Oldcastle BuildingEnvelope®

FG-2000 storefront

installation & 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 SUBMISSION 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 ALL STRUCTURAL SILICONE SEALANT AND WEATHER SEAL SILICONE SEALANT.

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

1-866-OLDCASTLE (653-2278) **OBE.com**

Version: 2024-0717

FG-2000 Storefront Installation and Glazing Manual

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PRODUCT FEATURES

- 1-3/4” x 4-1/2” center set storefront for 1/4” monolithic typical infill
- Screw spline, shear block or stack assembly options
- Inside or outside glazed
- EZPunch or Drill Jig fabrication
- Panelized assembly
- Anodized or factory painted finishing options

IMPORTANT NOTICE

Completely read these instructions prior to beginning work. These recommendations are for general erection/installation procedures only. For actual job conditions, see shop drawings if applicable. For perimeter anchor types and spacing, refer to the approved shop drawings or consult structural engineer/project design professional.

GENERAL NOTES

ARCHITECTURAL PRODUCT

It is the responsibility of Oldcastle BuildingEnvelope® to supply a system to meet the architect’s specification.

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.

INSTALLER QUALIFICATION

These architectural framing systems are 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.

SEALANTS

Due to varying job conditions, all perimeter and weather sealants used should be approved by the sealant manufacturer to ensure it will function for the conditions shown in these instructions and in shop drawings. Sealants must be compatible with all surfaces where adhesion is required, including other sealant surfaces. Clean metal surfaces with isopropyl alcohol prior to sealing. Use primers where directed by sealant manufacturer. Be sure to store sealants at recommended temperature and check container for remainder of shelf life before using.

MATERIAL AND WORK ACCEPTANCE

OLDCASTLE BUILDINGENVELOPE® MATERIALS

Check all material upon arrival for quality and to assure against shipping damage. Any visible damage must be noted on the freight bill at the time of receipt. If a claim is required, then the receiving party must process a claim with the freight company.

OTHER TRADES WORK

Completely check construction that will receive your materials against contract documents. Notify general contractor by letter of any discrepancies before proceeding with work. Failure to do so constitutes acceptance of work by other trades.

MATERIAL HANDLING, PROTECTION, AND STORAGE

Handle the material carefully. Do not drop from the truck. Stack with adequate separation so that the material will not rub together. Store material off the ground. Protect against the elements and other construction hazards by using a well-ventilated covering away from other trades. Remove material from package if it is wet or located in a damp area.

SHOP

- Cardboard wrapped or paper interleaved material must be kept dry. Immediately remove aluminum from cardboard or paper interleaved materials should it get wet to prevent staining or etching the aluminum finish.
- Check arriving materials for quantity and keep record of where various materials are stored.

JOB SITE

- Material at job site must be stored in a safe place well removed from possible damage by other trades.
- Cardboard wrapped or paper interleaved materials must be kept dry. Immediately remove aluminum from cardboard or paper interleaved materials should it get wet to prevent staining or etching the aluminum finish.
- Keep record of where various materials are stored.
- Protect materials after erection. Cement, plaster, and other alkaline solutions are very harmful to the finish.

EXPANSION JOINTS

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

GLAZING PRACTICES

The air and water performance of the framing 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:
• Glazing gaskets should be cut ¼” longer per foot, and lay flat, preferably for 24 hours
• Gaskets should be cut as single monolithic pieces and “crowded” during their installation to avoid corner gaps caused by post-installation relaxation
• The interior glazing gasket should be installed so as to avoid stretching, buckles, or tears
• 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.
• Gasket corner joinery must also be crowded, and sealant applied onto the gasket contact frame surface and into gasket reglet raceway where applicable.

• 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.
• 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
• Check the placement of the installed glass and verify there is proper edge bite into the pocket, and proper edge clearance from framing elements

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.

CLEANING

Final cleaning of exposed aluminum surfaces should be done in accordance with AAMA 609 and 610. Cement, plaster, terrazzo, alkaline and acid-based materials used to clean masonry are very harmful to finishes and should be removed immediately or permanent staining will occur. A spot test is recommended before any cleaning agent is used. Aluminum shall be cleaned with plain water containing a mild detergent. No abrasive agent shall be used.

SUMMARY

A. Study these instructions, shop drawings, erection drawings, and architectural drawings before starting any work. Approved shop drawings take precedence; this manual should be used as a reference only.
B. Completely check construction which will receive your materials against contract documents. Notify the general contractor by letter of any discrepancies before proceeding with your work since this constitutes acceptance of work by other trades.
C. Coordinate protection of installed materials with general contractors and other trades.
D. Do not install wall if there is a walkway with a downslope towards an entrance or a storefront.
E. All materials are to be installed plumb and level.
F. All work should start from an established benchmark and column centerlines established by the architect and the general contractor.
G. Protect all aluminum to be placed directly in contact with uncured masonry or incompatible materials with a heavy coat of zinc chromate or bituminous paint.
H. After weather sealant is set and a representative amount of the wall has been glazed (500 square feet or more), run a water hose test to check installation. On large jobs, hose test should be repeated during glazing operation. Test should be conducted in accordance with AAMA 501.2 specifications. This test should not be performed at entrances installed in the system.

FRAME FABRICATION

1.0 ESTABLISH FRAME SIZE

NOTE: The storefront must be installed square and plumb. Shim as necessary to compensate for deviations in Rough Opening.

When measuring the rough opening, take multiple measurements and use the smallest dimension. This assures a proper fit of the storefront system.

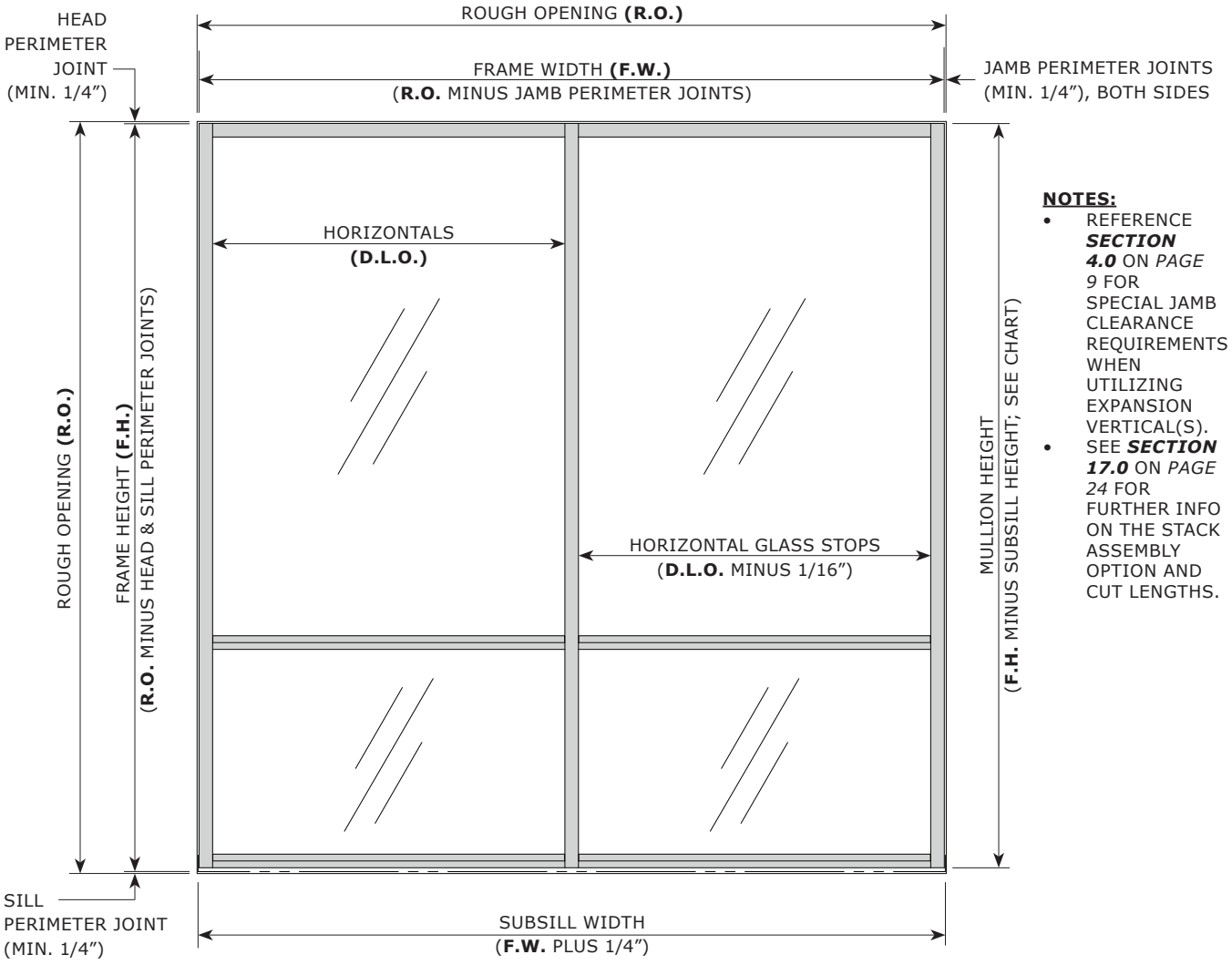
Measure width of Rough Opening.

A. Measure opening at bottom.
B. Measure opening at center.
C. Measure opening at top.

Repeat process to determine height of Rough Opening.

A. Measure opening from top to bottom of left side.
B. Measure opening from top to bottom of middle.
C. Measure opening from top to bottom of right side.

SUBSILL	SUBSILL HEIGHT
FG-2169	1/8″
FG-2246	1/2″
FG-2260 (8 PSF)	1/8″
FG-2180 (INSIDE GLZ)	3/8″



NOTES:

- REFERENCE ***SECTION 4.0*** ON *PAGE 9* FOR SPECIAL JAMB CLEARANCE REQUIREMENTS WHEN UTILIZING EXPANSION VERTICAL(S).
- SEE ***SECTION 17.0*** ON *PAGE 24* FOR FURTHER INFO ON THE STACK ASSEMBLY OPTION AND CUT LENGTHS.

Figure 1: Typical Elevation

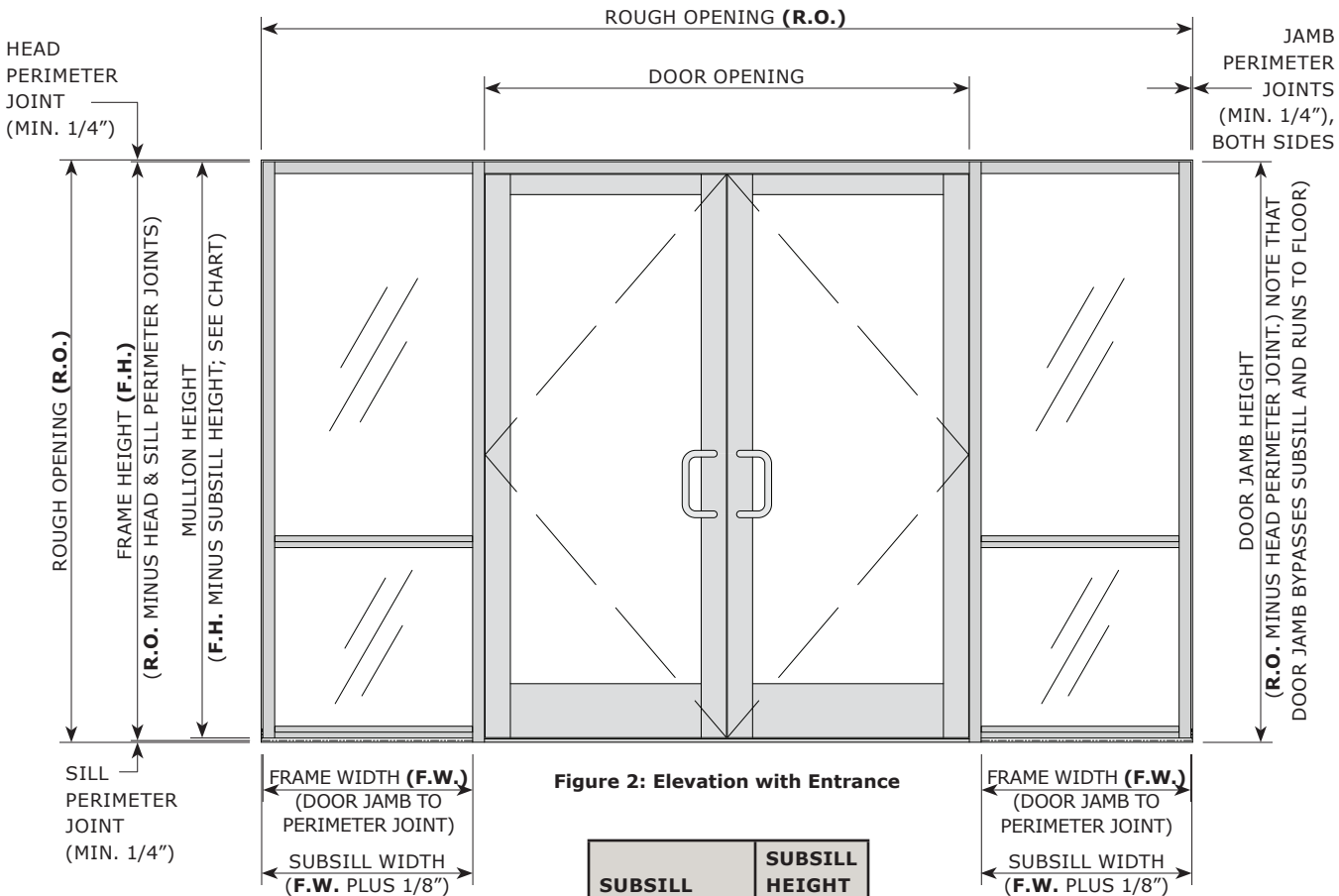


Figure 2: Elevation with Entrance

SUBSILL	SUBSILL HEIGHT
FG-2169	1/8″
FG-2246	1/2″
FG-2260 (8 PSF)	1/8″
FG-2180 (INSIDE GLZ)	3/8″

2.0 CUT MEMBERS TO SIZE - TYPICAL SYSTEMS

Note: *For Stack Assembly System, reference* ***Section 3.0***. Reference *Page 25 for special clearance requirements for Expansion Verticals.*

Subsills

Frame without Entrance ..... Frame Width plus (+) 1/4”
Frame with Entrance Sidelites *(Note: Subsill to butt tight against Door Jamb. Door Jamb runs to floor.)*..... Frame Width (Door Jamb to Perimeter Joint) plus (+) 1/8”

Verticals

Mullions and Mullion Fillers ..... Frame Height minus (-) Subsill Height (see chart Pg. 6)
Door Jambs and Sidelite Fillers ..... Rough Opening minus (-) Head Perimeter Joint

Horizontals

Horizontals..... D.L.O.
Horizontal Glass Stops .....D.L.O. minus (-) 1/16”

Accessories

V-11 Air Seal Gaskets..... Mullion Height
FG-1133 Horizontal Glazing Gaskets ..... D.L.O. plus (+) 1/4” per foot
FG-1133 Vertical Glazing Gaskets.....D.L.O. plus (+) 3/4” plus (+) 1/4” per foot

3.0 CUT MEMBERS TO SIZE - STACK ASSEMBLY SYSTEM

Head & Sill Channels

Frame without Entrance..... Frame Width
Frame with Entrance and Sidelites (*Note: Head & Sill Channels to butt tight against Door Jamb. Door Jamb runs to floor.)*.....Frame Width (Door Jamb to Perimeter Joint)

Verticals

Mullions..... Frame Height minus (-) 1-1/8”
Door Jambs and Sidelite Fillers ..... Rough Opening minus (-) Head Perimeter Joint

Horizontals

Intermediate Horizontals.....D.L.O. minus (-) 1/32”
Head Inserts, Horizontal Fillers and Sill Inserts.....D.L.O. minus (-) 1/32”

Accessories

FG-1133 Horizontal Glazing Gaskets ..... D.L.O. plus (+) 1/4” per foot
FG-1133 Vertical Glazing Gaskets.....D.L.O. plus (+) 3/4” plus (+) 1/4” per foot

Abbreviations used within these instructions:
D.L.O. = Day Light Opening

4.0 NOTE ON EXPANSION VERTICAL CLEARANCE REQUIREMENTS

For elevation widths in excess of 24 feet, Expansion Verticals should be used at a maximum spacing of every 20 feet on Mullion centerlines. A minimum of 7/16” clearance between Jambs and End Dams (installed) is necessary to maintain enough clearance for the two Mullion halves to engage and leave a final 1/8” reveal at the front. **Ensure that this extra clearance is accounted for when figuring Horizontal cut lengths.**

Note that the stack assembly system does not allow for Expansion Verticals.

