Oldcastle BuildingEnvelope®

SERIES 3000 MULTIPLANE STOREFRONT

INSTALLATION AND GLAZING MANUAL

Note: Installation and Glazing Manuals are product specific. ***FOR REVIEW ONLY!***

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1-866-OLDCASTLE (653-2278)
Web: www.obe.com

SERIES 3000 THERMAL MULTIPLANE INSTALLATION MANUAL

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GENERAL INFORMATION

The Oldcastle BuildingEnvelope® (2 x 4 1/2) system represents the latest in product development technology complemented by dealer on-the-job input and experience. Proper use of these systems will assure optimum results in erection and long term performance

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 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. Remove material from package if it is wet or is located in a damp area.

CHECK MATERIAL:

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.

Completely check construction which will receive your materials against contract documents. 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 and installation instructions 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 sealants used should be approved by the sealant manufacture, to insure they will function for conditions shown on instructions and shop drawings. They must be compatible with all surfaces in which adhesion is required, including other sealant surfaces. Use primers where directed by manufacturer of sealants. Be sure to properly store sealants at recommended temperatures and check sealant for remainder of shelf life before using.

FIELD CONDITIONS:

- Do not install wall if there is a walk way with a downslope towards an entrance or a storefront
- All materials to be installed plumb, level, and true. Aluminum to be placed in direct contact with the masonry or incompatible materials, should be isolated with a heavy coat of zinc-chromate or bituminous paint.
- After sealant is set and a representative amount of the wall has been glazed (250 square feet or more), run a water hose 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.
- Coordinate protection of installed materials with general contractors and other trades.

GENERAL INFORMATION CONT·

CLEANING MATERIALS:

Cement, plaster, terrazzo, alkaline and acid based materials used to clean masonry are very harmful to finishes and should be removed with water and a mild soap immediately or permanent staining will occure. A spot test is recommended before any cleaning agent is used.

EXPANSION JOINTS:

Expansion joints and perimeter seals shown in these instructions and in the shop drawings are shown at normal 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.

THERMAL IMPROVEMENT SUGGESTIONS:

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

1. Blinds or drapes prevent warm air from washing the window.
2. Warm air ventilators too far from window will not adequately wash the window with air to prevent condensation.
3. In extreme conditions, the fan of the heating systems should not cycle on and off, but run continuously.
4. 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 this problem.
5. On rare occasions, an extremely cold storm may cause frost to appear on the glass or framing. A space heater and electric fan blowing along the plane of the window wall can reduce or eliminate this temporary condition.

FABRICATION SUGGESTIONS:

The use of our EZ Punch tool is reccommended for faster and more accurate fabrication of wall systems. If hand fabricating the mullions; drill fixtures are available to improve accuracy. Fabrication instructions for use of these drill fixtures are described within this manual on pages 37 through 41.

FRAME FABRICATION
(Storefront Typical Installations)

Measure ROUGH OPENING to determine FRAME WIDTH and FRAME HEIGHT dimensions. Allow 1/4” minimum clearance for shimming and caulking around perimeter of frame. (FG-3413 Sill Receptor requires minimum 3/8” joint at head)

Cut material to size per dimensions given below:

Frame Members

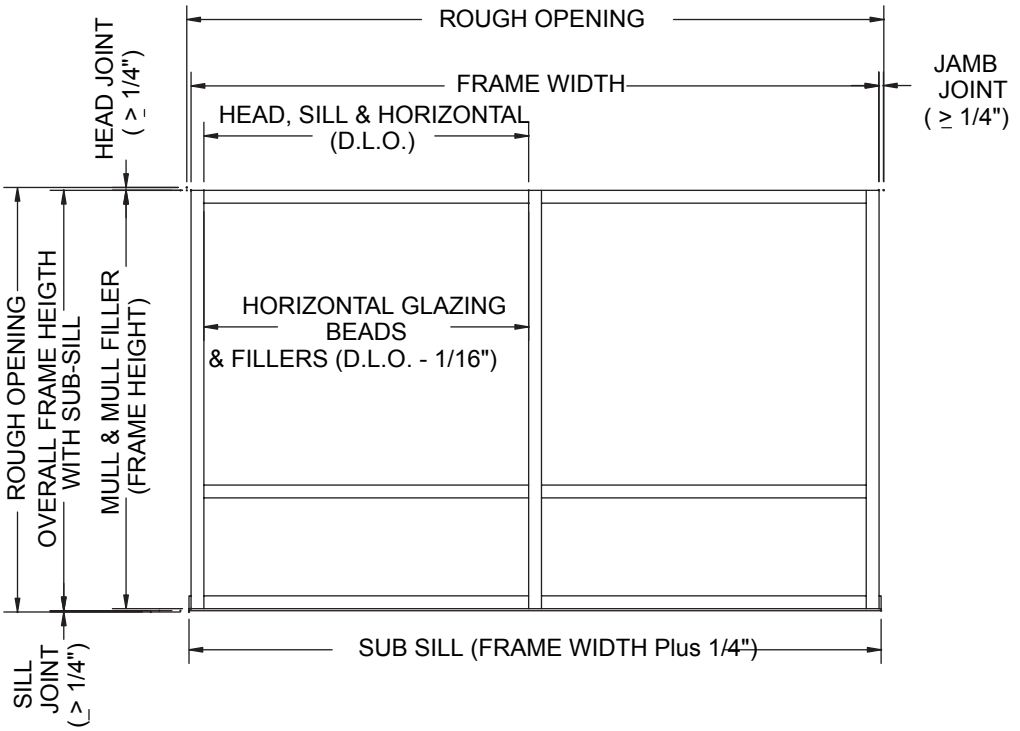
Sub-Sill or Sill Receptor:	Frame Width Plus1/4”
Mullion & Mull Fillers:	Frame Height (Rough Opening minus Head & Sill joints minus Sub Sill height; FG-3223 minus 3/8”, FG-3413 minus 1/2”)
Horizontal, Sill & Head:	Day Light Opening (D.L.O.)
Horizontal Glazing Beads & Fillers:	D.L.O. minus 1/16”

Accessories

Horizontal Gaskets:	D.L.O. Plus 3/8” per foot.
Vertical Gaskets:	D.L.O. Plus1” Plus 3/8” per foot

Other Members (as required)

Horizontal Glazing Adaptors:	D.L.O. minus 1/16”
Vertical Glazing Adaptors:	D.L.O. Plus 7/8”
Door Jamb:	Rough Opening minus Head Joint



FRAME FABRICATION

(SSG Installations)

Measure ROUGH OPENING to determine FRAME WIDTH and FRAME HEIGHT dimensions. Allow 1/4" minimum clearance for shimming and caulking around perimeter of frame. (FG-3413 Sill Receptor requires minimum 3/8" joint at head) (Reference page 6 for elevation and terminology)

Cut material to size per dimensions given below:

Frame Members

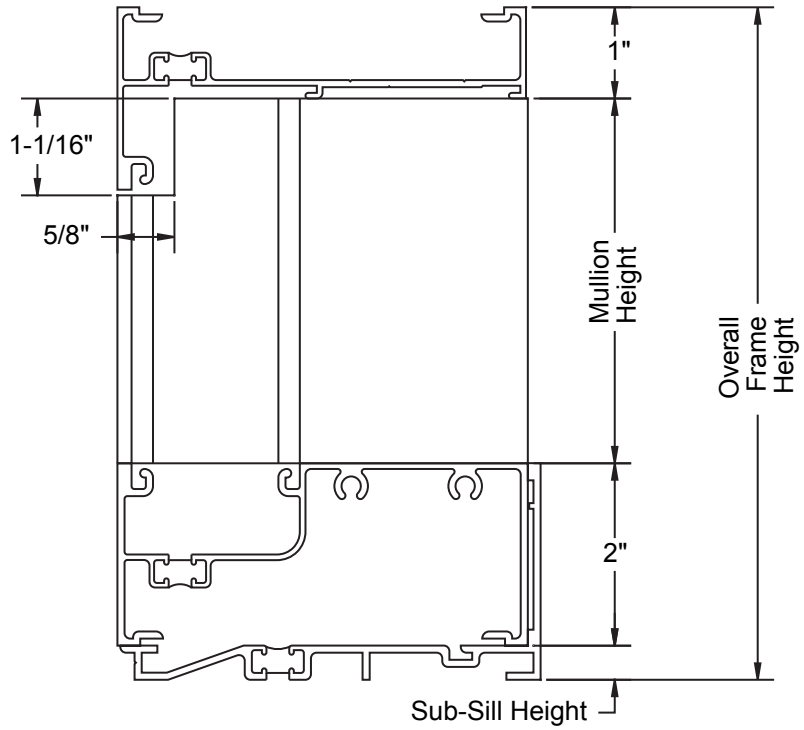
Sub-Sill or Sill Receptor:	Frame Width Plus1/4"
Mullions & Jamb (see Dtl. A)	Overall Frame Height Minus 3" Minus Sub-sill Height (FG-3223 Minus 3/8", FG-3413 Minus 1 /2")
Head & Sill	Frame Width
Horizontal (Screw Spline Assembly)	Day Light Opening (D.L.O.)
Horizontal (Shear Spline Assembly)	D.L.O. Minus 1/16"
Horizontal Glazing Beads & Fillers:	D.L.O. Minus 1/16"

Accessories

Head & Sill Exterior Gaskets:	D.L.O. Plus1" Plus 3/8" per foot.
Head & Sill Interior Gaskets:	D.L.O. Plus 3/8" per foot.
Horizontal Gaskets:	D.L.O. Plus 3/8" per foot.
Vertical Gaskets:	D.L.O. Plus1" Plus 3/8" per foot

Other Members (as required)

Horizontal Glazing Adaptors:	D.L.O. Minus 1/16"
Vertical Glazing Adaptors:	D.L.O. Plus 7/8"
Door Jamb:	Rough Opening Minus Head Joint

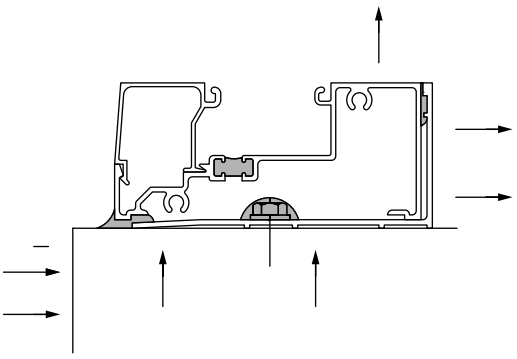


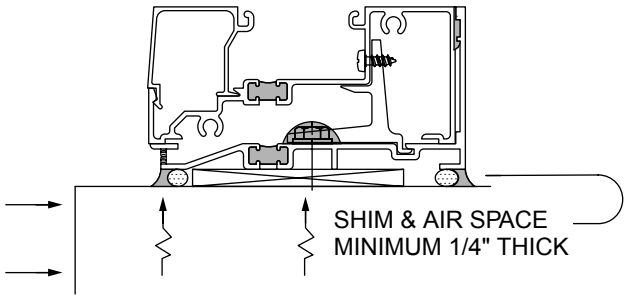
Detail "A"

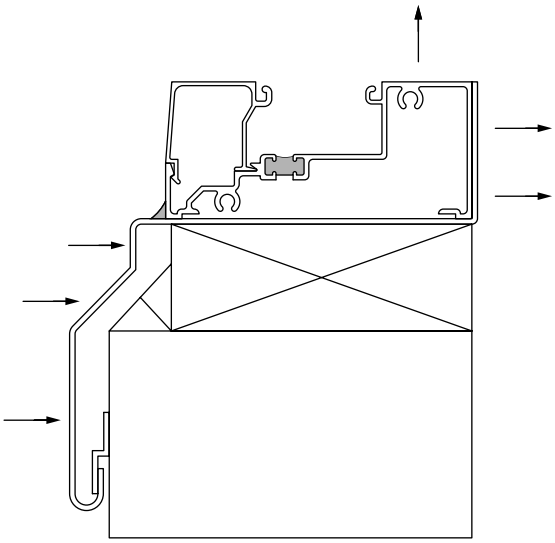
INSTALLATION FOR
THERMAL PERFORMANCE

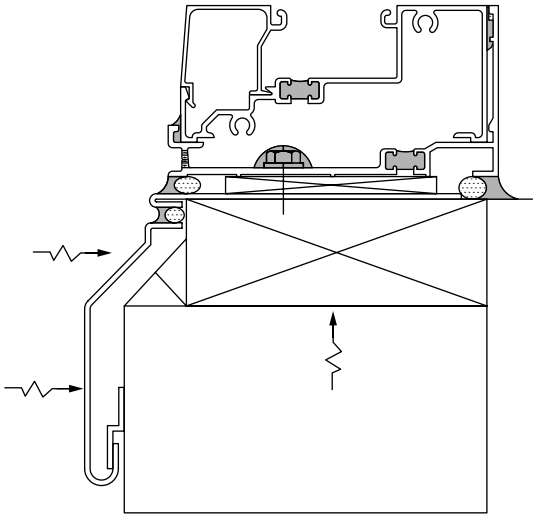
NOT RECOMMENDED

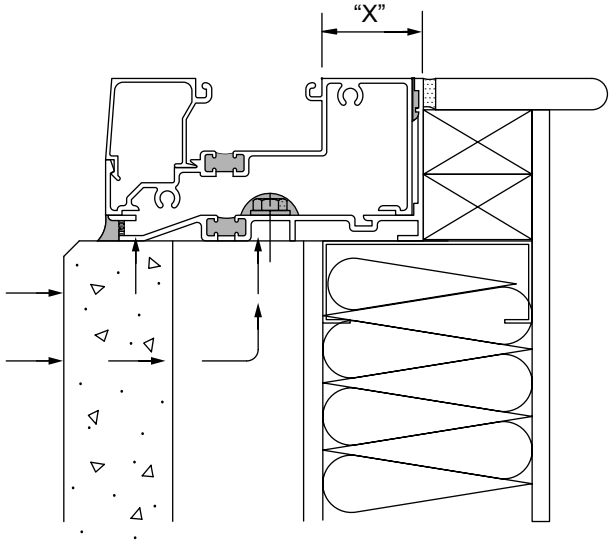
PREFERRED



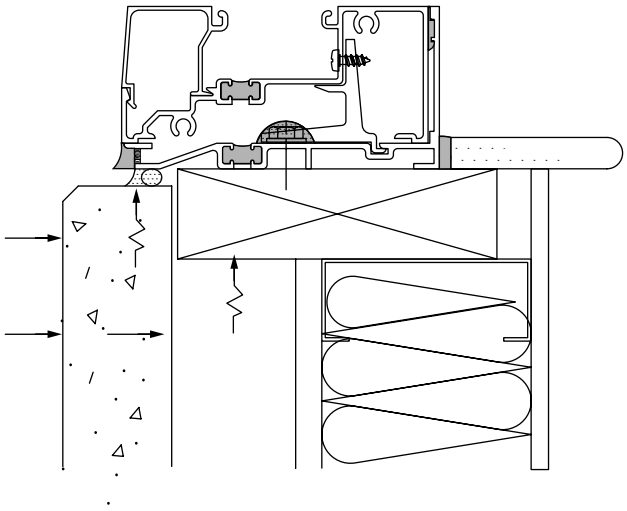








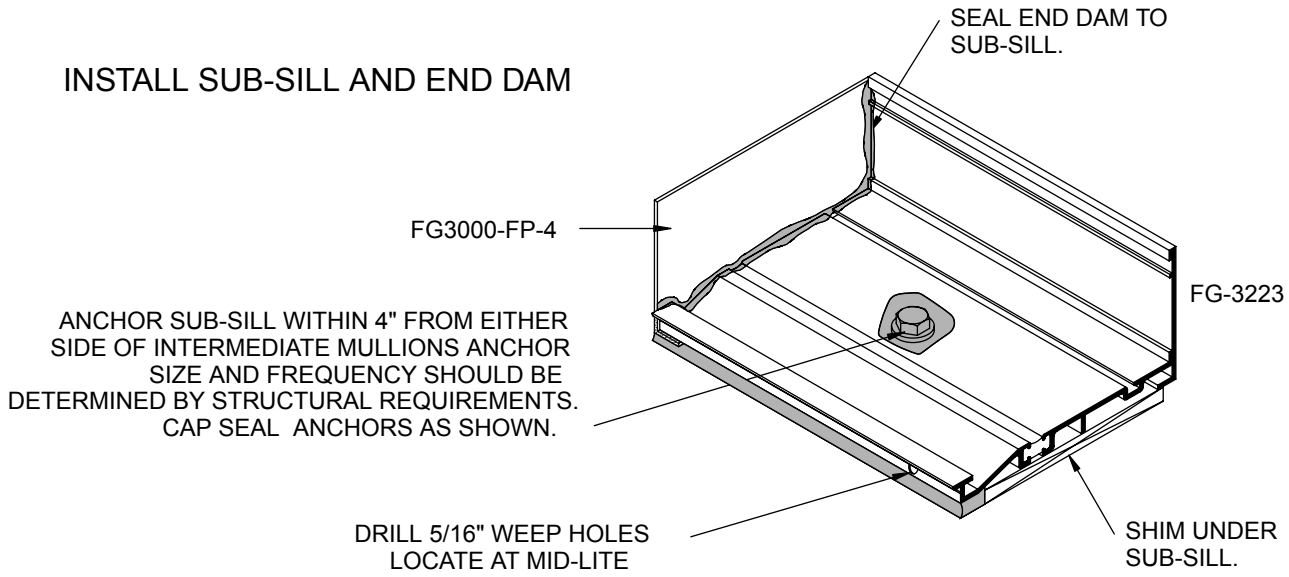
NOT ENOUGH METAL EXPOSED AT "X"



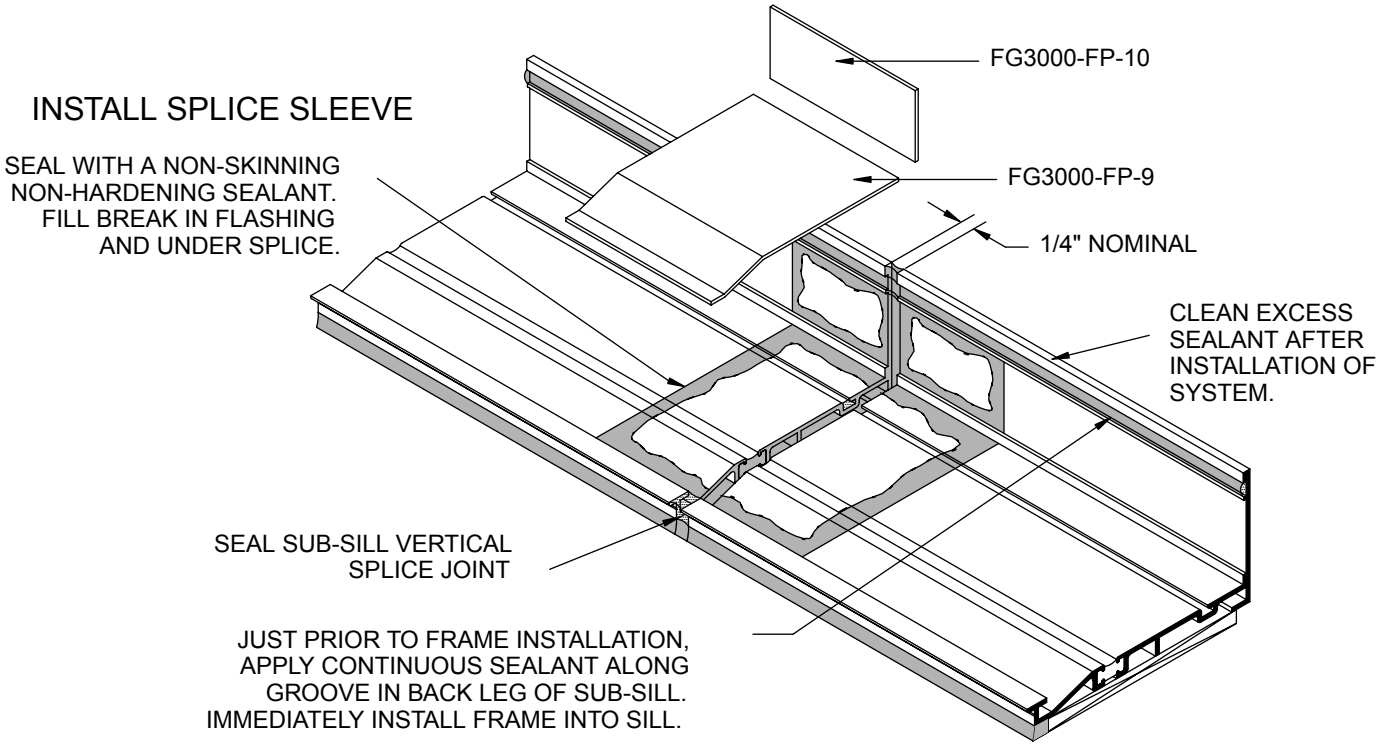
TO DERIVE THE GREATEST BENEFIT FROM YOUR STOREFRONT INSTALLATION,
WE RECOMMEND YOU REVIEW THE DETAILS ABOVE.

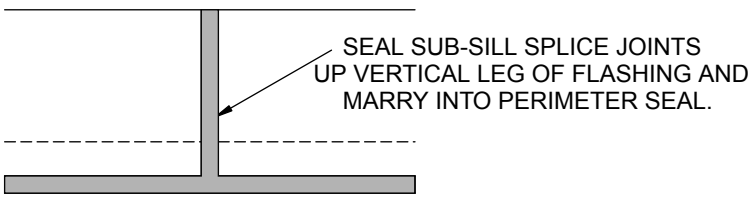
INSTALLATION INSTRUCTIONS FOR
FG-3223 SUB-SILL

INSTALL SUB-SILL AND END DAM



INSTALL SPLICE SLEEVE





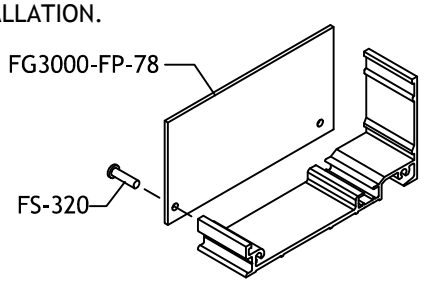
DETAIL "A"

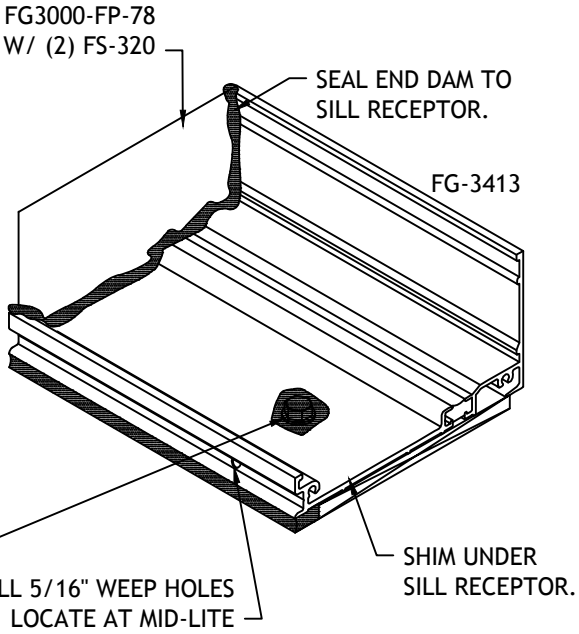
NOTE:
1) SUB-SILL SHALL BE INSTALLED LEVEL AND SHOULD NEVER TILT TOWARDS INTERIOR OF BUILDING.
2 REFERENCE PAGE 43 FOR END REACTIONS FOR SPECIFIC SILL ANCHORS.
3) SPLICE SUB-SILL AT MID-LITE ON LONG RUNS .

INSTALLATION INSTRUCTIONS FOR OPTIONAL FG-3413 SILL RECEPTOR

INSTALL SILL RECEPTOR AND END DAM

NOTE: IF A TWO PIECE HEAD RECEPTOR IS NOT USED, A 1/4" MINIMUM CLEARANCE IS REQUIRED AT THE HEAD CONDITION TO ALLOW FRAME INSTALLATION.



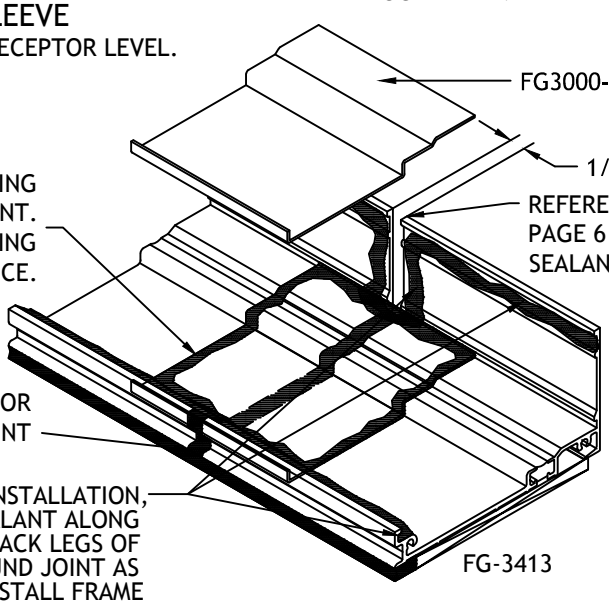


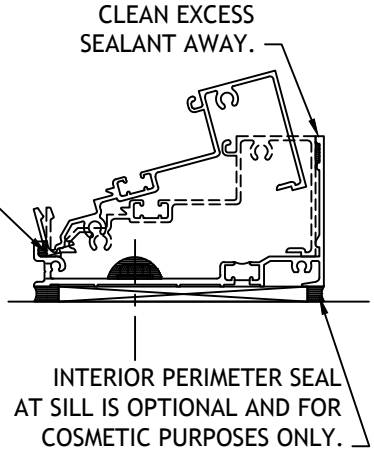
ANCHOR SILL RECEPTOR WITHIN 4" FROM EITHER SIDE OF INTERMEDIATE MULLIONS. ANCHOR SIZE AND FREQUENCY SHOULD BE DETERMINED BY STRUCTURAL REQUIREMENTS. CAP SEAL FLASHING ANCHORS AS SHOWN.

