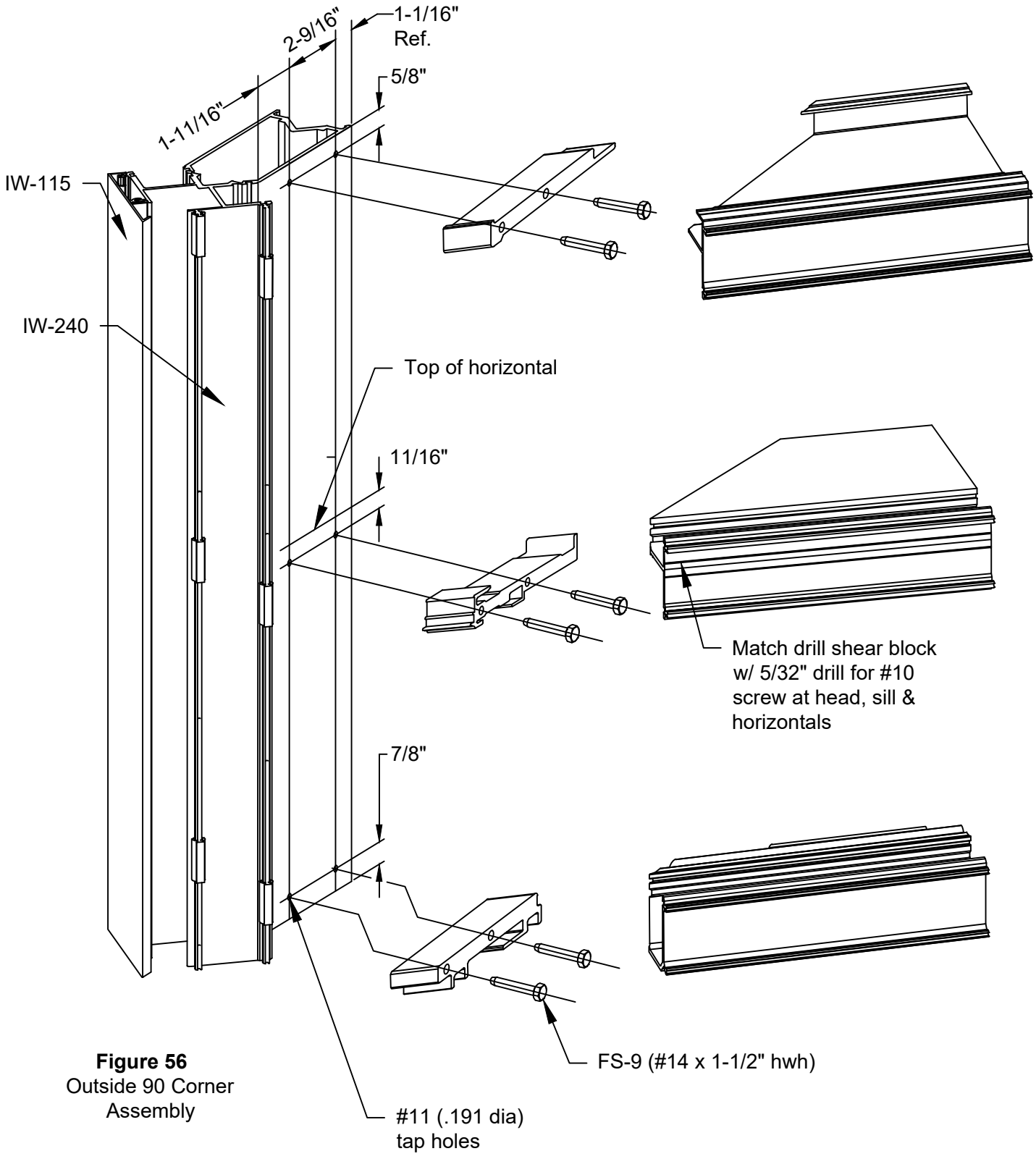
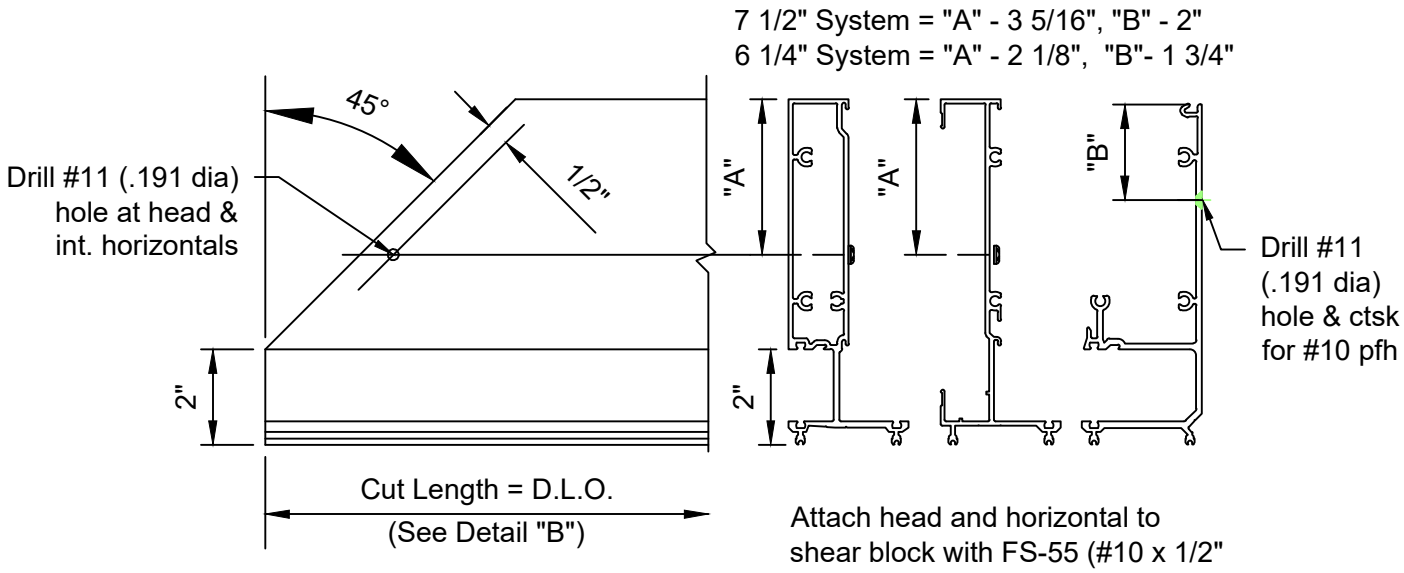


