Oldcastle BuildingEnvelope™

StormMax™ HR-251 Curtain Wall

INSTALLATION AND GLAZING MANUAL

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

APRIL 2013

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

TABLE OF CONTENTS

		Page
	General Information	3 - 4
1.	FRAME FABRICATION (WET GLAZE/DRY-GLAZE OPTION / SSG)	
	1.1 Measuring opening and sizing frame	5 - 6
	1.2 Cutting material	7
	1.3 Vertical mullion fabrication	8
	1.4 Steel reinforcing fabrication	9
	1.5 Head and sill fabrication	10
	1.6 Jamb mullion fabrication	11
	1.7 Pressure plate fabrication	12
2.	FRAMING ASSEMBLY	
	2.1 Captured framing assembly	13 - 14
	2.2 Structural silicone glazed (SSG) framing assembly	15
	2.3 End bay wall jamb frame assembly	16
	2.4 Alternate end jamb frame assembly	17
3.	FRAME INSTALLATION	
	3.1 Typical panel frame and jamb installation	18
	3.2 Panel frame installation with alternate jamb	18
	3.3 Anchoring panel frames	19 - 20
	3.4 Vertical mullion end cap installations @ typical mullion	21
	3.5 SSG mullion end cap installation	22
	3.6 Jamb mullion end cap installation	23
	3.7 Perimeter caulking of framing	24
4.	GLAZING	
	4.1 Pressure plate installation and sealant	25
	4.2 Glazing at wet glazed captured framing.	26
	4.2.1 Water diverter installation	27
	4.2.2 Glazing prep and setting glass	28
	4.2.3 Face cap installation	29
	4.2.4 Horizontal filler installation	30
	4.2.5 Interior sealant application	31
	4.3 Glazing at dry glazed captured framing	
	4.3.1 Water diverter installation	32
	4.3.2 Glazing prep and setting glass	33 - 34
	4.3.3 Face cap installation	35

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

TABLE OF CONTENTS

General Information		Page
4.	GLAZING (continued)	
	4.4 Glazing at Structural Silicone Glazed (SSG)	
	4.4.1 Water diverter installation	36 - 38
	4.4.2 Setting glass	39
	4.4.3 Face cap installation	40
	4.4.4 Interior structural silicone application	41 - 42
	4.4.5 Exterior weather seal prep and application	43 - 44
	4.4.6 Horizontal pressure plate installation and sealant	45 - 46
5.	SPECIAL CONDITIONS	
	5.1 Corner mullion assembly and installation	47 - 49
	5.2 Twin span mid-span anchor	50
	5.3 Twin span mid-span jamb anchor	51
	5.4 Twin span head anchor - Option No. 1	52 - 54
	5.5 Twin span head anchor - Option No. 2	55 - 57
	5.6 Twin span head anchor at outside corner	58 - 62
6.	MULLION SPLICES	
	6.1 Typical mullion splice	63 - 65
	6.2 Mullion splice at expansion horizontal	66 - 72
	6.3 Corner mullion splice	73 - 77
	6.4 Corner mullion splice at expansion horizontal	78 - 86
7.	DOOR INSTALLATION	
	7.1 Installation of door sub-frame	87 - 88
8.	PARTS, EXTRUSIONS AND ACCESSORIES	89 - 91

Quick Reference Guide

Glass Sizing
- Typical Mullion = D.L.O. + 1-1/2"
- Corner Mullion = D.L.O. + 1 - 9/16"

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

GENERAL INFORMATION

GENERAL INFORMATION:

Oldcastle BuildingEnvelope® HR-251 (2-1/2 x 7-1/2) hurricane impact resistant system represents the latest in product development technology. This system was especially designed to meet the stringent Miami Dade County and Florida Building Codes for glass and glazing systems. HR-251 successfully passed a series of large missile impact and cyclic wind test with a variety of impact-resistant glass.

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.

STRUCTURAL SEALANTS:

Both Dow Corning® 995 and 795 structural sealants were used on the HR-251 test specimen for glass to metal adhesion approved by Miami-Dade County. To comply with Miami-Dade County and Florida Building Code Protocols, Dow Corning® 795 and 995 sealant must be used for glass to metal adhesion with HR-251 .

PERIMETER SEALANTS:

Due to varying job conditions, all perimeter sealants used should be approved by the sealant manufacturer to ensure the sealant will function for the conditions shown on these instructions and shop drawings. Sealants must be compatible with all surfaces in which adhesion is required, including other sealants surfaces. Use primers where directed by sealant manufacturer. Be sure to properly store sealants at recommended temperature and check container for remainder of shelf life before using. Dow Corning® 795 silicone were the perimeter sealants used on the HR-251 test specimen approved by Miami-Dade County.

MATERIAL HANDLING:

SHOP

1. Cardboard wrapped or paper interleaved material must be kept dry.
2. Check arriving materials for quantity and keep record of where various materials are stored.

JOB SITE

1. Material at job site must be stored in a safe place well removed from possible damage by other trades.
2. Cardboard wrapped or paper interleaved materials must be kept dry.
3. Keep record of where various materials are stored.
4. Protect materials after erection. Cement, plaster and other alkaline solutions are very harmful to the finish.

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

GENERAL INFORMATION

CLEANING

Aluminum shall be cleaned with plain water containing a mild detergent, or a petroleum product such as white gasoline, kerosene, or distillate. No abrasive agent shall be used.

GENERAL CONSTRUCTION NOTES

A. Study these instructions, shop drawings, erection drawings and architectural drawings before starting any work.

B. All materials are to be installed plumb and level.

C. All work should start from an established benchmark and column centerlines established by the architect and the general contractor.

D. 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.

E. 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.

F. Follow installation and glazing instructions.

G. After 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.

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

FRAME FABRICATION

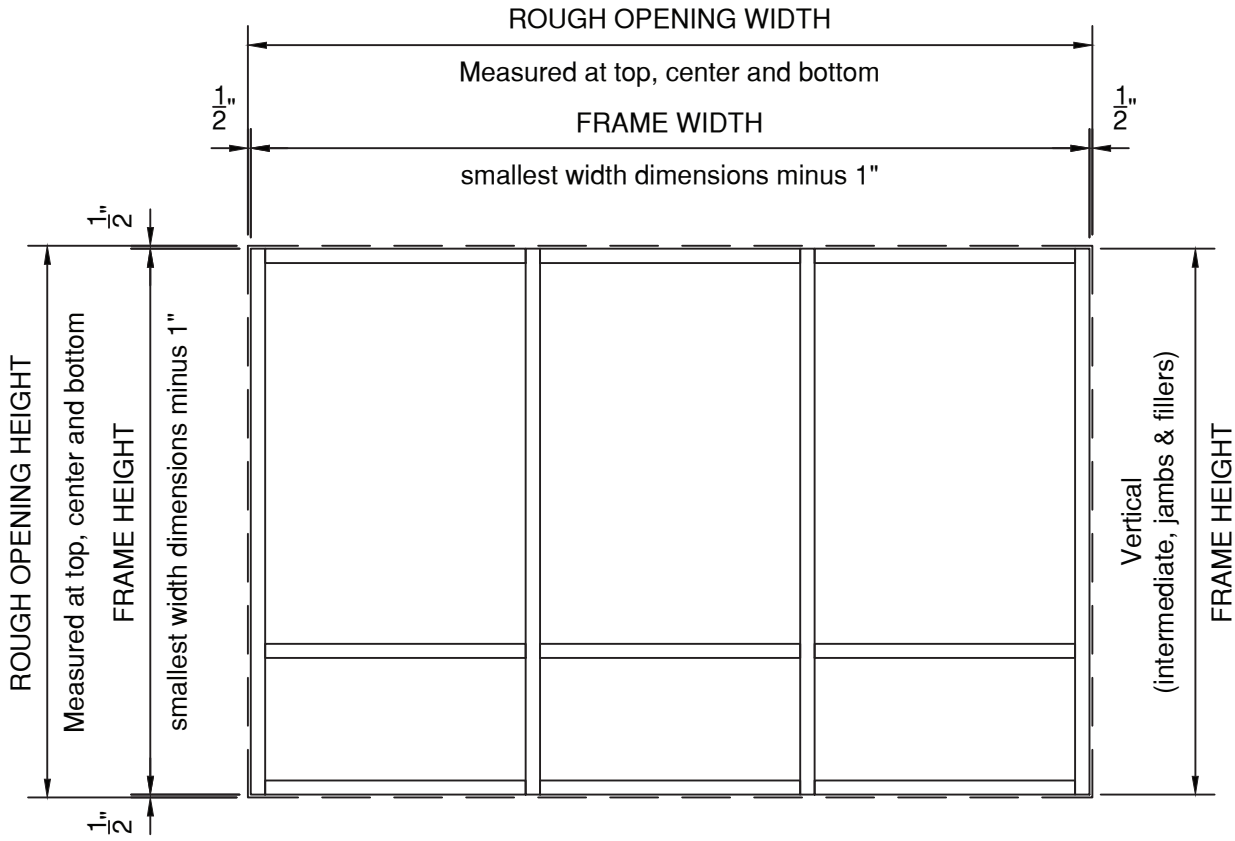


FIGURE 1
Elevation Of Frame

1.1 Measure width of rough opening.

A. Measure opening at bottom.

B. Measure opening at center.

C. Measure opening at top.

The frame width will be the smallest dimension less 1" allowing for a 1/2" caulk joint at each jamb.

NOTE: Maximum caulk joint for Miami-Dade County, FL installation is 1/2".

Repeat above process to determine frame height.

A. Beginning on the left side of opening, measure dimension from top to bottom.

B. Repeat at center.

C. Repeat at right side of opening.

The frame height will be the smallest dimension less 1" allowing for 1/2" caulk joint at the head and sill.

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

FRAME FABRICATION

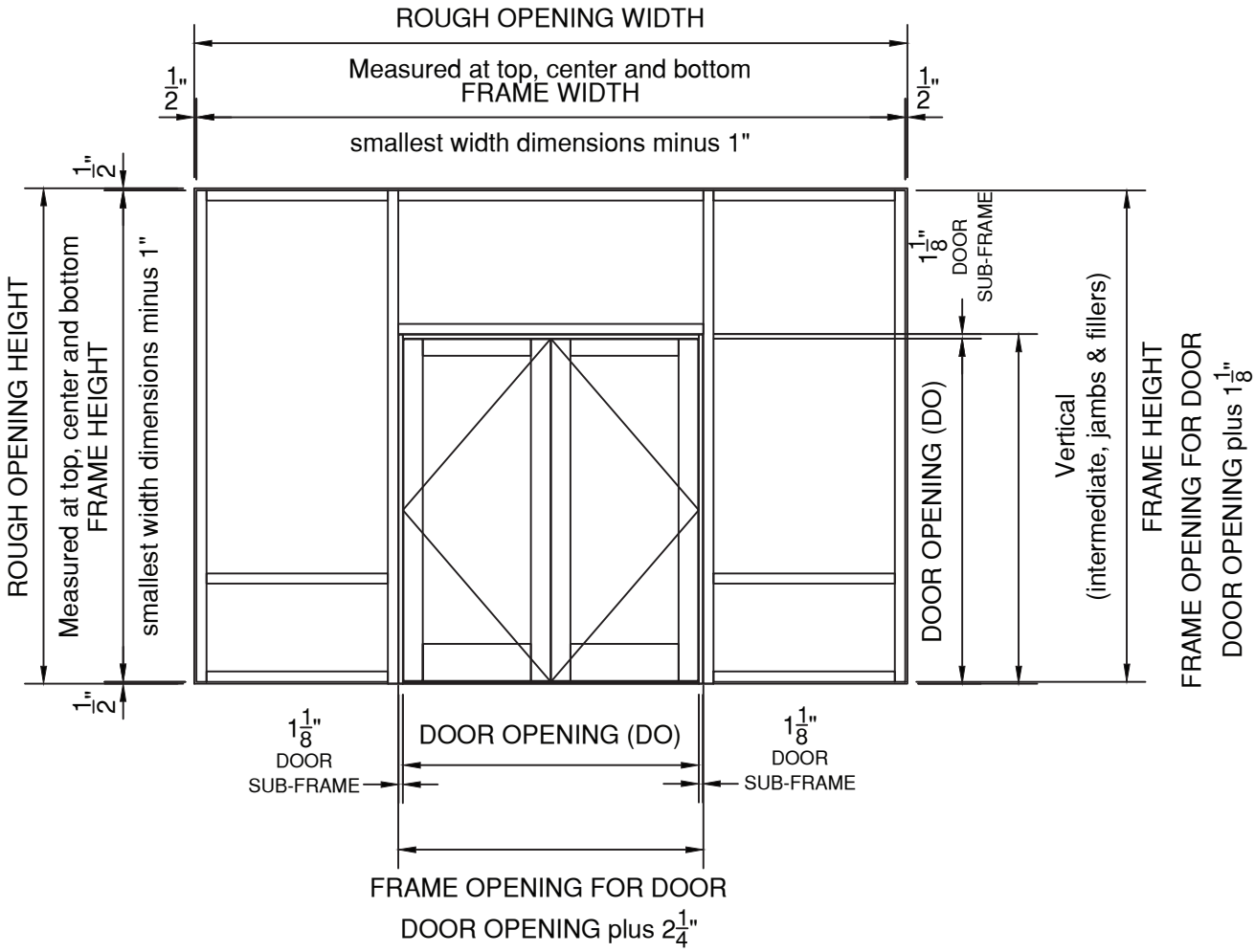


FIGURE 2
Elevation Of Frame With Door

FRAME FABRICATION

1.2 Cut **vertical** members to size.
Wall jambs, intermediate verticals, face covers and corner mullions are cut to frame height.
Pressure bars are cut frame height minus (-) 1/4".
Vertical mullions with a splice joint

- Typical Mullion splice refer to Page 63.
- Corner Mullion splice refer to Page 73-77
- Mullion splice with expansion horizontal refer to section 6.2 Pages 66 ~ 72
- Corner mullion with expansion horizontal refer to Pages 78-86.

Cut **horizontal** members to size.

Head, Sill CW-2024 and Intermediate Horizontals CW-2156 are cut D.L.O.

Pressure bars ZG-60 are cut D.L.O. minus (-) 1/4".

Face covers CW-2 are cut D.L.O. minus (-) 1/16".

Interior snap-on trim CW-1998 is cut D.L.O. minus (-) 1/16".

CAUTION: Mullion spacing tolerance accumulation build up could become a problem on wide multi-bay elevations. It is very important to frequently check the cut lengths of head, sill and intermediate horizontal members prior to assembly. It is also good practice to check overall frame width every four or five bays during installation.

FRAME FABRICATION

1.3 Drill or punch holes in verticals for attaching horizontals.

Note: Fabrication for SSG mullion CW-1999 is same as that for CW-2023 shown below.

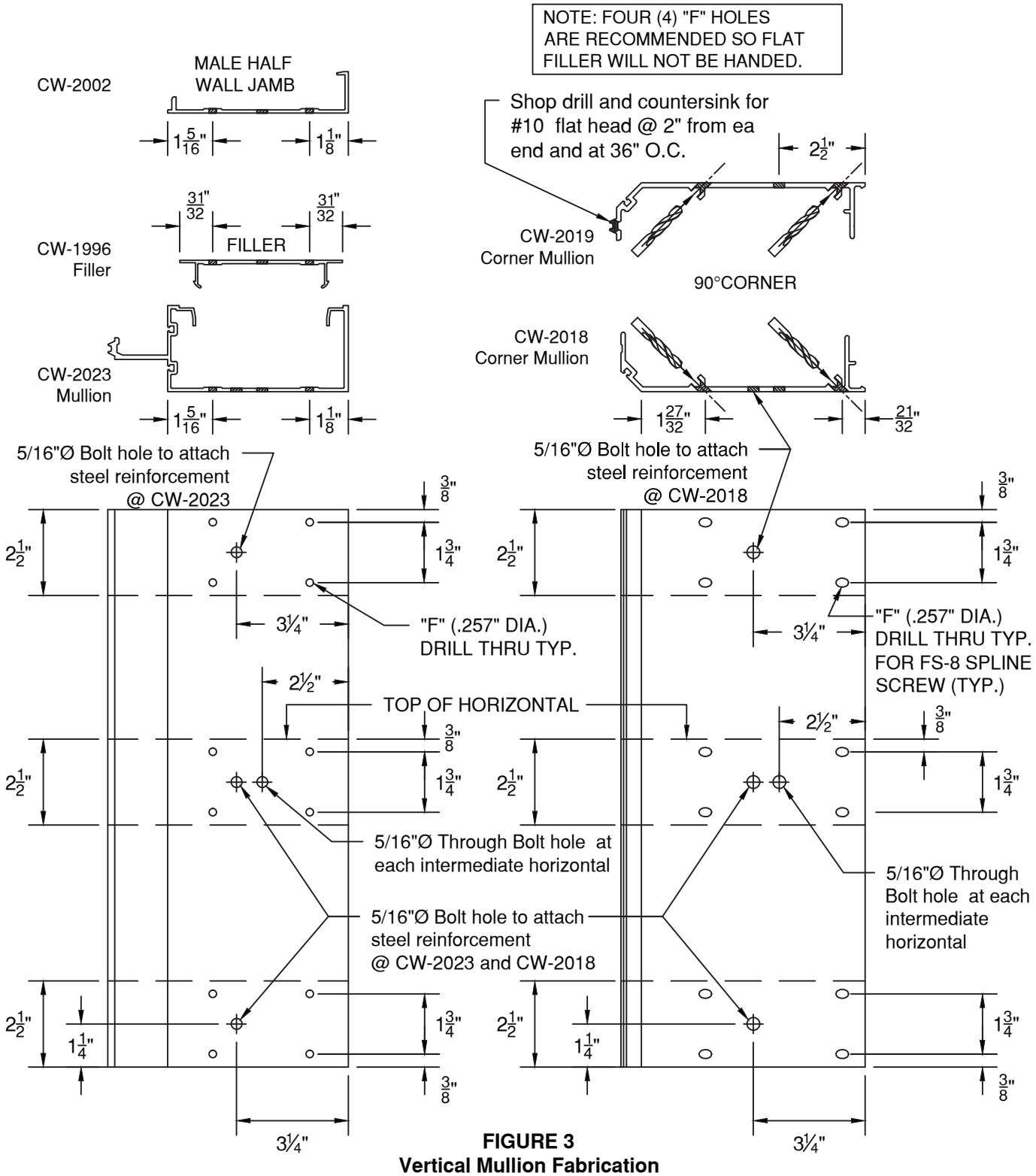


FIGURE 3
Vertical Mullion Fabrication

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

FRAME FABRICATION

1.4 Fabricate steel reinforcement where required.

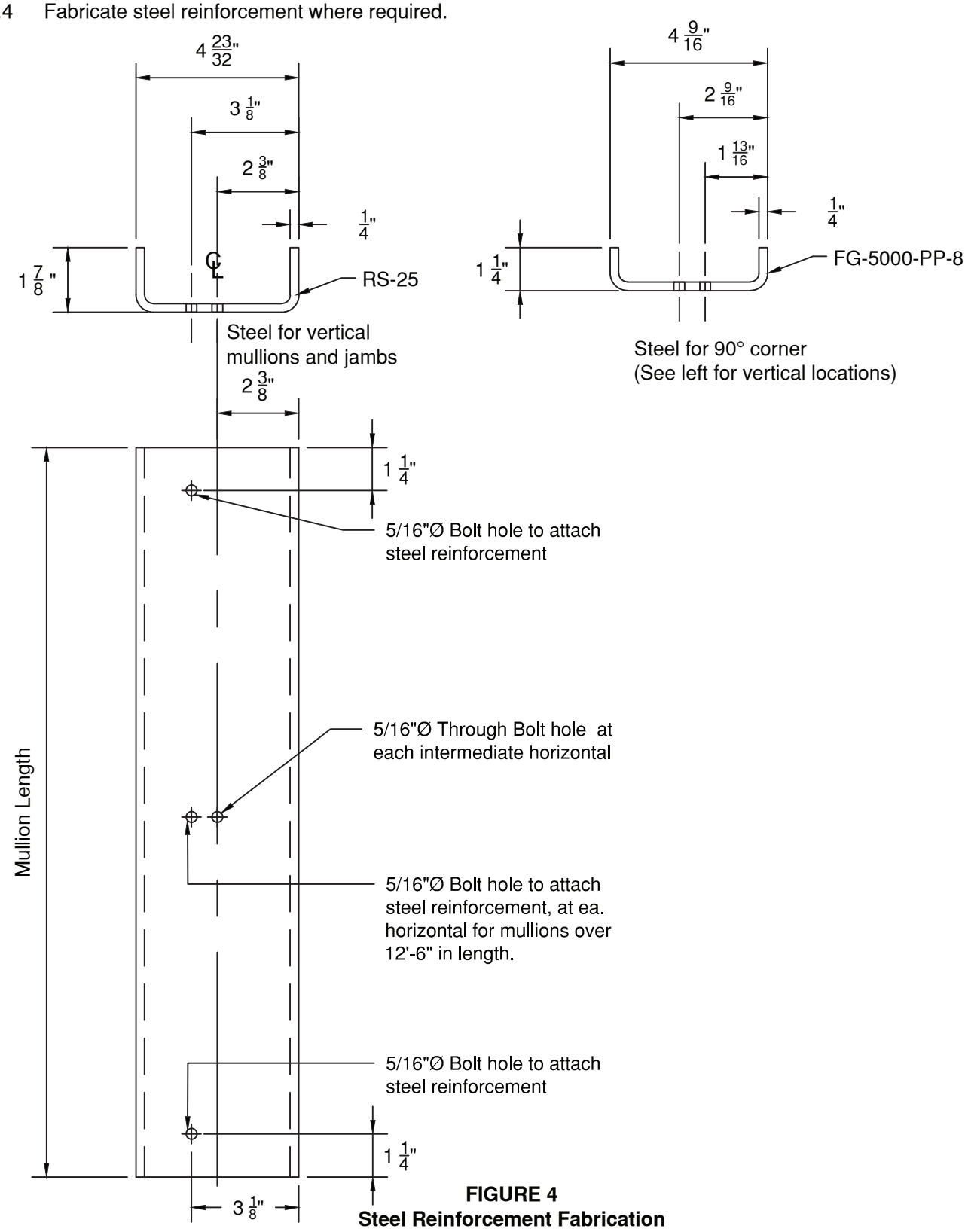


FIGURE 4
Steel Reinforcement Fabrication

FRAME FABRICATION

1.5 Fabricate Head/Sill for anchor holes. Drill or punch one (1) ea. 9/16"Ø hole located 4" from each end of part. Hole should be centered on "V" groove located in extrusion.

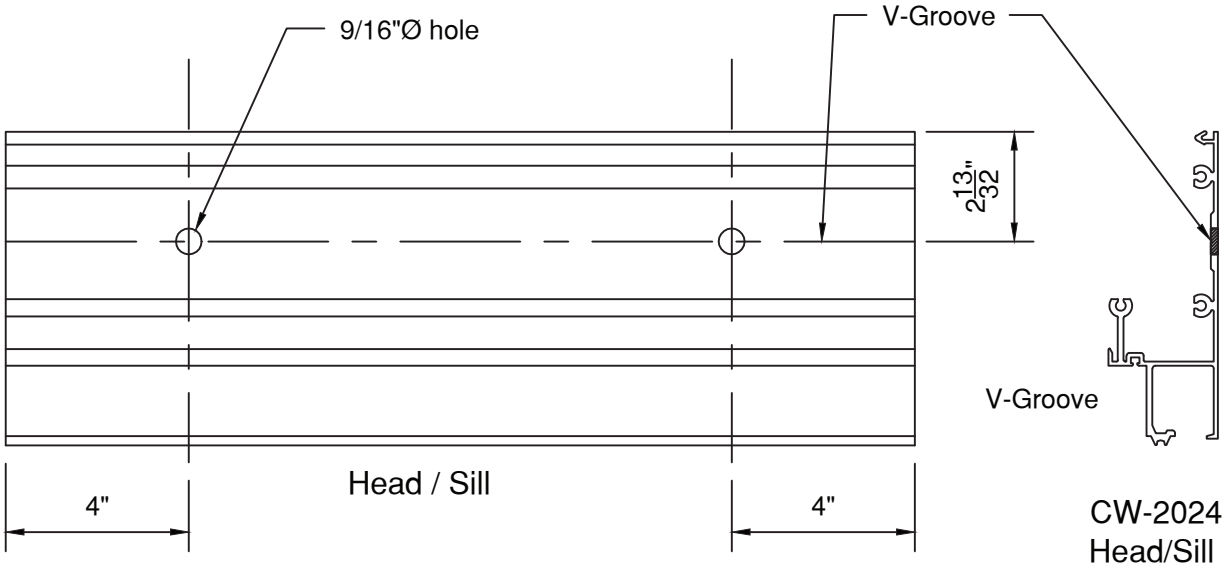


Figure 5
Head / Sill Fabrication

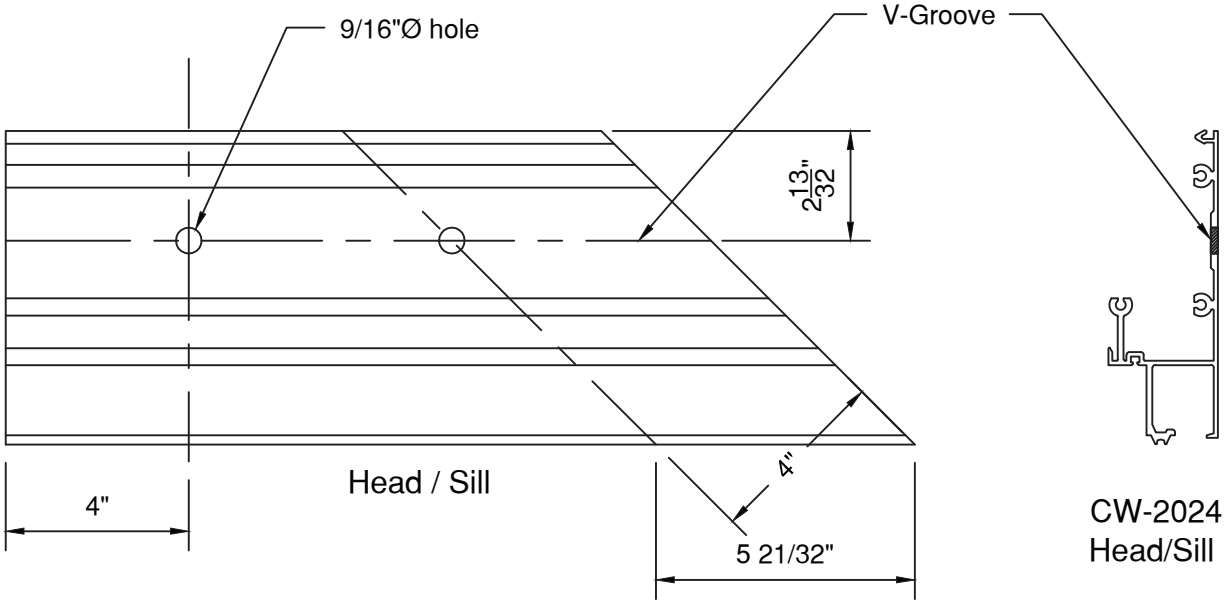


FIGURE 5.1
Head / Sill Fabrication At Corners

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

FRAME FABRICATION

1.6 Fabricate last bay wall jamb for FS-7 screws. Locate two holes at ea. horizontal intersection and others spaced 12" O.C. in between horizontals.

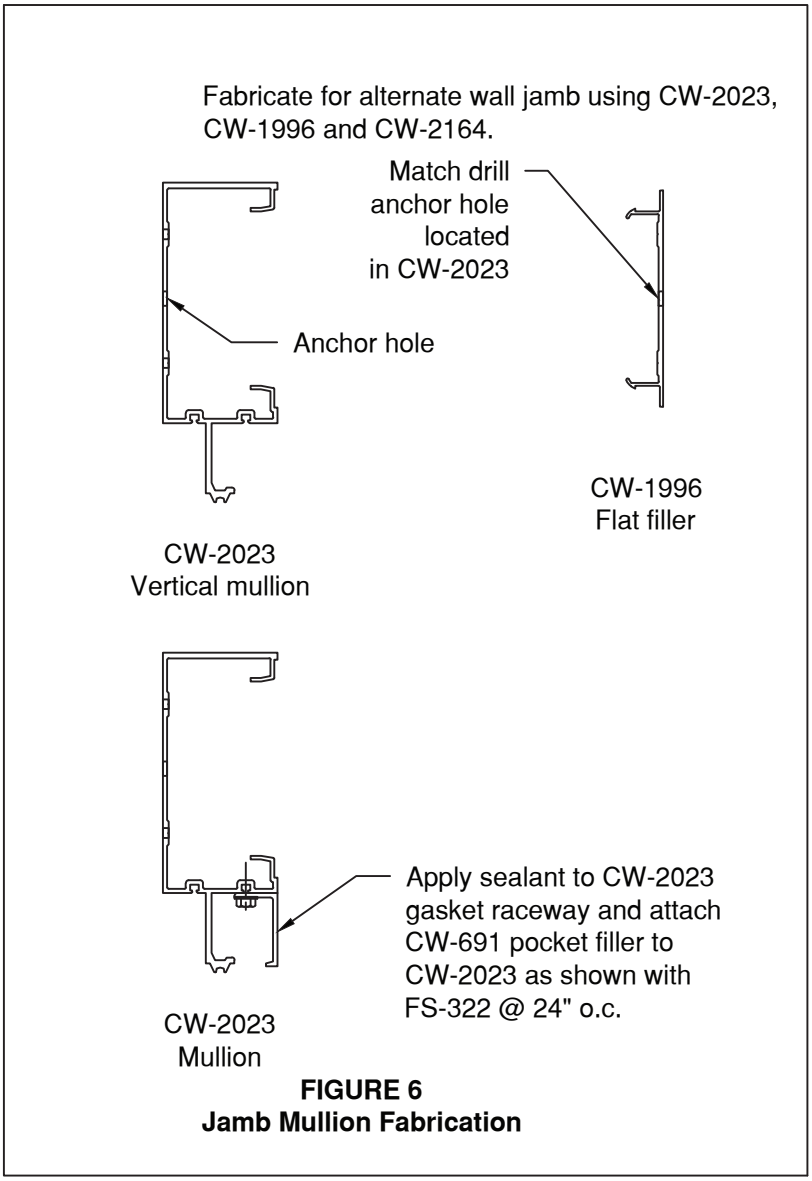


FIGURE 6
Jamb Mullion Fabrication

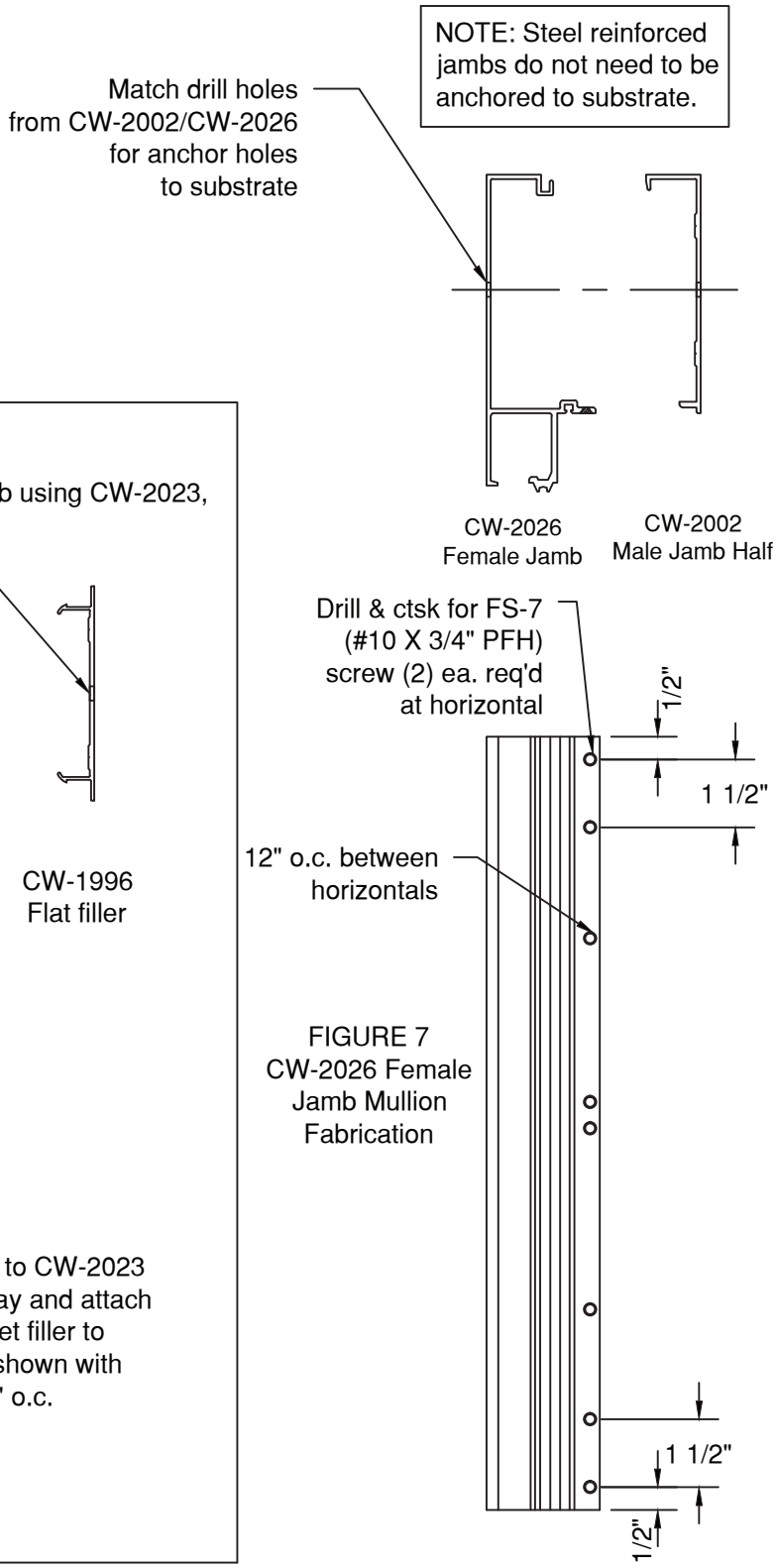


FIGURE 7
CW-2026 Female Jamb Mullion Fabrication

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

FRAME FABRICATION

Fabricate vertical and horizontal pressure bars. Holes for attaching ZG-60 pressure bars are pre-punched at factory 12" on center. Holes at each end of pressure bar will need to be added to each end of fabricated pressure bar as shown below.

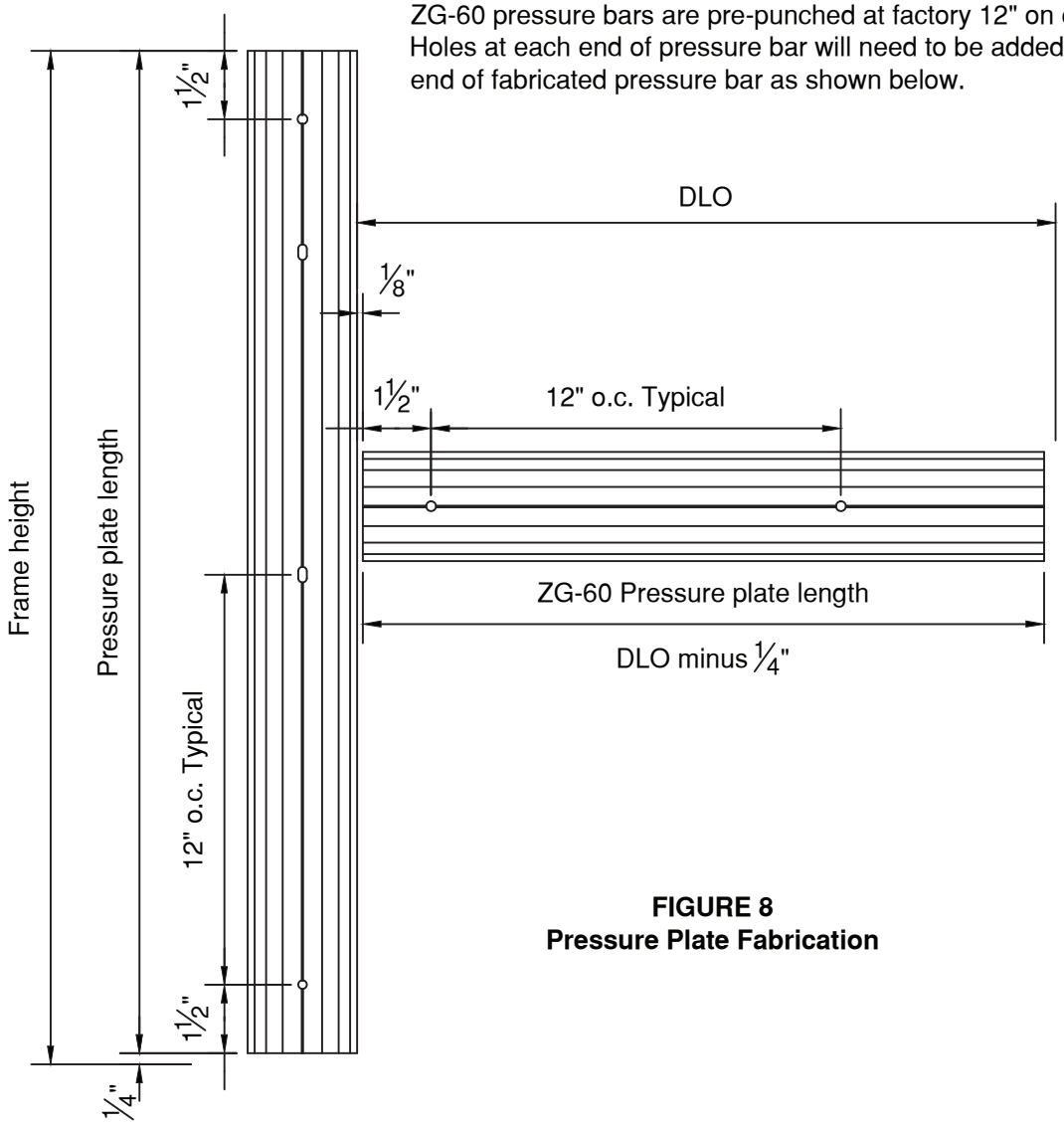


FIGURE 8
Pressure Plate Fabrication

1.7 Install the following gaskets into the fabricated framing members:

Back members: **FG-5185** for structural silicone glazed
GP-1015 for dry glazed

Intermediate Pressure Bars: **GP-118** for structural silicone glazed and dry glazed applications

Perimeter Pressure Bars: **GP-118** (against glass) for structural silicone glazed (against glass) for dry glazed
GP-103 (against aluminum)

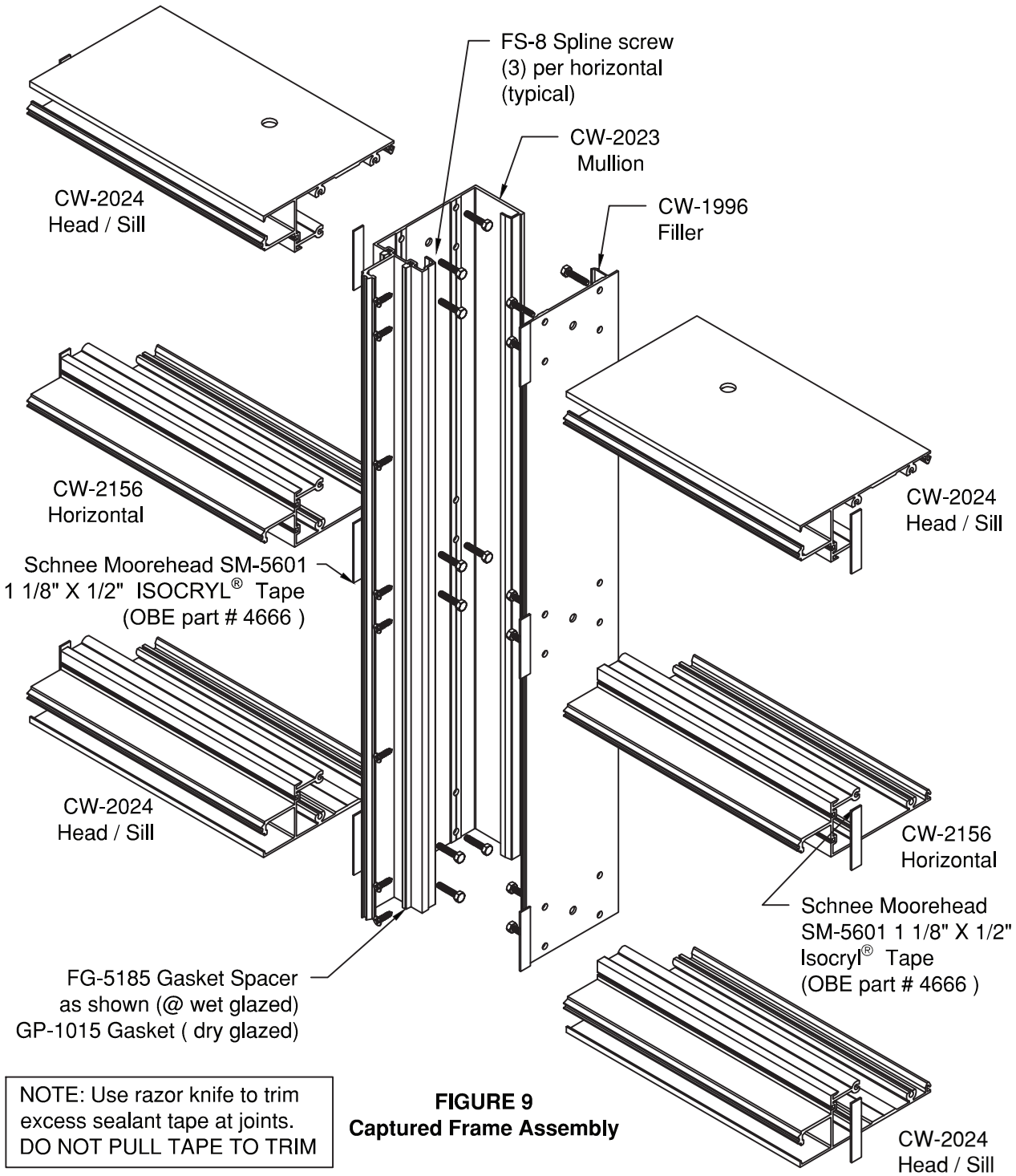
Gasket Installation Procedures

1. Cut gaskets allowing for 1/8" extra length per foot of extrusion to accommodate relaxation
2. Vertical spacer gasket runs full length. (For wet glazed only)
3. Horizontal spacer gasket is cut to D.L.O. length.
4. Horizontal glazing gasket GP-118 should extend 1/8" beyond end of pressure bar.
5. Vertical pressure bar gasket runs full length.

