

Oldcastle BuildingEnvelope®

*RELIANCE UNIT WALL
STRUCTURAL SILICONE GLAZE
ASSEMBLY & GLAZING INSTRUCTIONS*

NOTE:

THE ASSEMBLY DETAILS FOUND IN THIS PACKAGE ARE GENERIC AND ARE FOR REPRESENTATION ONLY WITH THE INTENT OF GIVING THE ASSEMBLY TEAM A VISUAL REPRESENTATION AS TO HOW THE ASSEMBLIES TYPICALLY ASSEMBLE. THE SHOP SUBMISSION DRAWINGS AND DETAILS ARE THE GOVERNING DOCUMENTS AND AS SUCH THIS PACKAGE IS TO BE USED ONLY AS A RESOURCE.

FOLLOW STRUCTURAL SEALANT MANUFACTURER'S RECOMMENDATIONS FOR USE AND APPLICATION OF THE STRUCTURAL GLAZING SILICONE AND WEATHER SEALANT.

NOTE: CUSTOMER / PROJECT QUALITY ASSURANCE PROCEDURES ARE SEPARATE DOCUMENTS AND ARE TO BE FOLLOWED IN CONJUNCTION WITH THIS MANUAL.

RELIANCE™ UNIT WALL SSG - ASSEMBLY & SEALING INSTRUCTIONS

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GENERAL INFORMATION

PRODUCT USE

The unitized curtain wall system is intended for assembly and installation by glazing professionals with appropriate experience. Subcontractors must be qualified to provide field instruction and project management.

Oldcastle BuildingEnvelope® does not control the application of its product configurations, sealant or glazing material and assumes no responsibility for the application. It is the responsibility of the owner, architect and installer to make these selections in strict compliance with applicable laws and building codes.

Consult silicone sealant manufacturer for review and recommendation of sealant application. Complete all necessary sealant adhesion and compatibility tests prior to assembly. Follow sealant manufacturer's recommendations and literature for proper cleaning, testing and application of silicone sealant.

The air and water performance of the unitized curtain wall is directly related to the completeness and integrity of the assembly and installation process. Please give strict attention to the critical areas of the seal installed at the horizontal to vertical connections and the glazing gasket installed at the interior side of the glass. All pressure plates must also be installed properly. To ensure top performance for this system, particular attention should be given to the following procedures:

1. Surface to be sealed should be cleaned with isopropyl alcohol or solvent and dried as recommended by sealant manufacturer to remove dirt and cutting oils. Sealant at horizontal to vertical connections should be a minimum 3/16" diameter bead on surfaces where horizontal abutts vertical per glazing instructions herein. No gap should be visible in the sealant. Exposed surfaces should be cleaned of excess sealant 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. The interior glazing gasket should be installed so as to avoid stretching, buckles or tears. The glazing gasket should run continuously around perimeter; cut the gasket at corners when required. Gasket should be sealed and butted together at joint. To avoid damage to gasket during glazing, glass should be level and straight during installation.

Vertical movement of mullion at intermediate floors requires special expansion joints and glazing materials. The system permits maximum $\pm 3/4$ " movement. For designs and applications that may require greater movement or special considerations, please contact your local Oldcastle BuildingEnvelope® facility.

Variations on details shown may occur but are not the responsibility of Oldcastle BuildingEnvelope®.

GENERAL INFORMATION

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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 "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 water tight due to extreme glass tolerances. The unitized curtain wall system is designed to accommodate glass or panels measuring 1" 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 assembly and installation instructions are of a general nature and cover the most common conditions.

Due to varying job conditions all sealant must be approved by the sealant manufacturer to ensure it will perform per 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 expiry and shelf life before using.

FIELD CONDITIONS

All material to be installed 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 unless otherwise specified. After sealant is set and a representative amount of the wall has been glazed (250 sq. ft. or more), perform a water hose test in accordance with AAMA 501.2 "Field Check of Metal Storefront, Curtain Walls and Slope Glazing Systems for Water Leakage". On large projects the hose test must be repeated during the glazing operation. Review anchors or embeds in structure as early as possible to confirm that 'as built' building structure can accommodate anticipated anchor tolerances.

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.

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MEASURING & CUTTING MATERIAL

Unless otherwise noted, the details shown in these instructions reflect 1 " glazing, and are representative of typical non corner conditions.

- 1.1 Measure ROUGH OPENING to determine FRAME WIDTH and FRAME HEIGHT dimensions. Allow 3/4" minimum clearance at jamb vertical & 1 1/4" at head frame installation.
- 1.2 Cut material to size.

Frame Members

Verticals
 Vertical Pressure Plates
 Vertical Face Covers
 Vertical Pocket Filler (Non Capt.)
 Vertical Pocket Filler Trim (Non Capt.)
 Horizontals
 Horizontal Interior Trim
 Horizontal Stack
 Horizontal Pocket Filler
 Horizontal Pressure Plates
 Horizontal Face Covers
 Horizontal Pocket Filler (Non Capt.)
 Horizontal Pocket Filler (Non Capt.)
 Starter Sill

Reference Project Shop Drawings.

See Page 4 for Cut Lengths

See Page 4 for Cut Lengths

Mull Height

Mull Height

D.L.O.

D.L.O. minus 1/16"

D.L.O. plus 3 5/8" (jamb unit)

D.L.O. plus 2 1/4" (typ. unit)

D.L.O. plus 3 5/8" (jamb unit)

D.L.O. plus 2" (typ. unit)

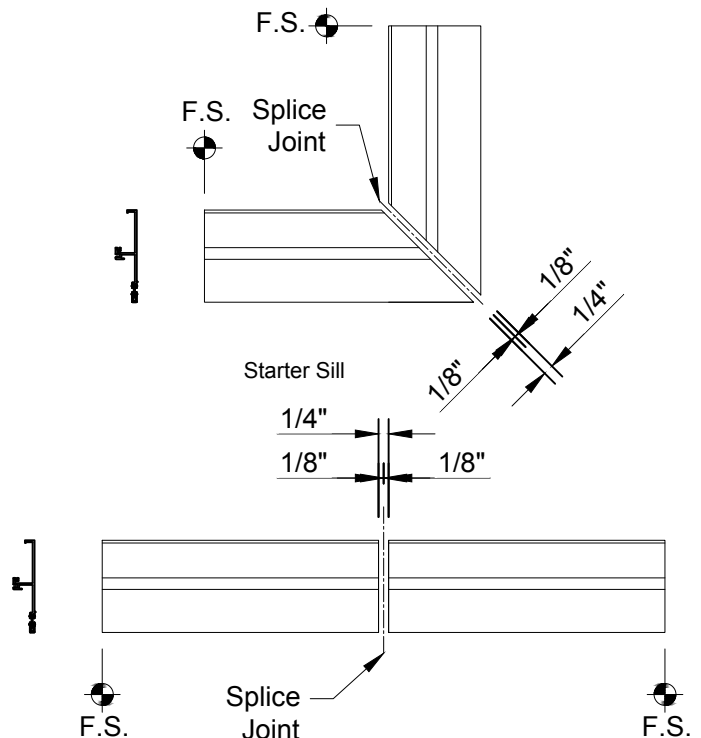
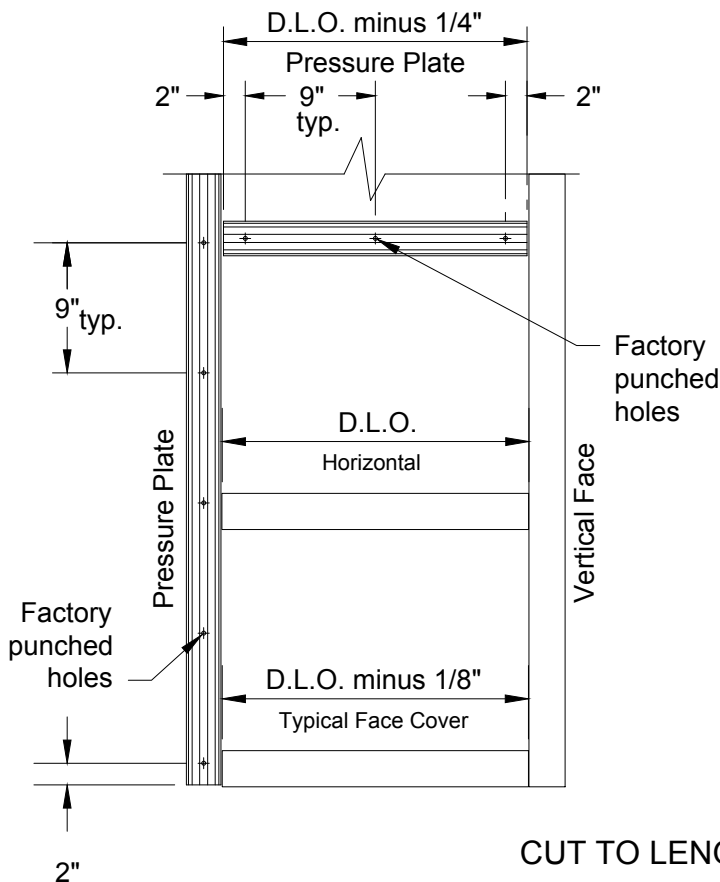
D.L.O. minus 1/4"

D.L.O. minus 1/8"

D.L.O. plus 3 1/4" (jamb unit)

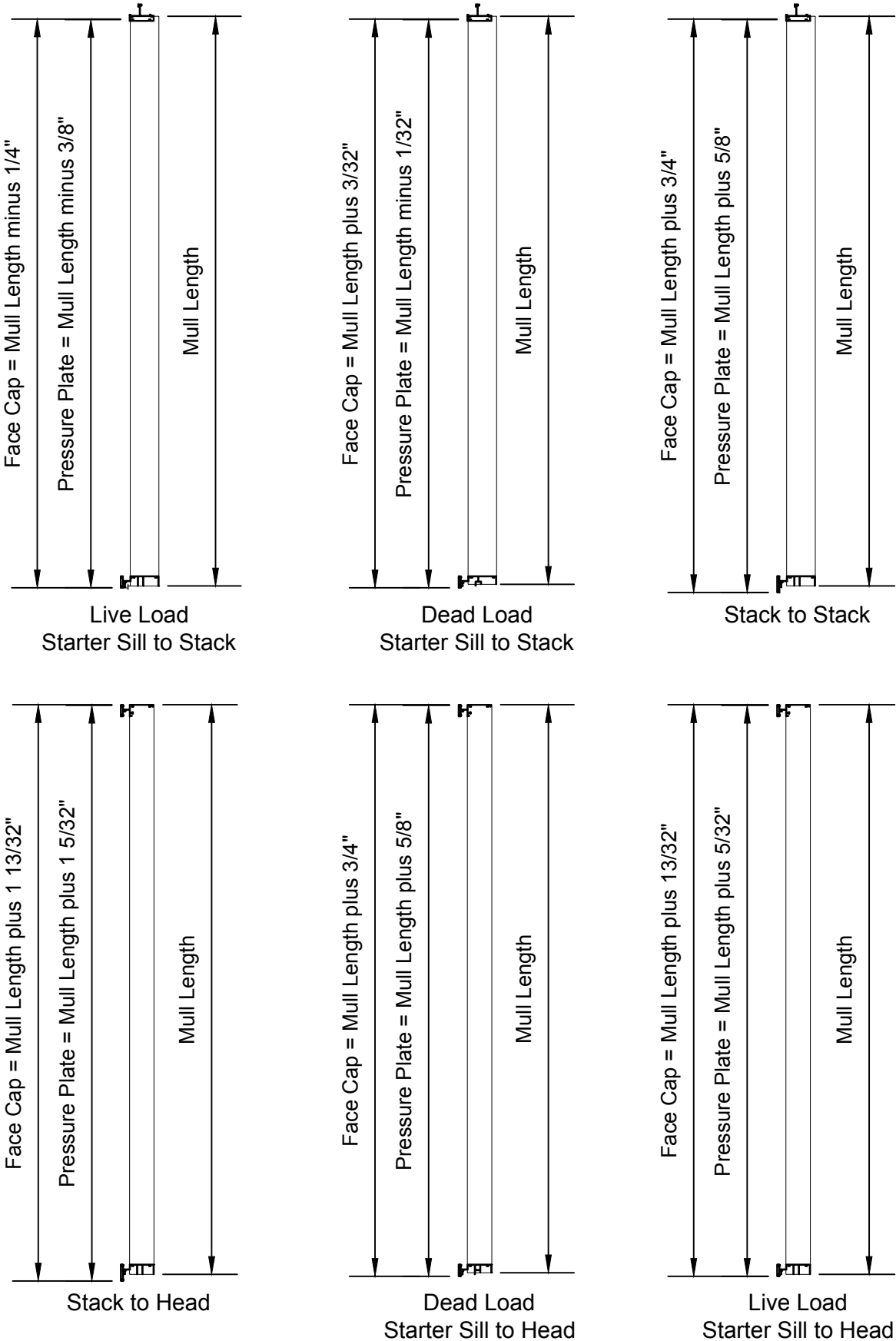
D.L.O. plus 1 1/2" (typ. unit)

Frame size w/ 1/4" splice joints as required



CUT TO LENGTH MATERIAL

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PRESSURE PLATE / FACE CAP CUT LENGTHS

Technical drawing of a window frame cross-section. The drawing shows a JAMB (left) and a MULL (right) section. The JAMB has a height of 3 1/4" and a width of 2 9/16". The MULL has a height of 1 3/16". The JAMB and MULL are connected by a horizontal rail. The rail has a width of 6" and a height of 6". The rail is secured with five screws, each with a diameter of Ø0.2280. The rail is shown in a cross-section view, with the top surface indicated by a dashed line. The JAMB and MULL are shown in a cross-section view, with the top surface indicated by a dashed line. The drawing is labeled with dimensions and a screw specification.