Reference ***Figure 3*** below for recommended clearances.

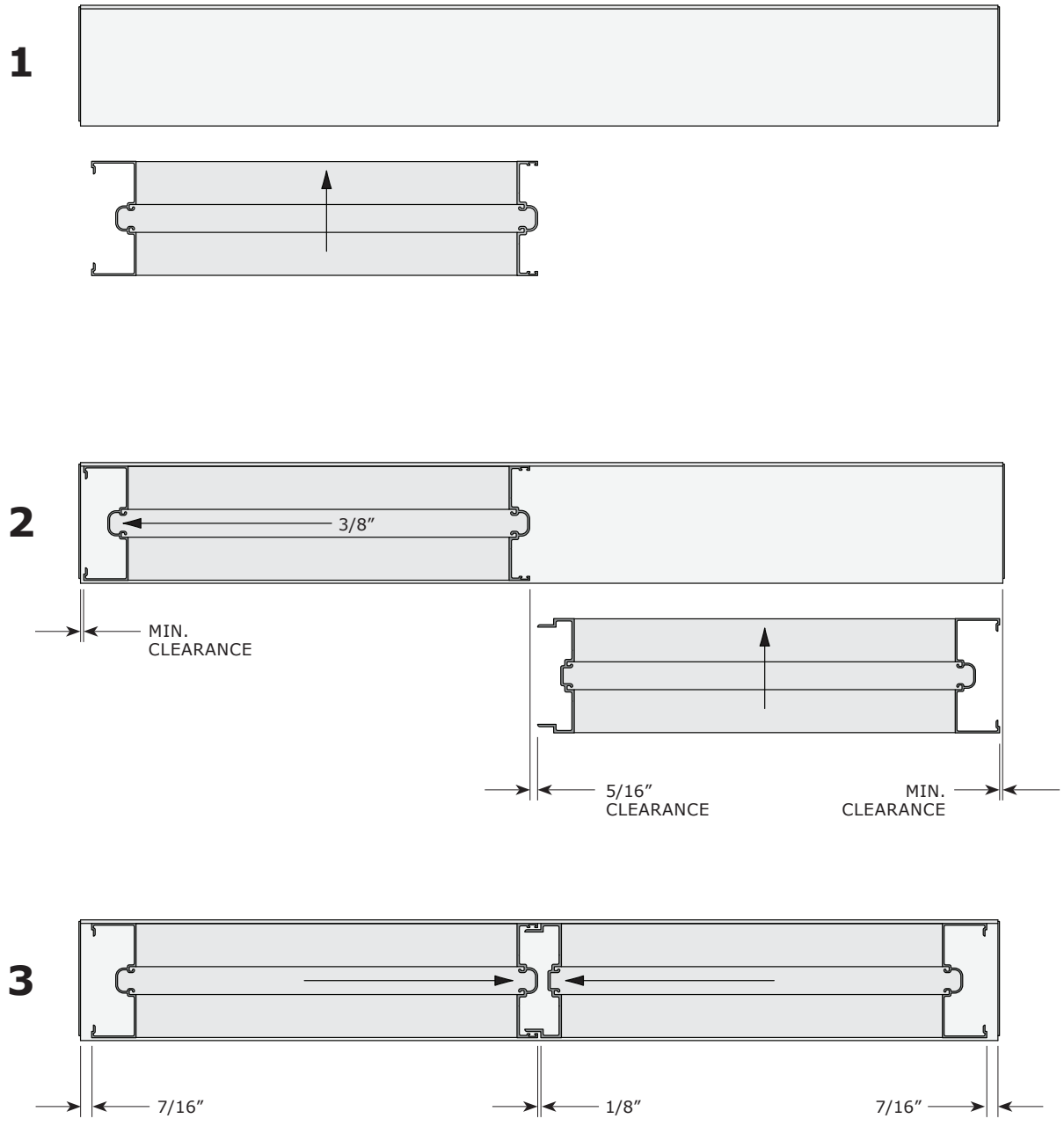
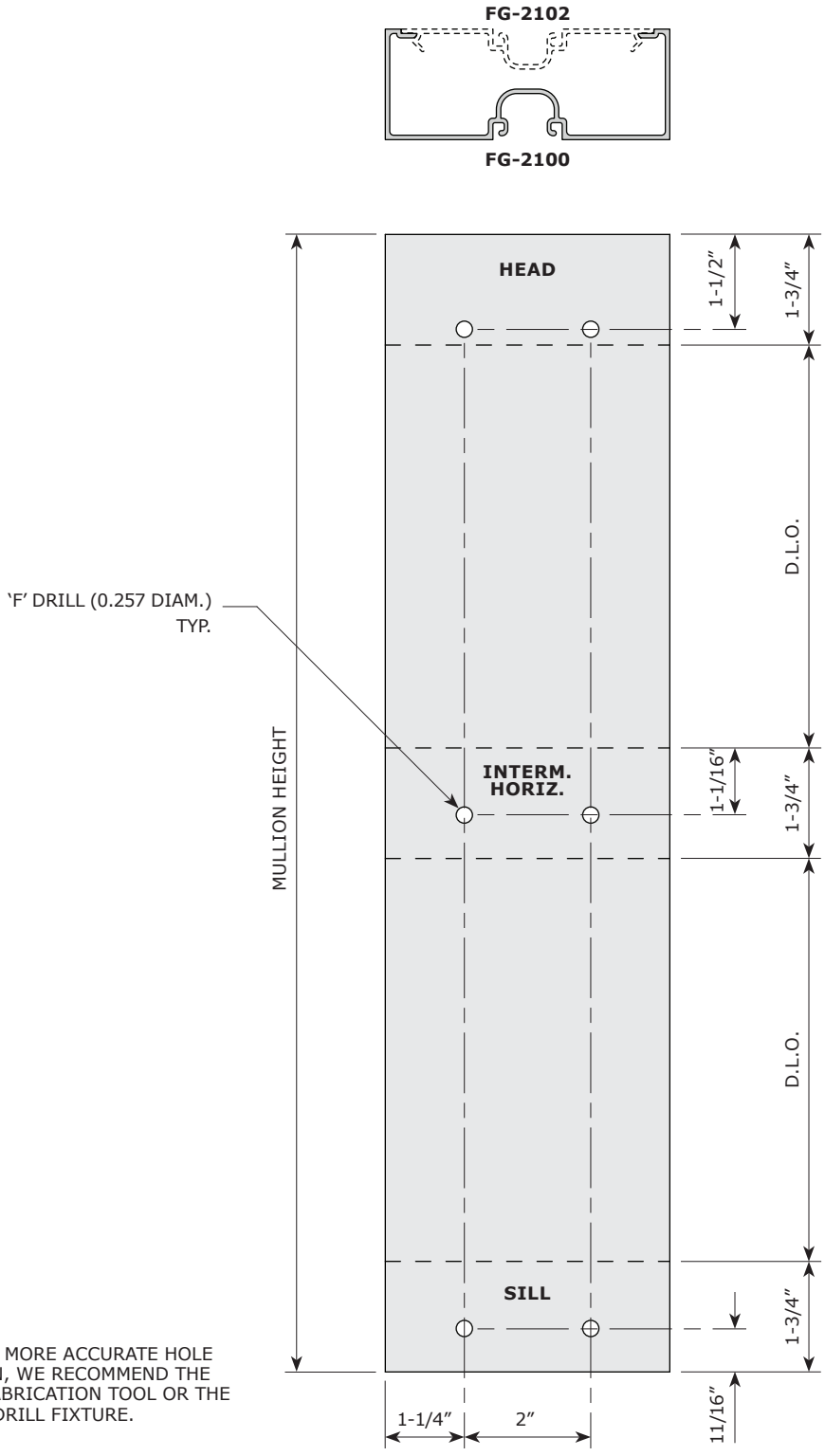


Figure 3: Expansion Vertical Clearance

VERTICAL HOLE PREP

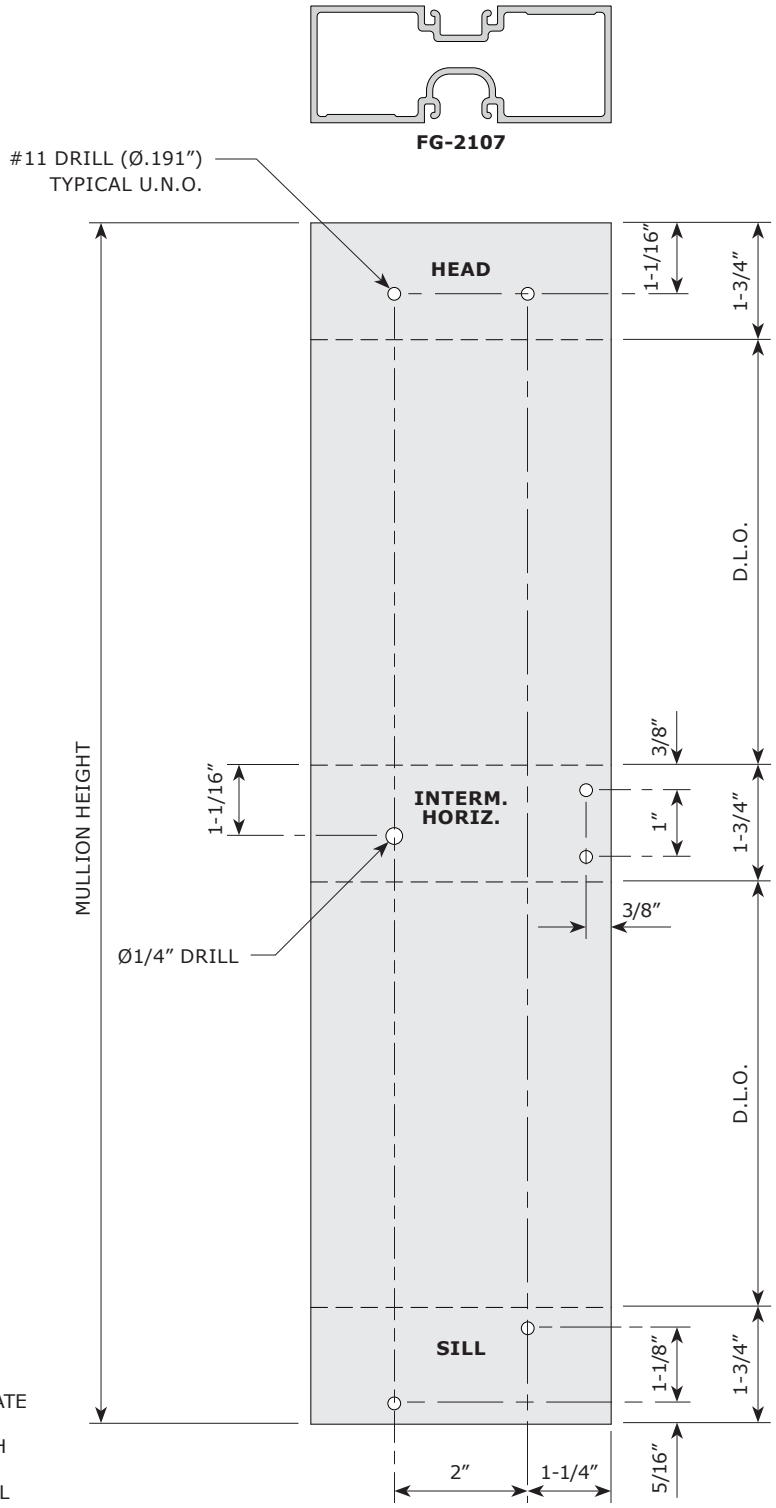
5.0 SCREW SPLINE / OUTSIDE GLAZED SYSTEM



NOTE:
FOR FASTER, MORE ACCURATE HOLE FABRICATION, WE RECOMMEND THE EZ PUNCH FABRICATION TOOL OR THE **DJ-5** HAND DRILL FIXTURE.

Figure 4: Mullion Prep - Screw Spline / Outside Glazed System

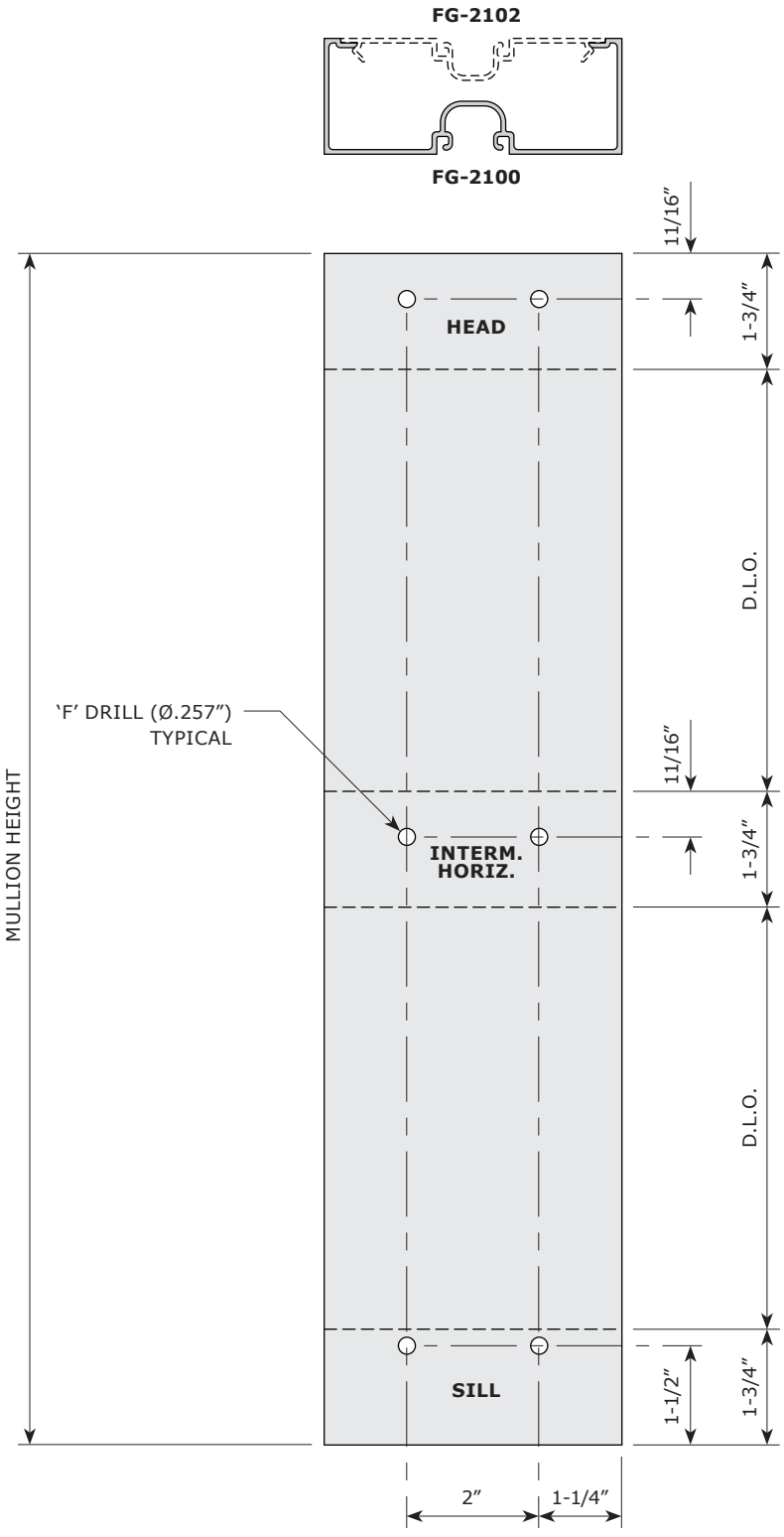
6.0 SHEAR BLOCK SYSTEM



NOTE:
FOR FASTER, MORE ACCURATE HOLE FABRICATION, WE RECOMMEND THE EZ PUNCH FABRICATION TOOL OR THE **DJ-3** AND **DJ-4** HAND DRILL FIXTURES.

Figure 5: Mullion Prep - Shear Block System

7.0 SCREW SPLINE / INSIDE GLAZED SYSTEM



NOTE:
FOR FASTER, MORE ACCURATE HOLE FABRICATION, WE RECOMMEND THE EZ PUNCH FABRICATION TOOL OR THE **DJ-5** HAND DRILL FIXTURE.