CAPTURED FRAME ASSEMBLY
(For Wet or Dry Glazed Framing)

2.1 Captured Frame Assembly

FABRICATION / ASSEMBLY NOTE: The vertical gasket cut to DLO +1½" with a 3/4" overlap at each horizontal. The GP-1015 gasket @ horizontals is cut to the same length as the horizontal. **See Details 'A' and 'B'**

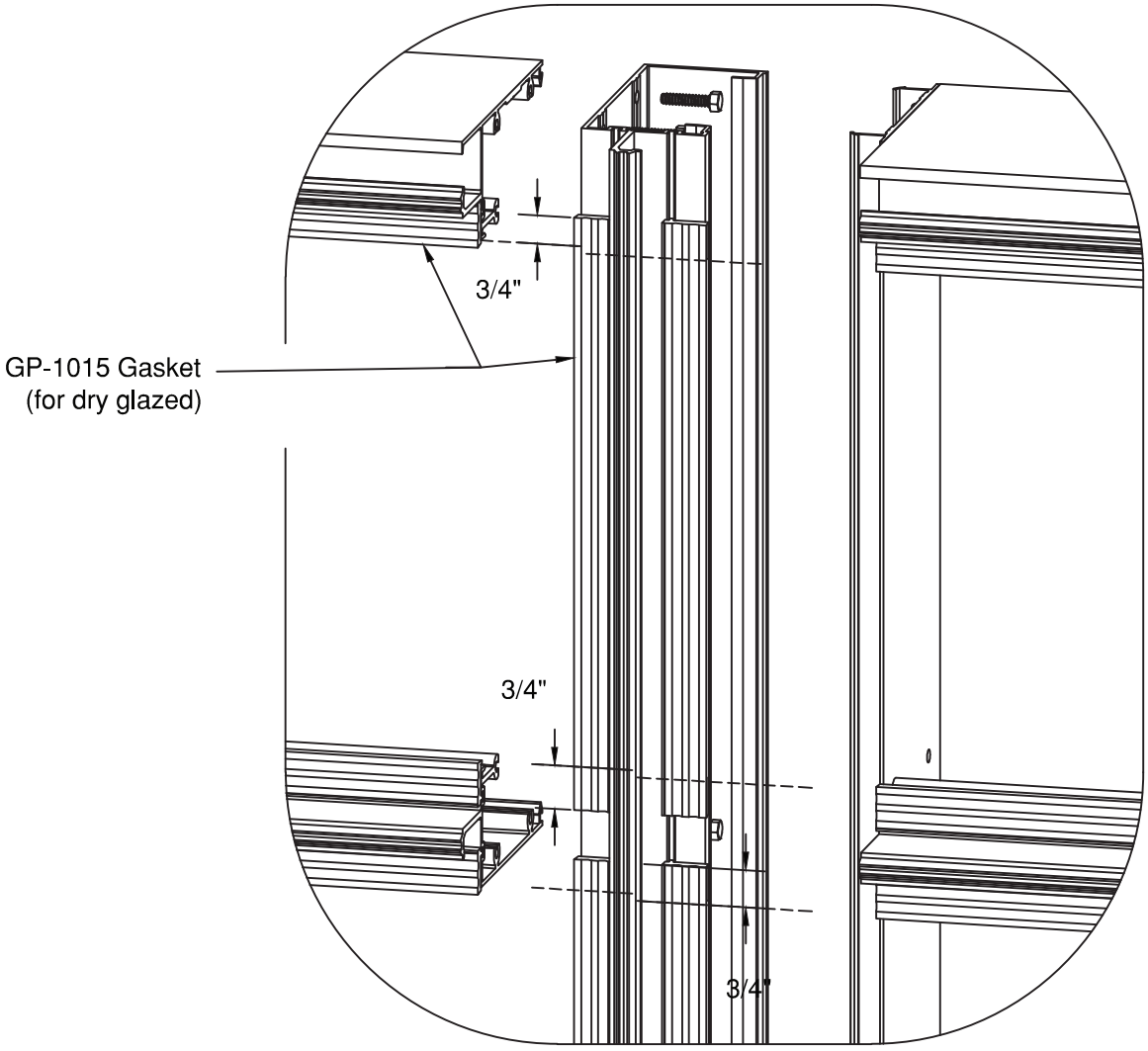


NOTE: Use razor knife to trim excess sealant tape at joints. DO NOT PULL TAPE TO TRIM

FIGURE 9
Captured Frame Assembly

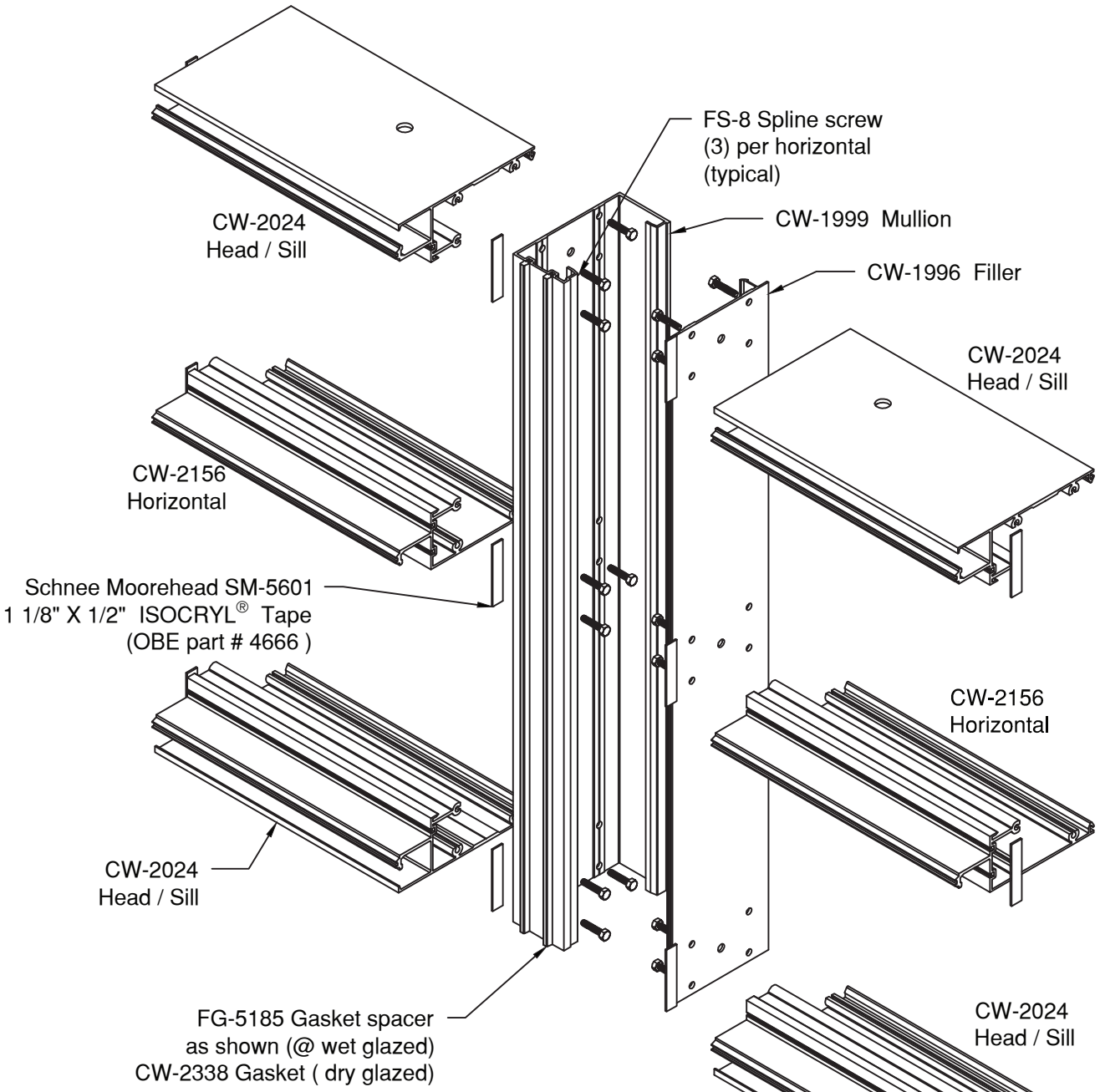
Phone: 1-866-OLDCASTLE (653-2278)
Web Address: www.oldcastlebe.com

CAPTURED FRAME ASSEMBLY
(Dry Glazed Framing)



Detail "A"
Dry Glazed Gasket

WET GLAZED FRAME ASSEMBLY
(For Structural Silicone Glazed Framing Only)



NOTE: Use razor knife to trim excess sealant tape at joints. DO NOT PULL TAPE TO TRIM

FIGURE 10
Wet Glazed Frame Assembly
SSG Mullion

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

ALTERNATE JAMB FRAME ASSEMBLY
(For Wet or Dry Glazed Framing)

2.3 Frame Assembly @ Jamb

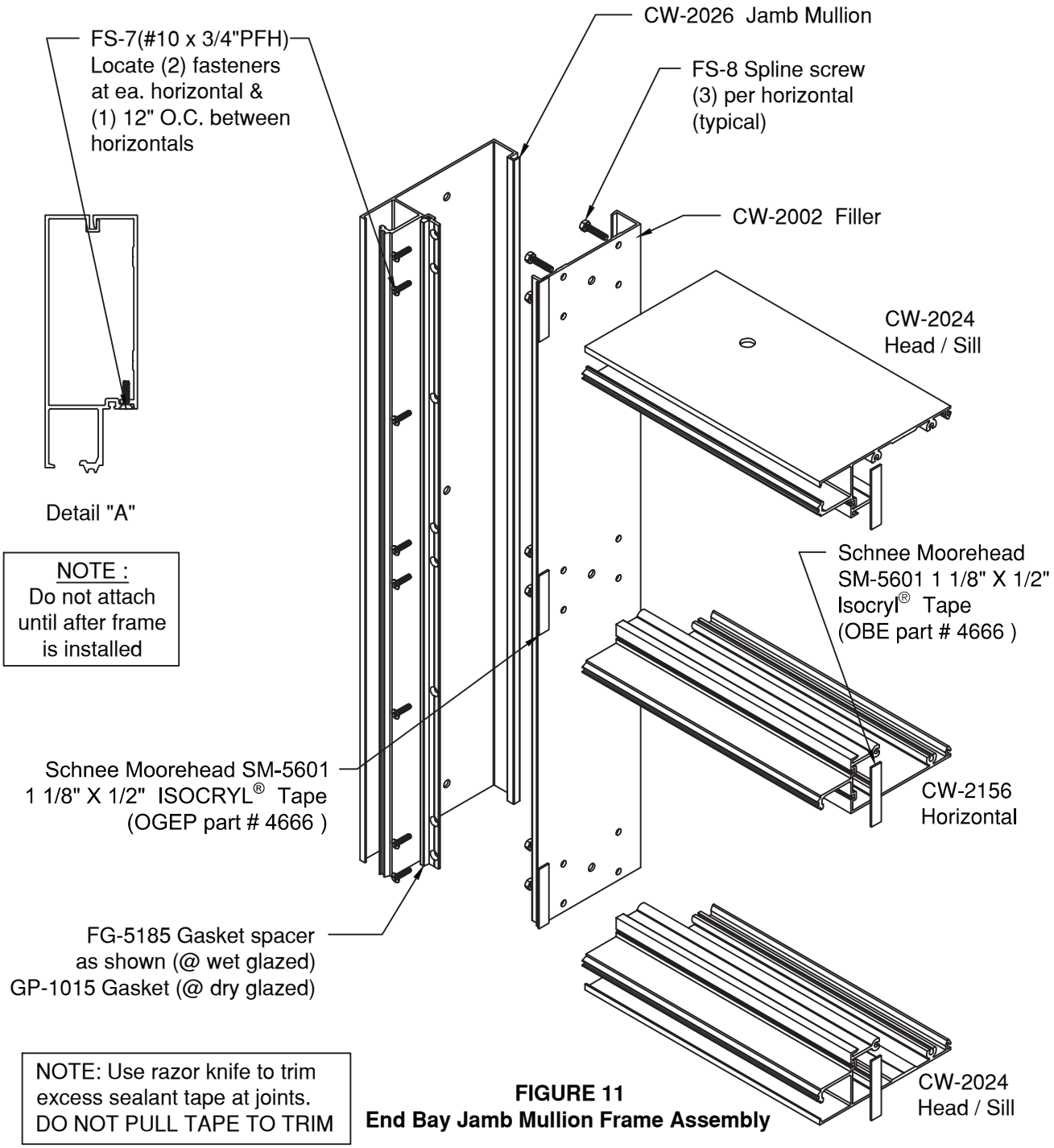
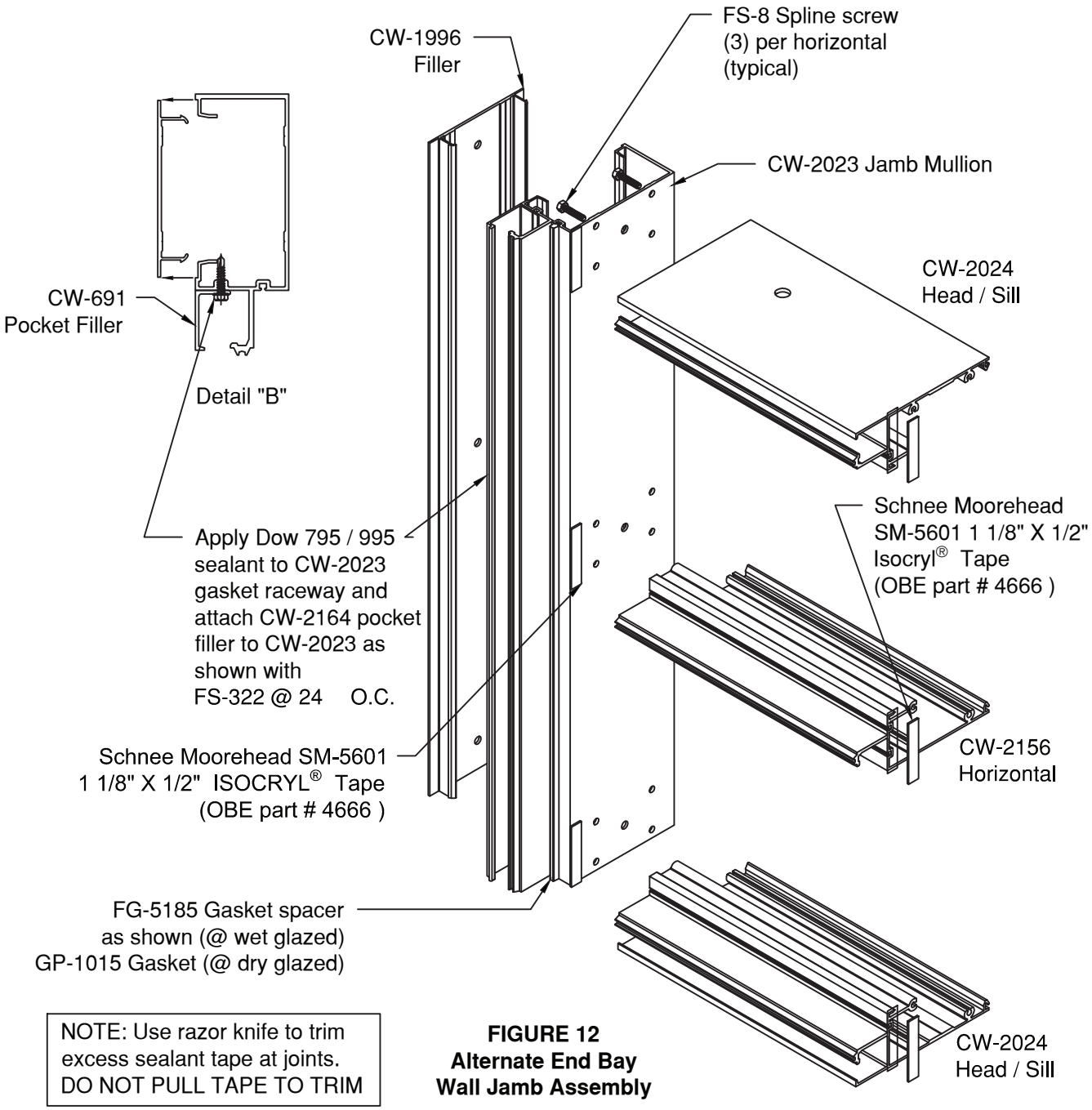


FIGURE 11
End Bay Jamb Mullion Frame Assembly

JAMB FRAME ASSEMBLY
(For Wet or Dry Glazed Framing)

2.4 Frame Assembly @ Alternate Jamb



NOTE: Use razor knife to trim excess sealant tape at joints. DO NOT PULL TAPE TO TRIM

FIGURE 12
Alternate End Bay
Wall Jamb Assembly

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

PANEL FRAME INSTALLATION

3.1 Installation of Framing Panels with Alternate Jambs

Install assembled frame panels into opening starting with the jamb and continuing along the elevation until the opposite jamb panel is installed.

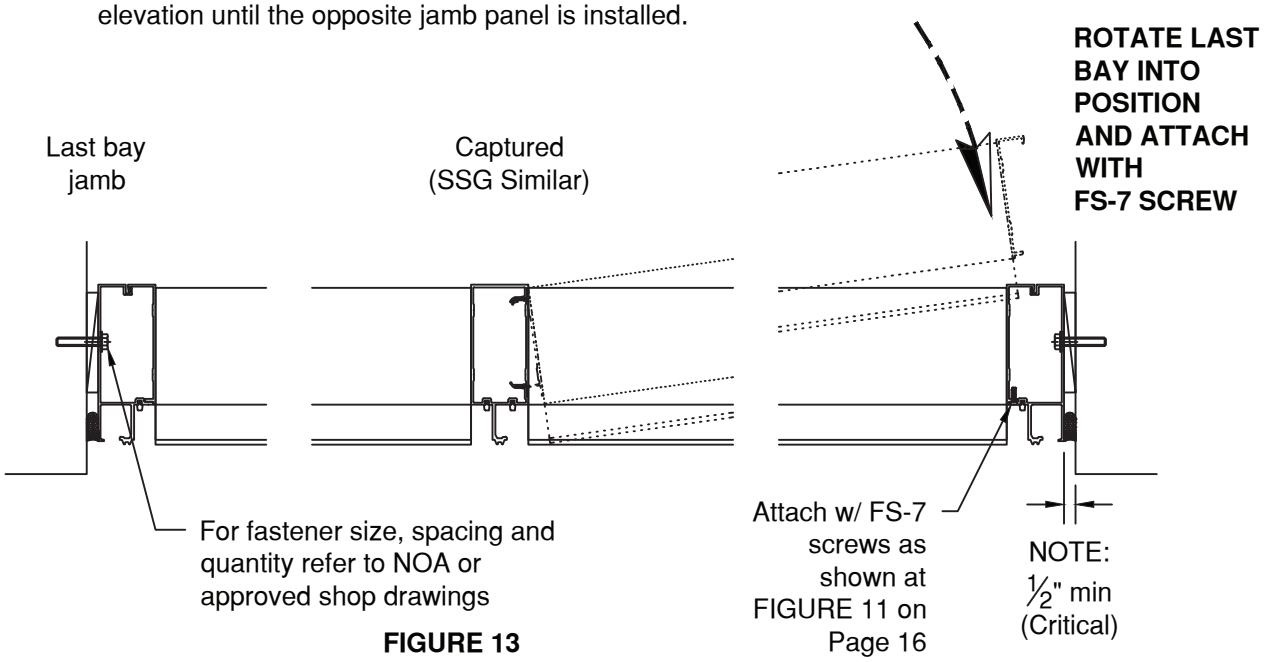


FIGURE 13
Panel Frame Installation
With Alternate Jamb Assembly

3.2 Installation of Framing Panels

Install assembled frame panels into opening starting with the jamb and continuing along the elevation until the opposite jamb panel is installed.

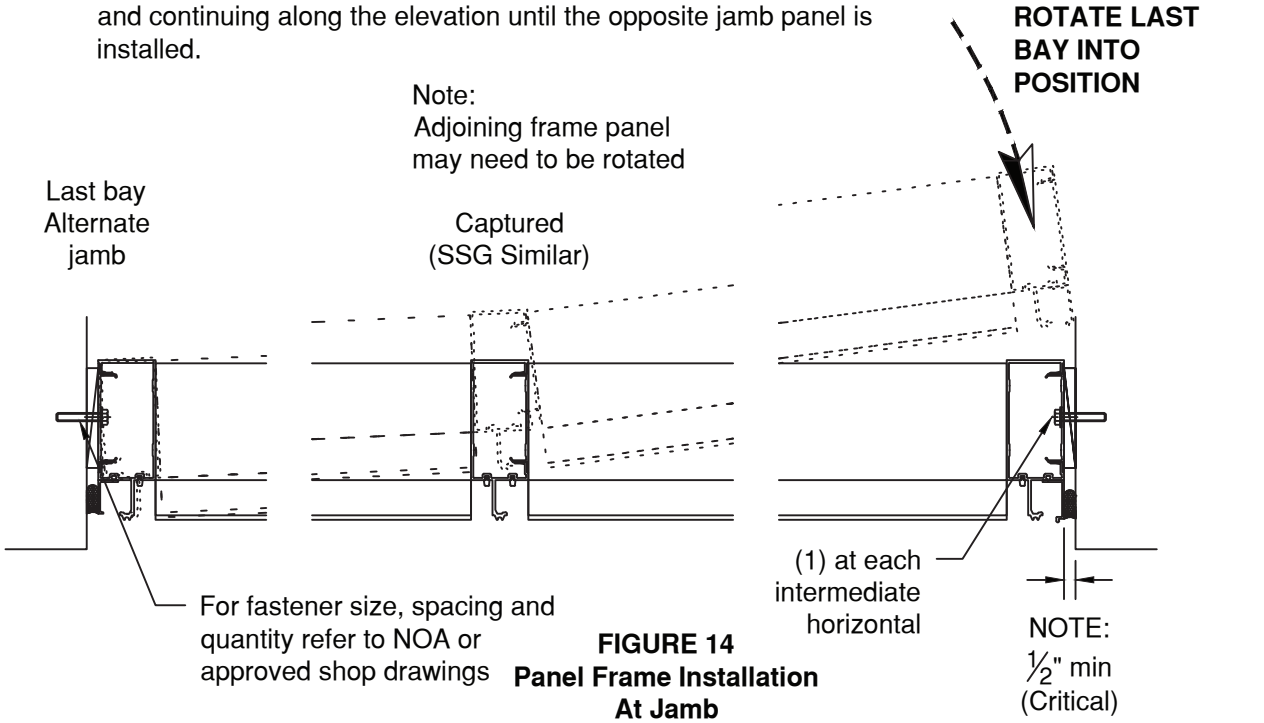


FIGURE 14
Panel Frame Installation
At Jamb

ALTERNATE WALL JAMB FRAME ANCHORING

3.3.1 Installation of Jamb Start Point. Ensure that the CW-2026 female jamb half is plumb and leveled to allow ¼" of shim at sill @ highpoint of opening, adding addition shims as needed. The anchor to surrounding structure with fasteners as noted in N.O.A. or approved shop drawings

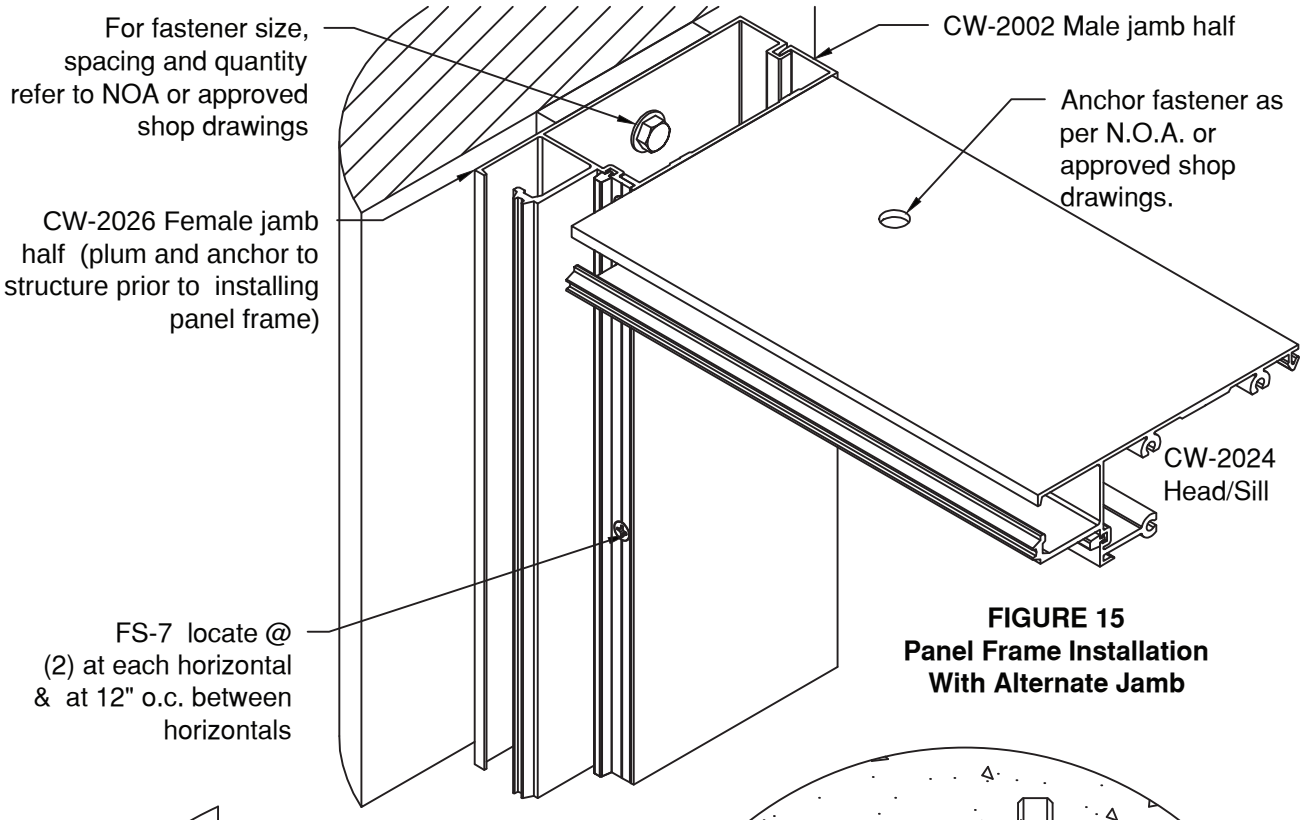
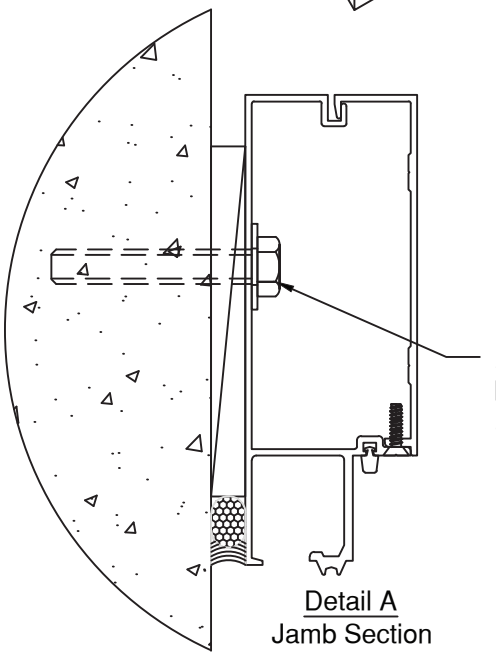
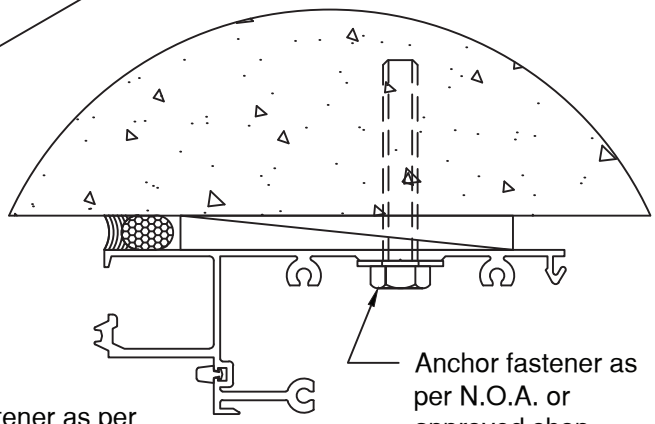


FIGURE 15
Panel Frame Installation With Alternate Jamb



Detail A
Jamb Section



Detail B
Head Section

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

WALL JAMB FRAME ANCHORING

3.3 Installation of Jamb Panel Frame. Ensure that the CW-1996 is fully engaged in to CW-2023 mullion, plumb and level panel frame to allow ¼" of shim at sill @ high point of opening, adding addition shims as needed. Then anchor to surrounding structure with fasteners as noted in N.O.A. or approved shop drawings.

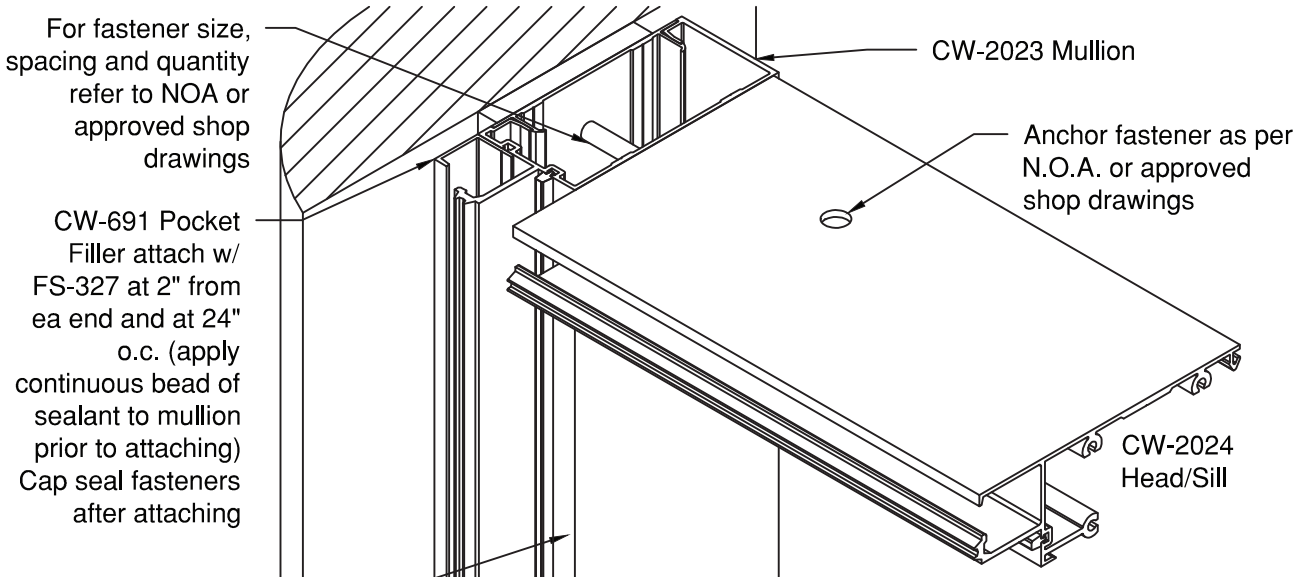
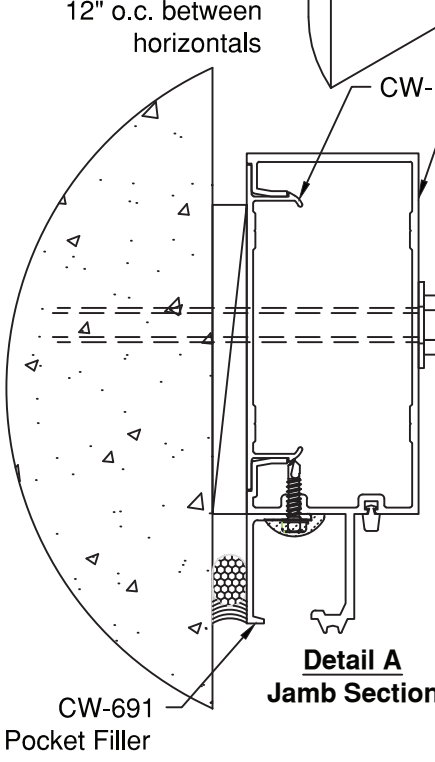
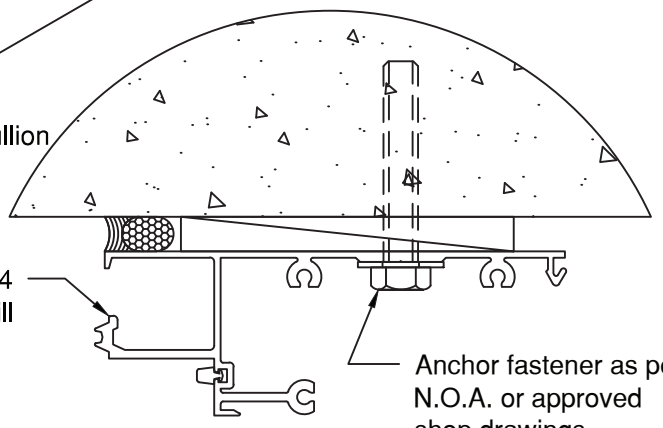


FIGURE 16
Panel Frame Installation With Alternate Jamb



Detail A
Jamb Section



Detail B
Head Section

MULLION END CAP INSTALLATION

3.4 Clean cut end of horizontals and a minimum of 3" at ends of HR-2024 Head/Sill and end the Mullions, where sealant is to be applied, also clean HR-FP-4 Mull Cap.

1. Apply bed sealant to Head and Sill as shown in detail "A"
2. Install HR-FP-4 by slightly bending to clear CW-2024 Head-Sill. **See Detail "B'**
3. Apply sealant at full perimeter of HR-FP-4 Mull cap as shown at Detail "C" and tool to ensure watertight seal. (Head and Sill both take end caps)

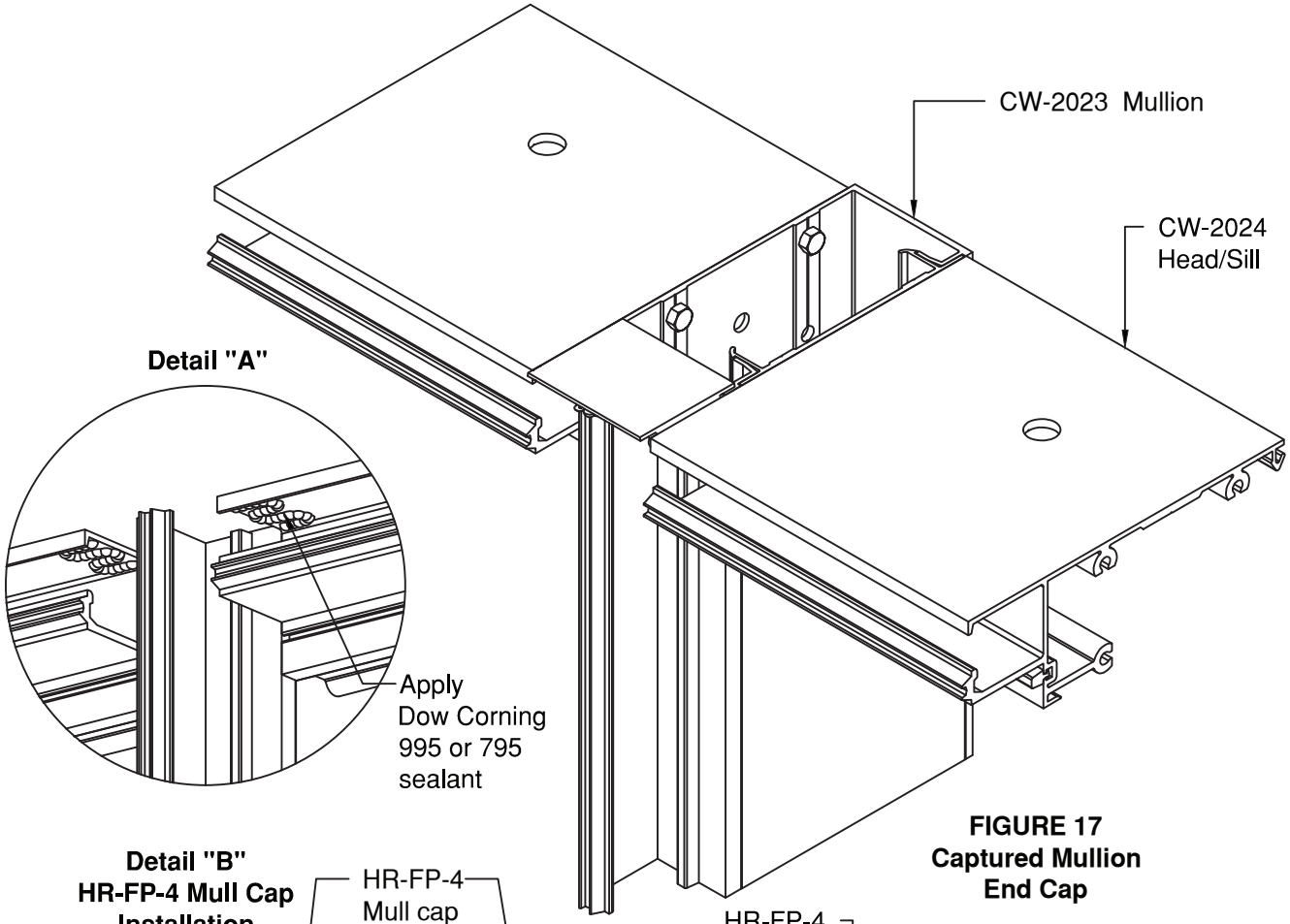
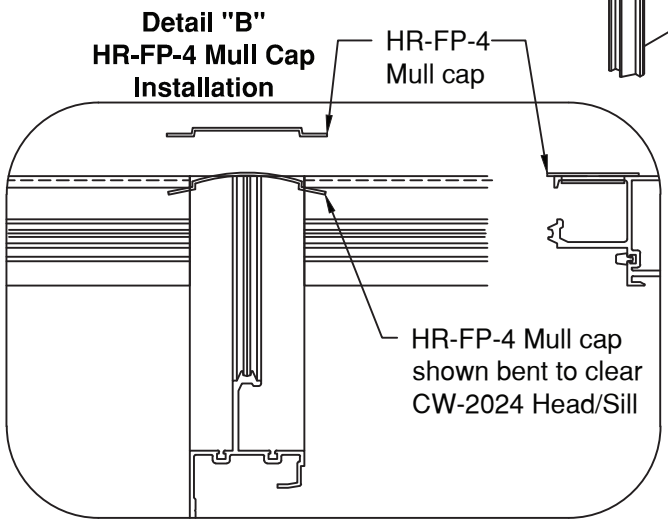
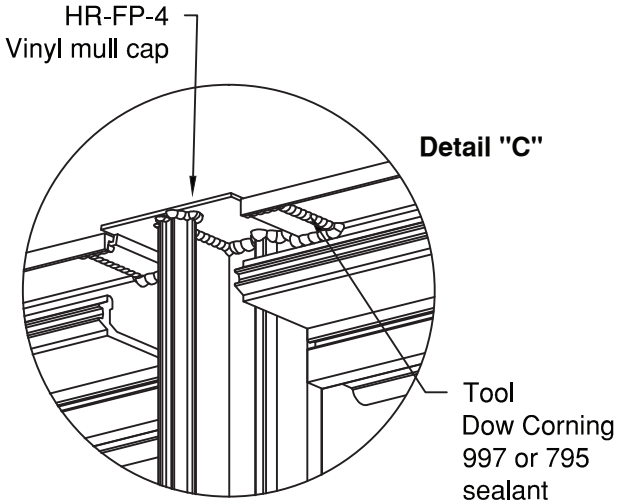


FIGURE 17
Captured Mullion
End Cap





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

SSG MULLION END CAP INSTALLATION

3.5 Clean cut end of Horizontals and a minimum of 3" at ends of HR-2024 Head/Sill and end the CW-1999 Mullion, where sealant is to be applied, also clean HR-FP-4 Mull Cap.

1. Apply bed sealant to Head/Sill as shown in Detail "A"
2. Install HR-FP-4 tilting it to fit the tab over the top of the CW-1999 Mullion
3. Apply sealant at full perimeter of HR-FP-4 Mull cap as shown at Detail "B" and tool to ensure watertight seal. (Both Head and Sill take HR-FP-4 Mull Caps)

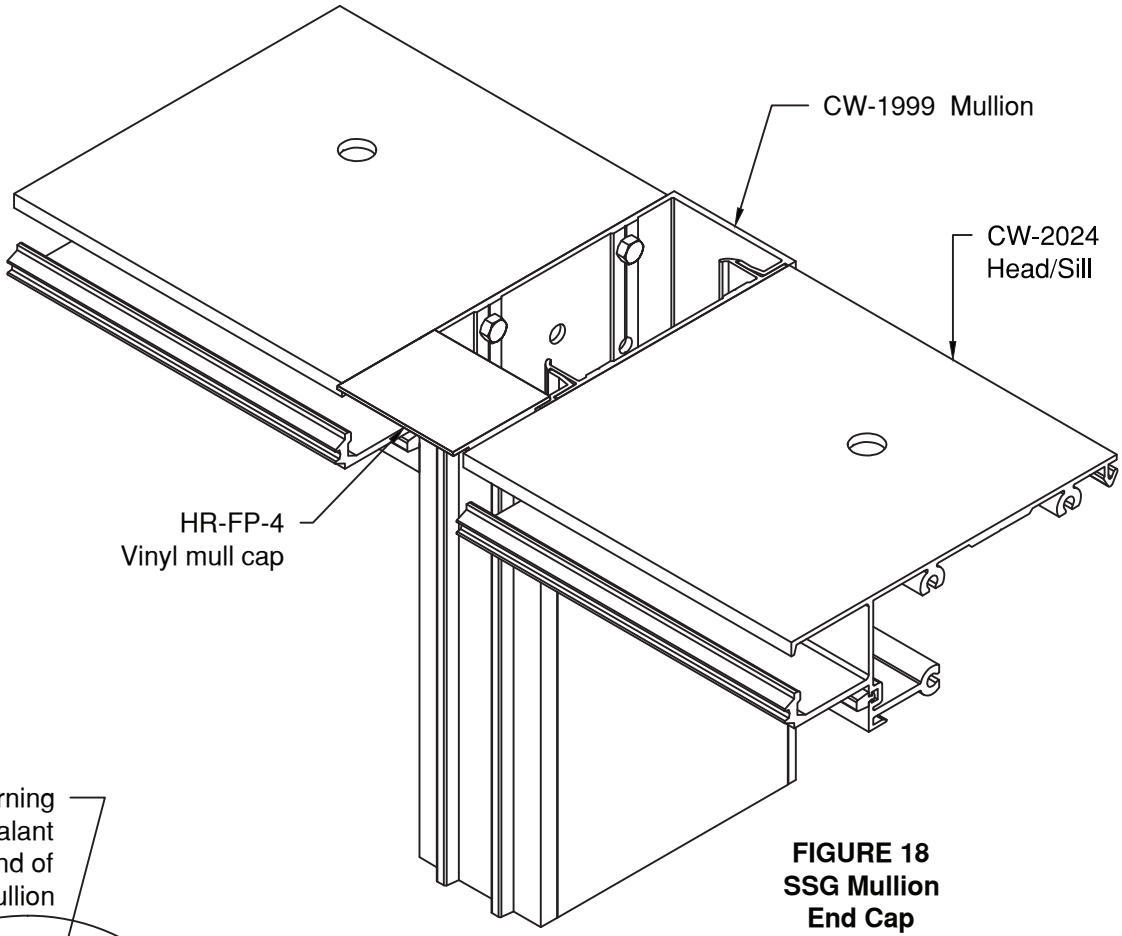
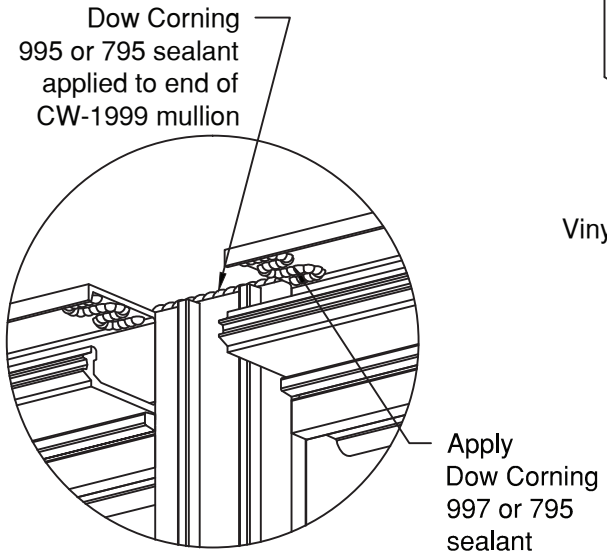
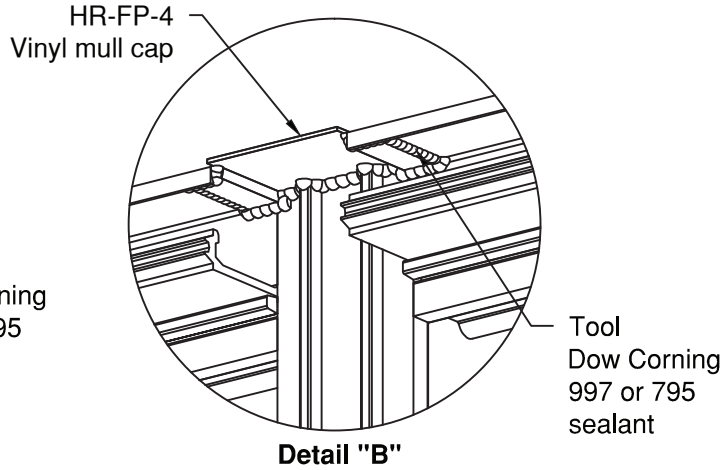


FIGURE 18
SSG Mullion
End Cap



Detail "A"



Detail "B"

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

JAMB MULLION END CAP INSTALLATION

3.6 Clean cut end of horizontals and a minimum of 3" at ends of HR-2024 Head /Sill and end the Mullion, where sealant is to be applied, also clean HR-FP-5 Mull Cap.

1. Apply bed sealant to Head /Sill as shown in FIGURE 19 and Detail "A"
2. Install HR-FP-5 by inserting jamb tab between mullion and pocket filler with back tilted up (down @ sill) to clear mullion face then press it tightly against inside of pocket filler and end of mullion
3. Apply sealant at full perimeter of HR-FP-5 Mull cap as shown at Detail "C" and tool to ensure water tight seal. (Both Head and Sill take End Caps)

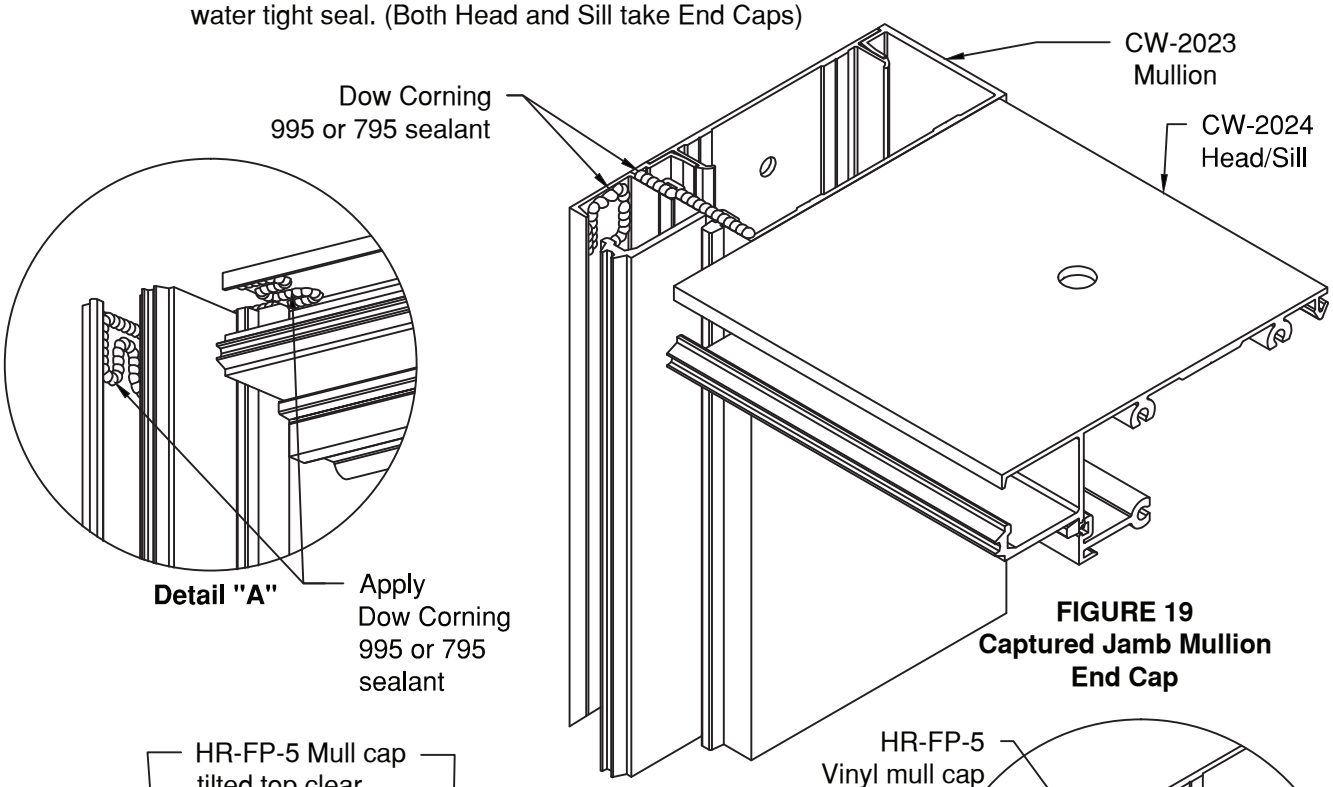
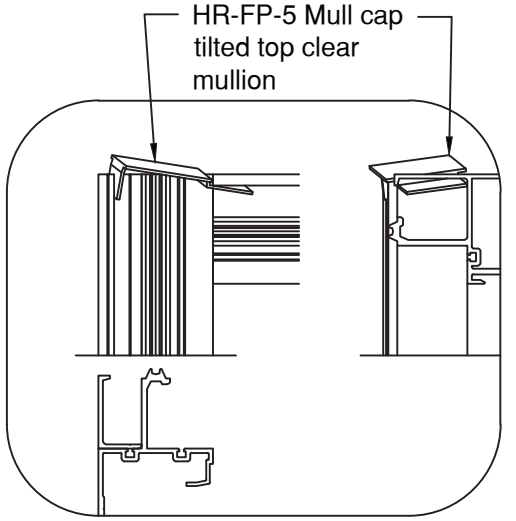
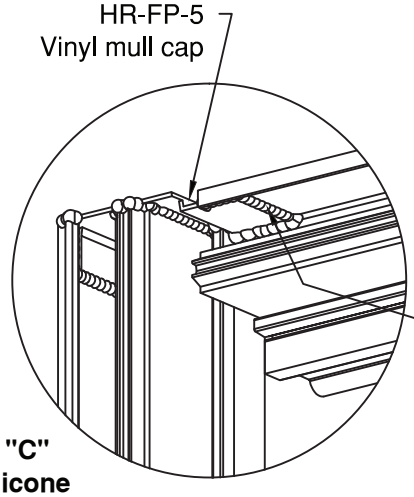


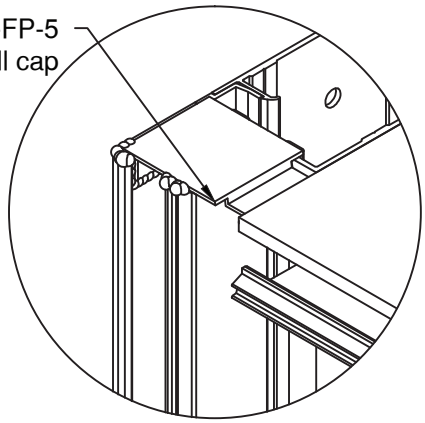
FIGURE 19
Captured Jamb Mullion End Cap



Detail "B"
HR-FP-5 Jamb Cap Installation



Detail "C"
Tool Silicone



Detail "D"
Installation Completed

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

PERIMETER CAULKING

3.7 Once all frames are installed and the system has been anchored to the substrate, apply weather seal around the entire perimeter. See details below for the correct location of the perimeter sealant and backer rod. Interior cosmetic seal is optional.