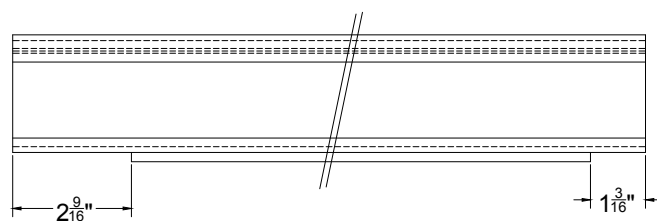


Diagram of RU-949 profile showing notches at the ends. The profile is labeled "RU-949". A note with an arrow pointing to the end of the profile reads: "** See Note". Another note with an arrow pointing to the notch at the end of the profile reads: "NOTCH @ ENDS".

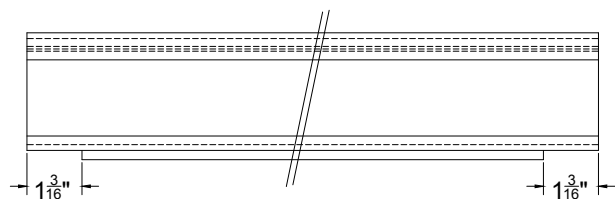
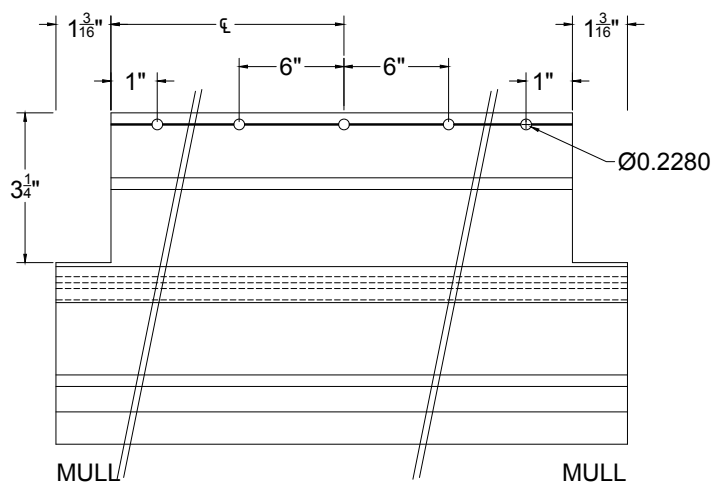
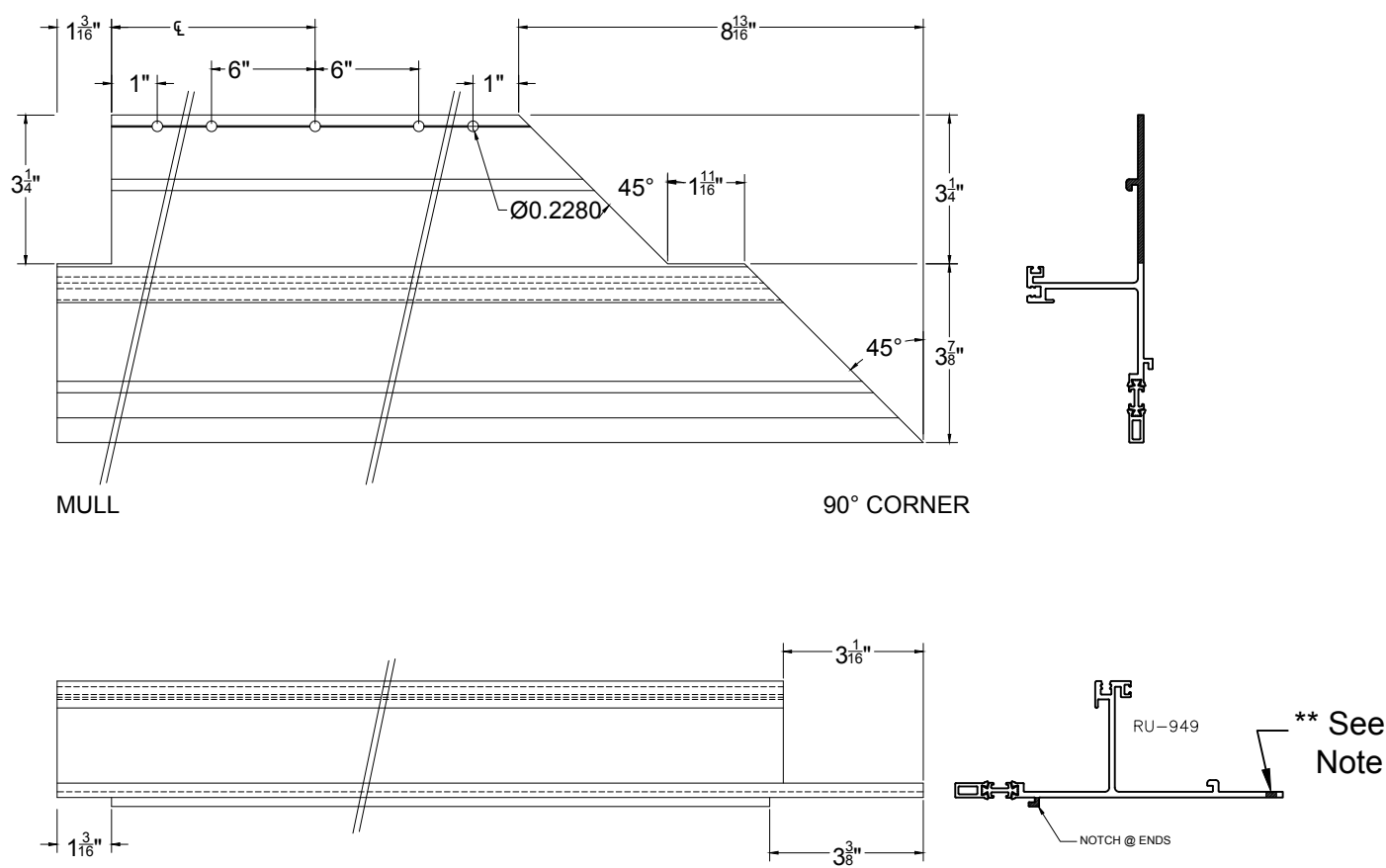


Diagram of RU-949 showing a notch at the ends. A label "NOTCH @ ENDS" points to a notch on the left end of the component. Another label "** See Note" points to the right end of the component.

1-866-OLDCASTLE (653-2278)
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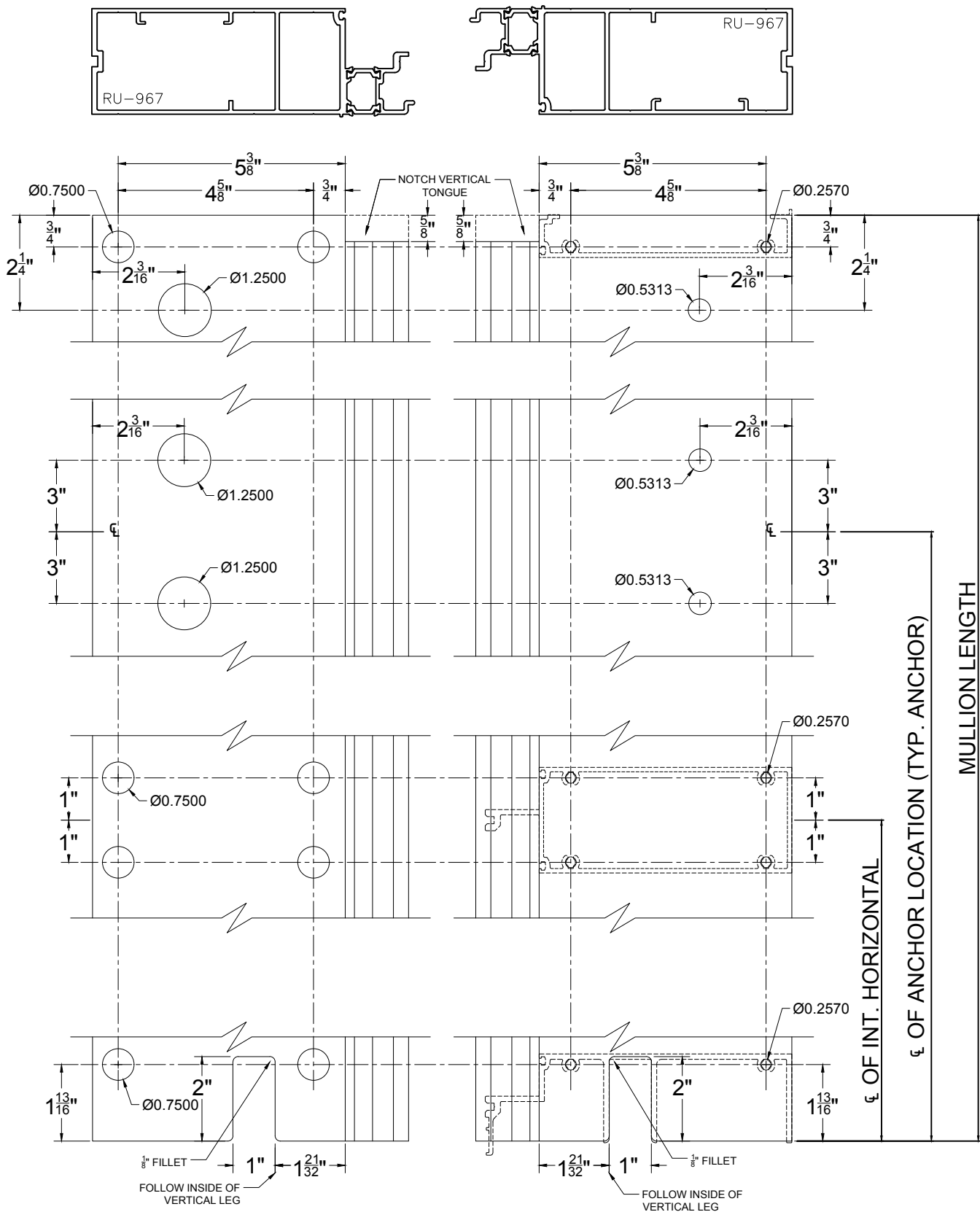
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**Additional fasteners may be required to meet project specific structural requirements.



