SERIES CG450
INSTALLATION INSTRUCTIONS

Fabrication for Panel Assembly

High Performance Center Glazed Storefront System

TABLE OF CONTENTS

INSTALLATION INSTRUCTIONS

PART 1-Handling, Storing and Protection of Aluminum

A. PRECAUTIONS: The following precautions are recommended to protect architectural aluminum materials against damage. Following these precautions will help ensure early acceptance of your products and workmanship.

B. HANDLE CAREFULLY: All aluminum materials stored at job site must be stored with adequate separation and not stacked directly onto the concrete floor slab to prevent materials from being damaged when handling. Cardboard wrapped or paper interleaved materials must be kept dry.

C. CHECK ARRIVING MATERIALS: Check for quantity and keep records of where various materials are stored.

D. KEEP MATERIAL AWAY FROM WATER, MUD AND SPRAY: Prevent cement, plaster or other materials from damaging the finish.

E. PROTECT MATERIALS AFTER ERECTION: Wrap aluminum section profiles with polyethylene or protect by erecting a polyethylene splatter screen. Cement, plaster, terrazzo, other alkaline solutions and acid based materials used to clean masonry are very harmful to the finish and should be removed with water and mild soap IMMEDIATELY. Please reference **AAMA 609** and **AAMA 610-2** for cleaning architectural aluminum.

PART 2- General Installation Instructions

A. CHECK SHOP DRAWINGS, INSTALLATION INSTRUCTIONS AND GLAZING INSTRUCTIONS to become thoroughly familiar with the project. The SHOP DRAWINGS take precedence and include specific details for the project. The INSTALLATION INSTRUCTIONS are of general nature and cover most common conditions.

B. ERECTION: All materials are to be installed plumb, level and true.

C. BENCH MARKS: All work should start from bench marks and/or column lines established by the ARCHITECTURAL DRAWINGS and the GENERAL CONTRACTOR with guaranteed accuracy. Check mullion spacing from both ends of masonry opening to prevent dimensional build-up of daylight opening.

D. SURROUNDING CONDITIONS: Make certain construction which will receive your materials is in accordance with the contract documents. Notify the general contractor in writing of any discrepancies and resolve differences before proceeding with work.

E. ISOLATION OF ALUMINUM: Aluminum to be placed in direct contact with uncured masonry or incompatible materials should be isolated with a heavy coat of zinc chromate or bituminous paint.

F. SEALANTS: Sealants must be compatible with all materials which they have contact, including other sealant surfaces. Consult with sealant manufacturer for recommendations relative to joint size, shelf life, compatibility, cleaning/priming, tooling, adhesion, etc. It is the responsibility of the GLAZING CONTRACTOR to submit a statement from the sealant manufacturer indicating that glass and glazing materials have been tested for compatibility and adhesion with glazing sealants, and interpreting test results to relative to material performance, including recommendations for primers and substrate preparation required to obtain adhesion. The chemical compatibility of all glazing materials and framing sealants with each other and with like materials used in glass fabrication must be established. This is required on every project.

INSTALLATION INSTRUCTIONS

(Continued)

G. FASTENING: Within the body of these instructions, "fastening" means any method of securing one part to another or to adjacent materials. Only those fasteners used within the system are specified in these instructions. Due to various substrates to which the framing may be attached, structural perimeter anchor fasteners are not specified in these instructions. For structural perimeter fasteners, reference the shop drawings, structural anchor charts or consult with the fastener supplier.

H. BUILDING CODES: Glass and glazing codes governing the design and use of products vary widely throughout Canada and the USA. **Oasis Commercial Products** does not control the selection of product configurations, operating hardware, or glazing materials, and assumes no responsibility for these design considerations. It is the responsibility of the owner, specifier, architect, general contractor and installer to make these selections in strict conformance with all applicable codes.

I. EXPANSION JOINTS: Expansion joints and perimeter seals shown in these instructions and in the shop drawings are shown at normal size. Actual dimensions may vary due to perimeter conditions and differences in metal temperature between time of fabrication and the time of installation. Detailed instructions and formula used to calculate expansion joints are shown within the body of these instructions.

J. FIELD TESTING: It is recommended that **AAMA 501.2 Water Hose Test** be conducted once a sufficient portion of the framing is installed, glazed and sealed to ensure proper installation. This test should be repeated on large projects at specific intervals as deemed necessary by job conditions and acceptable quality control standards.

K. COORDINATION WITH OTHER TRADES: Coordinate with the GENERAL CONTRACTOR and sequence with other trades any materials which offset your framing installation. For example, backup walls, partitions, ceilings, mechanical ducts, converters, etc.

L. FINAL CLEANING (CARE AND MAINTENANCE**)**: Final cleaning of exposed aluminum surfaces should be done in accordance with **AAMA publications 609.1** for anodized aluminum and **AAMA 610.1** for applied painted coatings (liquid or powder).

M. PRODUCT DESIGN CHANGES: **Oasis Commercial Products** reserves the right to change product designs without prior notice when deemed necessary for product improvement.

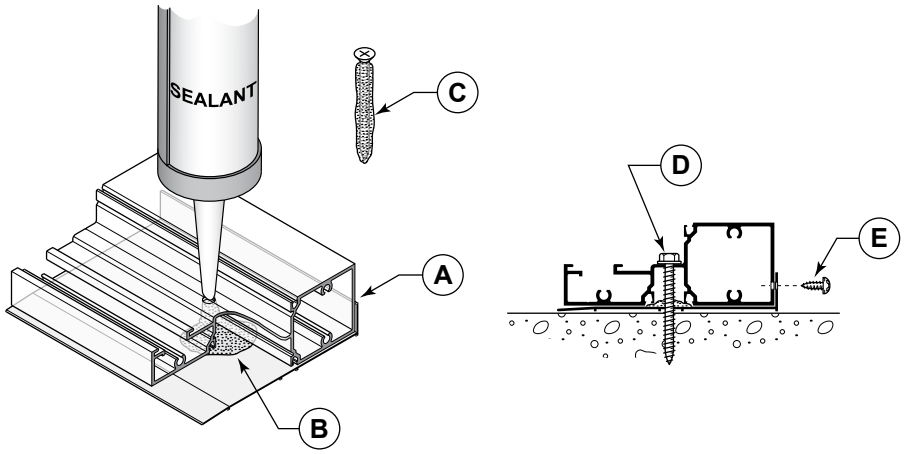
COMMON STOREFRONT SYSTEM FIELD FAILURES

1. Product not installed in accordance with manufacturer's installation instructions.
2. Workmanship.
3. Frames not installed level, true and plumb.
4. Frames not anchored properly to substrate to resist dynamic forces of shear, tension and compression.
5. Leaks at subsill pan receptor/flashing due to design or workmanship.
6. Debris left in glazing pockets and subsill pan receptor blocking weep holes.
7. Glazing gaskets not installed properly and failure to seal corners.
8. Water diverters not installed each end of intermediate horizontals.
9. End dams not installed at each end of subsill receptor pan.
10. Glazing:
    a. Glass not centered into opening.
    b. Positioning of setting blocks.
    c. Not using anti-walk blocks in areas prone to seismic movement.
    d. Not using anti-walk blocks in areas with helicopter traffic.

KEY WATER CONTROL FEATURES

A well designed storefront system has a full height interior leg with a recessed cavity for holding sealant to ensure a good seal between the subsill pan and the sill framing member. The subsill pan must have a recessed cavity so structural fasteners can be installed, cap sealed and inspected prior to installing the frame panels. To reduce air infiltration and to prevent harmonic whistling noises, each weep hole should be backed by a urethane coated baffle.