DRILL 5/16" WEEP HOLES LOCATE AT MID-LITE

INSTALL SPLICE SLEEVE

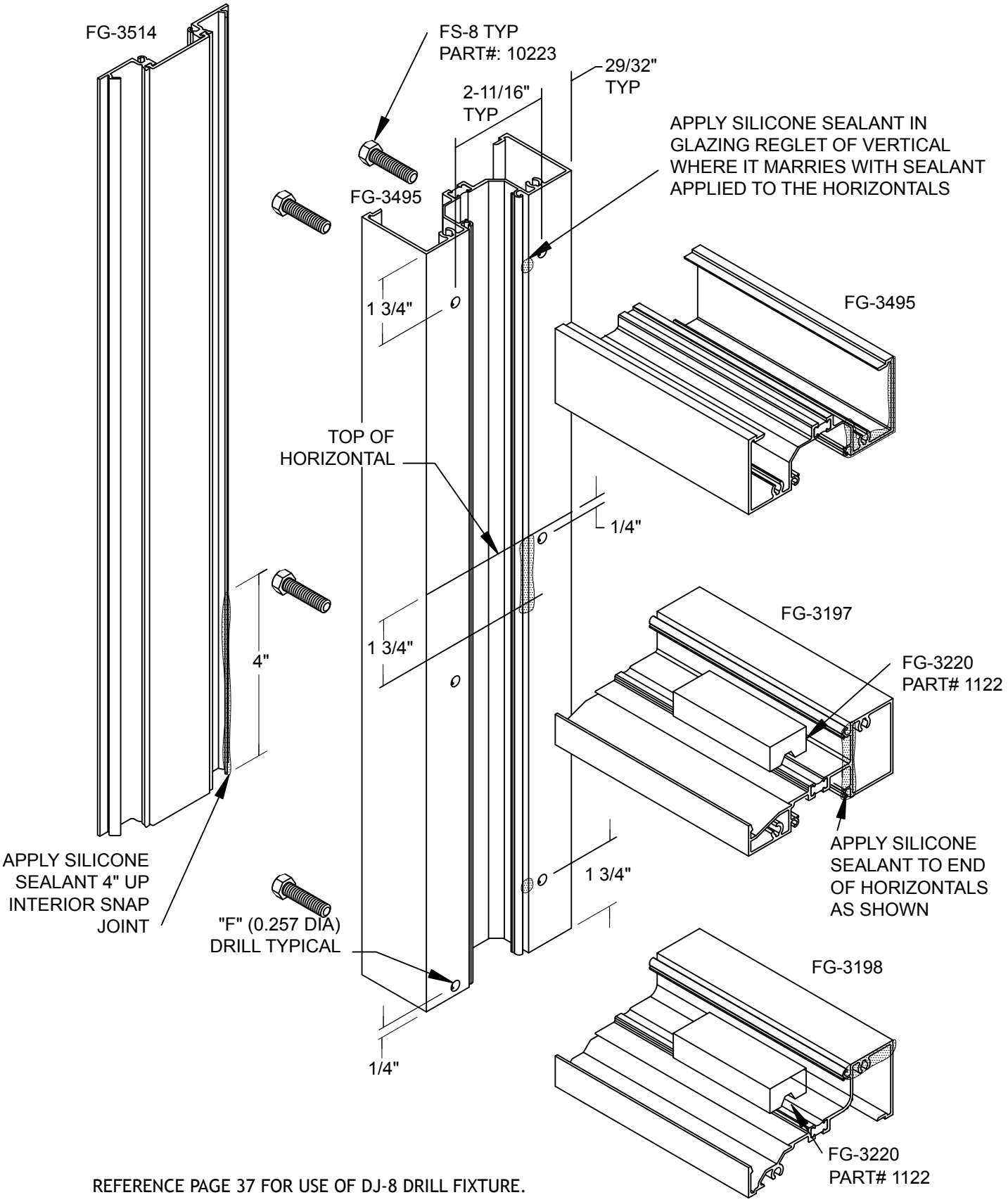
NOTE: INSTALL SILL RECEPTOR LEVEL.





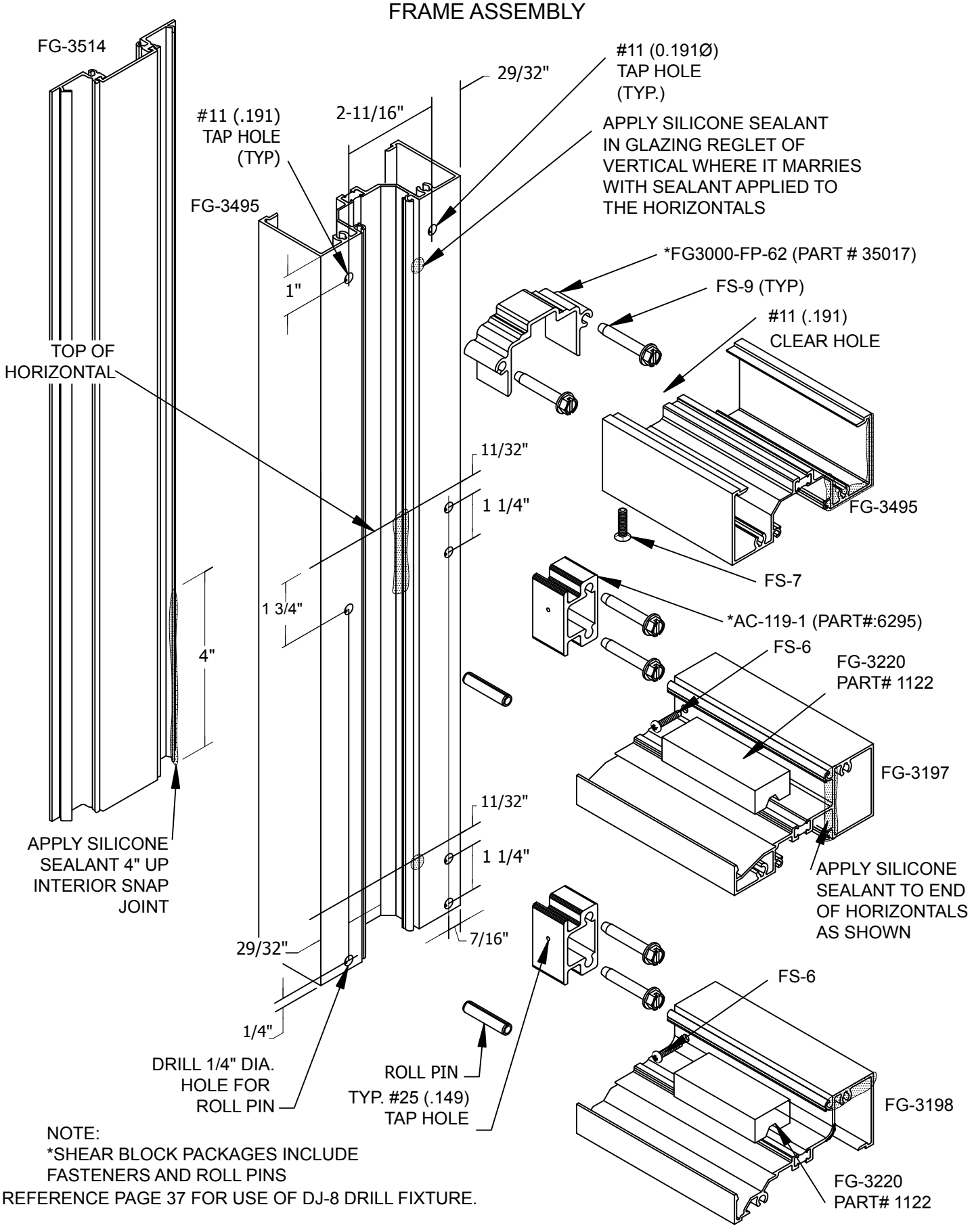
NOTE:
1) SILL RECEPTOR SHALL BE INSTALLED LEVEL AND SHOULD NEVER TILT TOWARDS INTERIOR OF BUILDING.
2) THE FG-3413 SILL RECEPTOR IS DESIGNED TO WITHSTAND A MAXIMUM END REACTION OF 600 LBS.
3) SPLICE SILL RECEPTOR AT MID-LITE.

OUTSIDE GLAZED, CENTER SET SCREW SPLINE
FRAME ASSEMBLY



REFERENCE PAGE 37 FOR USE OF DJ-8 DRILL FIXTURE.

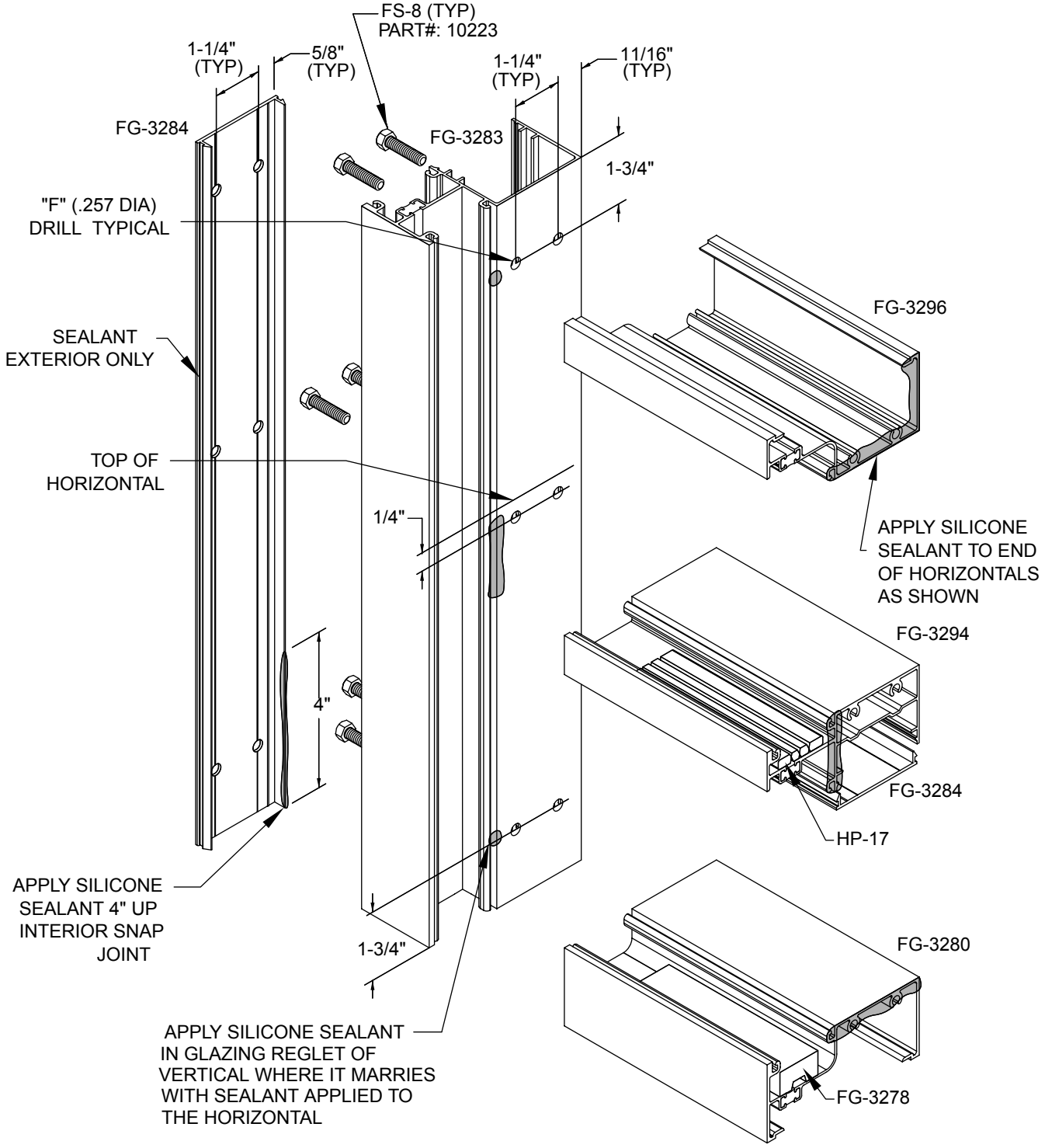
OUTSIDE GLAZED, CENTER SET SHEAR BLOCK
FRAME ASSEMBLY



NOTE:
*SHEAR BLOCK PACKAGES INCLUDE FASTENERS AND ROLL PINS

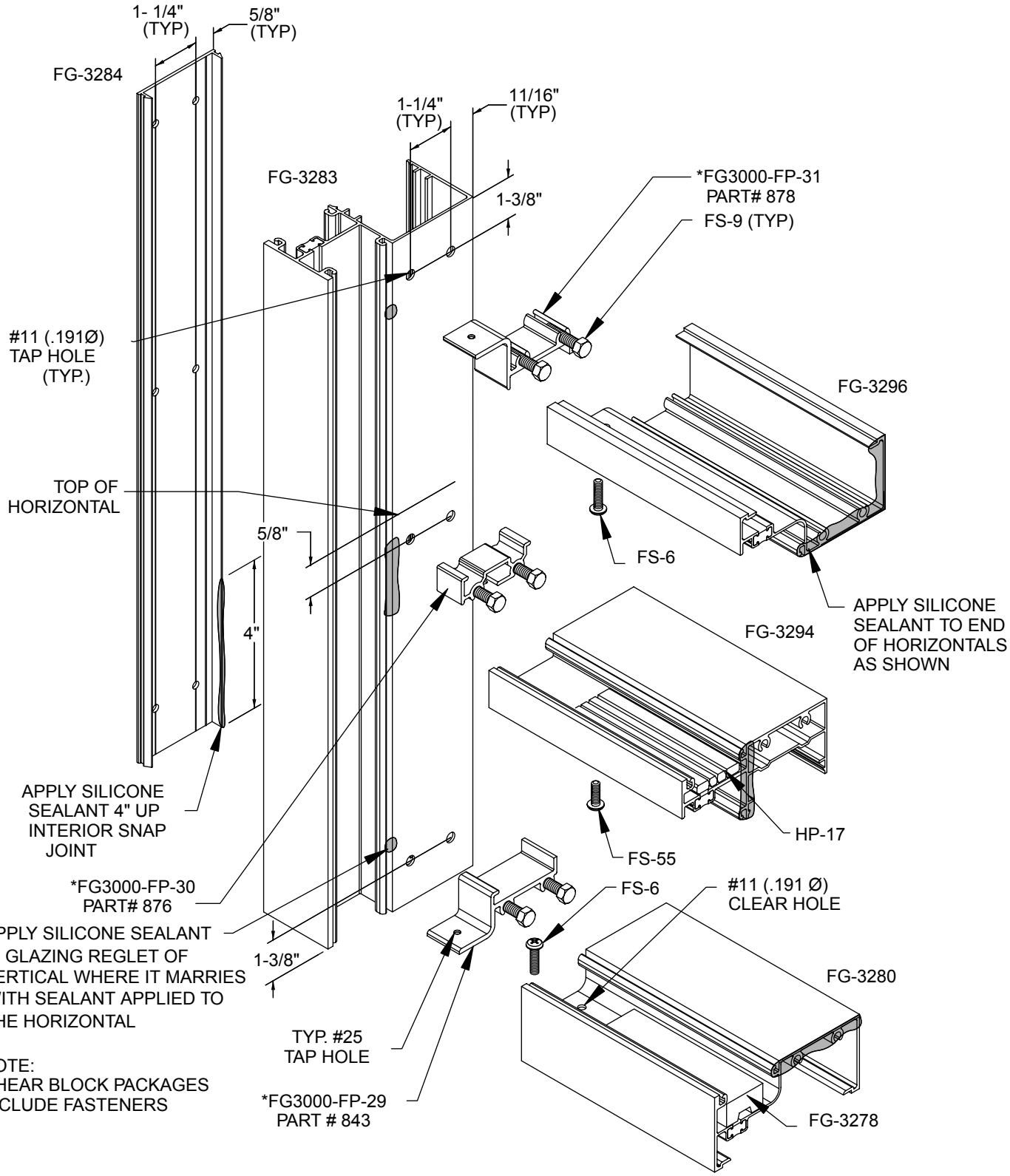
REFERENCE PAGE 37 FOR USE OF DJ-8 DRILL FIXTURE.

OUTSIDE GLAZED, FRONT SET SCREW SPLINE
FRAME ASSEMBLY



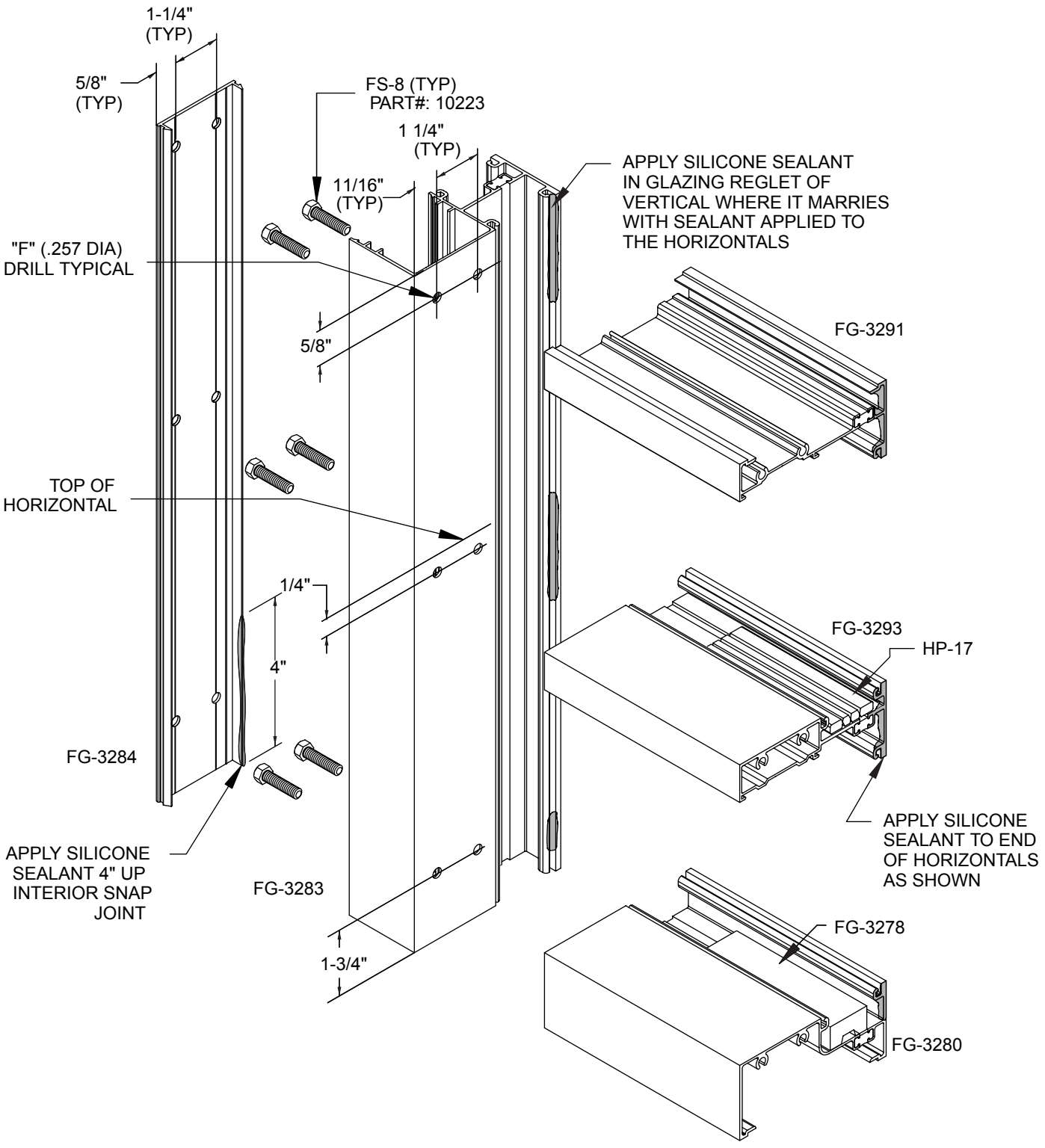
REFERENCE PAGE 39 FOR USE OF DJ-7 DRILL FIXTURE.

OUTSIDE GLAZED, FRONT SET SHEAR BLOCK
FRAME ASSEMBLY



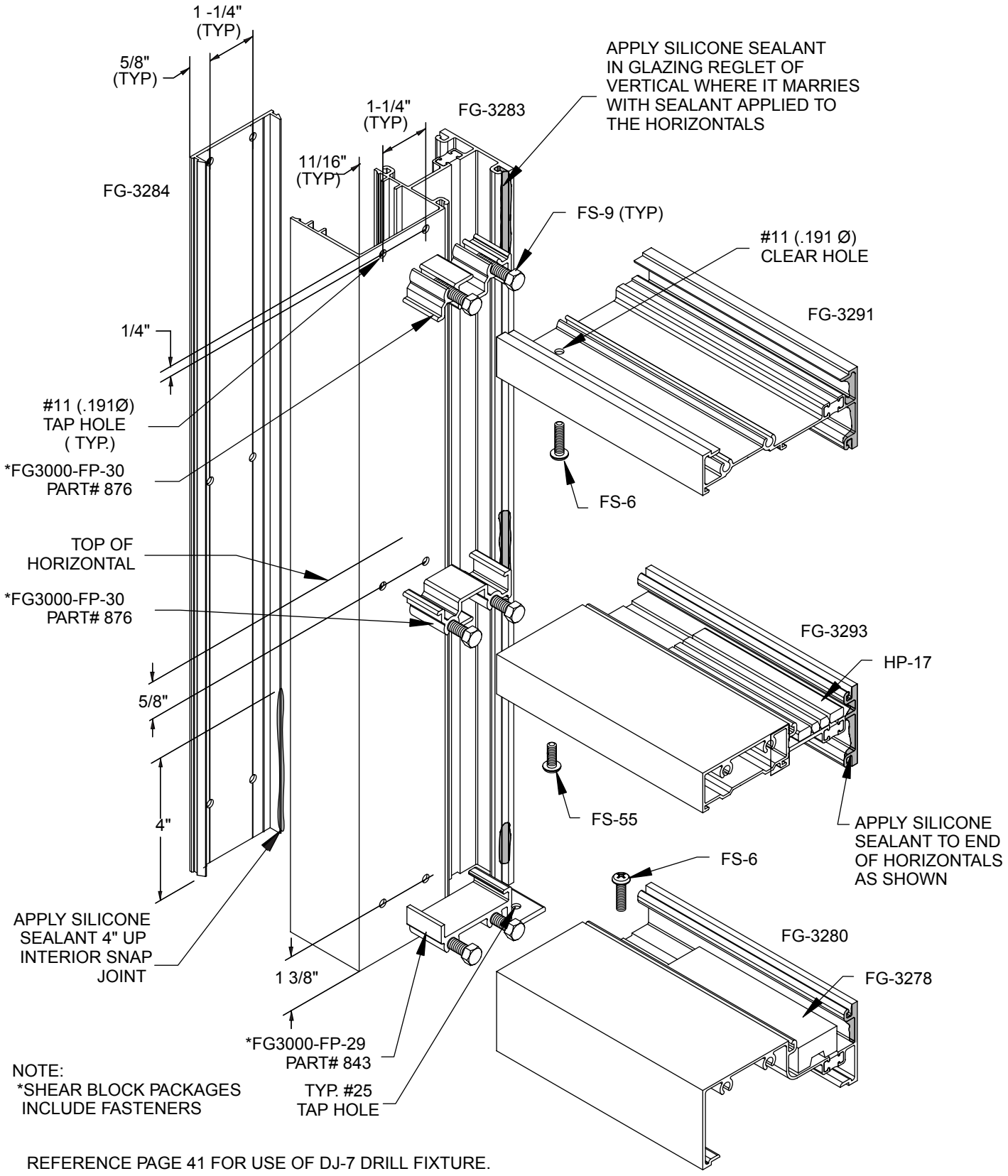
REFERENCE PAGE 39 FOR USE OF DJ-7 DRILL FIXTURE.

OUTSIDE GLAZED, BACK SET SCREW SPLINE
FRAME ASSEMBLY



REFERENCE PAGE 41 FOR USE OF DJ-7 DRILL FIXTURE.

OUTSIDE GLAZED, BACK SET SHEAR BLOCK
FRAME ASSEMBLY



REFERENCE PAGE 41 FOR USE OF DJ-7 DRILL FIXTURE.

OUTSIDE GLAZED SYSTEMS
GLAZING GUIDELINES

1) REMOVE GASKETS FROM ROLL AND ALLOW TO RELAX OVERNIGHT.
   ALL GASKETS TO BE CUT D.L.O. + 1/4" PER FOOT.

2) VERTICAL GASKETS RUN THRU HORIZONTAL GASKETS. HORIZONTAL GASKETS SHOULD BE MITERED ON ENDS AS SHOWN IN DETAIL "A"

3) INSTALL INTERIOR GASKETS PRIOR TO GLAZING. CORNERS OF INTERIOR GASKETS TO BE SET IN SEALANT (DTL."B") AND CORNERS SEALED JUST PRIOR TO SETTING GLASS (DTL."A"). NOTE: CLEAN GASKETS AND SURFACES WITH ISOPOPYL ALCOHOL PRIOR TO SEALING CORNERS.