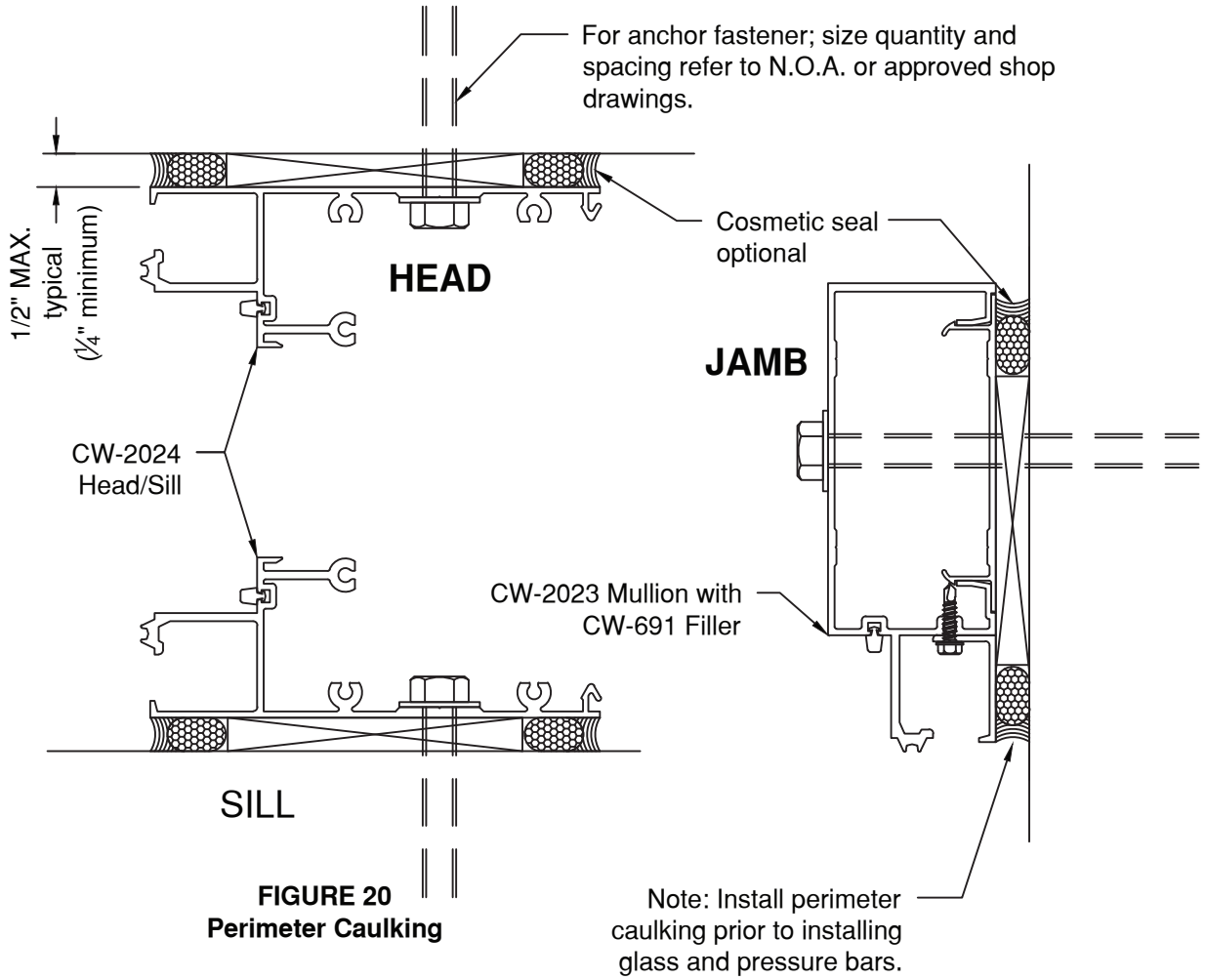


FIGURE 20
Perimeter Caulking

4. GLASS SIZING FORMULAS

Glass sizes for captured system

Glass width and height = D.L.O. + 1-1/2"

Glass sizes for SSG system

Glass height = D.L.O. + 1-1/2"
Glass width (SSG on both sides) = D.L.O. + 2"
Glass width (SSG on one side and captured on the other side) = D.L.O.+ 1-3/4"

Glass width at 90° corner:
SSG glazed vertical = D.L.O. + 2-3/4"
Captured vertical = D.L.O. + 2-1/2"

Glass tolerances are not addressed in the above formulas.
consult the glass manufacturer for glass tolerances prior to ordering

PRESSURE PLATE INSTALLATION

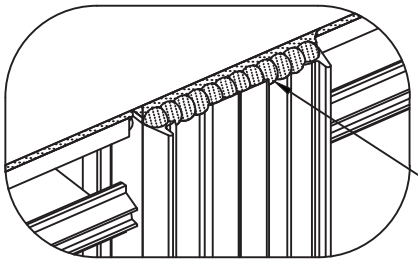
4.1 1. First install the vertical pressure plates using FS-322 screws, working from bottom to top, leaving a 1/4" gap between end of pressure plate and mullion bottom end cap **(see FIGURE 21)**.

2. After vertical pressure plates are done, then install the horizontal pressure plates, also using FS-322 screws, starting at the center and working outwards, center the horizontal pressure bars in opening leaving 3/16" gaps at each end.

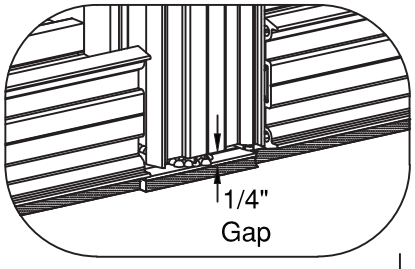
3. The end of vertical pressure plates at the head is to be sealed to the Mullion end cap and perimeter sealant. **See Detail "B"**

4. The end of the vertical pressure plates at the sill are to be left unsealed for water control. **See Detail "A"**

NOTE :Torque all pressure plate screws to 90 IN-LBS



Detail "B"
Sealant @ top end of vertical pressure plates



Detail "A"
Gap at bottom of vertical pressure plate

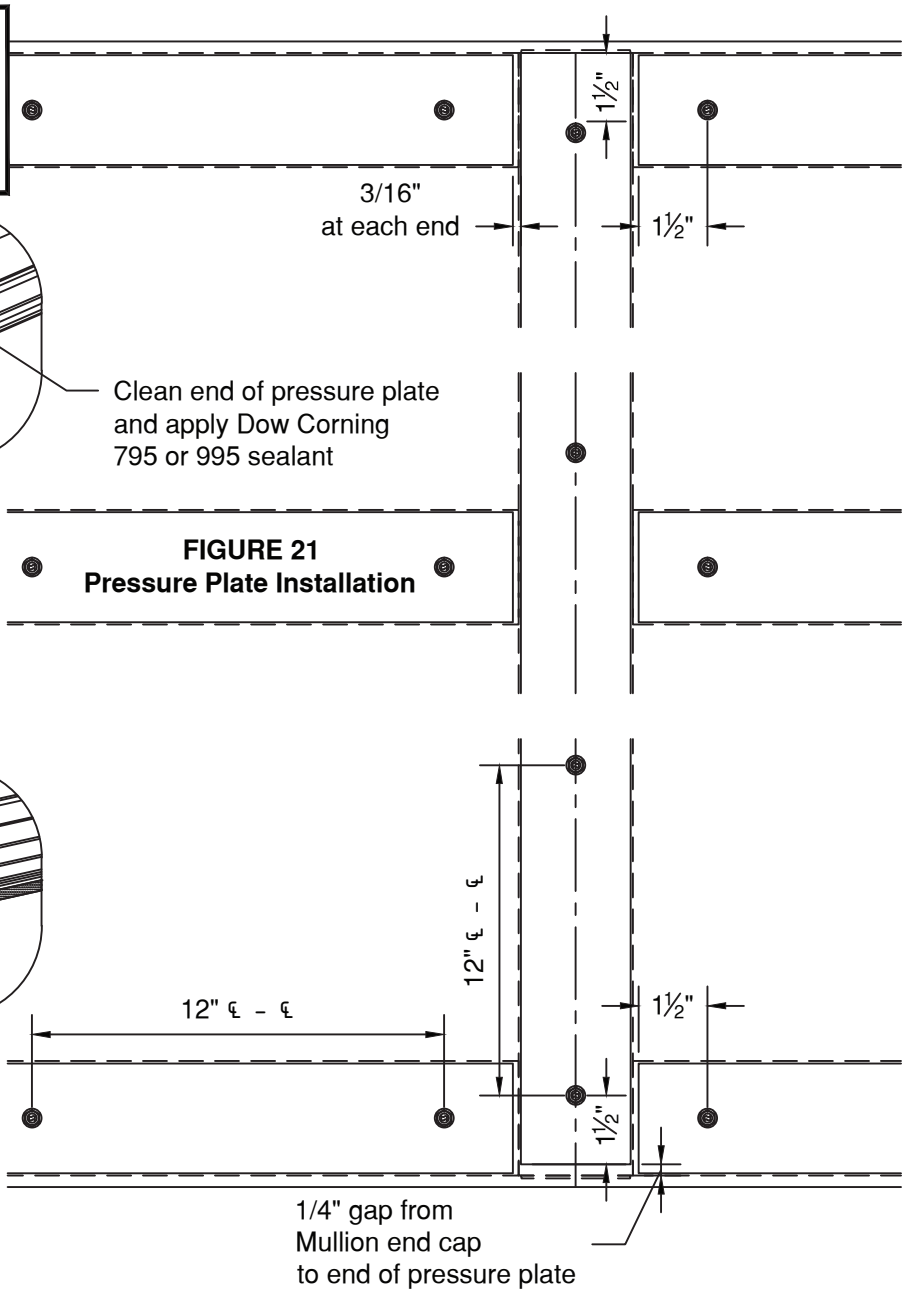


FIGURE 21
Pressure Plate Installation

WET GLAZED CAPTURED FRAME - GLAZING PREP

4.2 Water Diverter Installation. To be done after lower lites of glass are installed.

1. Clean then end of glazing pocket of CW-2156 horizontal and HR-FP-12 diverter.
2. Apply continuous bead of bed sealant at each end of horizontal similar to as shown in FIGURE 22 , 1" wide.
3. Set HR-FP-12 in sealant and press firmly into place, sliding vertical leg of diverter against side of glass .

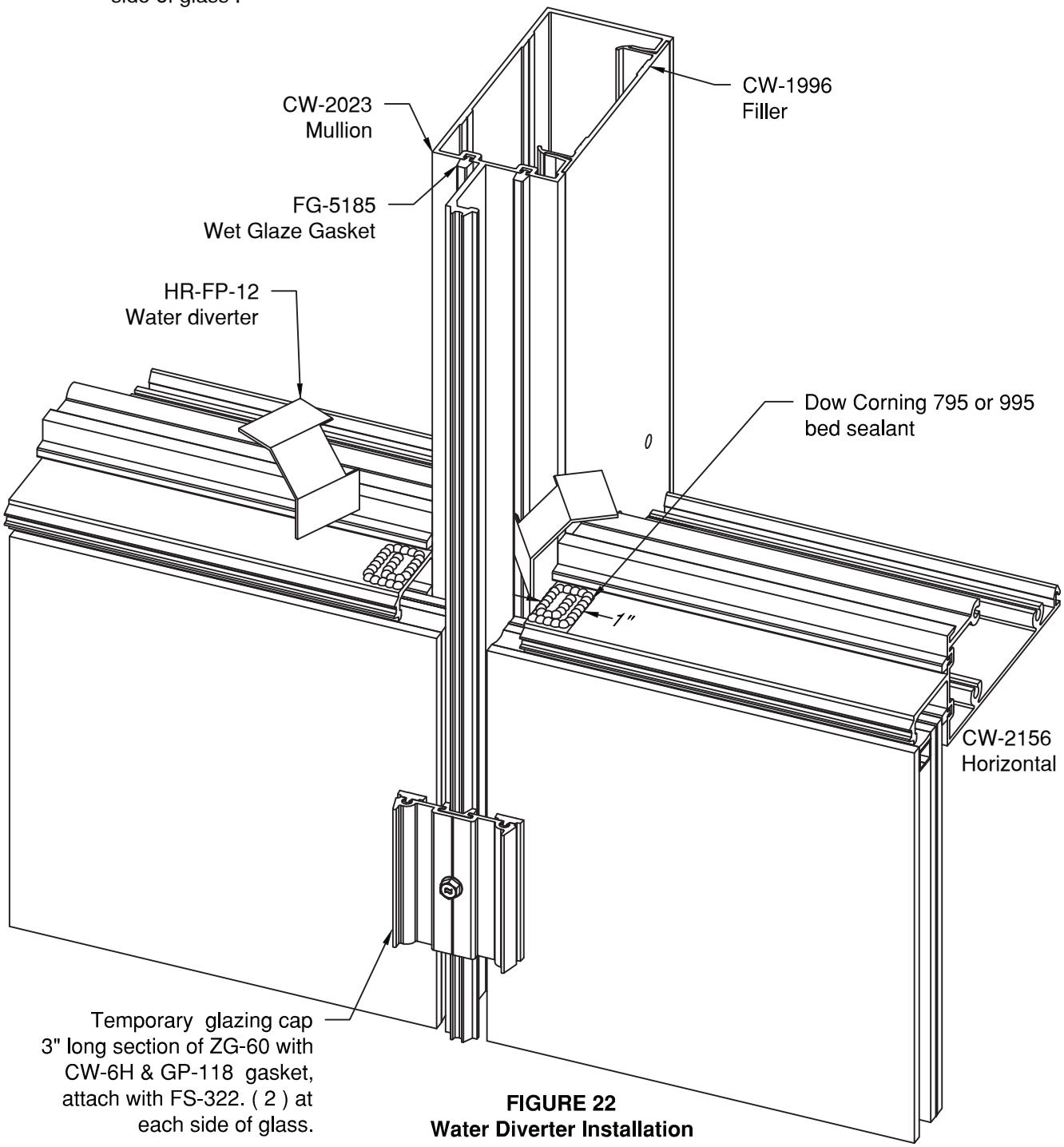


FIGURE 22
Water Diverter Installation

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

WET GLAZED CAPTURED FRAME - GLAZING PREP

4.2.1 Water Diverter Installation, continued.

1. Apply Dow Corning® 795 or 995 silicone around perimeter of HR-FP-12 diverter as **shown in FIGURE 23 and DETAIL A** (sealant is shown un-tooled) tool sealant to ensure a water tight seal and prevent any blockage of water drainage path.
2. Install CW-2102 setting blocks at 1/4 points (or as noted on approved shop drawings)

Note: At closed side of mullion tongue, clear excess sealant from between HR-FP-12 and mullion and front of diverter at face of glass to ensure proper drainage. See DETAIL A.

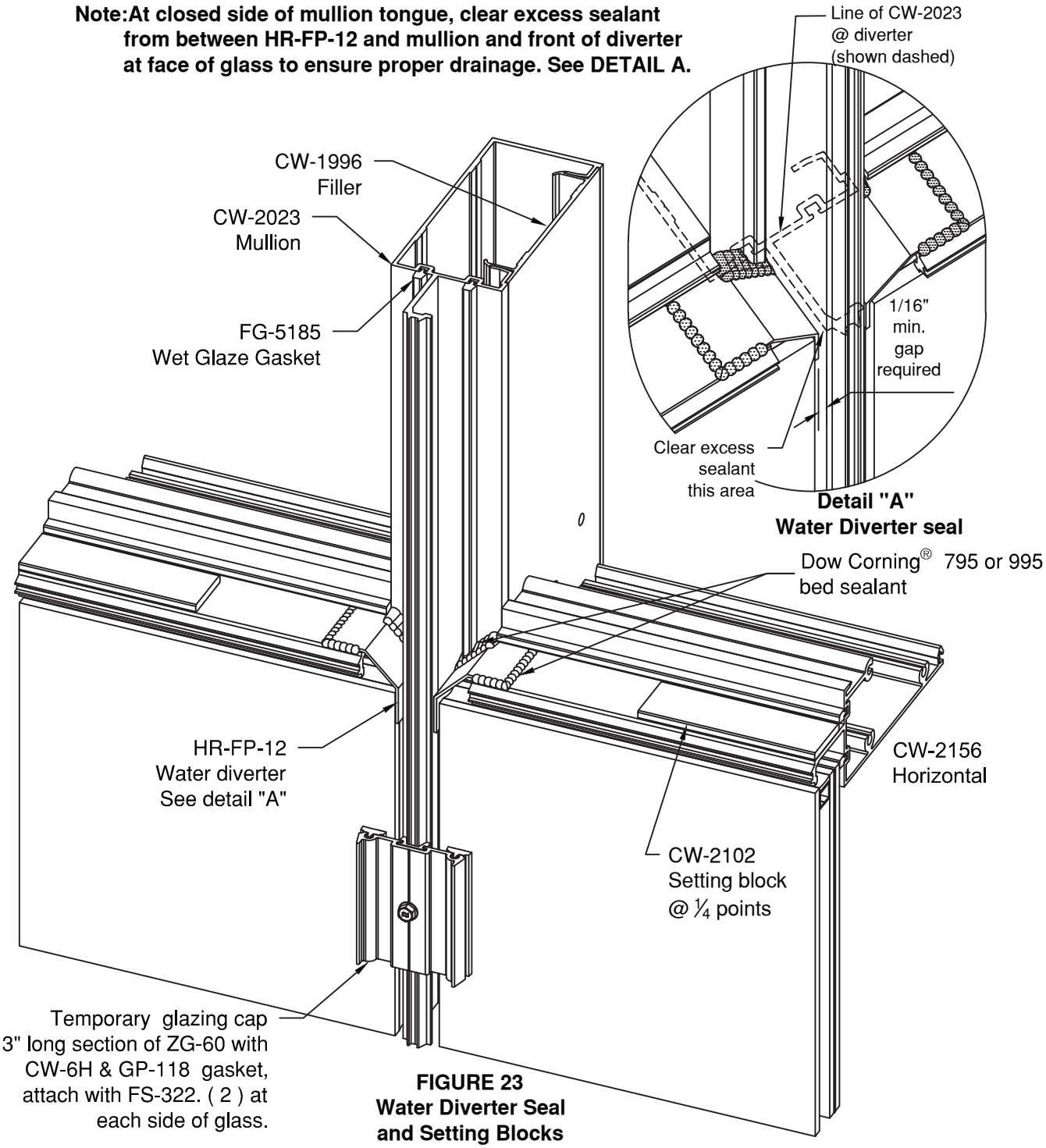


FIGURE 23
Water Diverter Seal and Setting Blocks

WET GLAZED CAPTURED FRAME - GLAZING

4.2.2 Setting the Glass. Setting glass from the bottom to the top.

1. Set bottom of glass on setting blocks with top slightly tilted outwards.
2. Center glass in opening then tilt into place.
3. Attach temporary glazing caps vertical and horizontals. 2 at each side of glass at ¼ points. Similar to as shown below.

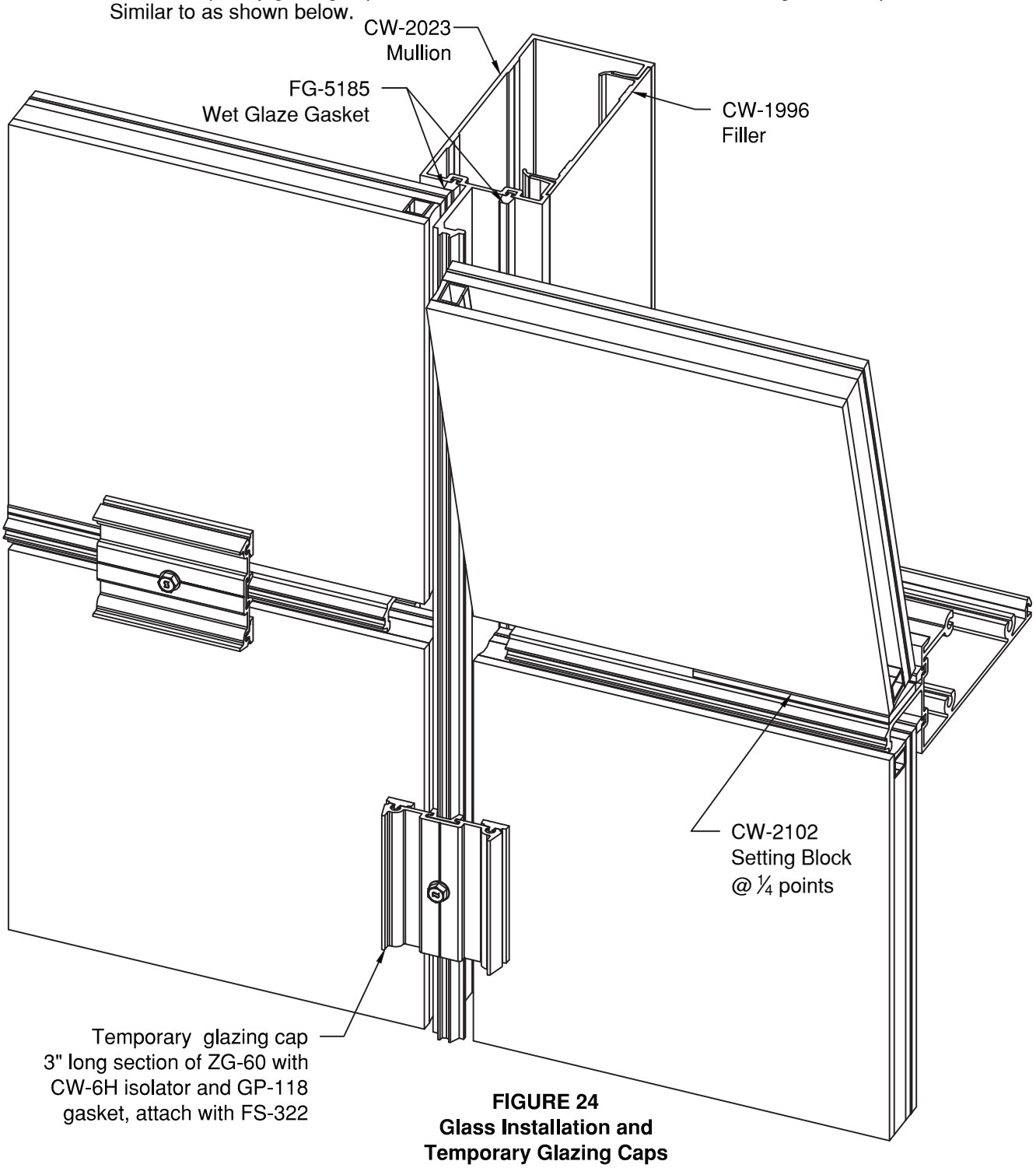


FIGURE 24
Glass Installation and
Temporary Glazing Caps

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

WET GLAZED CAPTURED FRAME - GLAZING

4.2.3 Face cap installation

To prevent damaging snap-on face caps during installation, hold a short piece of wooden 2" x 4" over the cap and hit the wood with a Stanley 3lbs. Compo-Cast dead blow soft face hammer. Do not hit the face cap directly with a mallet! See Detail A

1. Install vertical face caps first.
   - ? Clean end of horizontal pressure plate and adjoining area of vertical face cap.
   - ? Apply Dow Corning 795 or 995 silicone as noted and tool to assure water tight seal
2. Install horizontal face caps.

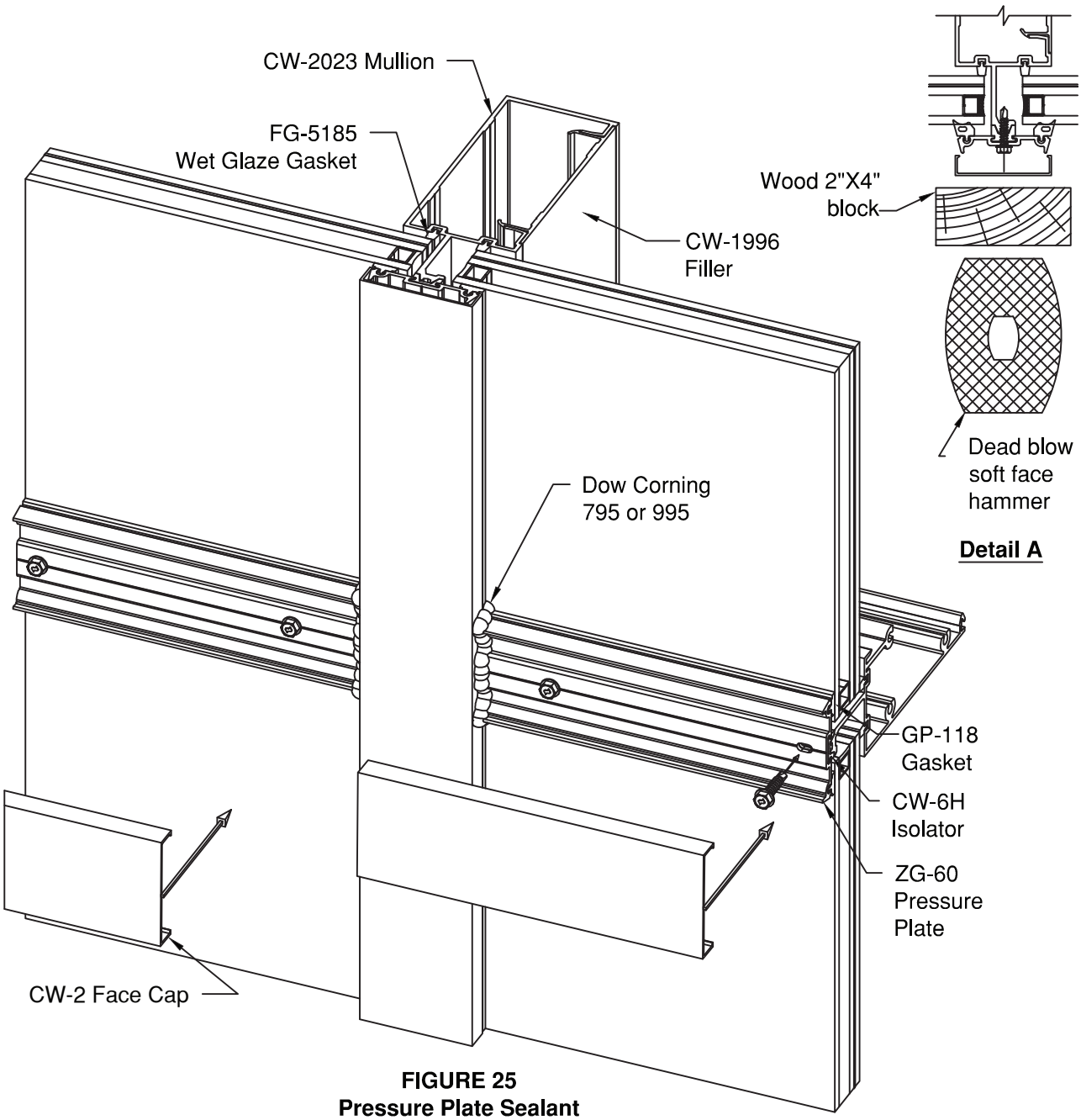


FIGURE 25
Pressure Plate Sealant
& Face Cap Installation

WET GLAZED CAPTURED FRAME

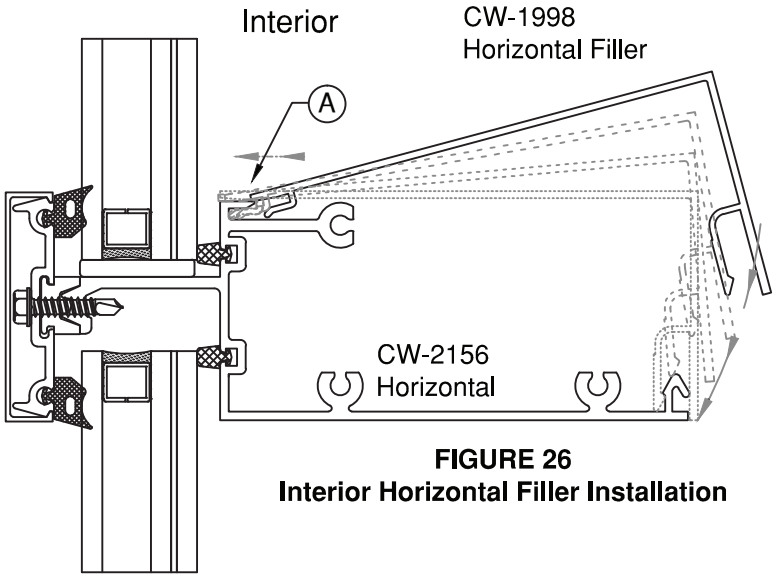
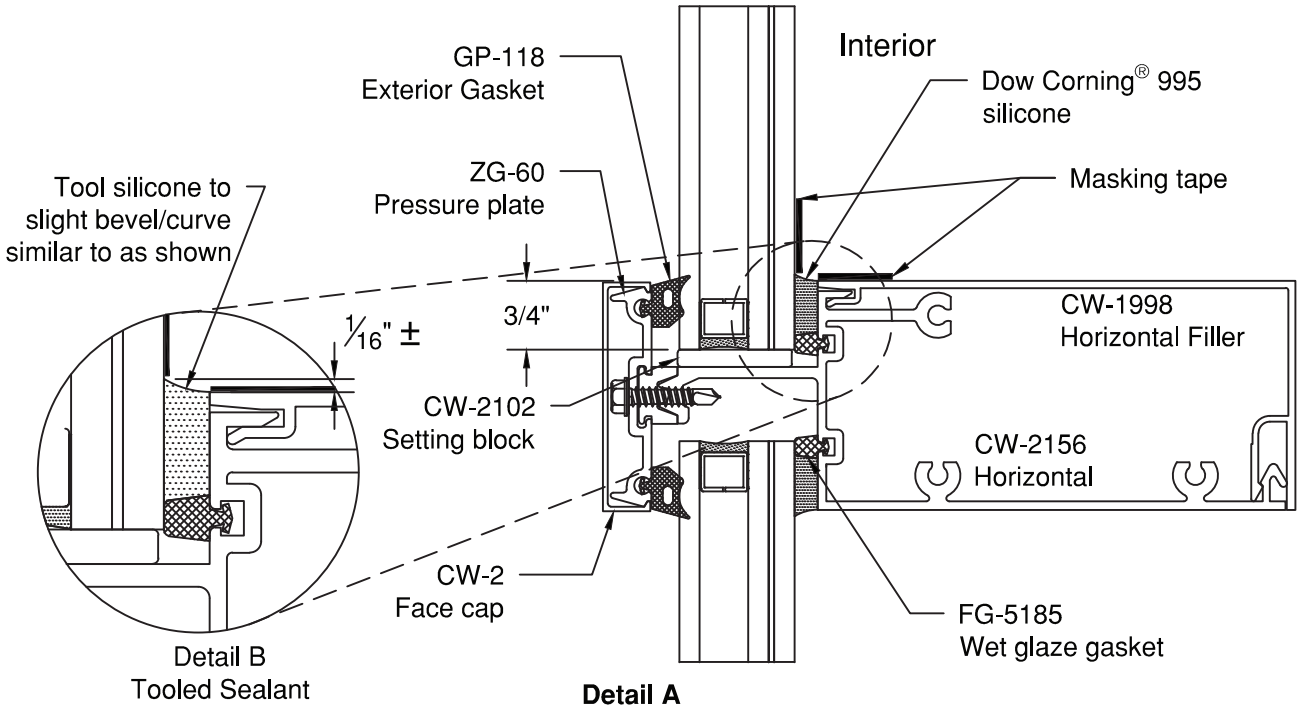


FIGURE 26
Interior Horizontal Filler Installation

4.2.4 Installation of Interior Horizontal Filler.

1. Set tip of filler CW-1998, point "A" noted above, on top of horizontal, then slide filler forward and rotate down to engage snap catch @ back of filler.



Detail A
Masking for Sealant

WET GLAZED CAPTURED FRAME

4.2.5 Wet glazed framing interior sealant application.

1. Mask off glass and aluminum with 1" wide (minimum) low adhesion masking tape. **See FIGURE 27**.
   Working a single DLO at a time, Fill cavity around the full perimeter of DLO with Dow Corning® 995 sealant as shown, care should be taken not to leave any voids and eliminate air bubbles in sealant. **(See Detail. A)**.
   Immediately tool , creating a finished joint with a beveled/curved joint surface **See Detail B.**
2. Remove masking tape 10 minutes after tooling; taking care not to damage tooled sealant.

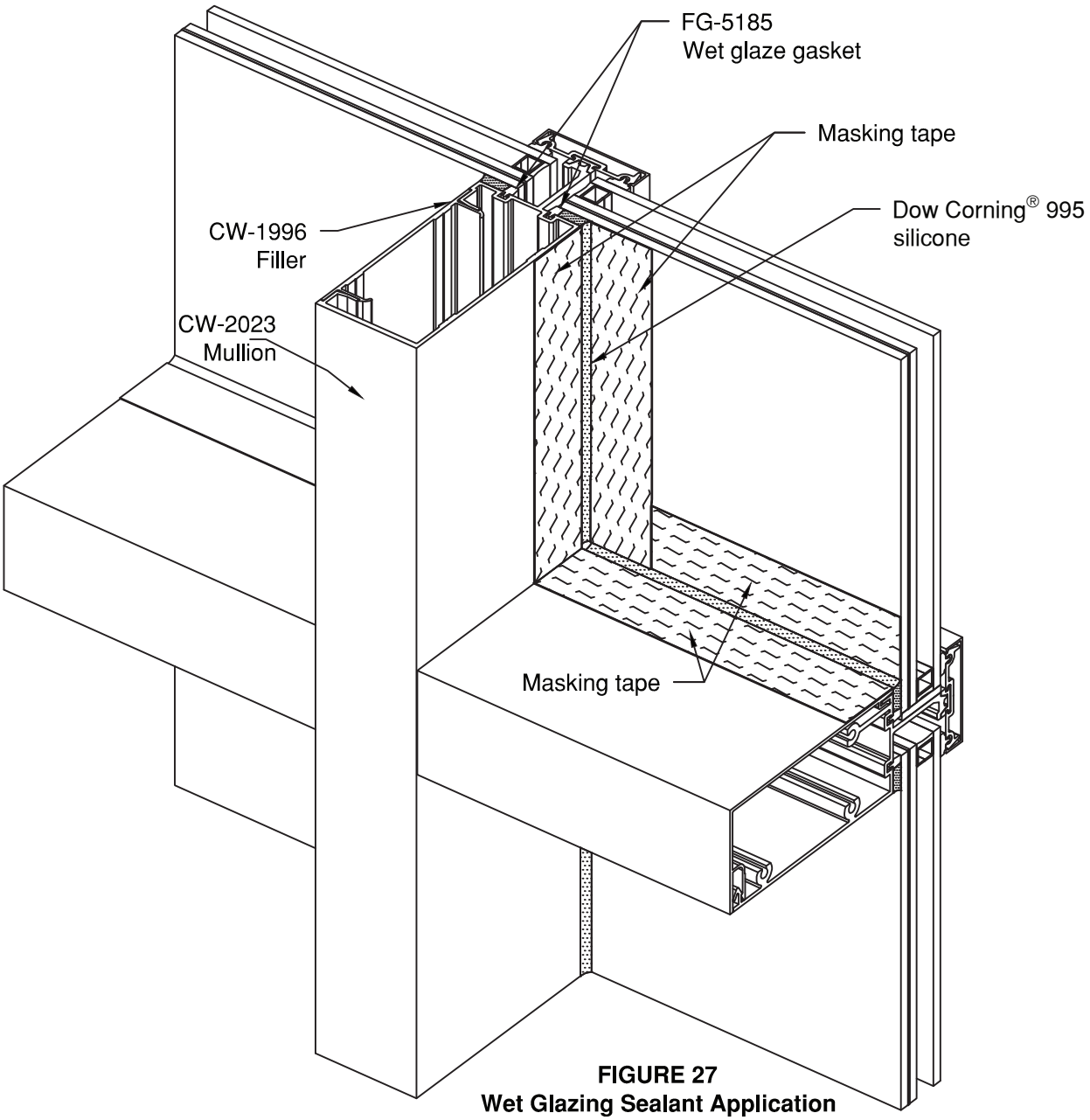


FIGURE 27
Wet Glazing Sealant Application

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

DRY GLAZED CAPTURED FRAME - GLAZING PREP

4.3.1 Water Diverter Installation. To be done after lower lites of glass are installed.

1. Clean then end of glazing pocket of CW-2156 horizontal and HR-FP-26 diverter.
2. Apply continuous bead of bed sealant at each end of horizontal similar to as shown in FIGURE 23 , 1" wide.
3. Set HR-FP-26 in sealant and press firmly into place, sliding vertical leg of diverter against side of glass.

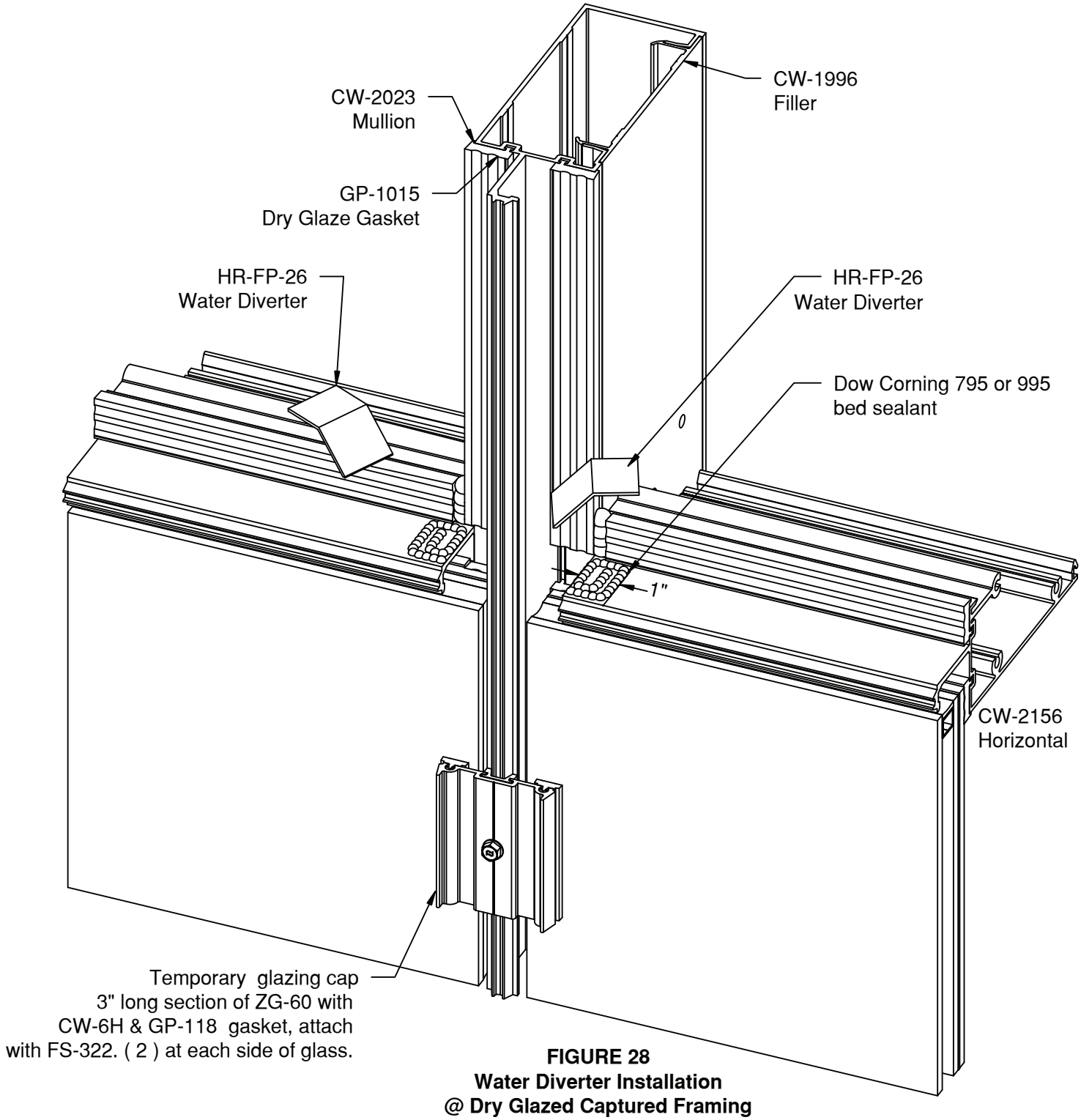


FIGURE 28
Water Diverter Installation
@ Dry Glazed Captured Framing

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

DRY GLAZED CAPTURED FRAME - GLAZING PREP

4.3.2 Water Diverter Installation, continued.

1. Apply Dow Corning® 795 or 995 silicone around perimeter of HR-FP-26 diverter as shown in FIGURE 24 and Detail A (sealant is shown un-tooled) tool sealant to ensure a water tight seal and prevent any blockage of water drainage path.
2. Install CW-2102 setting blocks at 1/4 points (or as noted on approved shop drawings)

Note: At closed side of mullion tongue, clear excess sealant from between HR-FP-26 & 27 and mullion and front of diverter at face of glass to ensure proper drainage. See Detail A.

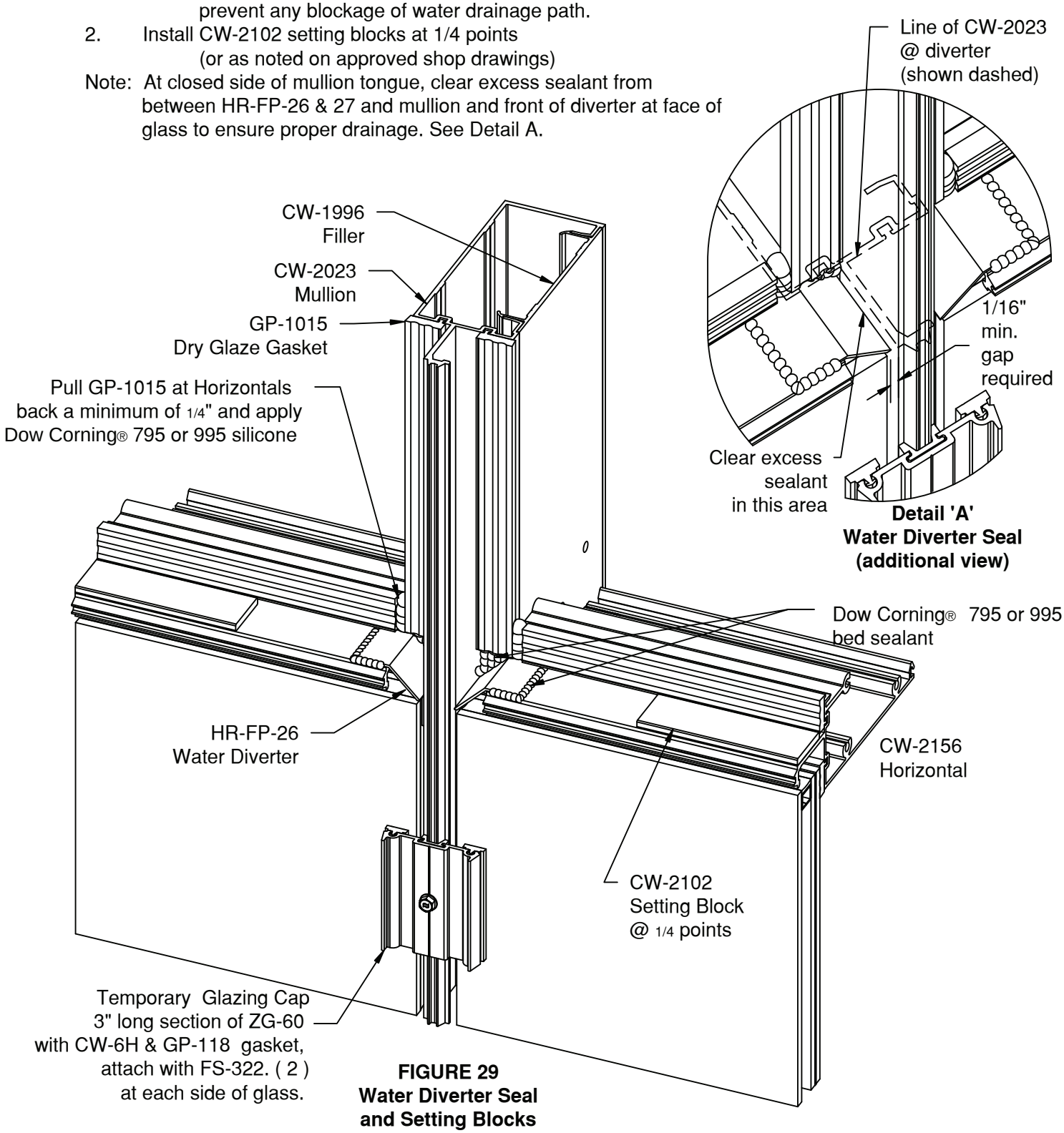


FIGURE 29
Water Diverter Seal and Setting Blocks

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

DRY GLAZED CAPTURED FRAME - GLAZING

4.3.2 Setting the Glass. Setting glass from the bottom to the top.

1. Set bottom of glass on setting blocks with top slightly tilted outwards.
2. Center glass in opening then tilt into place.
3. Attach temporary glazing caps vertical and horizontals. 2 at ea side of glass at ¼ points. Similar to as shown below.

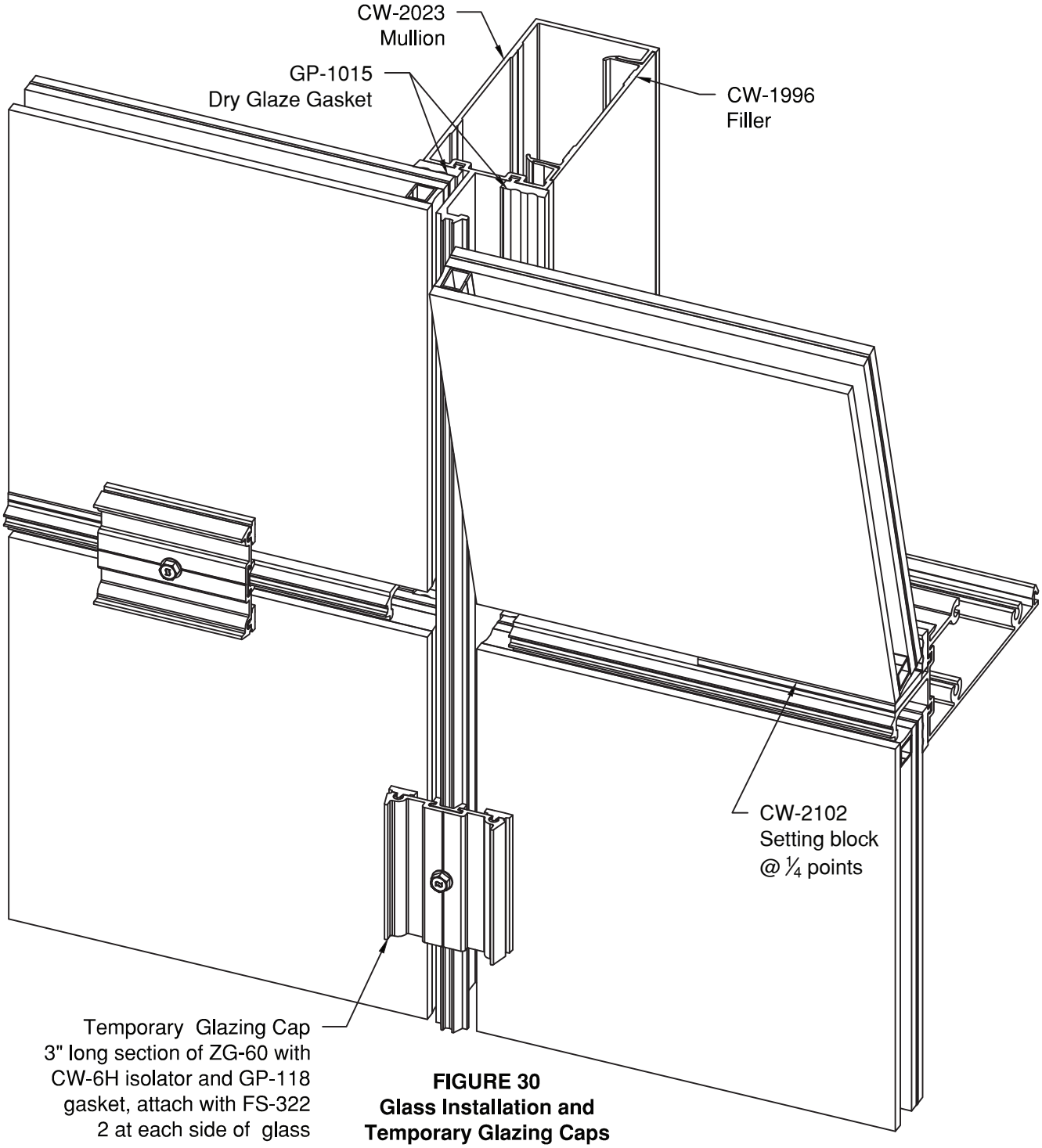


FIGURE 30
Glass Installation and Temporary Glazing Caps

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

DRY GLAZED CAPTURED FRAME - GLAZING

4.3.3 Face Cap Installation

To prevent damaging snap-on face caps during installation, hold a short piece of wooden 2" x 4" over the cap and hit the wood with a Stanley 3lbs. Compo-Cast dead blow soft face hammer. DO NOT hit the face cap directly with a mallet! See Detail A.