AVOID THESE COMMON INSTALLATION PRACTICES



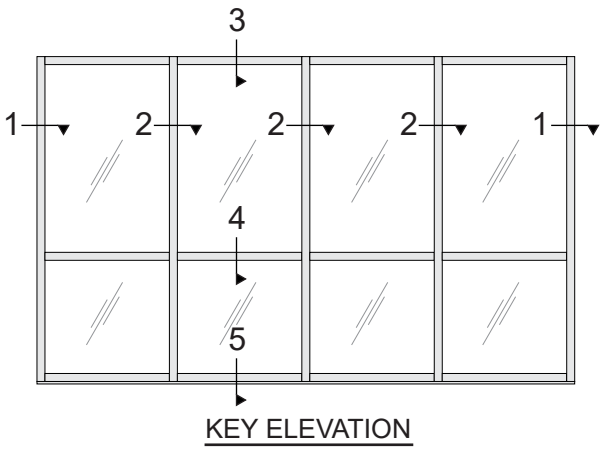
(A) Sill flashing interior leg less than full height

(B)(C)(D) Blind seal

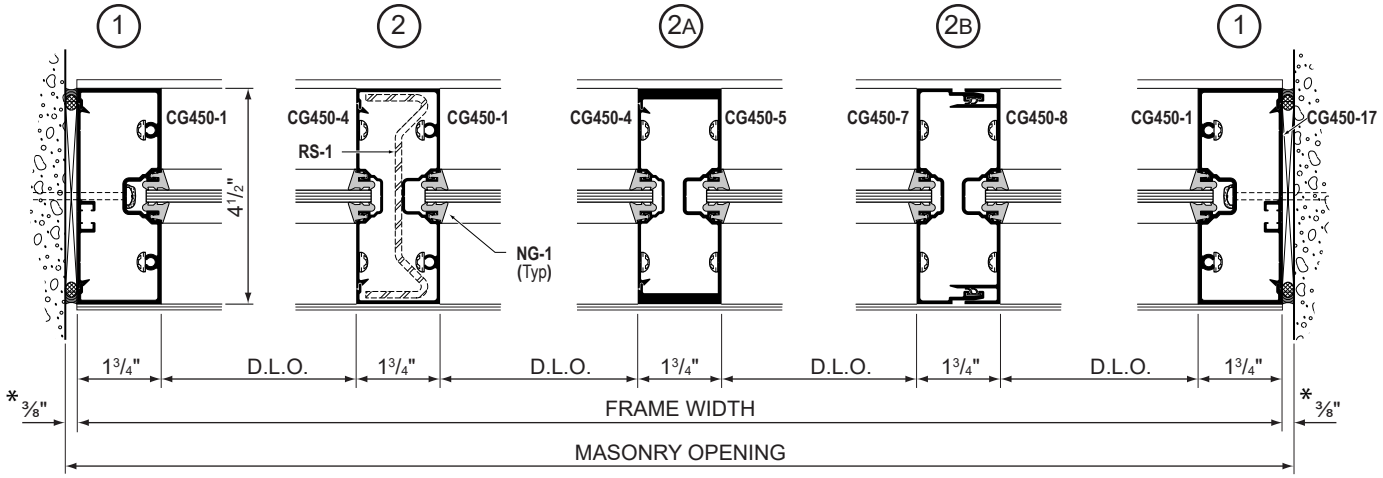
(E) Fastener penetrating interior flashing leg

Fig. 6.1

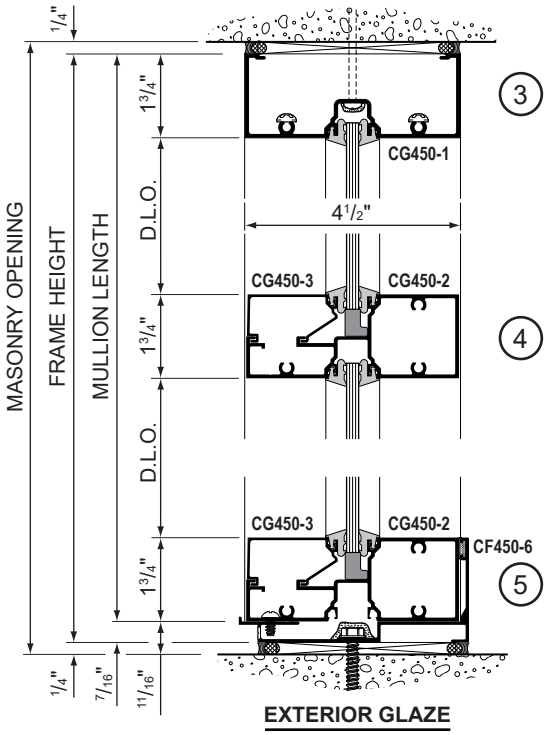
SYSTEM COMPONENT IDENTIFICATION



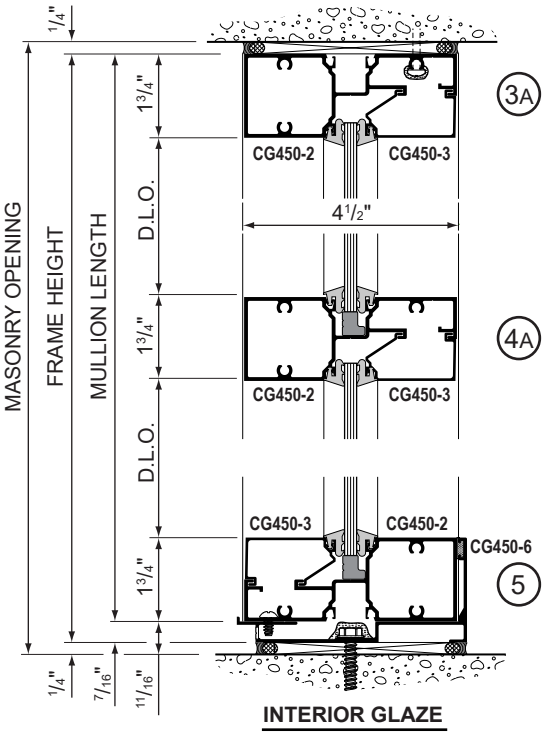
KEY ELEVATION



*Includes 1/8" allowance for subsill receptor



EXTERIOR GLAZE



INTERIOR GLAZE

Fig. 7.1

SYSTEM COMPONENT IDENTIFICATION

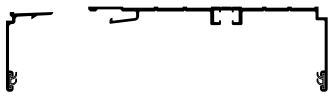
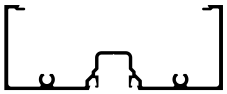
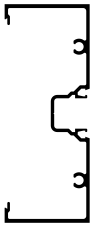
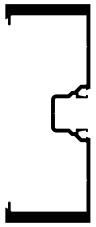
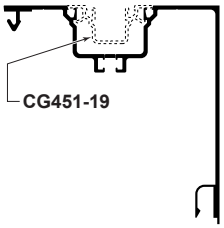
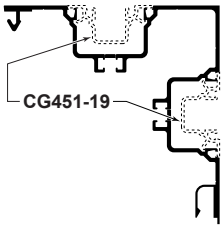
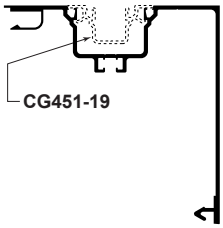
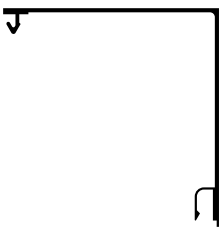
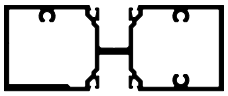
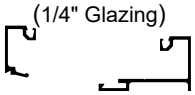
DESCRIPTION	FRAMING SECTIONS
Head & Sill Receptors	Head Receptor (Combination)  CG451-18 CG451-17 Sill Receptor  CG450-6
Horizontal Sections	Head  CG450-1 Sill/Intermediate Horizontal (Combination)  CG450-3 CG450-2
Vertical Sections	Mullion/Jamb (Standard)  CG450-1 Mullion (Heavy Duty)  CG450-5 Expansion Mullion (Male Half)  CG450-7 (Female Half)  CG450-8 Mullion Filler  CG450-4 Jamb Filler  CG451-16
Glass Pocket Adaptors and Fillers	Transition Adaptor (1" to ¼")  CG451-19 Glazing Pocket Filler  CG450-9
90˚ Corner Mullion Halves	90˚ Single Pocket (Pocket at Female Snap)  CG451-9 90˚ Two Pocket  CG451-10 90˚ Single Pocket (Pocket at Male Snap)  CG451-11 90˚ Trim  CG451-12