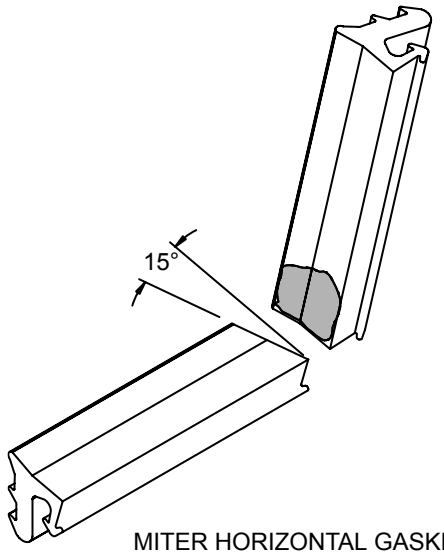
4) LOCATE SETTING BLOCKS AT EITHER 1/4 POINTS OR 1/8 POINTS, DEPENDENT ON SIZE OF GLASS.

5) GLASS BITE AT TYPICAL HORIZONTAL & VERTICAL MEMBERS IS 7/16”. AT SSG VERTICAL 3/4”.

6) GLAZE OPENINGS FROM BOTTOM TO TOP. INSTALL WATER DIVERTERS IN HORIZONTAL ABOVE, AFTER LITE BELOW IS IN POSITION.

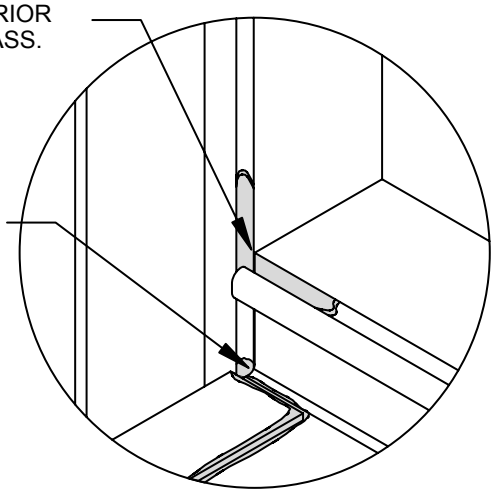
7) WATER DIVERTERS (FG1000-FP-2) MUST BE LOCATED ON EACH END OF HORIZONTALS AND SET IN SEALANT.

8) WHEN INSTALLING GLASS: FIRST, WET TOP OF SETTING BLOCK WITH SOAPY WATER. ONCE GLASS IS SET IN PLACE, PUSH GLASS AGAINST INTERIOR GASKET AT SETTING BLOCK AREA. FAILURE TO DO SO MAY CAUSE DIAGONAL CRACKS TOWARDS SETTING BLOCKS DUE TO GLASS BENDING WHILE INSTALLING GASKET(S) IN CORNERS.



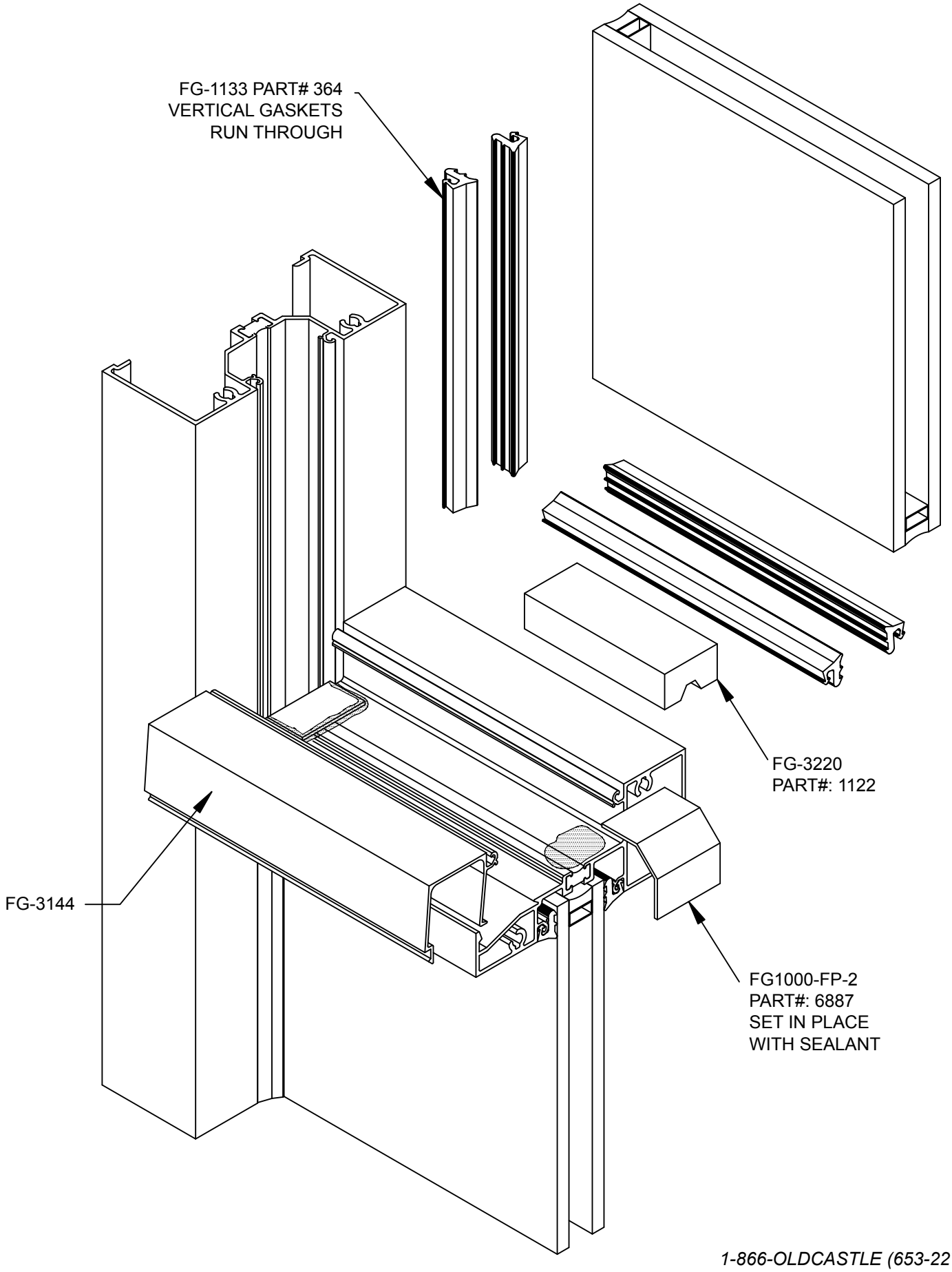
MITER HORIZONTAL GASKET TO VERTICAL GASKET

DETAIL "A"

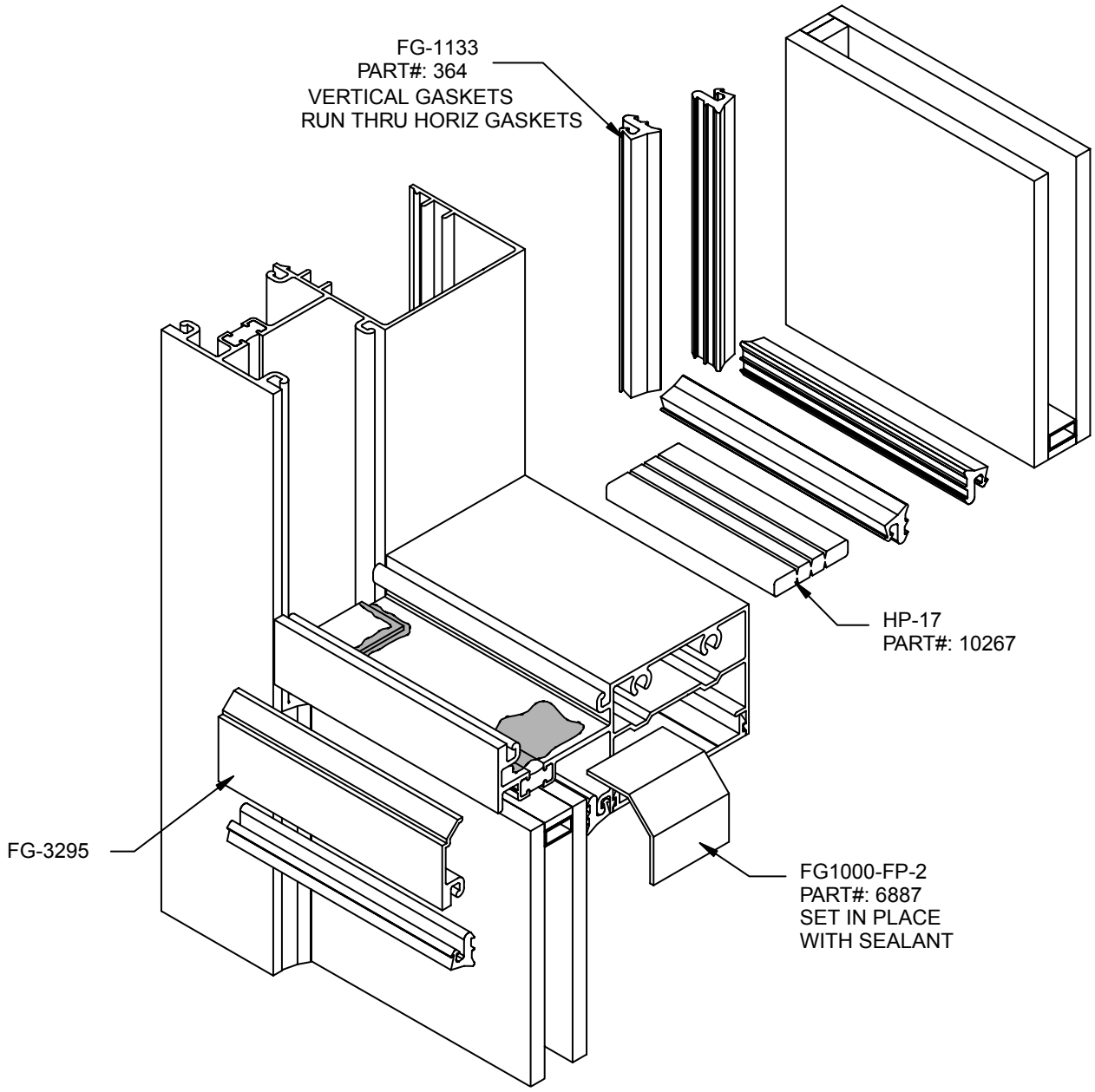


DETAIL "B"

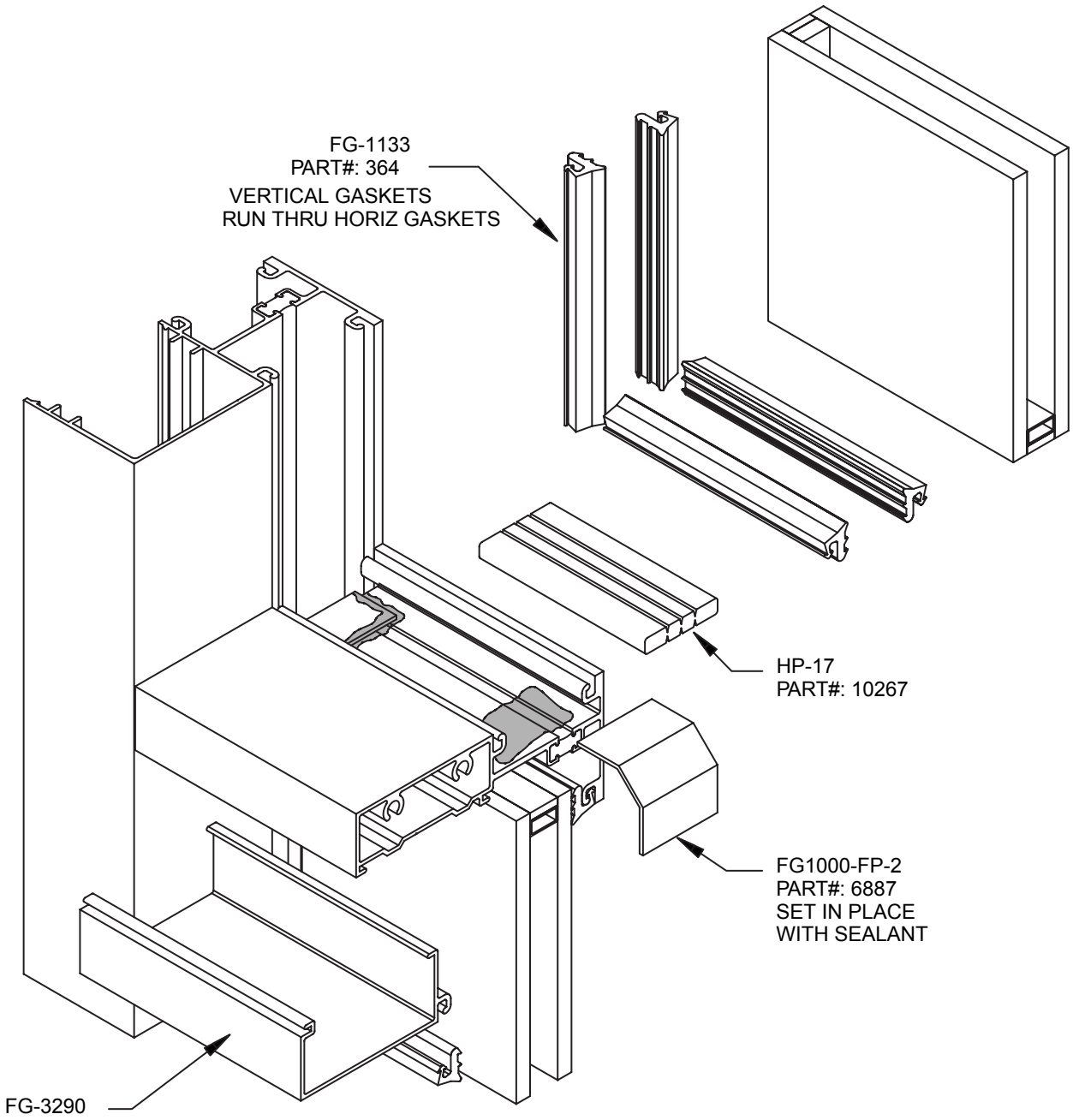
OUTSIDE GLAZED, CENTER SET
GLAZING DETAIL



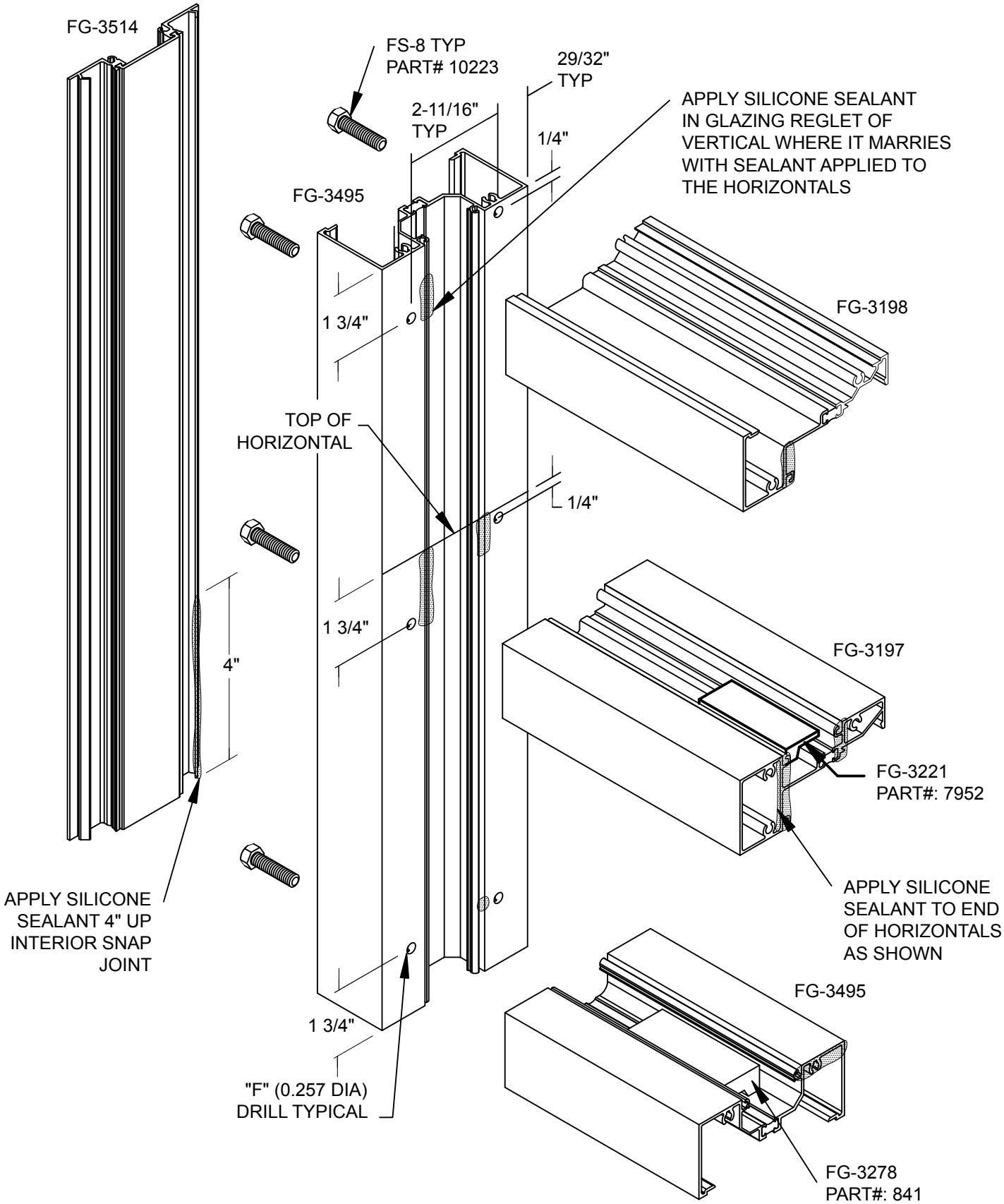
OUTSIDE GLAZED, FRONT SET
GLAZING DETAIL



OUTSIDE GLAZED, BACK SET
GLAZING DETAIL

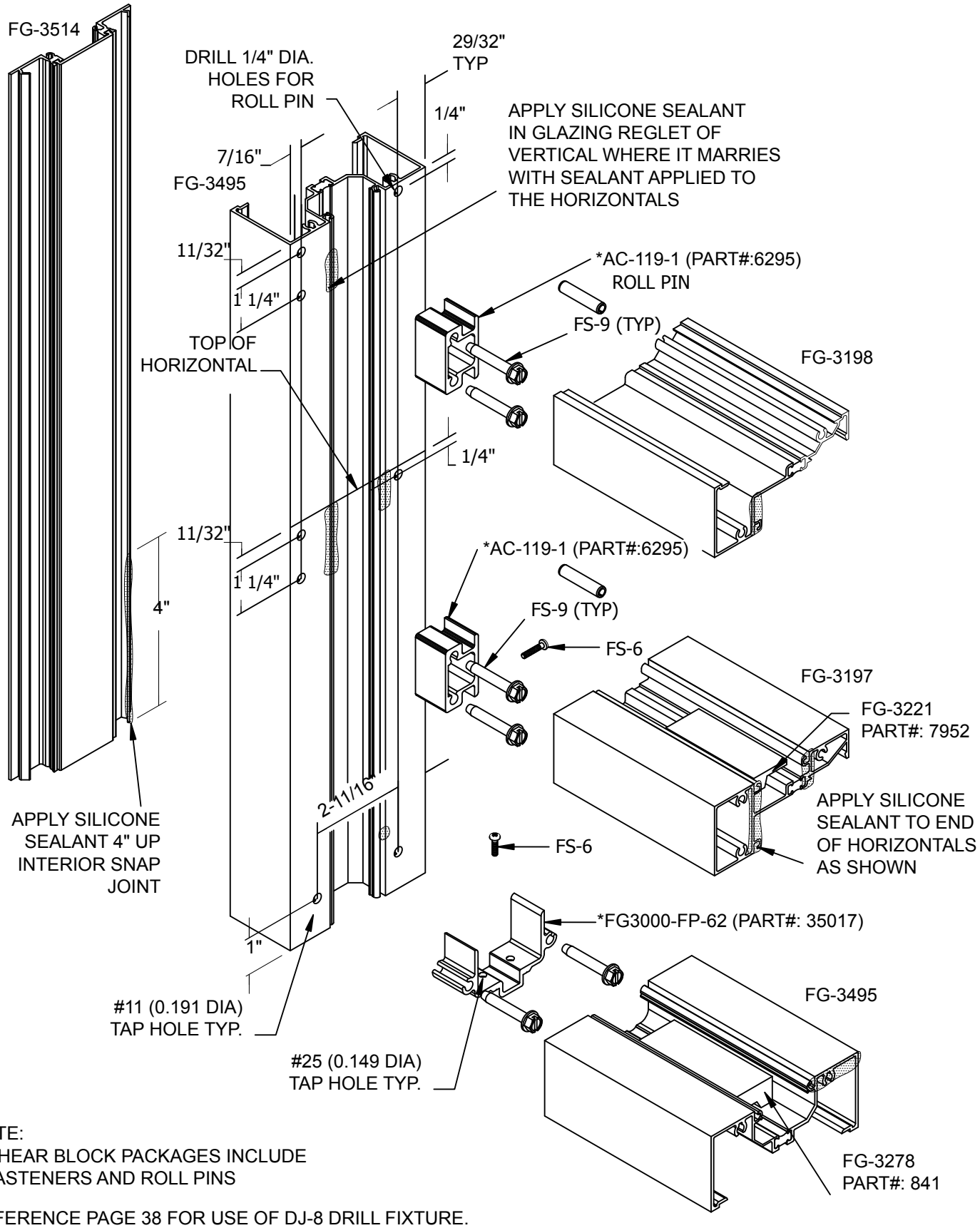


INSIDE GLAZED, CENTER SET
SCREW SPLINE FRAME ASSEMBLY



REFERENCE PAGE 38 FOR USE OF DJ-8 DRILL FIXTURE.