Figure 6: Mullion Prep - Screw Spline / Inside Glazed System

8.0 STACK ASSEMBLY SYSTEM

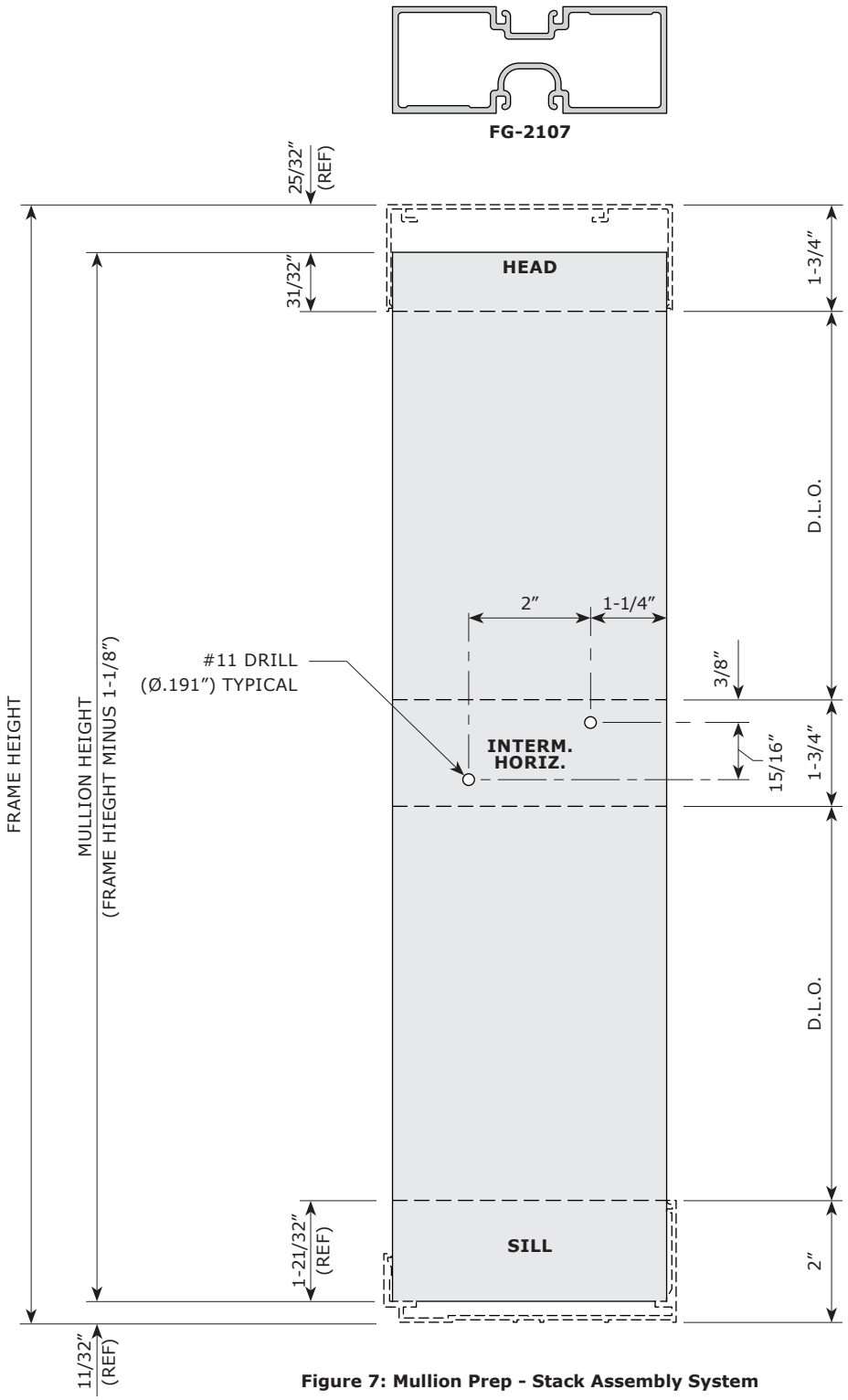


Figure 7: Mullion Prep - Stack Assembly System

FRAME ASSEMBLY

9.0 SCREW SPLINE / OUTSIDE GLAZED SYSTEM

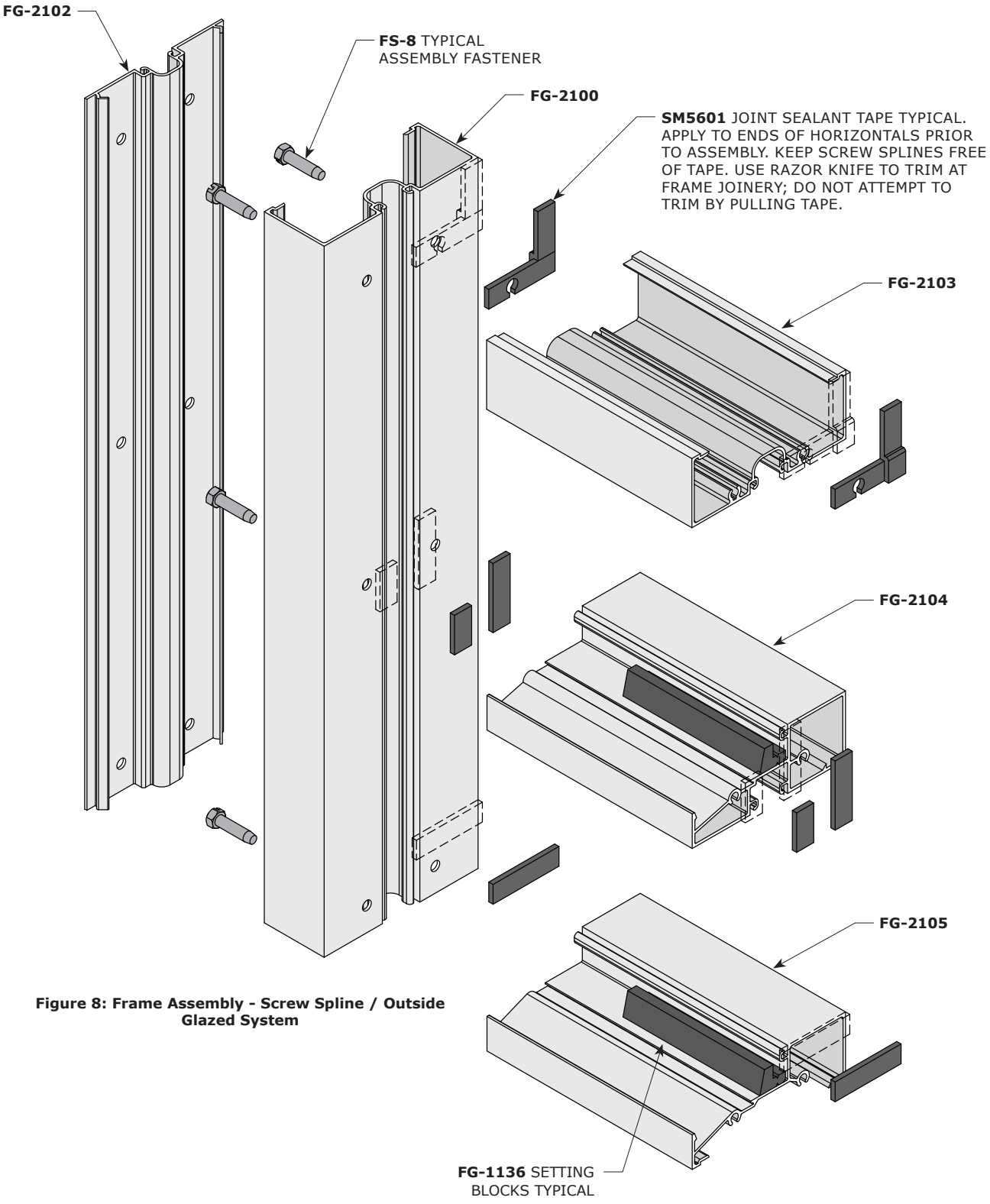
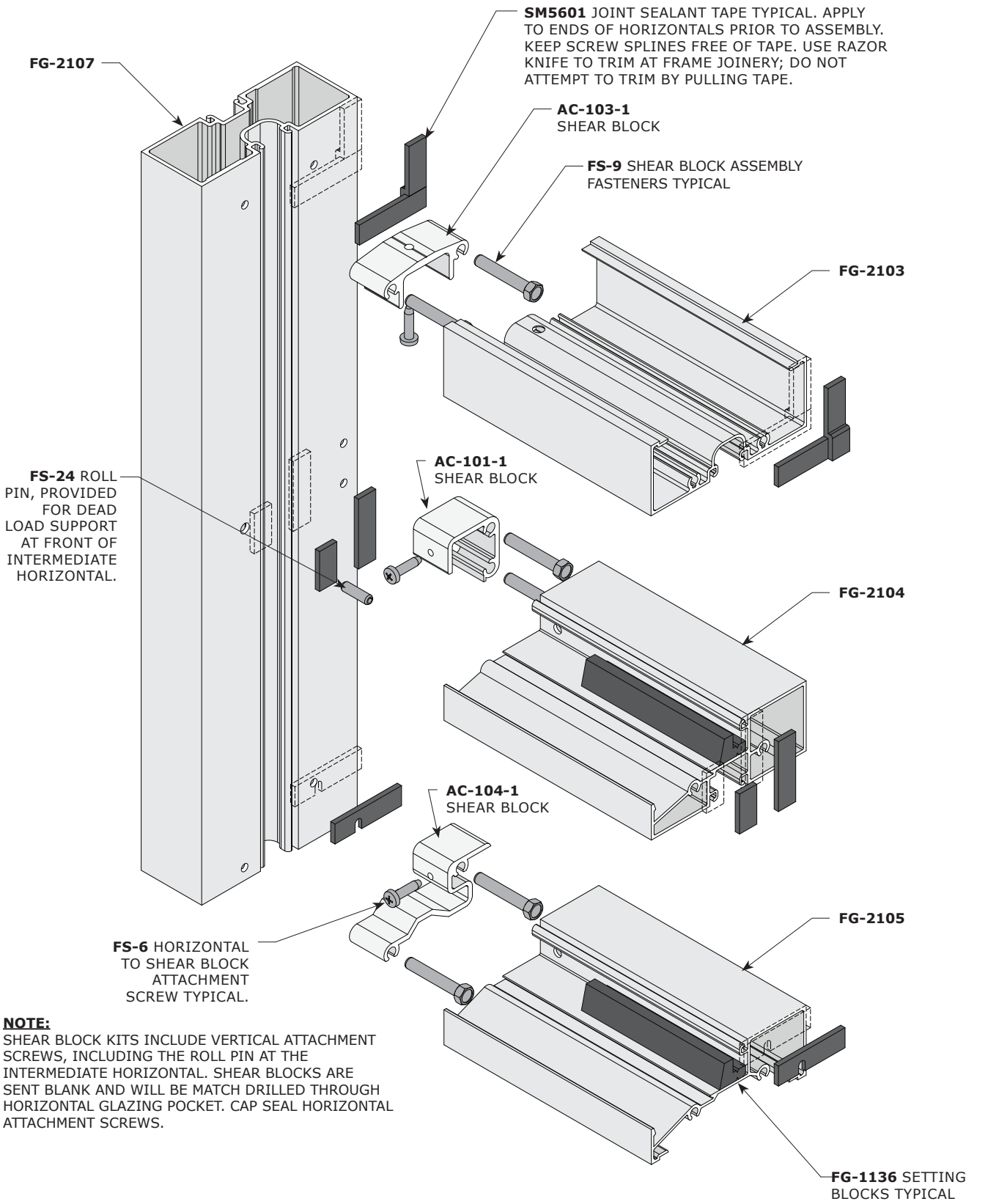


Figure 8: Frame Assembly - Screw Spline / Outside Glazed System

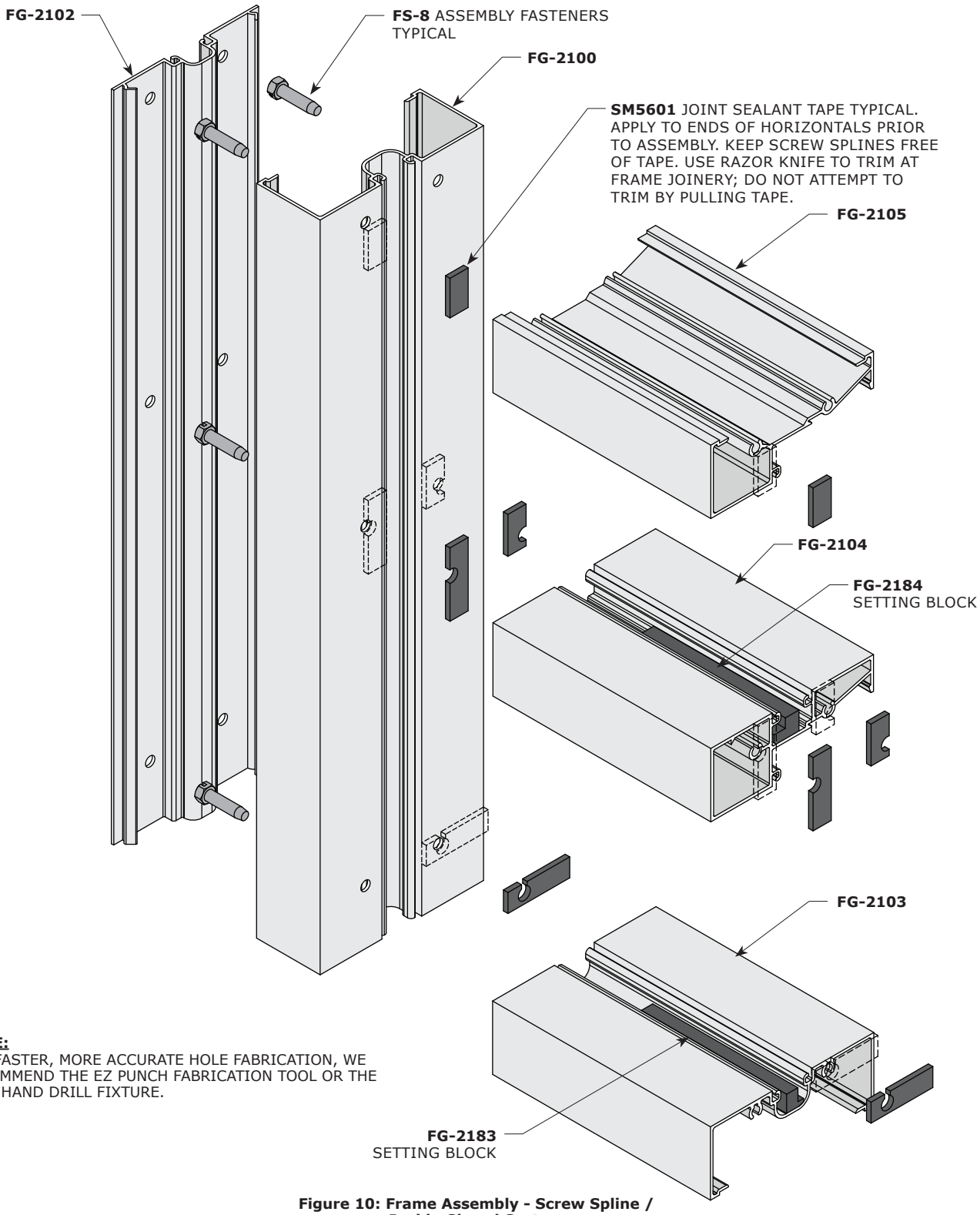
10.0 SHEAR BLOCK SYSTEM



NOTE:
SHEAR BLOCK KITS INCLUDE VERTICAL ATTACHMENT SCREWS, INCLUDING THE ROLL PIN AT THE INTERMEDIATE HORIZONTAL. SHEAR BLOCKS ARE SENT BLANK AND WILL BE MATCH DRILLED THROUGH HORIZONTAL GLAZING POCKET. CAP SEAL HORIZONTAL ATTACHMENT SCREWS.