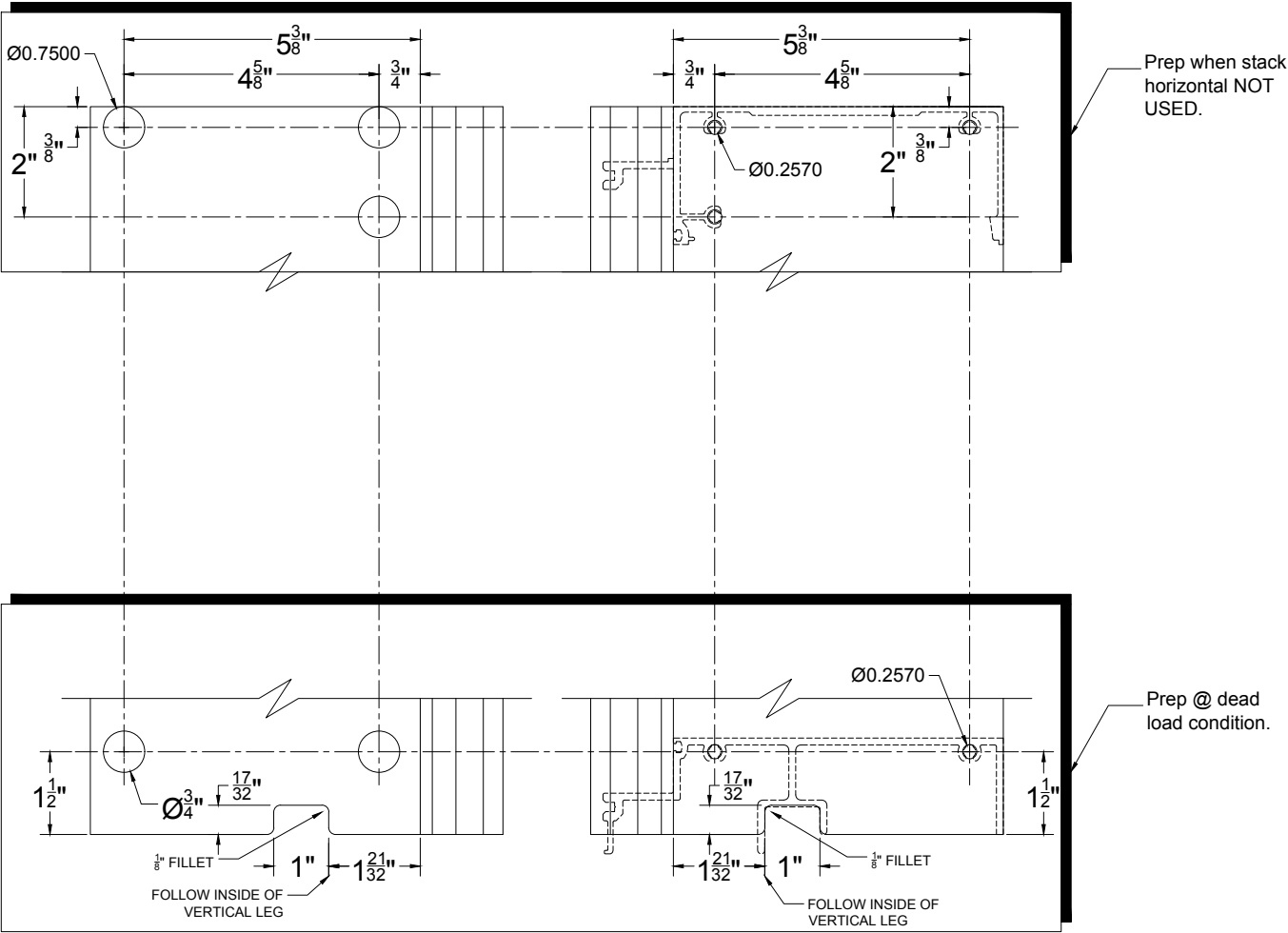
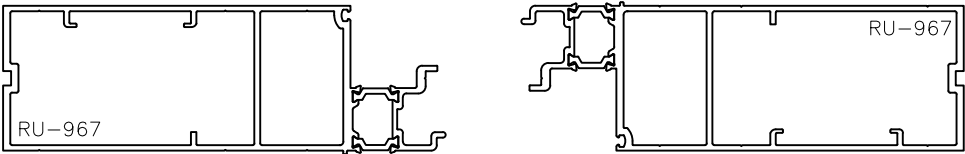
8" HORIZONTAL REFERENCE INFORMATION

RELIANCE™ UNIT WALL SSG - ASSEMBLY & SEALING INSTRUCTIONS



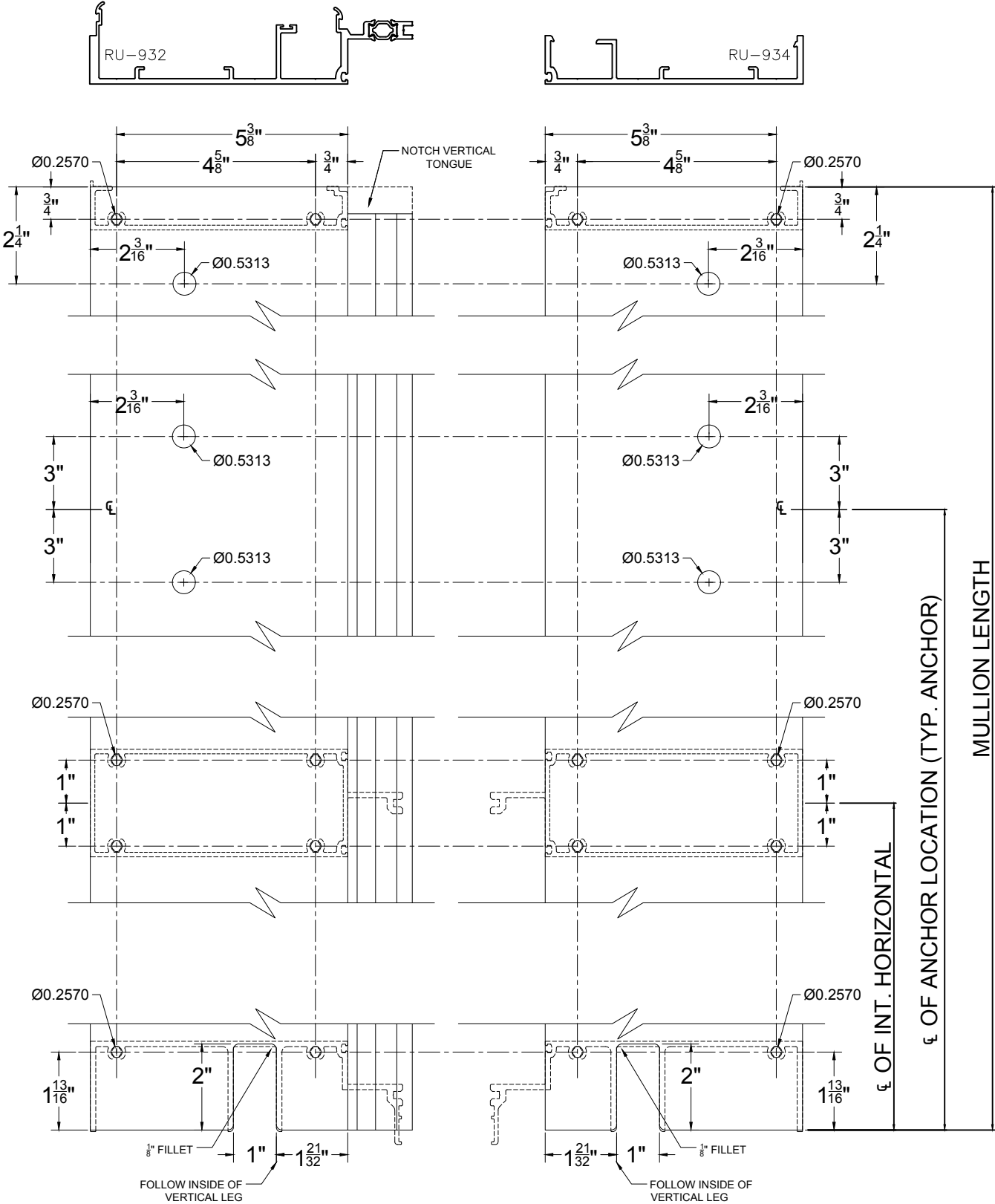
8" VERTICAL REFERENCE INFORMATION (CAPTURED JAMB)

RELIANCE™ UNIT WALL SSG - ASSEMBLY & SEALING INSTRUCTIONS



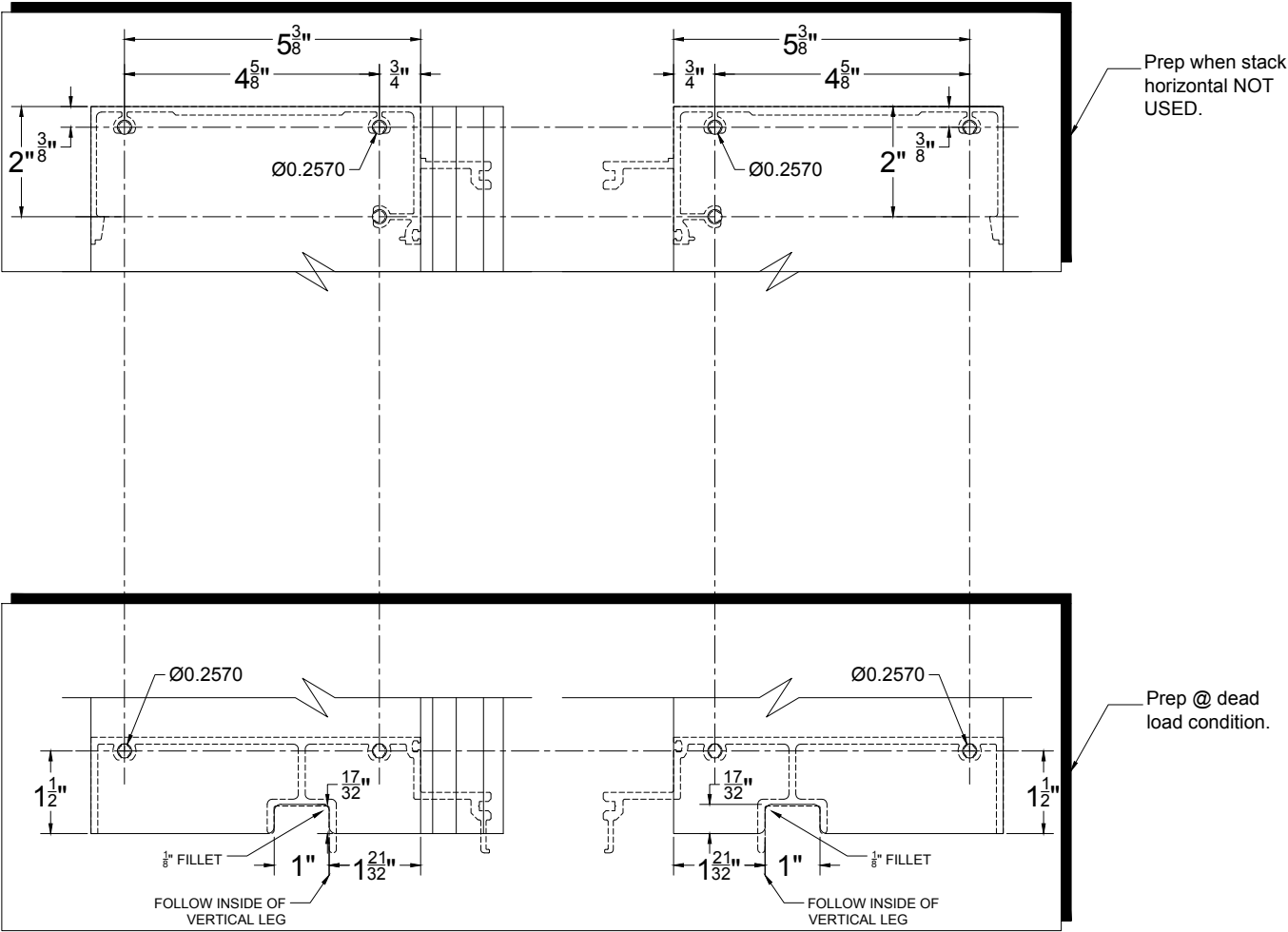
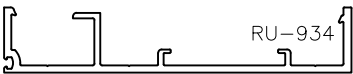
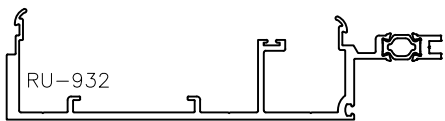
8" VERTICAL REFERENCE INFORMATION (CAPTURED JAMB)

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8" VERTICAL REFERENCE INFORMATION (CAPTURED INTERMEDIATE MULL)

RELIANCE™ UNIT WALL SSG - ASSEMBLY & SEALING INSTRUCTIONS



8" VERTICAL REFERENCE INFORMATION (CAPTURED INTERMEDIATE MULL)

RU-962

45°

90°

3 1/8"

ANCHOR HOLE LOCATION

5 3/8"

4 5/8"

3/4"