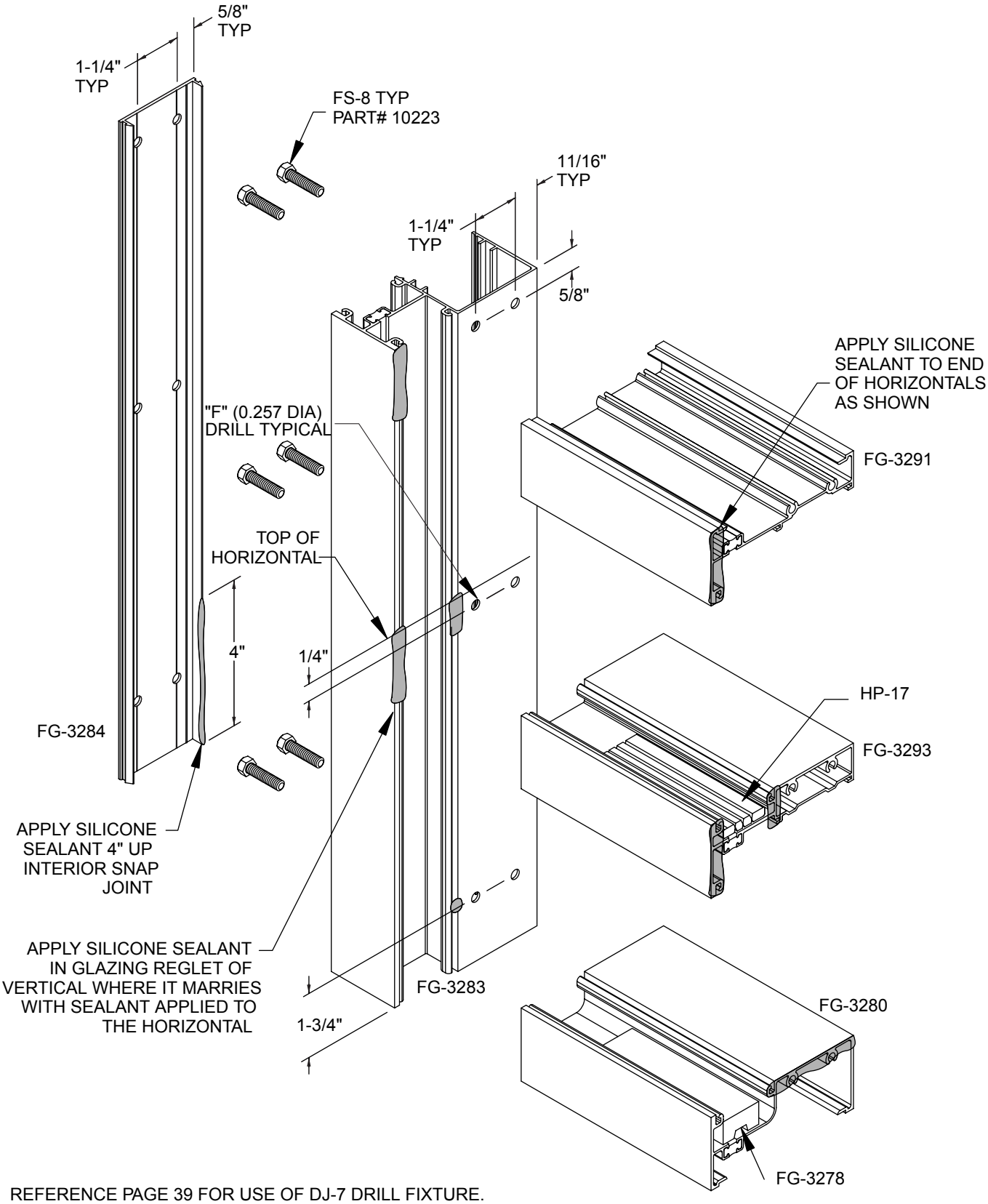
INSIDE GLAZED, CENTER SET
SHEAR BLOCK FRAME ASSEMBLY



NOTE:
* SHEAR BLOCK PACKAGES INCLUDE FASTENERS AND ROLL PINS

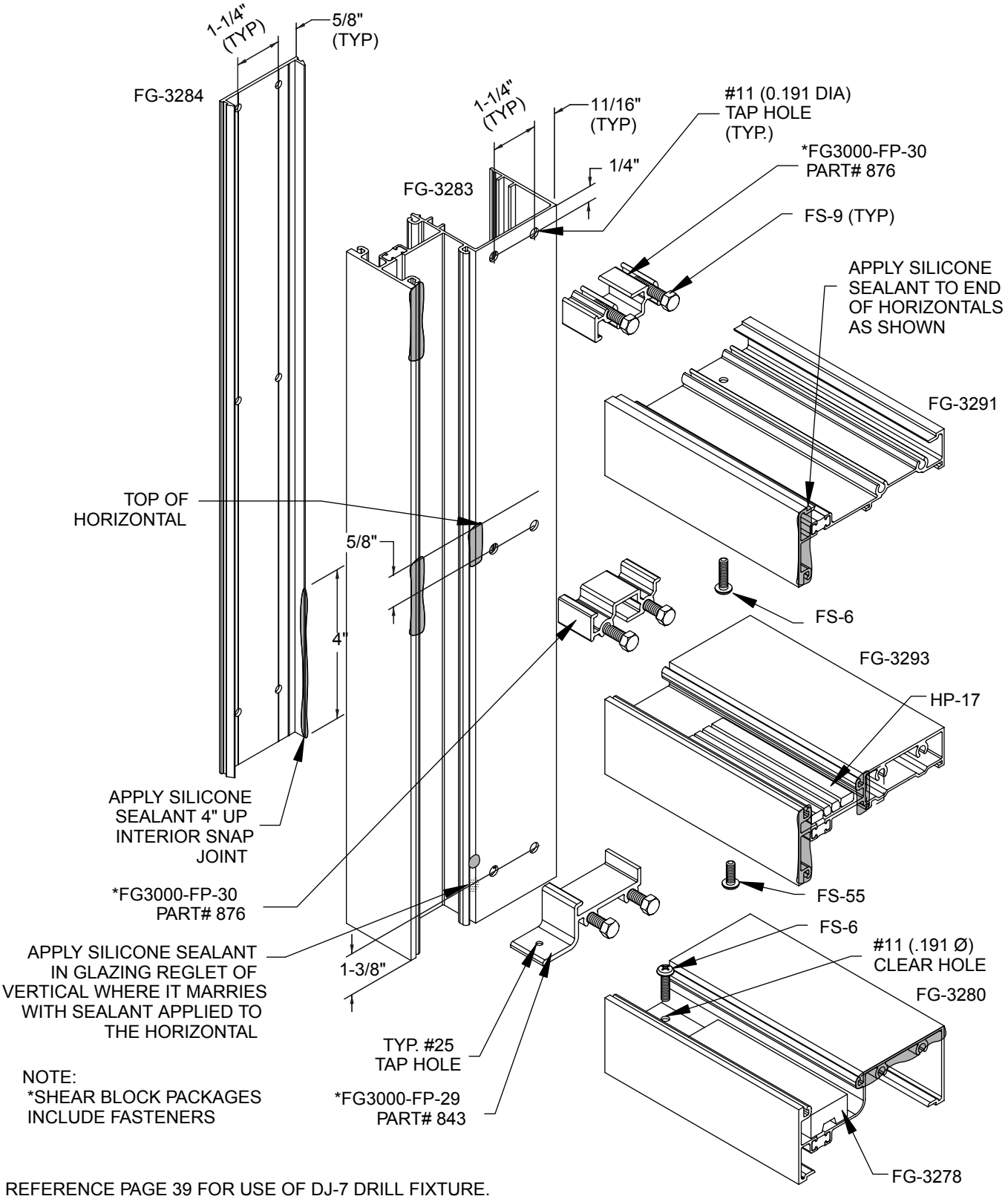
REFERENCE PAGE 38 FOR USE OF DJ-8 DRILL FIXTURE.

INSIDE GLAZED, FRONT SET SCREW SPLINE
FRAME ASSEMBLY



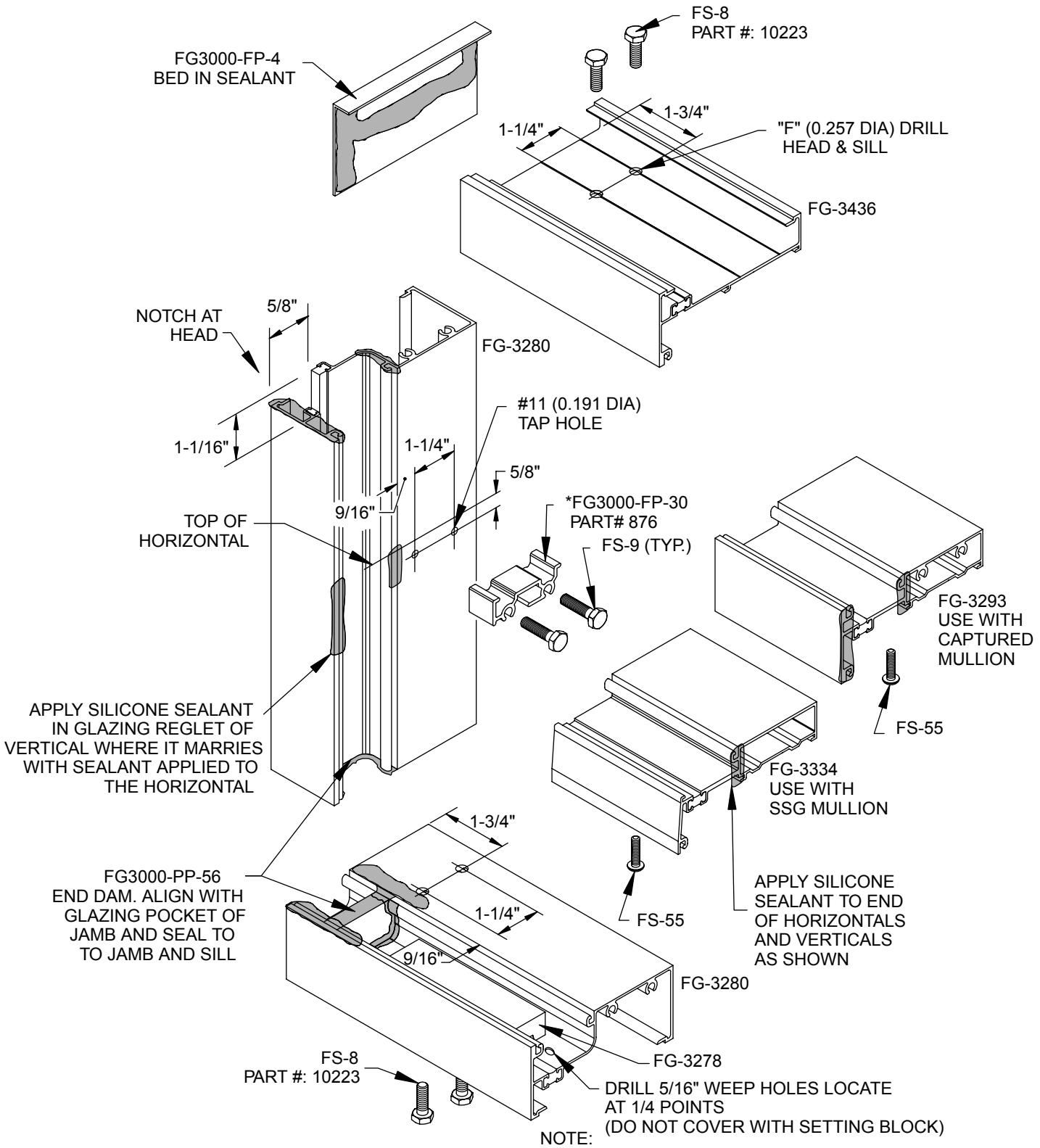
REFERENCE PAGE 39 FOR USE OF DJ-7 DRILL FIXTURE.

INSIDE GLAZED, FRONT SET SHEAR BLOCK
FRAME ASSEMBLY



REFERENCE PAGE 39 FOR USE OF DJ-7 DRILL FIXTURE.

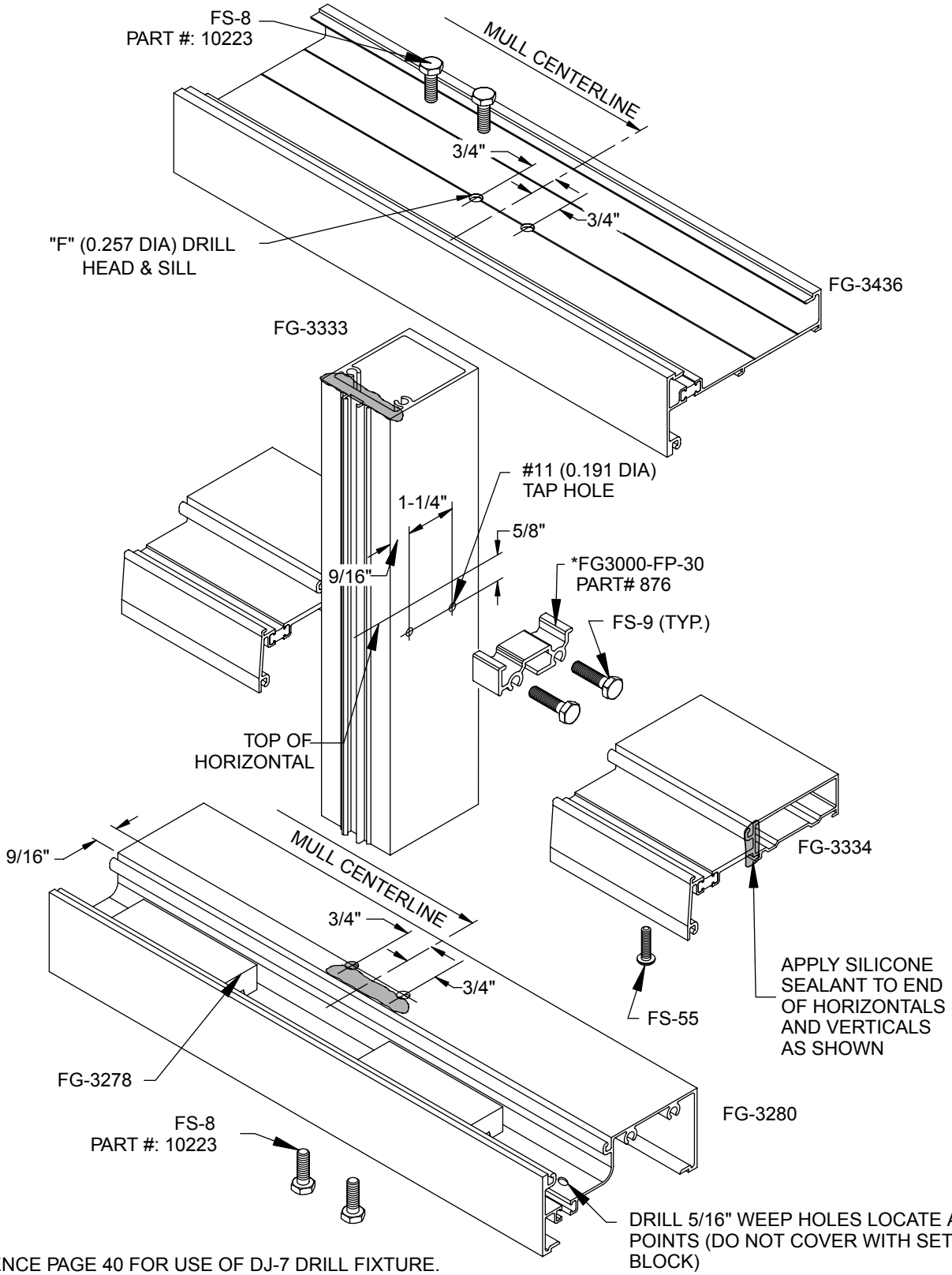
INSIDE GLAZED, FRONT SET
JAMB ASSEMBLY FOR SSG SYSTEM



NOTE:
*SHEAR BLOCK PACKAGES
INCLUDE FASTENERS

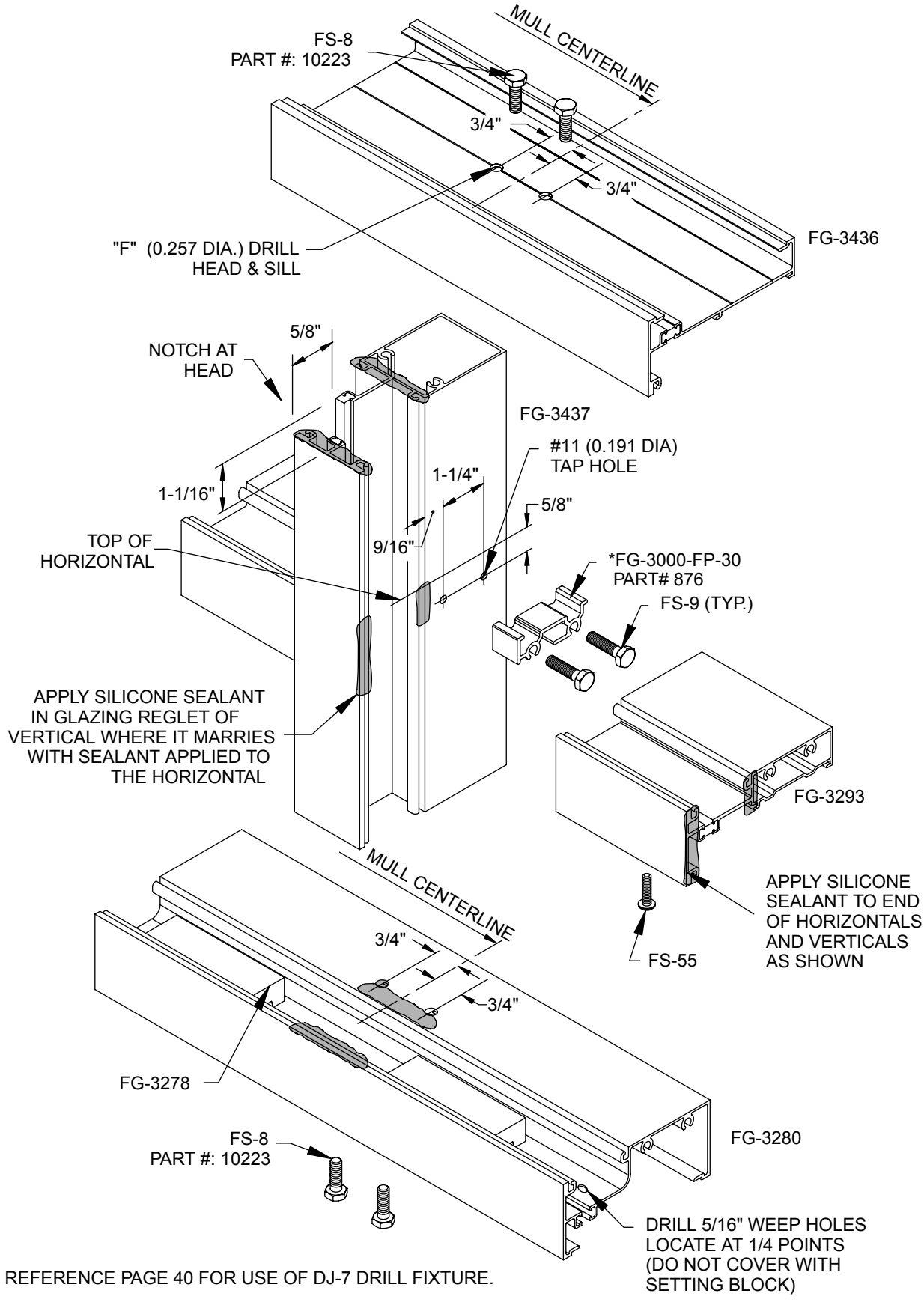
REFERENCE PAGE 40 FOR USE OF DJ-7 DRILL FIXTURE.

INSIDE GLAZED, FRONT SET
SSG MULLION ASSEMBLY



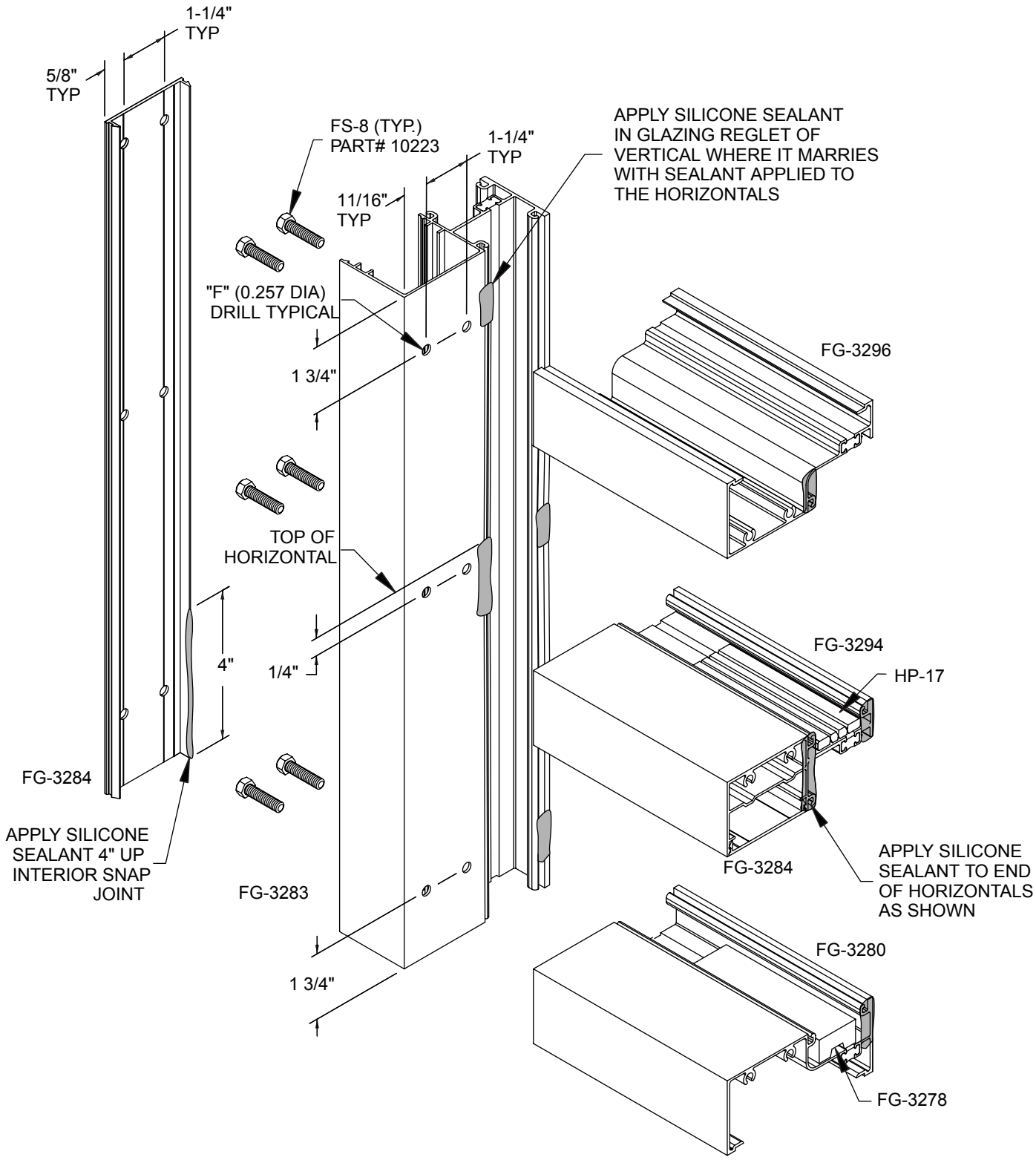
REFERENCE PAGE 40 FOR USE OF DJ-7 DRILL FIXTURE.

INSIDE GLAZED, FRONT SET, CAPTURED MULLION ASSEMBLY
FOR SSG SYSTEM



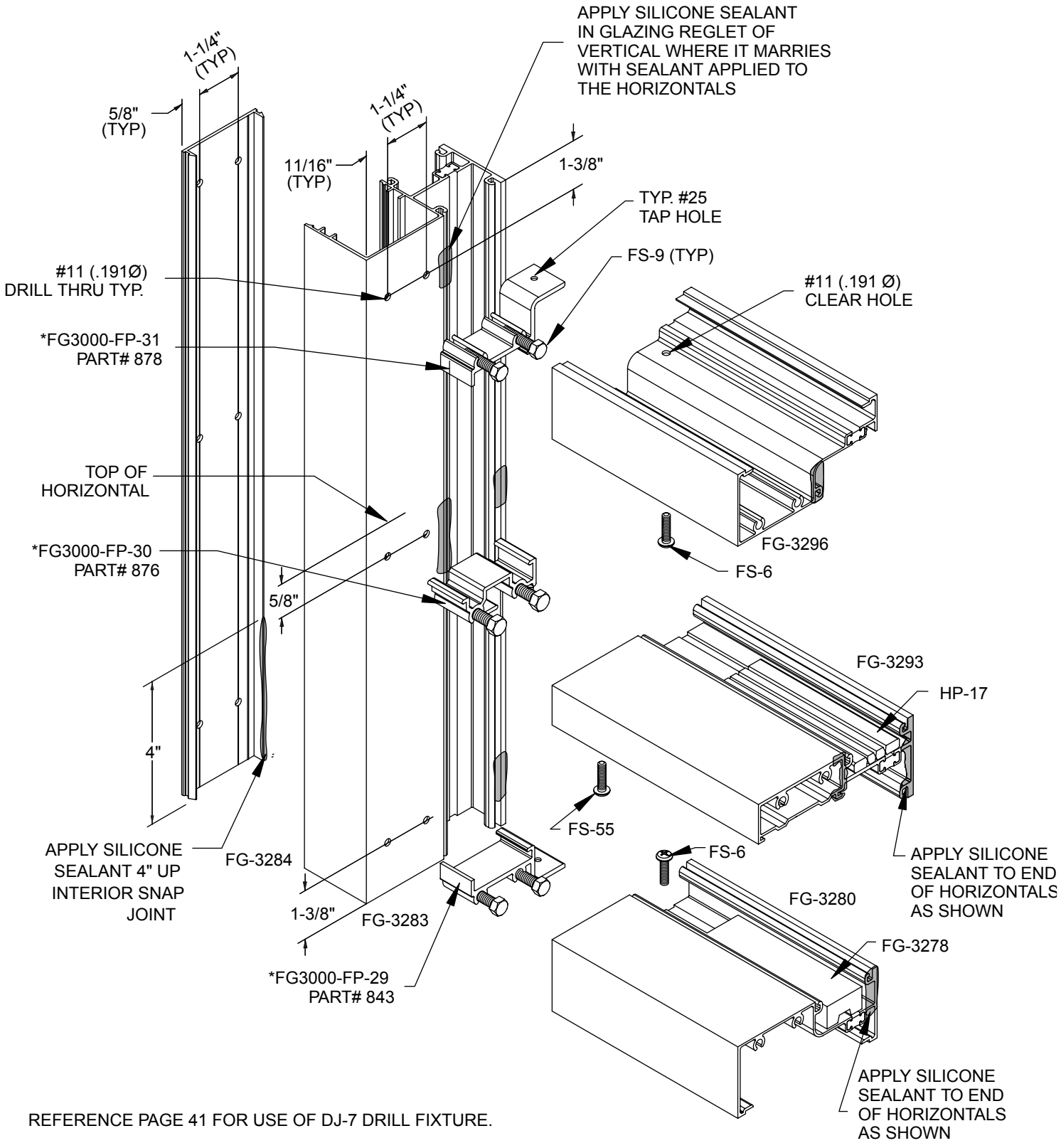
REFERENCE PAGE 40 FOR USE OF DJ-7 DRILL FIXTURE.

INSIDE GLAZED, BACK SET SCREW SPLINE
FRAME ASSEMBLY



REFERENCE PAGE 41 FOR USE OF DJ-7 DRILL FIXTURE.

INSIDE GLAZED, BACK SET SHEAR BLOCK
FRAME ASSEMBLY



REFERENCE PAGE 41 FOR USE OF DJ-7 DRILL FIXTURE.

INSIDE GLAZED SYSTEMS
GLAZING GUIDELINES

1) REMOVE GASKETS FROM ROLL AND ALLOW TO RELAX OVERNIGHT.
ALL GASKETS TO BE CUT D.L.O. + 1/4" PER FOOT.

2) VERTICAL GASKETS RUN THRU HORIZONTAL GASKETS.
HORIZONTAL GASKETS SHOULD BE MITERED ON ENDS AS SHOWN IN DETAIL “A”.

3) INSTALL EXTERIOR GASKETS PRIOR TO GLAZING. CORNERS OF EXTERIOR GASKETS TO BE SET IN SEALANT (DTL."B") AND CORNERS SEALED JUST PRIOR TO SETTING GLASS (DTL."A").
NOTE: CLEAN GASKETS AND SURFACES WITH ISOPOPYL ALCOHOL PRIOR TO SEALING CORNERS.