Fig. 8.1

SYSTEM COMPONENT IDENTIFICATION

DESCRIPTION	DOORFRAME SHAPES
Doorframe Jambs	Door Jamb (Offset Hung)  **DF450-30** Door Jamb (Center Hung)  **DF450-35**
Doorframe Headers	Door Header (Offset Hung)  **DF450-31** Door Header Offset or Center Hung  **DF450-32**
Doorframe Stops and Sash	Offset Arm Cover  **DF200-4** Snap-In Door Stop (¼" Glazing Pocket)  **DF200-3** Transom Sash & Stop (1/4" Glazing)  **DF200-6** **DF200-7**
Threshold	Threshold (for Offset & Center Hung)  **TH450** Threshold Clip  **DH-24-1**

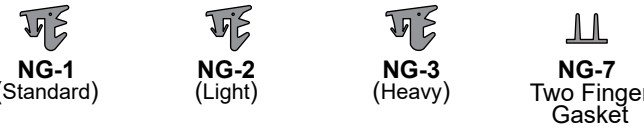
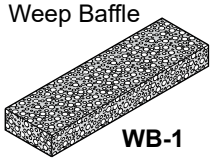
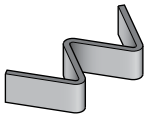
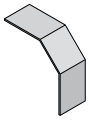
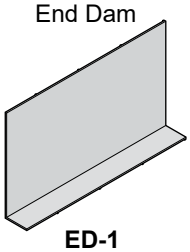
DESCRIPTION	ACCESSORIES
Gaskets and Weather Strips	Glazing Gaskets  **NG-1** (Standard) **NG-2** (Light) **NG-3** (Heavy) **NG-7** Two Finger Gasket Wool Pile Weather Strip  **WP-4** (Doorframe)
Miscellaneous	Setting Block for ¼" Glass  **SB-3** (Outside Glaze) **SB-4** (Inside Glaze) Weep Baffle  **WB-1**
	#12 X 1¼" PH Square Drive Zinc Plated SMS  **FAS12-4** #10 X 3/8" PPH Zinc Plated  **FAS10-4** Anti-Walk Block (for ¼" Glazing)  **AW-2** Water Diverter (for ¼" Glazing)  **WD-2** End Dam  **ED-1**

Fig. 9.1

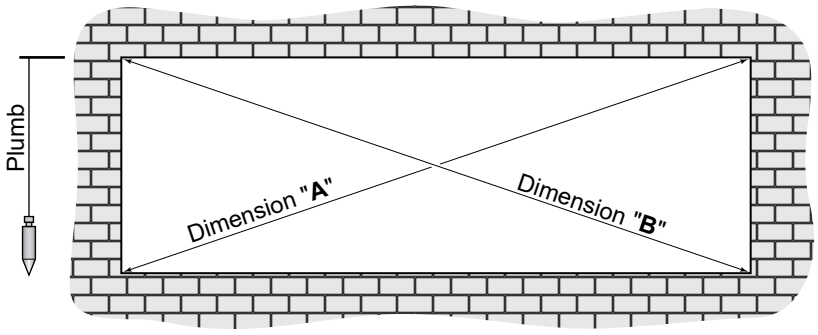
DETERMINE FRAME SIZE

DETERMINE SQUARENESS

Check opening for squareness to Plumb at both ends. Frames must be installed in a true rectangle. See **Fig. 10.1**.

ERECTION TOLERANCE:

1. Within any rectangular opening there should be no more than 1/8" difference between dimension **"A"** & **"B"**.



Dimension "**A**" = "**B**"

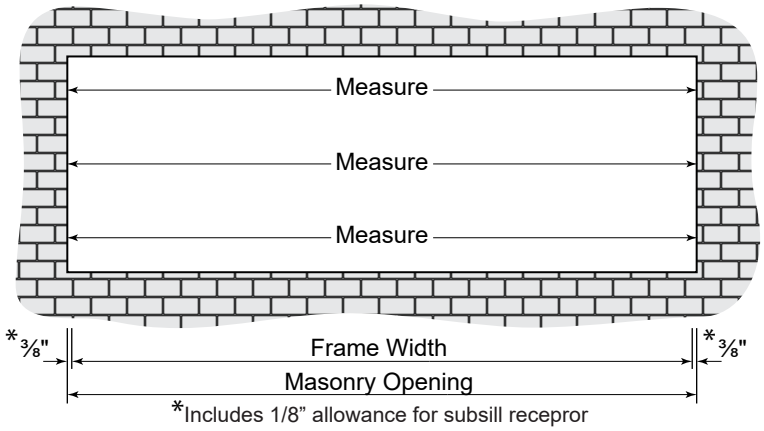
Fig. 10.1

DETERMINE FRAME WIDTH

Measure the width of the masonry opening at top, middle and bottom.
Select the smallest dimension measured and subtract 1/2" to determine frame width. See **Fig. 10.2**.

ERECTION TOLERANCES:

2. Maximum variation of mullions from plumb or horizontals from level should not exceed 1/8" in 12'-0" or 1/4" in any single run.
3. To assure the stated tolerances for item 2 are not exceeded in the erected framing, low cost **go/no-go** gauges can generally be made for use by the framing erector.



*Includes 1/8" allowance for subsill recepror

Fig. 10.2

DETERMINE FRAME HEIGHT

Measure the height of masonry opening several times along the entire length of opening. Select the smallest dimension for the masonry opening height. See **Fig. 10.3**.

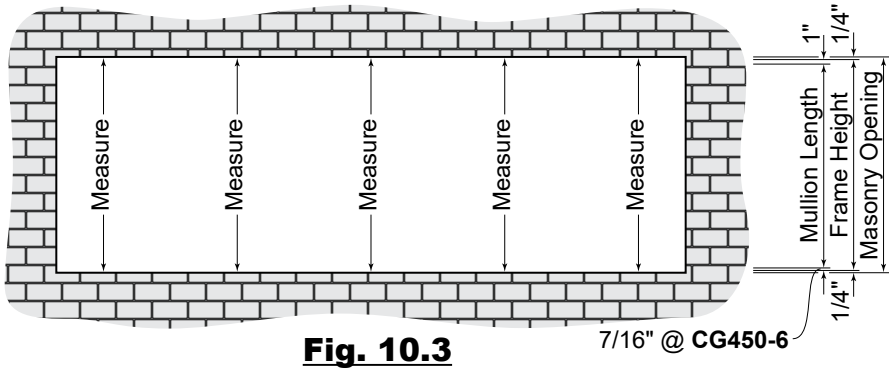


Fig. 10.3

CONTINUOUS HEAD AND SILL

Subtract: 1/2" from the masonry opening height.
1/4" caulk joint at head above head.
1/4" caulk joint below sill receptor.