NOTCH VERTICAL TONGUE

Ø0.2570

3/4"

2 3/16"

Ø0.5313

2 3/16"

Ø0.5313

24"

3"

3"

Ø0.5313

Ø0.5313

Ø0.2570

1"

1"

Ø0.2570

1"

1"

Ø0.2570

13/16"

2"

1"

21/32"

1/8" FILLET

FOLLOW INSIDE OF VERTICAL LEG

1"

21/32"

1"

1/8" FILLET

FOLLOW INSIDE OF VERTICAL LEG

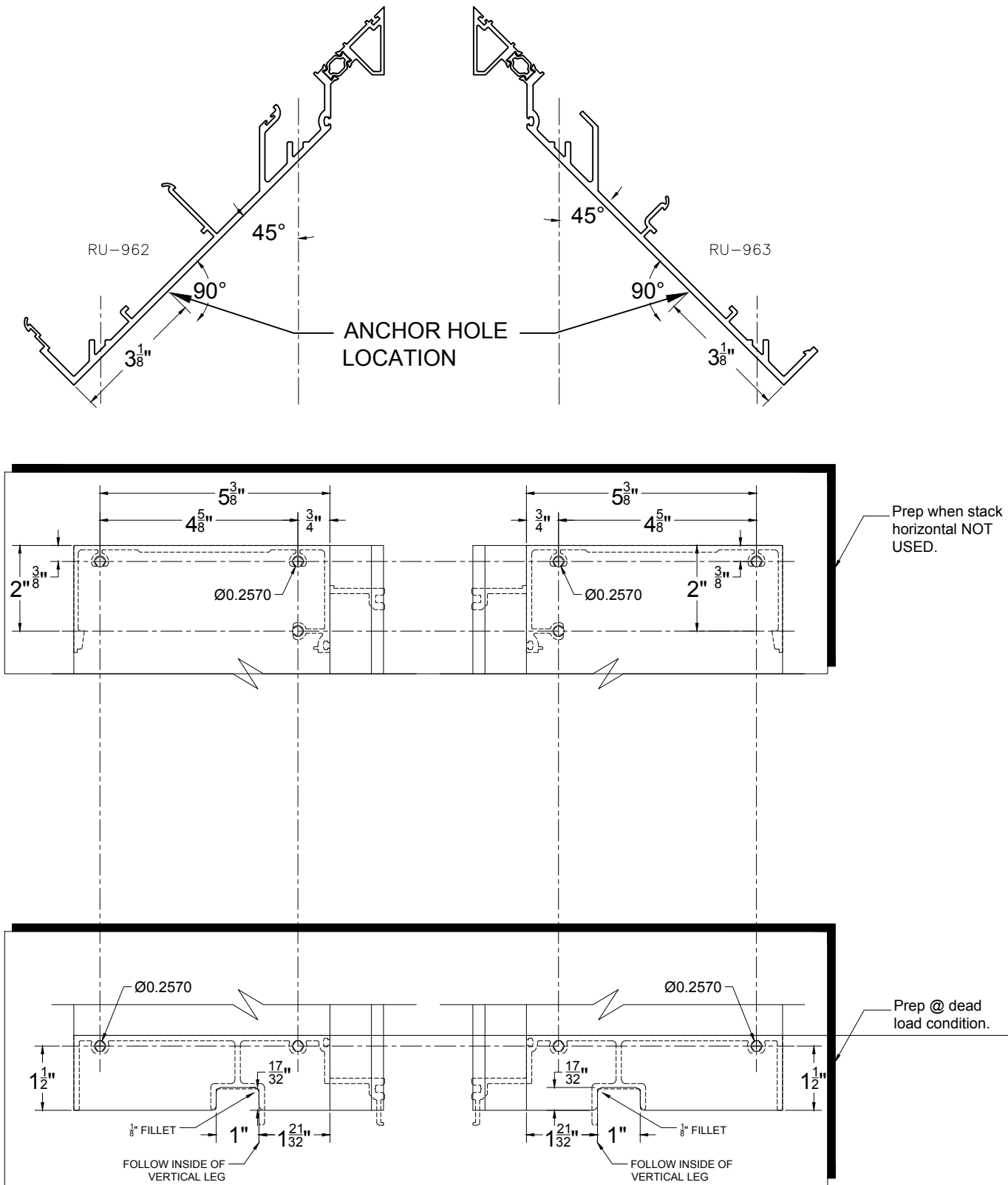
Ø OF INT. HORIZONTAL

Ø OF ANCHOR LOCATION (TYP. ANCHOR)

MILLION LENGTH

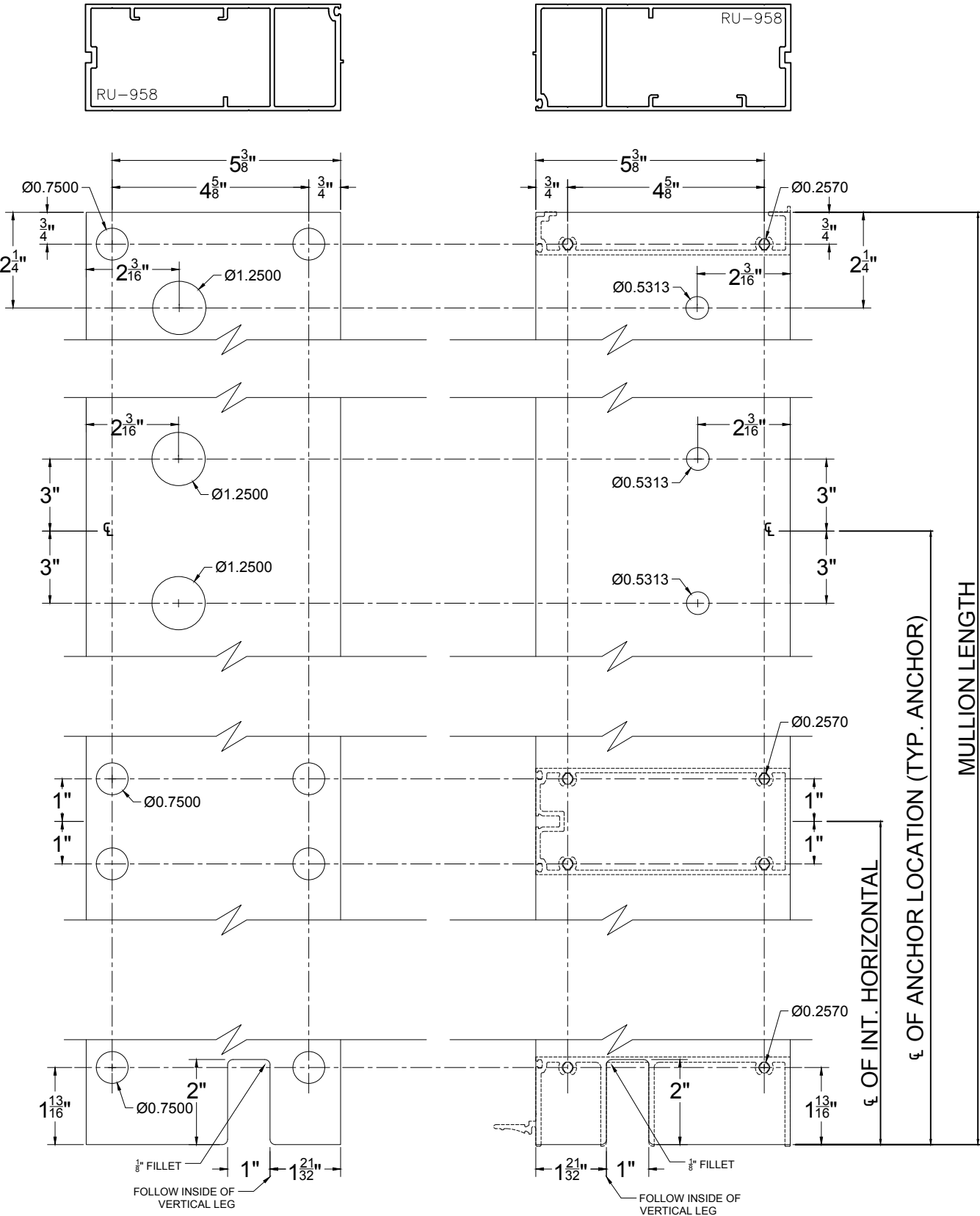
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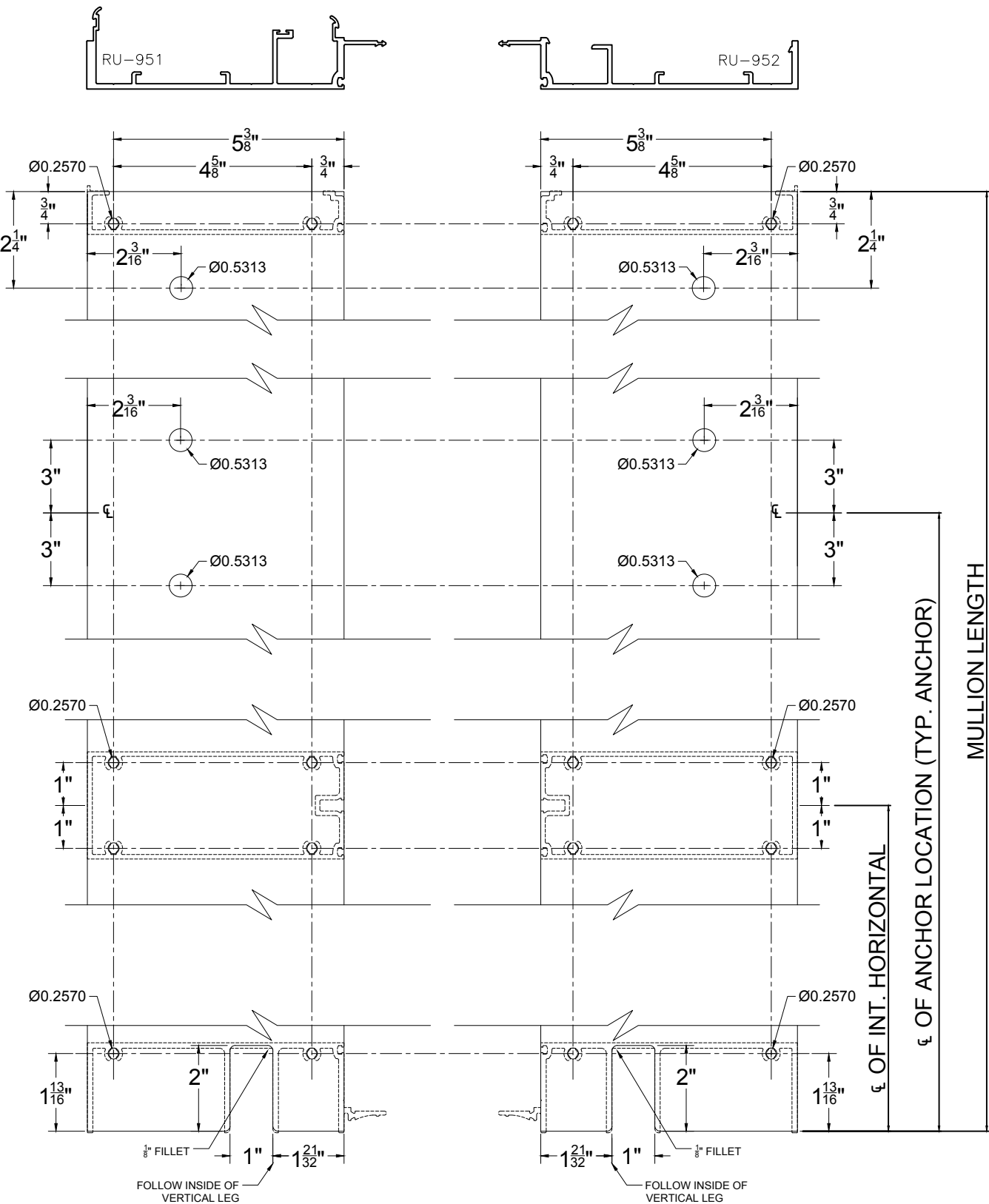
8" VERTICAL REFERENCE INFORMATION (CAPTURED O.S. 90° MULL)