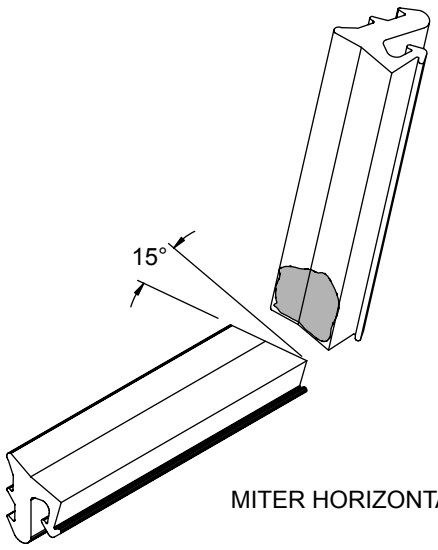
4) LOCATE SETTING BLOCKS AT EITHER 1/4 POINTS OR 1/8 POINTS, DEPENDENT ON SIZE OF GLASS.

5) GLASS BITE AT TYPICAL HORIZONTAL & VERTICAL MEMBERS IS 7/16”. AT SSG VERTICAL 3/4”.

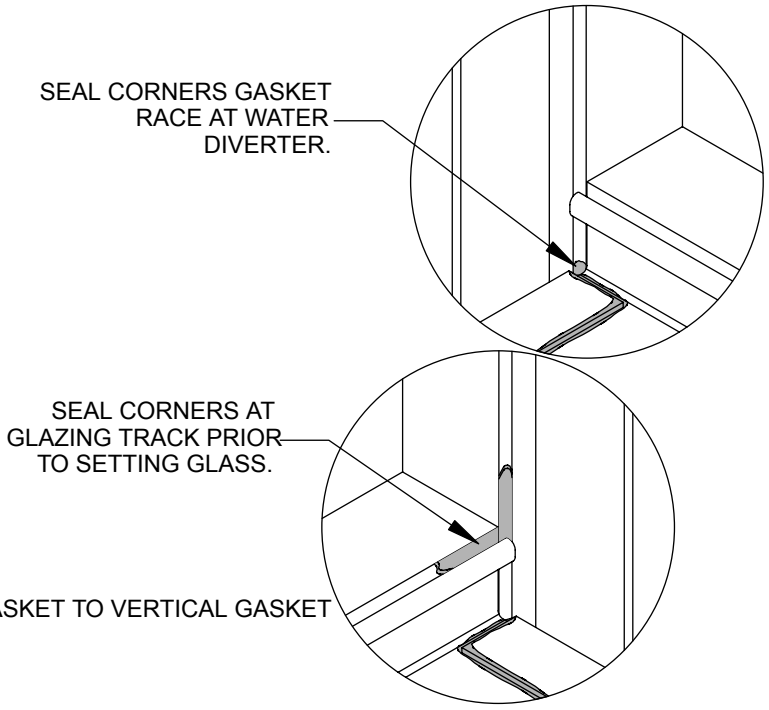
6) GLAZE OPENINGS FROM BOTTOM TO TOP. INSTALL WATER DIVERTERS IN HORIZONTAL ABOVE, AFTER LITE BELOW IS IN POSITION

7) WATER DIVERTERS MUST BE LOCATED ON EACH END OF HORIZONTALS AND SET IN SEALANT.

8) WHEN INSTALLING GLASS: FIRST, WET TOP OF SETTING BLOCK WITH SOAPY WATER. ONCE GLASS IS SET IN PLACE, PUSH GLASS AGAINST GASKET AT SETTING BLOCK AREA. FAILURE TO DO SO MAY CAUSE DIAGONAL CRACKS TOWARDS SETTING BLOCKS DUE TO GLASS BENDING WHILE INSTALLING GASKET(S) IN CORNERS.

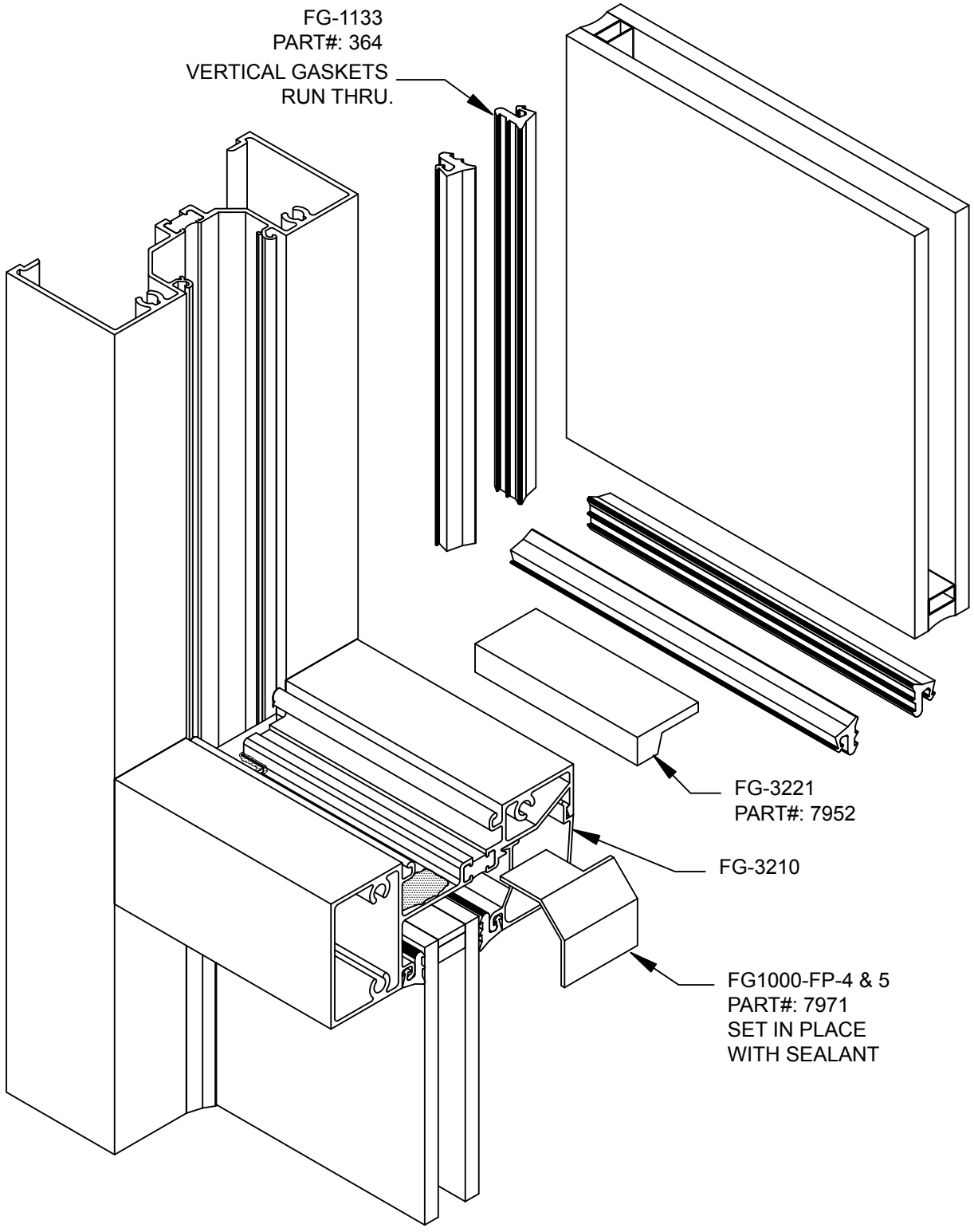


DETAIL "A"

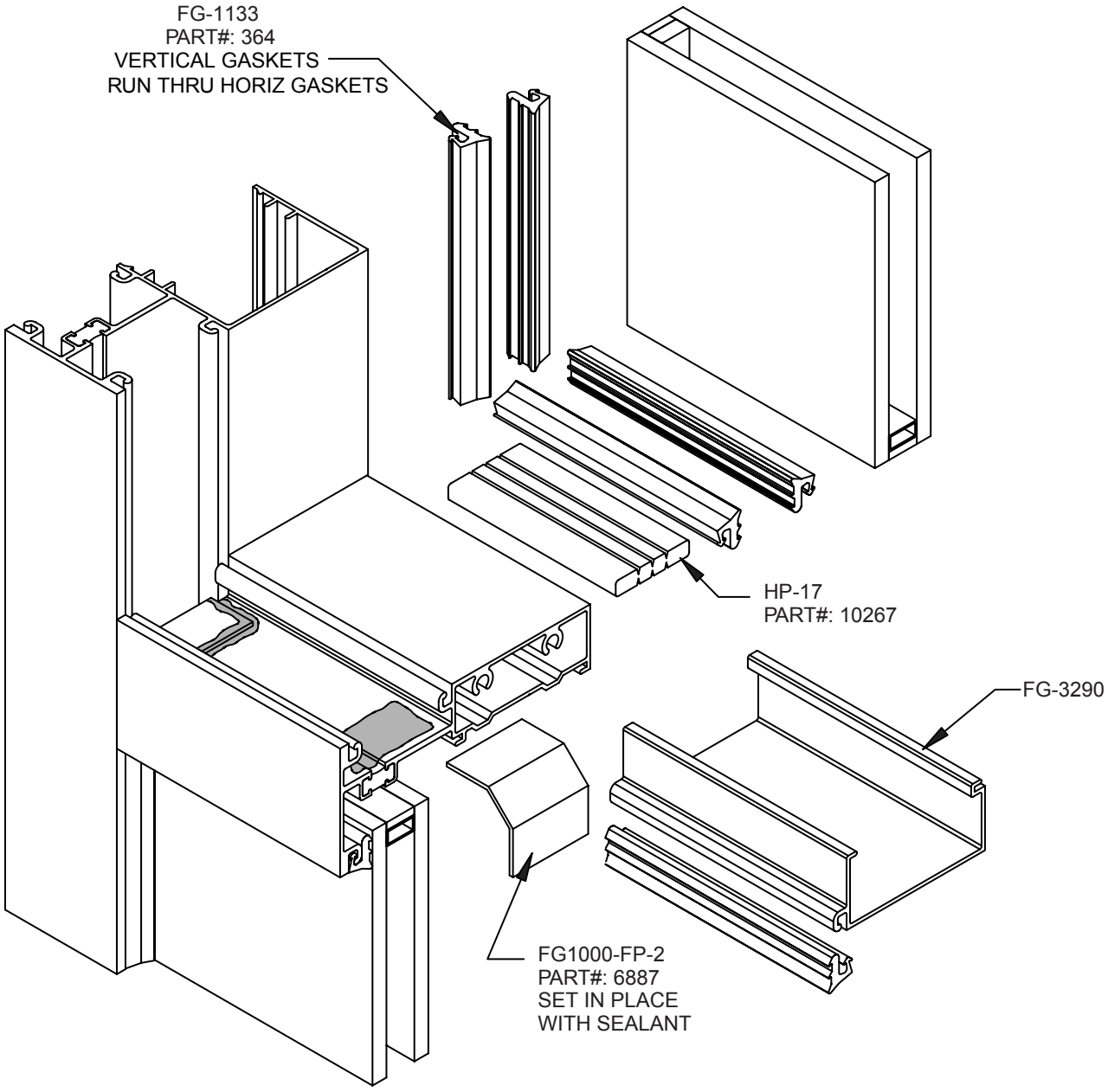


DETAIL "B"

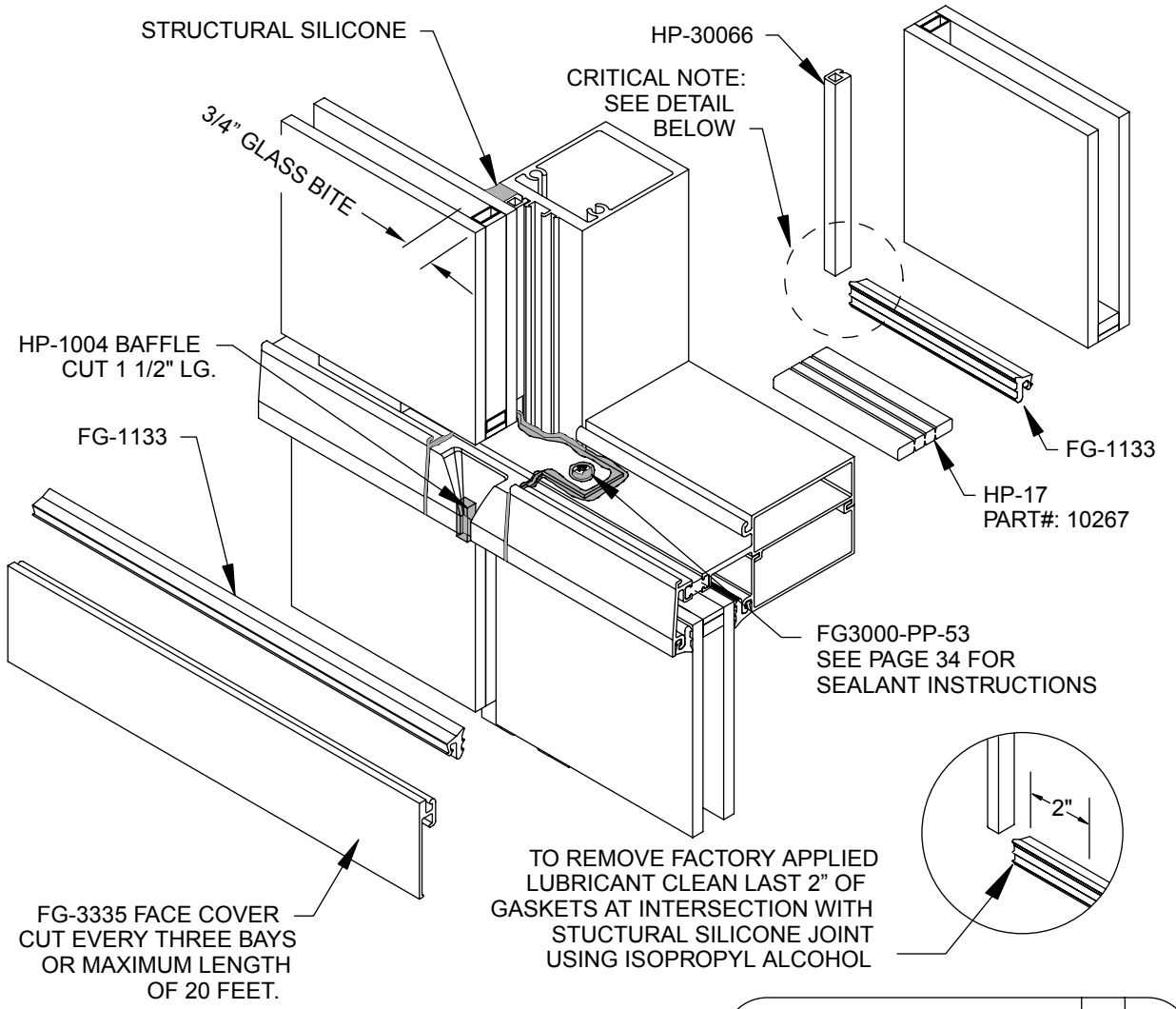
INSIDE GLAZED, CENTER SET
GLAZING DETAIL