FRAME MEMBER CUTTING

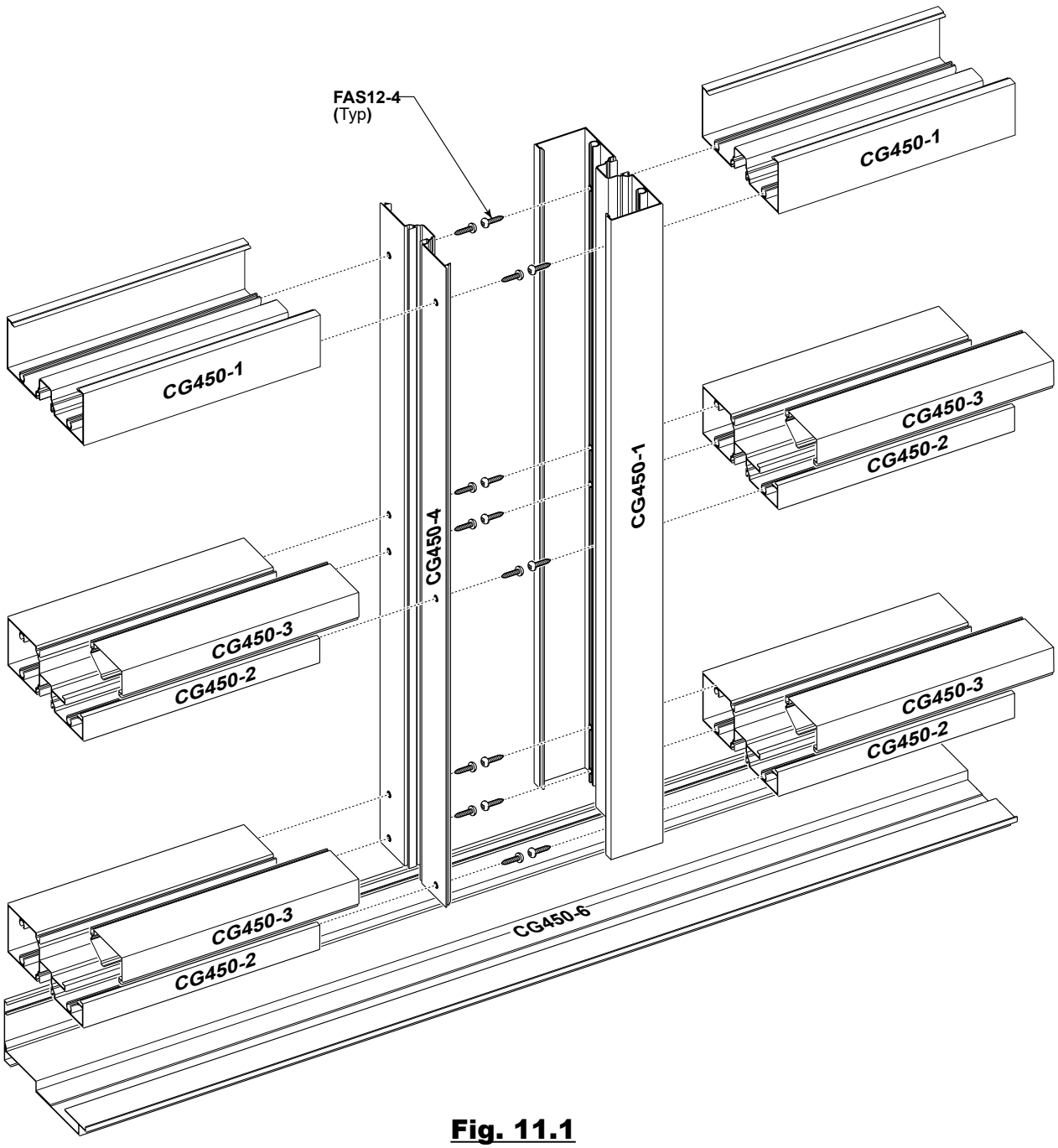


Fig. 11.1

FRAME MEMBER CUTTING

CUT SECTIONS TO SIZE

Sill Receptor:
= Overall Frame Width *PLUS* ¼" to allow for last panel installation.

Mullion, Pocket Filler & Jamb Members:
Without Head Receptor
= Frame Height *MINUS* 1".

Head, Horizontal & Sill:
= Daylight Opening.

Glazing Beads:
= Daylight Opening *MINUS* $^{1}/_{32}$".