1. Install vertical face caps first.
   - Clean end of horizontal pressure plate and adjoining area of vertical face cap.
   - Apply Dow Corning® 795 or 995 silicone as noted and tool to assure water tight seal
2. Install Horizontal Face Caps.

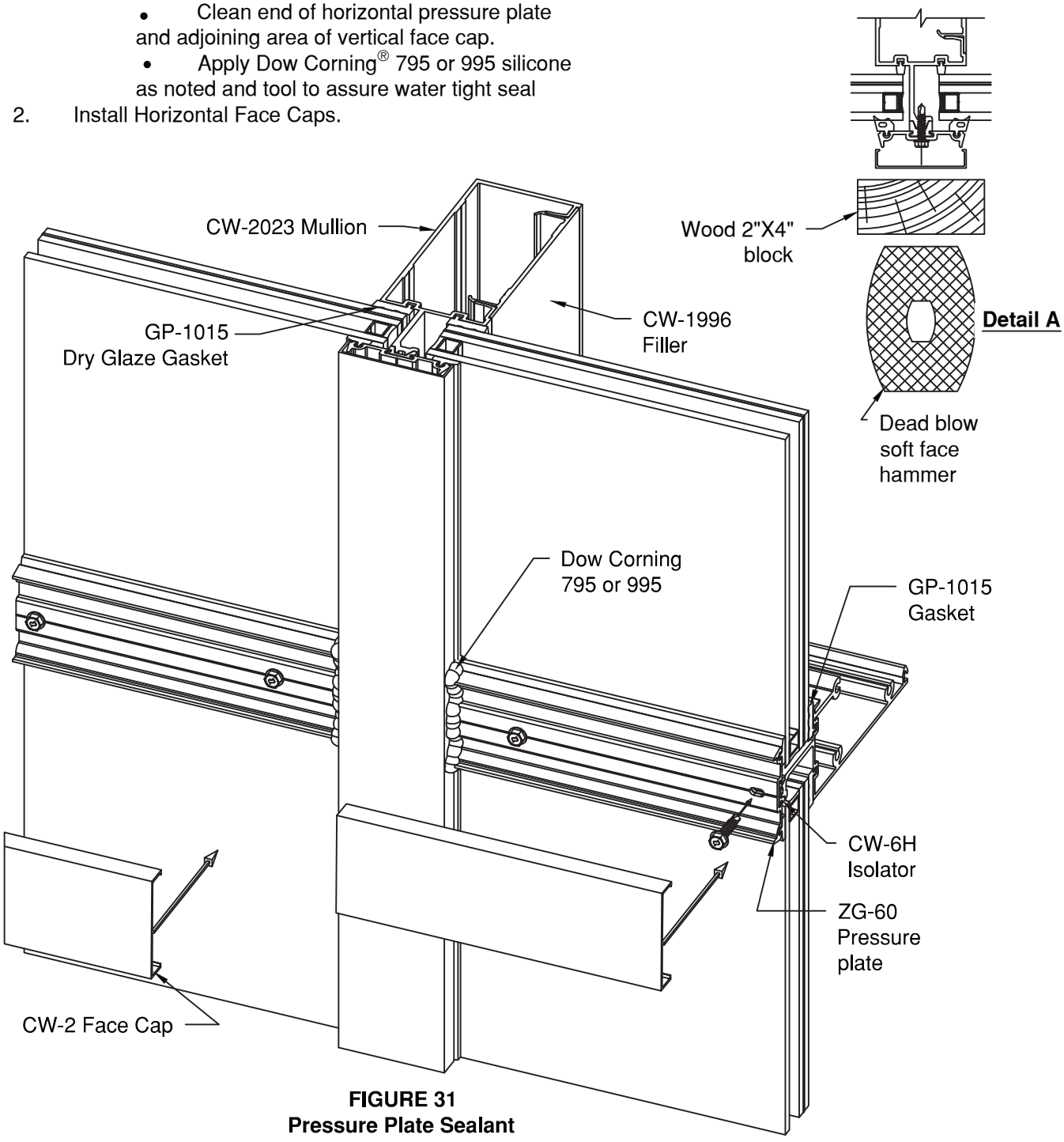


FIGURE 31
Pressure Plate Sealant
& Face Cap Installation

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

SSG - GLAZING PREP - BRIDGE INSTALLATION

4.4.1 Bridge/Water Diverter Installation. To be done after lower lites of glass are installed.

1. Clean the ends of glazing pocket of CW-2156 horizontal and the face of CW-1999 mullion, as well as the HR-FP-10 diverter.
2. Apply continuous bead of bed sealant at each end of the horizontals and the face of the mullion, as shown in FIGURE 32 Detail A , 1/2" wide min.
3. Set HR-FP-10 Bridge Diverter by first placing left most edge on top of glazing pocket with part tipped slightly up towards the right, with back of diverter just in front of the FG-2185 spacer. See Details B and C.

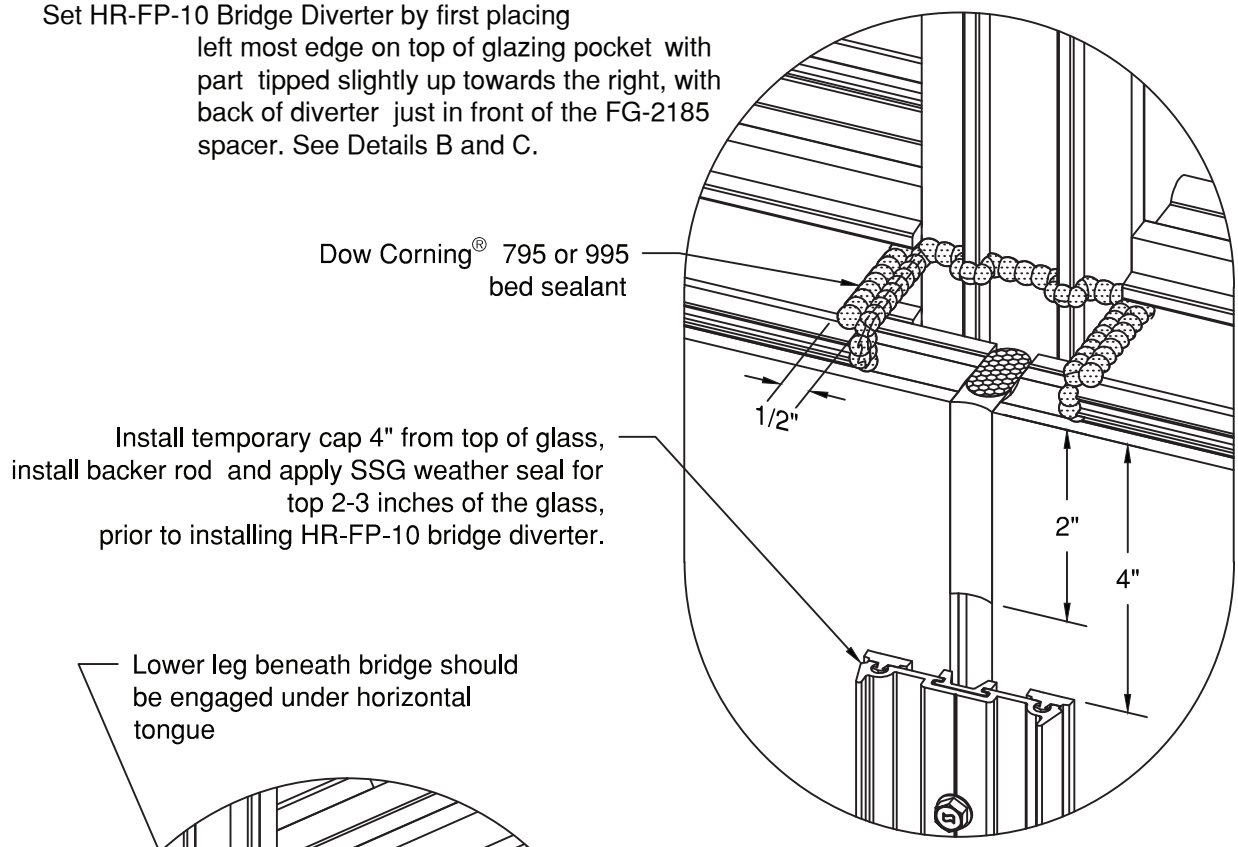


FIGURE 32 Detail A
Water Diverter Bed Sealant

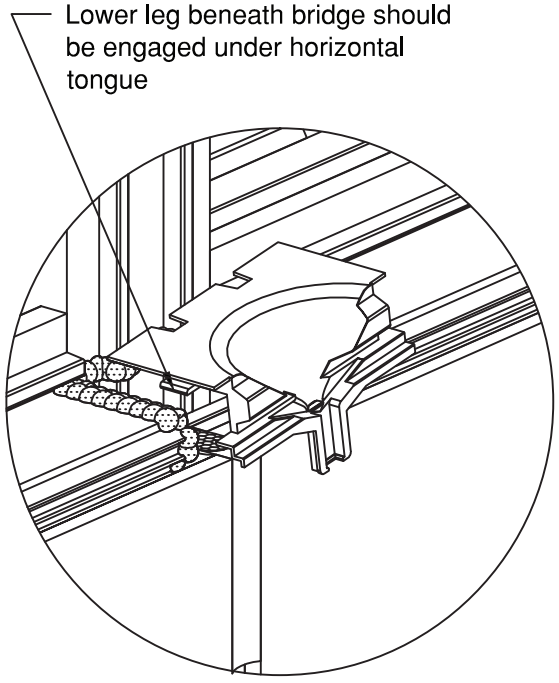


FIGURE 32 Detail B
Water Diverter
Bottom engage leg

SSG - GLAZING PREP - BRIDGE INSTALLATION

4.4.1 Bridge/Water Diverter Installation (Continued)

4. Slide HR-FP-10 towards left being sure the leg underneath bright engages under tongue of horizontal, as shown in Detail B.
5. As diverter is being slid towards the left rotate the right side down onto top of tongue of right horizontal and the snap leg will engage on end of tongue. See FIGURE D
6. Once snap leg is engaged, slide HR-FP-10 diverter back pressing back firmly against face of mullion.
7. Sealing Bridge Diverter
   - Apply sealant around fill perimeter of diverter and tool smooth to ensure water tight sea.

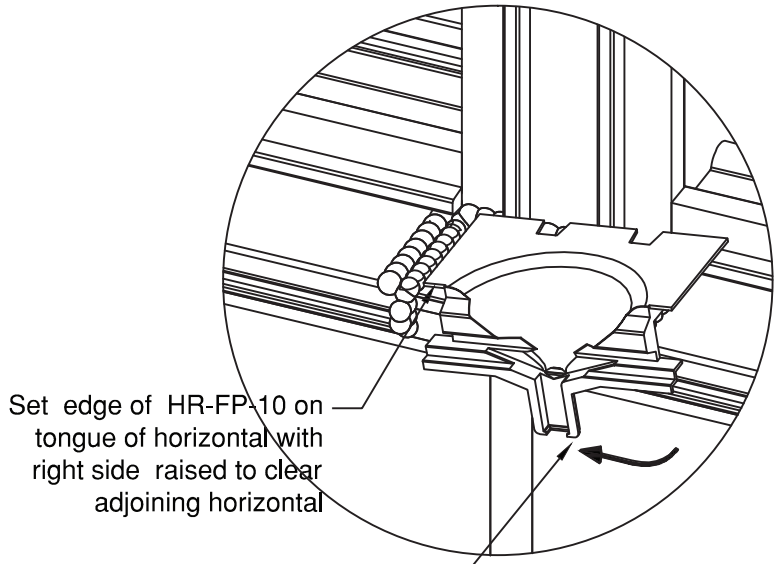


FIGURE 32 Detail C
Bridge Diverter Installation

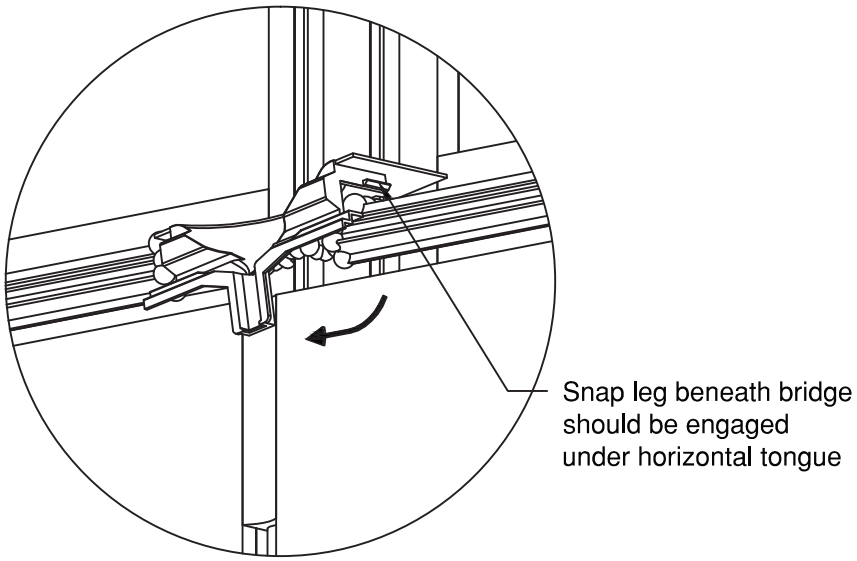


FIGURE 32 Detail D
Bridge Diverter
Snap Leg

SSG - GLAZING PREP - BRIDGE INSTALLATION

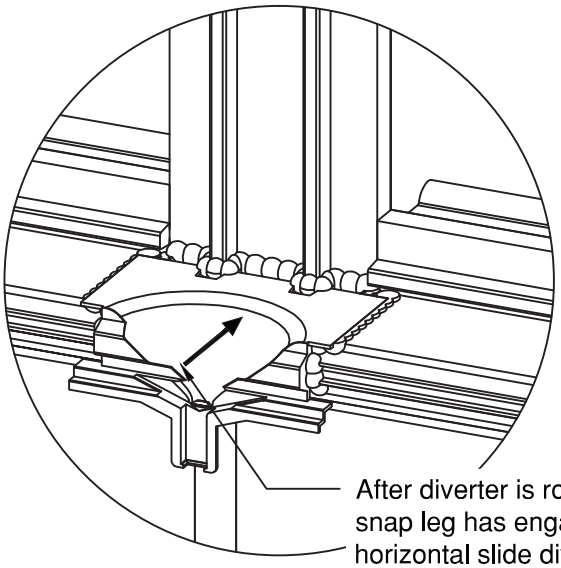


FIGURE 32 Detail E
Bridge Diverter Installation

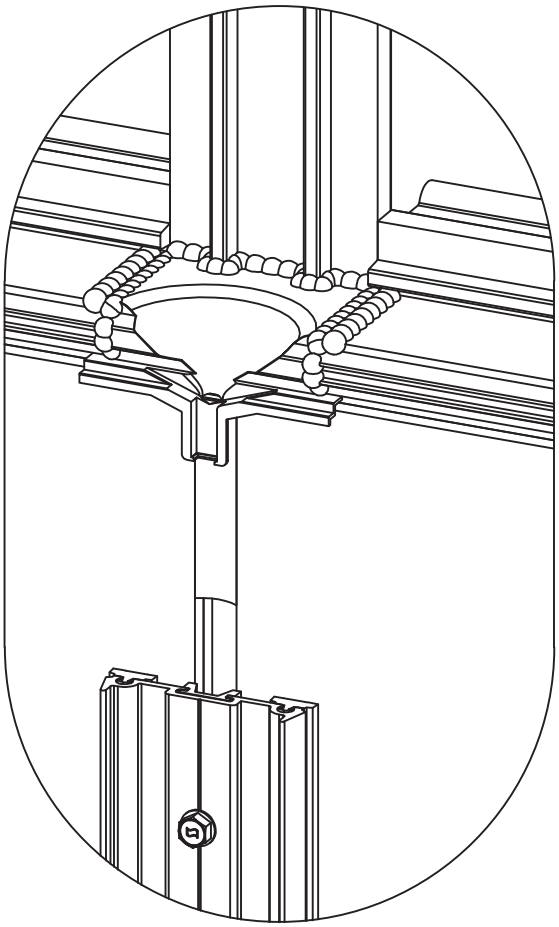


FIGURE 32 Detail F
Bridge Diverter
Perimeter Sealant

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

WET GLAZED SSG FRAME - GLAZING

4.4.2 Setting the Glass.
Setting glass from the bottom to the top.

1. Set bottom of glass on setting blocks with top slightly tilted outwards.
2. Center glass in opening then tilt into place.
3. Attach temporary glazing caps vertical and horizontals. 2 at ea side of glass at 1/3 points. Similar to as shown below.

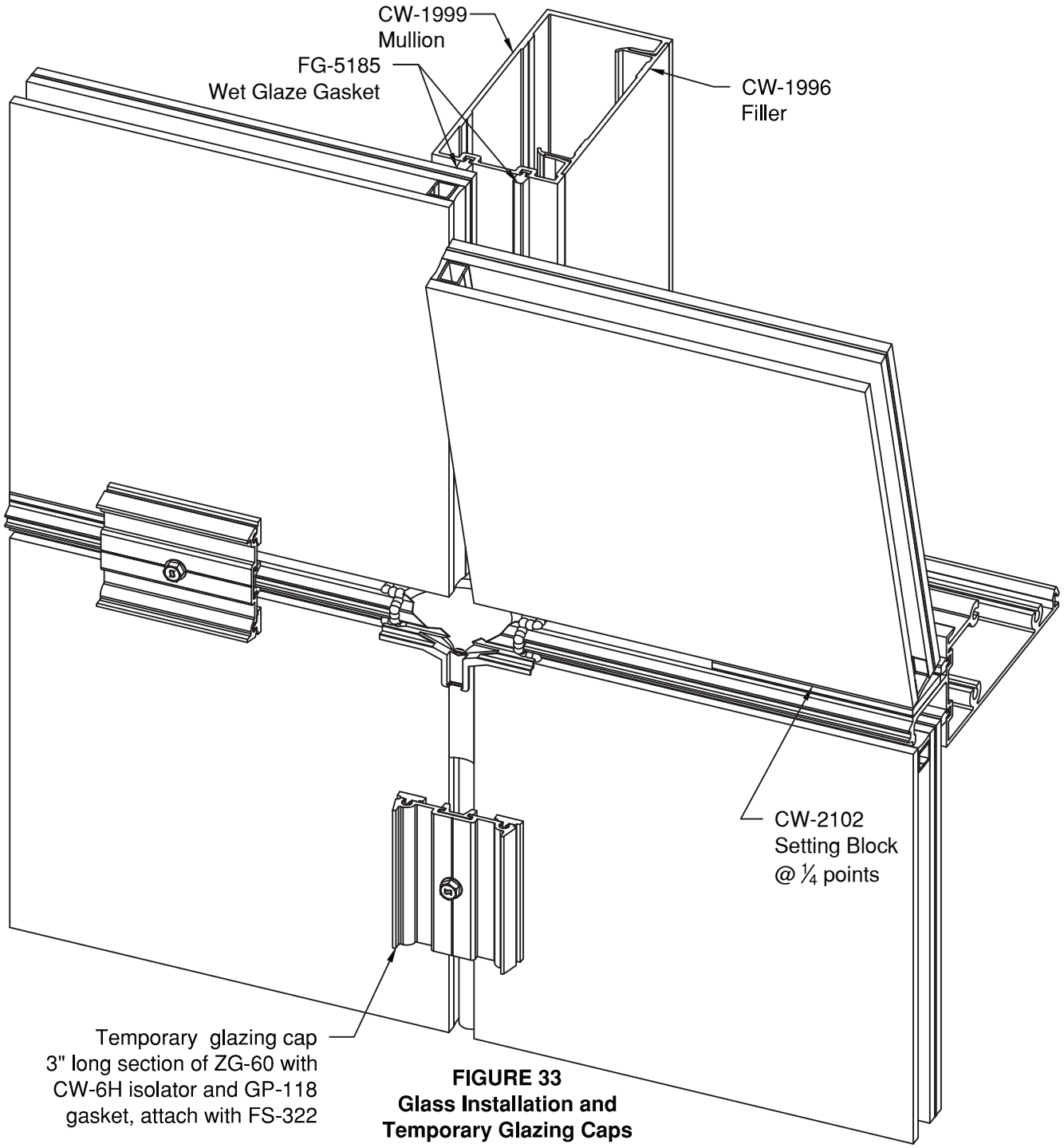


FIGURE 33
Glass Installation and Temporary Glazing Caps

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

WET GLAZED SSG FRAME - GLAZING

4.4.3 Horizontal pressure plate and face cap installation

1. Attach ZG-60 pressure plate with FS-322 (#12-14 X 1"HWH w/ #3 point) . Be sure to torque pressure plate screws to 90 in-lbs.

short piece of wooden 2" x 4" over the cap and hit the wood with a Stanley 3lbs. Compo-Cast dead blow soft face hammer. Do not hit the face cap directly with a mallet! See detail A.

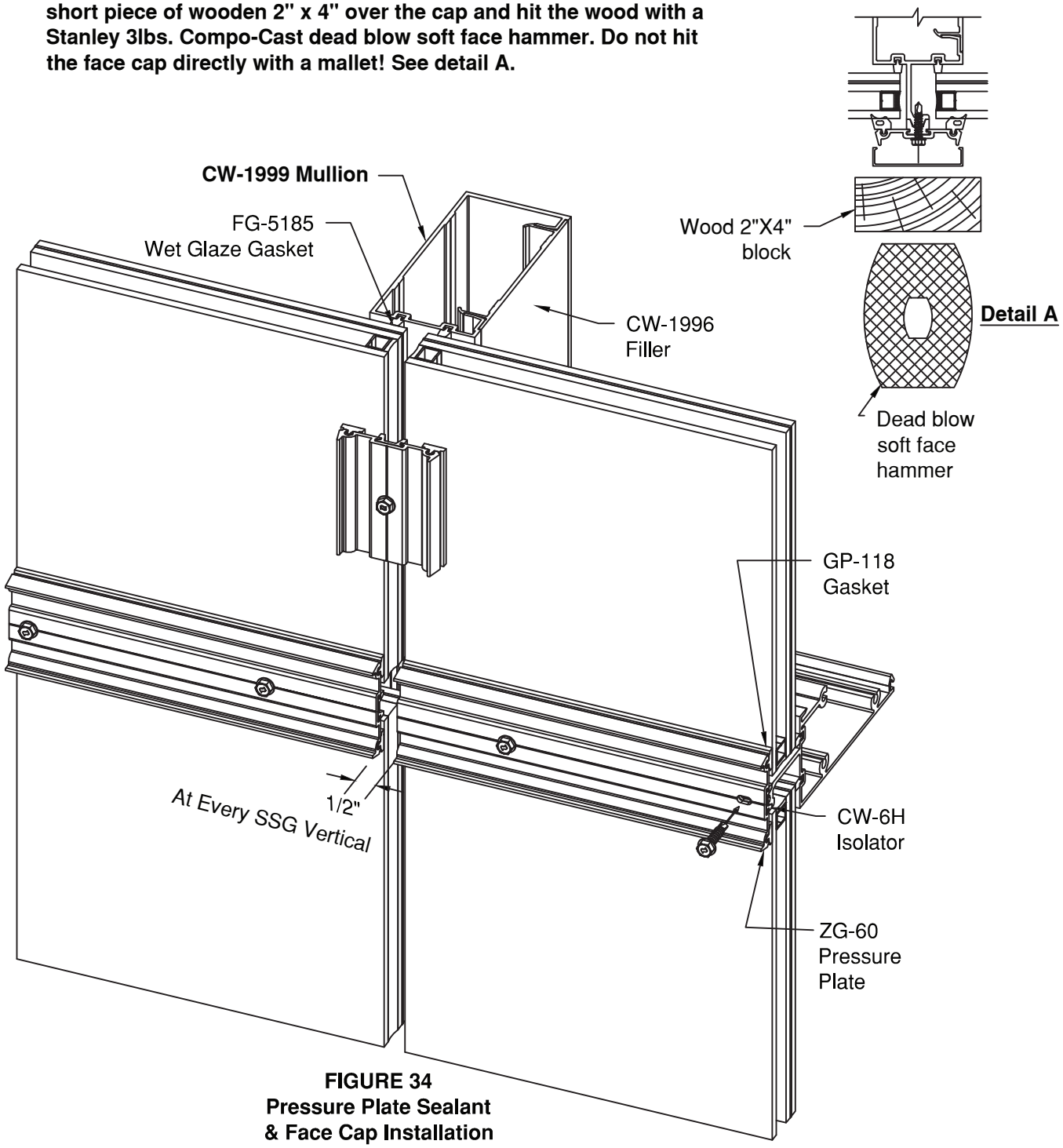


FIGURE 34
Pressure Plate Sealant
& Face Cap Installation

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

WET GLAZED SSG FRAME - GLAZING

4.4.4 Wet Glazed Framing Interior Sealant Application.

1. Mask off glass and aluminum with 1" wide (minimum) low adhesion masking tape. **See FIGURE 35**. Working a single DLO at a time, Fill cavity around the full perimeter of DLO with Dow Corning® 995 sealant as shown, care should be taken not to leave any voids and eliminate air bubbles in sealant. **(See Detail. A)**.Immediately tool , creating a finished joint with a beveled/curved joint surface **See Detail B on next page .**
2. Remove masking tape 10 minutes after tooling; taking care not to damage tooled sealant.

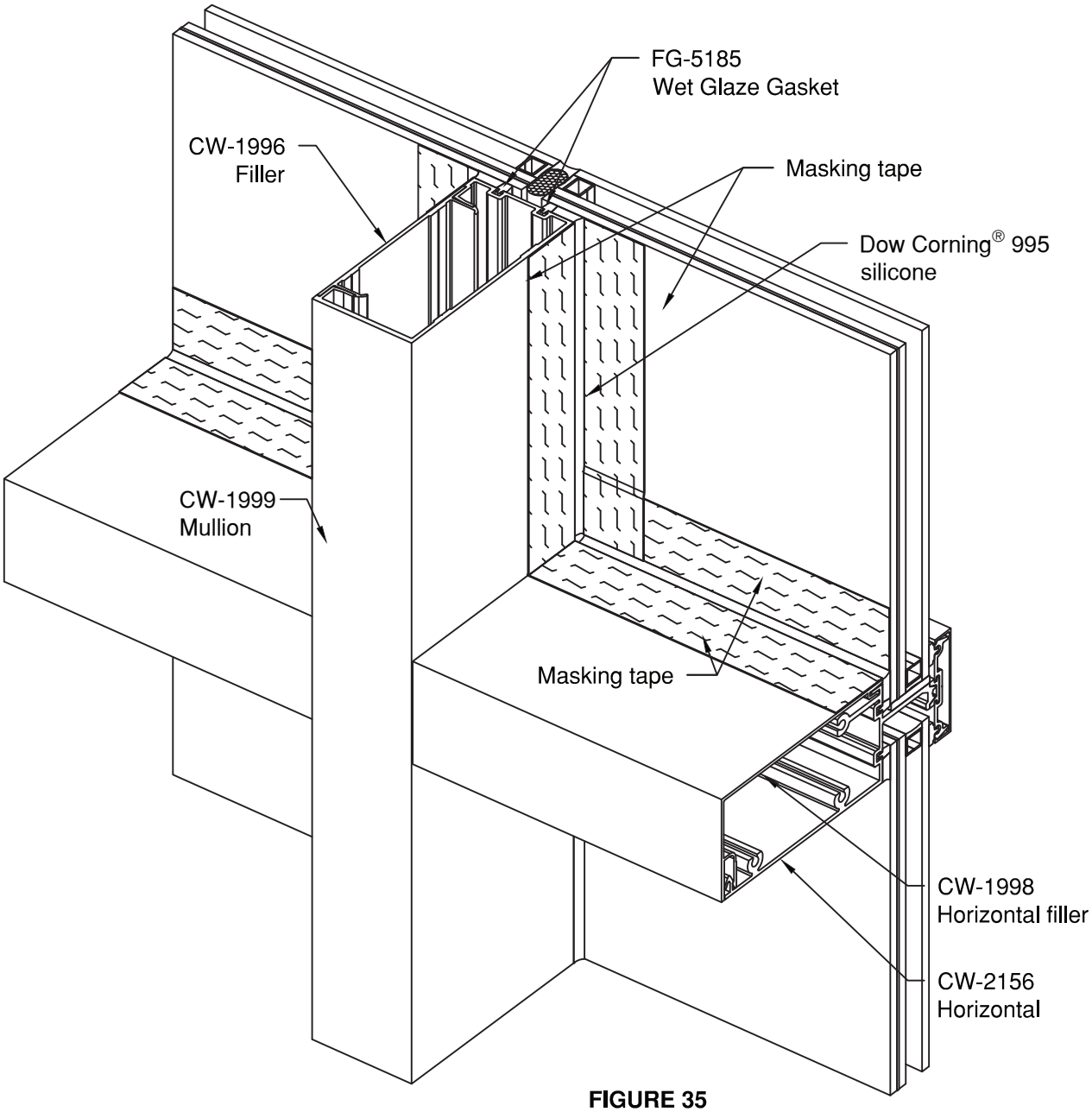


FIGURE 35
Wet Glazing Sealant Application

WET GLAZED SSG FRAME - GLAZING

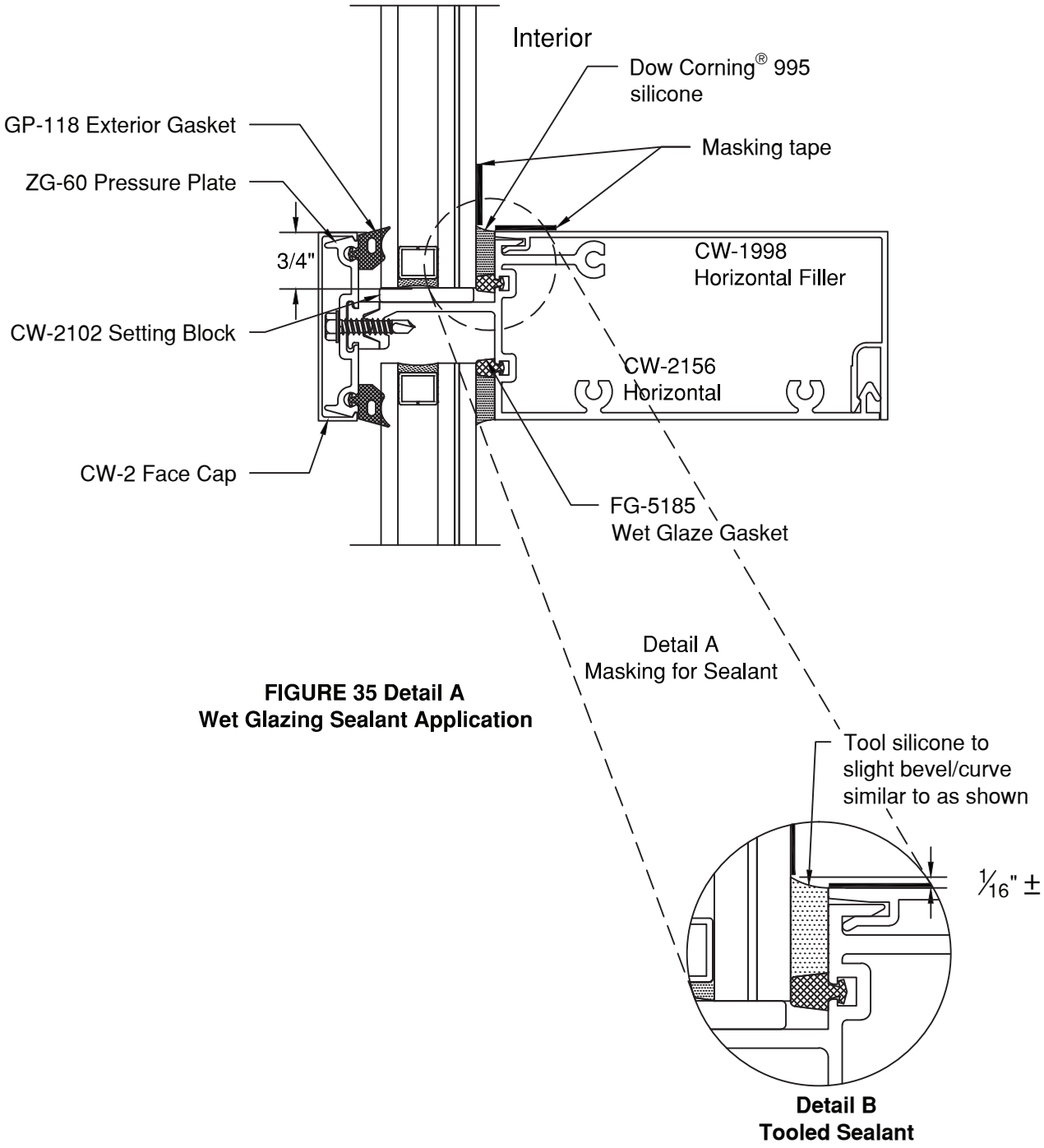


FIGURE 35 Detail A
Wet Glazing Sealant Application

Detail B
Tooled Sealant

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

WET GLAZED SSG - GLAZING

4.4.5 Exterior Weather Seal Prep and Application

✱ Note this is to be applied after interior structural silicone has been applied and temporary caps are in place ✱

NOTE: Oldcastle BuildingEnvelope® recommends that the application of the exterior weather seal be done after the interior structural seal has cured, the length of cure time as per Dow Corning .
This is so the weather seal can be applied as a single uninterrupted joint of sealant. If this seal is applied the structural seal has cured while the temporary caps are in place see FIGURE 37 for completing the sealant application after temp caps are removed.

1. Install horizontal pressure plates being sure to torque fasteners to 90 in-lbs.

See to FIGURE 34 on Page 40

- Clean edge of glass according to sealant manufacturer's recommendations for cleaner/primer requirements.

To prevent damaging or scratching the glass or horizontal face cap, apply masking tape (min 1½" wide) to face of glass and face cap aligning edge of tape with edge of glass and edge of face cap.

- insert backer rod to the required depth per N.O.A or as noted on approved shop drawings. {Shown as1/4" below.}
- Apply Dow Corning 795 or 995 silicone as noted and tool to assure water tight seal.

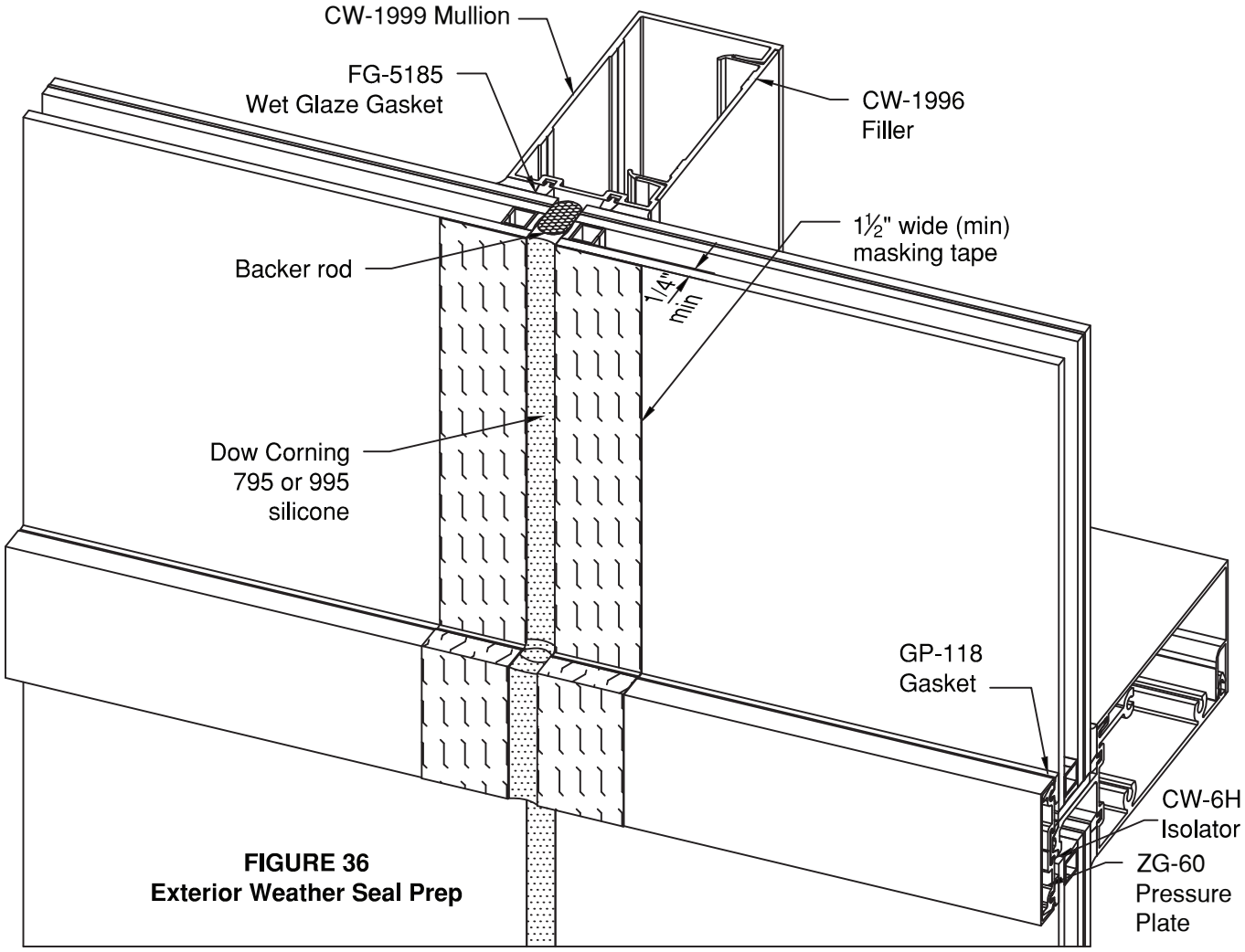


FIGURE 36
Exterior Weather Seal Prep

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

WET GLAZED SSG - GLAZING

4.4.5 (continued)

Completion of weather seal after sealant has cured and temp caps are removed, and any backer rod has also been removed from joint area.

2. Clean all surfaces inside joint area , as per sealant manufacture. Including the face of the mullion at the hole from the temporary cap fastener.
3. Apply Dow Corning® 795 or 995 to the hole in face of mullion.
4. Insert new backer rod into joint and apply Dow Corning® 795 or 995 and tool to ensure weather tight seal and to blend the new sealant to previously applied sealant. **See FIGURE 36** for weather seal application steps

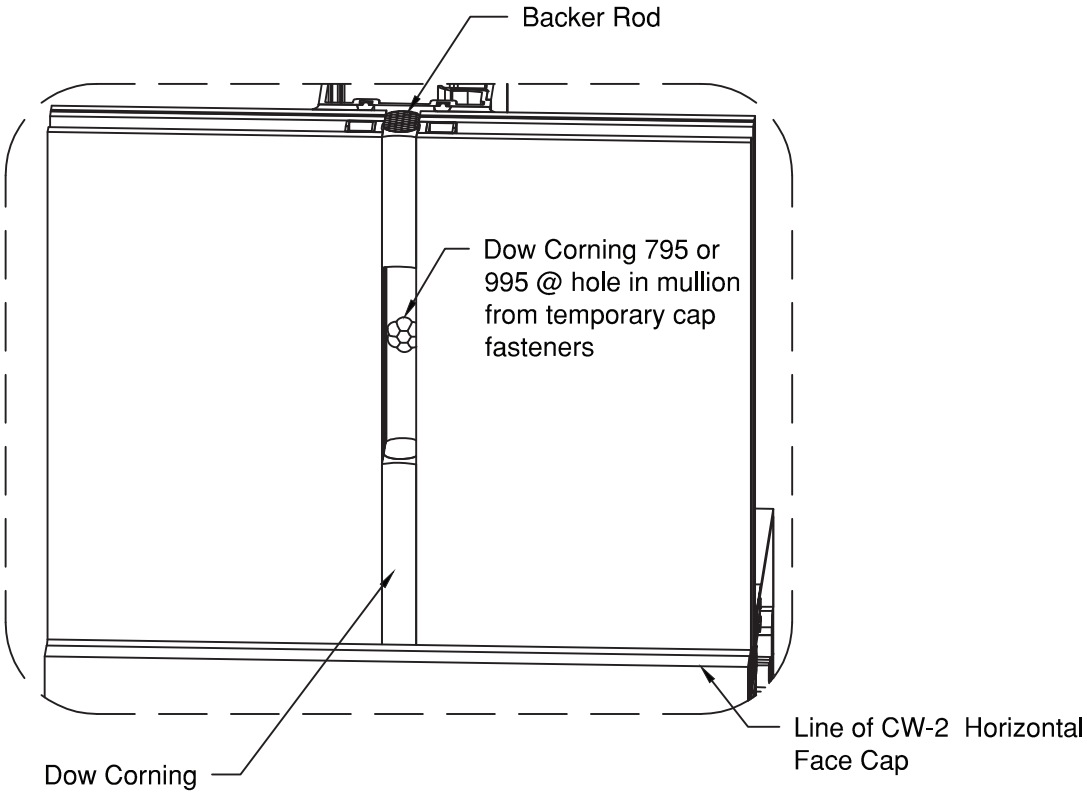


FIGURE 37
Exterior Weather Seal
Patch Seal @ Temporary Caps

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

WET GLAZED SSG FRAME - GLAZING

4.4.6 Wet Glazed Framing Sealant Application at Diverter Bridge.

1. At locations where the horizontal pressure plate runs through more than one glass bay, temporally position the pressure plate on the horizontal and mark the centerline of the diverter bridge, cl of each vertical mullion, **see FIGURE 38 detail A below.** Then cut the lower gaskets and spread to allow a 3/4" gap at each divert bridge.**see FIGURE 38 detail B below**
   - When trimming the gaskets check if the pre-punched slotted hole falls with in 2 of the mullion centerline this slotted hole must be sealed with silicone, **see FIGURE 38 Detail B**

NOTE: The pressure plate must be fastened to the horizontal between 2 to 4 each side of the centerline of the mullion. Additional 7/32 dia. Holes should be added if the pre-punched slotted holes are not within this area. **See FIGURE 38 details B & C.**

FIGURE 38 Detail A
SSG Pressure Plate at Diverter Bridge

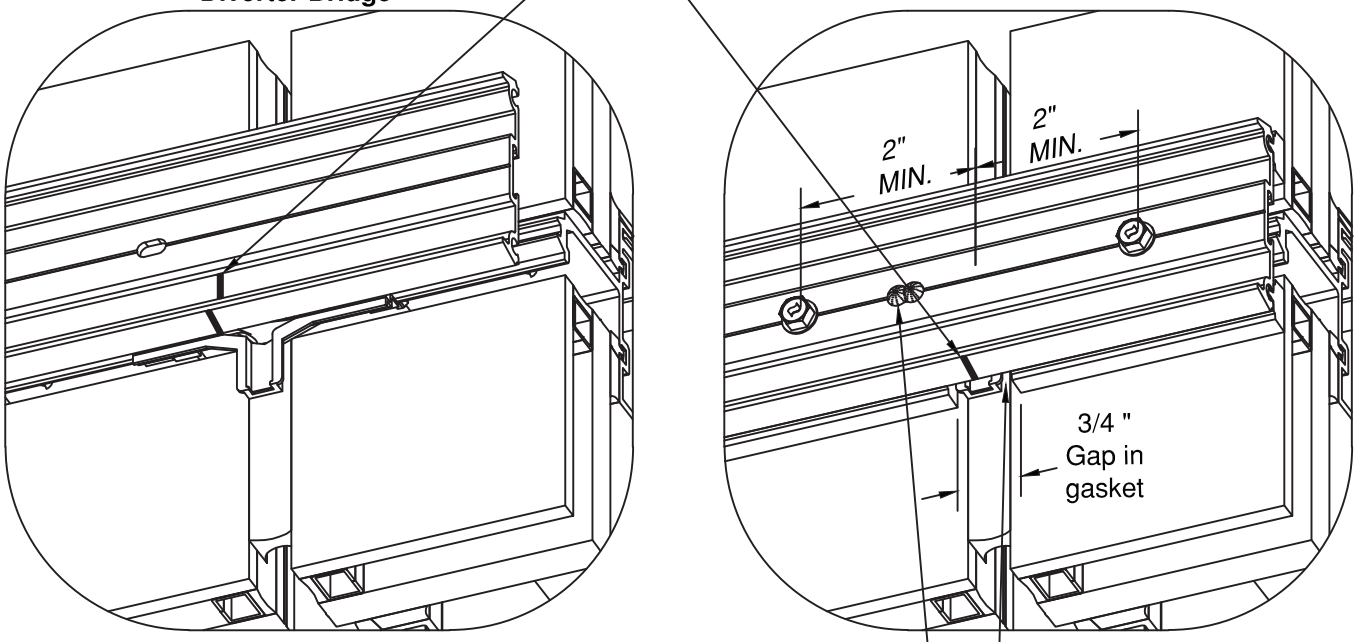
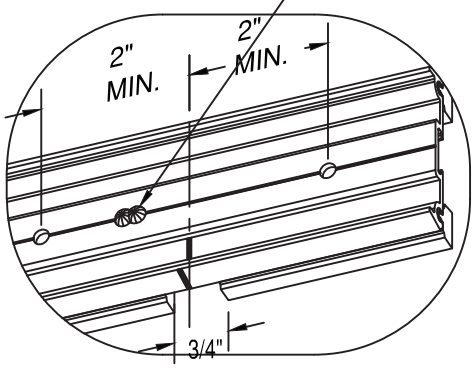


FIGURE 38 Detail C
SSG Pressure Plate Attachment at Diverter Bridge

FIGURE 38 Detail B
Trim gasket @ diverter



NOTE: The pressure plate must be fastened to the horizontal between 2" to 4" each side of the centerline of the mullion. Additional 7/32" dia. Holes should be added if the pre-punched slotted holes are not within this area.