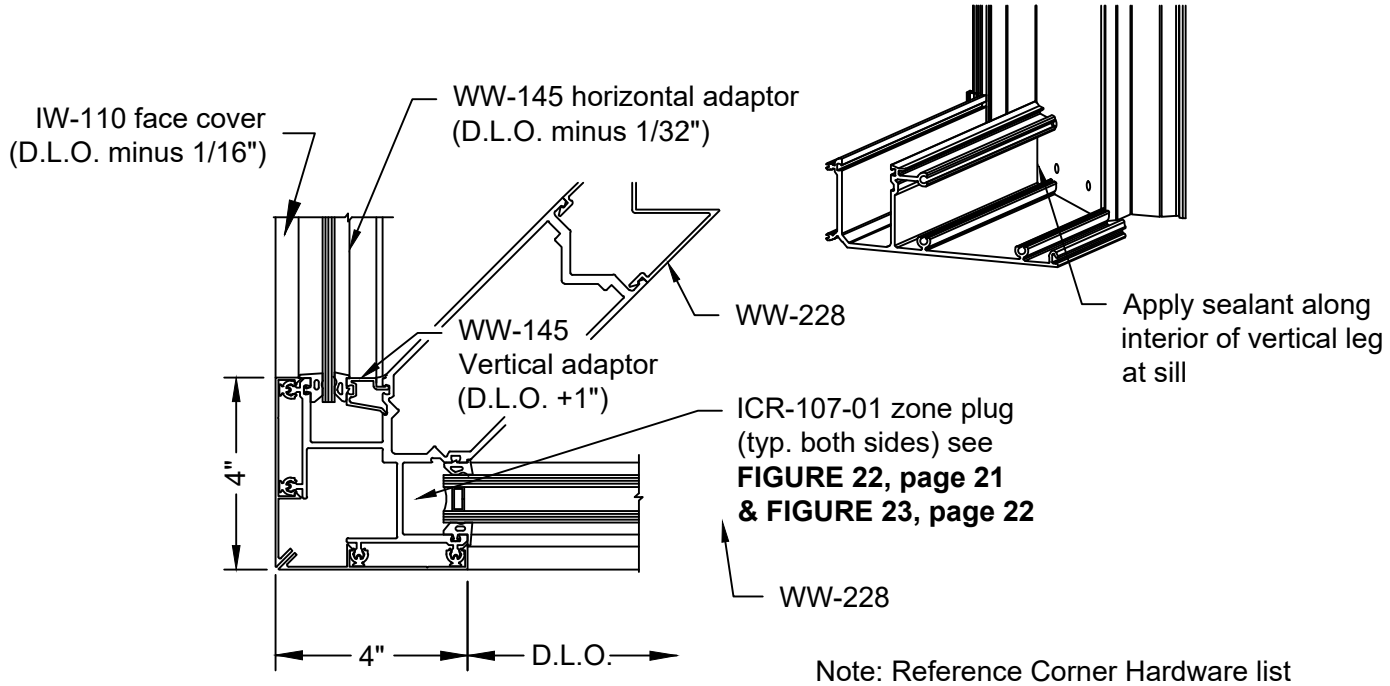
Figure 56
Outside 90 Corner
Assembly

OUTSIDE 90 CORNER INSTALLATION



Detail "A"
Miter Cut at
1" Intermediate Horizontal

Attach head and horizontal to shear block with FS-55 (#10 x 1/2" pph), and sill to shear block with FS-56 (#10 x 1/2" pfh). Shear blocks must be pre-attached to mullion and horizontals before installation.