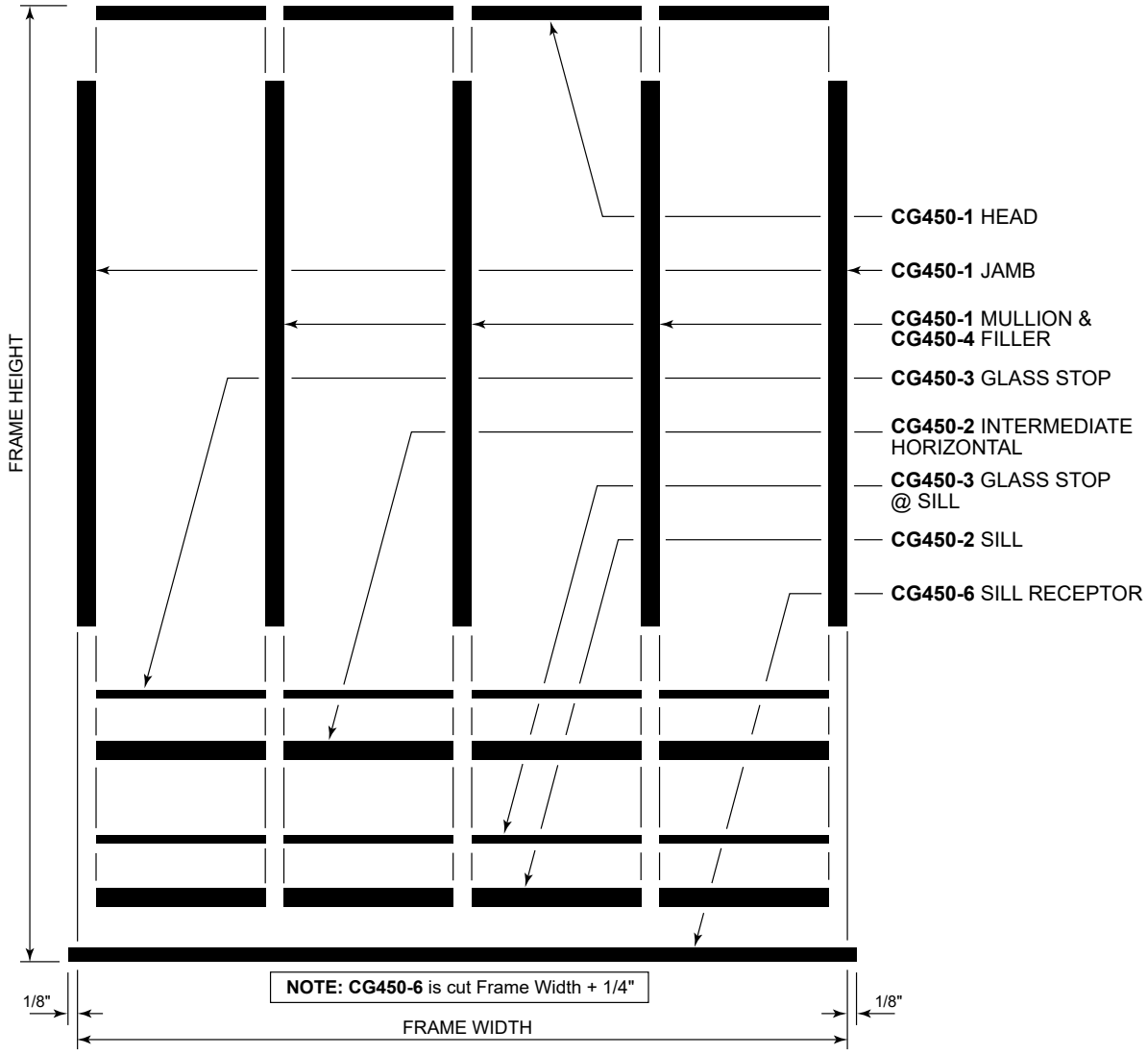


Fig. 12.1

FRAME MEMBER CUTTING

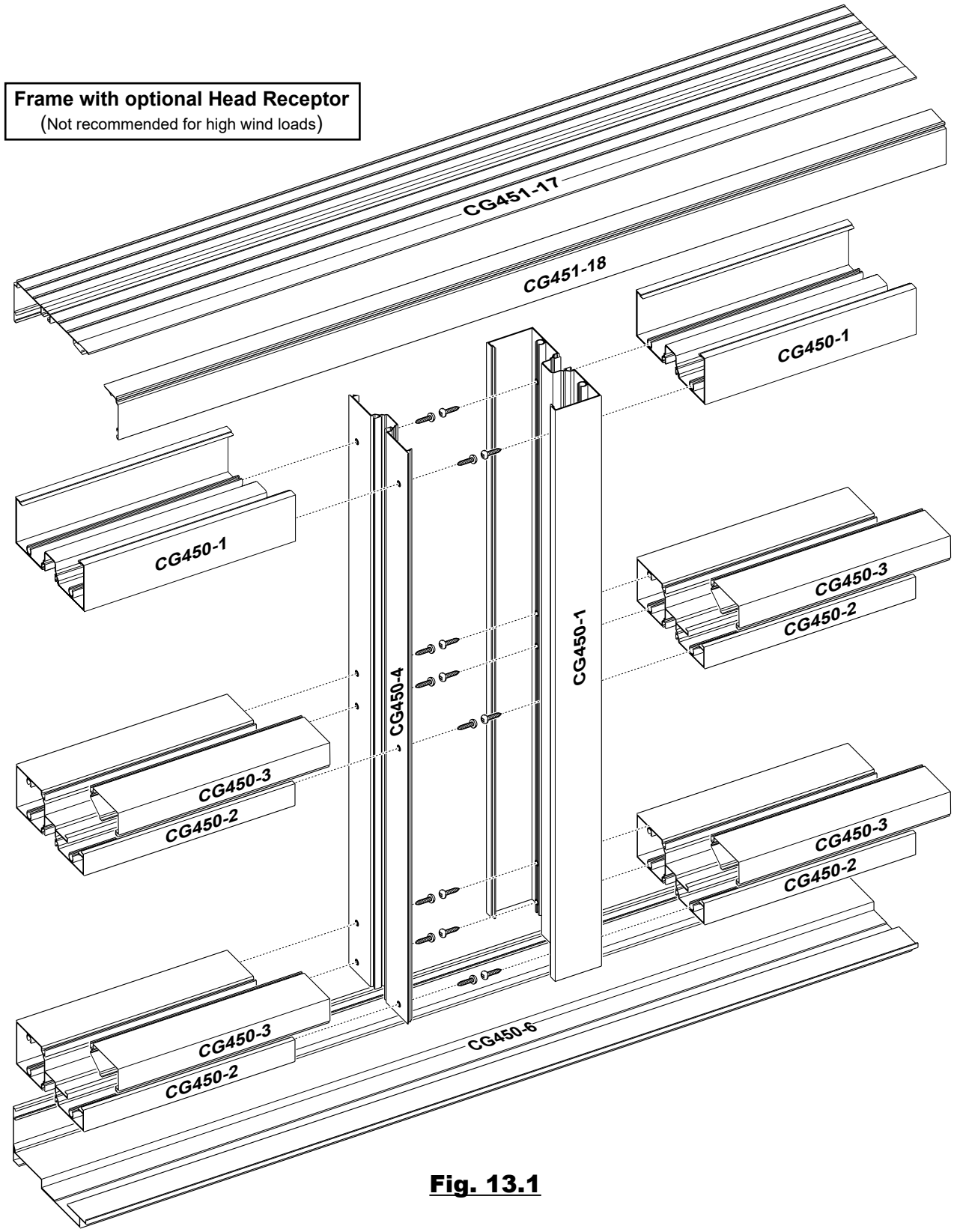


Fig. 13.1

FRAME MEMBER CUTTING

CUT SECTIONS TO SIZE

Sill Receptor (Standard**) & Head Receptor (**Optional**):**
= Overall Frame Width *PLUS* ¼" to allow for last panel installation.

Mullion, Pocket Filler & Jamb Members:
With Optional Head Receptor
= Frame Height *MINUS* 1¾".

Head, Horizontal & Sill:
= Daylight Opening.

Frame with optional Head Receptor

Glazing Beads:
= Daylight Opening *MINUS* 1/32".

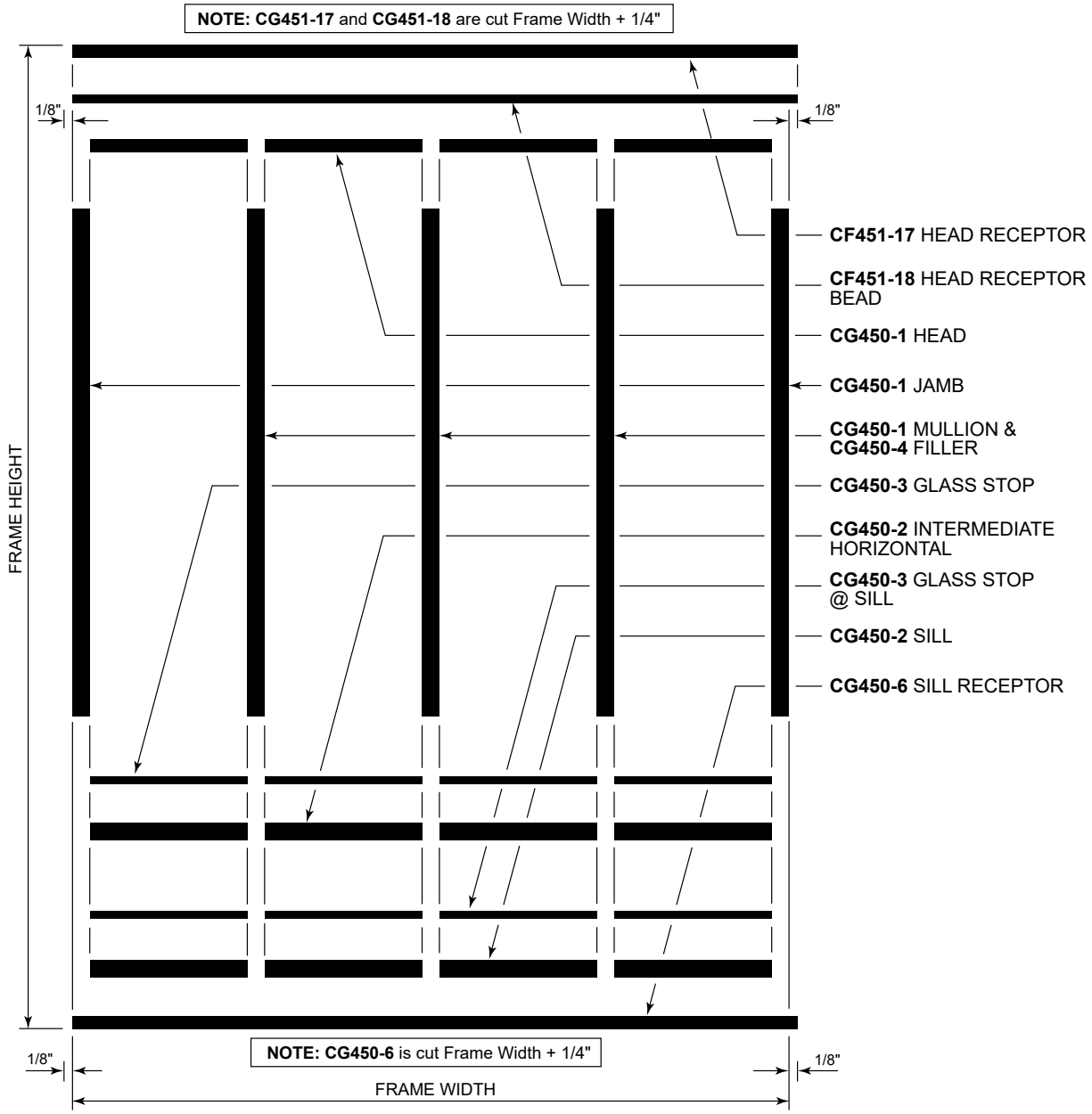
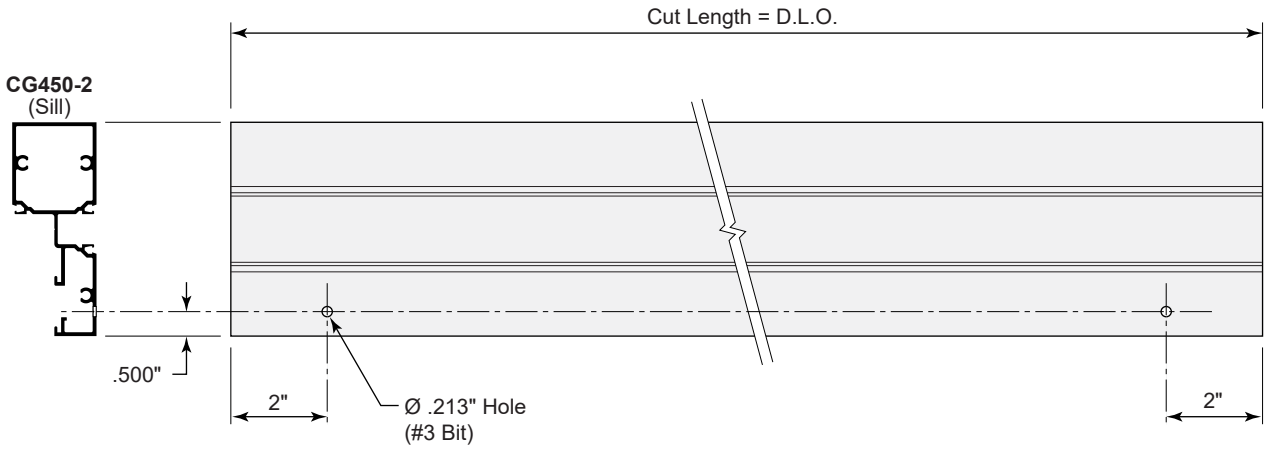


Fig. 14.1

SILL MEMBER FABRICATION

Cut sill members to length as determined in **Fig. 12.1** or **14.1**.
Drill holes for attachment to subsill. Reference **Fig. 27.1** for panel installation.