WET GLAZED SSG FRAME - GLAZING

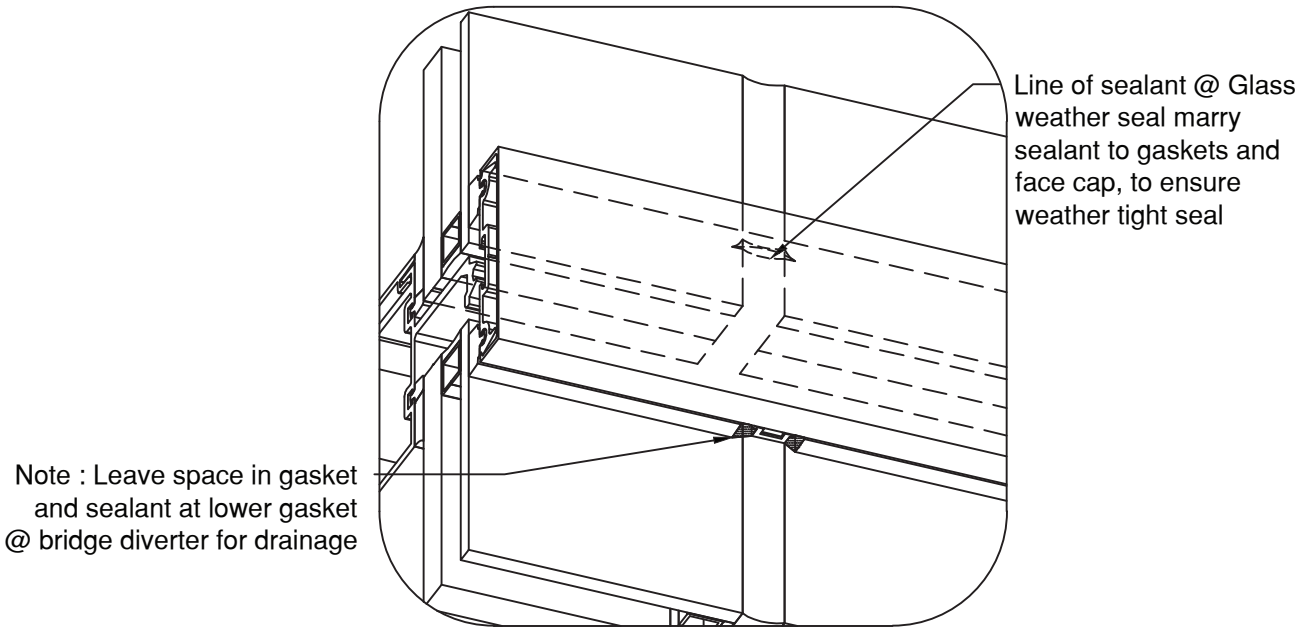


FIGURE 38 Detail D
Glass Weather Seal at Face Cap (No splice in cap)

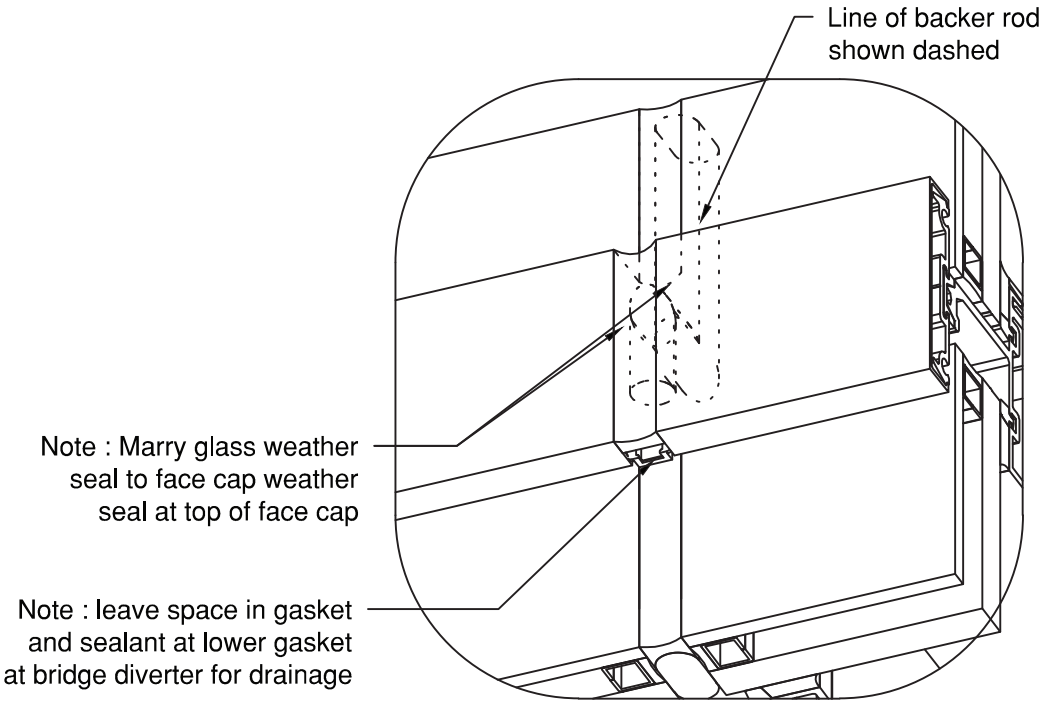


FIGURE 38 Detail E
Glass Weather Seal to Cap Splice Seal

OUTSIDE CORNER FRAME ASSEMBLY

5.1 Outside Corner Mullion Assembly
1. Attach mitered CW-2156 Horizontals and CW-2024 Head and Sill as shown
2. After Horizontals are attached attach steel reinforcing.

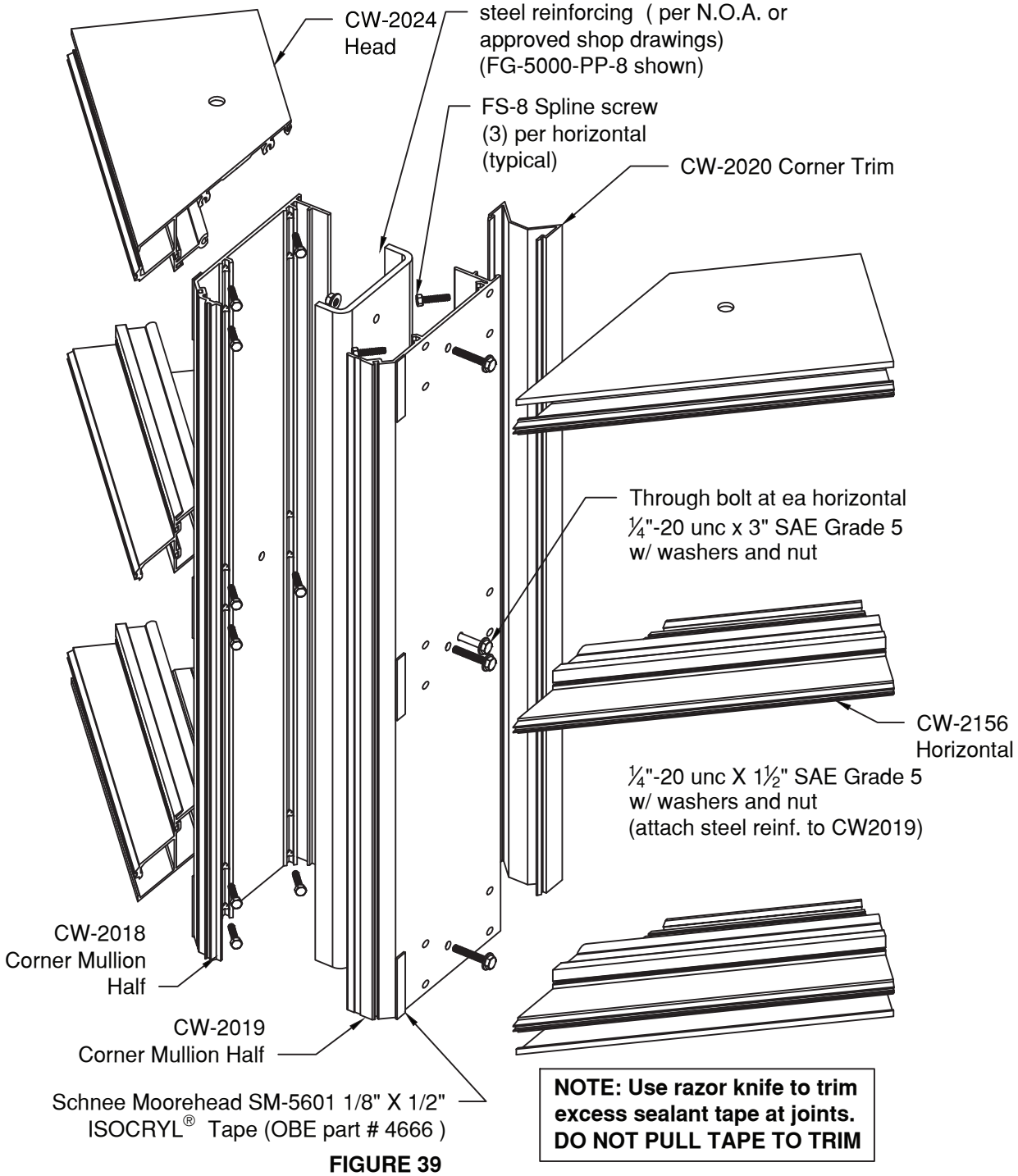
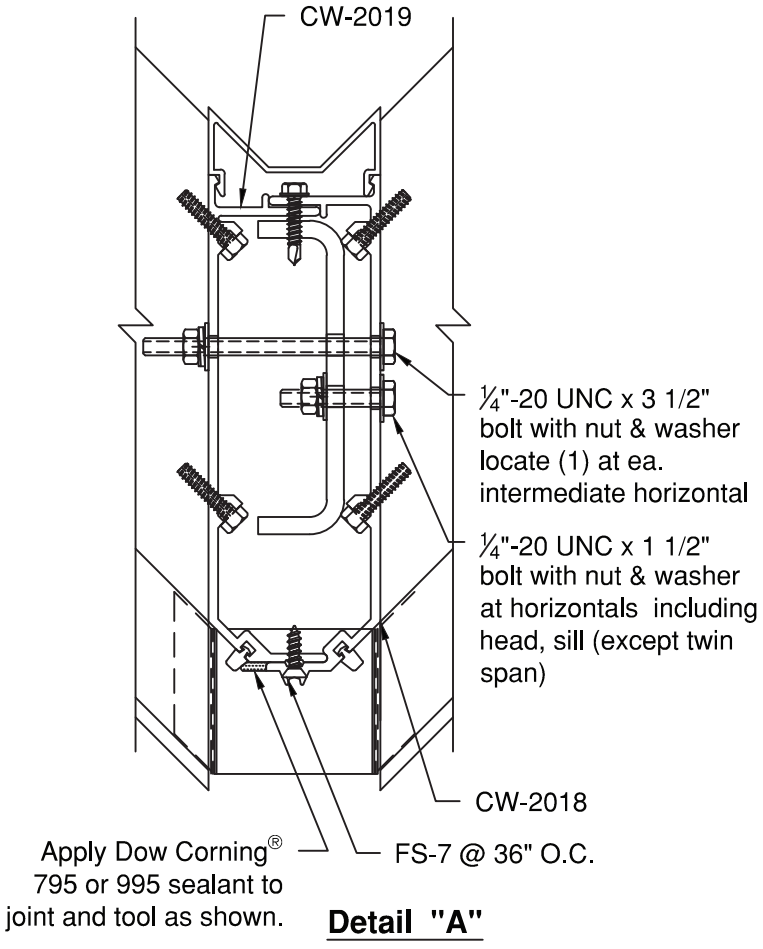
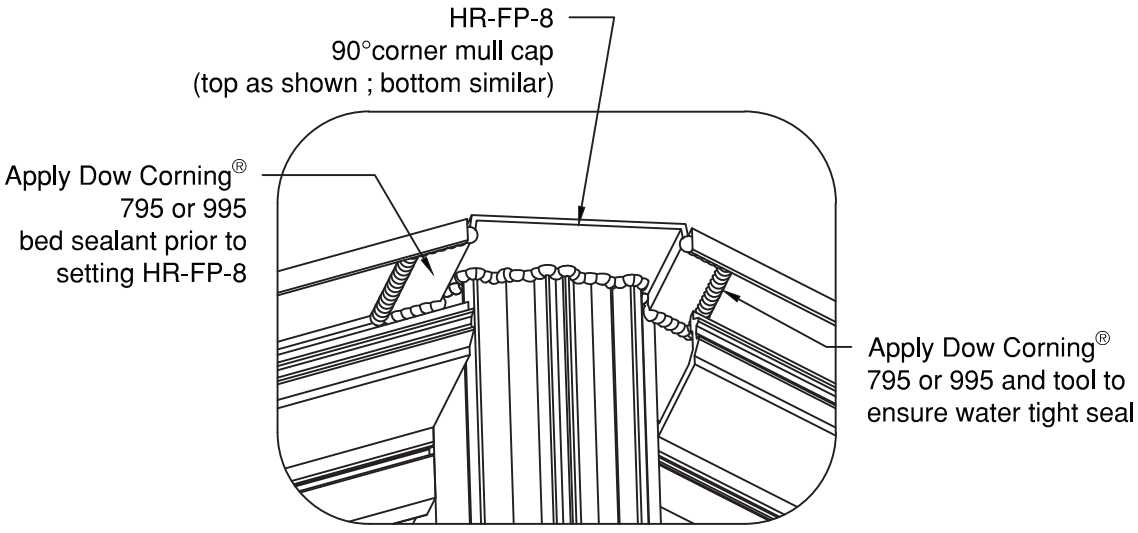


FIGURE 39
Corner Frame Assembly

OUTSIDE CORNER FRAME ASSEMBLY



Detail "A"



Detail "B"

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

OUTSIDE CORNER FRAME ASSEMBLY

5.1(continued) Outside Corner Framing Assembly

3. Align and slide fit CW-2018 half mullion into CW-2019 of adjoining frames.
4. Install FS-7 (#10 x ¾" Philips Flat heads) @ 36" o.c. @ front face and the FS-322 @ 36" o.c. @ the back face.
5. Apply continuous Dow Corning 795 or 995 @ seam between CW-2019 and CW-2018 and too to ensure water tight seal, **See Detail A on previous page.**
6. Install HR-FP-8 corner mull cap at top and bottom of mullion and seal with Dow Corning 795 or 995. **See Detail B**

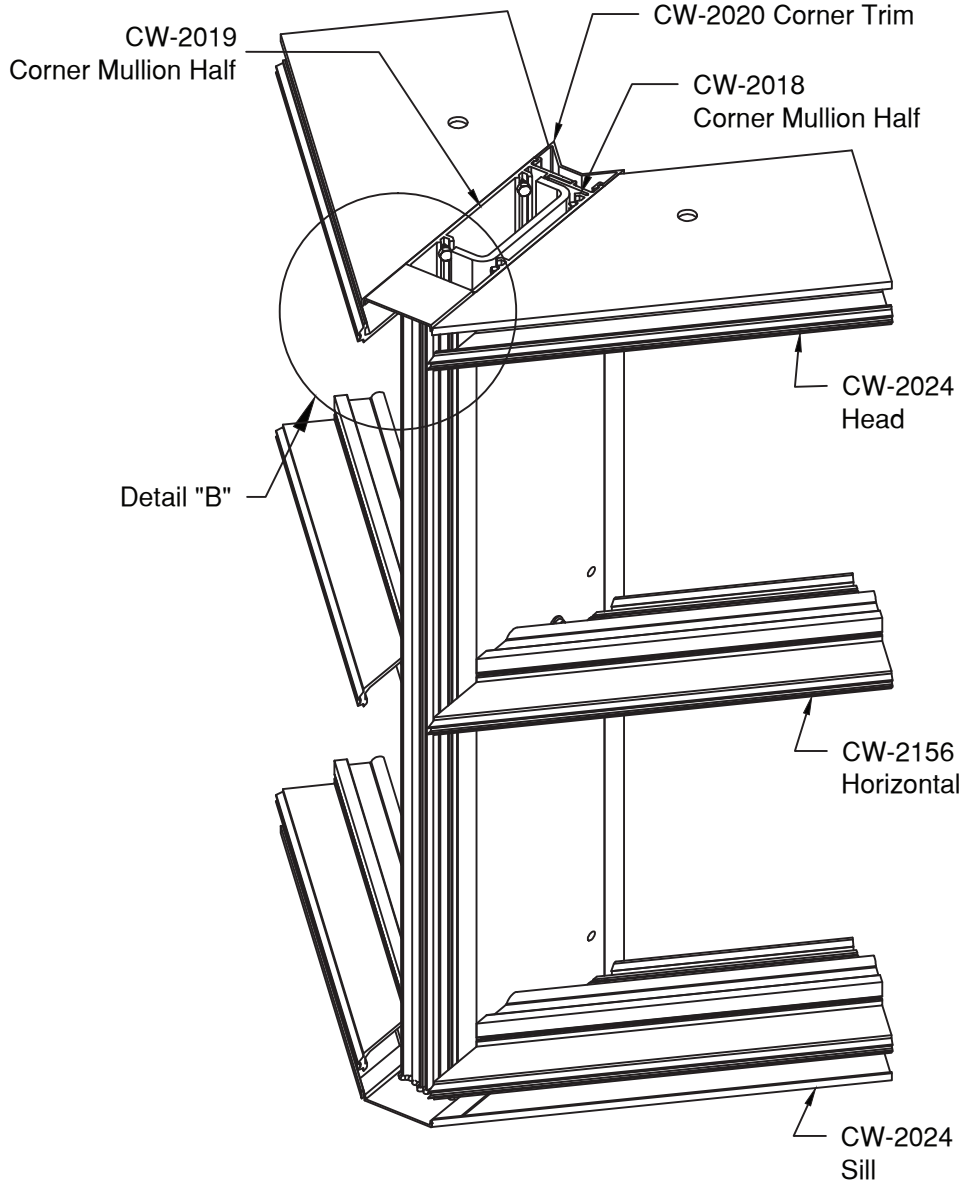


FIGURE 40
Corner Frame Assembly

MULTI SPAN ANCHOR INSTALLATION

5.2 Multi Span Condition Anchor Installation

1. FIGURE 41 shows fixed (dead load) and FIGURE 42 shows expansion (wind load) anchors. Anchor type and size vary per job requirements. Details shown are to be used as a guide only. See approved shop drawings for actual conditions.

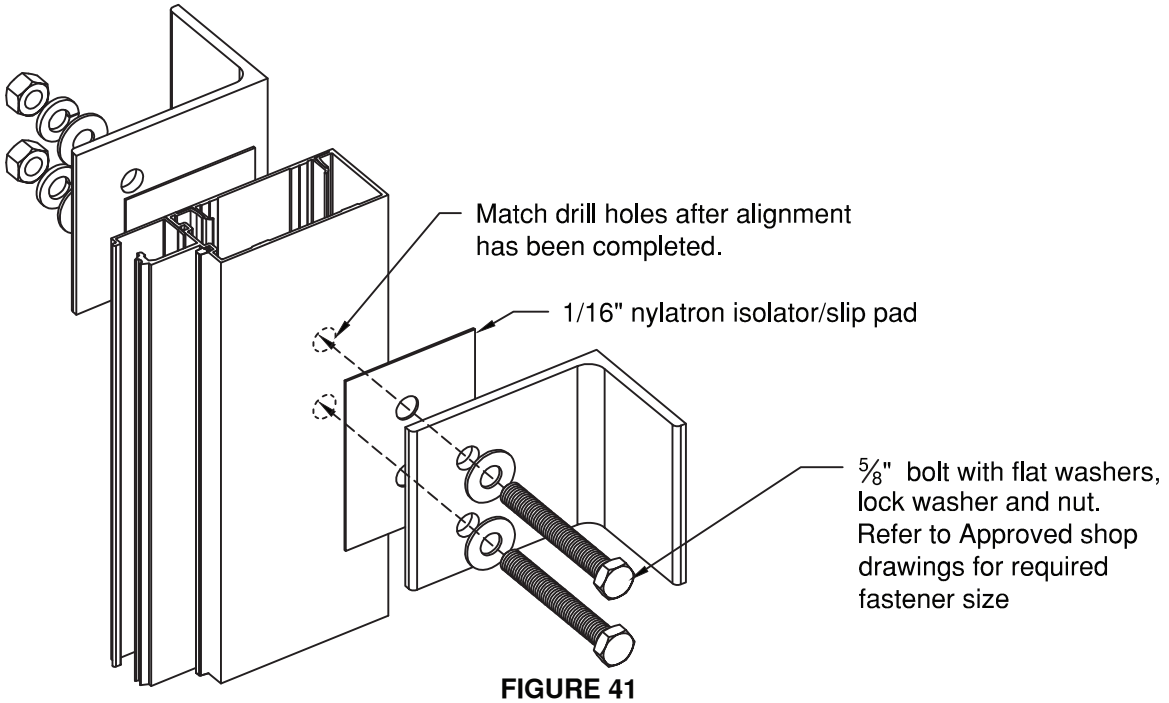


FIGURE 41
Fixed Anchor (Dead Load)

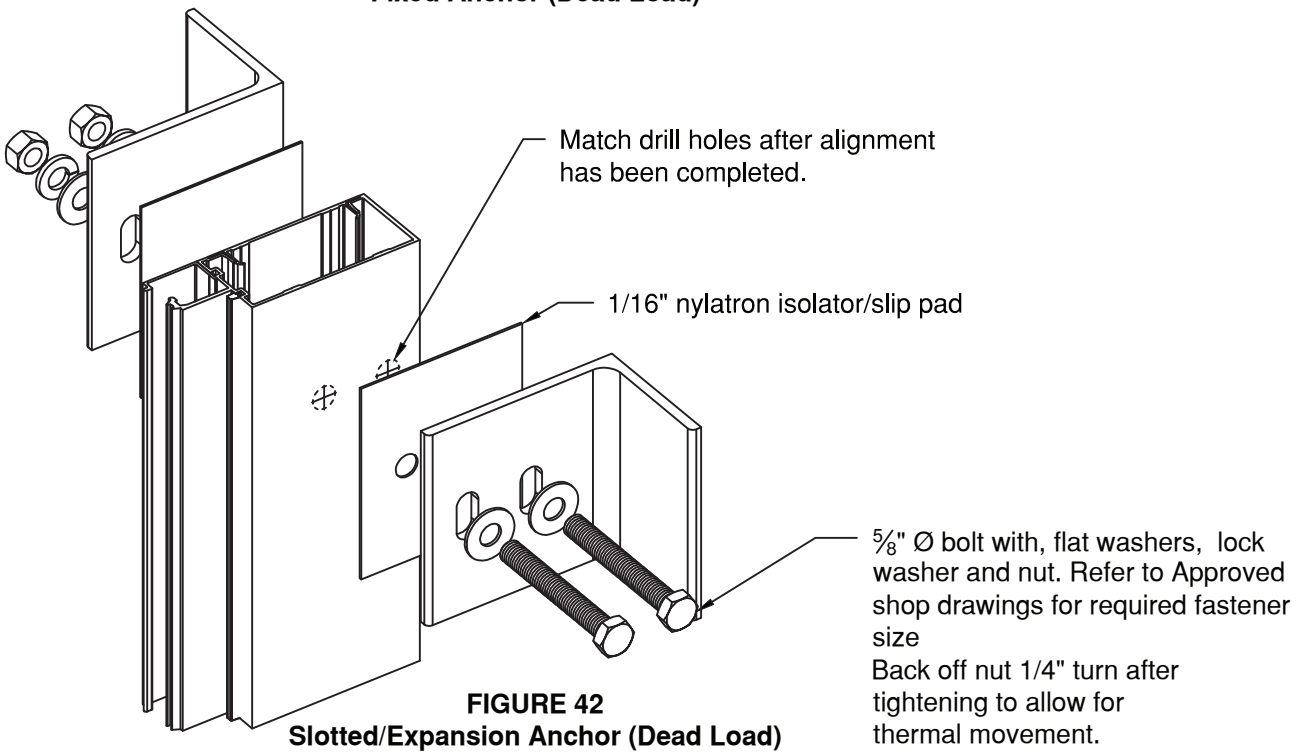


FIGURE 42
Slotted/Expansion Anchor (Dead Load)

MULTI SPAN ANCHOR INSTALLATION

5.3 Mid Span Anchor Installation of Jamb Panel Frame. Ensure that the CW-1996 is fully engaged in to CW-2023 mullion, plumb and level panel frame to allow ¼" of shim at sill @ highpoint of opening, adding addition shims as needed.

NOTE: Details shown are to be used as a guide only. See approved shop drawings for actual conditions. Steel plate and quantity of FS-323 as per approved shop drawings

1. Attach steel tap plate to CW-2023 mullion with FS-323 fasteners see FIGURE 43.
2. Locate into position and mark the of the anchor holes to be match drilled and tapped.
3. Drill and tap the holes to the diameter needed for the fasteners required. refer to the approved shop drawings for the fastener size.
4. Insert a (minimum) 1/16" nylatron slip pad between the anchor and the tap plate prior to inserting fasteners

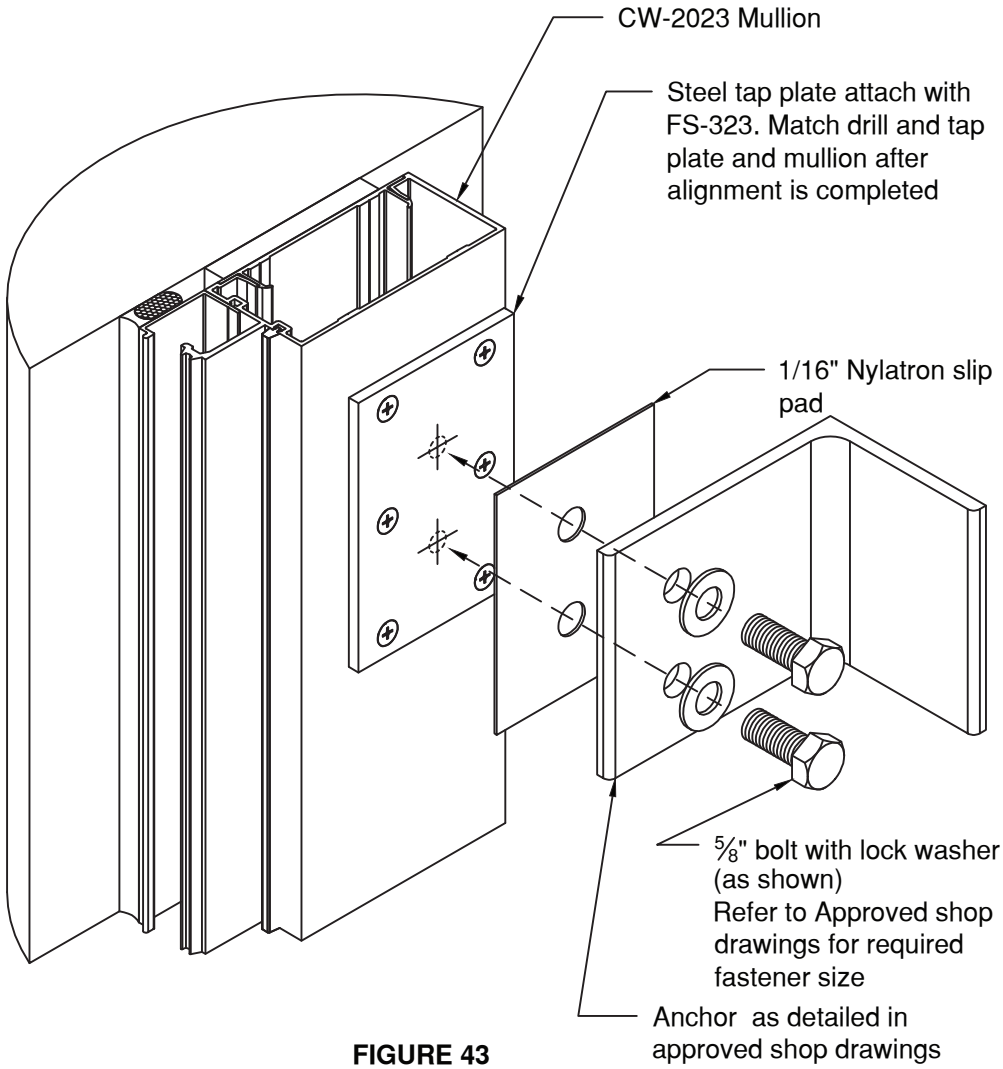


FIGURE 43
Jamb Fixed Anchor (Dead Load)

Reference figure 42 at left for slotted/Wind Load anchor

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

TWIN SPAN HEAD ANCHOR - OPTION No. 1

5.4 Head Anchor for Twin Span Framing - Option #1

1. Fabrication
   - Drill or punch one (2) ea. 1 1/4"Ø hole located as shown in FIGURE 44 in each end of part. These holes align with the anchor HR-FP-24.
2. Assembly
   - When attaching the CW-2024 Horizontal to CW-2023 mullion , insert the anchor sleeve HR-FP-15 , prior to installing the (3) FS-8 spline screws. See FIGURE 45
3. Installation
   - Prior to installing the ladder frame into opening insert the anchor HR-FP-24 into anchor sleeve, **See FIGURE 46**, then install frame, after frame is aligned, leveled and plumbed install anchor fasteners, **Refer to NOA or approved shop drawings.**
4. Installation of adjoining framing
   - Similar to figure single span framing as shown at FIGURE 13 and 14 on Page 18, slide ladder frame and engage CW-1996 filler into CW-2023 mullion. **See FIGURE 47.**

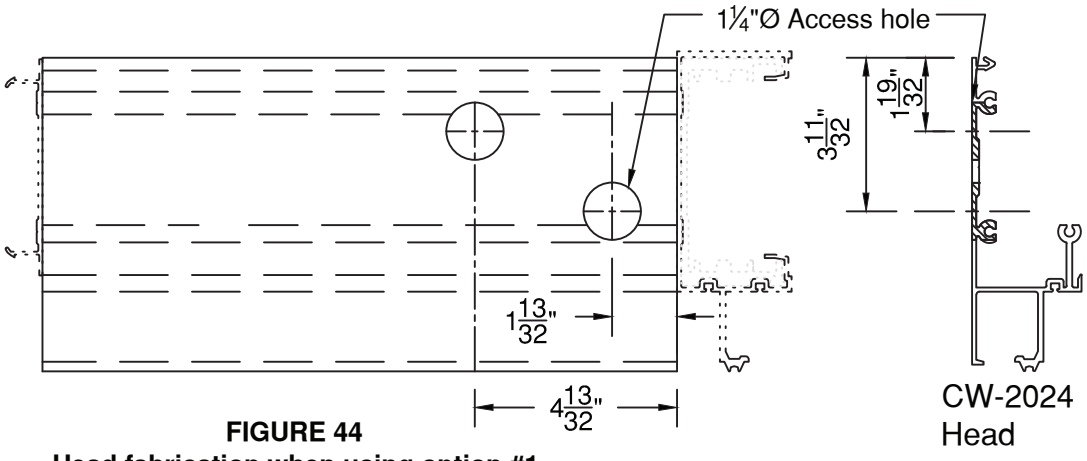


FIGURE 44
Head fabrication when using option #1 for head at twin span framing

TWIN SPAN HEAD ANCHOR - OPTION No. 1

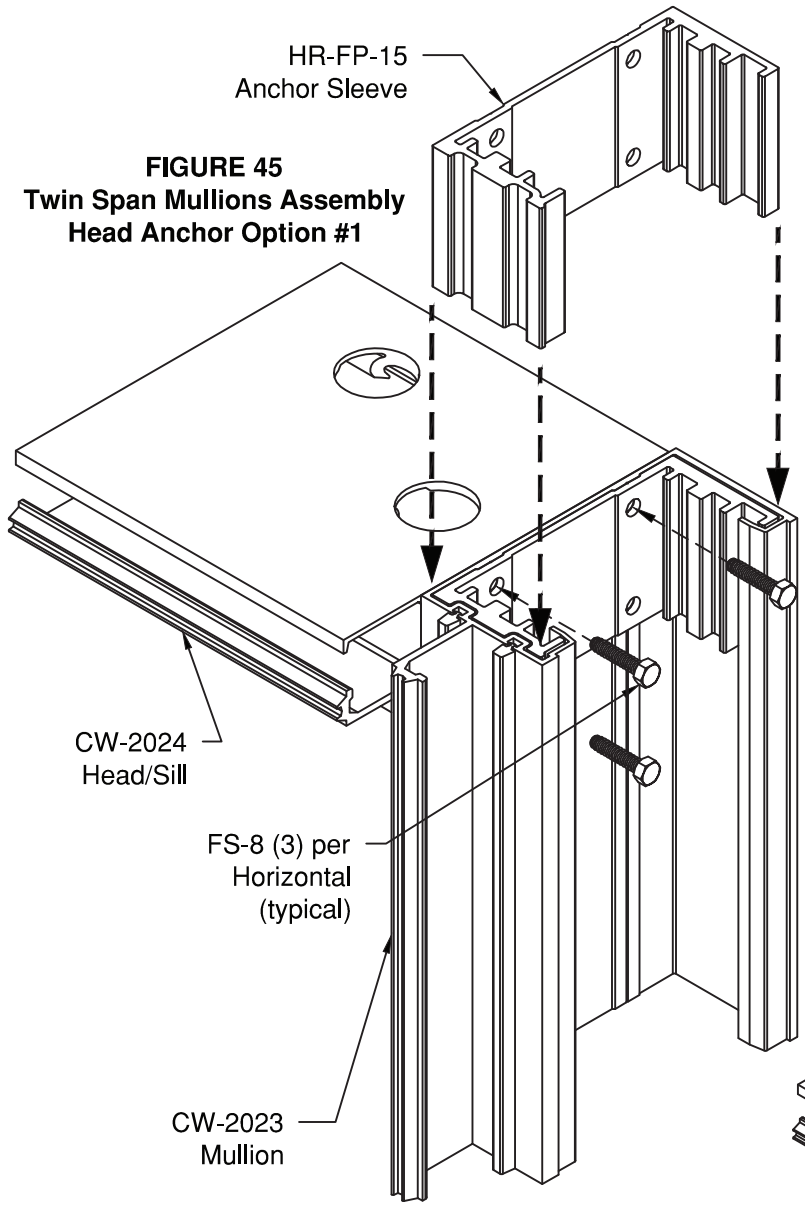


FIGURE 45
Twin Span Mullions Assembly
Head Anchor Option #1

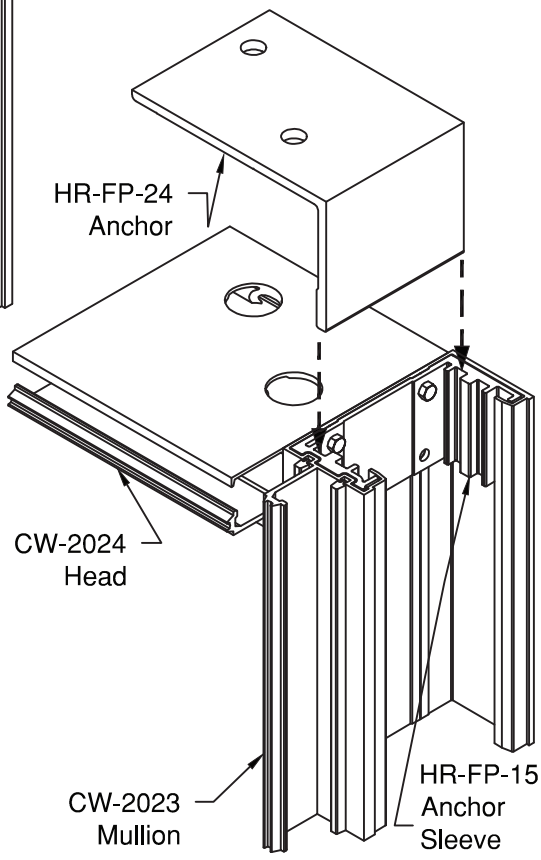
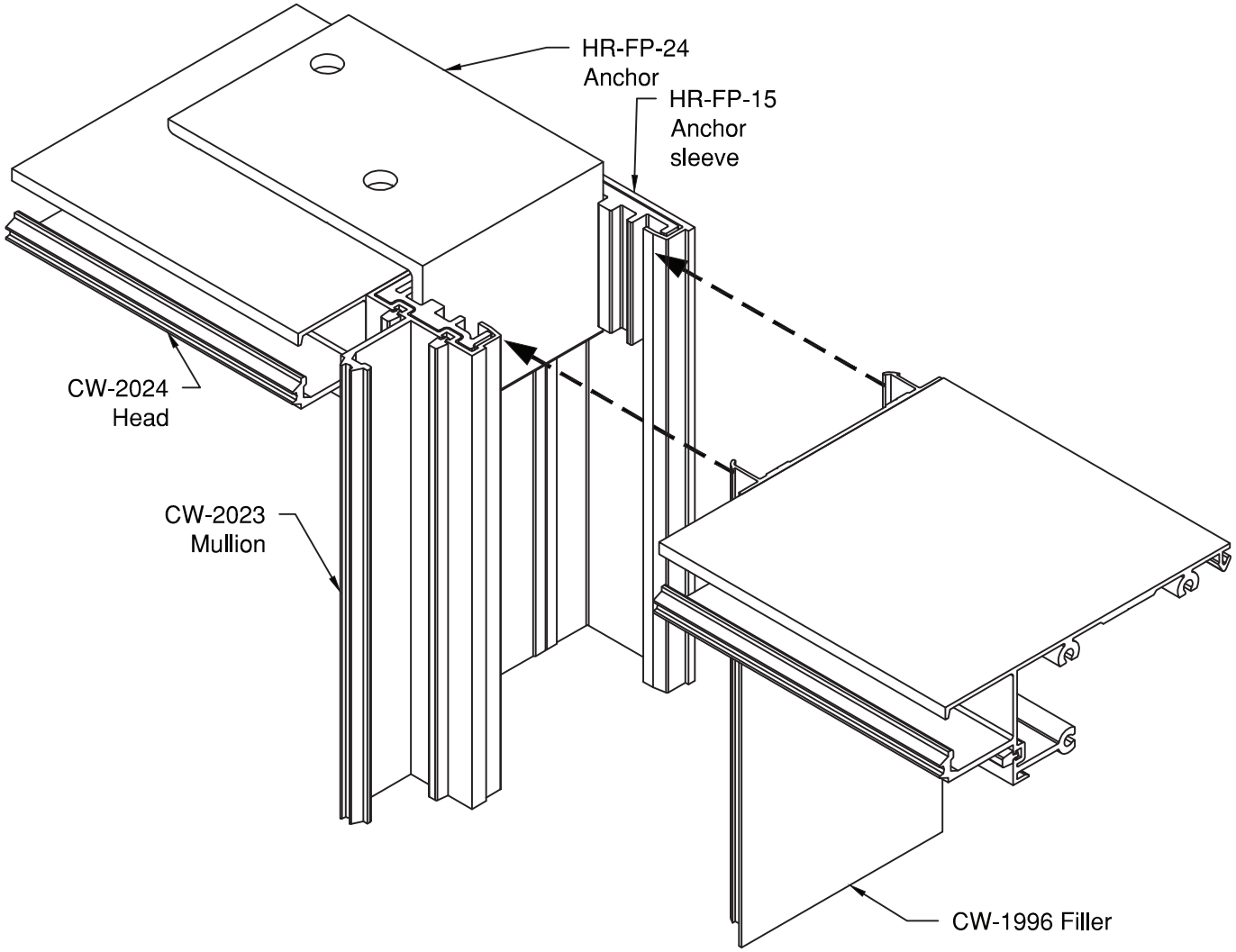


FIGURE 46
Inserting Head Anchor
for Option #1

FIGURE 45
Twin Span Mullions Assembly
Head Anchor Option #1

TWIN SPAN HEAD ANCHOR - OPTION No. 1

FIGURE 47
Twin Span Frame Assembly
Head Anchor Option #1



TWIN SPAN HEAD ANCHOR - OPTION No. 2

5.5 Head Anchor for Twin Span Framing Option #1

1. Fabrication
   - ? Drill or punch (4) ea. 1 1/4"Ø hole located as shown in FIGURE 48 in each end of part. The holes at the right hand end align with the anchor HR-FP-24, and the holes at the left hand end align with HR-FP-25.
2. Assembly
   - ? When attaching the CW-2024 Horizontal to CW-2023 Mullion, insert the anchor sleeve HR-FP-15, prior to installing the (3) FS-8 spline screws. See Figure 45
3. Installation
   - ? Prior to installing the frame into opening insert the anchor HR-FP-24 & HR-FP-25 into the anchor sleeve, **See FIGURE 50**, then install frame.
4. Installation of adjoining framing
   - ? Similar to figure single span framing as shown at FIGURE 13 and 14 on Page 18, slide ladder frame and engage CW-1996 Filler into CW-2023 Mullion. **See FIGURE 47.**
5. Anchoring the framing
   - ? After both frames are aligned, leveled and plumb, install all four(4) anchor fasteners, **Refer to NOA or approved shop drawings for size and type.**

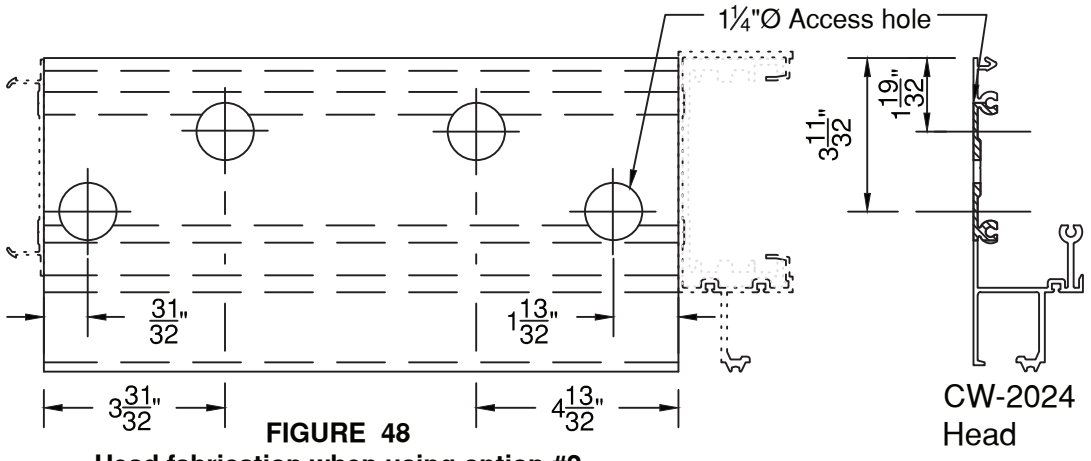


FIGURE 48
Head fabrication when using option #2 for head at twin span framing

TWIN SPAN HEAD ANCHOR - OPTION No. 2

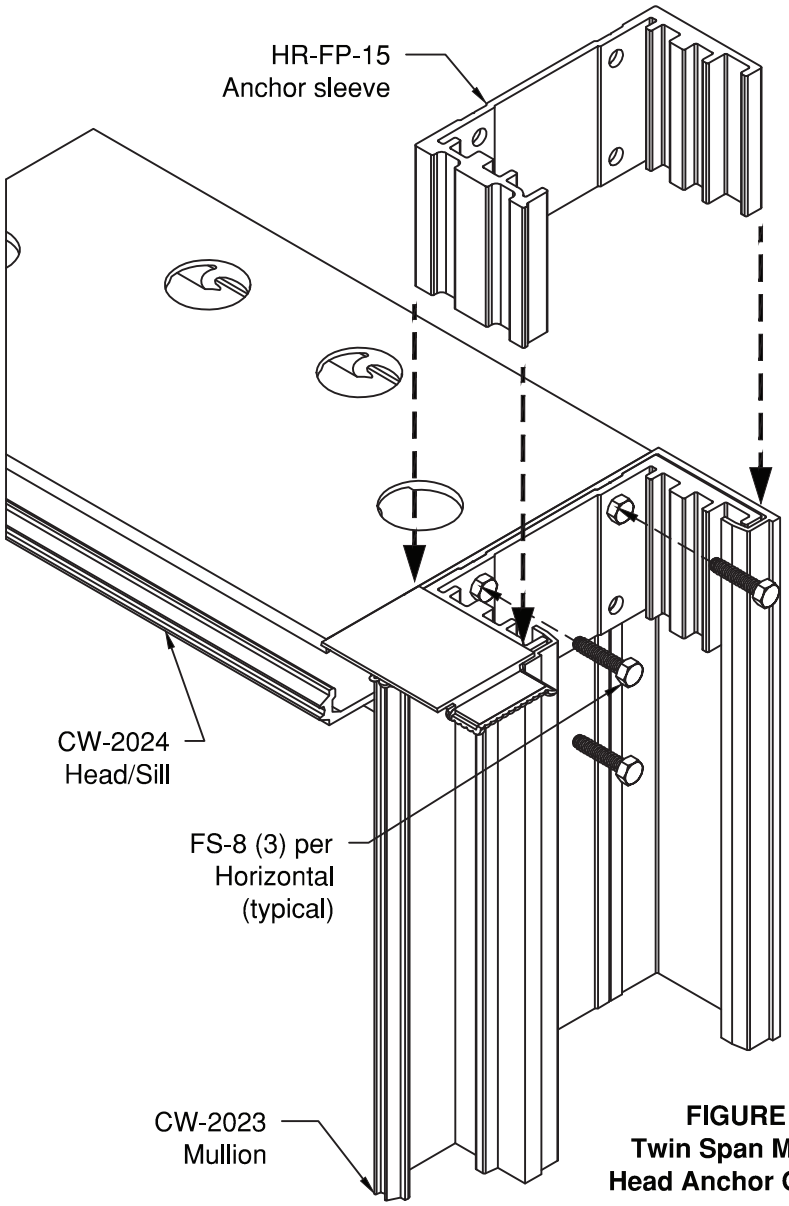


FIGURE 49
Twin Span Mullions
Head Anchor Option #1

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

TWIN SPAN HEAD ANCHOR - OPTION No. 2

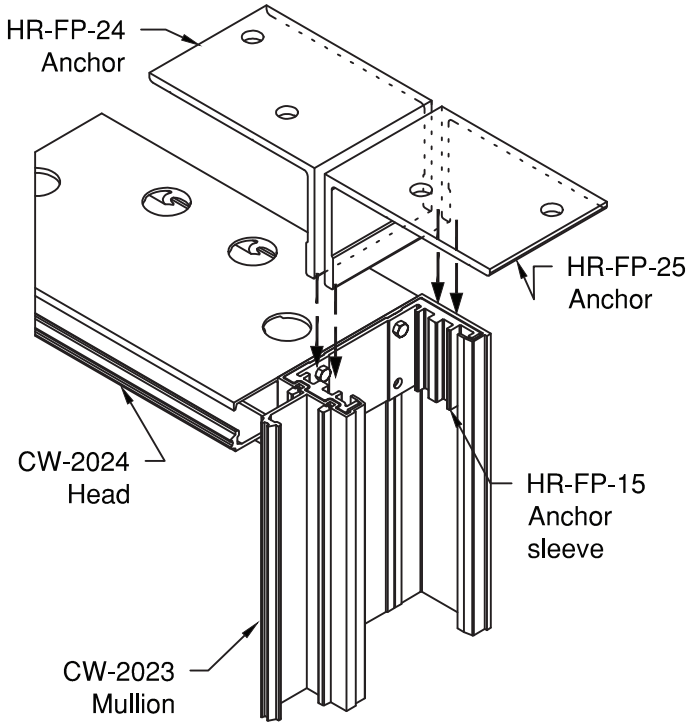


FIGURE 50
Twin Span Mullions
Head Anchor Option #2

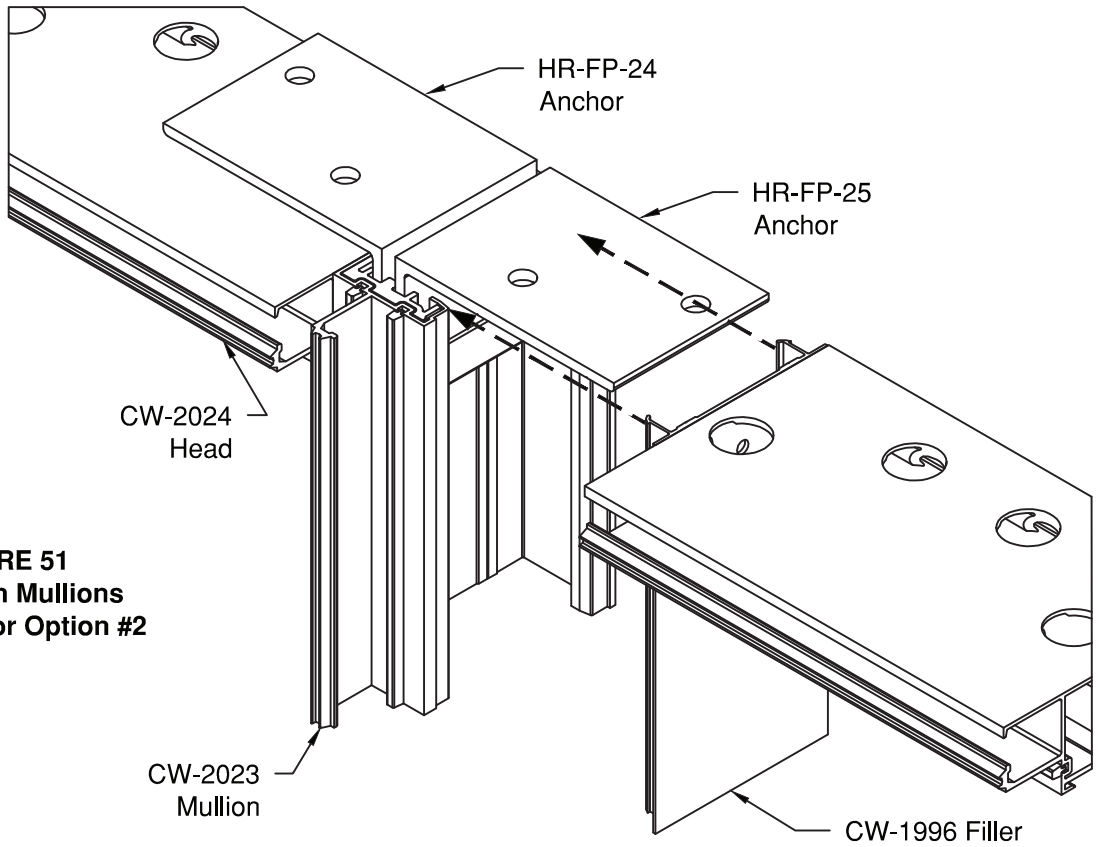


FIGURE 51
Twin Span Mullions
Head Anchor Option #2

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

OUTSIDE CORNER ASSEMBLY @ TWIN SPAN FRAMING

5.6.1 Outside Corner Mullion Fabrication at Head for Twin Span Framing
1. Drill spline screw holes as shown in FIGURE 3 on Page 8.
2. Drill and countersink 2 holes for #10 flat head screws in CW-2018 corner mullion

5.6.2 Outside Corner Frame Assembly at Head for Twin Span Framing
1. Attach HR-FP-17 to CW-2018 using (2) #10 x 3/4" Philips flat head screws, prior to attaching horizontal.
2. Attach horizontal to mullion, **see FIGURE 53.**

NOTE : Steel reinforcing is to be sized to be 5" short of top end of the corner mullion.