Detail "B"
OS90 Corner
Assembly Guide

Note: Reference Corner Hardware list page 53 & 54 for specific part numbers for shear blocks and other parts.

OUTSIDE 135 CORNER INSTALLATION

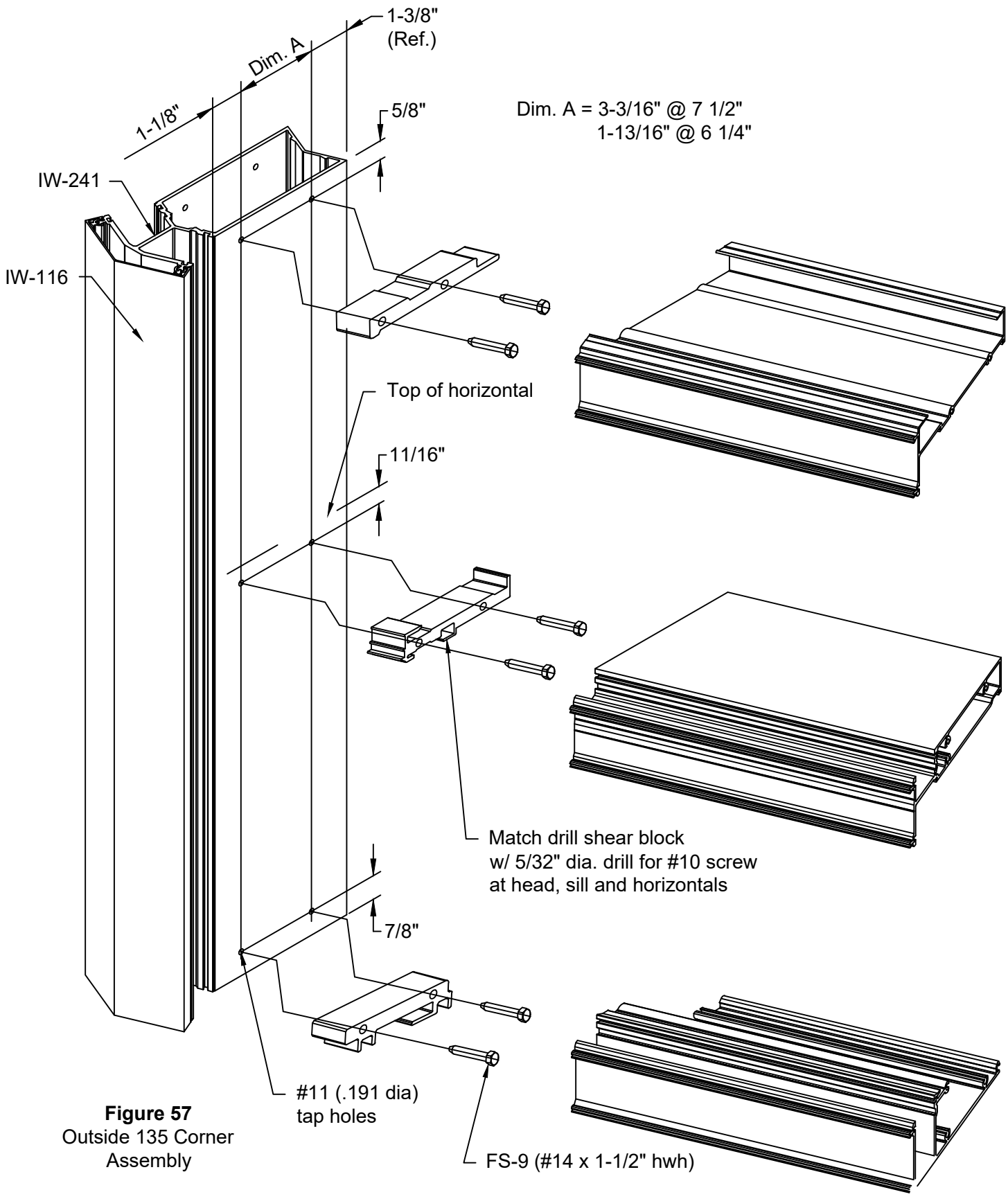
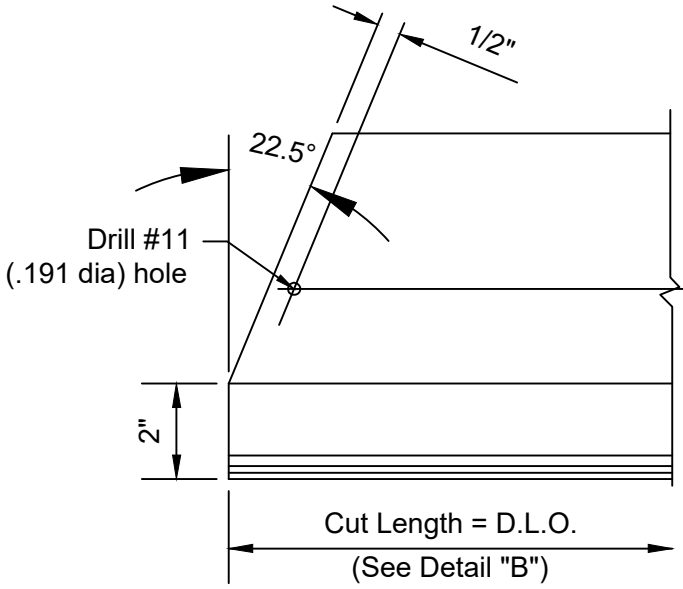