RELIANCE™ UNIT WALL SSG - ASSEMBLY & SEALING INSTRUCTIONS



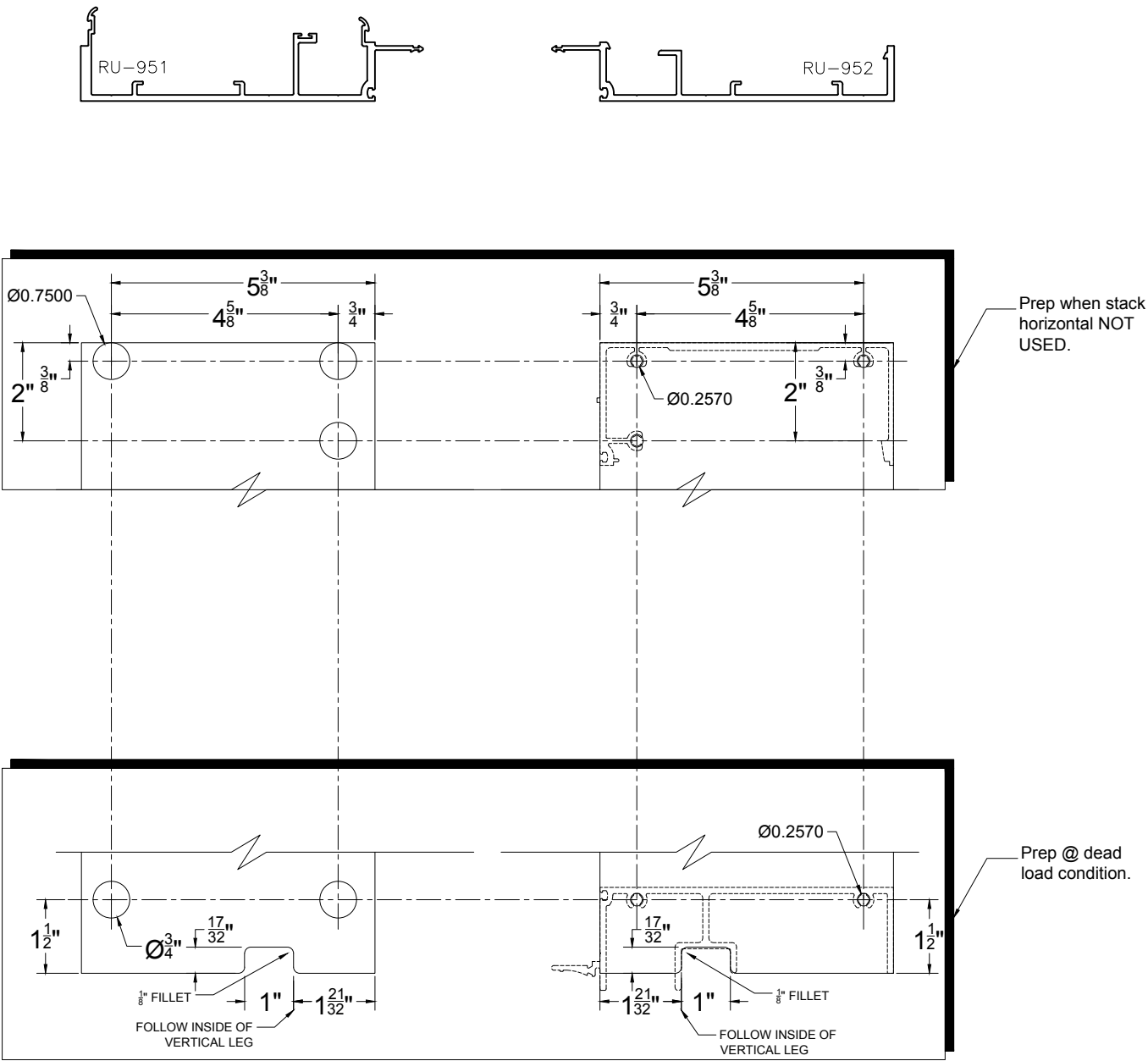
8" VERTICAL REFERENCE INFORMATION (NON CAPTURED JAMB)

RELIANCE™ UNIT WALL SSG - ASSEMBLY & SEALING INSTRUCTIONS



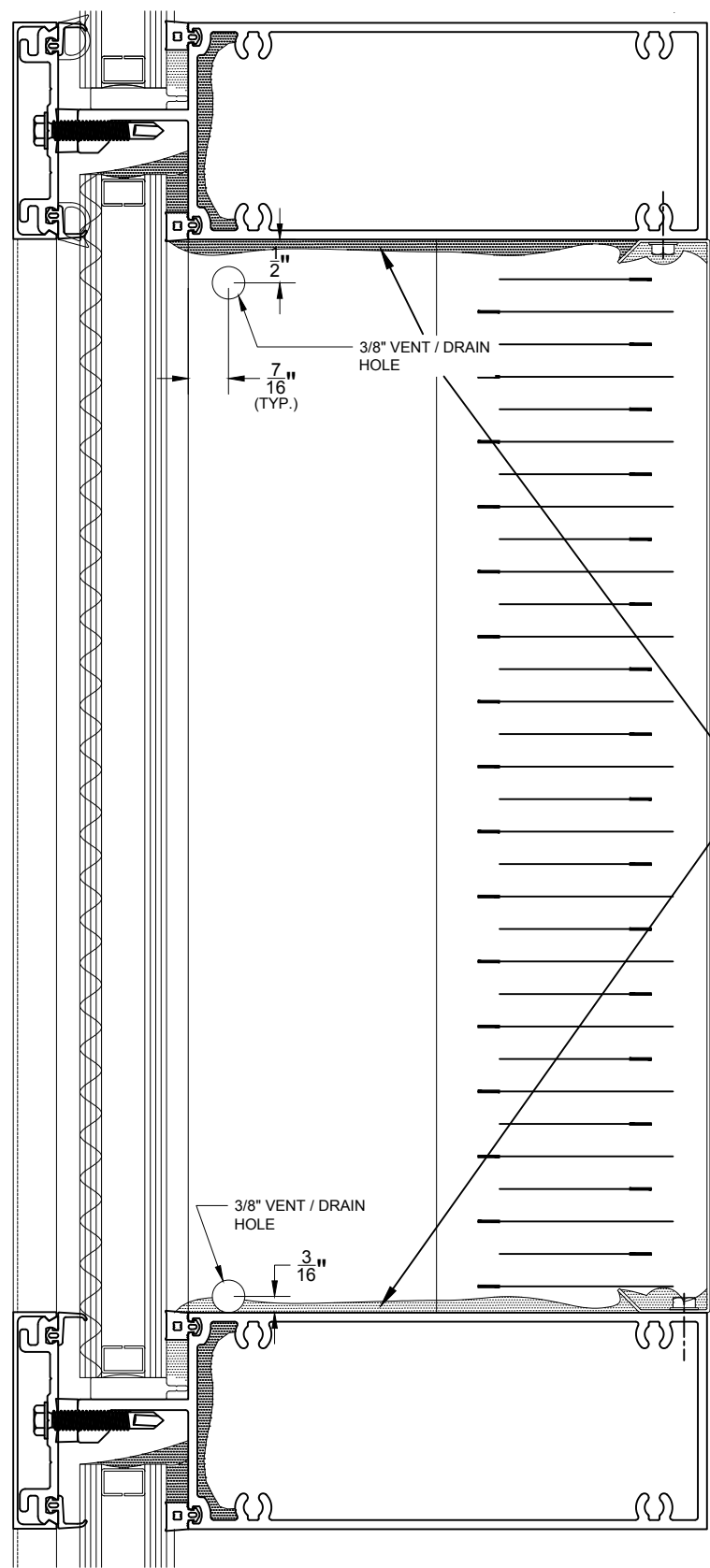
8" VERTICAL REFERENCE INFORMATION (NON CAPTURED INTERMEDIATE MULLS)

RELIANCE™ UNIT WALL SSG - ASSEMBLY & SEALING INSTRUCTIONS



8" VERTICAL REFERENCE INFORMATION (NON CAPTURED INTERMEDIATE MULLS)

RELIANCE™ UNIT WALL SSG - ASSEMBLY & SEALING INSTRUCTIONS



NOTE: Vent holes are designed for use with metal back pans which are hermetically sealed to glazing cavity openings on the back face. If the cavity is left open, or if FSK tape is used to seal the insulation to the framing, consideration must be given to the effect of vent holes at elevated structural loads during testing.

NOTE: Completely seal, water tight, all metal to metal joints within the spandrel cavity.

VENTS / DRAINS AND BACK PANS

RELIANCE™ UNIT WALL SSG - ASSEMBLY & SEALING INSTRUCTIONS

1. LAYOUT PARTS

Typically units are to be assembled with Female Mullion Half on the left of the unit and with the Male Mullion Half on the right of the unit (viewed from exterior of the unit). Please refer to shop drawings for proper mullion half required at left and right jamb units.

Check that all preps have been applied and located in the proper position per approved shop drawings.

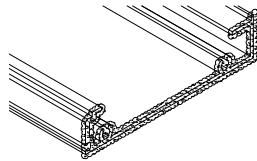
2. APPLY SILICONE SEALANT

Clean and butter top of the vertical mullions and both ends of horizontals with silicone sealant per approved shop drawings.

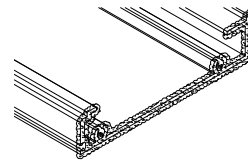
NOTE: ALL ASSEMBLY WORK MUST BE COMPLETED IMMEDIATELY AFTER SEALANT APPLICATION BEFORE SEALANT SKINS.

Butter both ends of the head horizontal from the front leg continuously around the perimeter including screw chase. (SEE BELOW)

CAPTURED

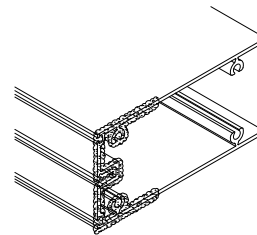
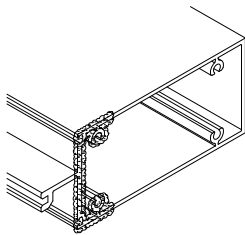


NON CAPTURED



Butter both ends of the intermediate transom from the lower screw chase inboards to the upper screw chase.
(NOTE: Spandrel & shadow box cavity areas are to be sealed full depth of horizontal.)

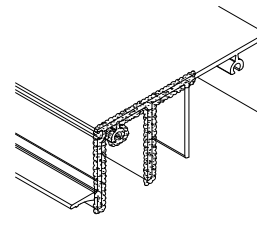
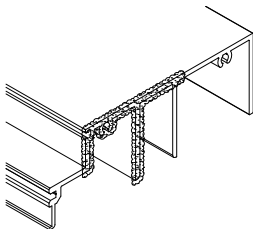
(SEE BELOW)



Butter both ends of the transom.