Figure 9: Frame Assembly - Shear Block System

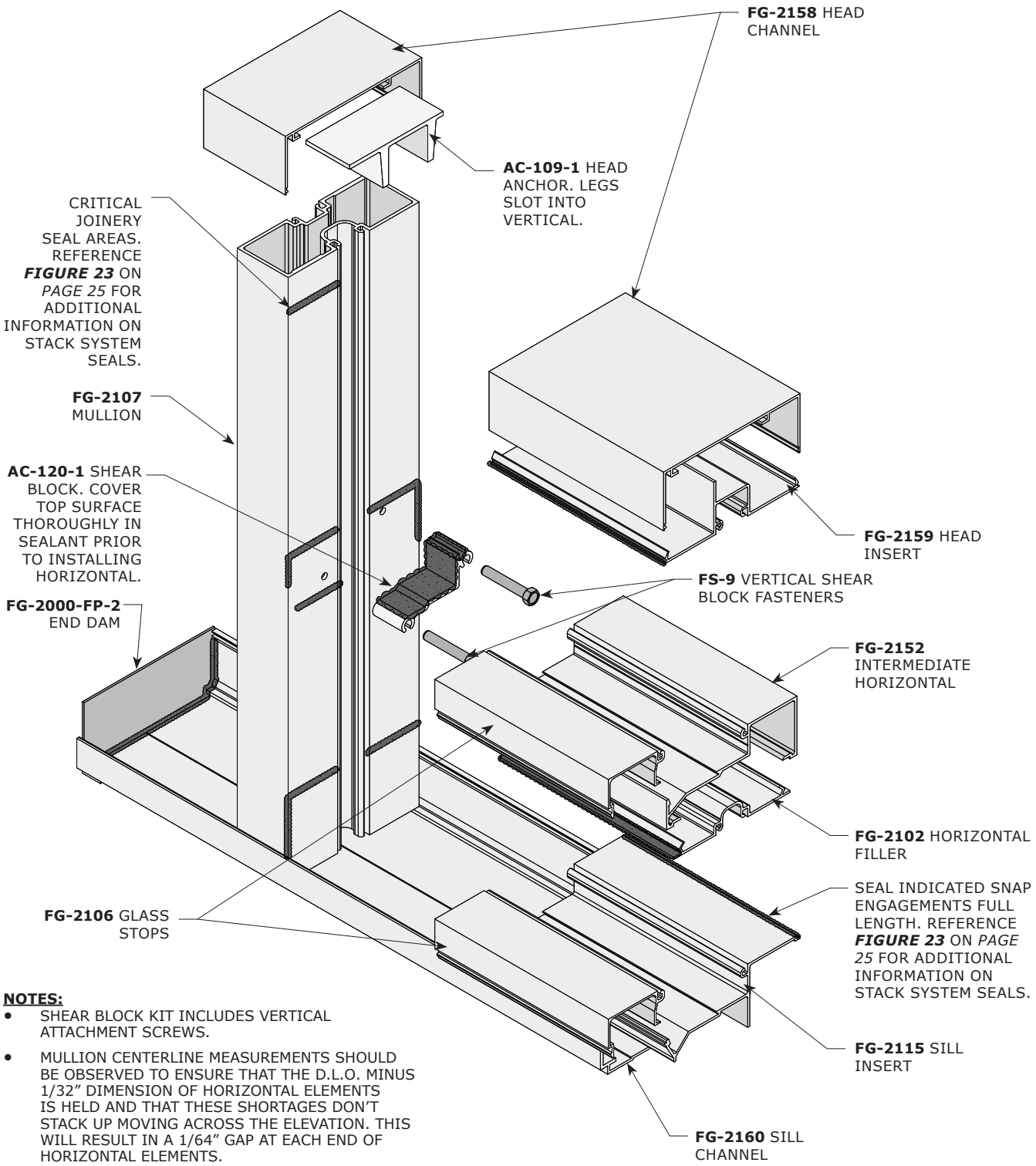
11.0 SCREW SPLINE / INSIDE GLAZED SYSTEM



NOTE:
FOR FASTER, MORE ACCURATE HOLE FABRICATION, WE RECOMMEND THE EZ PUNCH FABRICATION TOOL OR THE **DJ-5** HAND DRILL FIXTURE.

Figure 10: Frame Assembly - Screw Spline / Inside Glazed System

12.0 STACK ASSEMBLY SYSTEM



NOTES:

- SHEAR BLOCK KIT INCLUDES VERTICAL ATTACHMENT SCREWS.
- MULLION CENTERLINE MEASUREMENTS SHOULD BE OBSERVED TO ENSURE THAT THE D.L.O. MINUS 1/32″ DIMENSION OF HORIZONTAL ELEMENTS IS HELD AND THAT THESE SHORTAGES DON'T STACK UP MOVING ACROSS THE ELEVATION. THIS WILL RESULT IN A 1/64″ GAP AT EACH END OF HORIZONTAL ELEMENTS.

Figure 11: Frame Assembly - Stack System

SUBSILL PREPARATION AND SPLICING

13.0 TYPICAL SUBSILLS

Reference figures below for installation and splicing of typical End Dams and Subsills. The **FG-2169** Subsill is shown; End Dam installation and sealant procedures for **FG-2160**, **FG-2180** and **FG-2260** Subsills are similar. Reference chart below for proper End Dam per Subsill option. For **FG-2246** Subsill, see *Page 19.*

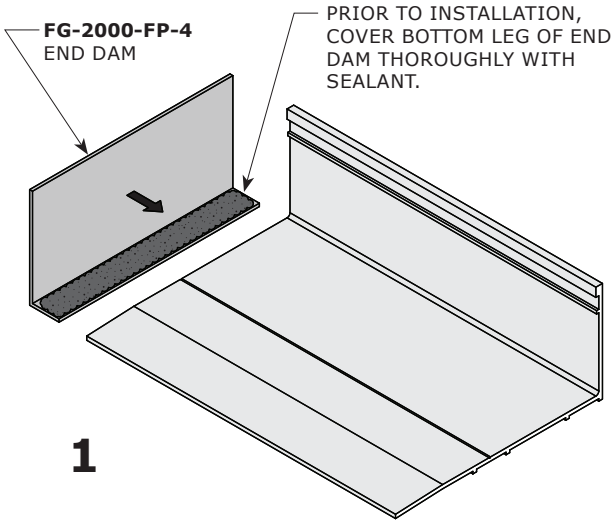


Figure 12: End Dam Installation - Typical

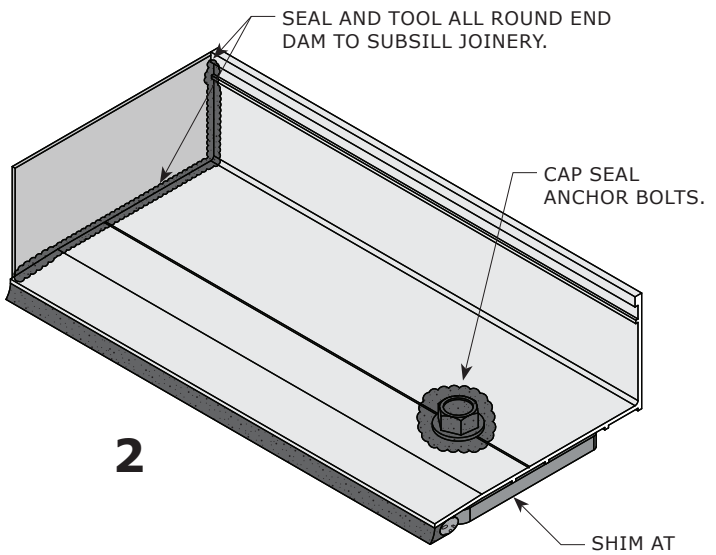


Figure 13: End Dam & Subsill Seals - Typical

SUBSILL SHOULD BE INSTALLED LEVEL AND NEVER TILTED INWARD TOWARD BUILDING.

SUBSILL	END DAM
FG-2169	**FG-2000-FP-4**
FG-2260 (8 PSF)	**FG-2000-FP-2**
FG-2180 (INSIDE GLZ)	**FG-2000-FP-2**
FG-2160 (STACK)	**FG-2000-FP-2**

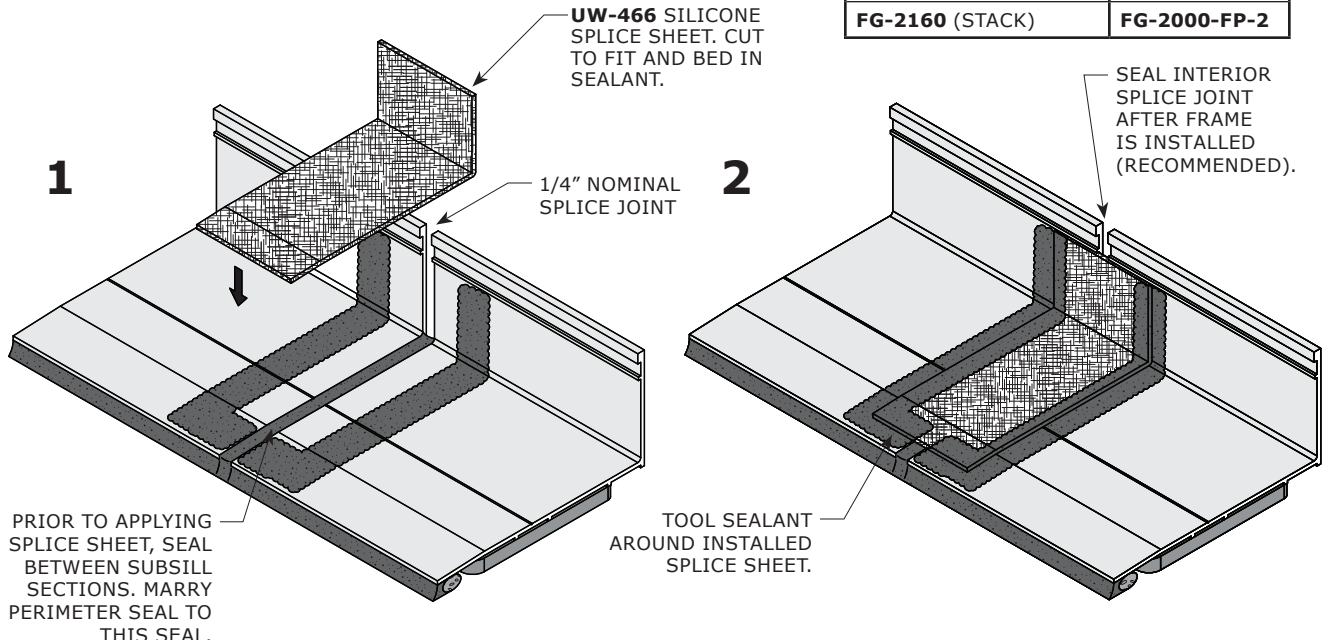


Figure 14: Subsill Splicing - Typical

14.0 FG-2246 SUBSILL AND SCREW-APPLIED END DAM

Reference below figures for installation and splicing of the **FG-2246** Subsill and screw-applied End Dam.

*Note: The **FG-2246** Subsill is to be used with the outside glazed and shear block systems only.*

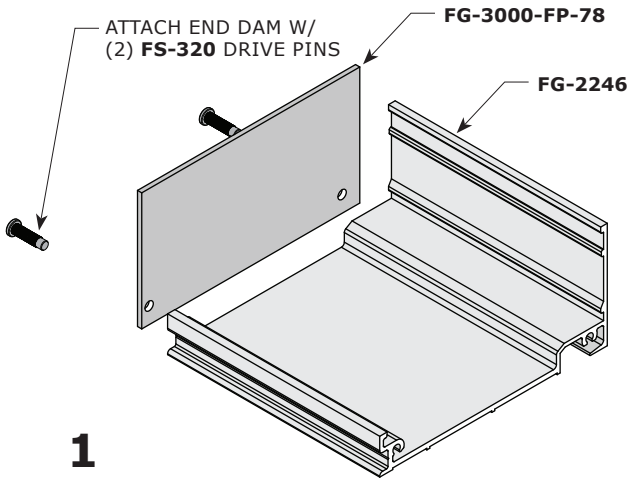


Figure 15: End Dam Installation - Screw Applied

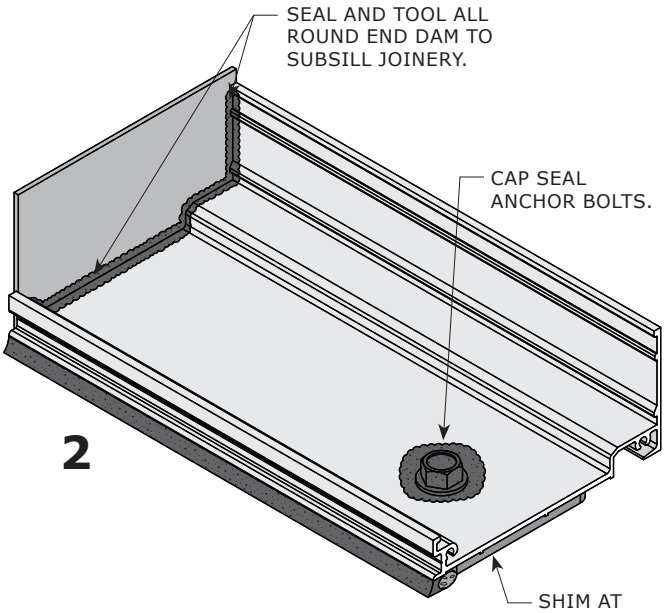


Figure 16: End Dam & Subsill Seals - Screw Applied

SUBSILL SHOULD BE INSTALLED LEVEL AND NEVER TILTED INWARD TOWARD BUILDING.

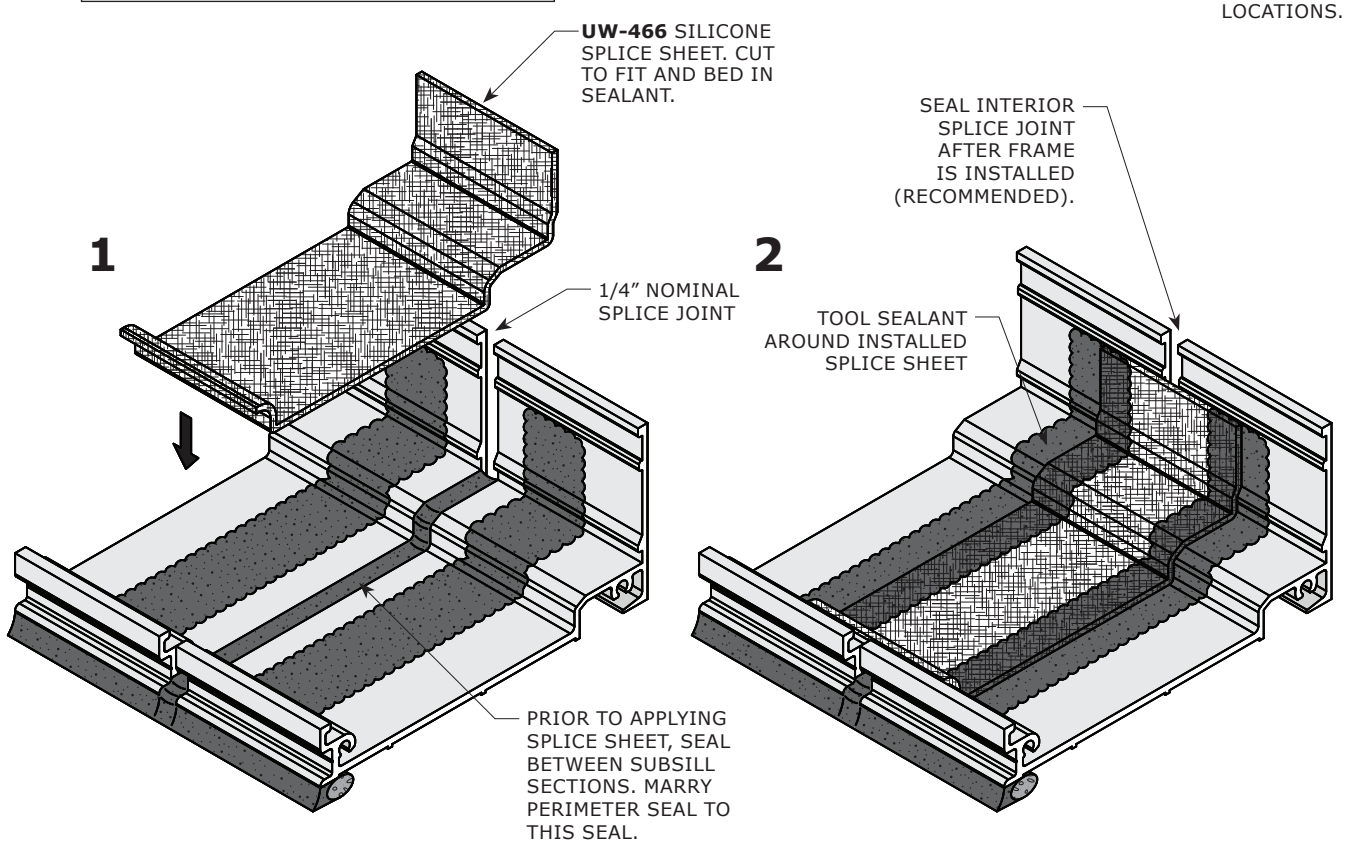


Figure 17: FG-2246 Subsill Splicing

FRAME ANCHORING AND PERIMETER SEALS

15.0 OUTSIDE GLAZED AND SHEAR BLOCK SYSTEMS

Reference below for anchoring of storefront frame. Reference ***Figure 19*** on *Page 21* for typical perimeter seals.