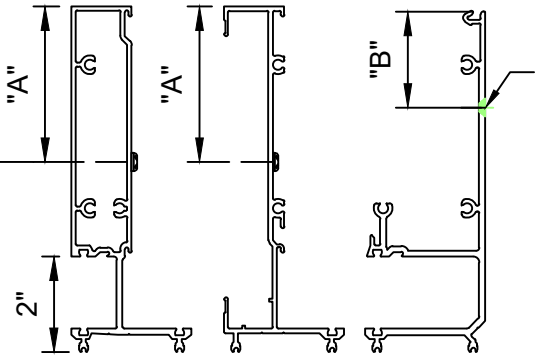
Figure 57
Outside 135 Corner Assembly

OUTSIDE 135 CORNER INSTALLATION

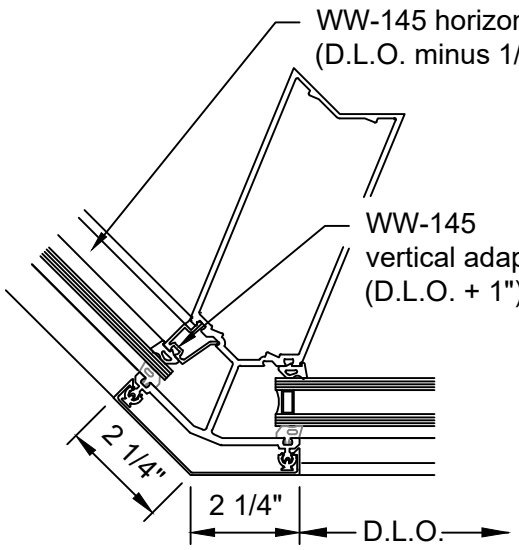


Detail "A"
Miter Cut at
1" Intermediate Horizontal

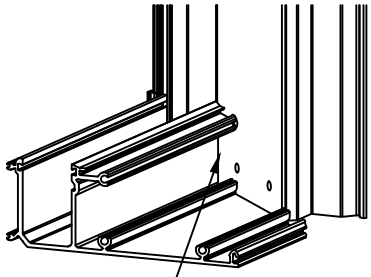
7 1/2" System = "A" - 3 5/16", "B" - 2"
6 1/4" System = "A" - 2 1/8", "B"- 1 3/4"



Attach head and horizontal to shear block with FS-55 (#10 x 1/2" pph), and sill to shear block with FS-56 (#10 x 1/2" pfh). Shear blocks must be pre-attached to mullion and horizontals before installation.



Detail "B"
OS90 Corner
Assembly Guide



Apply sealant along interior of vertical leg of sill

Note: Reference Corner Hardware list page 55 & 56 for specific part numbers for shear blocks and other parts.