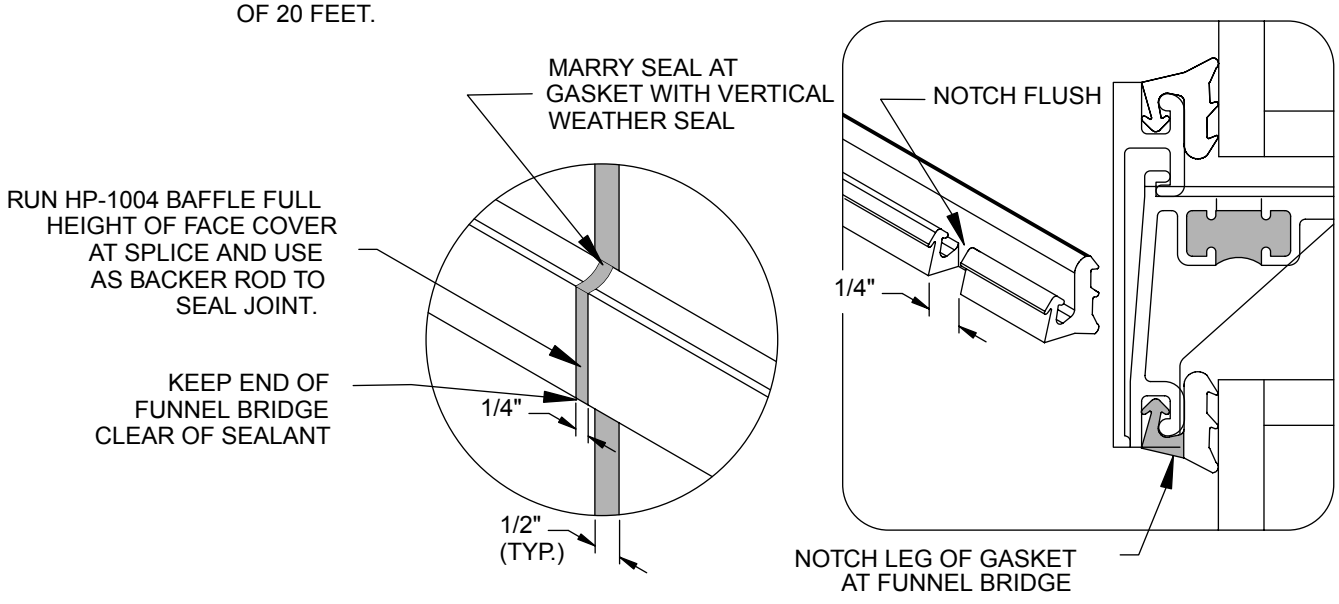


INSIDE GLAZED, FRONT SET
GLAZING DETAIL

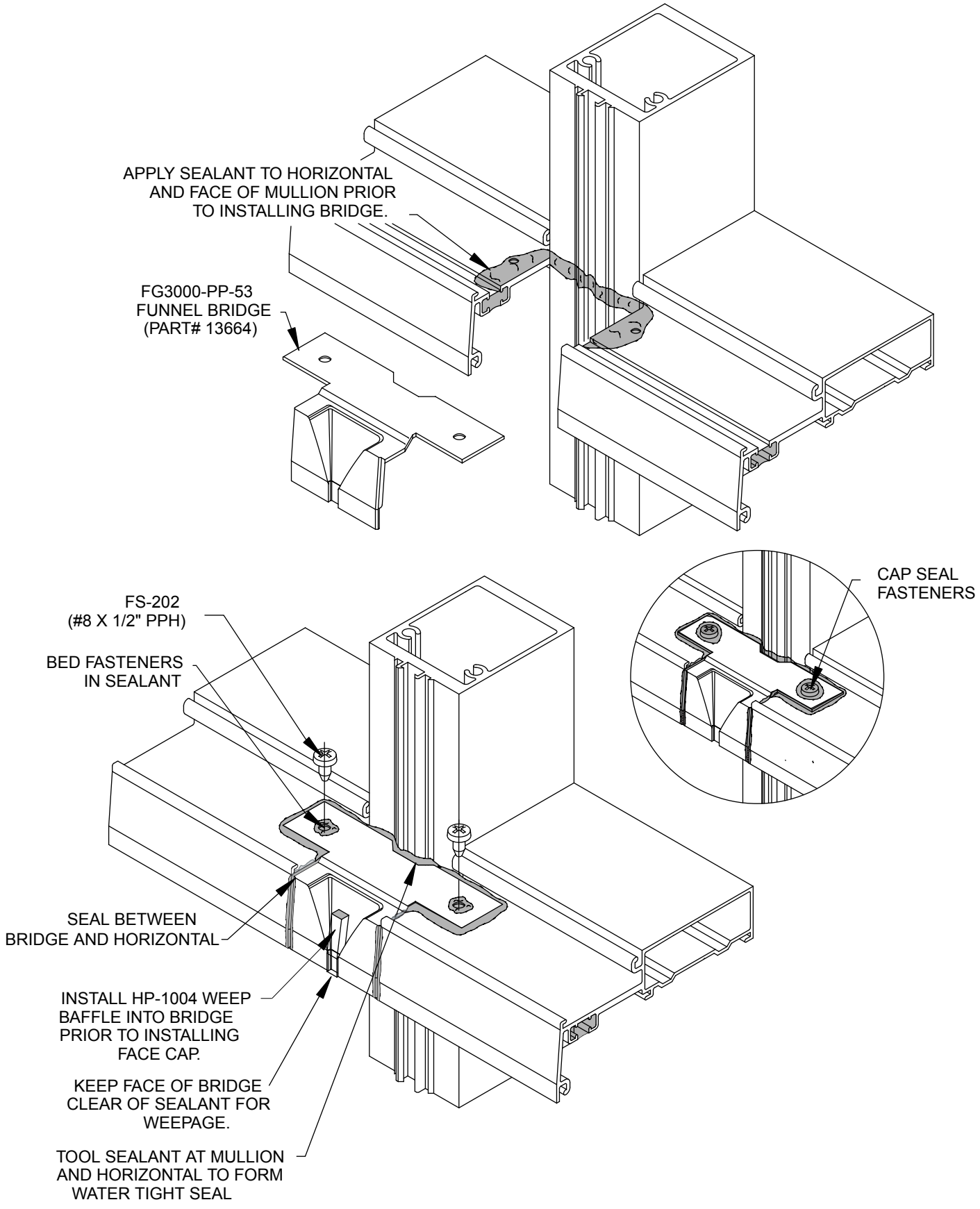


INSIDE GLAZED, FRONT SET
SSG GLAZING DETAIL

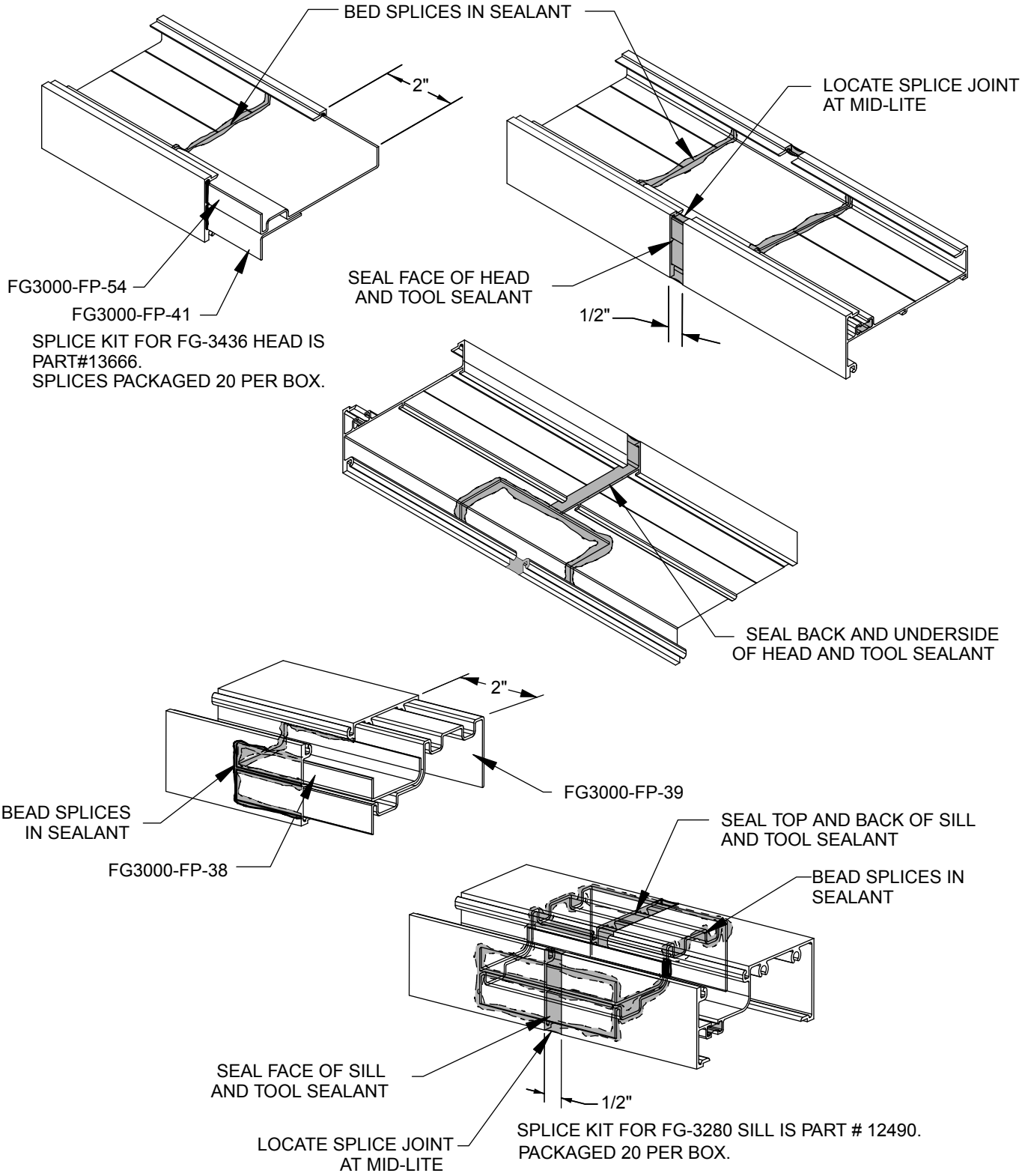




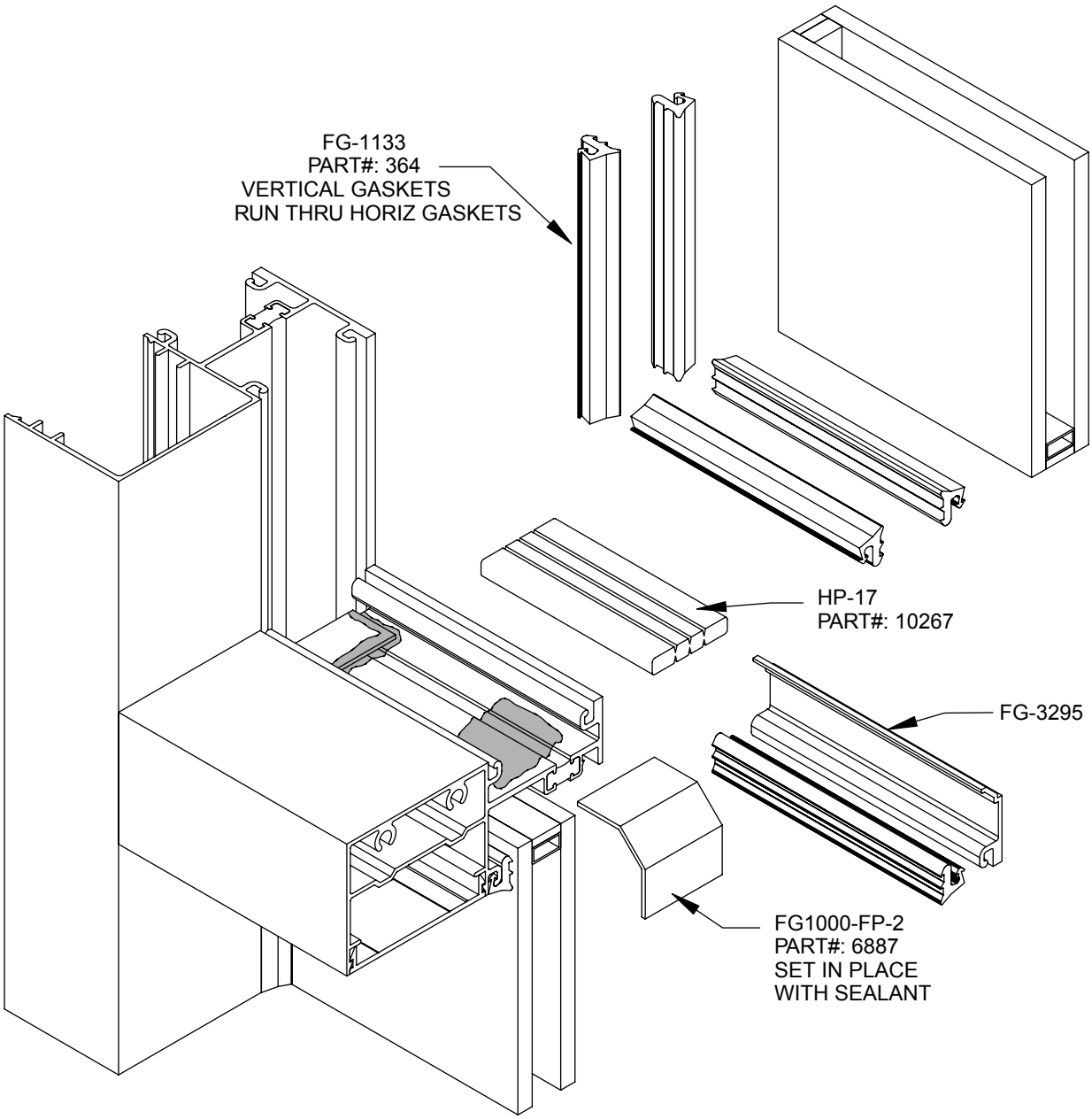
BRIDGE INSTALLATION FOR MULTIPLANE SSG



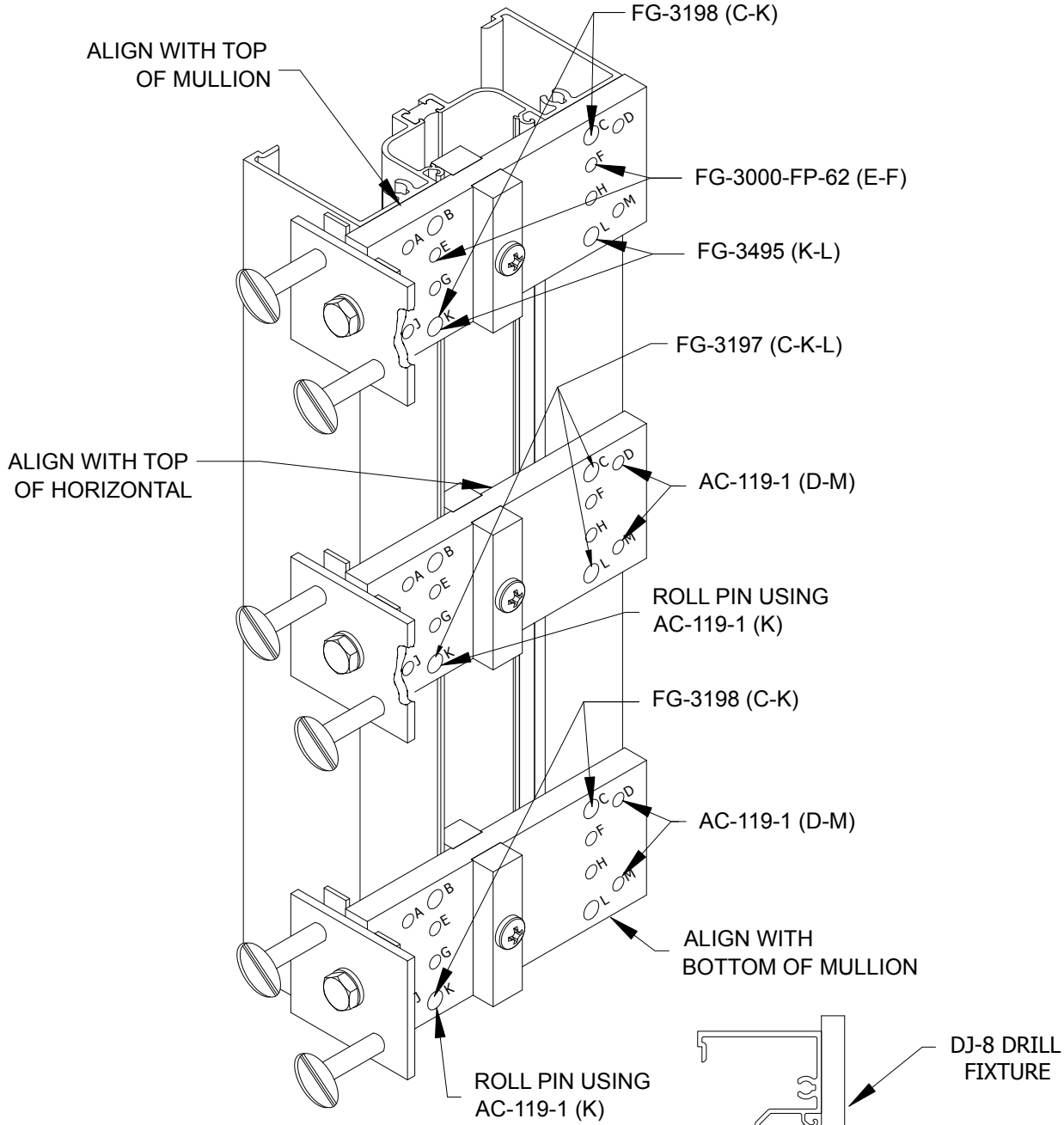
HEAD & SILL SPLICE INSTALLATION FOR SSG SYSTEM



INSIDE GLAZED, BACK SET
GLAZING DETAIL



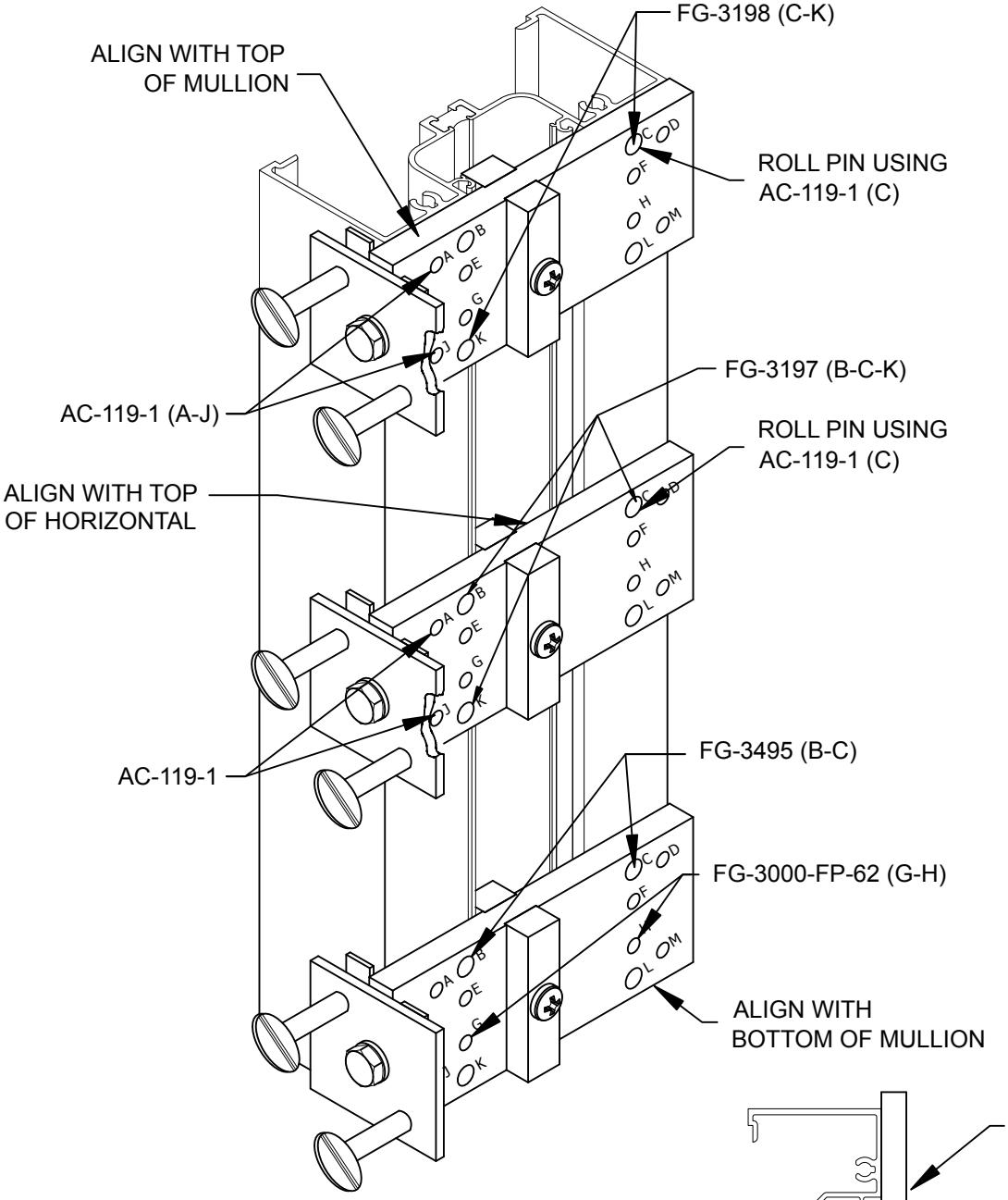
OUTSIDE GLAZED, CENTER SET MULLION FABRICATION USING DRILL FIXTURE

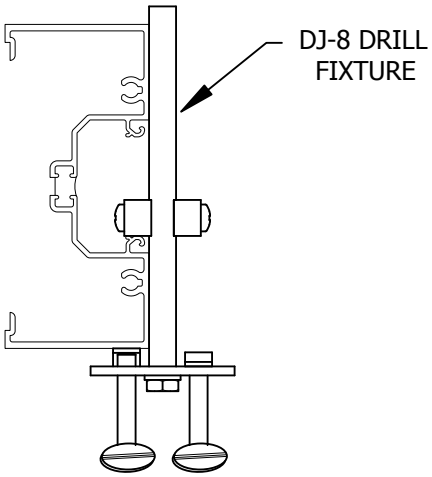


REFERENCE FRONT SET ASSEMBLY DRAWINGS FOR ADDITIONAL INFORMATION, SEALANT APPLICATION AND EXTRUSIONS.

NOTES:
1) DRILL HOLES FOR SCREWSPLINES USING A "F" (.257 Ø) DRILL
2) DRILL HOLES FOR ROLL PINS USING A "F" (.257 Ø) DRILL
3) DRILL HOLES FOR SHEAR BLOCKS USING #11 (.191Ø) DRILL

INSIDE GLAZED, CENTER SET MULLION FABRICATION USING DRILL FIXTURE

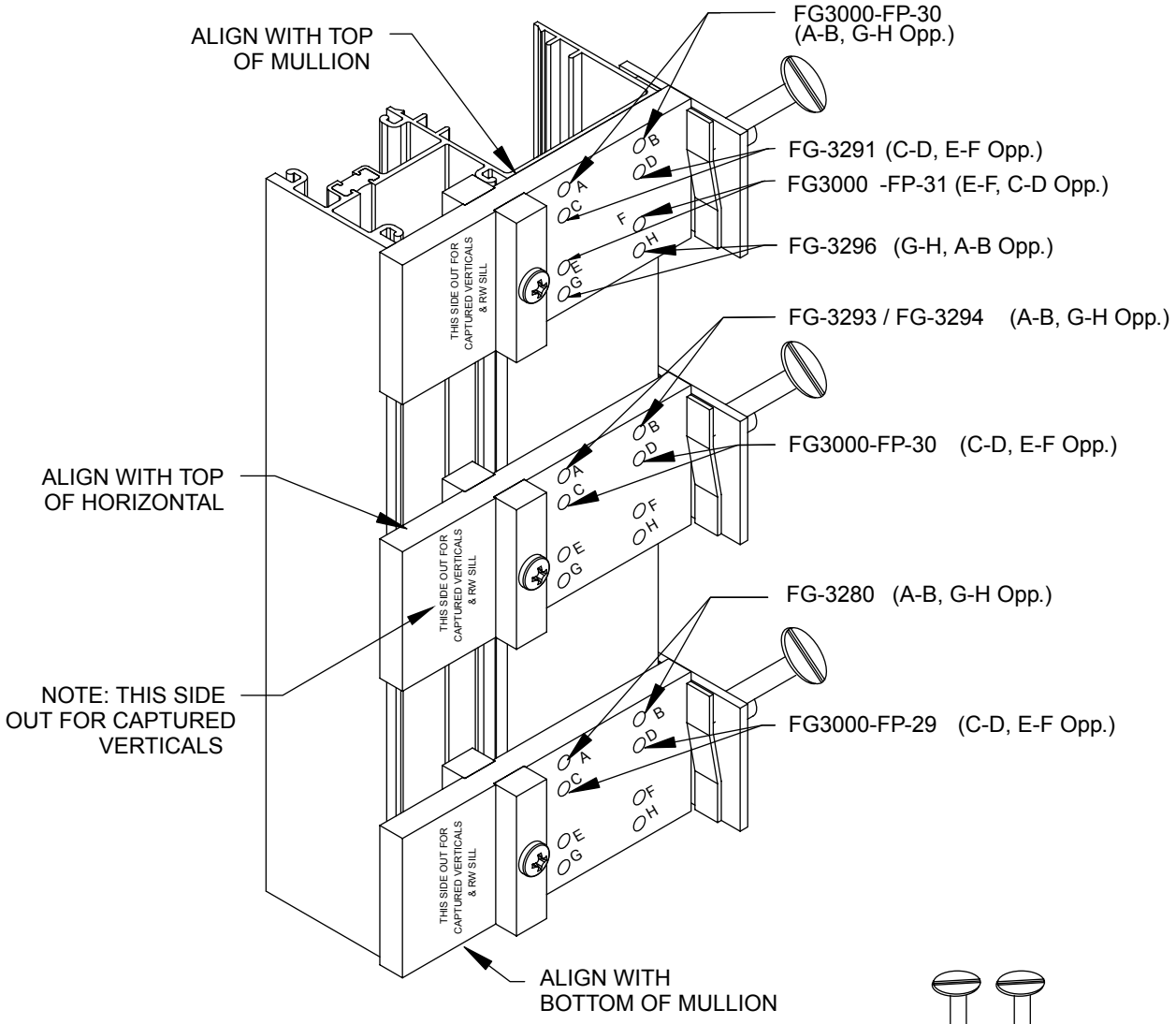


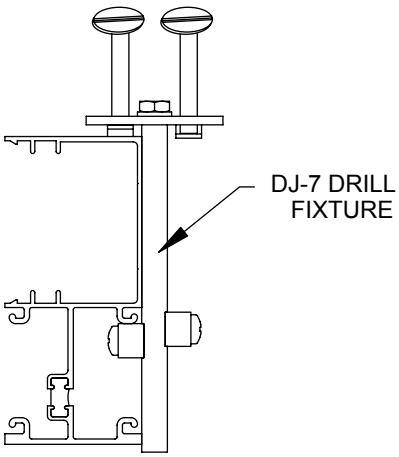


REFERENCE FRONT SET ASSEMBLY DRAWINGS FOR ADDITIONAL INFORMATION, SEALANT APPLICATION AND EXTRUSIONS.

NOTES:
1) DRILL HOLES FOR SCREWSPLINES USING A "F" (.257 Ø) DRILL
2) DRILL HOLES FOR ROLL PINS USING A "F" (.257 Ø) DRILL
3) DRILL HOLES FOR SHEAR BLOCKS USING #11 (.191Ø) DRILL

FRONT SET MULLION
FABRICATION USING DRILL FIXTURE

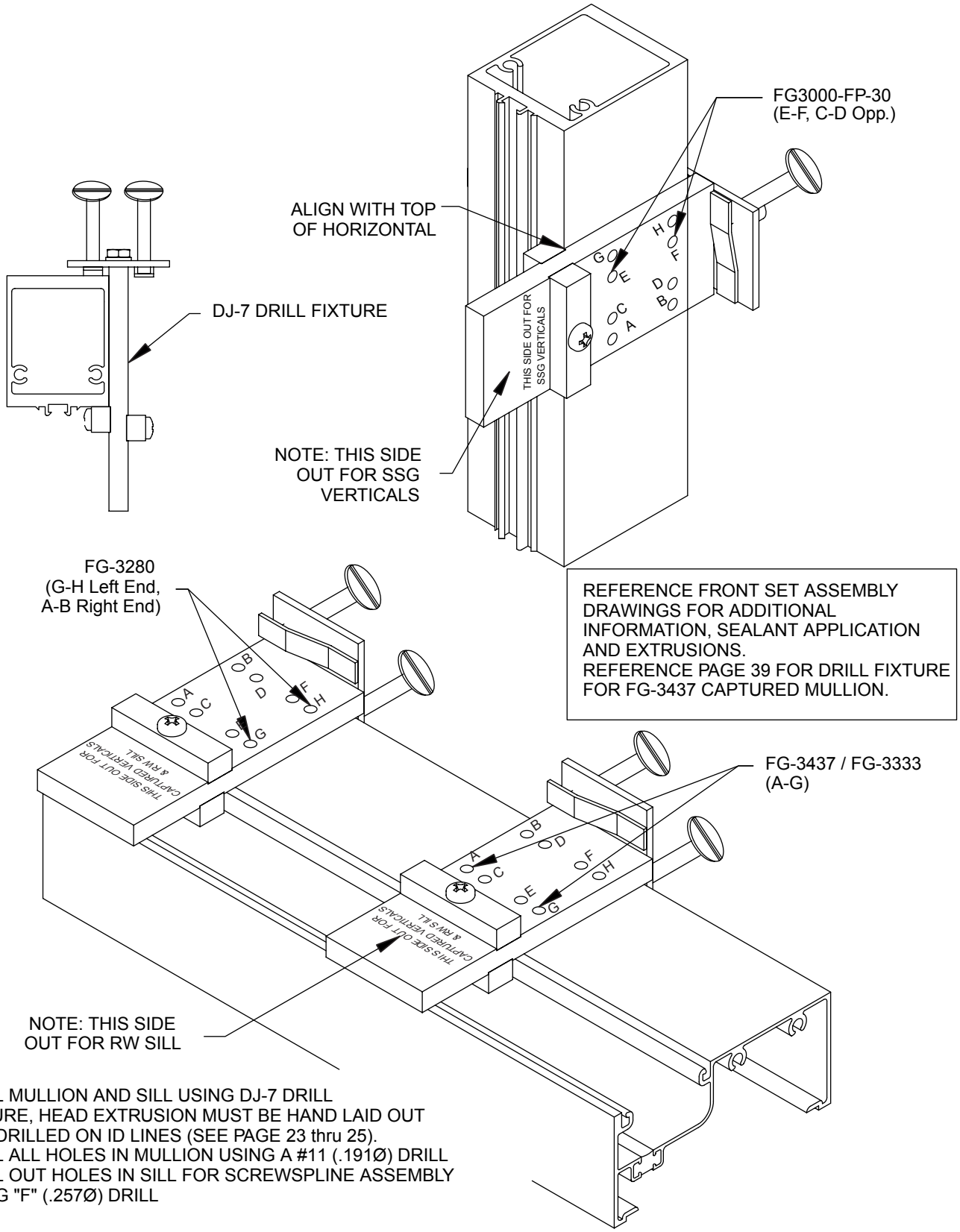




REFERENCE FRONT SET ASSEMBLY DRAWINGS FOR ADDITIONAL INFORMATION, SEALANT APPLICATION AND EXTRUSIONS.

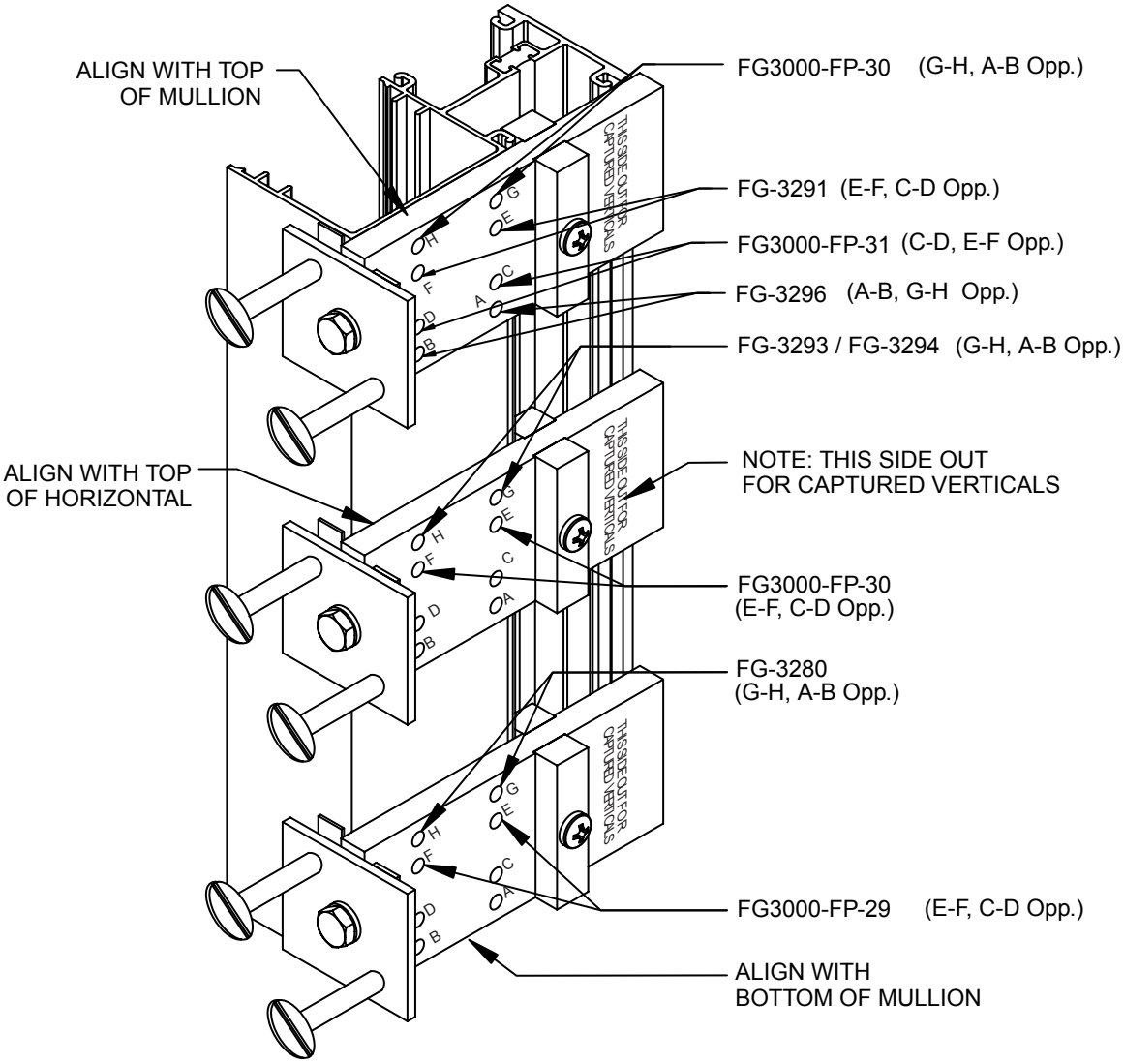
NOTES:
1) DRILL ALL HOLES USING #11 (.191Ø) DRILL
2) SHEAR BLOCK CONNECTIONS DRILL WITH #11 (.191Ø) DRILL
3) SCREWSPLINE CONNECTIONS DRILL OUT HOLES USING "F" (.257Ø) DRILL

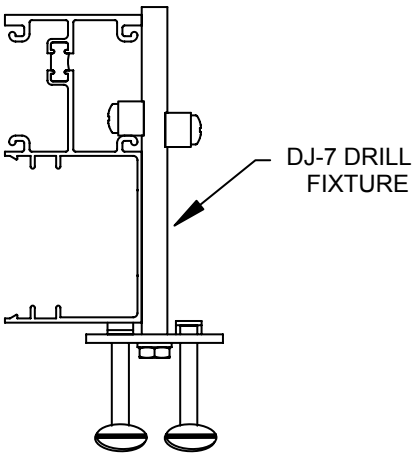
SSG FABRICATION
USING DRILL FIXTURE



NOTES:
1) DRILL MULLION AND SILL USING DJ-7 DRILL FIXTURE, HEAD EXTRUSION MUST BE HAND LAID OUT AND DRILLED ON ID LINES (SEE PAGE 23 thru 25).
1) DRILL ALL HOLES IN MULLION USING A #11 (.191Ø) DRILL
2) DRILL OUT HOLES IN SILL FOR SCREWSPLINE ASSEMBLY USING "F" (.257Ø) DRILL

BACK SET MULLION
FABRICATION USING DRILL FIXTURE

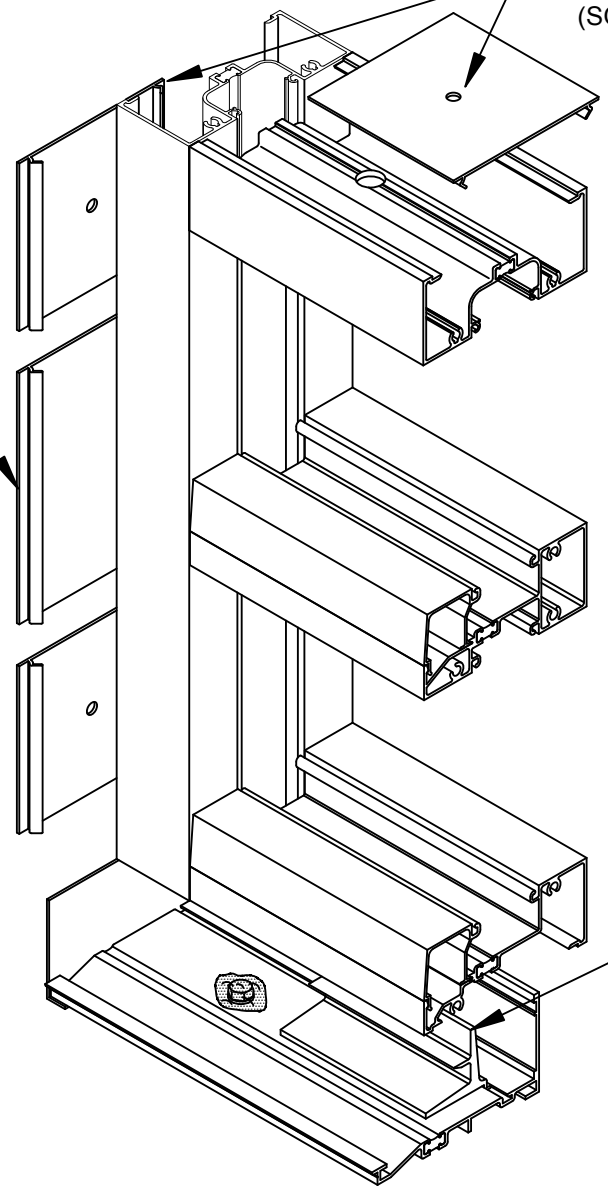




REFERENCE FRONT SET ASSEMBLY DRAWINGS FOR ADDITIONAL INFORMATION, SEALANT APPLICATION AND EXTRUSIONS.