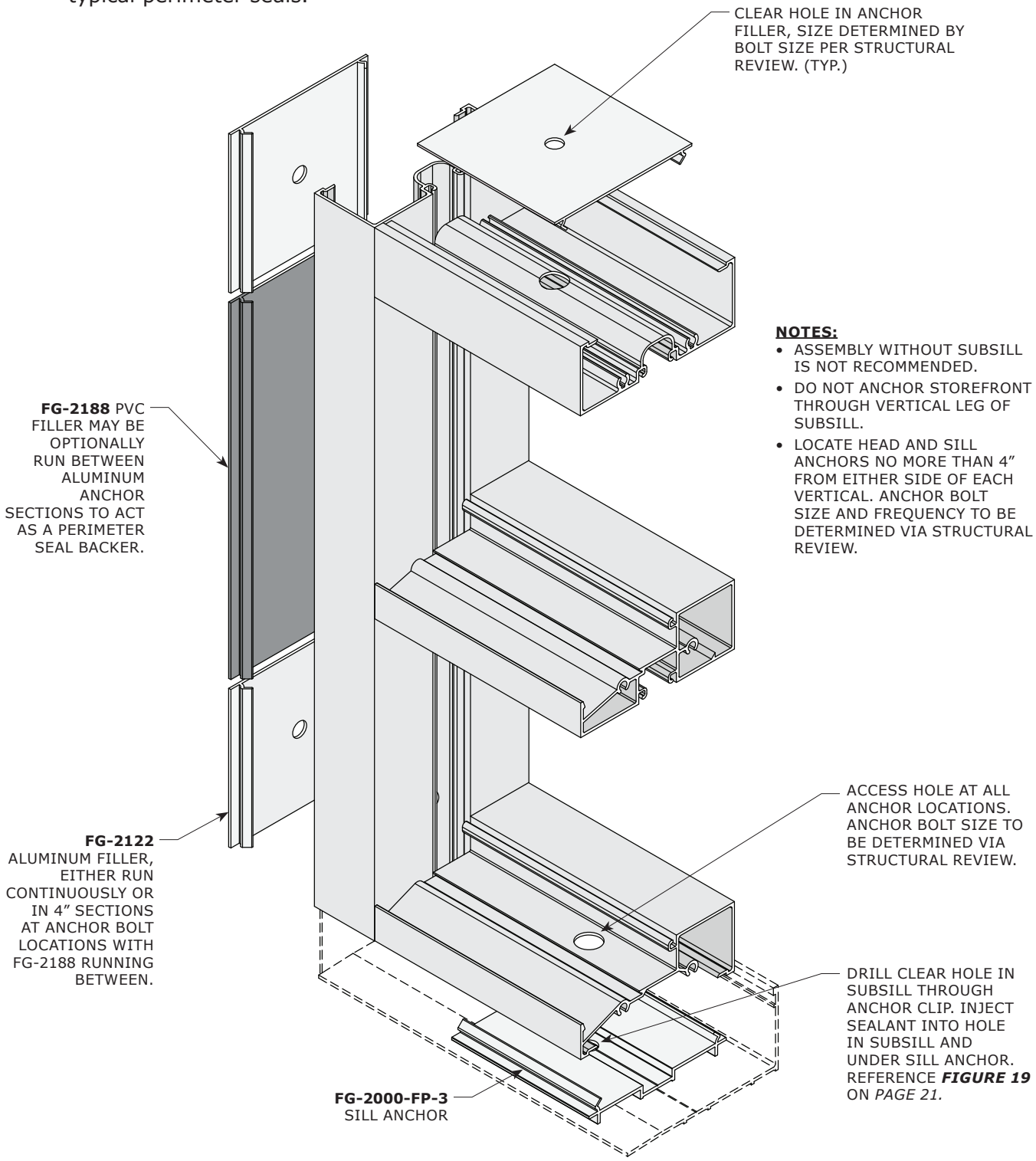
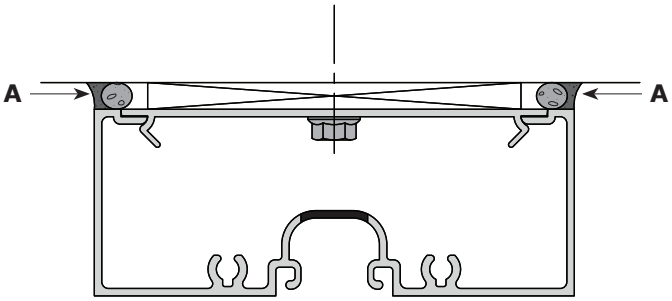
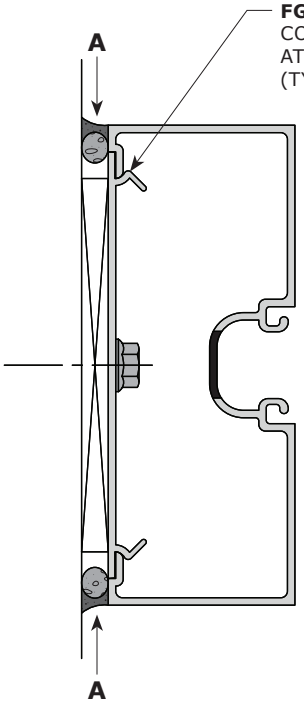


Figure 18: Frame Anchoring - Outside Glazed and Shear Block Systems





FG-2122, USE EITHER CONTINUOUSLY OR IN 4" LENGTHS AT ANCHOR BOLT LOCATIONS. (TYPICAL AT JAMBS AND HEAD)

NOTES:

- SHIM UNDER SUBSILL.
- SEALS MARKED **(A)** ARE REQUIRED PERIMETER SEAL LOCATIONS.
- AFTER RUNNING PERIMETER SEAL AT SILL, RUN AN ADDITIONAL SEAL ACROSS WIDTH OF ELEVATION AT LOCATION **(B).** GAP SEALANT AT WEEP LOCATIONS TO ALLOW MOISTURE TO EXIT SYSTEM. DO NOT OBSTRUCT WEEP.
- INTERIOR PERIMETER SEAL AT SILL **(C)** IS OPTIONAL AND FOR COSMETIC PURPOSES ONLY.
- THE **FG-2246** SUBSILL REQUIRES A 5/16" WEEP HOLE AT LOCATION **(D)** AT CENTERLINE OF EACH VERTICAL.
- AT LOCATIONS **(E)**, A CONTINUOUS SEAL IS REQUIRED PRIOR TO SETTING FRAME. SEAL AND SET FRAME ONE BAY AT A TIME TO PREVENT SEALANT SKINNING OVER BEFORE ALL FRAMES ARE SET.
- AT LOCATION **(F)**, RUN A CONTINUOUS SEAL ACROSS ENTIRE WIDTH OF ELEVATION. RUN THIS SEAL AFTER FRAME IS IN PLACE.
- WHERE USING THE **FG-2122** FILLER IN 4" LENGTHS AT ANCHOR LOCATIONS, THE **FG-2188** PVC FILLER MAY BE USED BETWEEN **FG-2122** SECTIONS AS BACKER ROD SUPPORT.

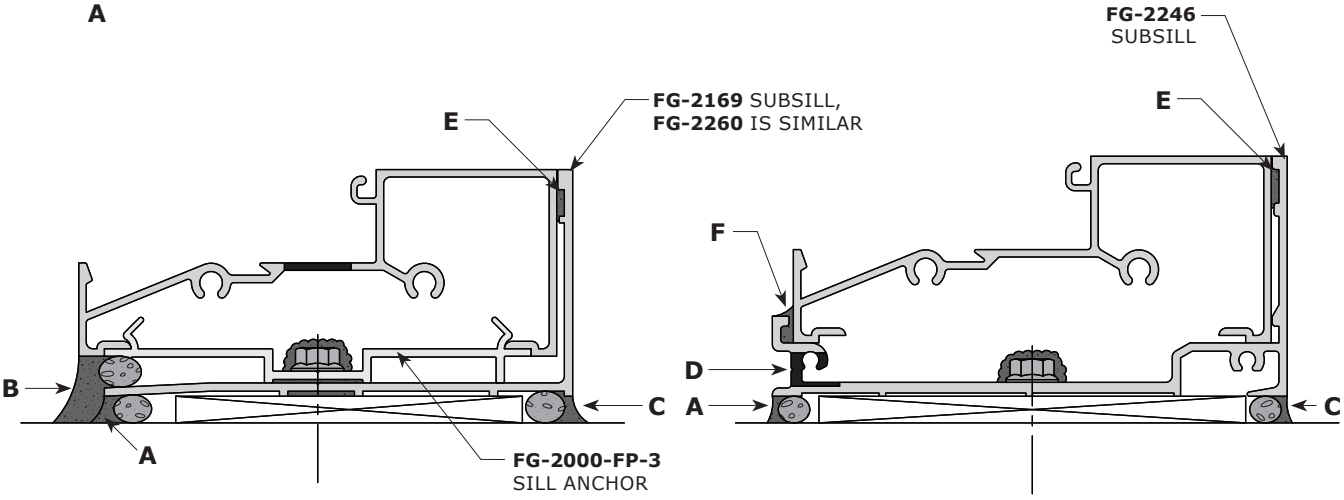


Figure 19: Typical Seals - Outside Glazed & Shear Block Systems

16.0 INSIDE GLAZED SYSTEM

Reference ***Figure 20*** below for anchoring of inside glazed storefront frame. Reference ***Figure 21*** on *Page 23* for typical perimeter seals.

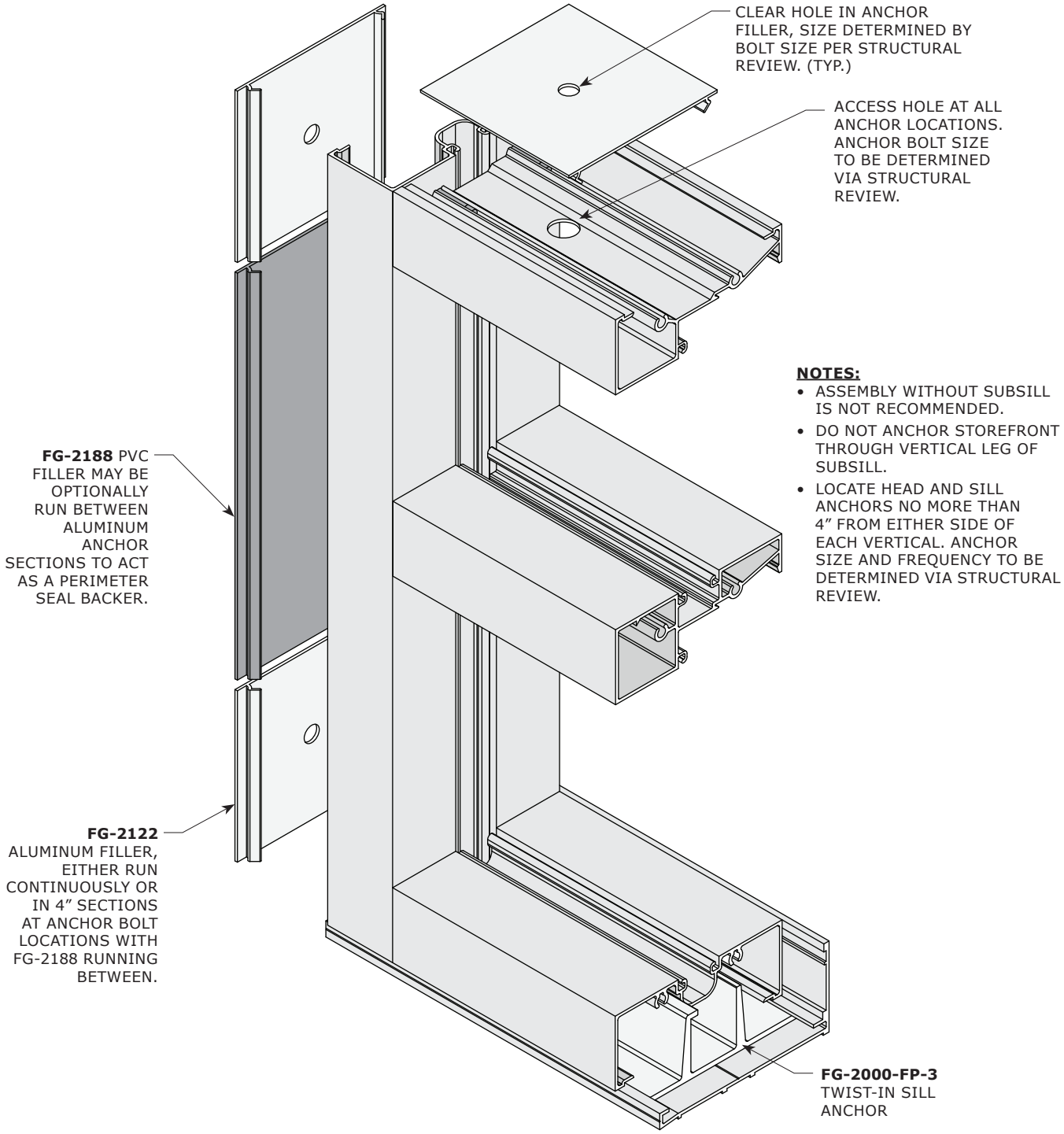
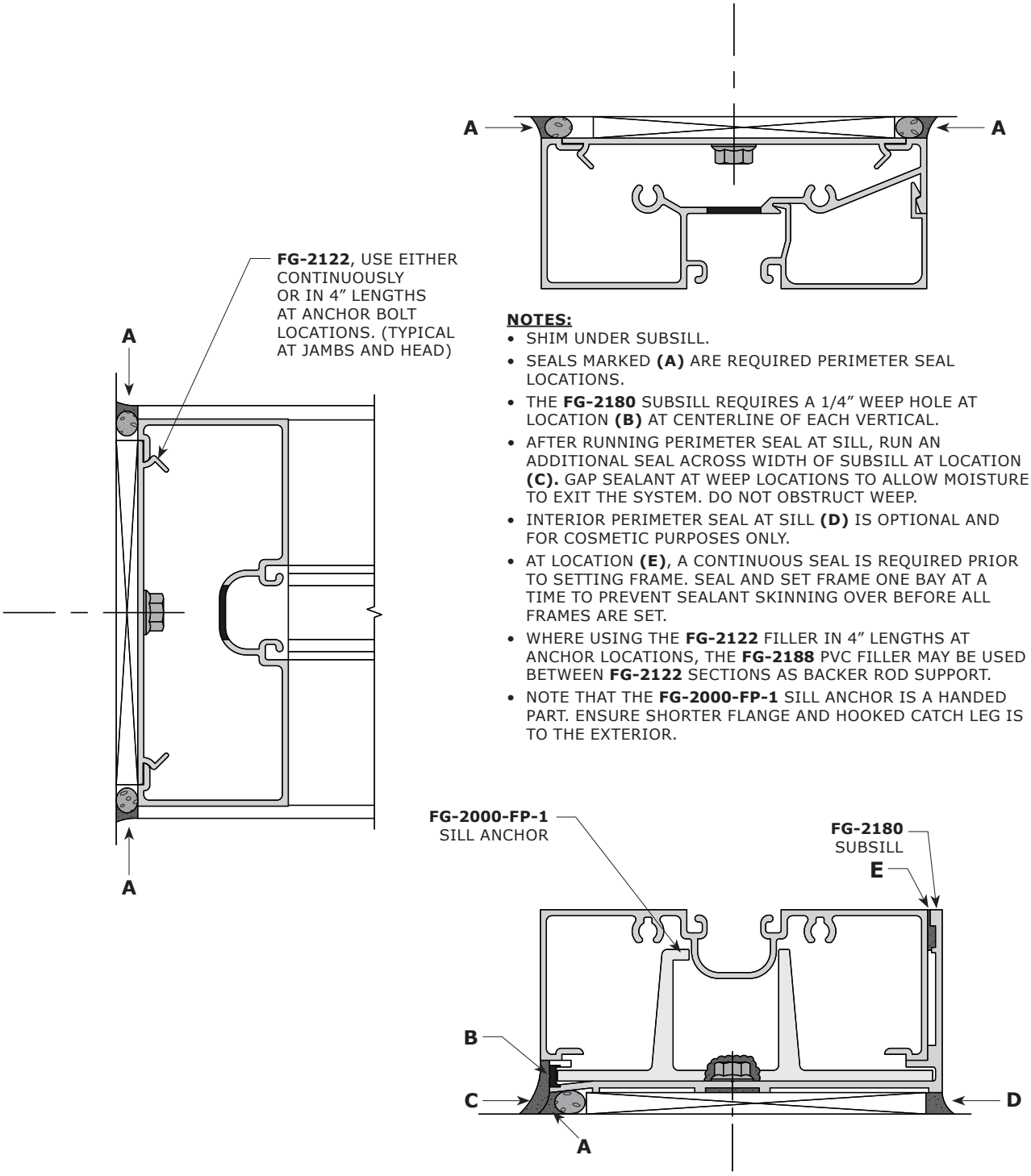


Figure 20: Frame Anchoring - Inside Glazed System



NOTES:

- SHIM UNDER SUBSILL.
- SEALS MARKED **(A)** ARE REQUIRED PERIMETER SEAL LOCATIONS.
- THE **FG-2180** SUBSILL REQUIRES A 1/4" WEEP HOLE AT LOCATION **(B)** AT CENTERLINE OF EACH VERTICAL.
- AFTER RUNNING PERIMETER SEAL AT SILL, RUN AN ADDITIONAL SEAL ACROSS WIDTH OF SUBSILL AT LOCATION **(C).** GAP SEALANT AT WEEP LOCATIONS TO ALLOW MOISTURE TO EXIT THE SYSTEM. DO NOT OBSTRUCT WEEP.
- INTERIOR PERIMETER SEAL AT SILL **(D)** IS OPTIONAL AND FOR COSMETIC PURPOSES ONLY.
- AT LOCATION **(E)**, A CONTINUOUS SEAL IS REQUIRED PRIOR TO SETTING FRAME. SEAL AND SET FRAME ONE BAY AT A TIME TO PREVENT SEALANT SKINNING OVER BEFORE ALL FRAMES ARE SET.
- WHERE USING THE **FG-2122** FILLER IN 4" LENGTHS AT ANCHOR LOCATIONS, THE **FG-2188** PVC FILLER MAY BE USED BETWEEN **FG-2122** SECTIONS AS BACKER ROD SUPPORT.
- NOTE THAT THE **FG-2000-FP-1** SILL ANCHOR IS A HANDED PART. ENSURE SHORTER FLANGE AND HOOKED CATCH LEG IS TO THE EXTERIOR.