BOTTOM VIEW of **CG450-2** SILL MEMBER

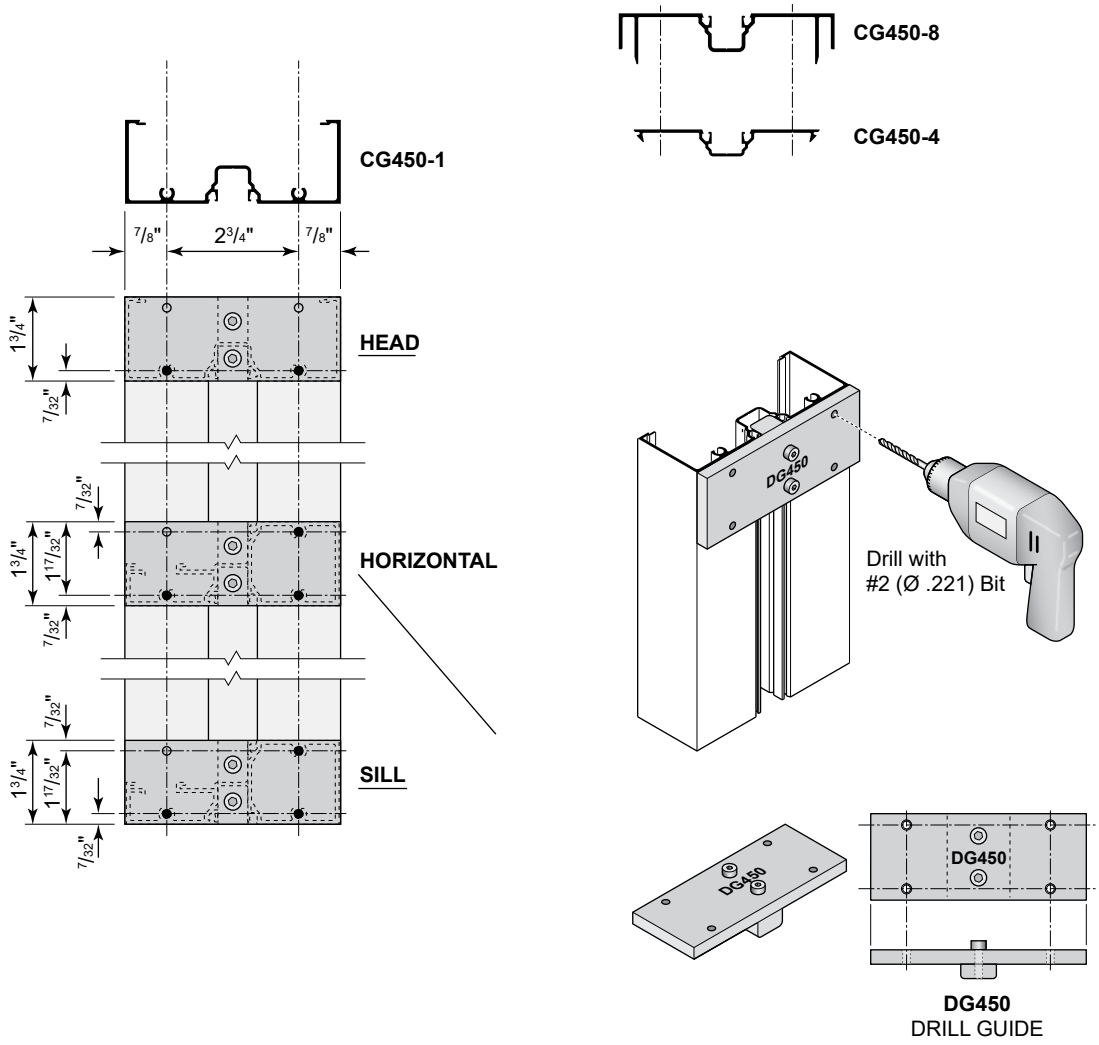
Fig. 15.1

VERTICAL MEMBER FABRICATION

Cut vertical members to length as determined in **Fig. 12.1** or **14.1**.
Mark location for Head, Horizontal and Sill. Reference **Fig. 7.1** for typical elevation.

VERTICALS - Drill screw spline holes for **HEAD**, **HORIZONTAL** and **SILL** as shown below.

DRILLING SCREW SPLINE HOLES INTO VERTICAL MEMBERS



NOTE:
Never allow two shallow glazing pockets to face each other within any elevation.
Plan vertical fabrication and panel assembly accordingly.

NOTE: Drill screw spline holes in 90° corner sections in similar manner using **DG450** Drill Guide.

Fig. 16.1

SILL RECEPTOR FABRICATION

Cut **CG450-6** sill receptor to frame width + 1/4" as determined in **Fig. 12.1** or **14.1**.
NOTE: CG450-6 is offered with weep holes prefabricated as shown in **Fig. 16.1**.

Fabricate weep holes as shown in **Fig. 17.1** with holes approximately 2" from edge of each vertical member.

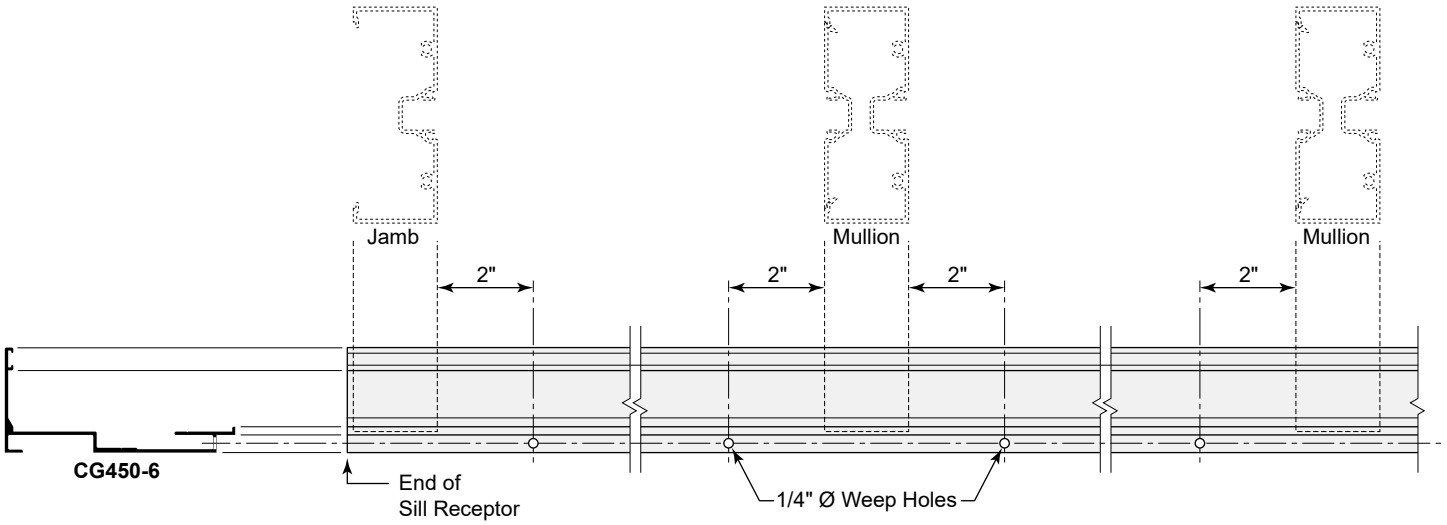


Fig. 17.1

Drill ø 9/32" holes for anchoring **CG450-6** to substrate as shown in **Fig. 17.2**.
Anchoring hole dimensions are located approximately 2" each side of vertical mullion.