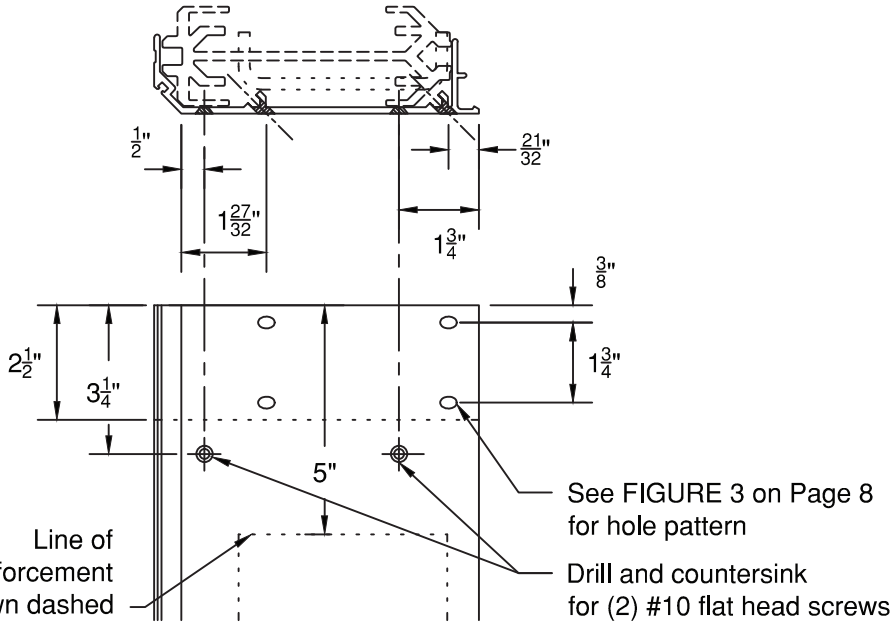


FIGURE 52
Mullion Fabrication at Head for Twin Span Framing

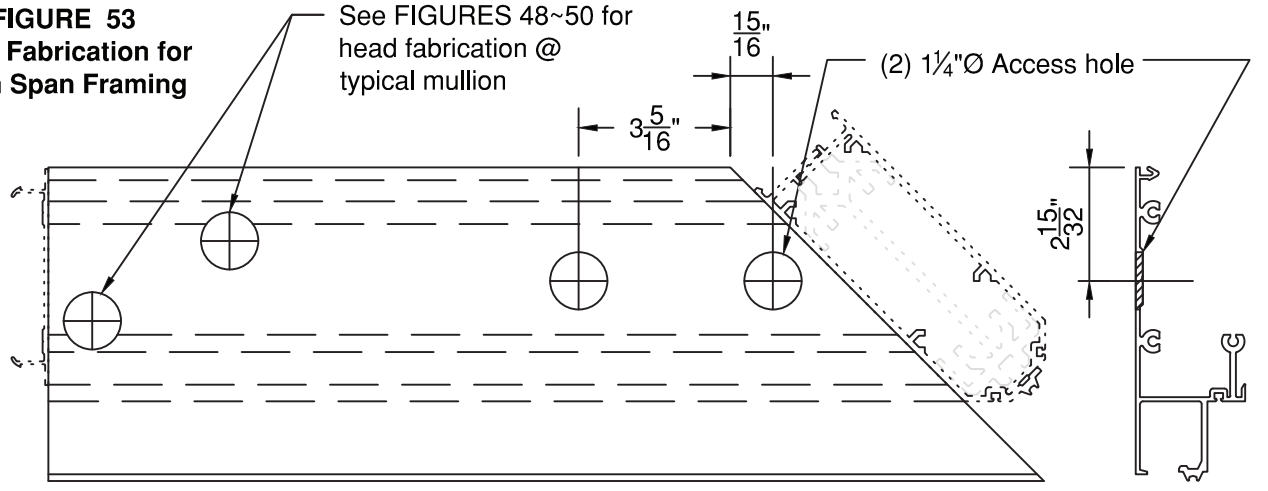


FIGURE 53
Head Fabrication for Twin Span Framing

5.6.3 Head fabrication at corner mullions for twin span framing
1. Drill (2) 1¼"Ø access holes **as shown in figure 53**, above
2. Refer to **sheets 25 and 26 FIGURES 48~50** for head fabrication @ typical mullions

OUTSIDE CORNER ASSEMBLY @ TWIN SPAN FRAMING

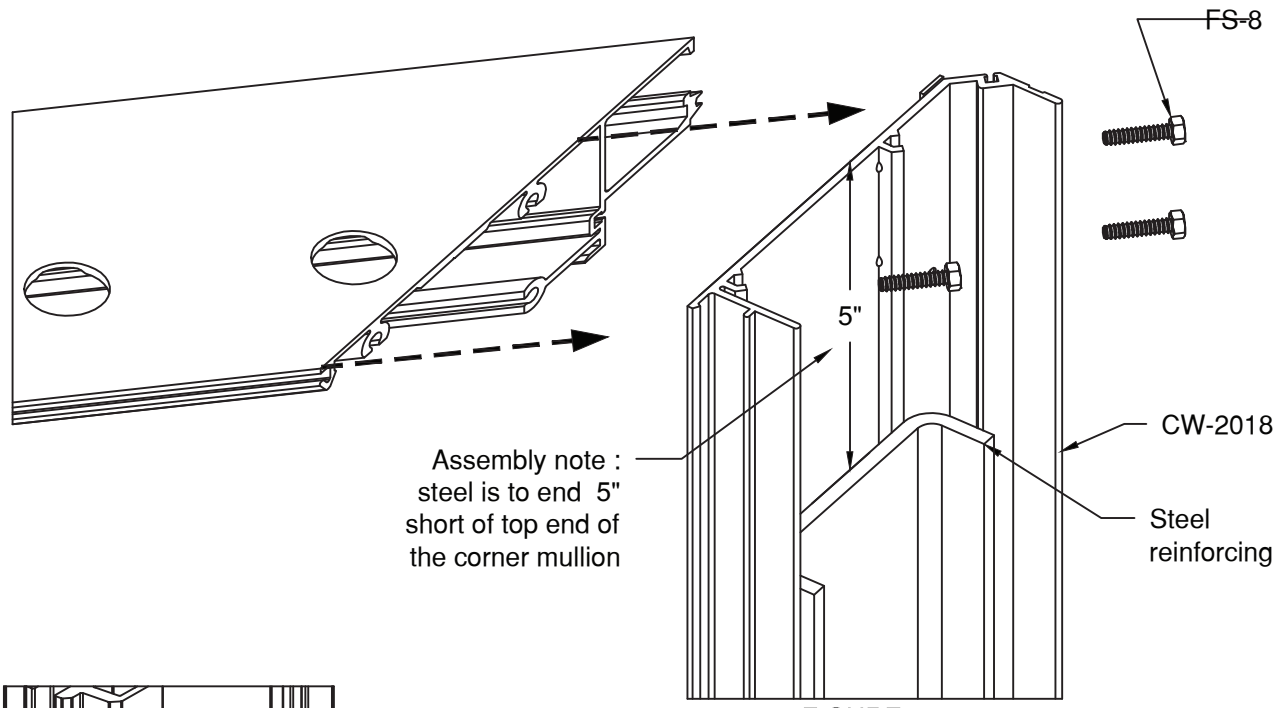


FIGURE 54
Frame Assembly @ Head for Twin Span Framing

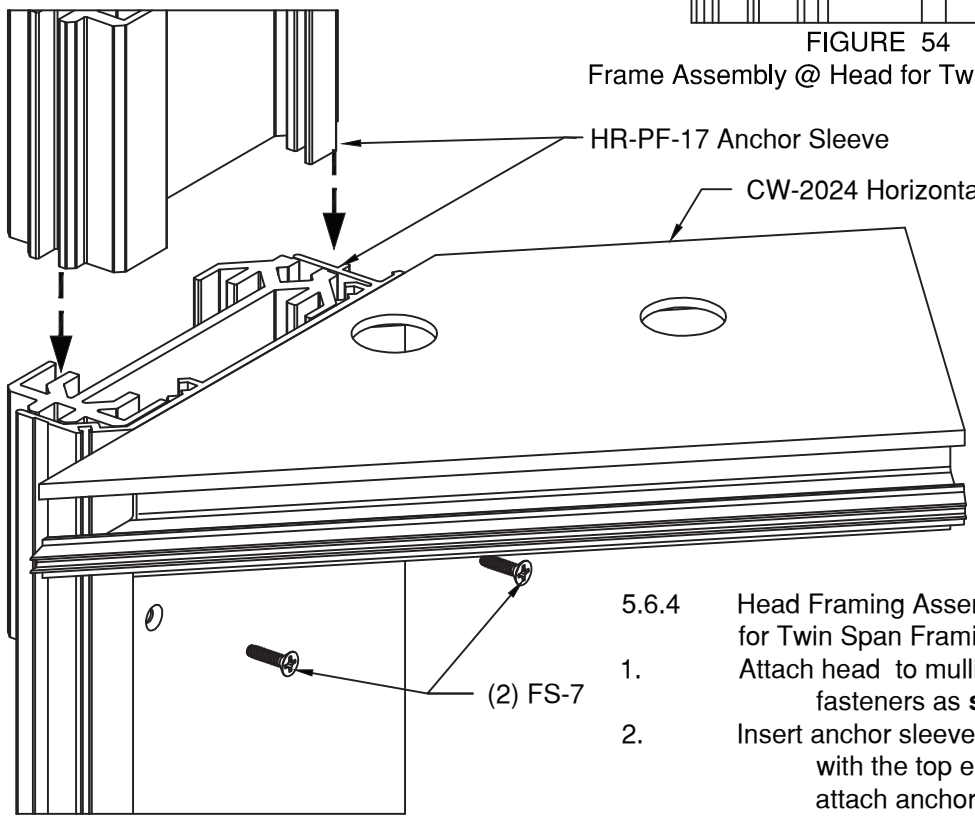


FIGURE 55
Anchor Sleeve Assembly @ Head for Twin Span Framing

5.6.4 Head Framing Assembly at Corner Mullions for Twin Span Framing

1. Attach head to mullion with (3) FS-8 fasteners as **shown in FIGURE 54**.
2. Insert anchor sleeve HR-FP-17 aligning it with the top end of the mullion,and attach anchor using (2) FS-7, **See FIGURE 55.**

OUTSIDE CORNER ASSEMBLY @ TWIN SPAN FRAMING (continued)

5.6.5 Outside Corner Framing Assembly

1. Prior to standing assembled frame into building opening, insert the HR-FP-22&23 head anchors into anchor sleeve, See FIGURE 56. After frame is aligned, leveled and plumbed install anchor fasteners at assembled frame side only, **Refer to NOA or approved shop drawings.**
2. Next insert the adjoining corner frame assembly similar to as as shown at FIGURE 56 below, after frame is leveled and plumb install the additional anchor fasteners. Also join the corner mullion halves using FS-7 @ 36" o.c. @ the front and FS-322 @ the back of the mullion. See Figure 57 details "A" and "B"

5.6.6 Sealing Corner Frame Assembly

1. Refer to FIGURE 40 , details "A" and "B" on Page 49.
2. Applying sealant to sealant to seal mullion halves along with installing and sealing the HR-FP-8 mullion end plug (mullion end plug not shown in these views for clarity)

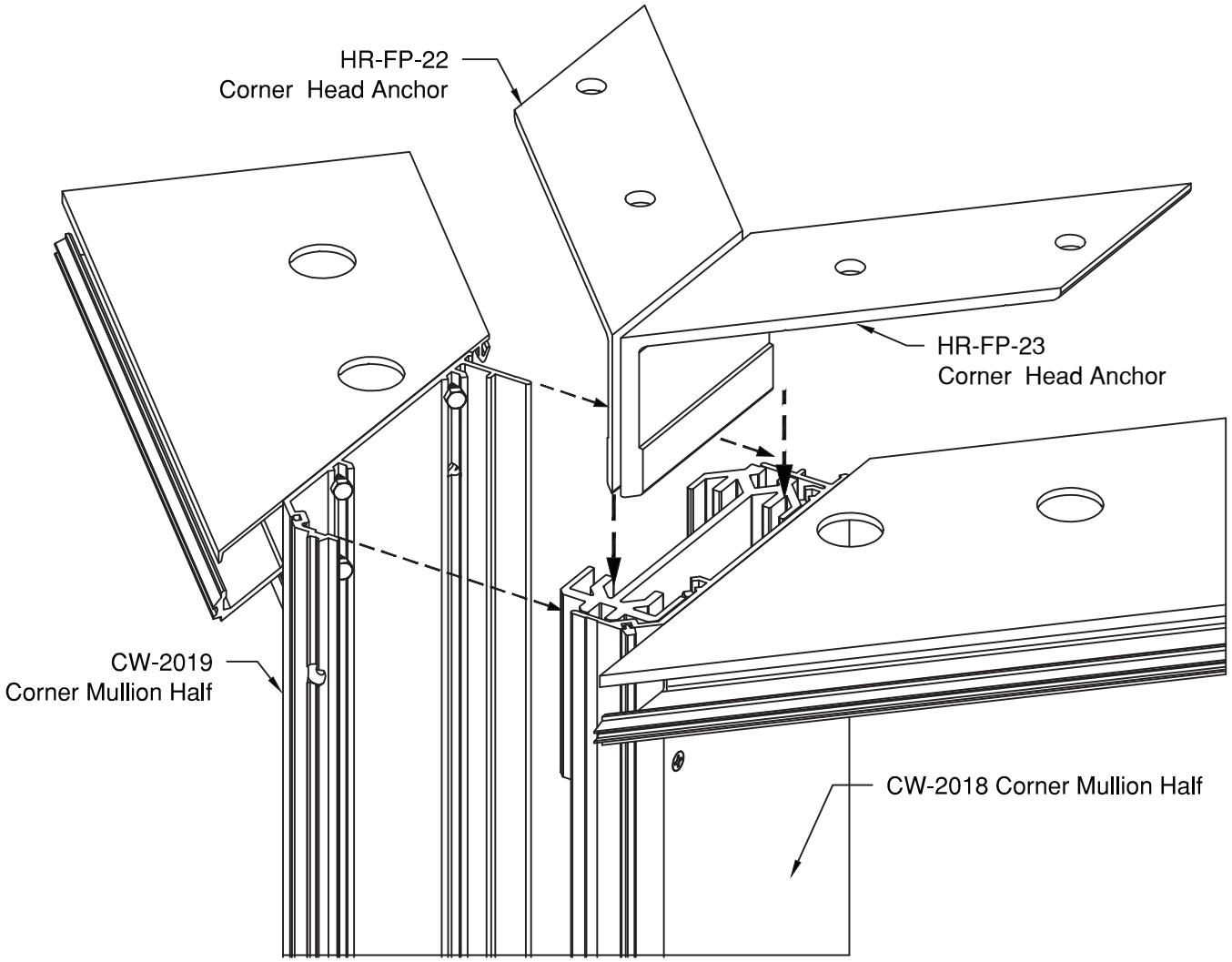
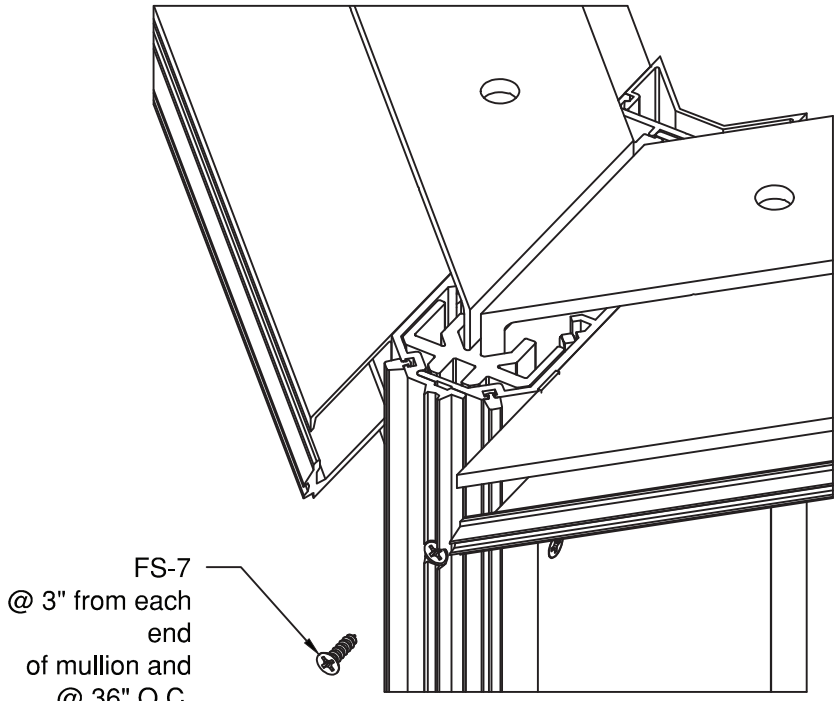


FIGURE 56
Anchor Assembly
at Head for Twin Span Framing

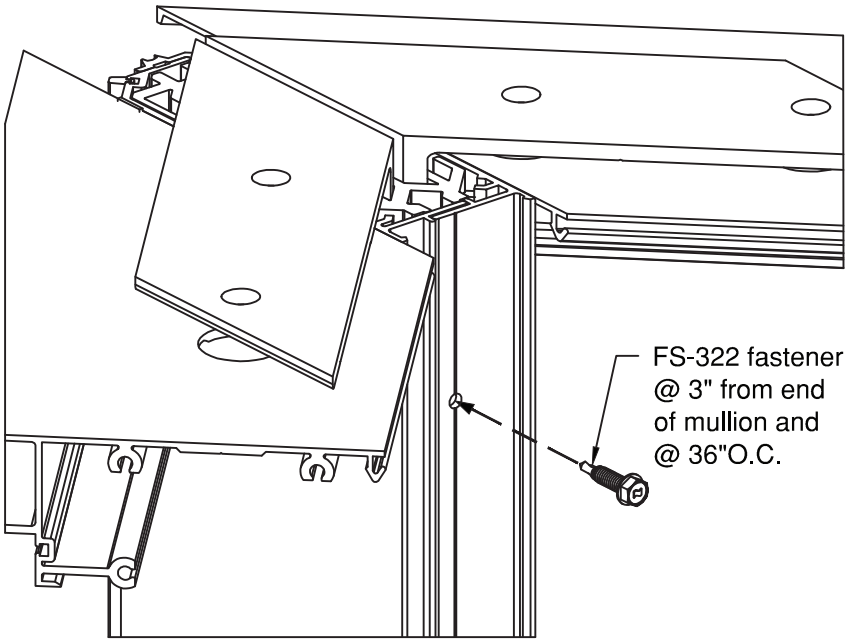
Phone: 1-866-OLDCASTLE (653-2278)
Web Address: www.oldcastlebe.com

OUTSIDE CORNER ASSEMBLY @ TWIN SPAN FRAMING (continued)

FIGURE 57
Corner Mullion Assembly Fasteners



Detail "A"
Front Assembly



Detail "B"
Back Assembly

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

OUTSIDE CORNER ASSEMBLY @ TWIN SPAN FRAMING (continued)

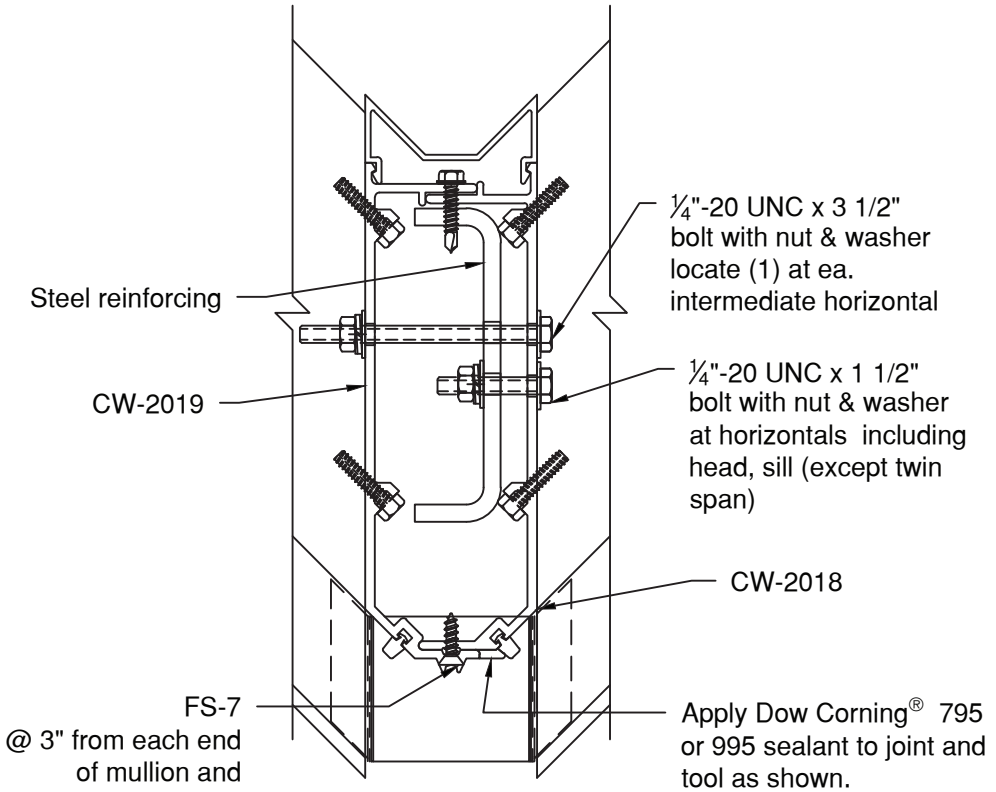


FIGURE 58
Assembled Corner Mullion

MULLION SPLICE

6.1 Mullion Splice

1. Clean splice sleeves and all joint surfaces. Apply bond breaker tape at areas where sleeve will be sealed to avoid three side adhesion.
2. Slide sleeve into the upper member before it is installed and use duct tape to temporally hold it in retracted position.
3. Install stop screw 2 7/8" from top of lower member as shown below. Install upper member, remove duct tape and let extruded sleeve slide down until it rests on top of stop screw.
4. Seal joint over sleeve as shown on Detail A at FIGURE 60 and FIGURE 61A Page 64.
5. Stagger joints on back members, pressure bars and face caps as shown on FIGURE 60 & 66
6. Seal pressure bar joint. See Detail B at FIGURE 60 and FIGURE 61B Page 64 & 66
7. Install lower face covers and seal joint using backer rod as required.

See Detail C at FIGURE 60 and FIGURE 61C on Page 64 & 66.

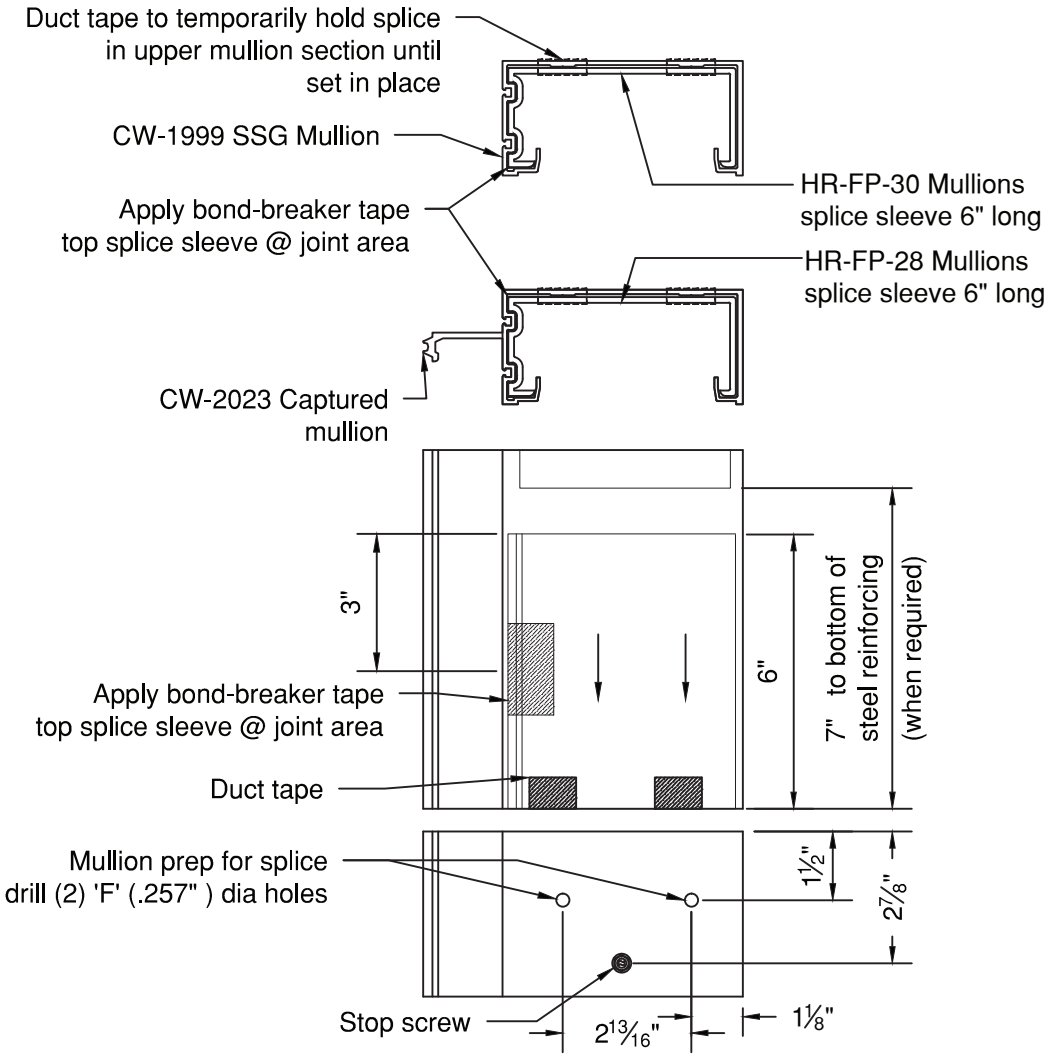


FIGURE 59
Mullion Splice Assembly and Prep

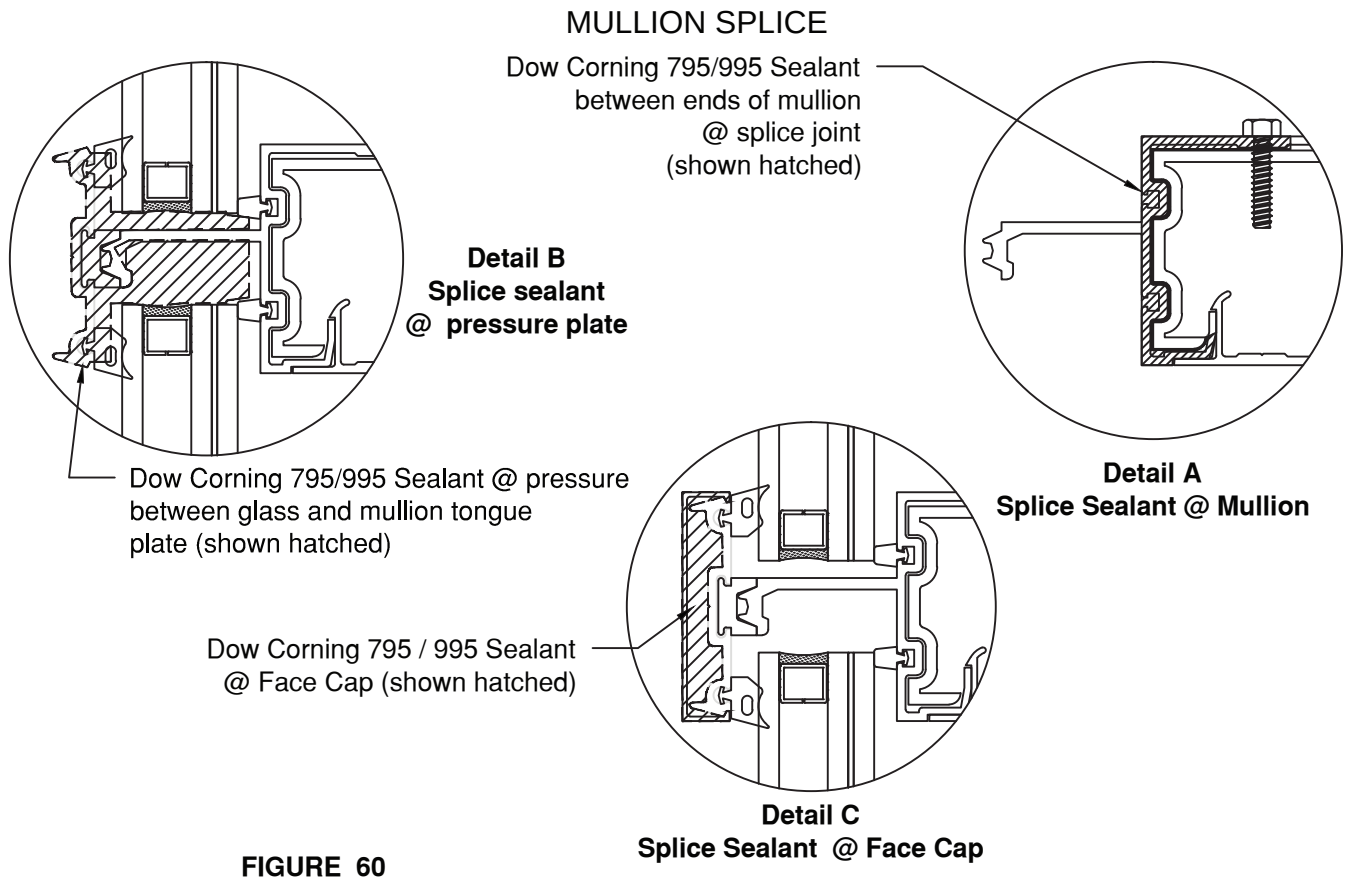
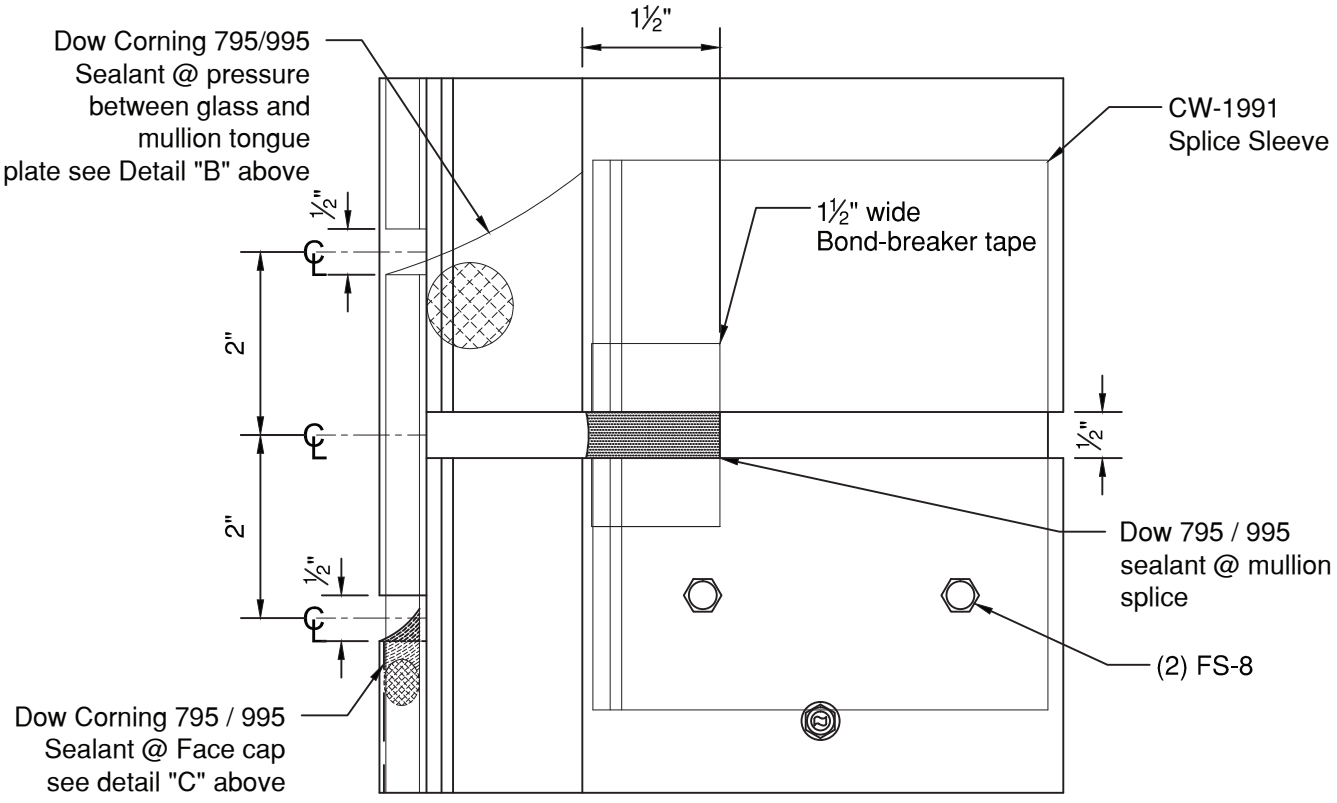


FIGURE 60
Mullion Splice Assembly and Sealant



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

MULLION SPLICE

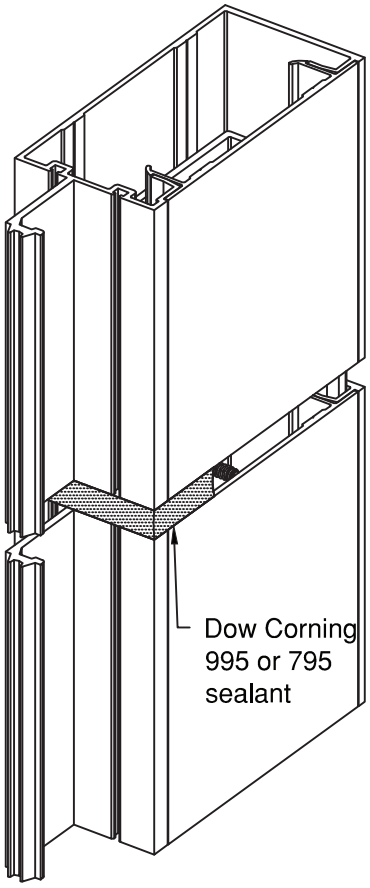


FIGURE 61A
Isometric View of
Sealant Application @ Detail A
Splice Sealant @ Mullion

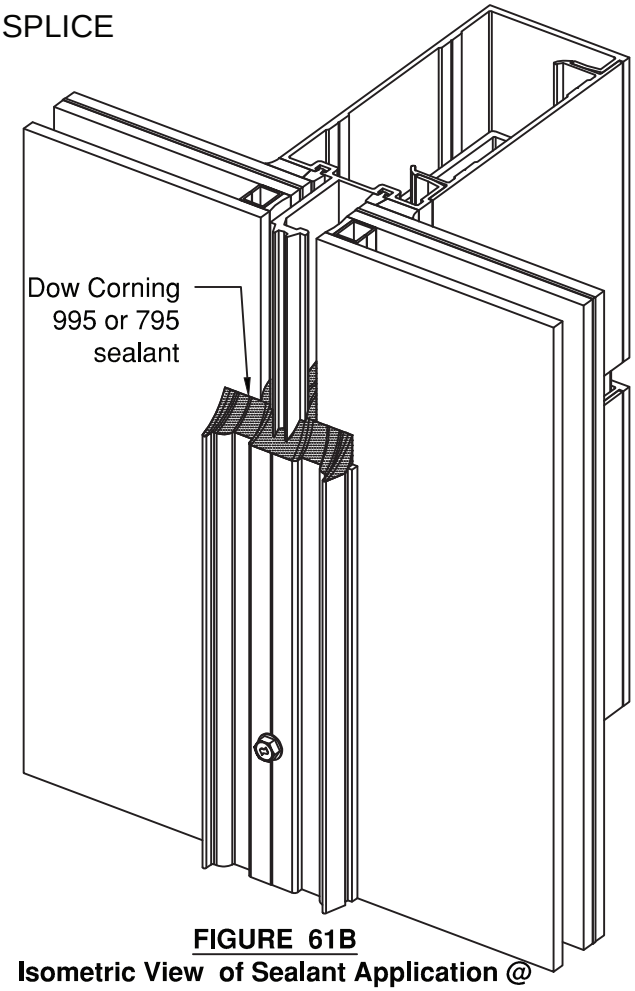


FIGURE 61B
Isometric View of Sealant Application @
Detail B
Splice Sealant @ Pressure Plate

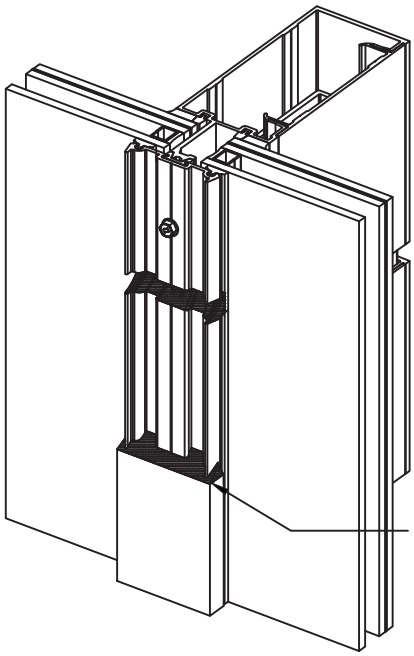


FIGURE 61C
Isometric View of
Sealant Application @ Detail C
Splice Sealant @ Face Cap

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

MULLION SPLICE @ FRAMING WITH DOUBLE / EXPANSION HORIZONTAL

6.2.1 Framing Prep for Mullions at Splice at Double Horizontal

1. Drill or punch holes in verticals for attaching horizontals and mullion splice
   - **See figure 63-1** for top of lower vertical mullions.
   - **See figure 63-2** for bottom of upper mullion.

Note these figures are for at the splice only refer to FIGURE 3 on Page 8 for hole pattern at sill and typical horizontals.

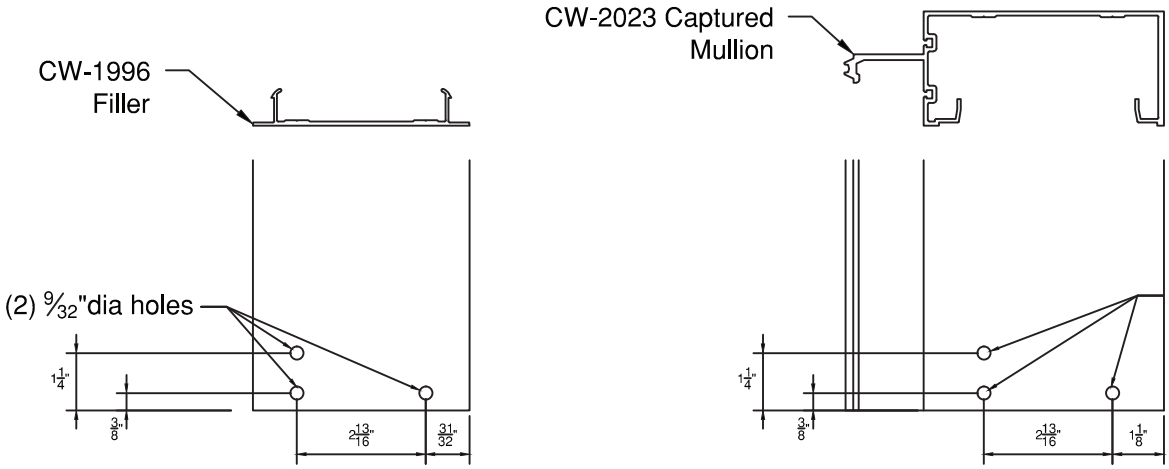


FIGURE 63-2
Mullion Prep for Bottom of Upper Mullion

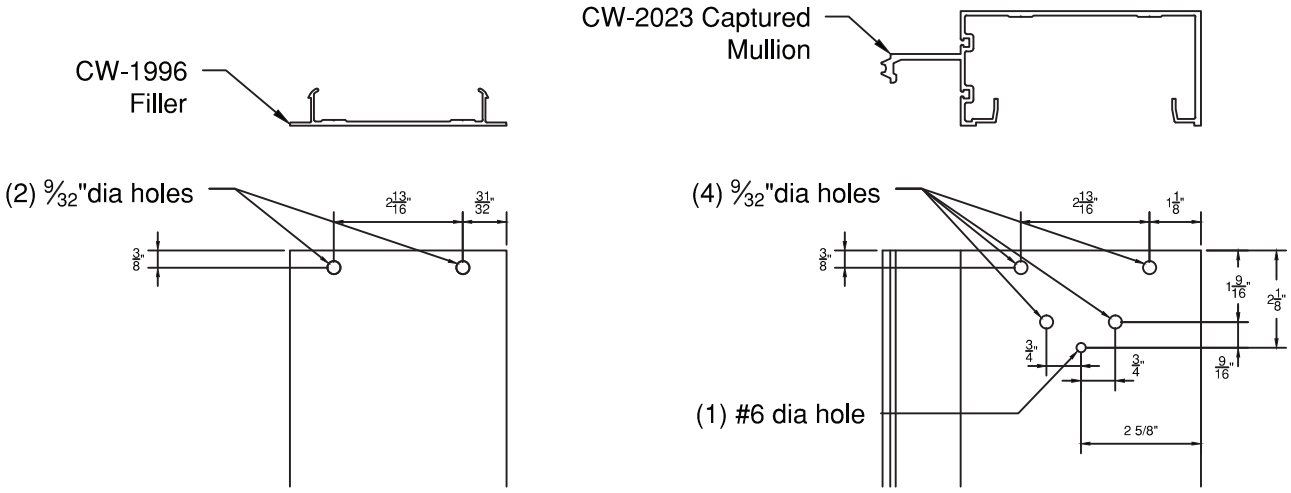


FIGURE 63-1
Mullion Prep for Top of Lower Mullion

MULLION SPLICE @ FRAMING WITH DOUBLE / EXPANSION HORIZONTAL

6.2.2 Framing Assembly for Mullions at Splice at Double Horizontal

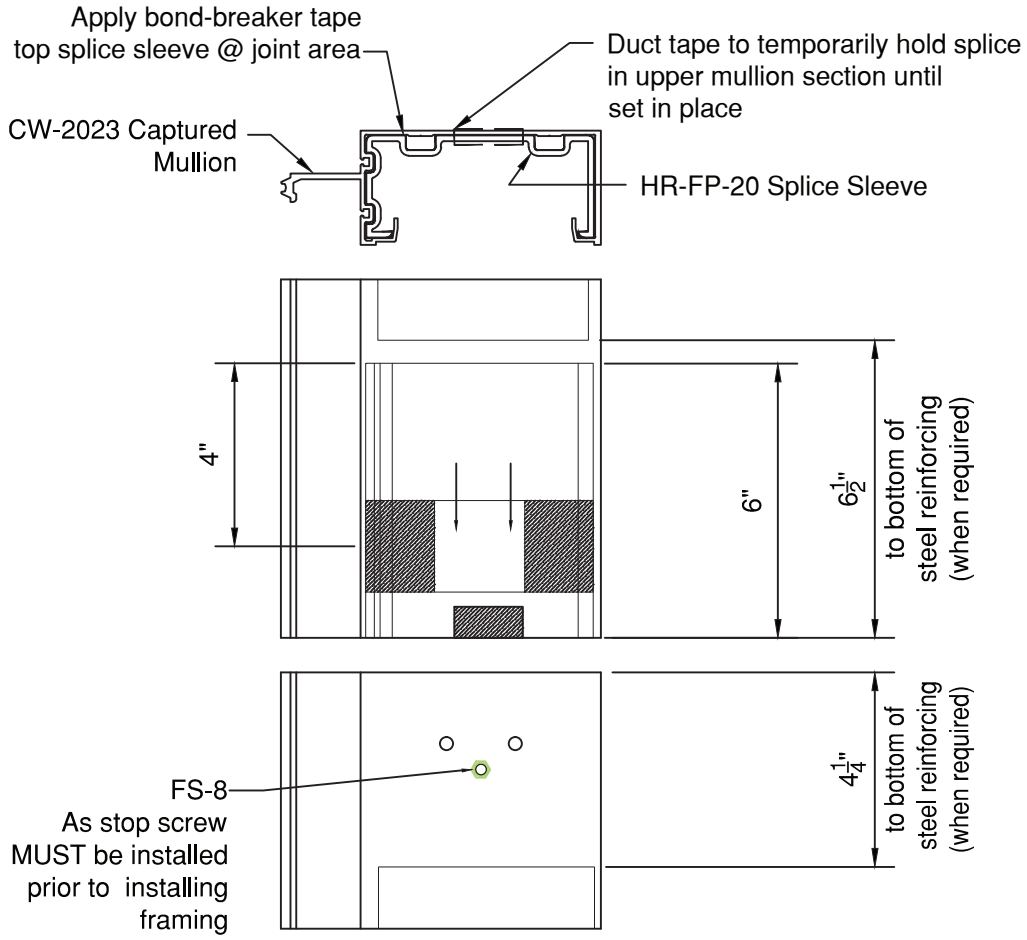
- At top of lower mullion install FS-8 stop screw **as shown in FIGURE 64**
- At Bottom of upper mullion insert HR-FP-20 splice sleeve and apply duct tape as shown to temporally hold sleeve until framing is installed, aligned and plumbed in place. **See FIGURE 64**.
- After ladder frames are installed and plumbed remove duct tape and install (2) FS-8 fasteners to attach splice sleeve to lower frame. **See FIGURE 65.**

6.2.3 Sealant Application at Mullion Splice and Split Horizontal

NOTE : Prior to installing any glass

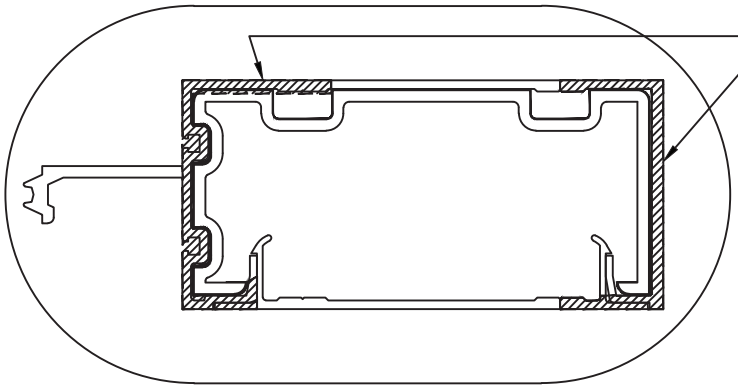
- Clean ends of mullions and faces of horizontals to be sealed, refer to FIGURE 65 & 66
- Apply Dow Corning 795 / 995 at front and back of mullions as shown in detail 'A' and figure 65 also see FIGURE 67 & 67A on Page 70.
- Next Insert backer rod between horizontals as shown at figure 66 and apply silicone sealant as shown. Tool sealant to ensure water tight seal.