Figure 21: Typical Seals - Inside Glazed System

17.0 STACK INSTALLATION SYSTEM

Reference ***Figure 22*** below for anchoring of stack installation storefront frame. Reference ***Figure 23*** on *Page 25* for frame and perimeter seal information.

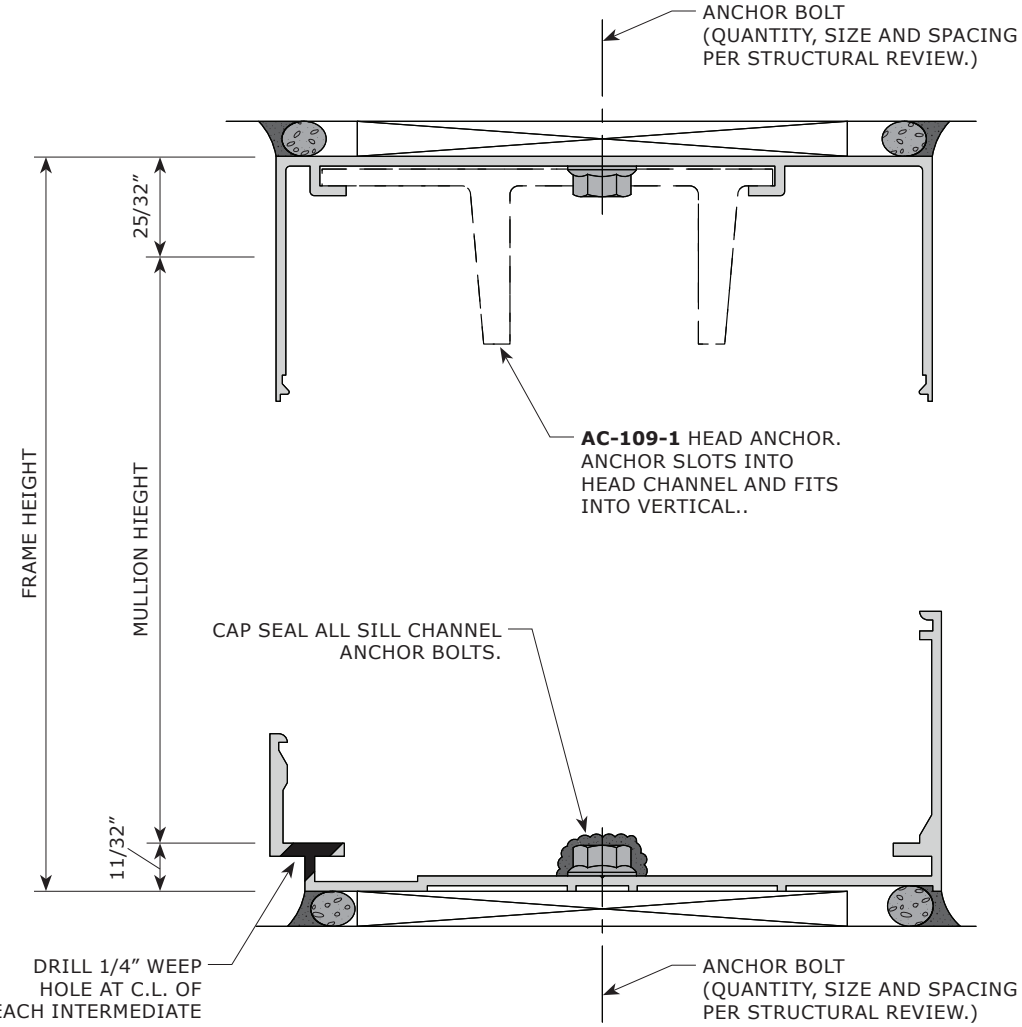


Figure 22: Frame Anchoring - Stack System

NOTES:

Due to the nature of the stack installation method, the assembly of frame and sealing of joinery will be performed in concert with the installation process. Reference ***Figure 11*** on *Page 17* for frame assembly illustration.

HEAD CHANNEL:
Anchor screws should be located no more than 4" from each side of intended vertical Mullion locations. **AC-109-1** Head Anchors should be used if the height x width x design load is 500 lbs. or more at the top of the Mullion. Typically, one additional Anchor screw at the middle of each D.L.O. or at 24" O.C. is adequate for securing the Head Channel. For unusual conditions, consult your Oldcastle BuildingEnvelope® representative.

SILL CHANNEL:
Shim Sill Channel a minimum of 1/4". Anchor at 24" O.C. and no more than 4" on each side of intended Mullion locations.

HORIZONTALS AND HEAD/SILL INSERTS:
Members are cut 1/32" less than D.L.O. to allow for incremental expansion.

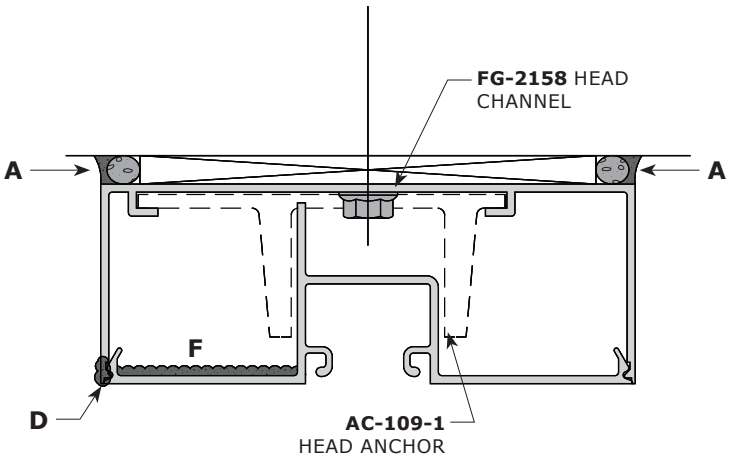
JAMBS:
Jambs are not anchored to Substrate but must be shimmed tight to prevent End Dam dislodgement under load. Since all horizontal members are cut 1/32" short, special care must be taken to avoid overshimming between Jamb and structure. **Be sure to account for all of these shortages when laying out and installing storefront system.**

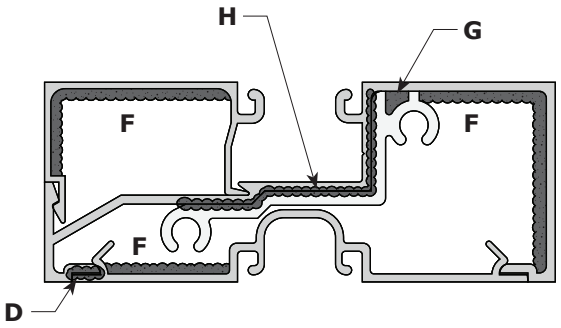
VERTICAL MULLIONS:
Mullions are cut at Frame Height minus (-) 1-1/8". Reference ***Section 3.0*** on *Page 8* for full cut list.

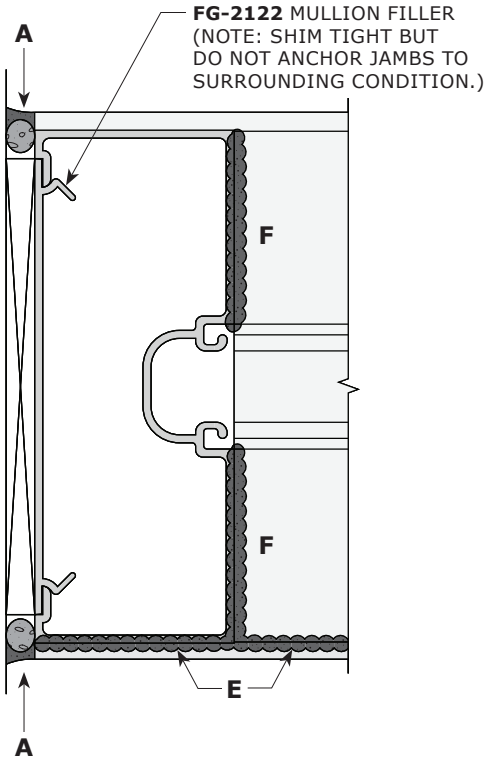
It is highly recommended that, prior to glazing and after seals have cured, a preliminary water test be performed. Patch any Sill Channel weeps and fill Channel with water to check for leaks. If no leaks are observed, uncover weeps to drain and continue glazing process.

NOTES:

- REFERENCE NOTES ON *PAGE 24* FOR ADDITIONAL INFORMATION REGARDING THE STACK INSTALLATION METHOD.
- SPECIAL CARE MUST BE TAKEN WHILE INSTALLING TO PERFORM SEALS COMPLETELY AS SHOWN TO ENSURE PERFORMANCE LEVELS SHOWN IN THE TEST REPORT.
- SEALS MARKED **(A)** ARE REQUIRED PERIMETER SEAL LOCATIONS.
- THE **FG-2160** SILL CHANNEL REQUIRES A 1/4" WEEP HOLE AT LOCATION **(B)** AT CENTERLINE OF EACH INTERMEDIATE VERTICAL.
- INTERIOR PERIMETER SEAL AT SILL **(C)** IS OPTIONAL AND FOR COSMETIC PURPOSES ONLY.
- SEALS MARKED **(D)** ARE CONTINUOUS SEALS ALONG ENGAGEMENT TRACKS.
- SEAL MARKED **(E)** IS A CONTINUOUS SEAL ALONG ENTIRE WIDTH OF ELEVATION, TO BE PERFORMED AFTER FRAME IS INSTALLED.
- FRAME JOINERY SEALS ARE MARKED **(F)**. ENSURE THAT JOINERY IS COMPLETELY SEALED. IMMEDIATELY WIPE AWAY EXCESS SEALANT.
- AT LOCATION MARKED **(G)**, COMPLETELY FILL GROOVE OF SHEAR BLOCK WITH SEALANT PRIOR TO ATTACHING HORIZONTAL(S).
- AT LOCATION **(H)**, COMPLETELY SEAL TOP SURFACE OF SHEAR BLOCK PRIOR TO ATTACHING HORIZONTAL(S).
- NOTE THAT THE **AC-109-1** HEAD ANCHOR IS A HANDED PART. ENSURE LONGER LEG IS TO THE EXTERIOR.
- CAP SEAL SILL ANCHOR BOLTS.







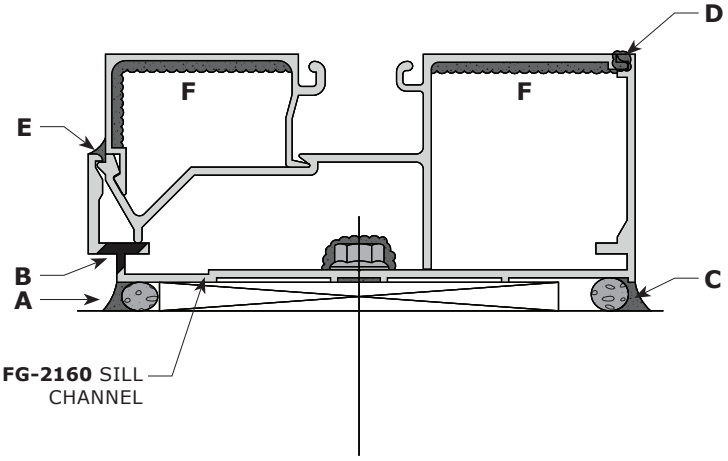


Figure 23: Frame & Perimeter Seals - Stack System

DOOR JAMB SIDELITE INSTALLATION AT SILL

Reference ***Figure 24*** below for Door Jamb installation. Note that Door Jamb bypasses Subsill and runs to floor. Butt Subsill tight against Door Jamb. **FG-2102** Sidelite Filler has been omitted from open back Jamb detail for clarity.

The **FG-2169** Subsill is shown below. The procedure for other Subsills and the stack system Sill Channel is similar.

Once Door Jamb and Subsill are installed, continue installing storefront frame per this manual.

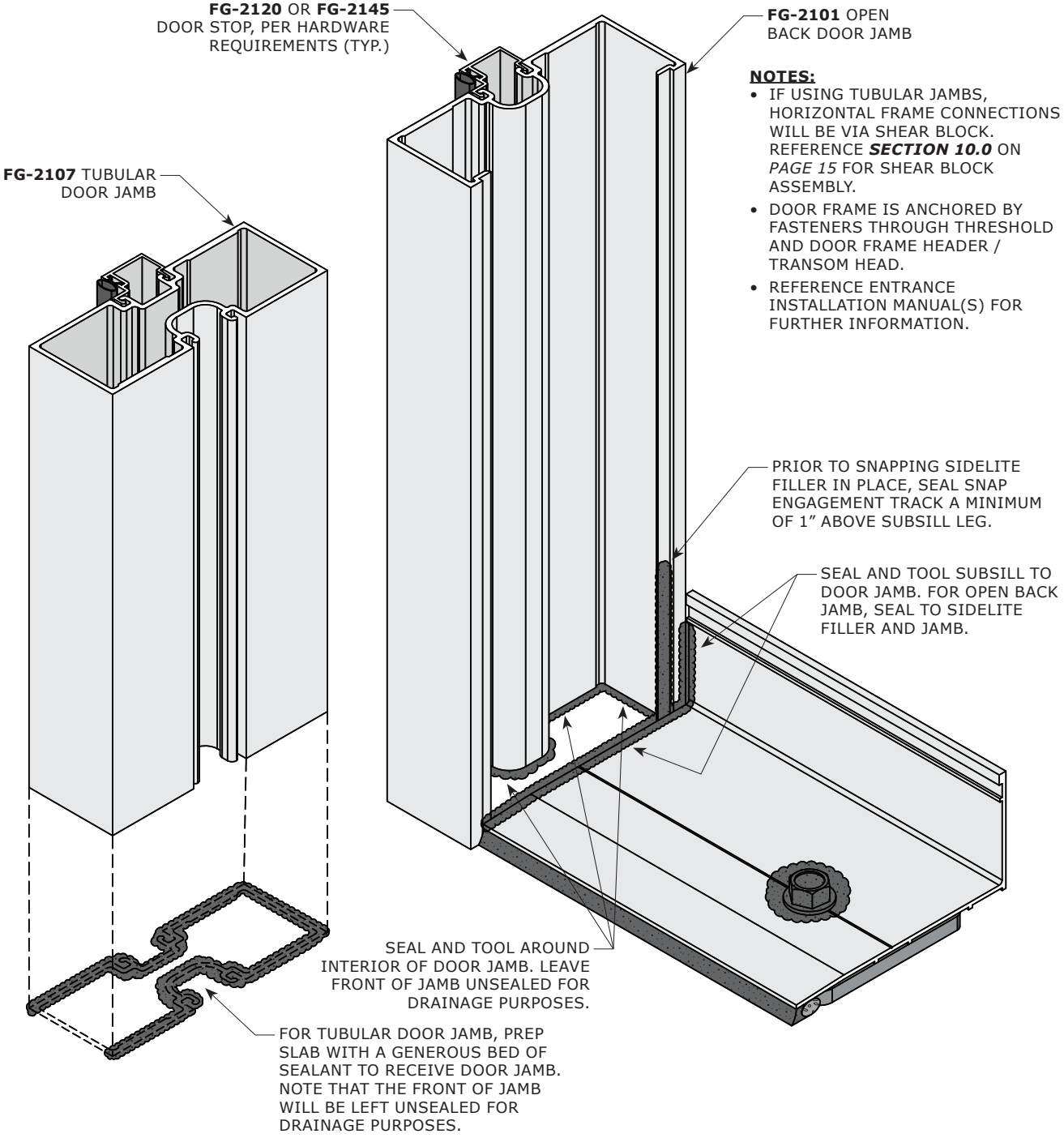


Figure 24: Door Jamb Installation

GLAZING

18.0 OUTSIDE GLAZED (SCREW SPLINE AND SHEAR BLOCK) SYSTEMS

Note: Glass Size is D.L.O. plus 5/8". Glaze lower lites first, then work upwards. This will allow for the installation of Water Diverters at Intermediate Horizontals without obstruction. ***Clean all surfaces to be sealed with isopropyl alcohol prior to applying sealant.***