INSIDE 90 CORNER INSTALLATION

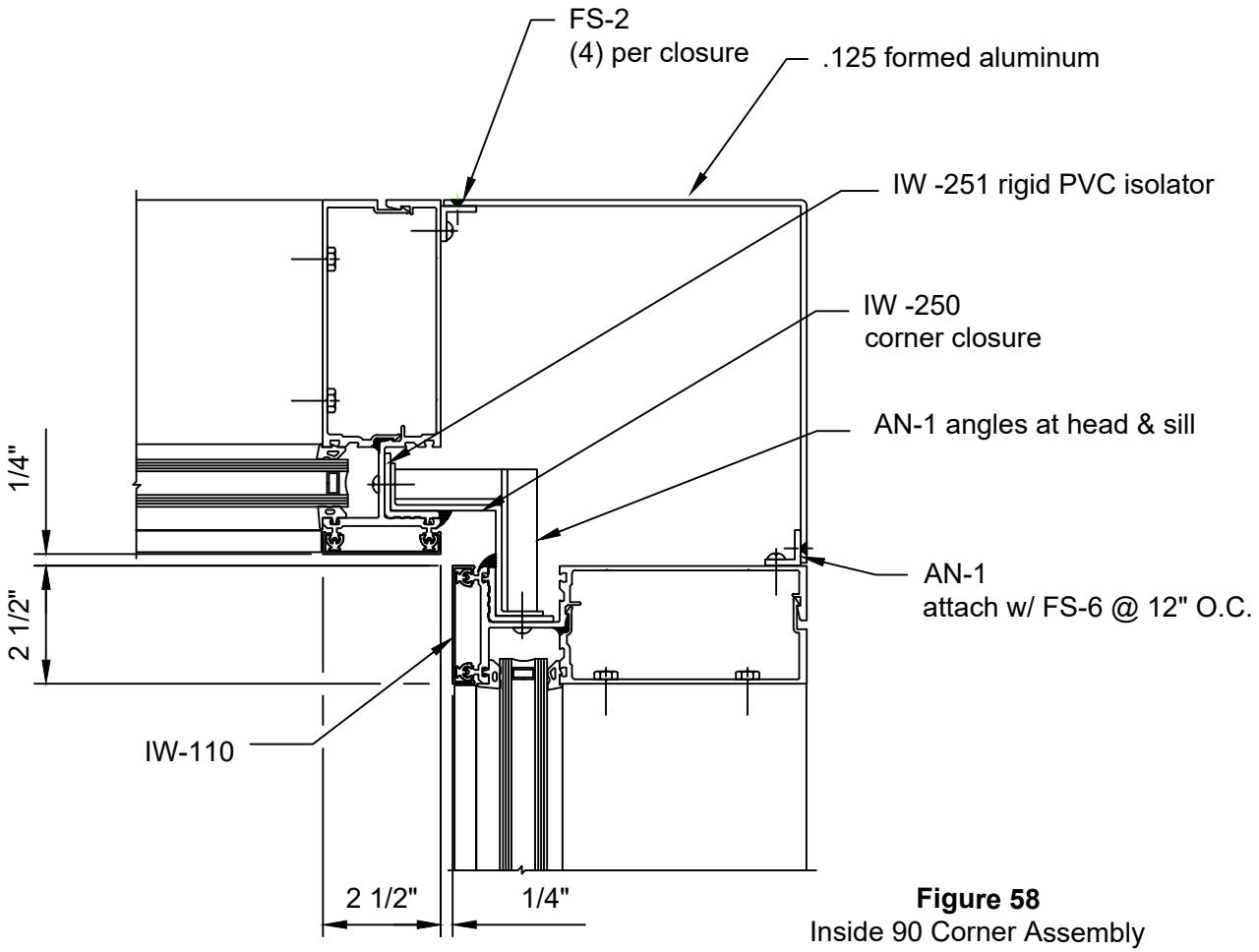


Figure 58
Inside 90 Corner Assembly

C.1 Inside 90 degree corners will utilize the IW-250 corner closure attached to vertical mullions using FS-55 #10 x 1/2" p.p.h. fasteners at 12" O.C. Closure will be isolated from mullion using the IW-251 rigid PVC isolator.

C.2 Typical vertical mullions will be used on either side of corner assembly.

C.3 Aluminum angles should be attached at head and sill of corner closure to provide proper backing for perimeter sealants.

C.4 Corner closures, angles and all fasteners should be properly sealed to prevent water infiltration

C.5 Interior corner closure to be made from .125 formed aluminum when required and attached to mullions using continuous AN-1, 3/4" x 3/4"x1/8" aluminum angle. Angles attached to mullions using FS-6 #10 x 3/4" p.p.h. fasteners at 18" O.C. and closure attached to angle with minimum of (2) FS-2 #8 x 1/2" p.f.h. per side.