FIGURE 64
Mullion Splice Assembly

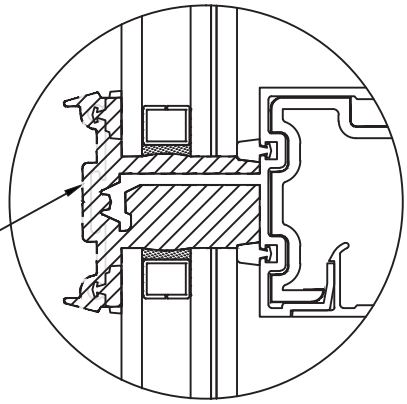


Phone: 1-866-OLDCASTLE (653-2278)
Web Address: www.oldcastlebe.com

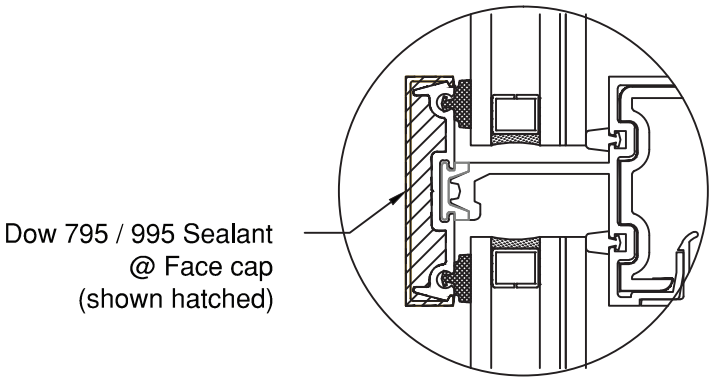
MULLION SPLICE @ FRAMING WITH DOUBLE / EXPANSION HORIZONTAL



Detail A
Splice Sealant @ Mullion
(Refer to 3D views 67 and 67A on Page 70)



Detail B
Splice Sealant
@ Pressure Plate



Detail C
Splice Sealant @ Face Cap

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

MULLION SPLICE @ FRAMING WITH DOUBLE / EXPANSION HORIZONTAL

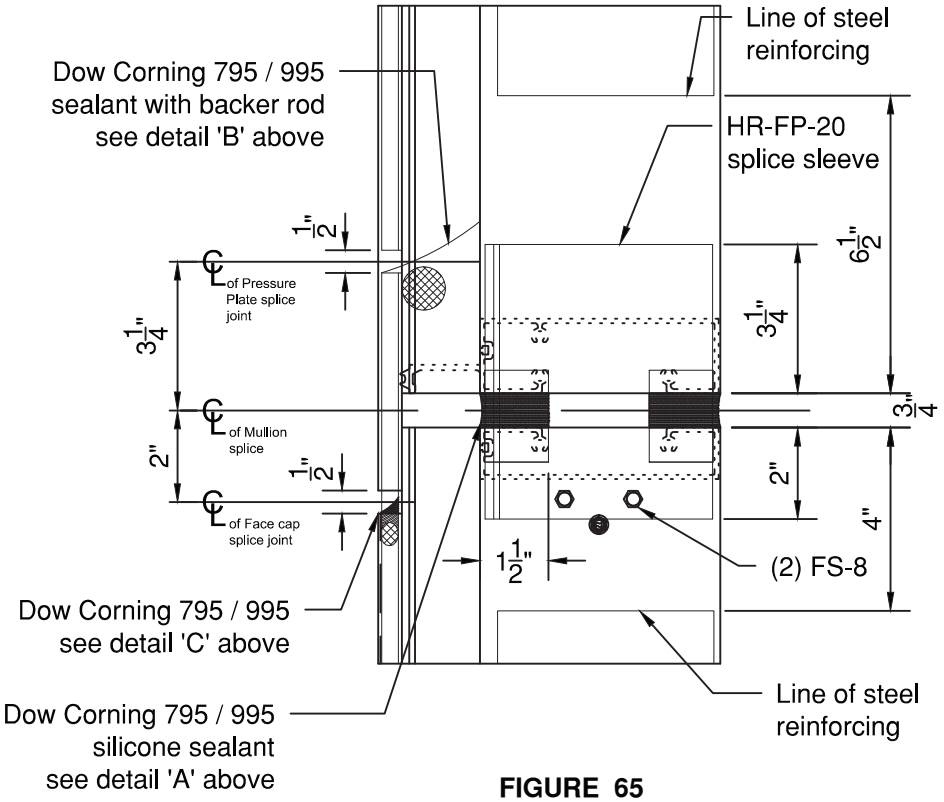


FIGURE 65
Mullion Splice Assembly and Sealant

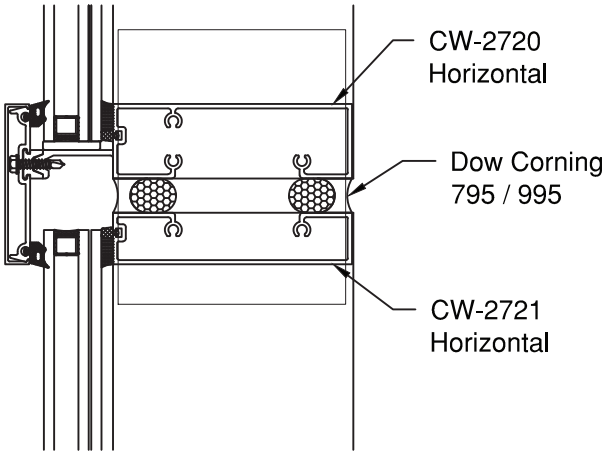


FIGURE 66
Sealant Application @ Split Horizontal
(refer to 3D views 67 and 67A
on sheet 32)

MULLION SPLICE @ FRAMING WITH DOUBLE / EXPANSION HORIZONTAL

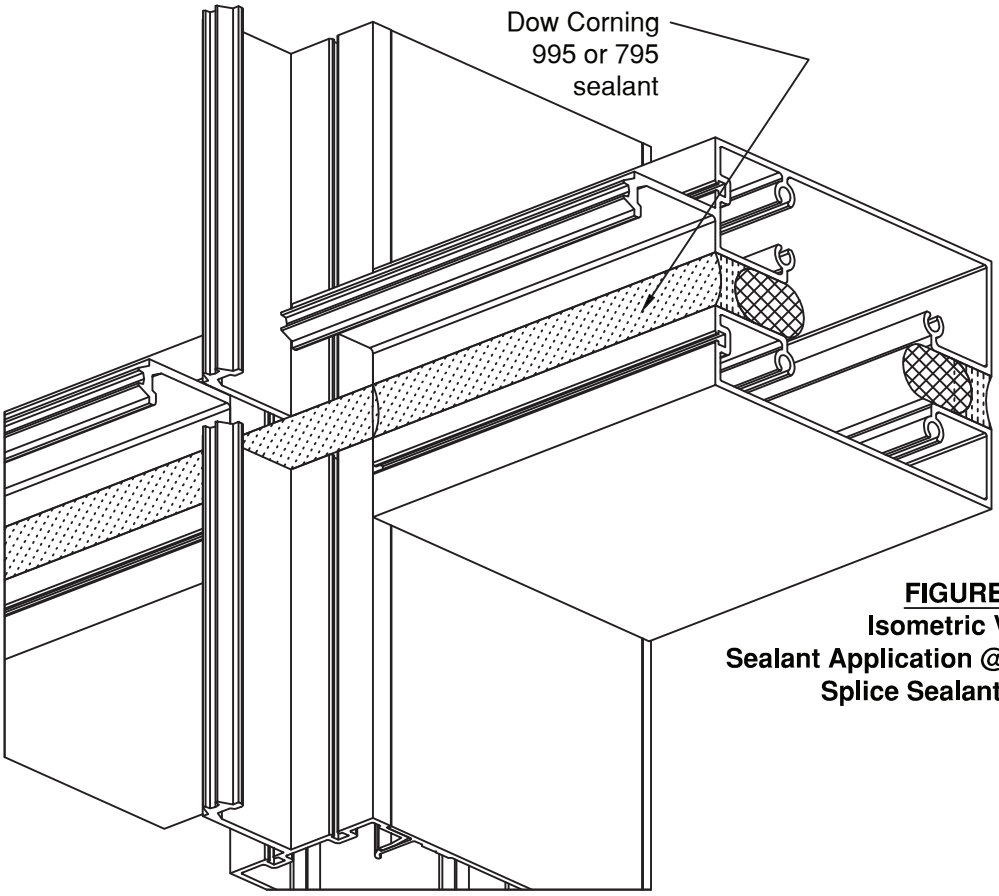


FIGURE 67
Isometric View of
Sealant Application @ Detail A Sheet 32
Splice Sealant @ Mullion

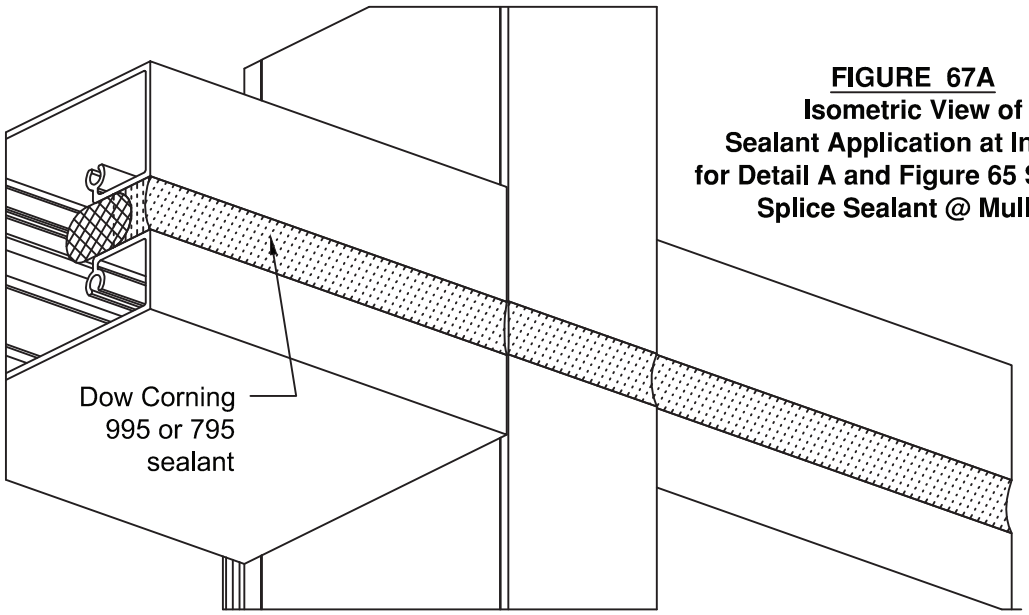


FIGURE 67A
Isometric View of
Sealant Application at Interior
for Detail A and Figure 65 Sheet 32
Splice Sealant @ Mullion

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

MULLION SPLICE @ FRAMING WITH DOUBLE / EXPANSION HORIZONTAL

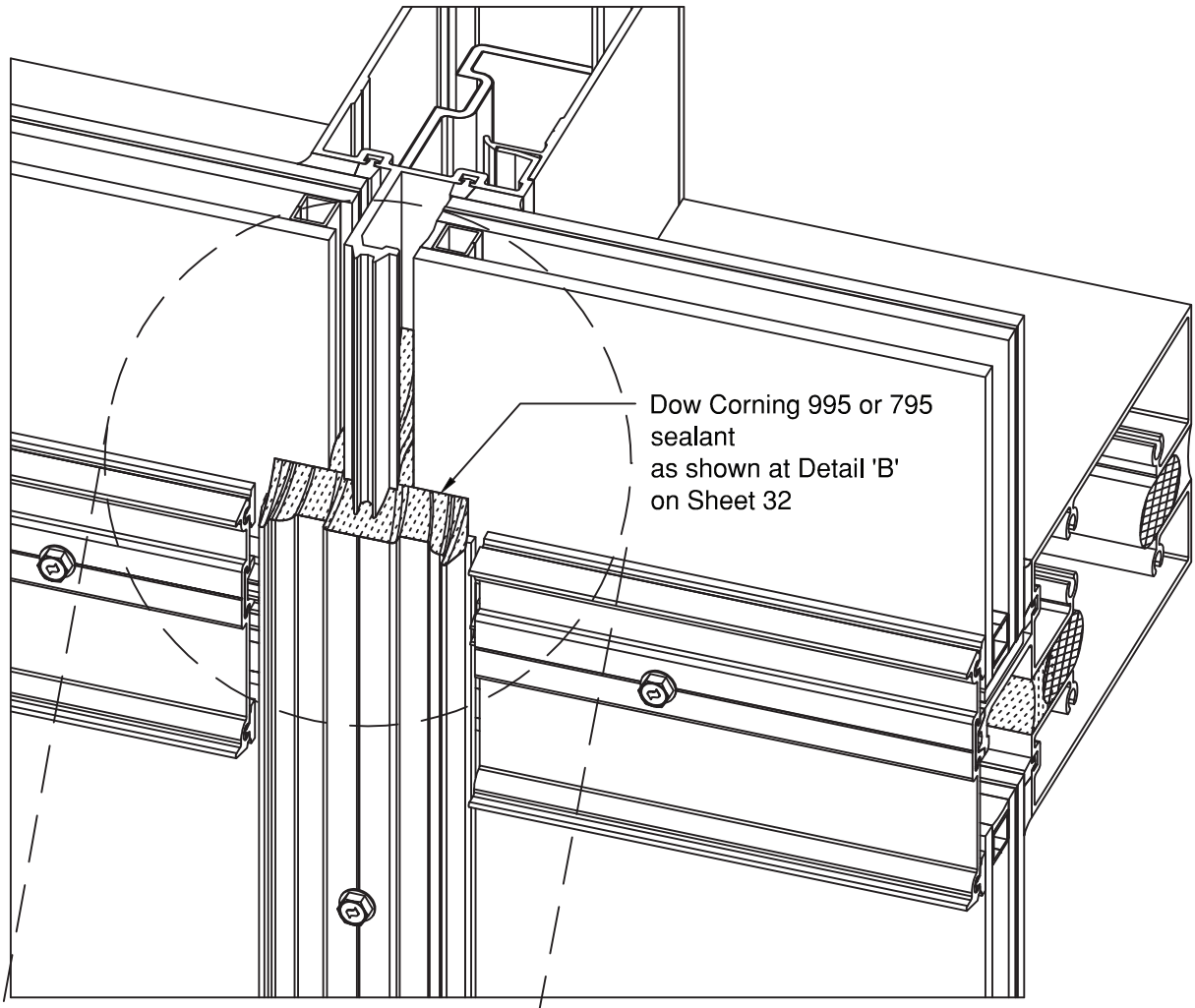


FIGURE 68
Isometric View of
Sealant Application @ Detail 'B' Sheet 32
Splice Sealant @ Face Cap

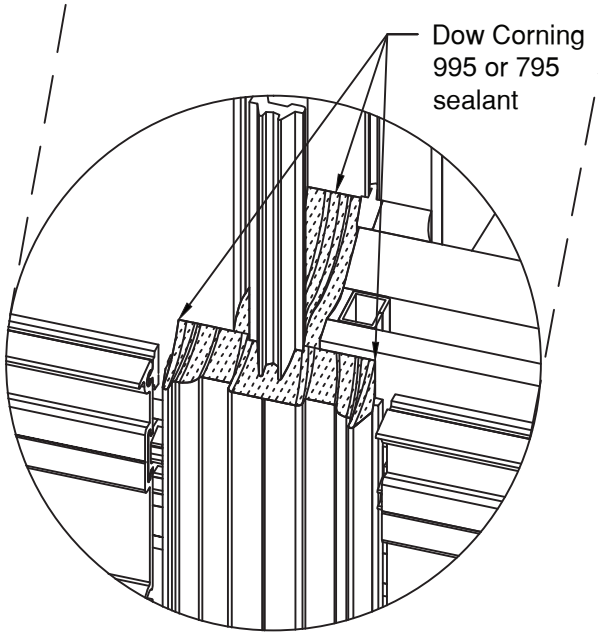


FIGURE 68A
Cut-Away Isometric View of
Sealant Application @ Figure 68
Splice Sealant @ Face Cap

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

MULLION SPLICE @ FRAMING WITH DOUBLE / EXPANSION HORIZONTAL

6.2.4 Face Cap Installation

To prevent damaging snap-on face caps during installation, hold a short piece of wooden 2" x 4" over the cap and hit the wood with a Stanley 3 lbs. Compo-Cast dead blow soft face hammer. DO NOT hit the face cap directly with a mallet! See Detail A.

1. Install Vertical Face Caps First.
   - Clean end of horizontal pressure plate and adjoining area of vertical face cap.
   - Apply Dow Corning® 795 or 995 silicone as noted and tool to assure water tight seal
2. Install Horizontal Face Caps.

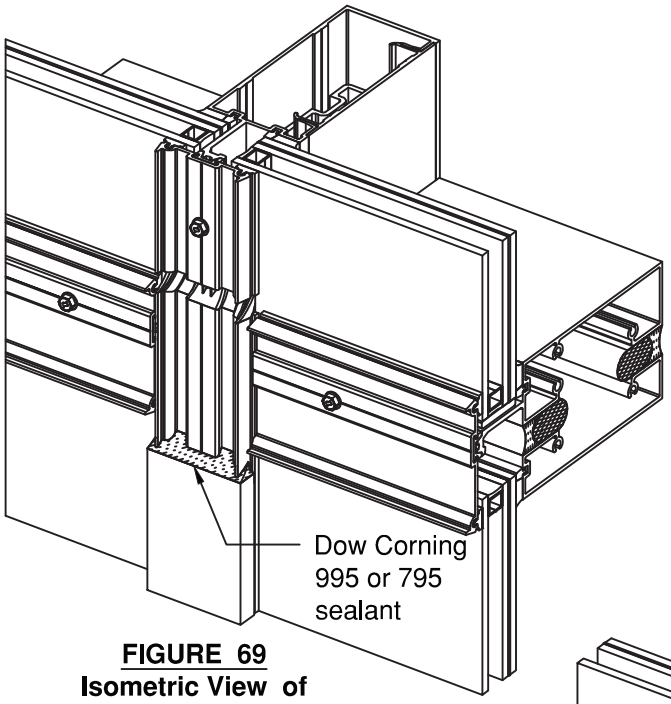
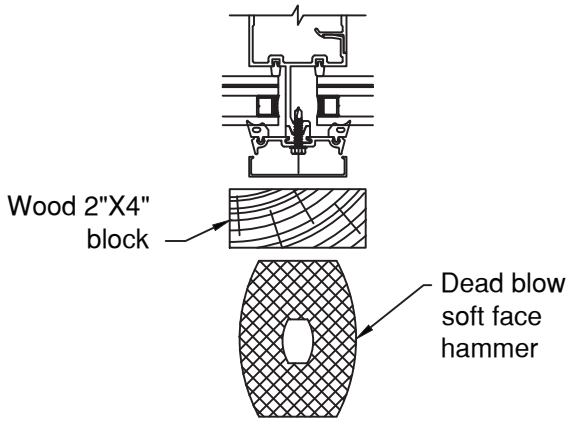


FIGURE 69
Isometric View of
Sealant Application @ Detail C sheet 32
Splice Sealant @ Face Cap



Detail A
Face Cap Installation

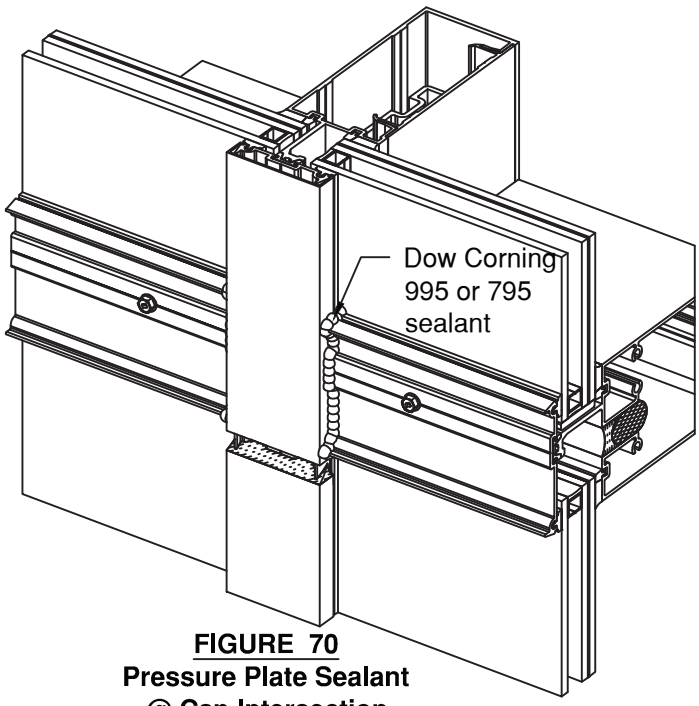


FIGURE 70
Pressure Plate Sealant
@ Cap Intersection

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

OUTSIDE CORNER MULLION SPLICE FABRICATION PREPS AND ASSEMBLY

6.3.1 Corner Mullion Splice Fabrication and Assembly

1. Drill or punch holes in lower mullion halves and install stop screw 3 3/32" from top of lower member as shown at FIGURE 71 below.
2. Clean splice sleeves and all joint surfaces. Apply bond breaker tape at areas where sleeve will be sealed to avoid three side adhesion.
3. Slide sleeve into the upper member before it is installed and use duct tape to hold it in place.

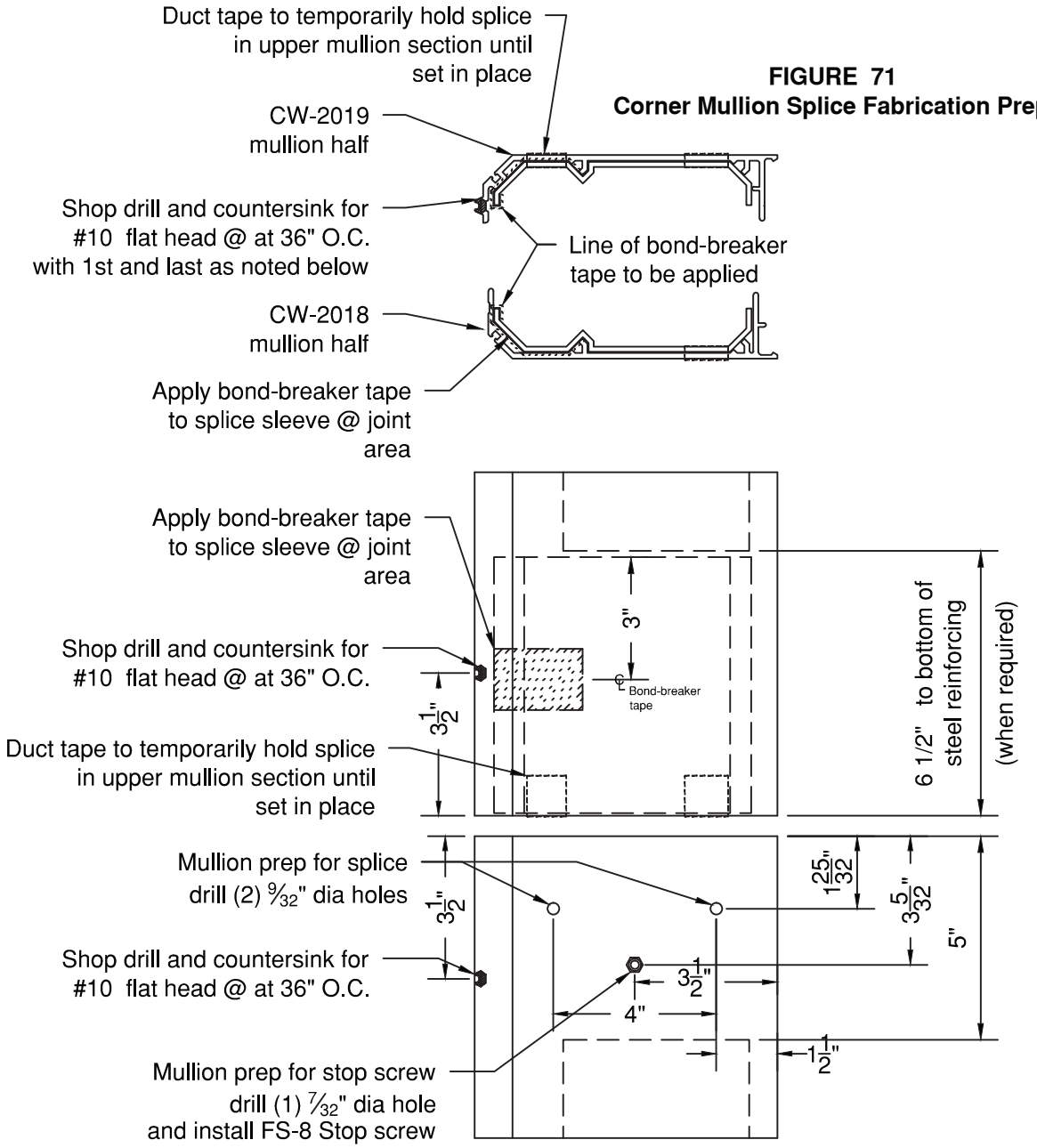


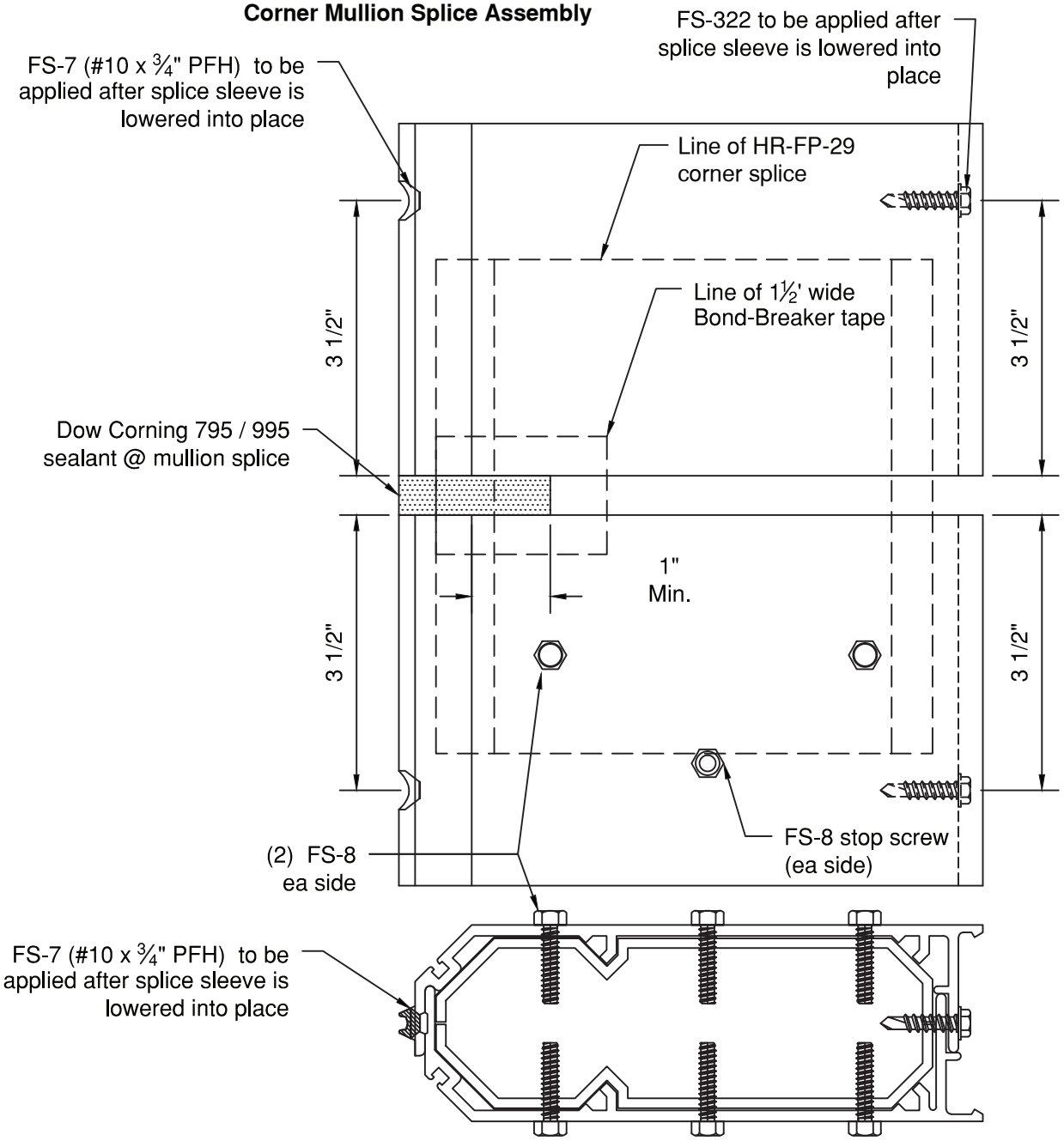
FIGURE 71
Corner Mullion Splice Fabrication Prep

OUTSIDE CORNER MULLION SPLICE FABRICATION PREPS AND ASSEMBLY

6.3.2 Corner Mullion Splice Installation

1. Install upper members, remove duct tape and let extruded sleeve slide down until it rests on top of stop screw.
2. Match drill splice sleeve and install (2) FS-8 fasteners ea side of mullion
3. Install FS-7 and FS-322 after splice sleeve is lowered in to place.

FIGURE 72
Corner Mullion Splice Assembly



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

OUTSIDE CORNER MULLION SPLICE ASSEMBLY AND SEALANT

6.3.3 Corner Mullion Splice Sealant Application
Apply Dow Corning® 795 or 995 sealant as shown at FIGURE 73 and in Detail "A"

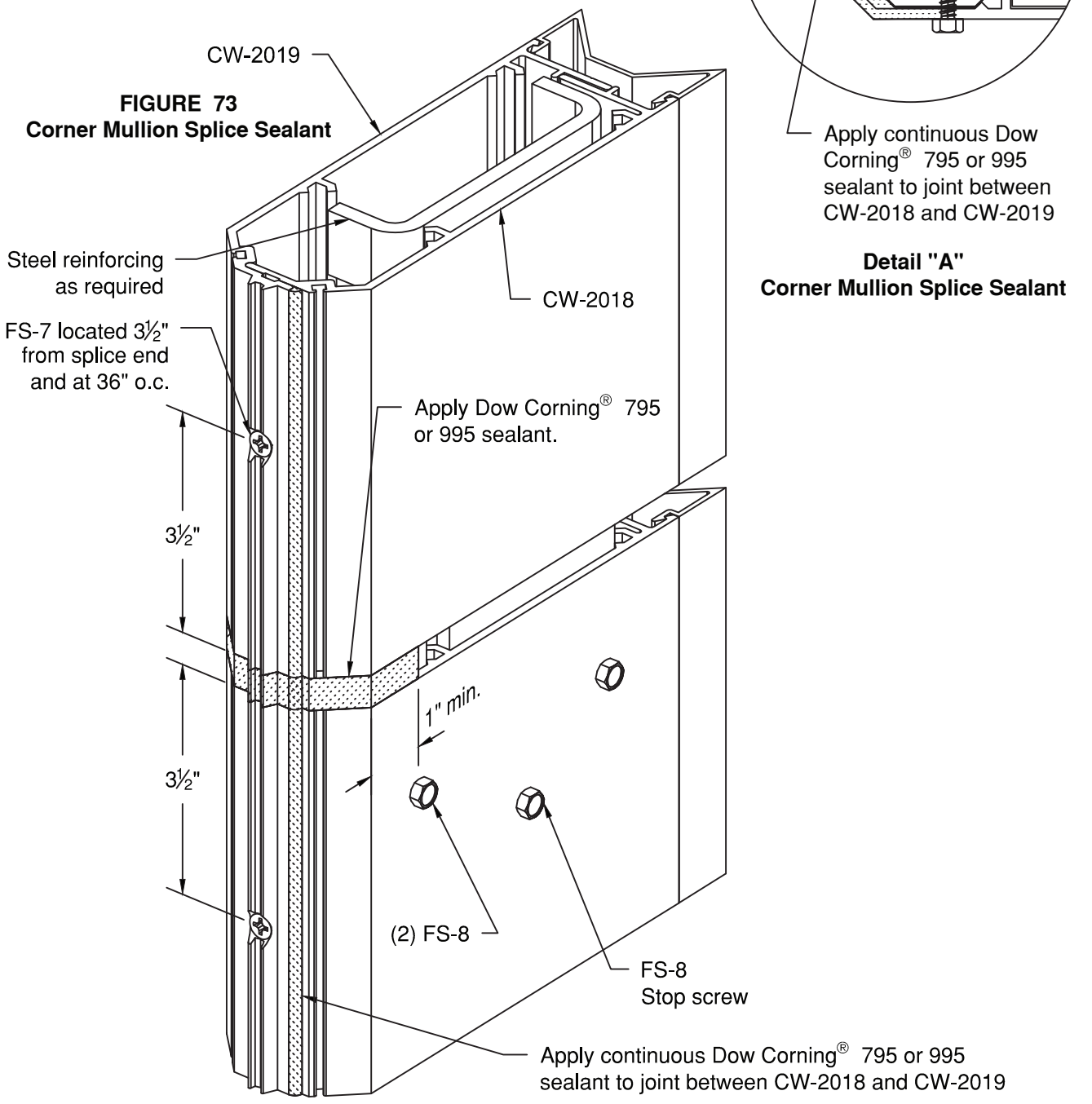
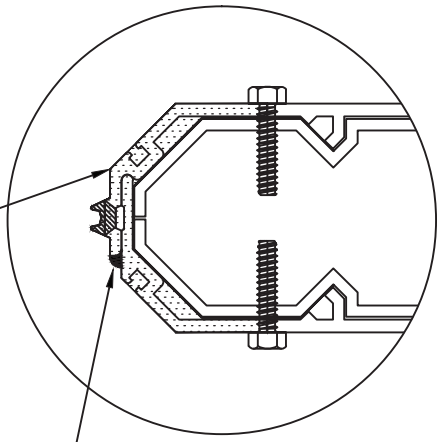


FIGURE 73
Corner Mullion Splice Sealant



Detail "A"
Corner Mullion Splice Sealant

OUTSIDE CORNER MULLION SPLICE ASSEMBLY AND SEALANT

6.3.4 Corner Mullion Pressure Plate installation and sealant application at splice Apply Dow Corning® 795 or 995 sealant as shown at FIGURE 74 and in Detail "B".

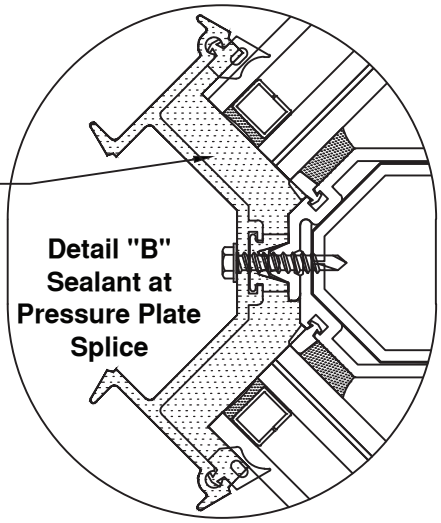
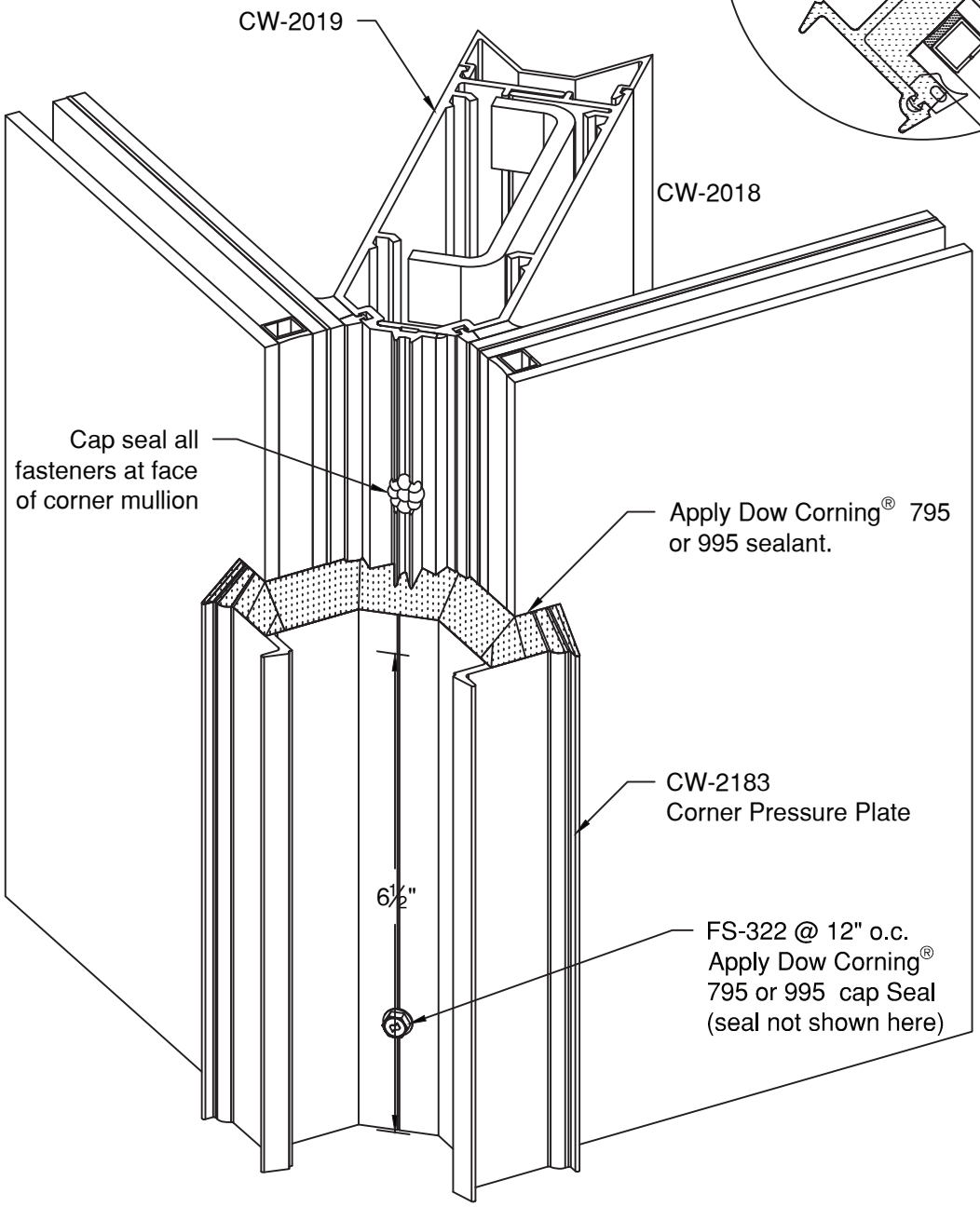


FIGURE 74
Corner Mullion Splice Sealant



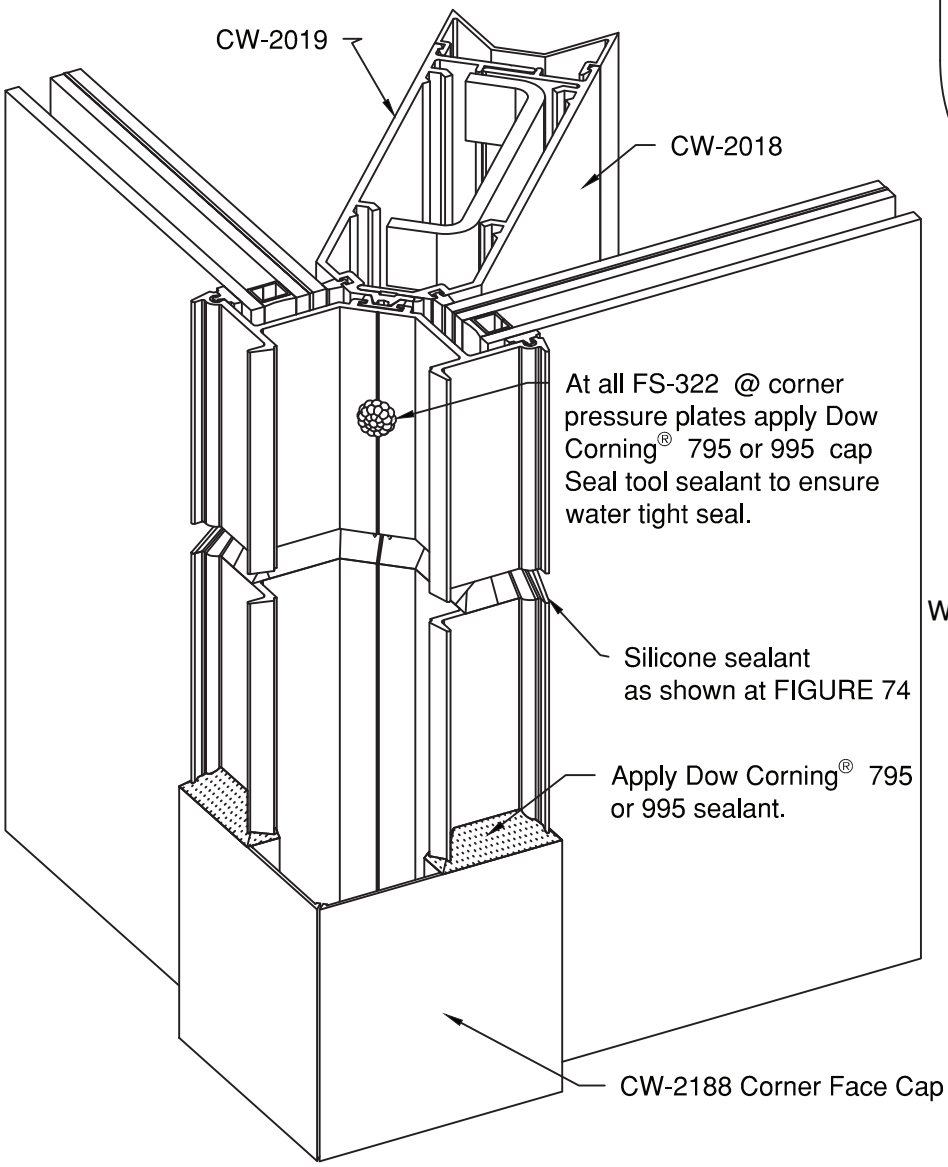
OUTSIDE CORNER MULLION ASSEMBLY

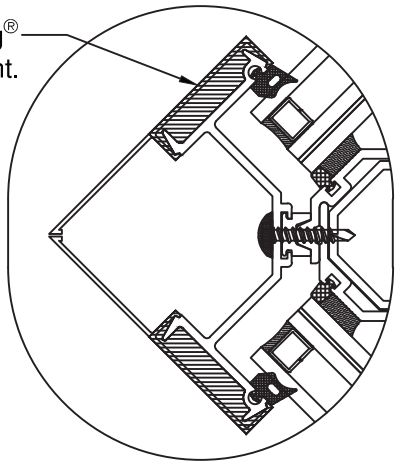
6.3.5 Corner Mullion Face Cap Installation and Sealant Application at Splice

To prevent damaging snap-on face caps during installation, hold a short piece of wooden 2" x 4" over the cap and hit the wood with a Stanley 3lbs. Compo-Cast dead blow soft face hammer. DO NOT hit the face cap directly with a mallet! See Detail D.

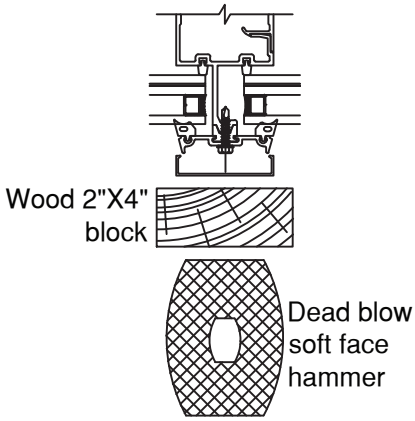
Apply Dow Corning® 795 or 995 sealant as shown at Figure 75 and in detail "C".

FIGURE 75
Corner Mullion Face Cap Sealant at Splice





Detail C
Corner Mullion Face Cap Sealant at Splice



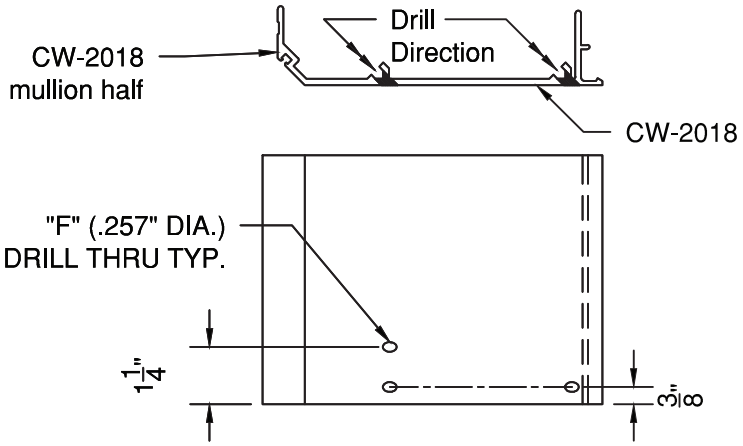
Detail D
Face Cap Installation

OUTSIDE CORNER MULLION SPLICE FABRICATION PREPS AND ASSEMBLY

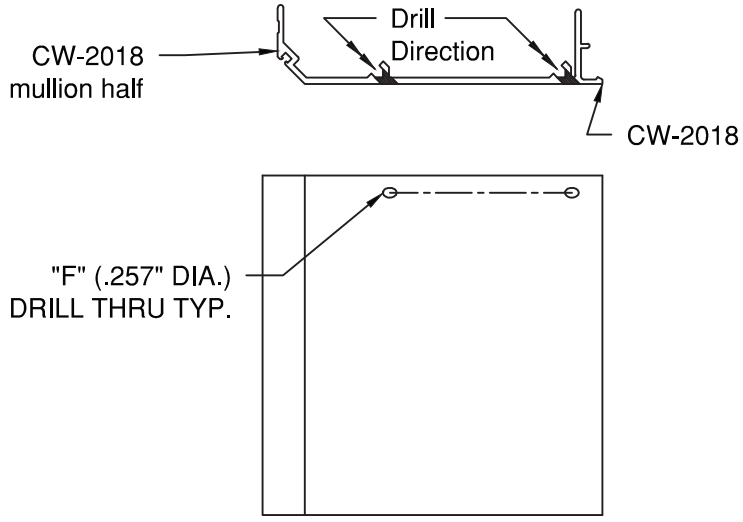
6.4.1 Corner Mullion Splice Fabrication

1. Drill "F" (0.257" dia) holes for FS-8 spline screws as shown in details "A"-"D" below
2. In lower mullion half CW-2019 drill 7/32" hole for stop screw and (2) 9/32" dia. holes, and Install stop screw 2¾" from top of lower member as shown at detail "D" below.
3. At both upper and lower mullion halves CW-2019 dill and countersink holes for #10 @ front of mullion and 7/32" dia holes at back as noted below.