Reference ***Figure 26*** on *Page 28* for glazing components and follow this procedure:

1. Install interior Gaskets. Vertical Gaskets run through with horizontal Gaskets running between. Begin installing vertical Gaskets at the mid-point of D.L.O. and work toward the ends of Mullions. Horizontal Gaskets should be installed starting at setting block locations, with enough slack to work both inward and outward without stretching Gasket. Gaskets should be cut long enough to crowd, mitigate relaxation and preserve edge pressure over time. Refer to material cut lists on *Page 8*.
2. Wet Setting Blocks with soapy water and set in frame at 1/4 points or per approved shop drawings.
3. Position and center glazing infill in opening side to side so that 5/16" glass bite is maintained at each end of Horizontal.
4. Lower infill onto Setting Blocks, pushing back against interior Gaskets in Setting Block areas. Failure to do so may cause diagonal cracks to appear toward Setting Blocks due to glass bending as Gaskets are sealed and installed at D.L.O. corners. *Note: Lift infill and re-position Setting Blocks if necessary to provide full support for glazing*.
5. Install Glass Stop.
6. Install exterior Gaskets. Again, vertical Gaskets run through with horizontal Gaskets running between. Use same procedure as outlined in Step 1.
7. Once all Gaskets are installed, pull ends of interior horizontal and vertical Gaskets from their reglets at each corner and fill final 2" of horizontal and vertical glazing reglets with sealant. Push vertical Gasket back into reglet at corner, then do the same for the horizontal Gasket. Compress any slack back toward D.L.O. to fully seal horizontal Gaskets to vertical Gaskets. Immediately wipe away any excess sealant. Reference ***Figure 25*** below.
8. Repeat Step 7 for exterior Gaskets.

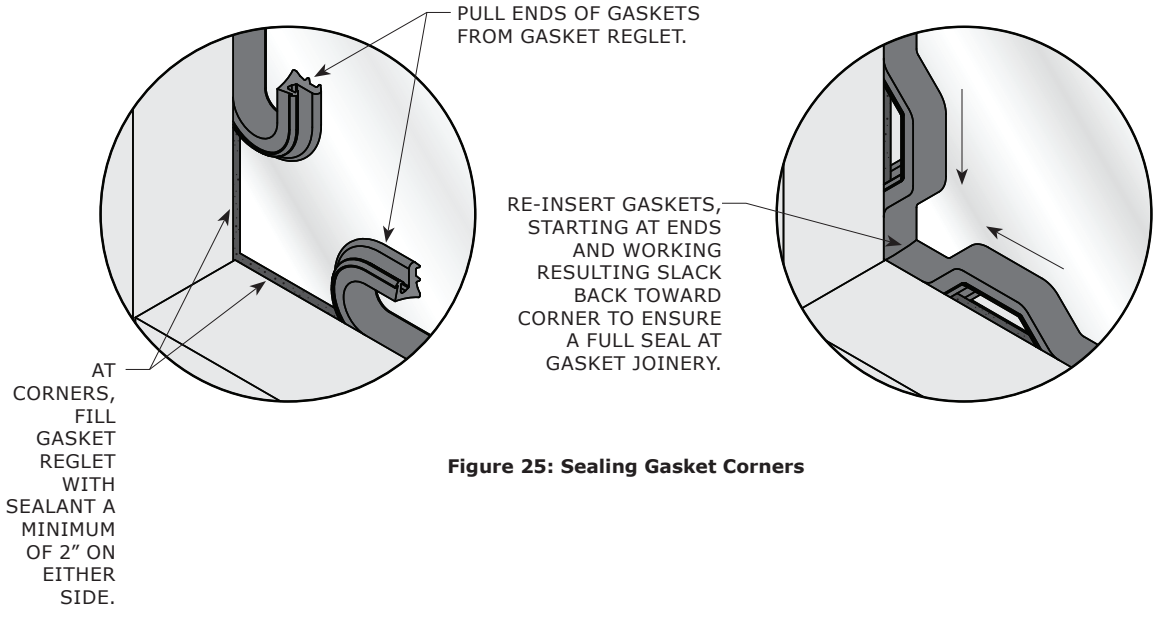


Figure 25: Sealing Gasket Corners

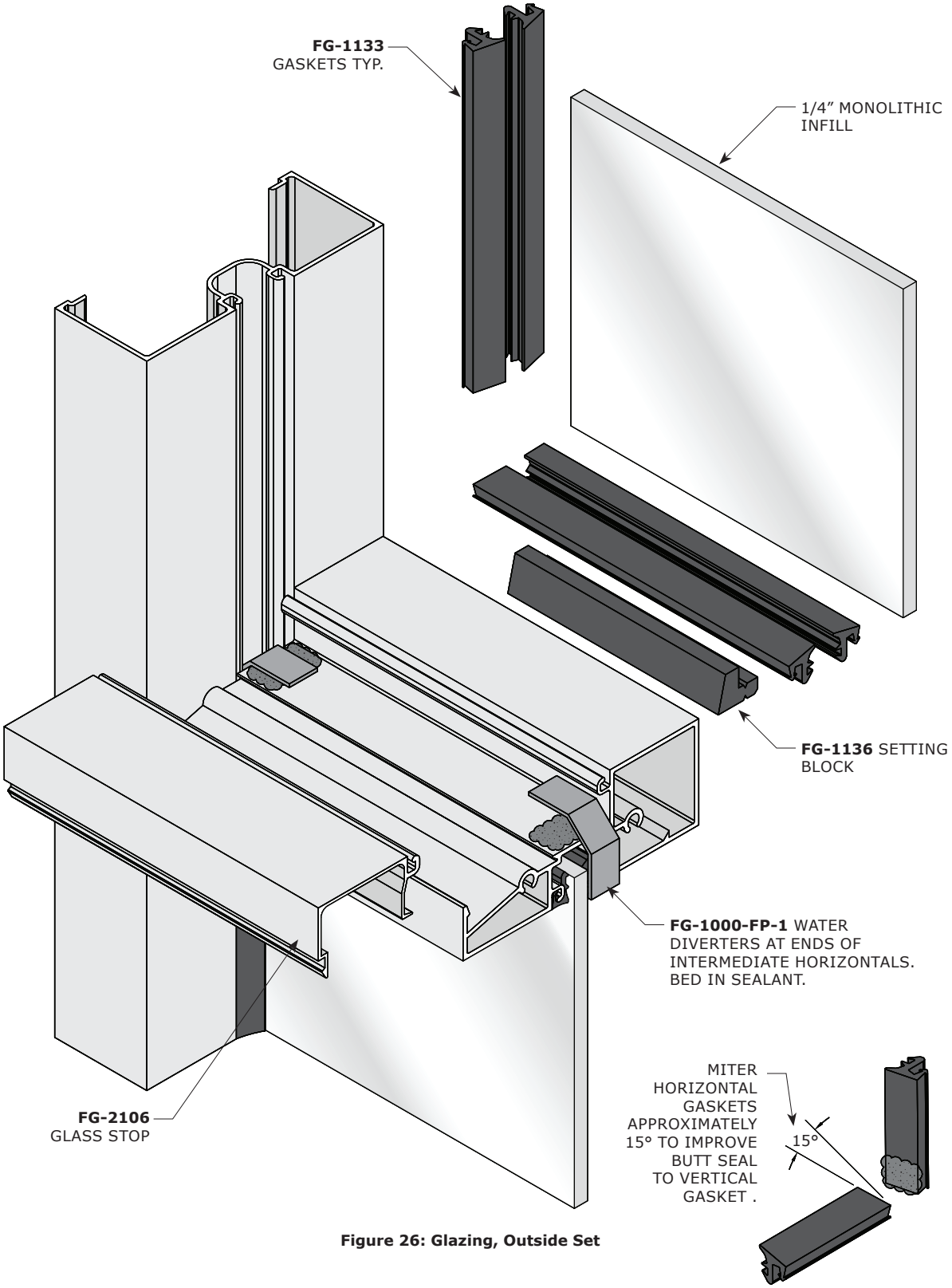


Figure 26: Glazing, Outside Set

19.0 INSIDE GLAZED SYSTEM

Note: Glass Size is D.L.O. plus 5/8". Glaze lower lites first, then work upwards. This will allow for the installation of Water Diverters at Intermediate Horizontals without obstruction. ***Clean all surfaces to be sealed with isopropyl alcohol prior to applying sealant.***

Reference ***Figure 28*** on *Page 30* for glazing components and follow this procedure:

1. Install exterior Gaskets. Vertical Gaskets run through with horizontal Gaskets running between. Begin installing vertical Gaskets at the mid-point of D.L.O. and work toward the ends of Mullions. Horizontal Gaskets should be installed starting at setting block locations, with enough slack to work both inward and outward without stretching Gasket. Gaskets should be cut long enough to crowd, mitigate relaxation and preserve edge pressure over time. Refer to material cut lists on *Page 8*.
2. Wet Setting Blocks with soapy water and set in frame at 1/4 points or per approved shop drawings.
3. Position and center glazing infill in opening side to side so that 5/16" glass bite is maintained at each end of Horizontal.
4. Lower infill onto Setting Blocks, pushing back against exterior Gaskets in Setting Block areas. Failure to do so may cause diagonal cracks to appear toward Setting Blocks due to glass bending as Gaskets are sealed and installed at D.L.O. corners. *Note: Lift infill and re-position Setting Blocks if necessary to provide full support for glazing*.
5. Install Glass Stop.
6. Install interior Gaskets. Again, vertical Gaskets run through with horizontal Gaskets running between. Use same procedure as outlined in Step 1.
7. Once all Gaskets are installed, pull ends of exterior horizontal and vertical Gaskets from their reglets at each corner and fill final 2" of horizontal and vertical glazing reglets with sealant. Push vertical Gasket back into reglet at corner, then do the same for the horizontal Gasket. Compress any slack back toward D.L.O. to fully seal horizontal Gaskets to vertical Gaskets. Immediately wipe away any excess sealant. Reference ***Figure 27*** below.
8. Repeat Step 7 for interior Gaskets.

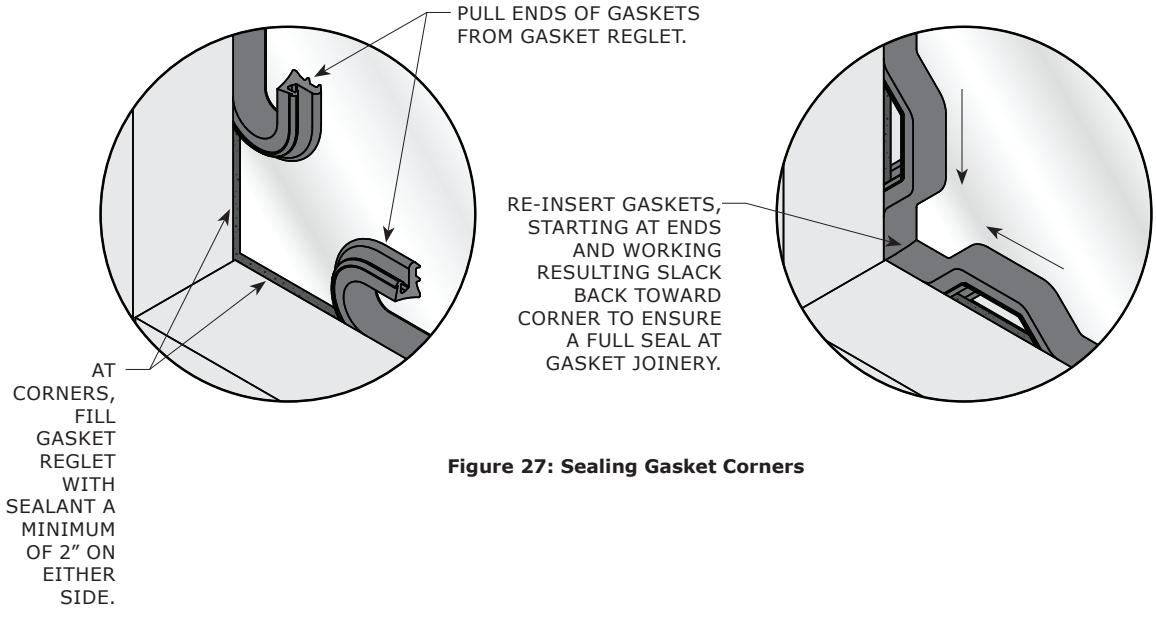


Figure 27: Sealing Gasket Corners

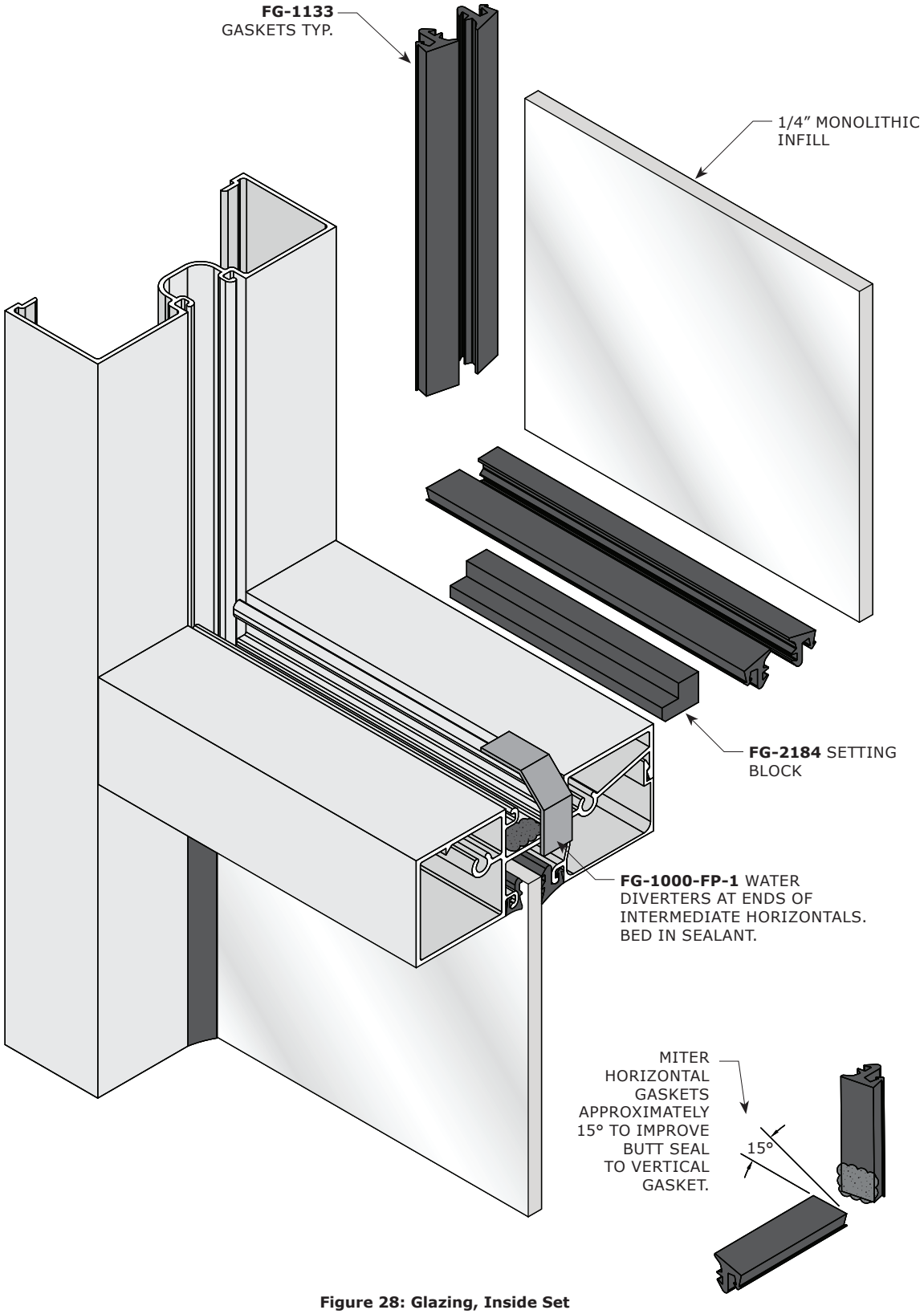


Figure 28: Glazing, Inside Set

20.0 STACK ASSEMBLY SYSTEM

Note: Glass Size is D.L.O. plus 5/8". Glaze lower lites first, then work upwards. This will allow for the installation of Water Diverters at Intermediate Horizontals without obstruction. ***Clean all surfaces to be sealed with isopropyl alcohol prior to applying sealant.***