NOTES:
1) DRILL ALL HOLES USING #11 (.191Ø) DRILL
2) SHEAR BLOCK CONNECTIONS DRILL WITH #11 (.191Ø) DRILL
3) SCREWSPLINE CONNECTIONS DRILL OUT HOLES USING "F" (.257Ø) DRILL

FRAME INSTALLATION



NOTES:

1) WHEN USING OPTIONAL FG-3413 SILL RECEPTOR, SILL ANCHORS ARE NOT REQUIRED.

2) ANCHOR SIZE AND FREQUENCY SHOULD BE DETERMINED BY STRUCTURAL REQUIREMENTS.

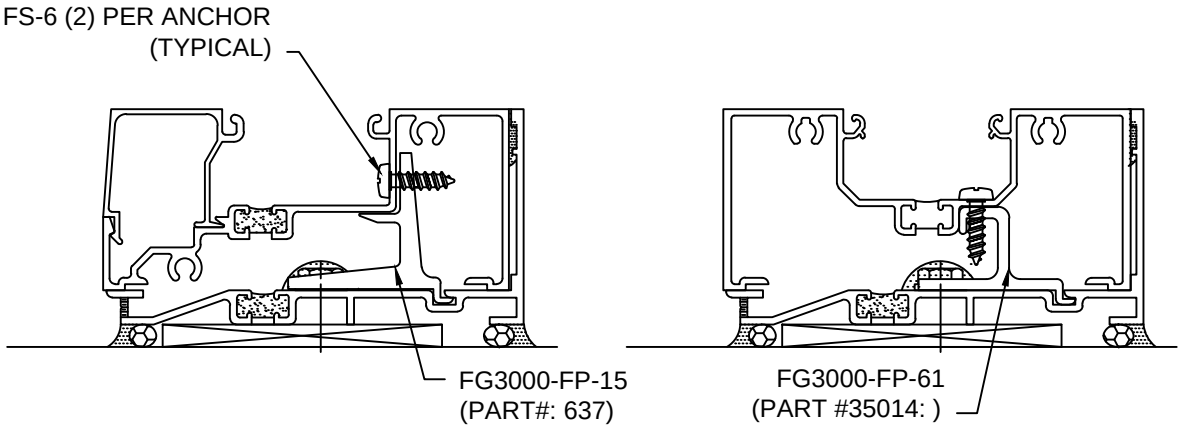
3) SILL AND HEAD ANCHORS SHOULD BE LOCATED SO THAT THE ANCHOR IS NOT MORE THAN 4" AWAY FROM EACH SIDE OF MULLION.

4) ASSEMBLY WITHOUT FLASHING IS NOT RECOMMENED.

5) ASSEMBLY USING A NON-THERMAL OR SHEET METAL FLASHING WILL RESULT IN LOSS OF THERMAL CONTINUITY AND IS NOT RECOMMENDED.

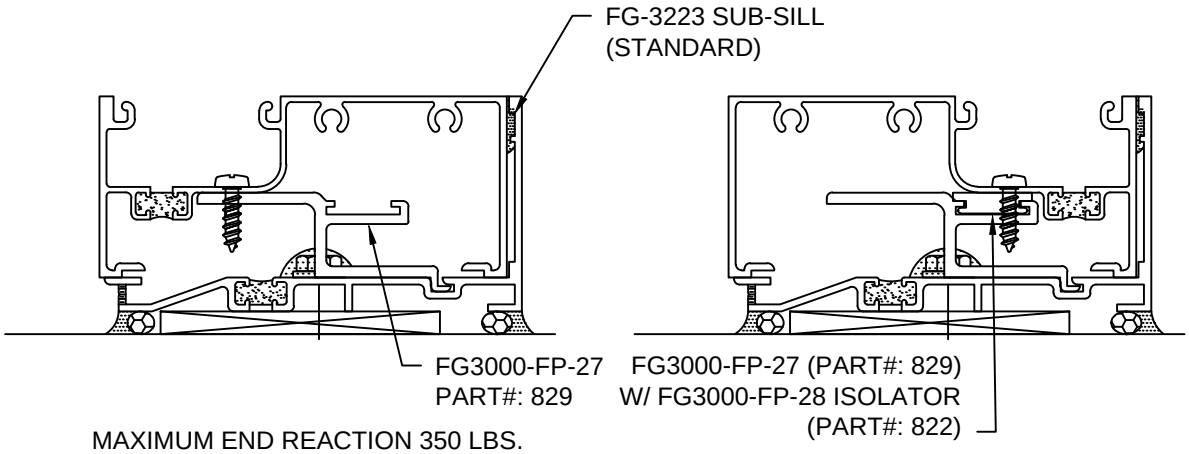
6) DO NOT ANCHOR WALL THROUGH VERTICAL LEG OF SUB-SILL.

SILL ANCHORS



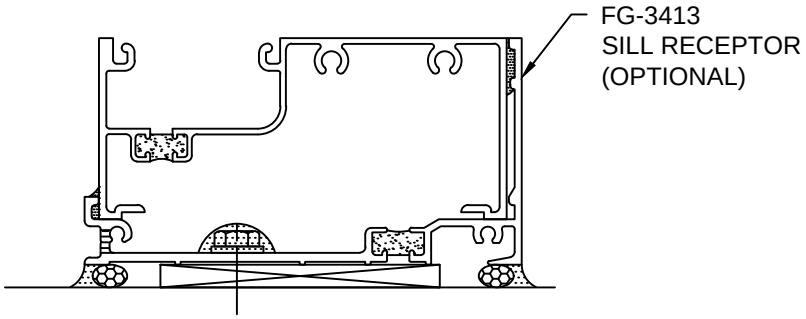
MAXIMUM END REACTION 600 LBS.

MAXIMUM END REACTION 400 LBS.



MAXIMUM END REACTION 350 LBS.

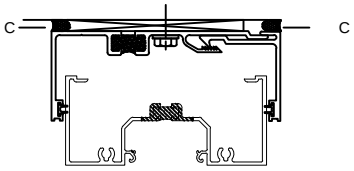
MAXIMUM END REACTION 350 LBS.



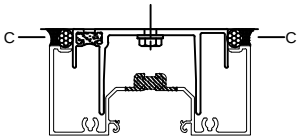
OPTIONAL SILL, MAY BE USED WITH
CENTER, FRONT OR BACK SET SYSTEMS.
NO SILL ANCHOR REQUIRED

MAXIMUM END REACTION 600 LBS.

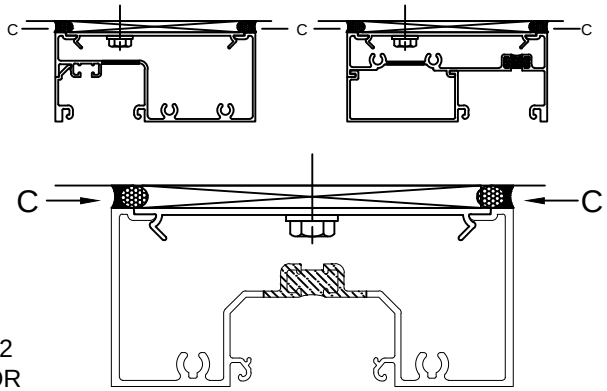
OUTSIDE GLAZED
ANCHORAGE AND PERIMETER SEAL

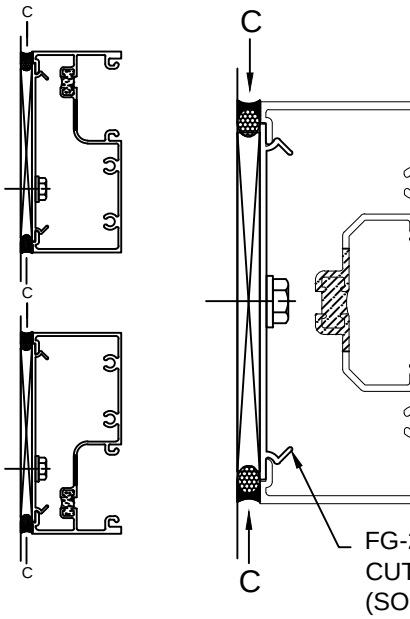


OPTIONAL MO-678/MO-244 HEAD RECEPTOR MAXIMUM END REACTION OF 450 LBS.



OPTIONAL FG3000-FP-52 ANCHOR, AVAILABLE FOR CENTER SET SYSTEM ONLY. MAXIMUM END REACTION OF 600LBS.

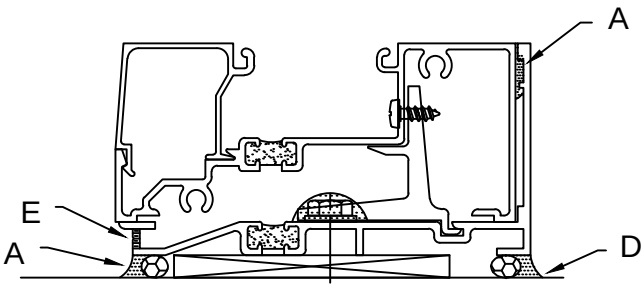




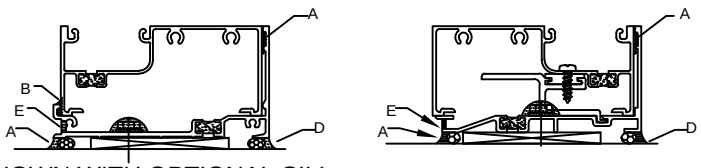
APPLY SEALANT ALONG LENGTH OF SILL FLASHING AT POINT (A).

WHEN USING OPTIONAL FG-3413 SILL RECEPTOR: ONCE THE WALL IS SECURED, APPLY FILLET SEAL BETWEEN SILL FLASHING AND FRONT OF SILL (B).

THE QUALITY OF THE INSIDE AND OUTSIDE PERIMETER SEALS (C) MAY BE IMPROVED BY USING FG-2188 RIGID PVC FILLER. THE PART MAY BE USED IN FULL LENGTHS OR CUT INTO PIECES. ITS PURPOSE IS TO PROVIDE SUPPORT FOR THE BACKER ROD REGARDLESS OF JOINT SIZE. INTERIOR PERIMETER SEAL AT SILL (D) IS FOR COSMETIC PURPOSES AND IS OPTIONAL.

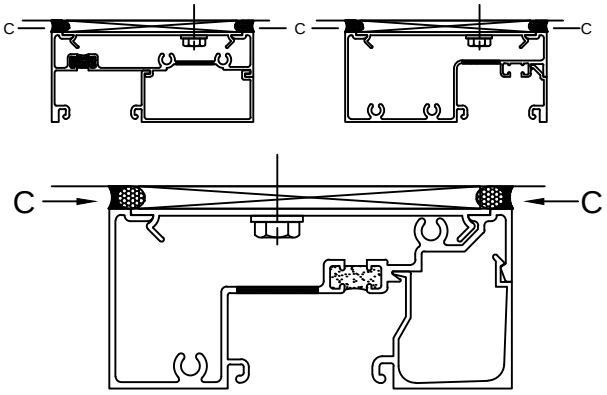


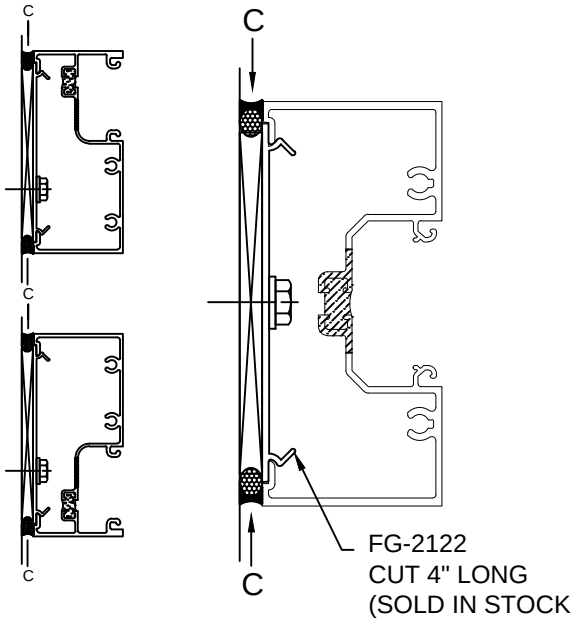
NOTE: 5/16" WEEP HOLES REQUIRED IN FLASHING (E) AT MID-LITE.



SHOWN WITH OPTIONAL SILL

INSIDE GLAZED
ANCHORAGE AND PERIMETER SEAL



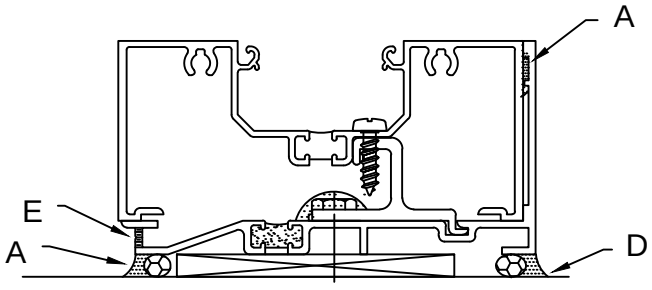


APPLY SEALANT ALONG LENGTH OF SILL FLASHING AT POINT (A).

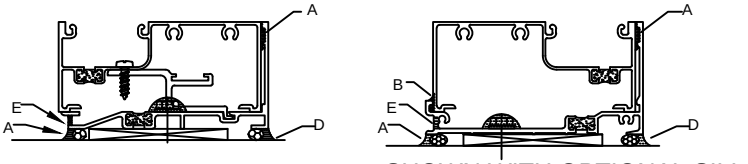
WHEN USING OPTIONAL FG-3413 SILL RECEPTOR: ONCE THE WALL IS SECURED, APPLY FILLET SEAL BETWEEN SILL FLASHING AND FRONT OF SILL (B).

THE QUALITY OF THE INSIDE AND OUTSIDE PERIMETER SEALS (C) MAY BE IMPROVED BY USING FG-2188 RIGID PVC FILLER. THE PART MAY BE USED IN FULL LENGTHS OR CUT INTO PIECES. ITS PURPOSE IS TO PROVIDE SUPPORT FOR THE BACKER ROD REGARDLESS OF JOINT SIZE. INTERIOR PERIMETER SEAL AT SILL (D) IS FOR COSMETIC PURPOSES AND IS OPTIONAL.

FOR SSG INSTALLATION ONLY. INTERIOR PERIMETER SEALS "C" & "D" ARE FOR COSMETIC PURPOSES AND ARE OPTIONAL.

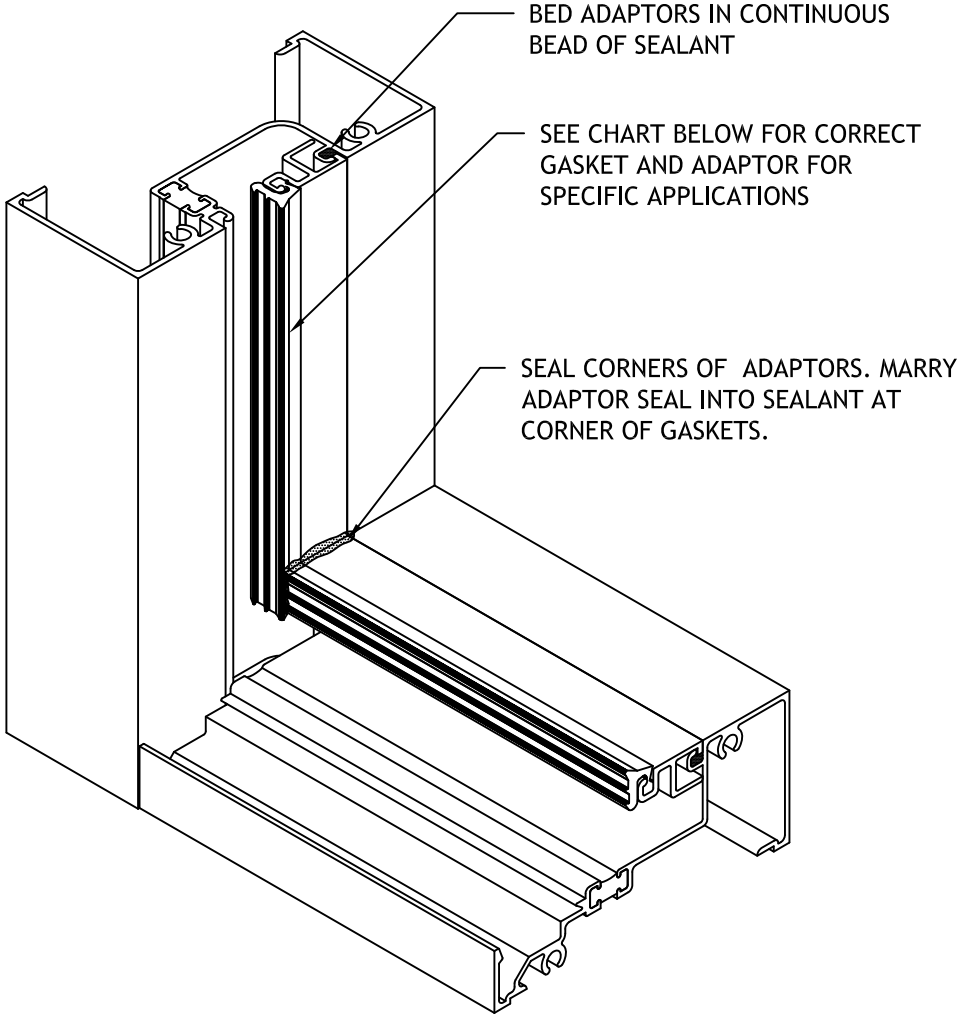


NOTE: 5/16" WEEP HOLES REQUIRED IN FLASHING (E) AT MID-LITE.



SHOWN WITH OPTIONAL SILL

GLAZING ADAPTOR INSTALLATION



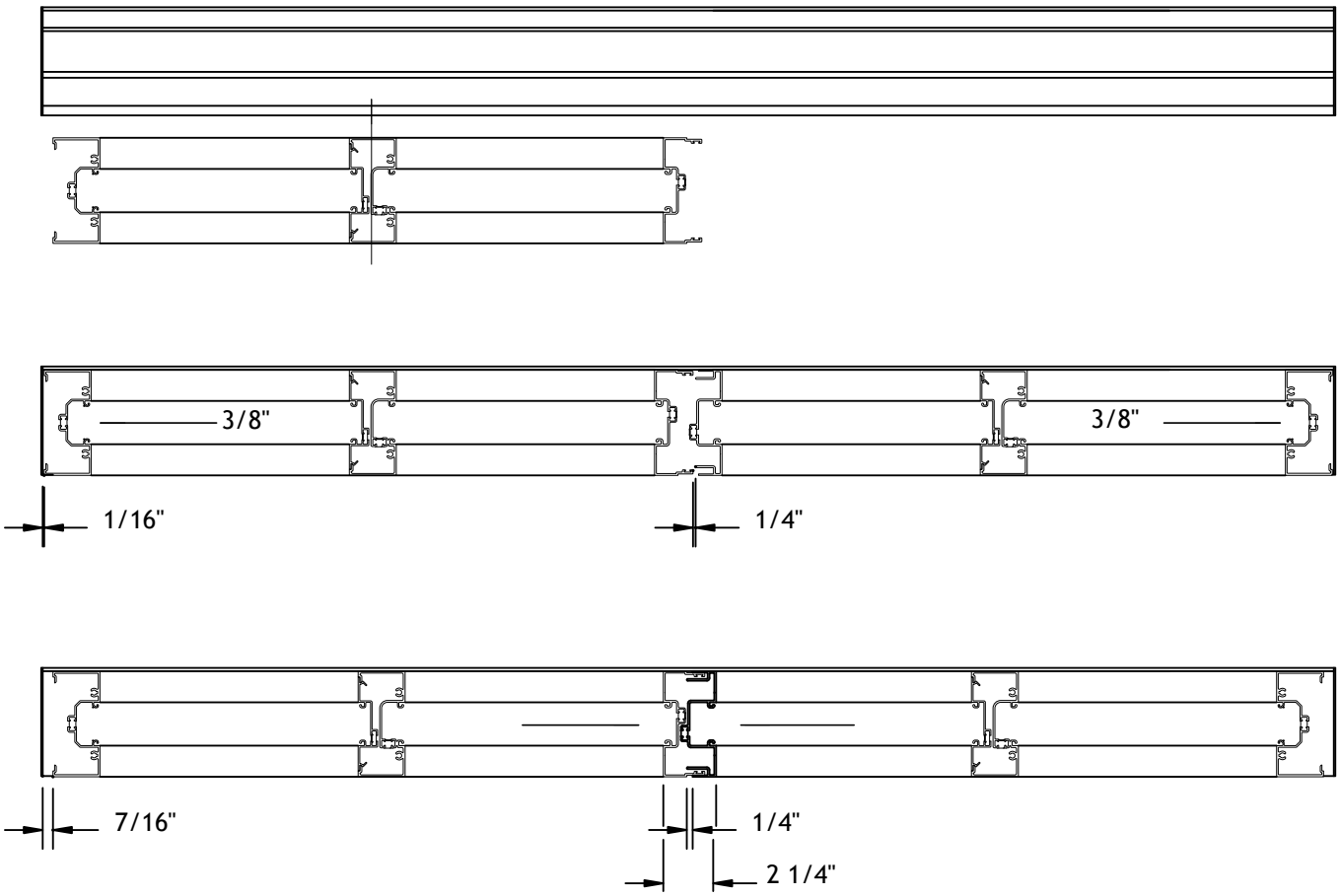
NOTE:
ADAPTORS SHOULD BE INSTALLED ON INTERIOR SIDE OF ALL GLAZING OPTIONS.