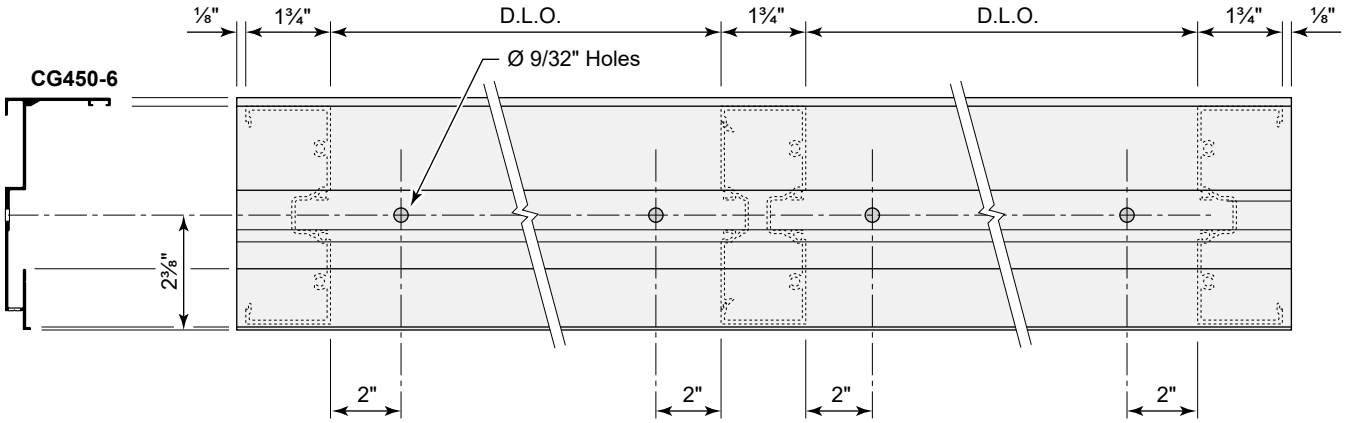


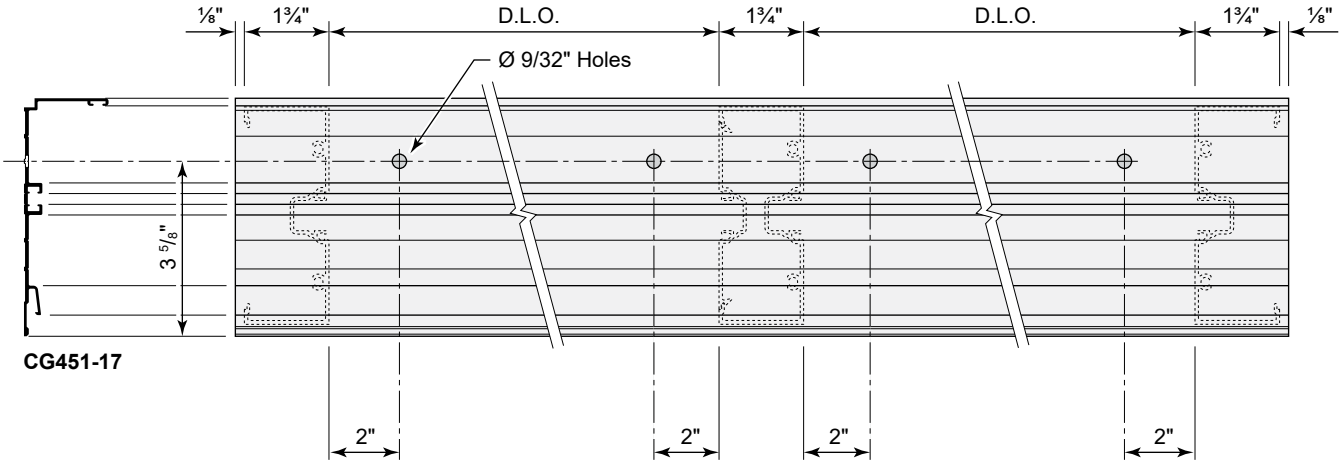
Fig. 17.2

NOTE:
The anchor holes shown above are for typical conditions in concrete or steel substrate for 20psf..

HEAD RECEPTOR FABRICATION
(OPTIONAL)

Cut head receptor to Frame Width + 1/4" as determined in **14.1**.

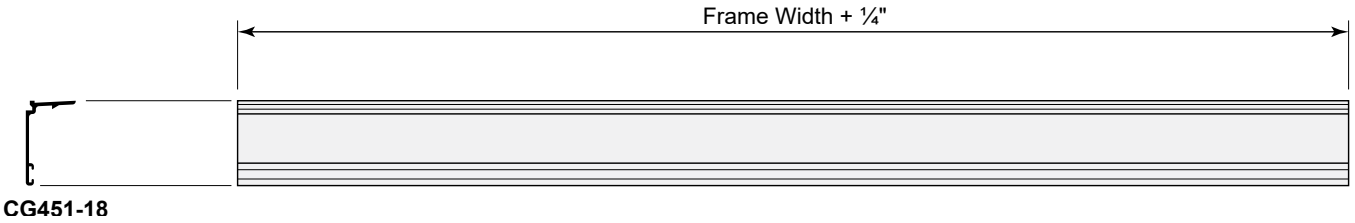
Drill ø 9/32" holes for anchoring **CG451-17** to substrate as shown in **Fig. 18.1**.
NOTE: Dimensions for anchoring holes are approximate.
Anchor screws to be located 5" each side of vertical center line and no further apart than 24" on centers.



NOTE: Insert **NG-7** lace-in gasket prior to installation.

Fig. 18.1

Cut **CG451-18** receptor bead to Frame Width + 1/4" as determined in **Fig. 18.2**.



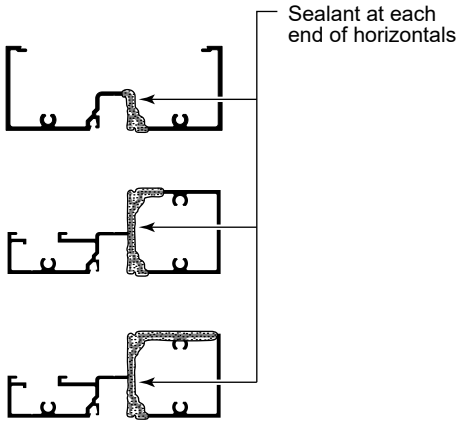
NOTE: Insert **NG-7** lace-in gasket prior to installation.

Fig. 18.2

EXTERIOR GLAZE PANEL ASSEMBLY

Exterior Glazed

Cut and apply sealant to verticals at locations where horizontal members intersect as shown in **Fig. 19.1.** Assembled panels with screws and trim excess tape at joints as required.



NOTE:
Never allow two shallow glazing pockets to face each other within any elevation. Plan panel and mullion fabrication accordingly.