Reference ***Figure 30*** on *Page 32* for glazing components and follow this procedure:

1. Install interior Gaskets. Vertical Gaskets run through with horizontal Gaskets running between. Begin installing vertical Gaskets at the mid-point of D.L.O. and work toward the ends of Mullions. Horizontal Gaskets should be installed starting at setting block locations, with enough slack to work both inward and outward without stretching Gasket. Gaskets should be cut long enough to crowd, mitigate relaxation and preserve edge pressure over time. Refer to material cut lists on *Page 8*.
2. Wet Setting Blocks with soapy water and set in frame at 1/4 points or per approved shop drawings.
3. Position and center glazing infill in opening side to side so that 5/16" glass bite is maintained at each end of Horizontal.
4. Lower infill onto Setting Blocks, pushing back against interior Gaskets in Setting Block areas. Failure to do so may cause diagonal cracks to appear toward Setting Blocks due to glass bending as Gaskets are sealed and installed at D.L.O. corners. *Note: Lift infill and re-position Setting Blocks if necessary to provide full support for glazing*.
5. Install Glass Stop.
6. Install exterior Gaskets. Again, vertical Gaskets run through with horizontal Gaskets running between. Use same procedure as outlined in Step 1.
7. Once all Gaskets are installed, pull ends of interior horizontal and vertical Gaskets from their reglets at each corner and fill final 2" of horizontal and vertical glazing reglets with sealant. Push vertical Gasket back into reglet at corner, then do the same for the horizontal Gasket. Compress any slack back toward D.L.O. to fully seal horizontal Gaskets to vertical Gaskets. Immediately wipe away any excess sealant. Reference ***Figure 29*** below.
8. Repeat Step 7 for exterior Gaskets.

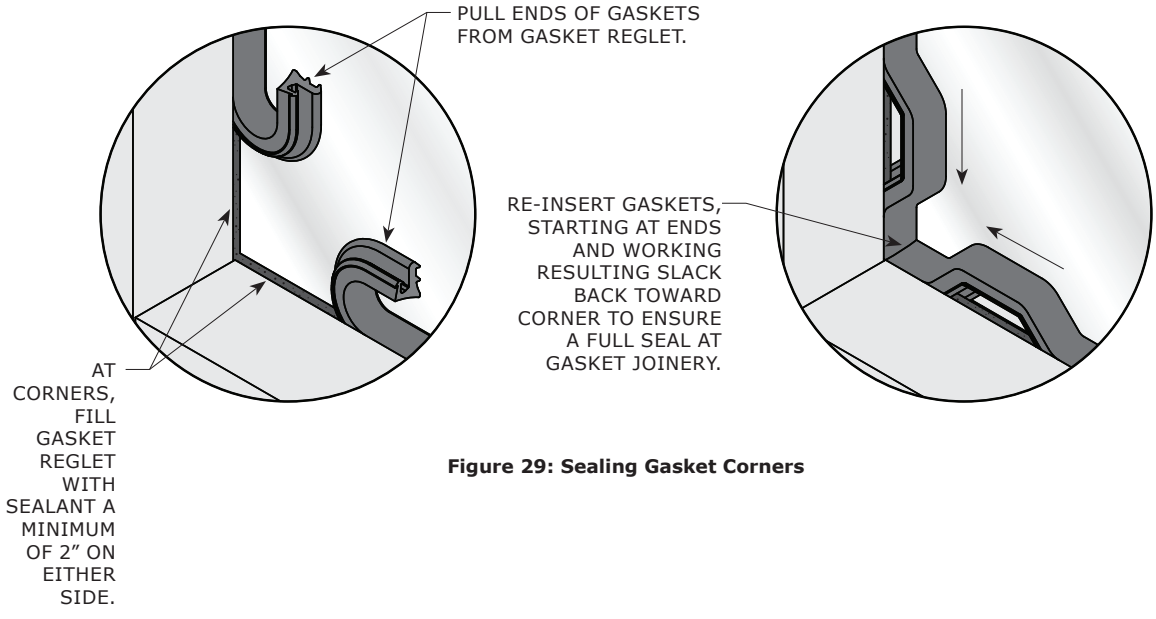


Figure 29: Sealing Gasket Corners

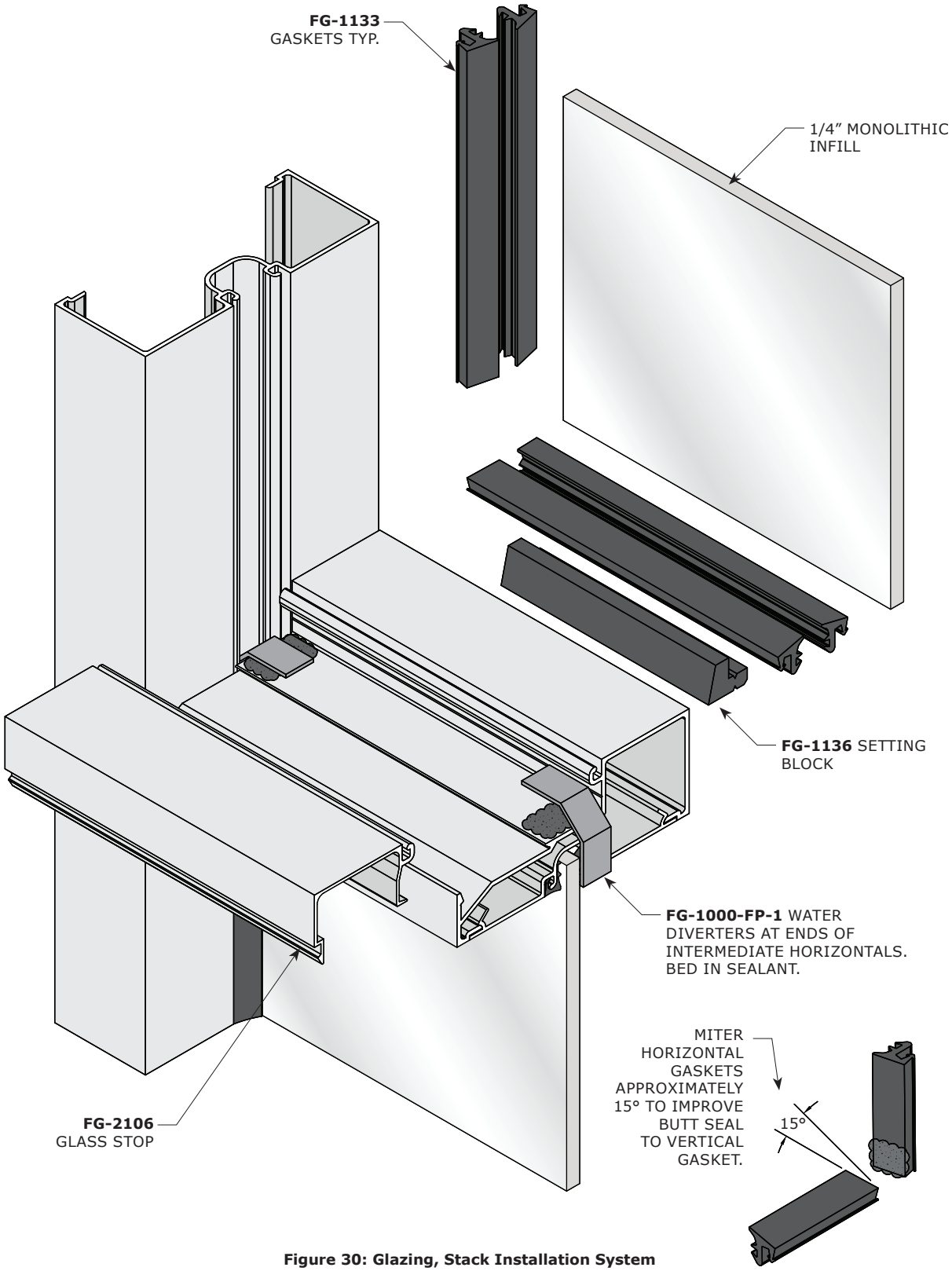
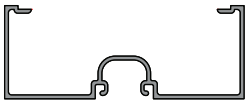
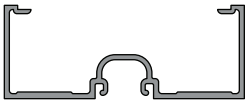
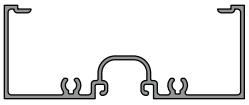
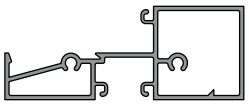
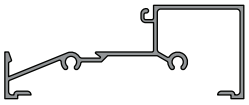


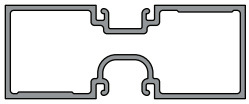
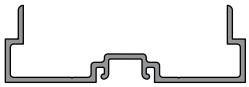
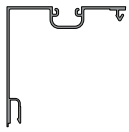
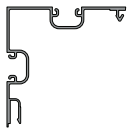
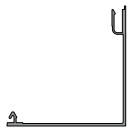
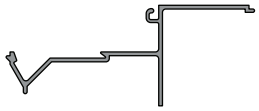
Figure 30: Glazing, Stack Installation System

PARTS LIST

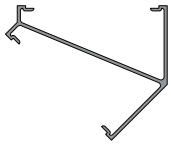
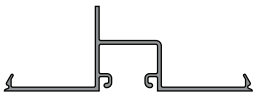
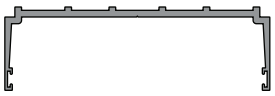
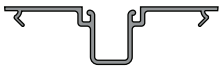
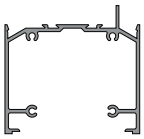
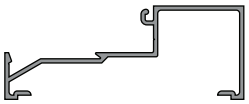
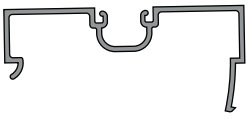
Parts not shown to scale.

EXTRUSIONS

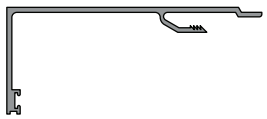
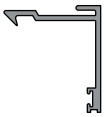
FG-1123 	Pocket Filler
FG-1190 	Pocket Filler
FG-2100 	Jamb or Intermediate Mullion
FG-2101 	Open Back Door Jamb / Heavy Mullion
FG-2102 	Horizontal / Mullion Filler
FG-2103 	Outside Glazed Head / Inside Glazed Sill / Intermediate Mullion Option
FG-2104 	Intermediate Horizontal
FG-2105 	Outside Glazed Sill / Inside Glazed Head

FG-2106 	Glass Stop
FG-2107 	Stack System Intermediate Mullion / Tubular Door Jamb
FG-2108 	Expansion Mullion Half
FG-2109 	Expansion Mullion Half
FG-2110 	Self-mating 180° Post
FG-2111 	Corner Mullion Half
FG-2112 	Corner Mullion Closure
FG-2115 	Sill Insert (Stack Assembly System)

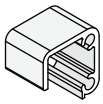
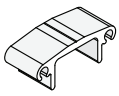
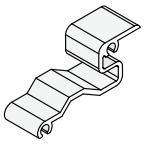
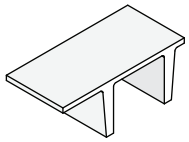
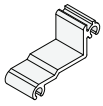
EXTRUSIONS (CONT.)

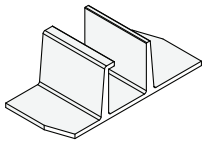
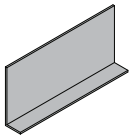
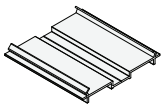
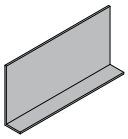
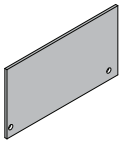
FG-2122 	Aluminum Flat Filler	**FG-2158** 	Head Channel (Stack Assembly System)
FG-2138 	135° Corner Mullion	**FG-2159** 	Head Insert (Stack Assembly System)
FG-2139 	Head Receptor (1-piece)	**FG-2160** 	Sill Channel (Stack Assembly System)
FG-2140 	Mullion Filler at 135° Corner	**FG-2169** 	Subsill
FG-2141 	Sidelite Base Horizontal / Sill	**FG-2180** 	Subsill (Inside Glazed System Only)
FG-2152 	Intermediate Horizontal (Stack Assembly System)	**FG-2188** 	Thermal Flat Filler
FG-2154 	Adjustable Mullion Half	**FG-2246** 	Subsill Option (Outside Glazed Only)
FG-2155 	Adjustable Mullion Half	**FG-2260** 	Subsill (Limited to 8 p.s.f. Water)

EXTRUSIONS (CONT.)

MO-243 	Head Receptor (2-Piece)
MO-244 	Head Receptor (2-Piece) Closure

PARTS AND ACCESSORIES

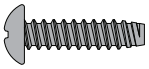
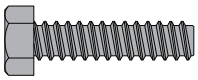
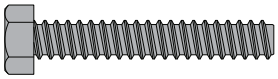
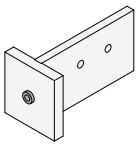
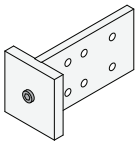
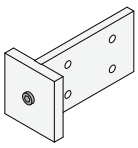
AC-101-1 	Shear Block (for Intermediate Horizontal)
AC-103-1 	Shear Block (for Outside Glazed Head / Inside Glazed Sill)
AC-104-1 	Shear Block (for Outside Glazed Sill / Inside Glazed Head)
AC-109-1 	Head Anchor (for Stack Assembly System)
AC-120-1 	Shear Block (for Intermediate Horizontal - Stack Assembly System)

FG-1000-FP-1 	Water Diverter
FG-2000-FP-1 	Sill Anchor (for Inside Glazed System)
FG-2000-FP-2 	End Dam (for FG-2180 & FG-2260 Subsills)
FG-2000-FP-3 	Sill Anchor (for Outside Glazed System)
FG-2000-FP-4 	End Dam (for FG-2169 Subsill)
FG-3000-FP-78 	End Dam (for FG-2246 Subsill)
UW-466 	2” Wide Silicone Splice Sheet

GLAZING & WEATHERING

FG-1133 	Typical Glazing Gasket
FG-1134 	Light Glazing Gasket
FG-5125 	Heavy Glazing Gasket
FG-1136 	Typical Setting Block
FG-2183 	Setting Block (for Inside Glazed System at sill)
FG-2184 	Setting Block (for Inside Glazed System at Intermediate Horizontal)
SM5601 	1/2” Wide x 1/8” Thick Joint Sealant Tape
V-11 	Air Seal Gasket (at Expansion Verticals and Head Receptors)

FASTENERS & DRILL JIGS

FS-6 	#10 x 3/4” PPH B Pt., Horizontal to Shear Block Fastener
FS-8 	1/4” x 1” HH B Pt., Screw Spline Assembly Fastener
FS-9 	1/4” x 1-1/2” HH B Pt., Shear Block Assembly Fastener (included with Shear Block Kits)
FS-24 	7/32” x 3/4” Roll Pin, for Dead Load Support at Interm. Horizontal (included with Shear Block Kit)
FS-320 	M4 x 16mm Headed Helical Drive Pin, End Dam to FG-2246 Subsill Fastener
DJ-3 	Drill Fixture for AC-101-1 Shear Block
DJ-4 	Drill Fixture for AC-103-01 & AC-104-1 Shear Blocks
DJ-5 	Drill Fixture for Screw Spline Assembly