INSIDE 135 CORNER INSTALLATION

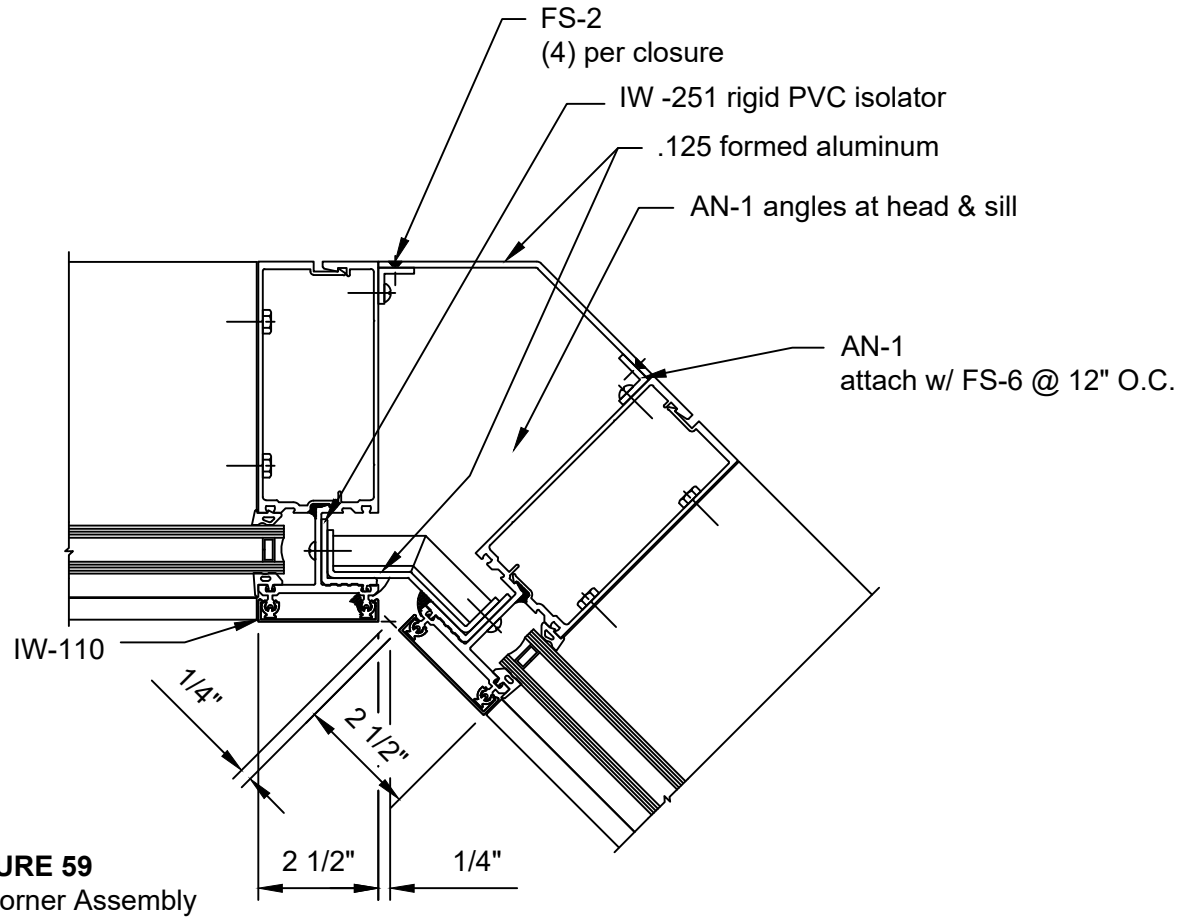


FIGURE 59
Inside 135 Corner Assembly

C.6 Inside 135 degree or similar angled corners will utilize a .125 formed alum. corner closure attached to vertical mullions using FS-55 #10 x 1/2" p.p.h. fasteners at 12" O.C. Closure will be isolated from mullion using the IW-251 rigid PVC isolator.

C.7 Typical vertical mullions will be used on either side of corner assembly.

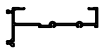
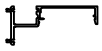
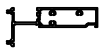
C.8 Aluminum angles should be attached at head and sill of corner closure to provide proper backing for perimeter sealants.

C.9 Corner closures, angles and all fasteners should be properly sealed to prevent water infiltration

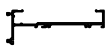
C.10 Interior corner closure to be made from .125 formed aluminum when required and attached to mullions using continuous AN-1, 3/4" x 3/4"x1/8" aluminum angle. Angles attached to mullions using FS-6 #10 x 3/4" p.p.h. fasteners at 18" O.C. and closure attached to angle with minimum of (2) FS-2 #8 x 1/2" p.f.h. per side.

PARTS LIST

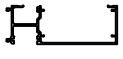
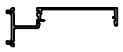
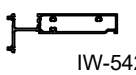
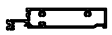
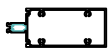
4" BACKMEMBERS
6 1/4" SYSTEM DEPTH

 IW-446	Head
 IW-447	Sill
 WW-448	Sill Cover
 IW-443	Jamb
 IW-440	Captured Vertical - Left
 IW-441	Captured Vertical - Right
 IW-444	SSG Vertical - Left
 IW-445	SSG Vertical - Right
 IW-442	Horizontal
 IW-449	Outside/Inside Glazed Horizontal
 WW-442	Outside Glazed Horizontal

5 1/4" BACKMEMBERS
7 1/2" SYSTEM DEPTH

 IW-546	Head
 IW-547	Sill
WW-548	Sill Cover

5 1/4" BACKMEMBERS - cont'd
7 1/2" SYSTEM DEPTH

 IW-543	Jamb
 IW-540	Captured Vertical - Left
 IW-541	Captured Vertical - Right
 IW-544	SSG Vertical - Left
 IW-545	SSG Vertical - Right
 IW-542	Horizontal
 IW-549	Outside/Inside Glazed Horizontal
 WW-542	Outside Glazed Horizontal

COMMON EXTRUSIONS
All System Depths and Infills

 IW-110	Typical Face Cap
 ICW-111	Face Cap at Sunshades
IW-161	Pressure Plate for Outside/Inside Glaze Horizontals
IW-162	Pressure Plate for Outside Glaze Horizontals
 WW-341	Pocket Filler
 CH-93	Pocket Filler (Lower pocket Horizontal)