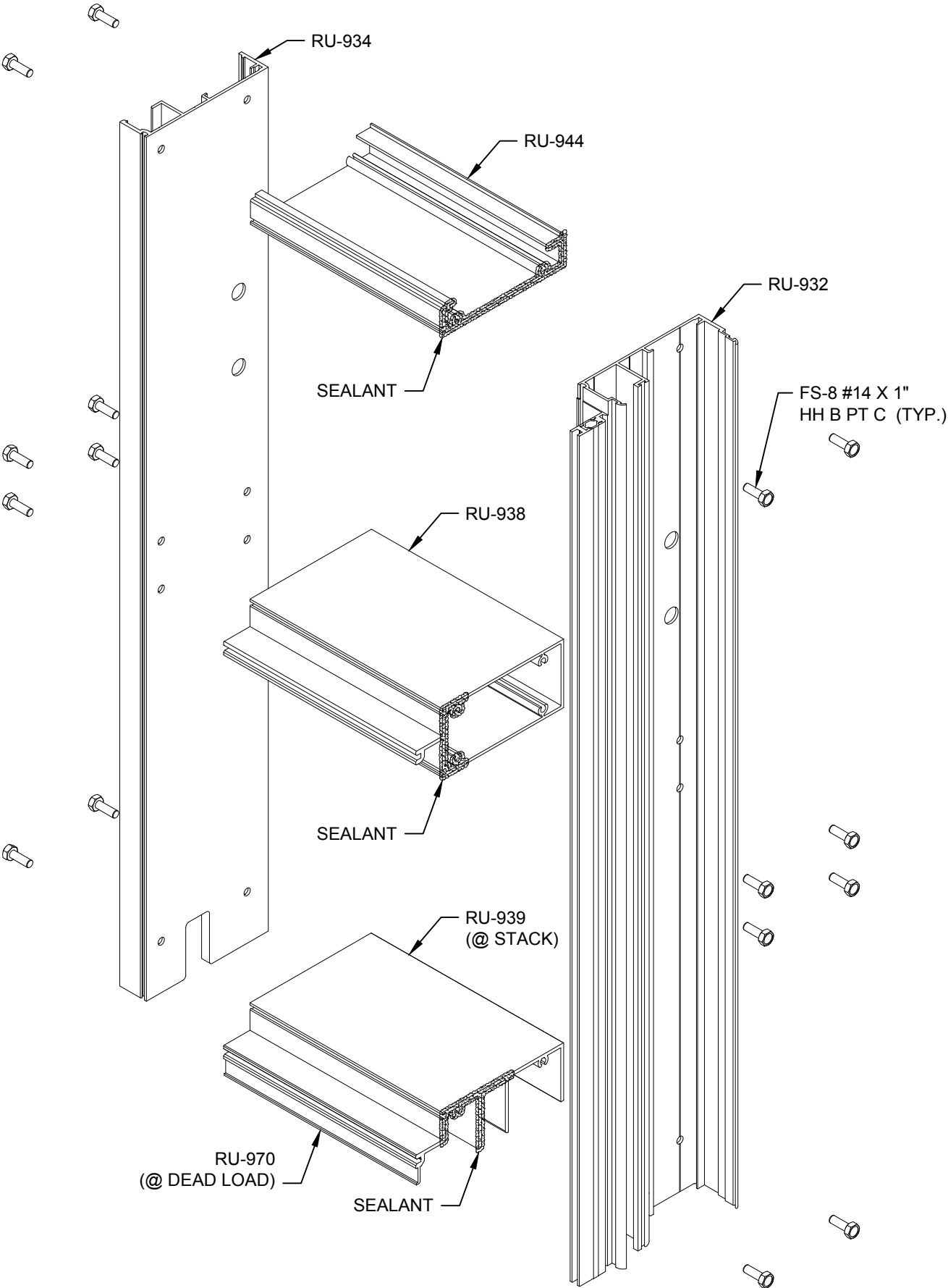
(NOTE: Spandrel & shadow box cavity areas are to be sealed full depth of horizontal.)

(SEE BELOW)



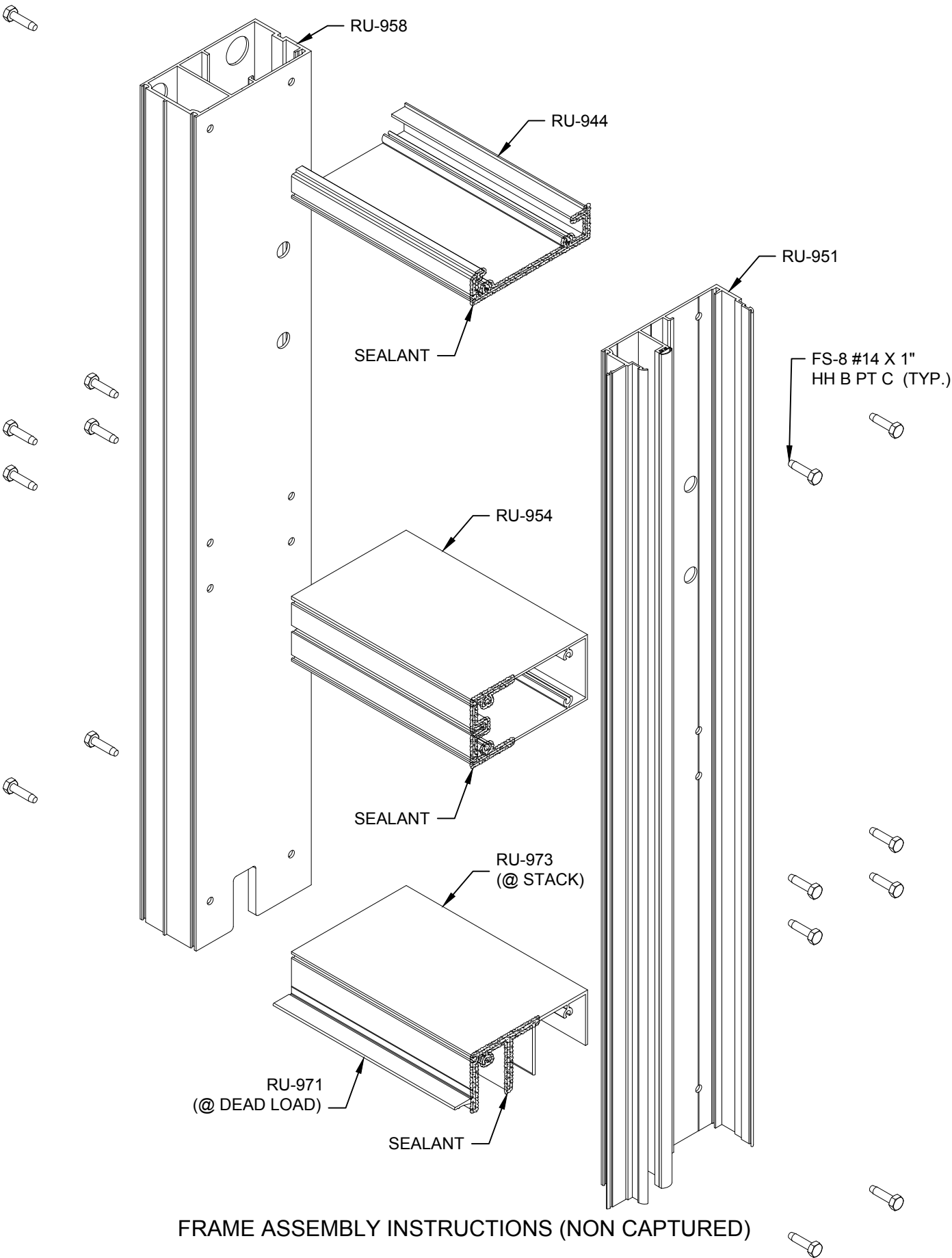
FRAME SUB-ASSEMBLY INSTRUCTIONS

RELIANCE™ UNIT WALL SSG - ASSEMBLY & SEALING INSTRUCTIONS

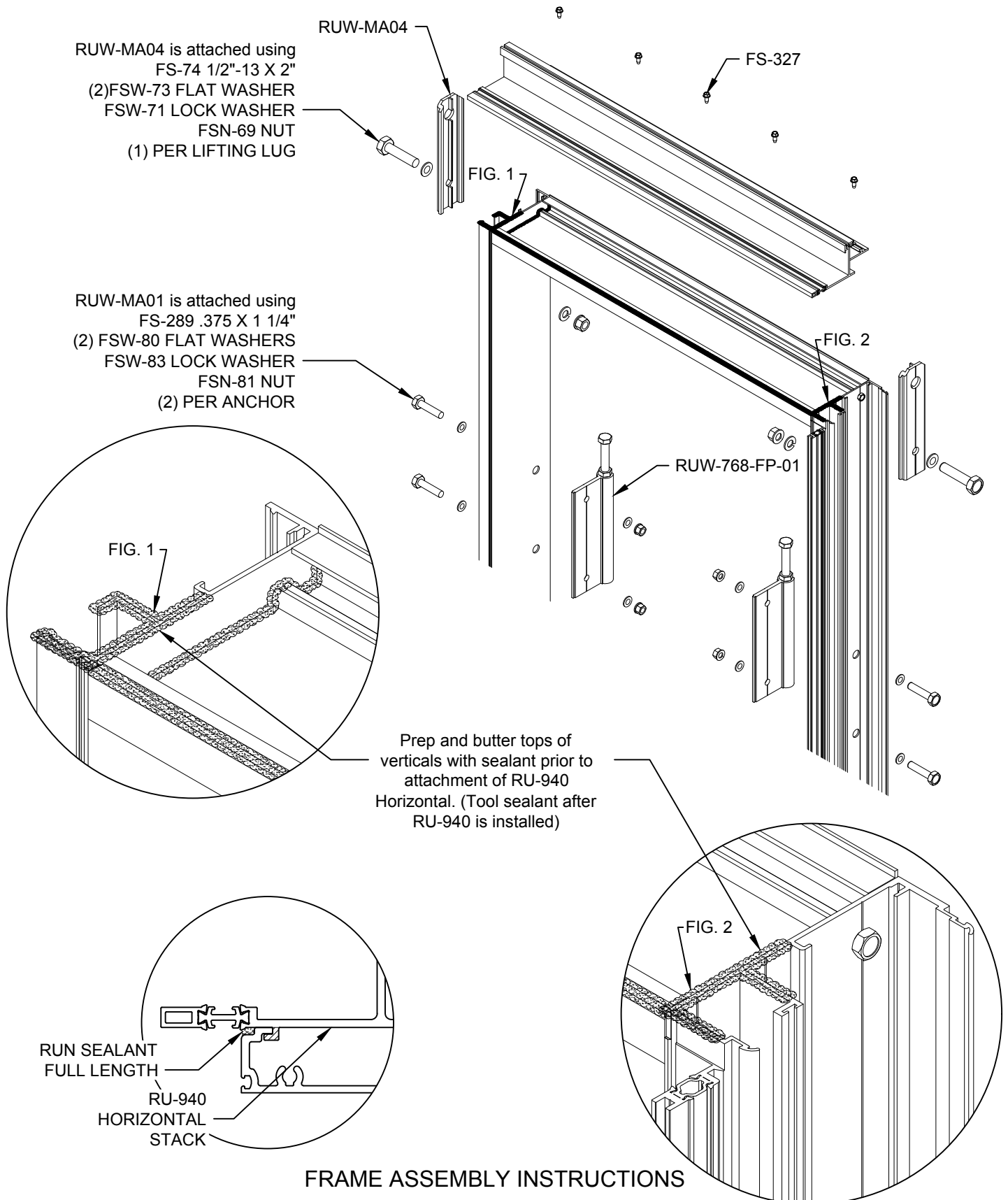


FRAME ASSEMBLY INSTRUCTIONS (CAPTURED)

RELIANCE™ UNIT WALL SSG - ASSEMBLY & SEALING INSTRUCTIONS



RELIANCE™ UNIT WALL SSG - ASSEMBLY & SEALING INSTRUCTIONS



RELIANCE™ UNIT WALL SSG - ASSEMBLY & SEALING INSTRUCTIONS

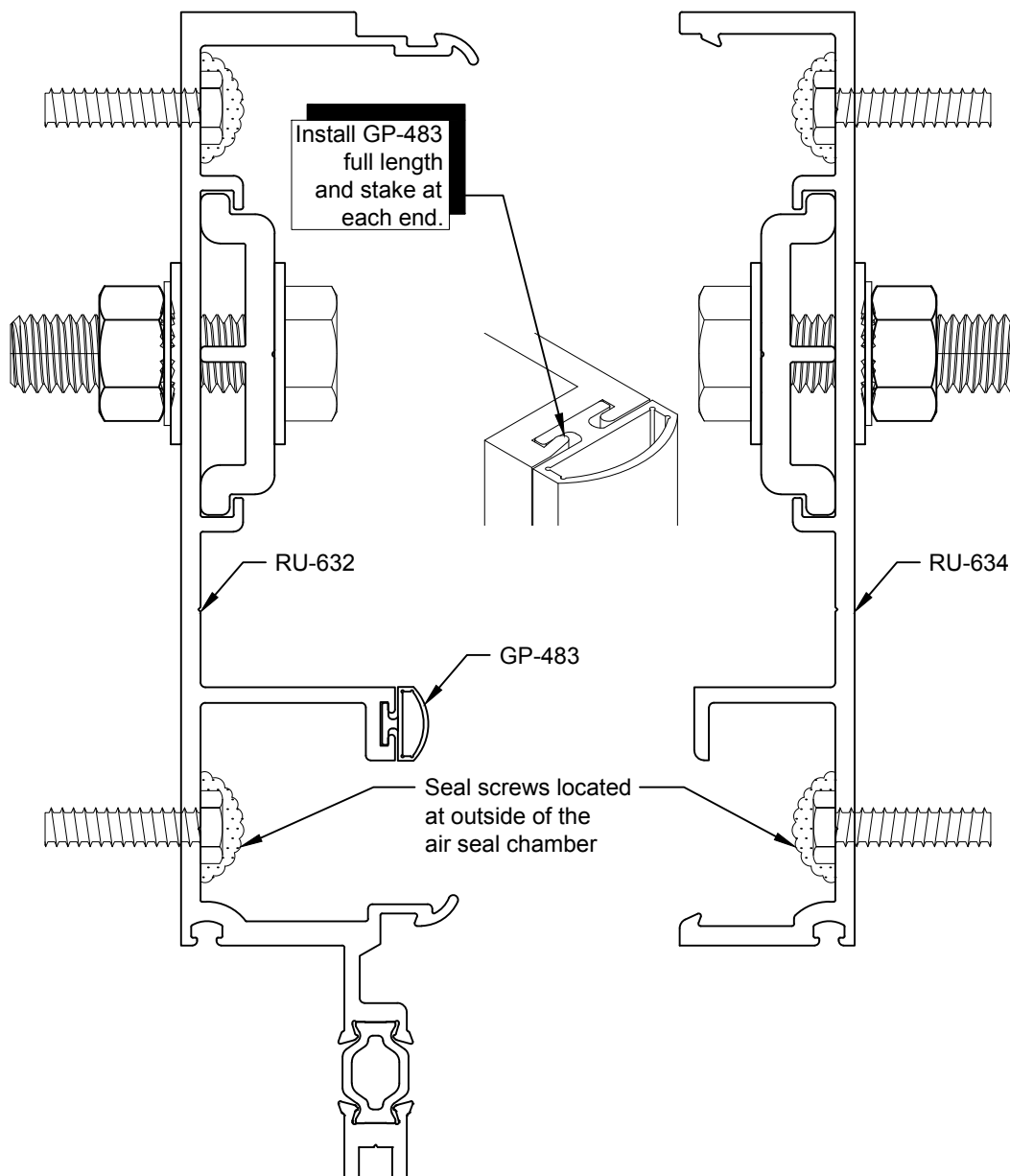
ASSEMBLING FRAME

Position horizontal members aligning with splines with screw holes and assemble with FS-8 #14 x 1" long hex washer head Type B pt assembly screws.