FIGURE 76
Mullion Prep for top of lower mullion

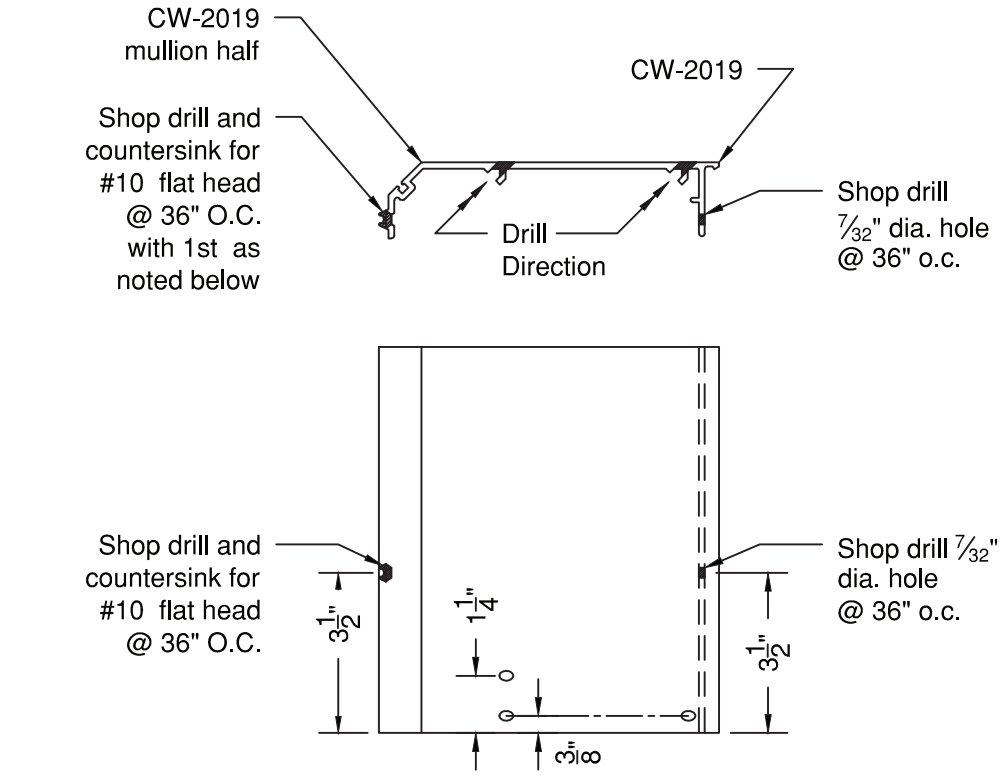


Detail "A"
Mullion Prep

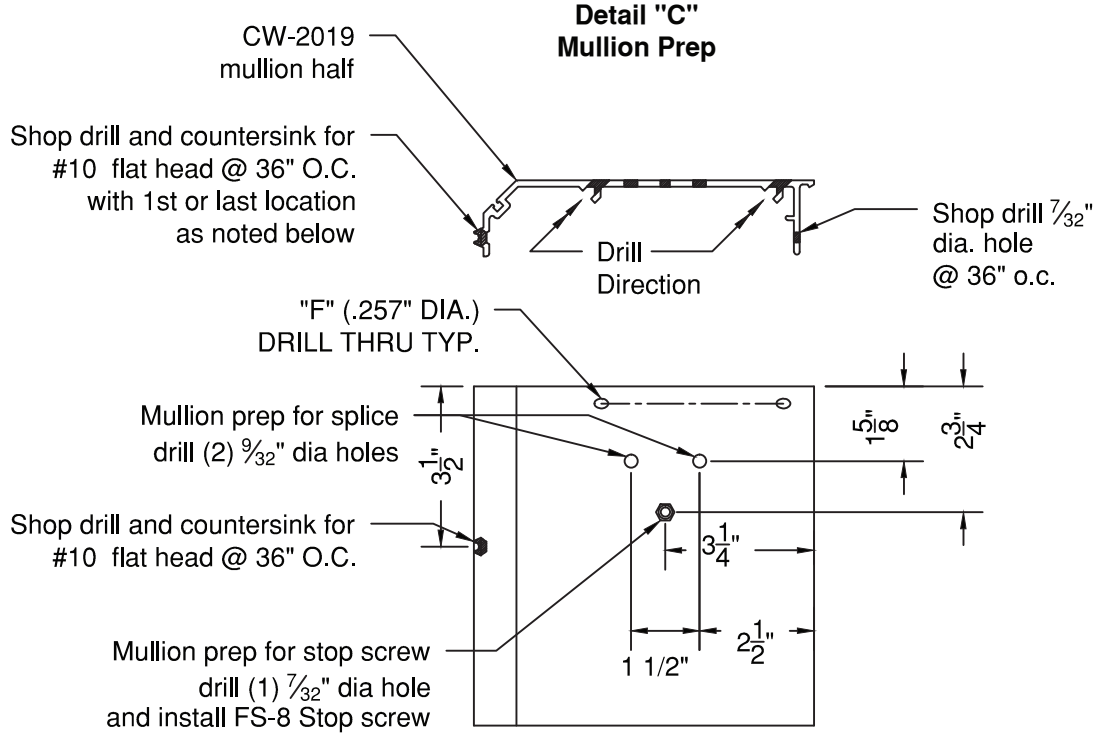


Detail "B"
Mullion Prep

OUTSIDE CORNER MULLION SPLICE FABRICATION PREPS AND ASSEMBLY



Detail "C"
Mullion Prep



Detail "D"
Mullion Prep

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

OUTSIDE CORNER MULLION SPLICE FABRICATION PREPS AND ASSEMBLY

6.4.2 Corner Mullion Splice Assembly

1. Clean splice sleeve and apply bond breaker tape at areas where sleeve will be sealed to avoid three side adhesion. See FIGURE 77 below

2. Slide sleeve into the upper member before it is installed and use duct tape to hold in place.

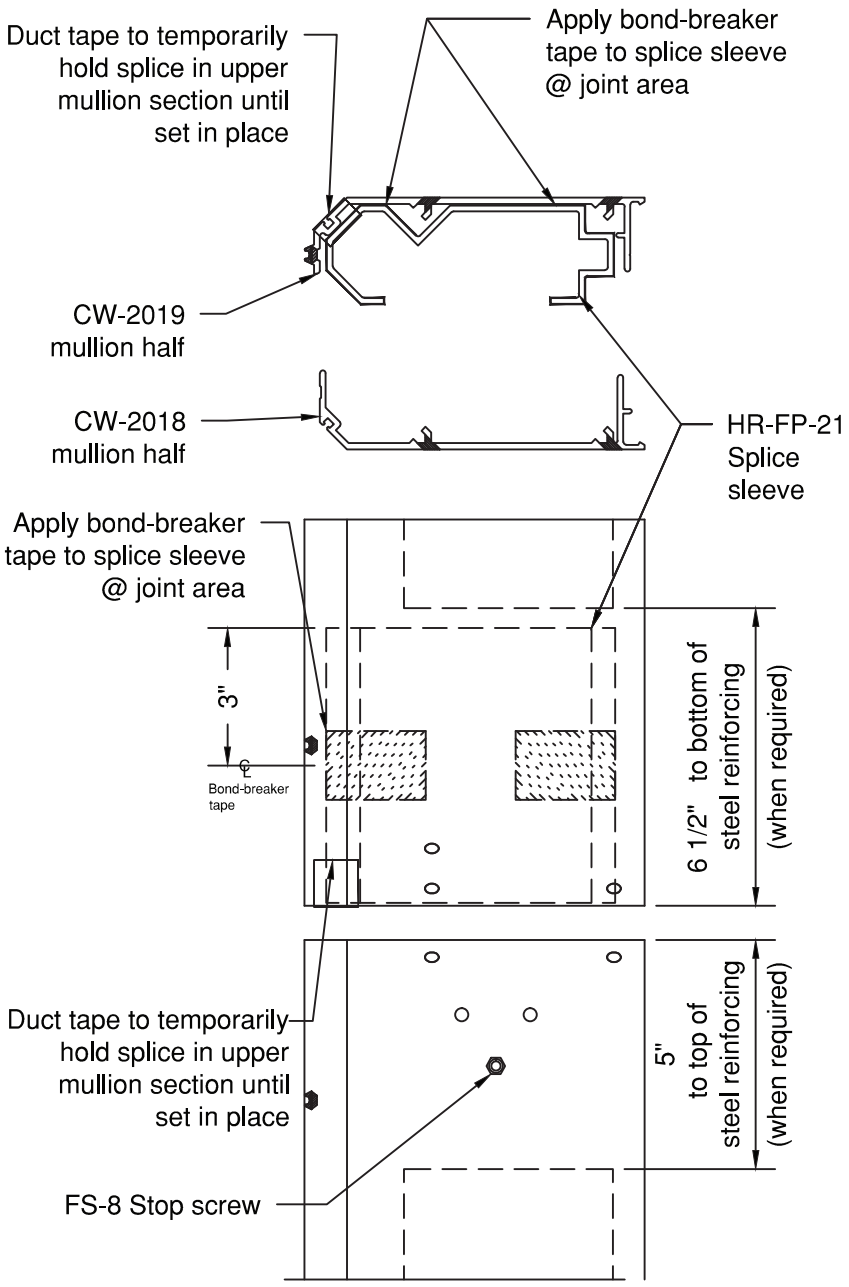


FIGURE 77
Corner Mullion Splice Assembly Prep

OUTSIDE CORNER MULLION SPLICE FABRICATION PREPS AND ASSEMBLY

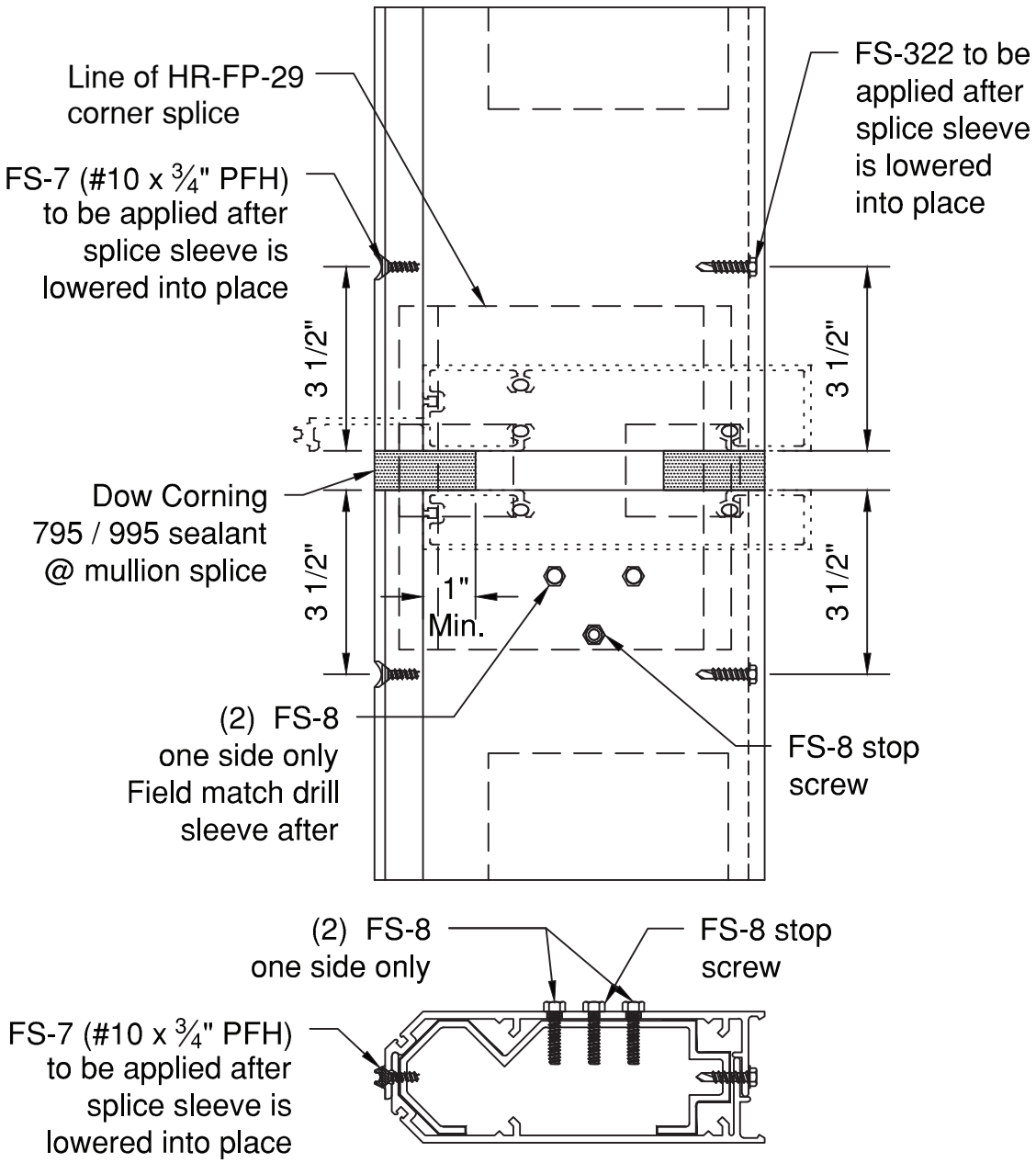


FIGURE 78
Corner Mullion Splice Assembly

OUTSIDE CORNER MULLION SPLICE FABRICATION PREPS AND ASSEMBLY

6.4.3 Corner Mullion Splice Installation

1. Install upper members, and clean ends of mullions and horizontals at areas sealant is to be applied refer to details FIGURE 78 & 79 below.
2. Remove duct tape and let extruded sleeve slide down until it rests on top of stop screw.
3. Match drill splice sleeve and install (2) FS-8 fasteners as shown
4. Install FS-7 and FS-322 after splice sleeve is lowered in to place.

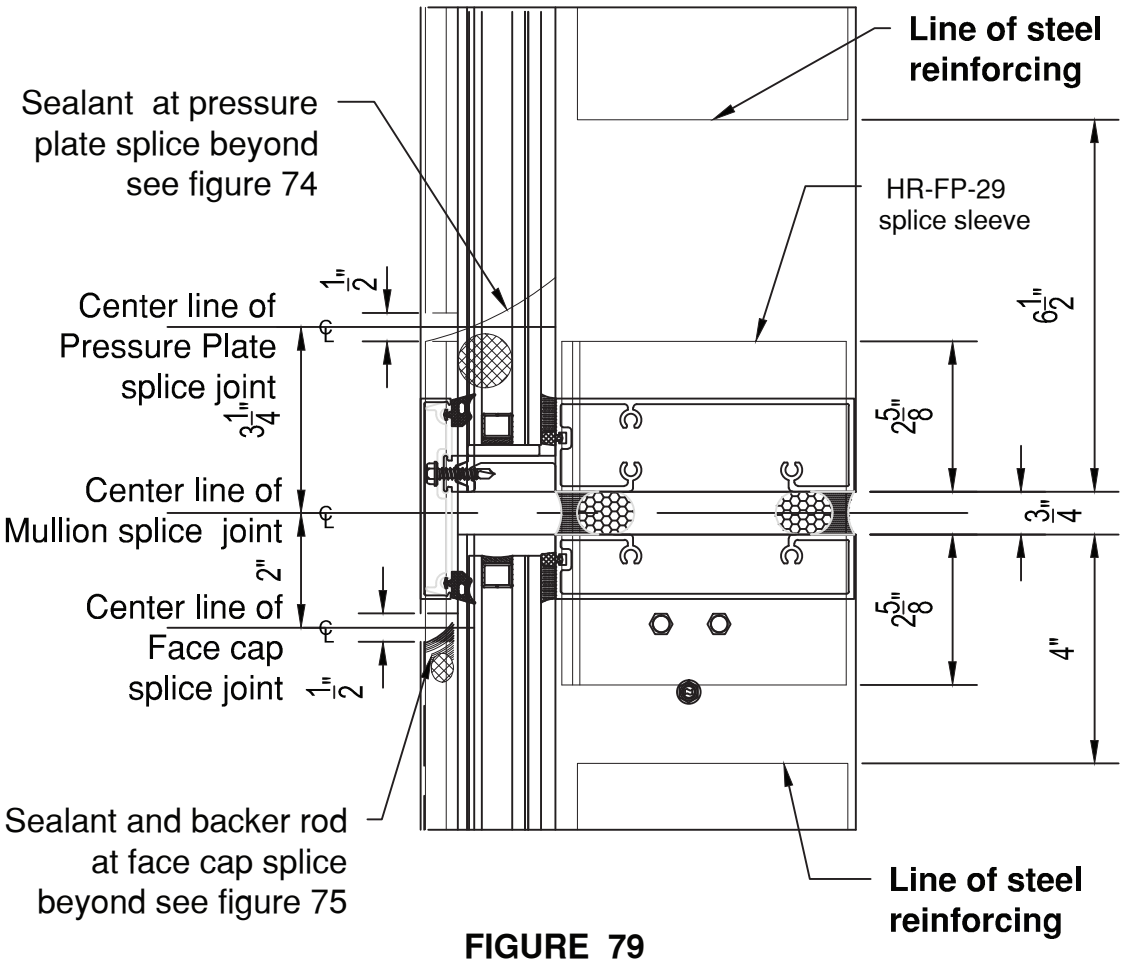


FIGURE 79
Expansion Horizontal @ Splice

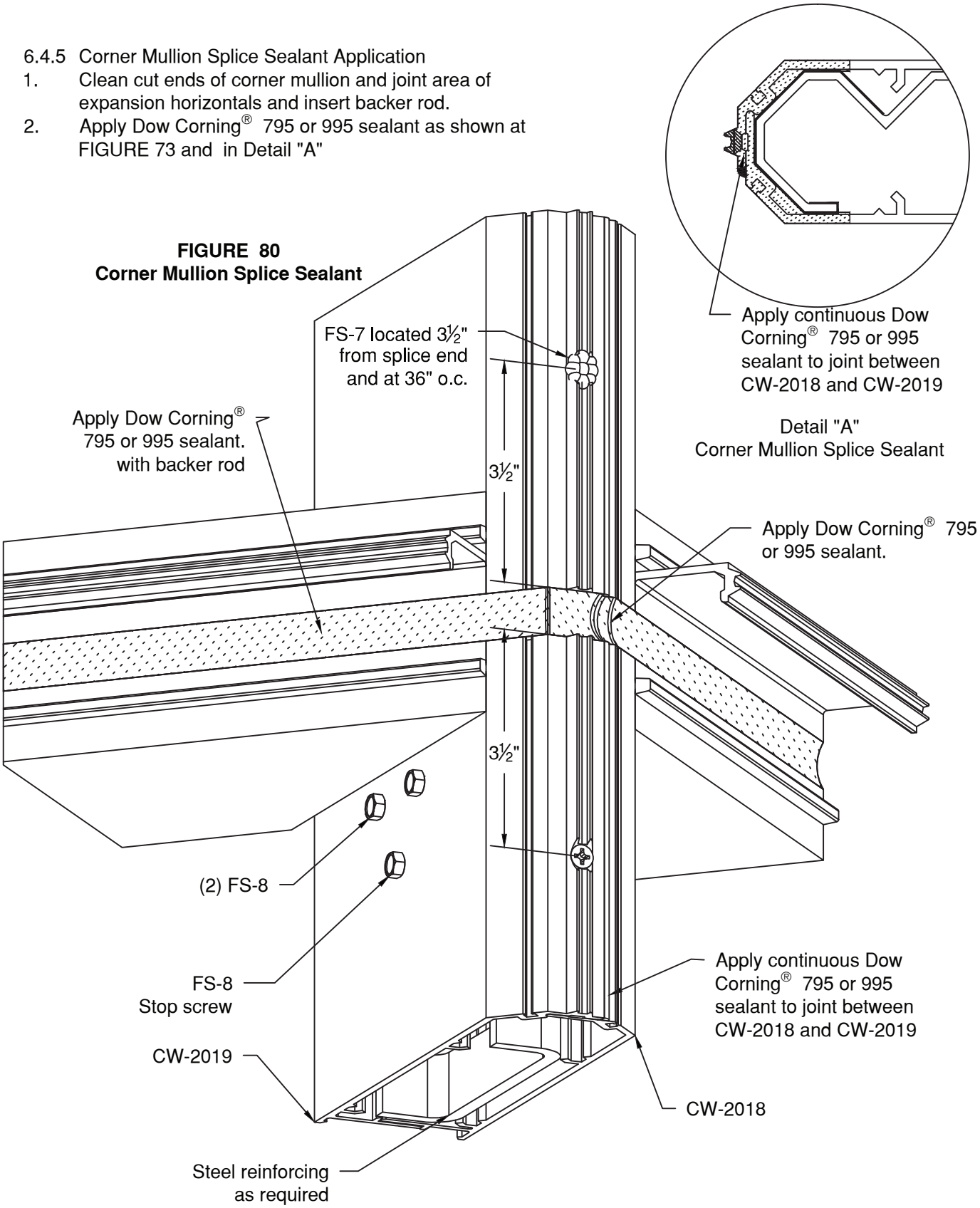
Phone: 1-866-OLDCASTLE (653-2278)
Web Address: www.oldcastlebe.com

OUTSIDE CORNER MULLION SPLICE ASSEMBLY AND SEALANT

6.4.5 Corner Mullion Splice Sealant Application

1. Clean cut ends of corner mullion and joint area of expansion horizontals and insert backer rod.
2. Apply Dow Corning® 795 or 995 sealant as shown at FIGURE 73 and in Detail "A"

FIGURE 80
Corner Mullion Splice Sealant



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

OUTSIDE CORNER MULLION SPLICE ASSEMBLY AND SEALANT

6.4.6 Corner Mullion Pressure Plate Installation and Sealant Application at Splice

1. Clean cut ends of pressure plate and face of mullion @ pressure plate splice
2. Insert backer rod and Apply Dow Corning® 795 or 995 sealant as shown at FIGURE 74 and in Detail "B".

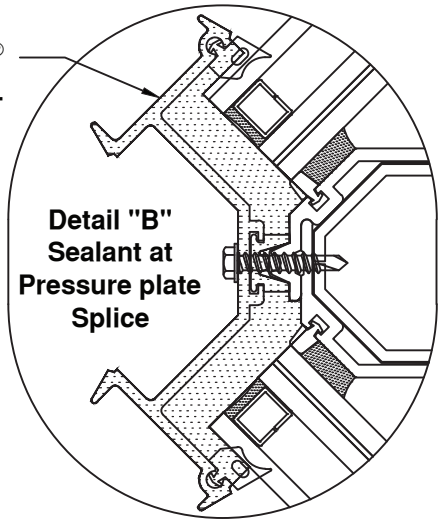
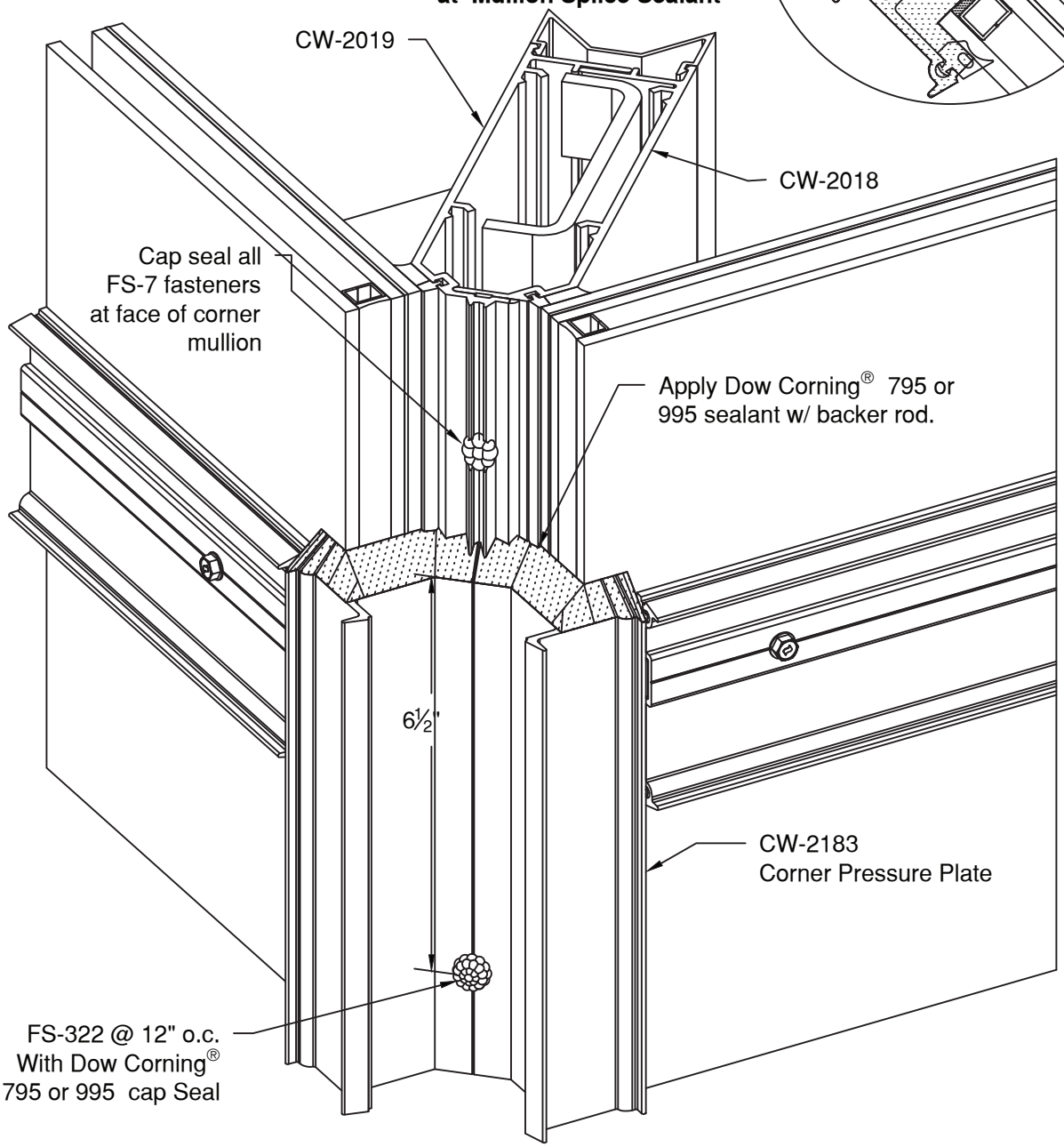


FIGURE 81
Pressure Plate Sealant at Mullion Splice Sealant

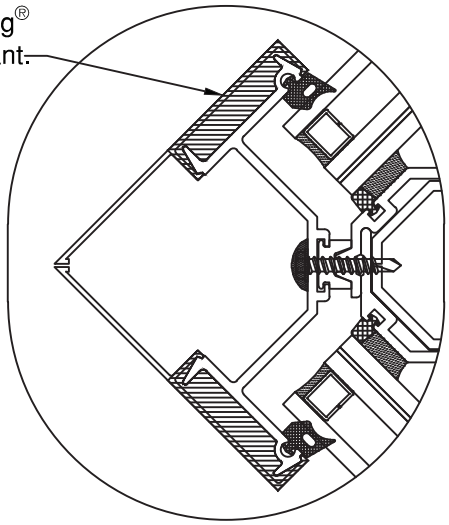


OUTSIDE CORNER MULLION SPLICE ASSEMBLY AND SEALANT

6.4.7 Corner Mullion Face Cap Splice @ Split Expansion Horizontal Installation and Sealant Application

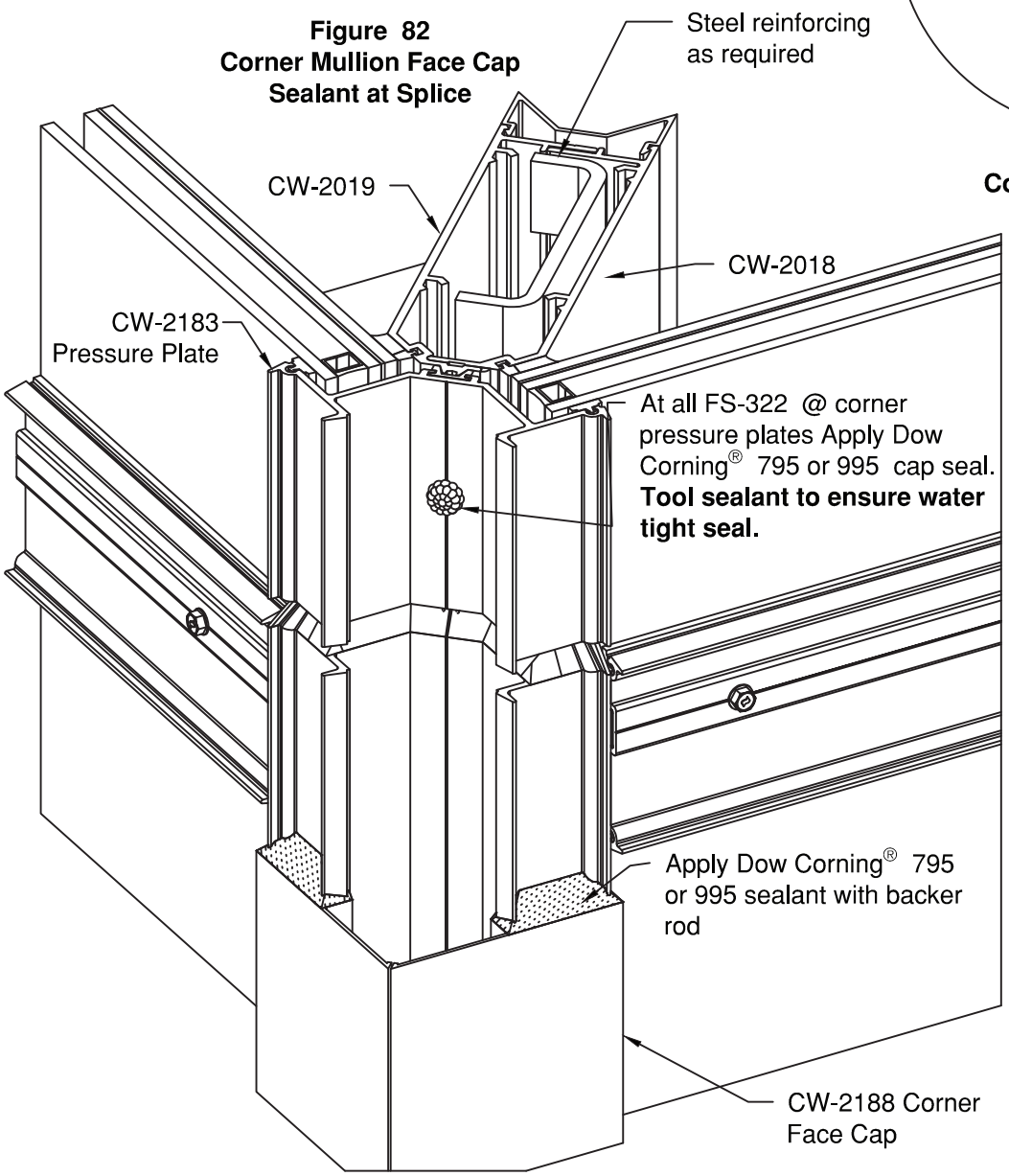
NOTE : Prior to installing CW-2188 Corner Face Caps clean and apply Dow Corning® 795 or 995 cap seal at all FS-322 pressure plate fasteners

1. Apply backer rod and Dow Corning® 795 or 995 sealant as shown at FIGURE 82 and in Detail "C". and tool sealant to ensure water tight seal.



Detail "C"
Corner Mullion Face Cap
Sealant at Splice

Figure 82
Corner Mullion Face Cap
Sealant at Splice



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

OUTSIDE CORNER MULLION SPLICE ASSEMBLY AND SEALANT

6.4.8 Expansion Horizontal Pressure Plate Sealant @ Corner Mullion

NOTE : Prior to sealing CW-2722 Pressure Plates install the CW-2188 Face Caps and the CW-2 vertical face caps **See FIGURE 69 Page 72 .**

1. Clean ends of CW-2722 and sides of face caps at intersection
2. Apply Dow Corning® 795 or 995 sealant as shown at Figure 83, and tool sealant to ensure water tight seal.
3. Install CW-709 face cap, see Page 72 FIGURE 69 and 70.

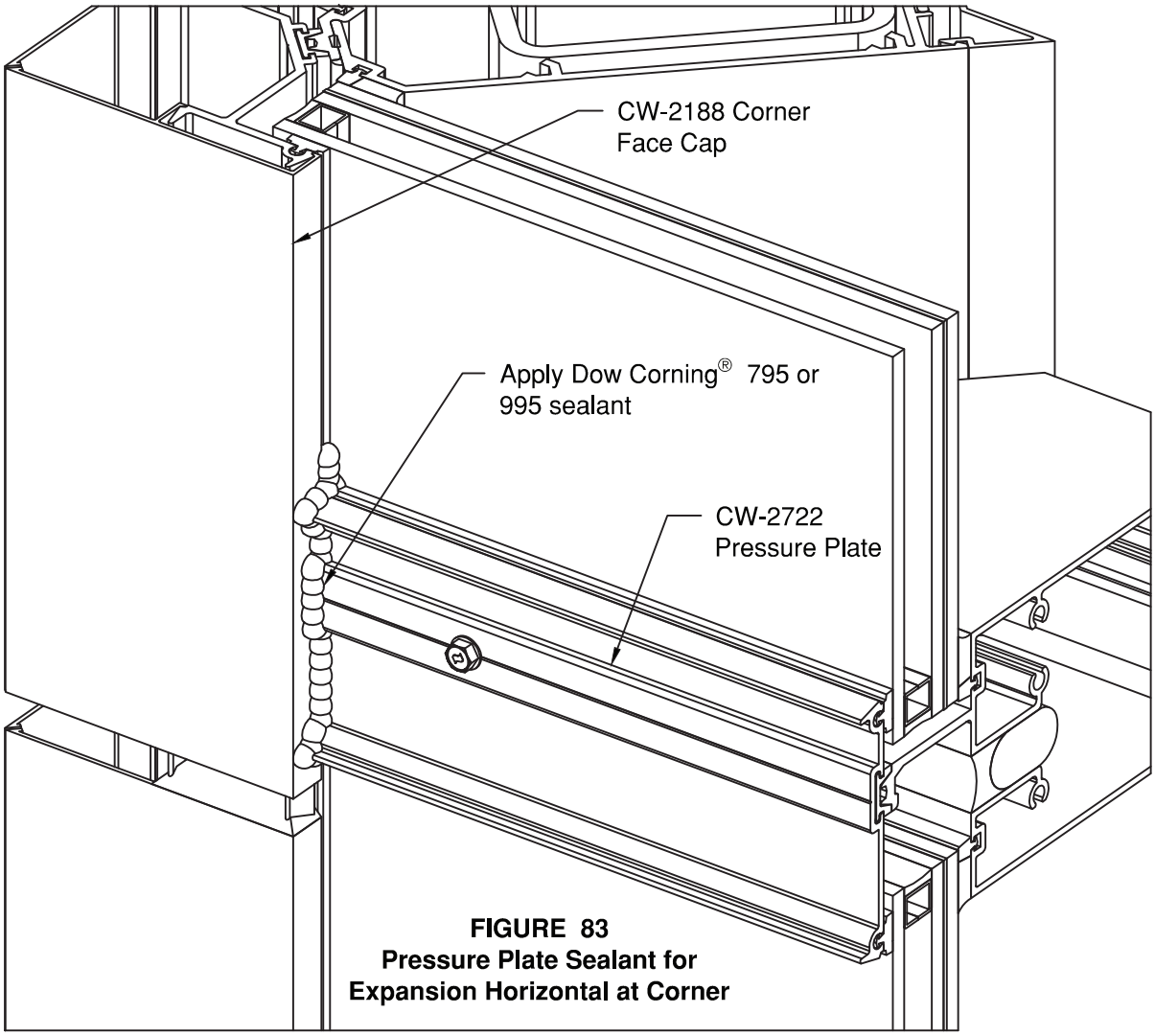


FIGURE 83
Pressure Plate Sealant for
Expansion Horizontal at Corner

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

DOOR SUB-FRAME INSTALLATION

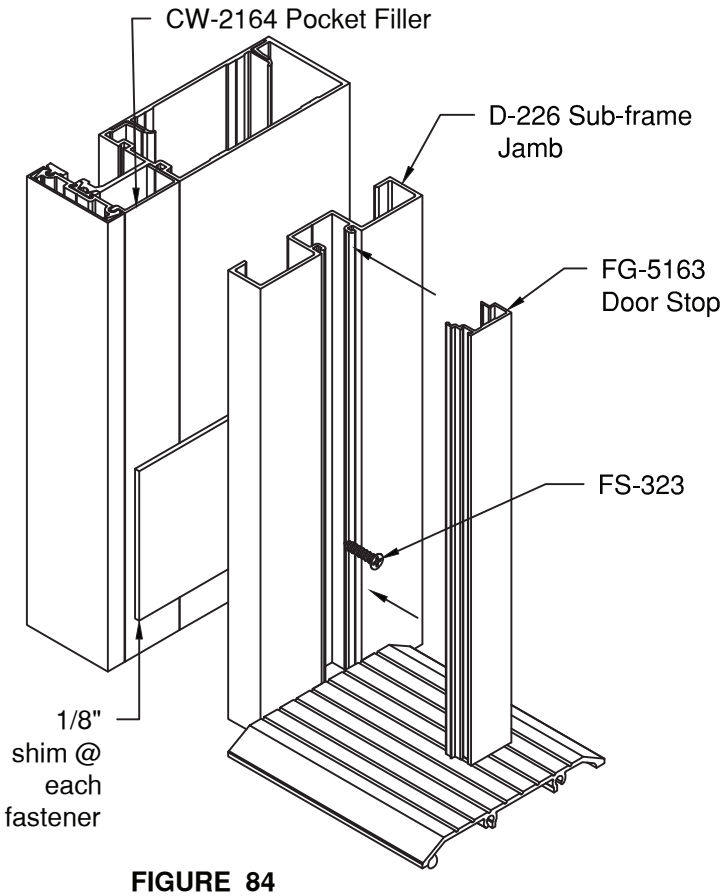
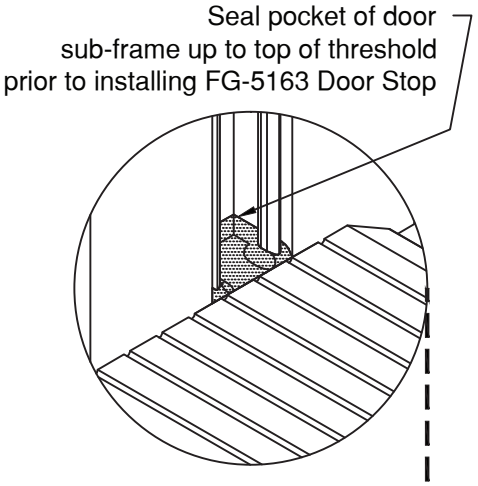


FIGURE 84
Door Sub-frame and Threshold Assembly



Detail A
Sealant @ Pocket for Door Stop

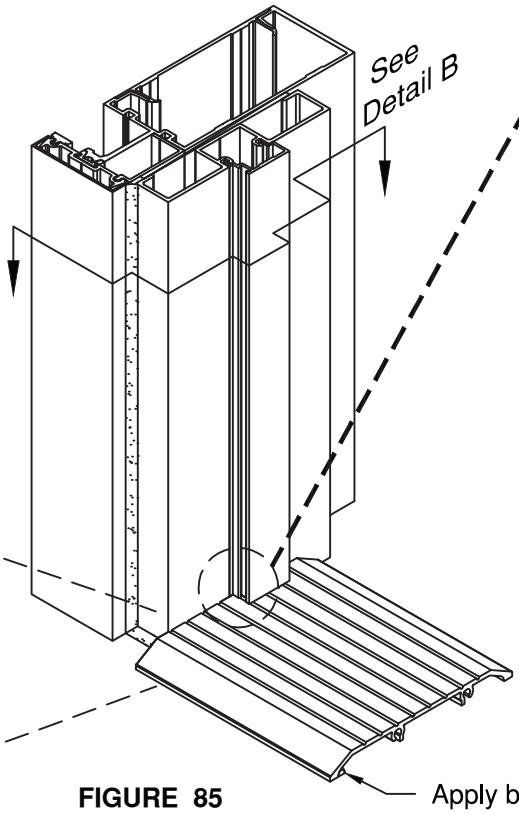
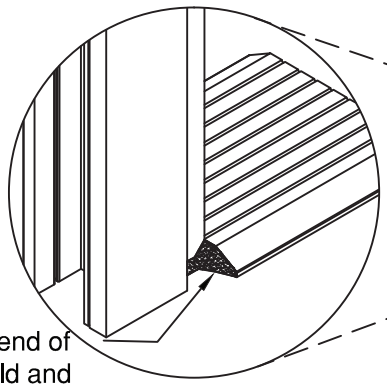


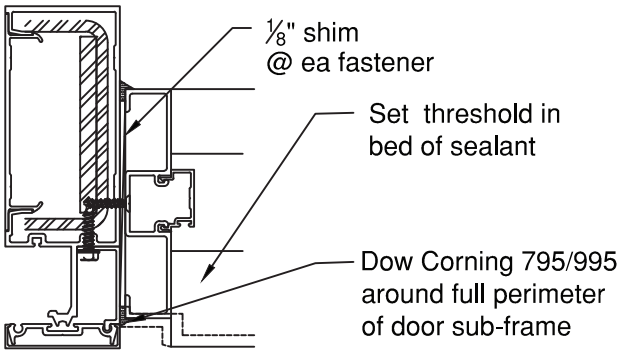
FIGURE 85
Door Sub-frame and Threshold Sealant



Detail C
Sealant @ Ends of Threshold

DOOR SUB-FRAME INSTALLATION

Detail B
Sealant @ Pocket for Door Stop



Sub-Frame and Threshold Fastener Chart

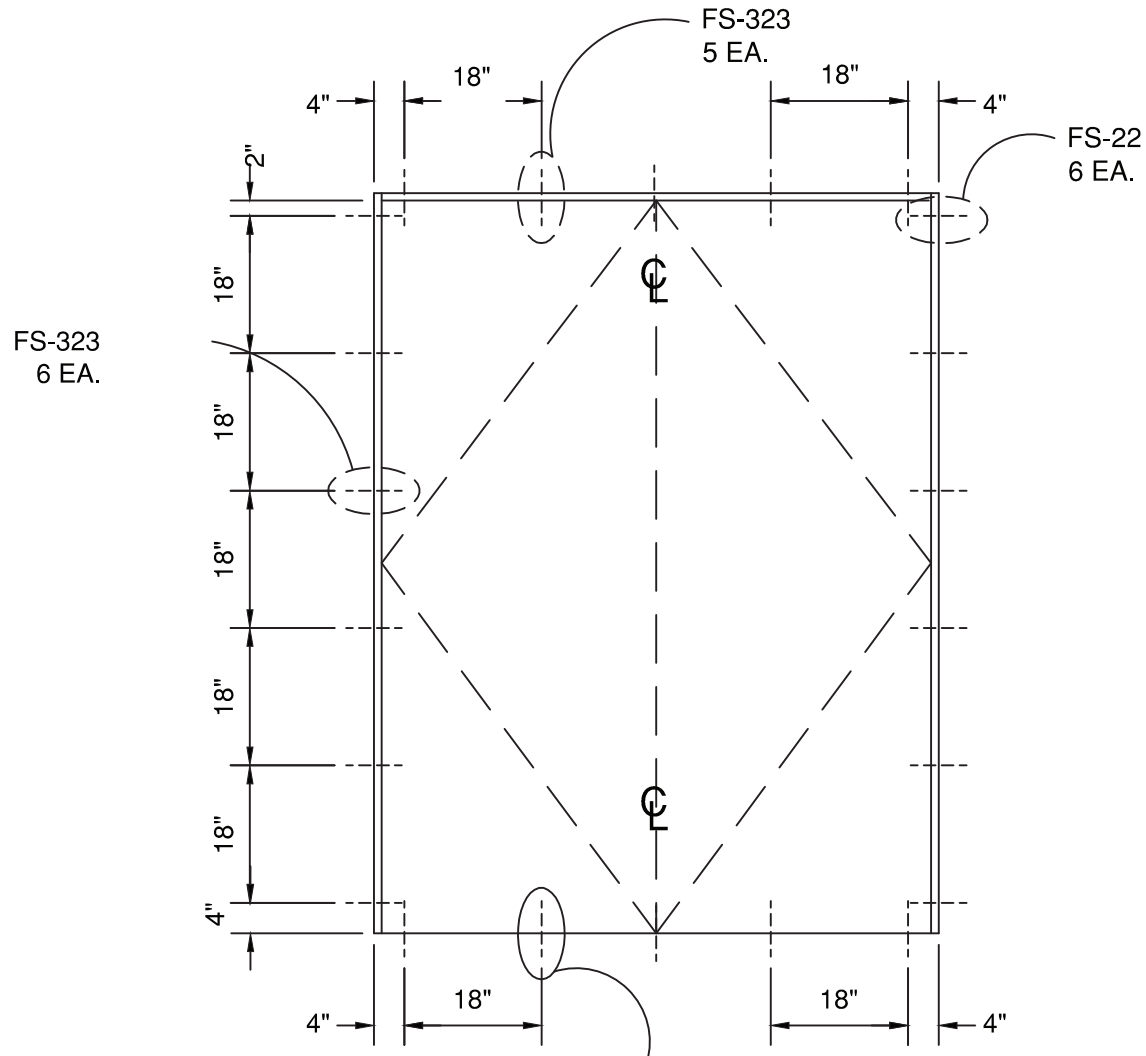
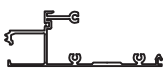
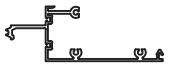
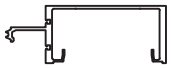
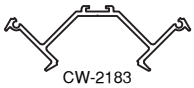
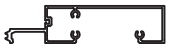


FIGURE 86
Sub-Frame and Threshold Fastener Diagram

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

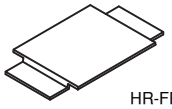
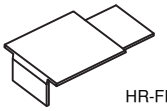
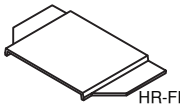
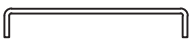
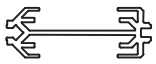
PARTS LIST
STANDARD FRAMING

ITEM	DESCRIPTION
CW-2	Face Cap
CW-691	Pocket Filler
CW-709	3 1/2" Face Cap (At Expansion)
CW-1996	Flat Filler for CW-2023, CW-1999 & CW-2182
CW-1998	Head, Horizontal & Sill Trim
CW-1999	Structural Silicone Glazed Vertical Mullion
CW-2002	Two-Piece Jamb (Fits with CW-2026)
CW-2018	Two-Piece Corner Mullion (Fits with CW-2019)
CW-2019	Two-Piece Corner Mullion (Fits with CW-2018)
CW-2020	Interior Face Cap for Corner Mullion
CW-2023	Vertical Mullion
 CW-2024	Head / Sill

ITEM	DESCRIPTION
CW-2026	Two-Piece Jamb (Fits with CW-2002)
 CW-2156	Horizontal
 CW-2182	Heavy Wall Vertical Mullion
 CW-2183	Pressure Plate for Corner Mullion
CW-2188	Face Cap for Corner Mullion 2 per corner
 CW-2720	Top Horizontal (Expansion)
CW-2721	Bottom Horizontal (Expansion)
CW-2722	3 1/2" Pressure Plate with CW-6H Isolator (At Expansion)
ZG-60	Pressure Plate with 6H Isolator

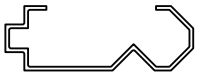
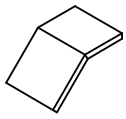
PARTS LIST
STANDARD ACCESSORIES

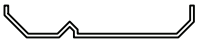
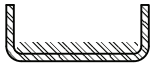
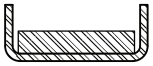
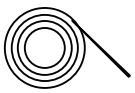
ITEM	DESCRIPTION
CW-1991	Vertical Mullion Splice
CW-2021	Splice for Corner Mullions
CW-2102	Setting Block 2 per lite
FG-5000-PP-8	Reinforcement Steel
FG-5185	Interior Spacer Gasket
FS-7	#10 X 3/4" PHF 'B' pt Jamb Screw OGEP # 550
FS-8	#14 x 1" hhsts Assembly Screw
FS-22	#12 -24 x 1/2" PPH Mullion Cap Screw OGEP # 530
FS-322	#12 -14 x 1" HWH Pressure Plate Screw OGEP # 517
FS-323	#12 x 1" PFH 'A' pt OGEP # 525
GP-118	Exterior Glazing Gasket
GP-103	Perimeter Gasket

ITEM	DESCRIPTION
GP-1015	Interior Glazing Gasket (Dry Glaze Option)
 HR-FP-4	Mullion End Cap
 HR-FP-5	Right & Left Hand Jamb End Cap
 HR-FP-8	Corner Mullion Cap
HR-FP-10	Bridge/Water Diverter for SSG mullion
HR-FP-12	Water Diverter
 HR-FP-13	Splice for Male Half
HR-FP-14	Splice for Female Half
HR-FP-15	Head Anchor Sleeve
HR-FP-16	Jamb Head Anchor Sleeve
 HR-FP-17	Corner Head Anchor Sleeve
HR-FP-18	Wall Jamb Splice Male Half

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

PARTS LIST STANDARD ACCESSORIES

ITEM	DESCRIPTION
HR-FP-20	Mullion Splice
 HR-FP-21	Corner Mullion Splice
HR-FP-22	Corner Head Anchor Left
HR-FP-23	Corner Head Anchor Right
HR-FP-24	Head Anchor Left
HR-FP-25	Corner Head Anchor Right
 HR-FP-26	Dry Glaze Water Diverter

ITEM	DESCRIPTION
HR-FP-28	Mullion Splice
 HR-FP-29	Corner Mullion Splice
HR-FP-30	SSG Mullion Splice
 RS-16	RS-25 with 3/8" X 4" Steel Bar Weldment 10' Steel Reinforcement
 RS-17	RS-25 with 3/4" X 4" Steel Bar Weldment 10' Steel Reinforcement
RS-25	Reinforcement Steel
 SM-5601	Joint Sealant Tape

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