COMMON EXTRUSIONS
All System Depths and Infills

 WW-145	Glazing Adaptor 1/4" Infill - Captured Verticals
 IW-131	Glazing Adaptor 1/4" Infill - SSG Verticals
 WW-175	1/4" Glazing Adaptor WW-542 & WW-442
 IW-132	Reglaze Leg IW-546 & IW-446
 IW-133	Reglaze Leg IW-542 & IW-442
 WW-150	1" Glass Stop IW-542, IW-526 & IW-549
 WW-151	1/4" Glass Stop IW-542, IW-526 & IW-549
 WW-148	1" Glass Stop IW-442, IW-446 & IW-449
 WW-149	1/4" Glass Stop IW-442, IW-446 & IW-449
 IW-151	1/4" Spandrel Glass Stop
 IW-152	1" Spandrel Glass Stop

STANDARD ACCESSORIES
All System Depths and Infills

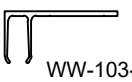
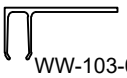
 GP-123	Typical EPDM Dense Exterior & Interior Gasket 1/4" F.C.
GP-113	Wedge Gasket 1/4" F.C.
GP-127	Optional EPDM Gasket 3/16" F.C.

PARTS LIST

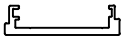
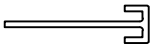
STANDARD ACCESSORIES
All System Depths and Infills

 GP-100	Reglaze Gasket 1/4" F.C.
 GP-101	1" Setting Block (2 Per Lite) Outside Glazed Horizontal
 GP-102	SSG Spacer Gasket Corner Mullions 1/4" F.C.
 GP-107	Thermal Isolator
 GP-109	1" Setting Block (2 Per Lite)
 GP-110	1/4" Setting Block (2 Per Lite)
 IW-121	Setting Chair for Sill
 HP-1004	Weep Baffle Sill Member
 IW-325	Mullion Cap (Intermediates Only)
 IW-326	Jamb Mullion Cap
 ICW-12	Isolator Clips @ 12" O,C,
 GP-141	Baffle Clips @ Weep Holes Horizontals
 ICR-107-01	Zone Plug Typical Mullion & 90° O.S. Captured
 WW-300	SSG Mull Bridge for Outside Glazed Horizontals
 IW-300-01	SSG Mull Bridge for Head

STANDARD ACCESSORIES
All System Depths and Infills

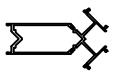
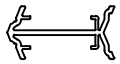
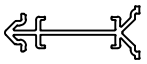
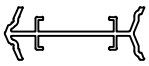
 IW-301-01	SSG Mull Bridge for Horizontal
 IW-302-01	SSG Mull Bridge for Sill
 WW-333-01	Temporary Glazing Retainer for Captured Mullions
 SPW-PP-3	Temporary Glazing Retainer for SSG Verticals
 WW-174-05	"T" Anchor for IW-540 & IW-544
 WW-174-06	"T" Anchor for IW-440 & IW-444
 WW-103-05	"F" Anchor for IW-543 Jamb Mullion
 WW-103-06	"F" Anchor for IW-443 Jamb Mullion
 IW-180-01	Vertical Mullion Splice for IW-440 & IW-444
 IW-181-01	Vertical Mullion Splice for IW-441 & IW-445
 IW-182-01	Jamb Mullion Splice for IW-443
 IW-183-01	Head Anchor Sleeve IW-440 & IW-444
 IW-190-01	Vertical Mullion Splice for IW-540 & IW-544
 IW-191-01	Vertical Mullion Splice for IW-541 & IW-545
 IW-192-01	Jamb Mullion Splice for IW-543

STANDARD ACCESSORIES
All System Depths and Infills

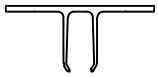
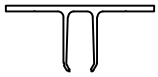
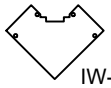
 IW-193-01	Head Anchor Sleeve IW-540 & IW-544
IW-122-01	Sealant block for Mullions
BA2-01	Sealant block for all Jamb Mullions
 IW-107-01	Standard SunShade Anchor
ICW-FP-74	Isolator Clip Installation Tool

PARTS LIST

CORNER MULLIONS & ACCESSORIES

 IW-240	90° Corner Mullion 7 1/2" & 6 1/4"
 IW-241	135° Corner Mullion 7 1/2"
 IW-243	135° Corner Mullion 6 1/4"
 IW-115	90° Outside Corner Face Cap 7 1/4" & 6" (2 Per Corner)
 IW-116	135° Outside Corner Face Cap 7 1/4" & 6" (2 Per Corner)
 WW-145	1/4" Adaptor 90° and 135° corners 7 1/4" & 6"
 WW-227	O.S. 90° Corner Mullion Snap-In Back Trim 6 1/4"
 WW-228	O.S. 90° Corner Mullion Snap-In Back Trim 7 1/2"
 IW-189	Outside 135 6 1/4" Corner Mull Reinforcement
 IW-198	Outside 90 Corner Mull Reinforcement
 IW-199	Outside 135 7 1/2" Corner Mull Reinforcement
 IW-194-01	Splice Sleeve for WW-240
 IW-195-01	Splice Sleeve for WW-241
 IW-185-01	Splice Sleeve for WW-243