When applying opposite side of mullion half, do not tighten screws until all horizontals have been applied to keep from wiping off the sealant with mullion during installation.

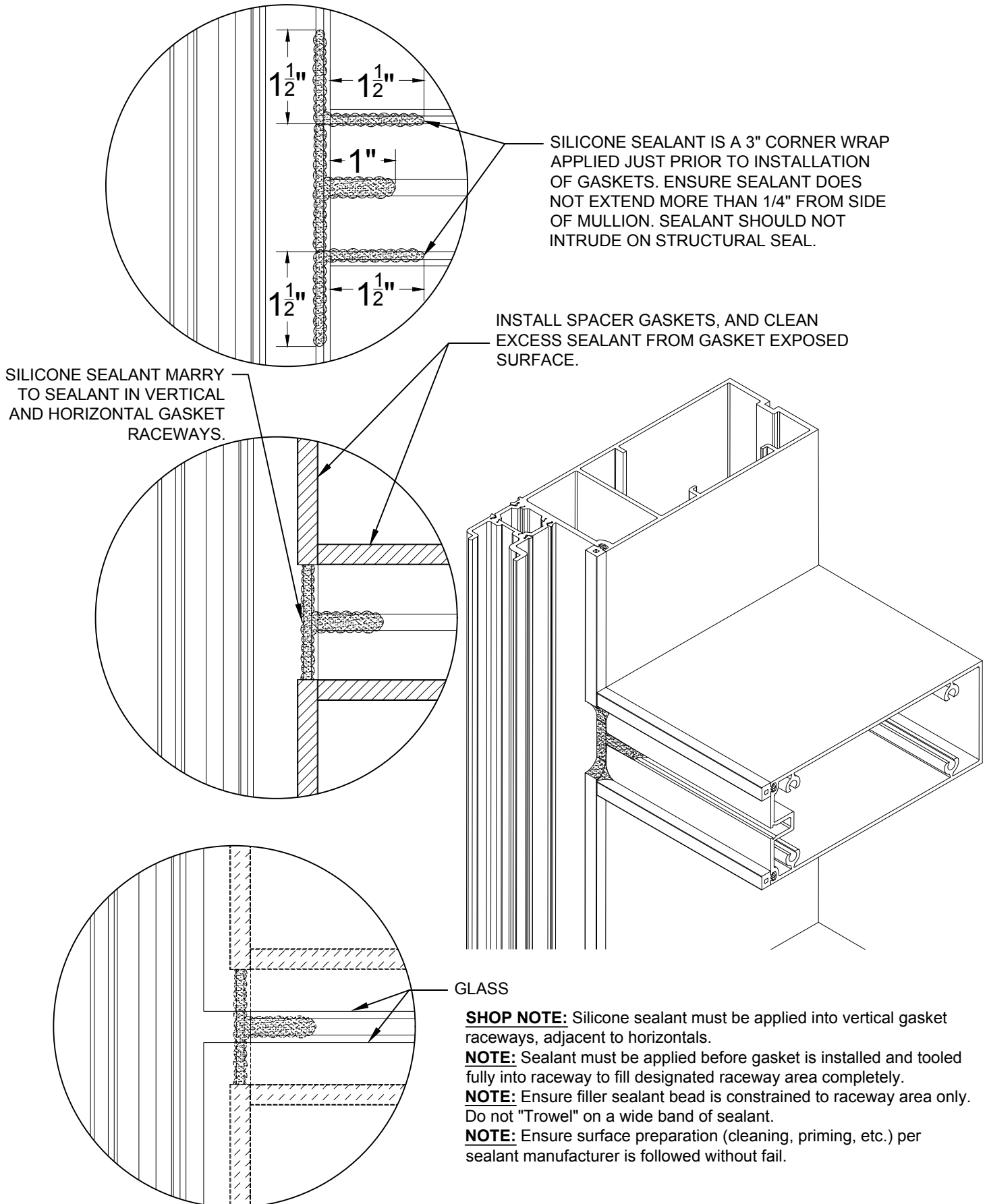
A RING OF SEALANT SHOULD APPEAR AROUND EVERY SCREW HEAD LOCATED IN WET AREAS. (SEE FIGURE BELOW)

THOROUGHLY SEAL OVER SCREW HEADS WHICH ARE LOCATED OUTSIDE OF THE AIR SEAL CHAMBER.