GLASS	ADAPTOR	GASKETS	GLASS	ADAPTOR	GASKETS
1/4"	FG-3194	FG-1133 Both Sides	11/16"	FG-3237	FG-1133 & FG-1134
5/16"	FG-3236	FG-5125 Both Sides	3/4"	FG-3237	FG-1134 Both Sides
3/8"	FG-3236	FG-1133 & FG-5125	13/16"	N/A	Not Available
7/16"	FG-3236	FG-1133 Both Sides	7/8"	None	FG-5125 Both Sides
1/2"	FG-3237	FG-5125 Both Sides	15/16"	None	FG-1133 & FG-5125
9/16"	FG-3237	FG-1133 & FG-5125	1"	None	FG-1133 Both Sides
5/8"	FG-3237	FG-1133 Both Sides	1 1/16"	None	FG-1133 & FG-1134
5/8"	NONE	FG-3129 Both Sides	1 1/8"	None	FG-1134 Both Sides

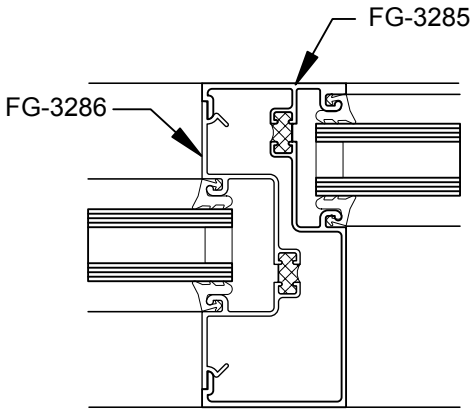
EXPANSION MULLION INSTALLATION

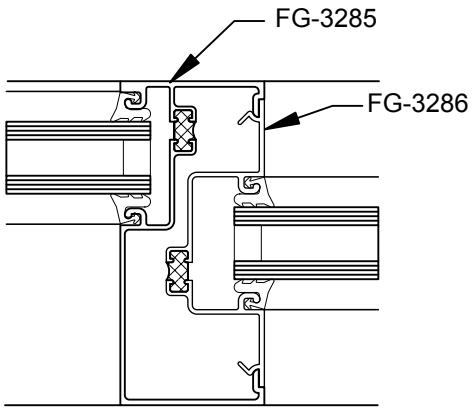
The example below shows installation of the center set system, options for front or back set are also available. Please reference price catalog for specific extrusions and anchors required for your installation. Please note the locations of various seals and insure proper locations of these seals when installing typical runs and expansion sections of each of these systems. These seals are shown in the sub-sill installation and assembly sections of this manual. The sub-sills for these products are designed so that sill anchors may be properly sealed prior to frame installation. The frame is either installed over the hook-in anchors or dropped into the sill receptor. This prevents any additional fasteners from penetrating the sill and potentially causing leaks from under the sill. Be sure to properly cap seal all sill anchors prior to beginning installation of frames.

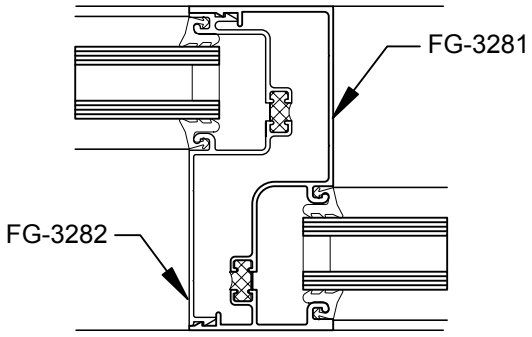
Multiple units may require the use of an expansion mullion if total run exceeds 24 feet in length. When elevation exceeds the 24 foot limit, locate expansion mullions at a distance of no more than every 20 feet. Locate splice in sub-sill at a distance of no more than every 12 feet. A minimum of 7/16" clearance between the jamb and sill end dam must be provided at each end of units when using expansion mullions. This will allow the minimum 3/8" clearance to move the units side ways so that the second unit may be rotated into position and interlocked into first unit. Once in position units should be centered into opening to provide equal joints at the jambs. OBE recommends the use of the FG-2188 PVC filler in the jambs and head to improve the perimeter seal.

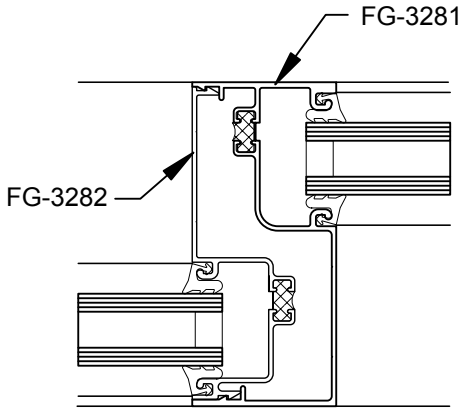


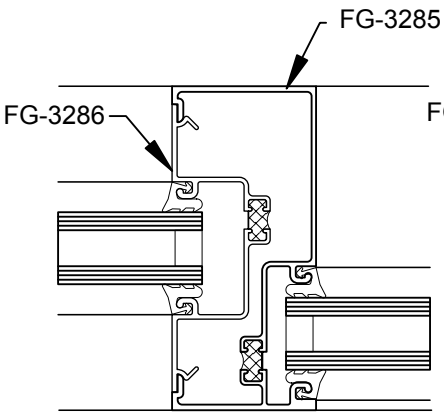
OPTIONAL VERTICALS FOR MULTI-POSITION GLASS

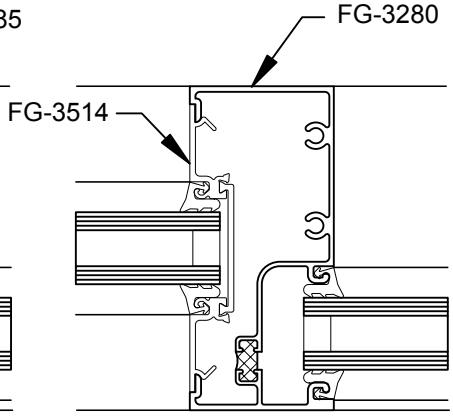


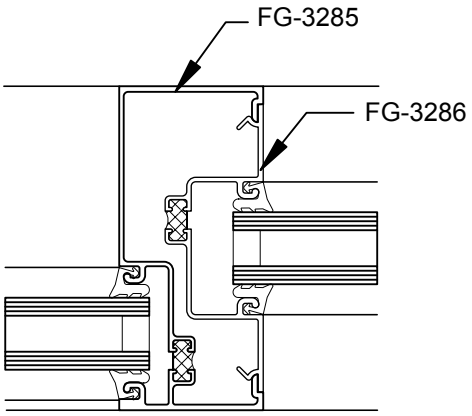




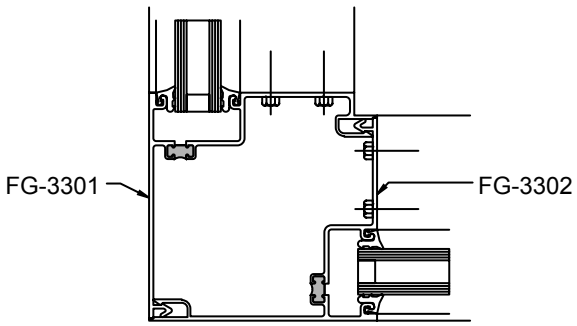




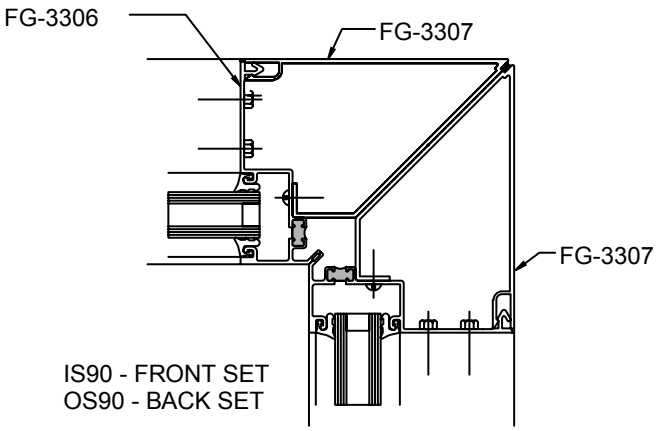




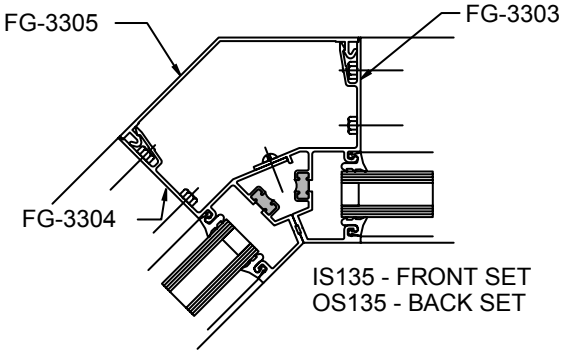
CORNER DETAILS



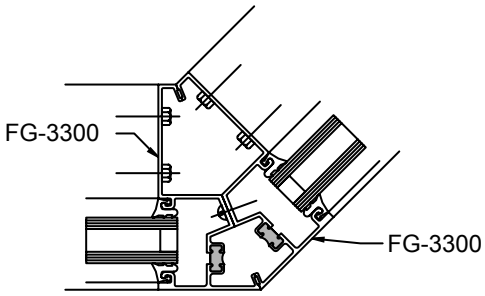
OS90 - FRONT SET
IS90 - BACK SET



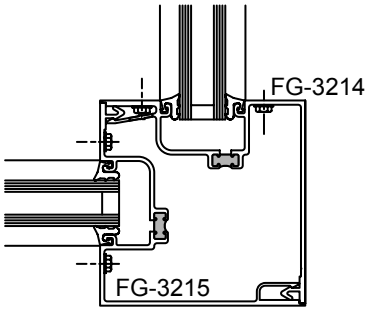
IS90 - FRONT SET
OS90 - BACK SET



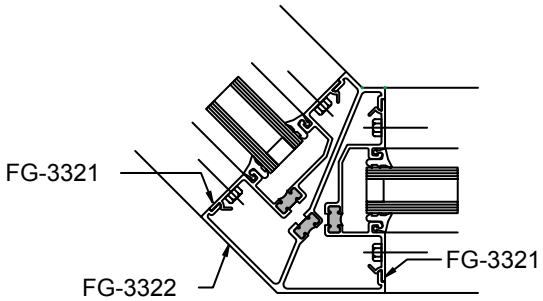
IS135 - FRONT SET
OS135 - BACK SET



OS135 - FRONT SET
IS135 - BACK SET

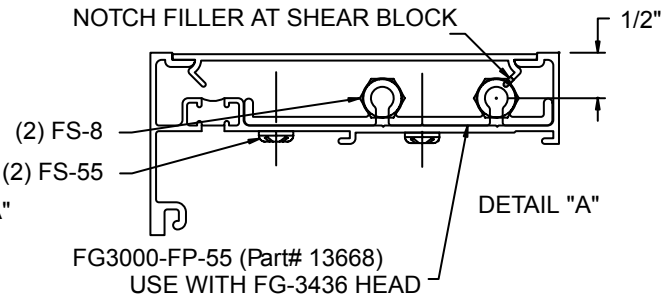


OS90 OR IS90 -
CENTER SET



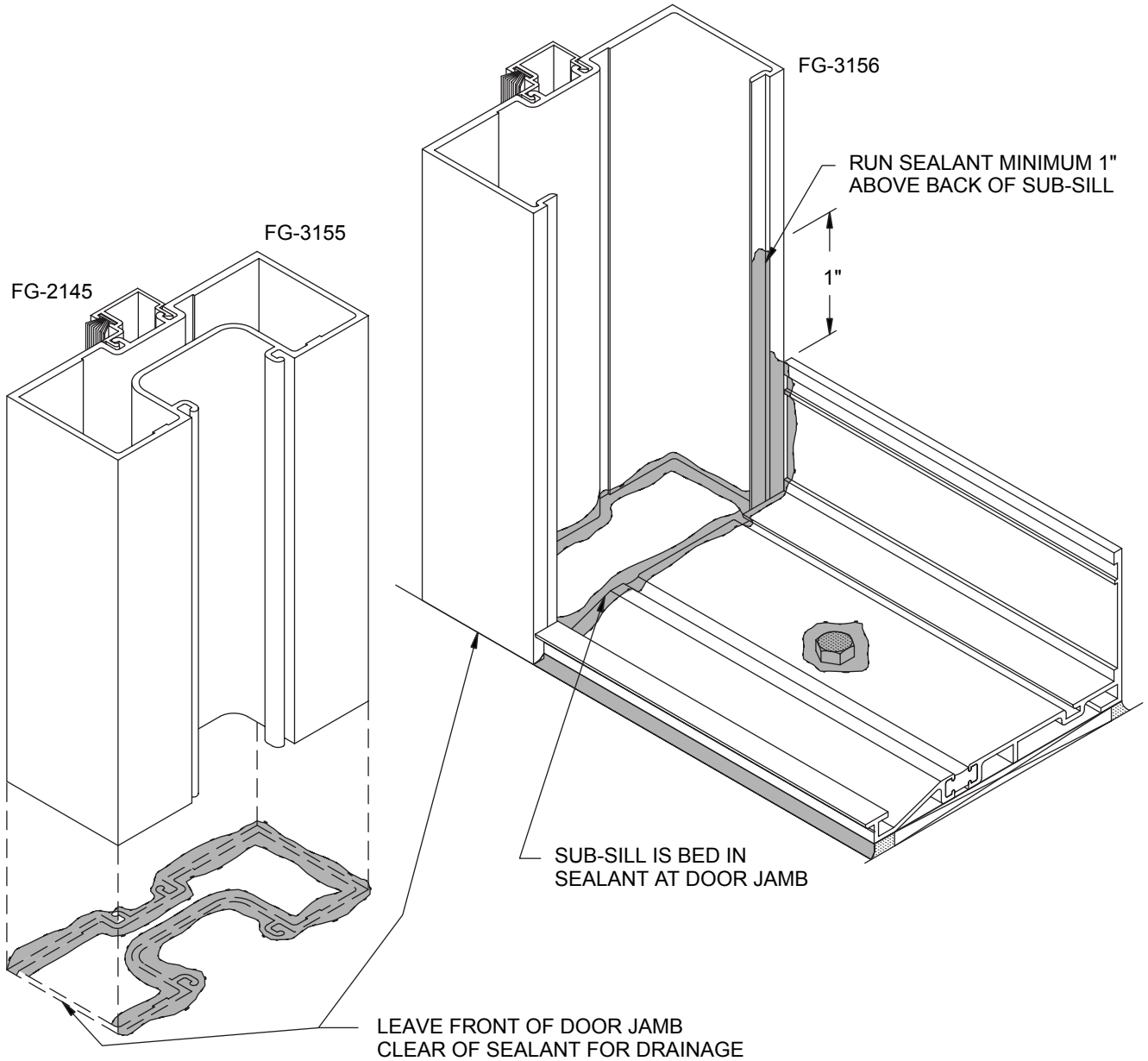
OS135 OR IS135 -
CENTER SET

NOTE: WHEN USING ALL CORNER ASSEMBLIES WITH SSG SYSTEM APPLICATIONS, THE CORNER WILL RUN THROUGH. ATTACH USING CONNECTIONS SHOWN IN FABRICATION AND ASSEMBLY SECTION OF THIS MANUAL. SPECIAL SHEAR BLOCK FOR HEAD IS SHOWN IN DETAIL "A" ON THIS PAGE.



FG3000-FP-55 (Part# 13668)
USE WITH FG-3436 HEAD

DOOR FRAME INSTALLATION



NOTES:

1) USE SHEAR BLOCKS AS SHOWN IN FRAME ASSEMBLY SECTION OF THIS MANUAL TO SECURE HORIZONTALS TO TUBULAR FRAMES.

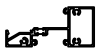
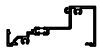
2) DOOR FRAME IS ANCHORED BY FASTENERS THROUGH THRESHOLD AND DOOR FRAME HEADER.

3) DO NOT FABRICATE STANDARD 2 PIECE POUR & DEBRIDGED FRAME EXTRUSIONS FOR DOOR FRAMES. IF THERMAL FRAME IS REQUIRED,OPTIONAL THERMAL DOOR FRAME FG-3389 OR FG-3444 MAY BE USED IN CONJUNCTION WITH THERMAL DOORS.

4) WHEN USING THE CENTER SET SYSTEM, THE TWO-PIECE OR TUBULAR FRAMING OPTION ARE AVAILABLE AS SHOWN ABOVE. WHEN USING EITHER THE FRONT SET OR BACK SET SYSTEM ONLY THE TUBULAR OPTION IS AVAILABLE. THE VERTICAL FOR THE FRONT OR BACK SET OPTIONS IS FG-3287.

PARTS LIST

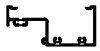
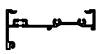
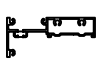
SERIES 3000 MULTIPLANE CENTER SET

FG-3495	Open Back Head / Jamb / Mullion
FG-3595	Open Back Heavy Mullion
FG-3328	Expansion Mullion (mates w/ FG-3327)
FG-3329	Expansion Mullion (mates w/ FG-3326)
FG-3514	Open Back Filler
 FG-3197	Intermediate Horizontal
 FG-3198	Sill
FG-3144	Glass Stop for FG-3197, FG-3198 & FG-3320
FG-3210	Heavy Glass Stop for Inside Glazing

SERIES 3000 MULTIPLANE SILL FLASHING

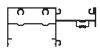
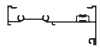
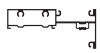
FG-3223	Sub-Sill
FG-3413	Sill Receptor

SERIES 3000 THERMAL FRONT SET

FG-3280	Open Back Jamb & Sill
FG-3283	Open Back Mullion
FG-3297	Open Back Heavy Mullion
FG-3326	Expansion Mullion (mates w/ FG-3327)
FG-3327	Expansion Mullion (mates w/ FG-3326)
FG-3284	Open Back Filler (Mullion & Horizontal)
 FG-3296	Outside Glazed Head
FG-3294	Outside Glazed Horizontal
FG-3295	Face Stop for FG-3294 & FG-3296
 FG-3291	Inside Glazed Head
 FG-3293	Inside Glazed Horizontal
FG-3290	Glass Stop for FG-3291 & FG-3293

PARTS LIST

SERIES 3000 THERMAL MULTIPLANE BACK SET

FG-3280	Open Back Jamb & Sill
FG-3283	Open Back Mullion
FG-3297	Open Back Heavy Mullion
FG-3326	Expansion Mullion (mates w/ FG-3327)
FG-3327	Expansion Mullion (mates w/ FG-3326)
FG-3284	Open Back Filler (Mullion & Horizontal)
FG-3296	Inside Glazed Head
 FG-3294	Inside Glazed Horizontal
FG-3295	Face Stop for FG-3294 & FG-3296
 FG-3291	Outside Glazed Head
 FG-3293	Outside Glazed Horizontal
FG-3290	Glass Stop for FG-3291 & FG-3293

SERIES 3000 THERMAL MULTIPLANE OPTIONAL VERTICALS

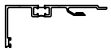
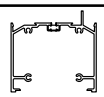
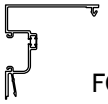
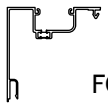
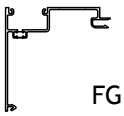
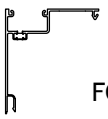
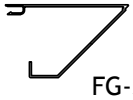
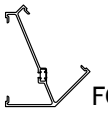
FG-3285	Open Back Mullion-Center Set to Front Set or Back Set
FG-3286	Open Back Filler for FG-3285
FG-3281	Open Back Mullion - Front Set to Back Set or Back Set to Front Set
FG-3282	Open Back Filler for FG-3281

SERIES 3000 THERMAL MULTIPLANE SSG SYSTEM

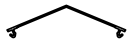
FG-3280	Open Back Jamb & Sill
FG-3333	SSG Mullion
FG-3437	Mullion
FG-3436	Head
FG-3334	Intermediate Horizontal
FG-3335	Face Stop for FG-3334
FG-3290	Glass Stop for FG-3436 & FG-3334

PARTS LIST

SERIES 3000 MULTIPLANE AUXILARY EXTRUSIONS

 MO-678	Head Receptor
MO-244	Receptor Face
 FG-3320	4-13/16" High Sidelight Base
FG-3331	4-5/8" High Sidelight Base (mates w/ FG-3332)
FG-3332	4-5/8" High Sidelight Base (mates w/ FG-3331)
 FG-3214	Center Set 90° Corner
 FG-3215	Center Set 90° Corner (Self-Mating 180°)
 FG-3301	Front Set Outside 90°, Back Set Inside 90° Corner
 FG-3302	Front Set Outside 90°, Back Set Inside 90° Corner (Mates w/ FG-3301)
FG-3306	Front Set Inside 90°, Back Set Outside 90° Corner (2 per corner)
 FG-3307	90° Corner mates w/ FG-3306 (2 per corner)
 FG-3322	Center Set 135° Corner

SERIES 3000 MULTIPLANE AUXILARY EXTRUSIONS

FG-3321	Center Set 135° Corner Filler (2 per corner)
FG-3304	135° Corner mates w/ FG-3303
 FG-3305	135° Filler for FG-3303/FG-3304
FG-3300	Front Set 135°Outside, Back Set Inside 135°Corner (2 per corner)
FG-3303	Front Set 135°Inside, Back Set Outside 135°Corner (2 per corner)
FG-2122	Open Back Filler
FG-2188	Vinyl Filler for Caulk Stop 12' lg.
FG-3126	Pocket Filler
FG-3218	Vinyl Pocket Filler for Window Applications 12' lg.
FG-3194	Glazing Adaptor for 1/4" glass Use with mullions only
FG-3237	Glazing Adaptor for 1/2", 9/16",5/8", 11/16" & 3/4" Use with mullions only
FG-3236	Glazing Adaptor for 5/16", 3/8" & 7/16" Use with mullions only

PARTS LIST

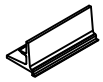
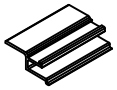
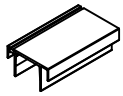
SERIES 3000 MULTIPLANE AUXILIARY EXTRUSIONS

FG-3594	Glazing Adaptor for 1/4" glass Use with FG-3514 filler
FG-3537	Glazing Adaptor for 1/2", 9/16",5/8", 11/16" & 3/4" Use with FG-3514 filler
FG-3536	Glazing Adaptor for 5/16", 3/8" & 7/16" Use with FG-3514 filler

SERIES 3000 MULTIPLANE ACCESSORIES

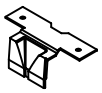
FG1000-FP-2	Water Diverter for Center Set Outside Glazed & all Front Set or Back Set
FG1000-FP-4/5	Water Diverter for Center Set Inside Glazed
FG3000-FP-9/10	Splice for FG-3223
FG3000-FP-4	End Dam for FG-3223
FG3000-FP-47	Splice for FG-3413
FG3000-FP-78	End Dam for FG-3413
FG3000-FP-62	Shear Block for FG-3495
AC-119-1	Shear Block for FG-3197 & FG-3198

SERIES 3000 MULTIPLANE ACCESSORIES

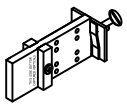
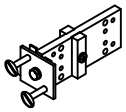
FG3000-FP-29	Shear Block for FG-3280
FG3000-FP-30	Shear Block for FG-3291, FG-3293, FG-3294 & FG-3334
FG3000-FP-56	End Dam for FG-3280 Sill for SSG System
FG3000-FP-31	Shear Block for FG-3296
FG3000-FP-55	Shear Block for FG-3436 Head at Corners
FG3000-FP-61	Anchor for FG-3223 Inside Glazed Center Set
 FG3000-FP-15	Anchor for FG-3223 Outside Glazed Center Set
 FG3000-FP-27	Anchor for FG-3223 Front or Back Set
FG3000-FP-28	Sill Anchor Isolator for Back Set Only (mates w/FG3000-FP-27)
FG3000-FP-32	Anchor for FG-3223 use w/ FG-3332 Sidelight Base
 FG3000-FP-52	Anchor for FG-3231 Head

PARTS LIST

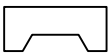
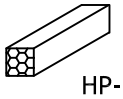
SERIES 3000 MULTIPLANE ACCESSORIES

 FG3000-FP-53	Funnel Bridge for FG-3334
FG3000-FP-41/54	Splices for FG-3436 Head
FG3000-FP-38/39	Splices for FG-3280 Sill

SERIES 3000 MULTIPLANE ACCESSORIES
FASTENERS & DRILL JIGS

FS-6	#10 X 3/4" P.P.H. Attachment of Sill to Sill Anchor & Shear Blocks
FS-7	#10 X 3/4" P.F.H. Attachment of Shear Blocks
FS-8	#14 X 1" H.H.S.T.S. Assembly Screw
FS-55	#10 x 1/2" P.R.H. Attachment of Shear Blocks at Horizontals
FS-202	#8 x 1/2" P.P.H. Attachment of FG3000-FP-53 Bridge
 DJ-7	Drill Fixture for Front or Back Set Shear Block or Screwspline Assembly
 DJ-8	Drill Fixture for Center Set Shear Block or Screwspline Assembly
FS-320	.17 x 5/8" DRIVE PIN Attachment of End Dam to FG-3413 Sub Sill

SERIES 3000 MULTIPLANE ACCESSORIES
GASKETS & SETTING BLOCKS

FG-1133	1" Glazing Gasket
FG-1134	Light Gasket
FG-3129	5/8" Glazing Gasket
FG-5125	Heavy Gasket
HP-30066	Spacer Gasket for SSG Mullion
CW-998	Gasket for Expansion Mullions
V-11	Gasket for Head Receptor
FG-3220	Setting Block for FG-3197, FG-3198 & FG-3231
FG-3221	Setting Block for FG-3197 Inside Glazed
 FG-3278	Setting Block for FG-3280
HP-17	Setting Block for FG-3293, FG-3294 & FG-3334
 HP-1004	Weep Baffle