CORNER MULLIONS & ACCESSORIES - cont'd

 WW-105-03	"T" Anchor for IW-240
 WW-105-04	"T" Anchor for IW-241
 WW-105-05	"T" Anchor for IW-243
 IW-320	90° Outside Mullion Cap
 IW-321	135° Outside Mullion Cap
 IW-322	Zone Plug 135° Captured O.S.
 IW-250	IS90 Corner Closure
 IW-251	Inside Corner Closure Isolator

CORNER MULLIONS & ACCESSORIES - cont'd

 IW-242-01	OS90° Right Hand Shear Block for IW-542
 IW-242-02	OS90° Left Hand Shear Block for IW-542
 IW-244-01	OS90° Right Hand Shear Block for IW-442
 IW-244-02	OS90° Left Hand Shear Block for IW-442
 IW-245-01	OS90° Right Hand Shear Block for IW-546 & IW-550
 IW-245-02	OS90° Left Hand Shear Block for IW-546 & IW-550
 IW-246-01	OS90° Right Hand Shear Block for IW-446 & IW-450
 IW-246-02	OS90° Left Hand Shear Block for IW-446 & IW-450
 IW-247-01	OS90° Right Hand Shear Block for IW-547
 IW-247-02	OS90° Left Hand Shear Block for IW-547
 IW-248-01	OS90° Right Hand Shear Block for IW-448
 IW-248-02	OS90° Left Hand Shear Block for IW-448

PARTS LIST

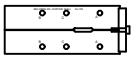
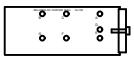
CORNER MULLIONS & ACCESSORIES - cont'd

 IW-242-03	OS135° Right Hand Shear Block for IW-542
 IW-242-04	OS135° Left Hand Shear Block for IW-542
 IW-244-03	OS135° Right Hand Shear Block for IW-442
 IW-244-04	OS135° Left Hand Shear Block for IW-442
 IW-245-03	OS135° Right Hand Shear Block for IW-546 & IW-550
 IW-245-04	OS135° Left Hand Shear Block for IW-546 & IW-550
 IW-246-03	OS135° Right Hand Shear Block for IW-446 & IW-450
 IW-246-04	OS135° Left Hand Shear Block for IW-446 & IW-450
 IW-247-03	OS135° Right Hand Shear Block for IW-547
 IW-247-04	OS135° Left Hand Shear Block for IW-547
 IW-248-03	OS135° Right Hand Shear Block for IW-448
 IW-248-04	OS135° Left Hand Shear Block for IW-448

DOOR EXTRUSIONS

 D-186	Door Subframe (3/4" Sightline)
 F-16	Door Header OHCC (2" Sightline)
 DS-1	Flush Door Frame & Optional D-186 Door Stop (Use with SC-1 Clip)
 SC-1	Spring Clip for DS-1 Door Stop
 FS-15	3⁄16" x 7⁄16" Drive Rivet Fastens SC-1 Clip

DRILL FIXTURES

 DJ-105	Drill Jig for WW-542 horizontal prep for mullions
 DJ-108	Typical Drill Jig for Mullions (Non Corners)

STEEL REINFORCEMENT

 CW250-PP-16	Steel Channel for IW-540 & IW-544, (20'-1")
 RS-21	Steel Channel for IW-440 & IW-444, (20'-1")
 RS-11	3/8" X 3" Steel Bar for Corner Reinforcement (20'-1")

STANDARD FASTENERS

 FS-6	#10 X 3/4" PPH B PT
 FS-8	#14 x 1" Phillips Hex Head Horizontals to Verticals & Splice Sleeves to Mullions
 FS-9	#14 x 1-1/2" Phillips Hex Head - Horizontals to Verticals at Head Anchors
 FS-55	#10 x 1/2" Phillips Round Head Attach Reglaze Legs
 FS-119	#10 x 1 3/8" Phillips Flat Head SSG Mullion Adaptor
 FS-320	#10 x 1/2" U-Drive Fastens Mull Caps
 FS-322	#12-14 x 1" Hex Washer Head Drillflex Fastens Pressure Plate to Mullion (IW-442 & IW-542) & Attach Splices
 FS-325	#12-24 X 1-11/32" Hex Washer Head Drillflex Fastens Pressure Plate to Mullion (WW-442 & WW-542)
 FS-108	1/4"-20 x 1" Hex Head Bolt for Steel Reinforcement Attachment
 FS-110	1/4"-20 x 1-1/2" Hex Head Bolt for Steel Reinforcement Attachment
 FS-107	1/4"-20 x 3-1/2" Hex Head Bolt for Steel Reinforcement Attachment
 FSN-37	1/4"-20 Hex Nut
 FSW-65	1/4" Lock Washer