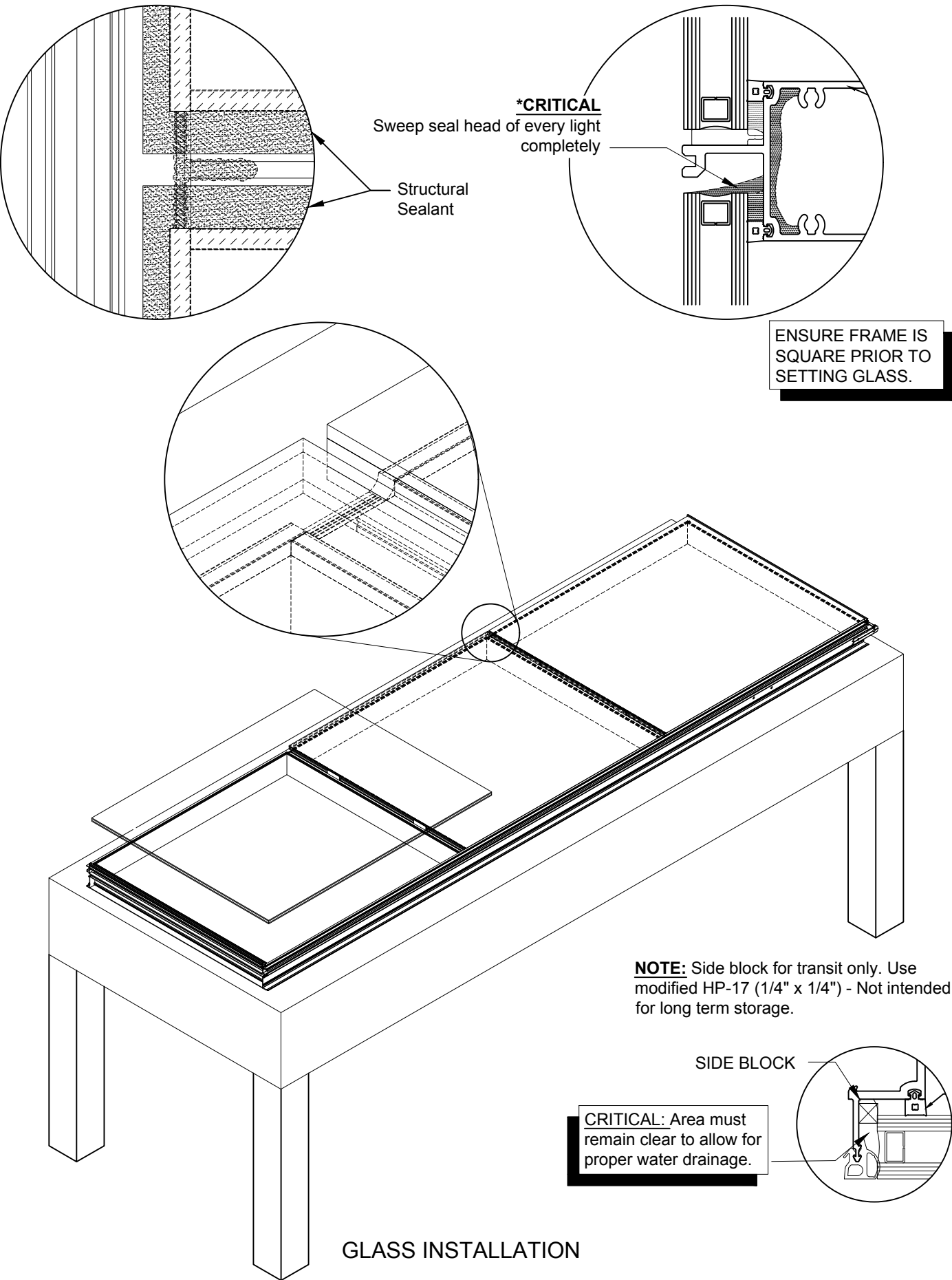
FRAME ASSEMBLY INSTRUCTIONS

RELIANCE™ UNIT WALL SSG - ASSEMBLY & SEALING INSTRUCTIONS

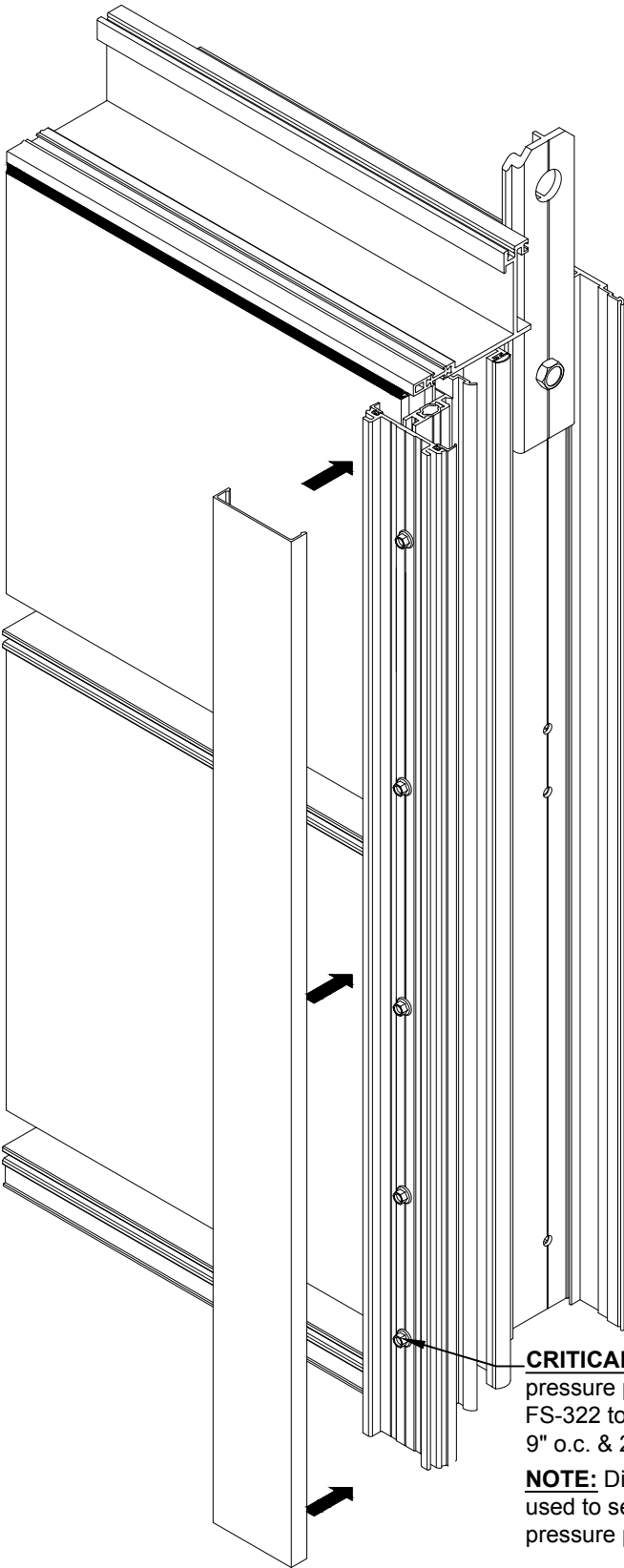


GASKET LOCATION / APPLICATION

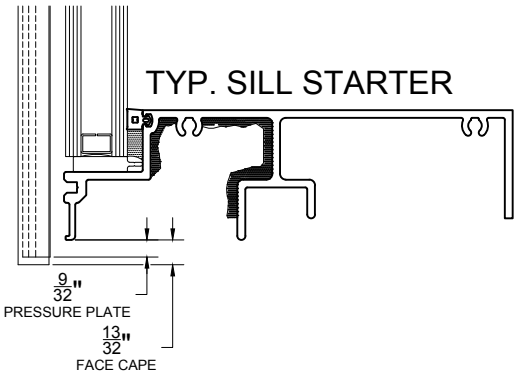
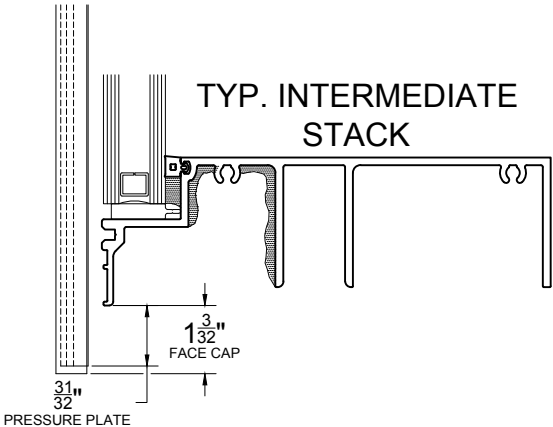
RELIANCE™ UNIT WALL SSG - ASSEMBLY & SEALING INSTRUCTIONS



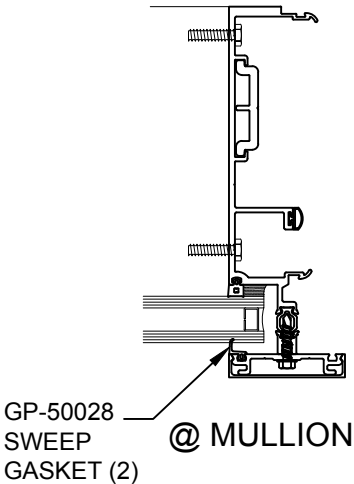
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VERTICAL FACE CAP & PRESSURE PLATE LOCATING DIMENSIONS

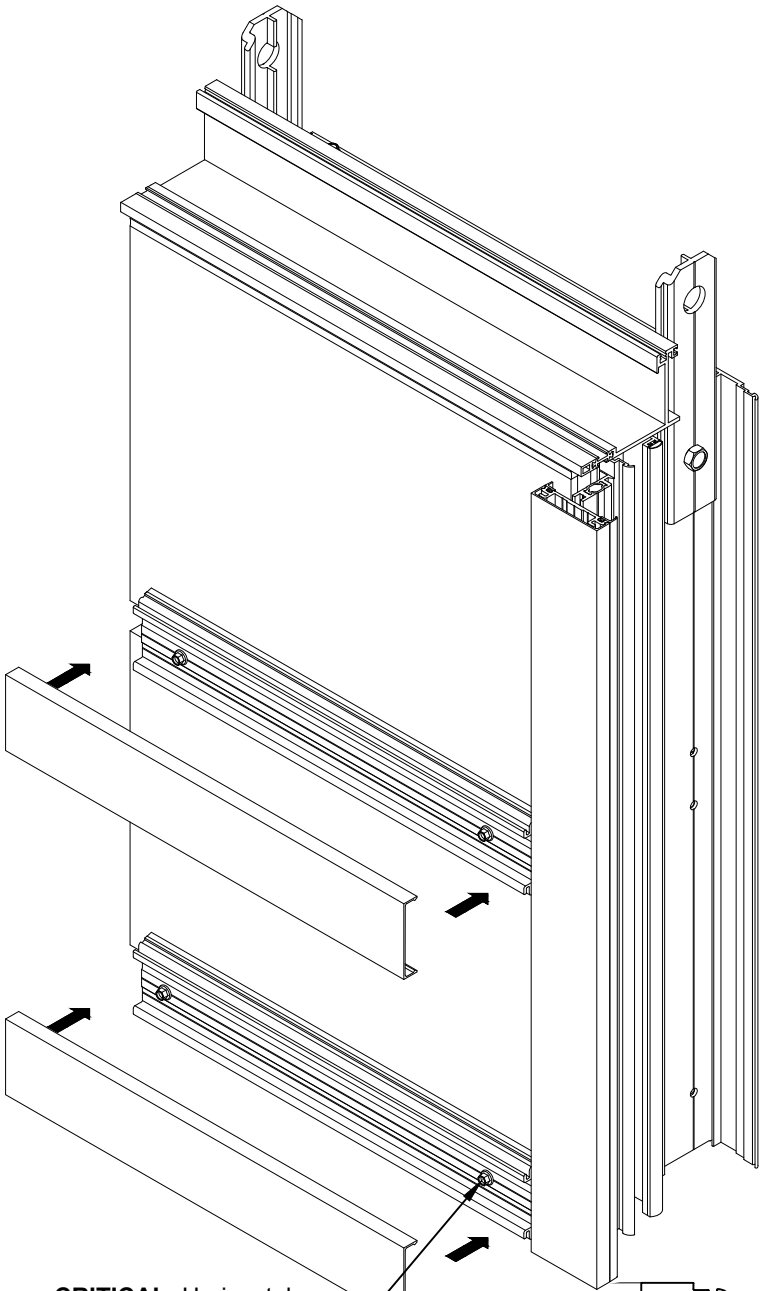


CRITICAL: Vertical pressure plate attached with FS-322 torqued to 70 in lb, 9" o.c. & 2" from each end.
NOTE: Different fastener used to secure horizontal pressure plate.



PRESSURE PLATE INSTALLATION

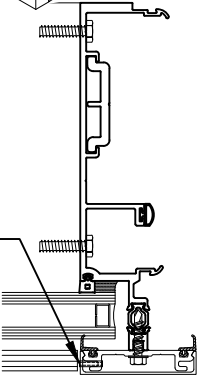
RELIANCE™ UNIT WALL SSG - ASSEMBLY & SEALING INSTRUCTIONS



CRITICAL: Horizontal pressure plate attached with FS-325 torqued to 70 in lb, 9" o.c. & 2" from each end.

NOTE: Different fastener used to secure vertical pressure plate.

(FS-317 Pin) (1) required at vertical cap only. Location of pin to be concealed behind horizontal cap.) See Figure **



VERTICAL

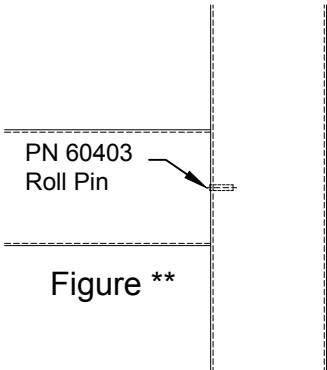
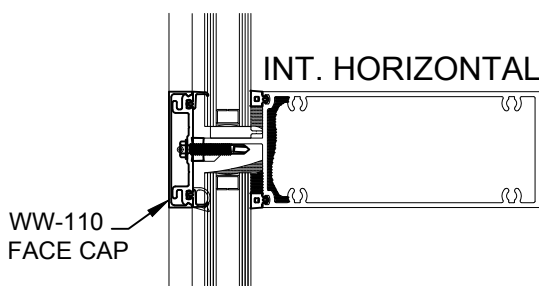
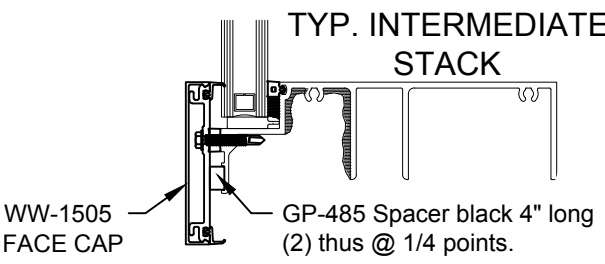


Figure **

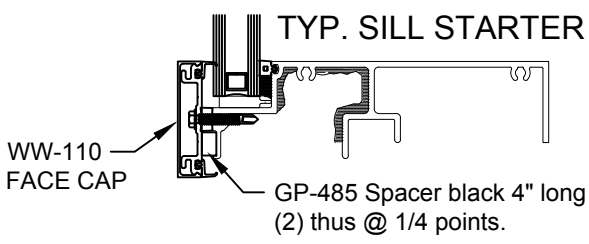


WW-110
FACE CAP



WW-1505
FACE CAP

GP-485 Spacer black 4" long
(2) thus @ 1/4 points.



WW-110
FACE CAP

GP-485 Spacer black 4" long
(2) thus @ 1/4 points.














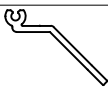







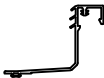


















HORIZONTAL FACE CAP INSTALLATION

RELIANCE™ UNIT WALL SSG - ASSEMBLY & SEALING INSTRUCTIONS

[illegible]

EXTRUSION SHEET

RELIANCE™ UNIT WALL SSG - ASSEMBLY & SEALING INSTRUCTIONS

| ACCESSORIES | |  | GP-492 | Formed Silicone Boot for Sealing of 90° O.S. Corner |  | UCW-6006 | Lifting Lug Typical |
|---|---|---|----------|---|---|----------|--------------------------------------|
|  | Hex Head Bolt 3/8" X 1 1/4" |  | GP-483 | Santoprene Weather Gasket |  | UCW-6012 | Lifting Lug 90° O.S. Corner |
|  | Flat Washer For 3/8" Bolt |  | GP-142 | EPDM Isolator |  | RU-647 | Dead Load Block |
|  | Nut For 3/8" Bolt |  | GP-50008 | EPDM / Silicone Gasket |  | RU-768 | 8" Mullion Anchor Typical |
|  | Hex Head Bolt 1/2"-13 X 2" |  | GP-486 | EPDM / Silicone Gasket |  | RU-237 | 8" Mullion Anchor 90° O.S. Corner |
|  | Flat Washer For 1/2" Bolt |  | GP-498 | Silicone Spacer Gasket |  | RU-242 | Sill Shear Angle |
|  | Lock Washer For 1/2" Bolt |  | GP-50028 | EPDM / Silicone Weatherseal Gasket |  | RU-645 | Stack Shear Angle |
|  | Nut For 1/2"-13 Bolt |  | GP-185 | Air Seal Gasket @ Stack |  | RU-241 | Corner Mull Sun Shade Anchor |
|  | Typical Assembly Fastener |  | GP-186 | Air Seal Gasket @ Sill |  | RU-239 | Standard Mull Sun Shade Anchor |
|  | Vertical Pressure Plate, Pocket Filler / Chicken Head 1" Fastener |  | GP-497 | 1" X 1/4" Setting Block | | | |
|  | Horizontal Pressure Plate 1-11/32" Fastener |  | GP-485 | 5/16" X 1/2" Spacer Block | | | |
|  | Adjustment Bolt 3/8"-16x5" Square Head Cup Point Bolt |  | HP-17 | Edge Block Modified as Needed | | | |
|  | Taplock Threaded Insert 3/8"-16x11/16" |  | UCW-8759 | Serrated Washer | | | |
|  | Attachment Pin |  | UCW-387 | Anchor Lug Typical | | | |
|  | Silicone Splice 4" |  | UCW-200 | Serrated Anchor Plate Washer | | | |
|  | Silicone Splice 2" |  | UCW-309 | Anchor Plate Typical | | | |

ACCESSORY SHEET