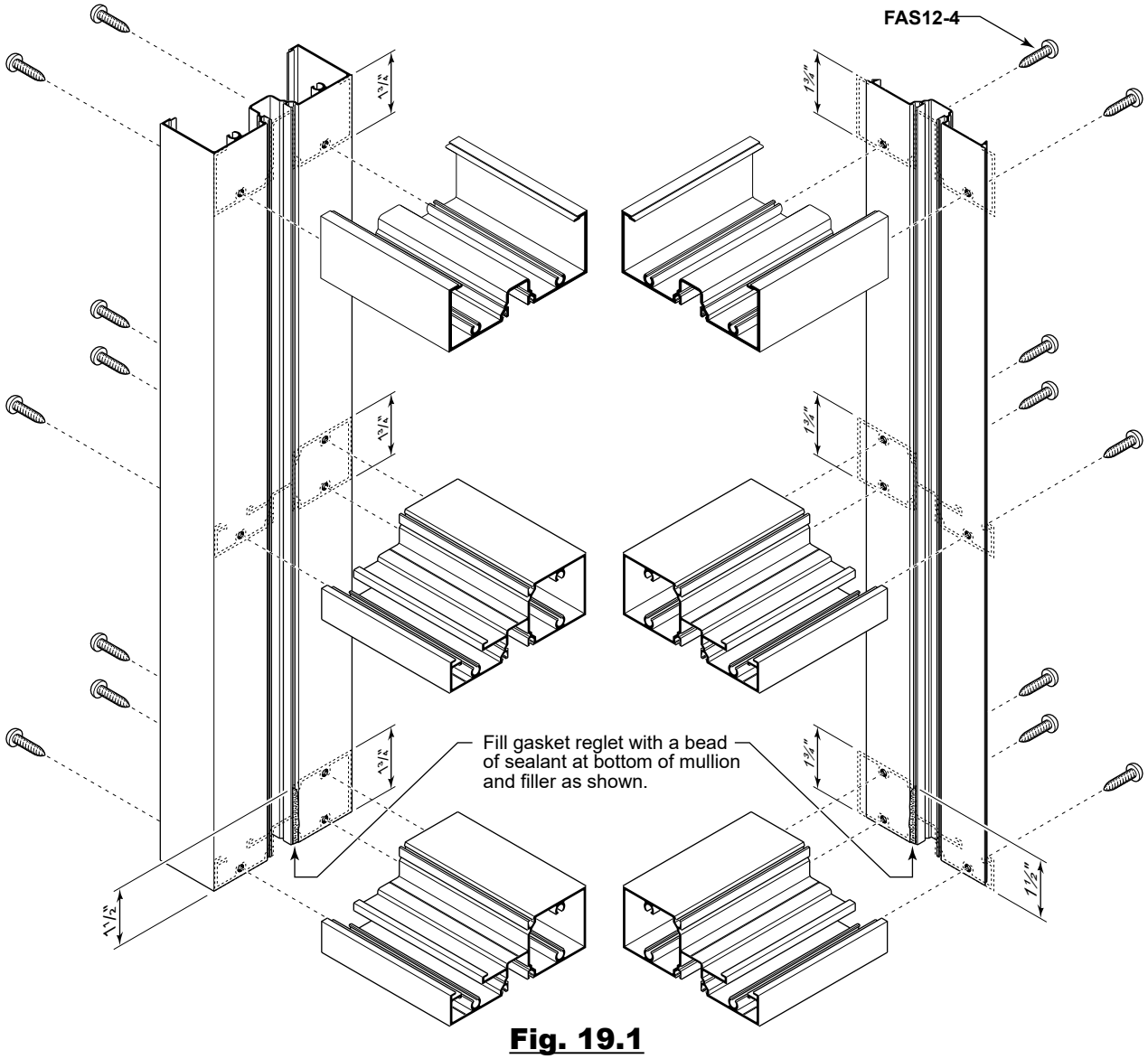
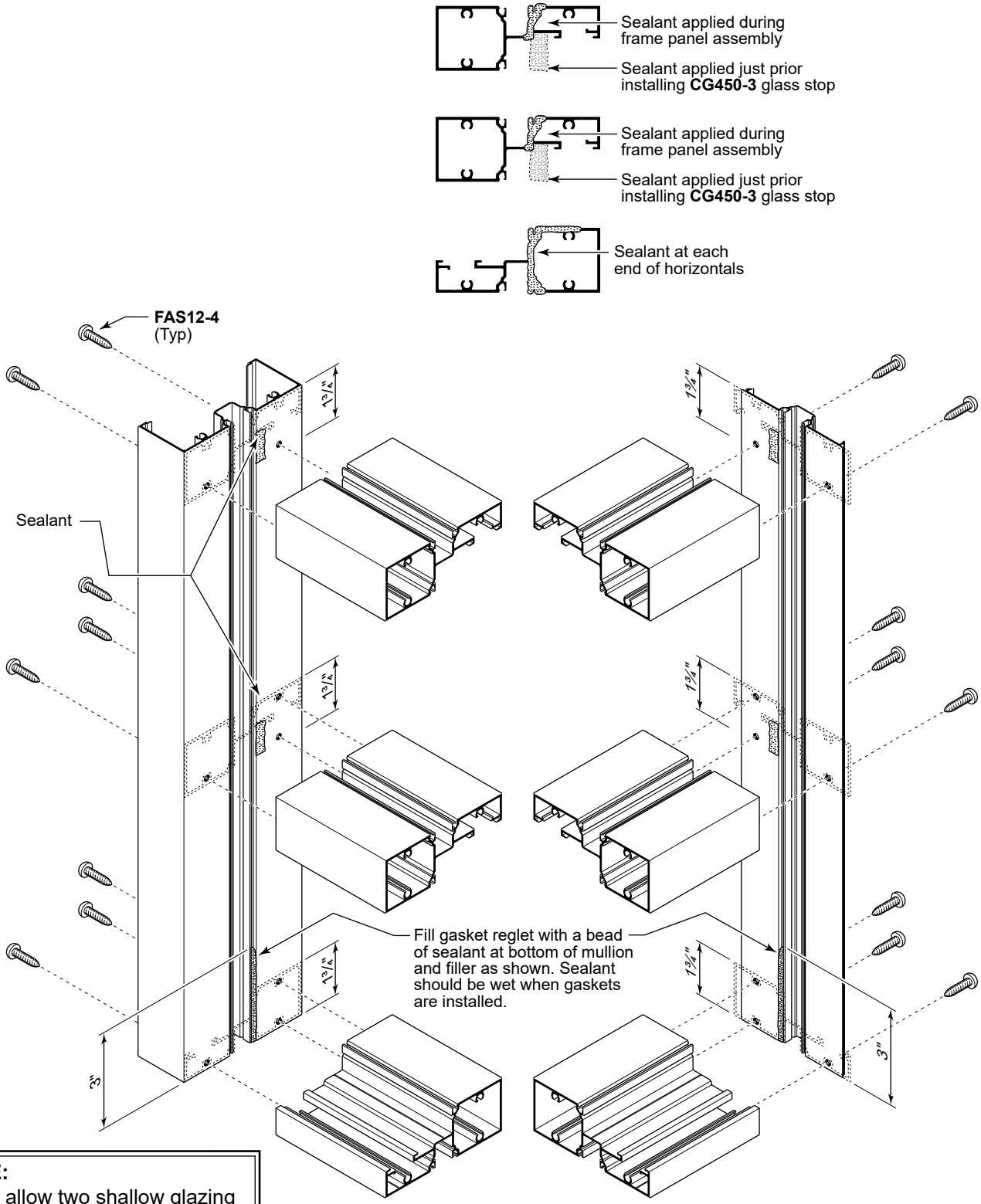


Fig. 19.1

INTERIOR GLAZE PANEL ASSEMBLY

Interior Glazed

Cut and apply sealant to verticals at locations where horizontal members intersect as shown in **Fig. 20.1.** Assemble panel with screws and trim excess tape at joints as required.



NOTE:
Never allow two shallow glazing pockets to face each other within any elevation. Plan panel and mullion fabrication accordingly.

Fig. 20.1

PANEL ASSEMBLY

Install **NG-1** gaskets into assembled frames as shown in **Fig. 21.1**.
Reference **Fig. 28.3** for gasket cutting and installation methods.

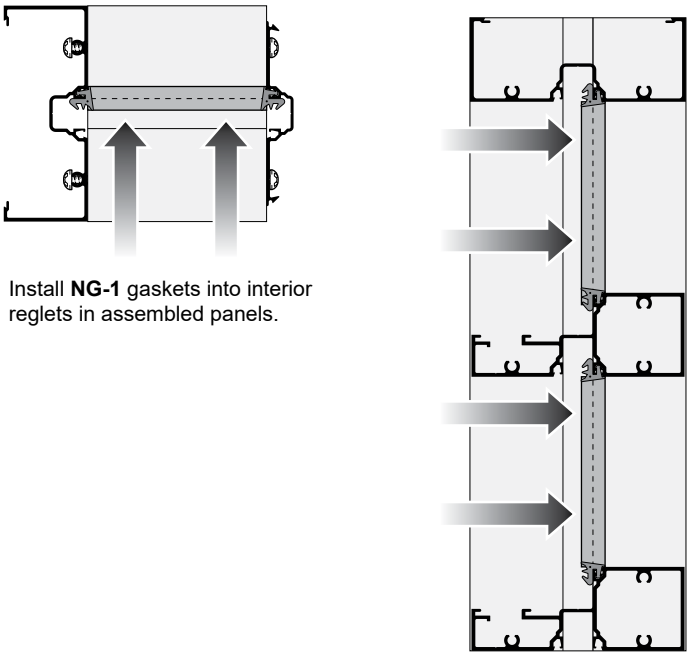


Fig. 21.1

SILL RECEPTOR END DAM INSTALLATION

Butter **ED-1** end dams with sealant and attach to each end of **CG450-6** as shown in **Fig. 21.2**.
Apply sealant to joint as shown and tool to ensure good tight joint.

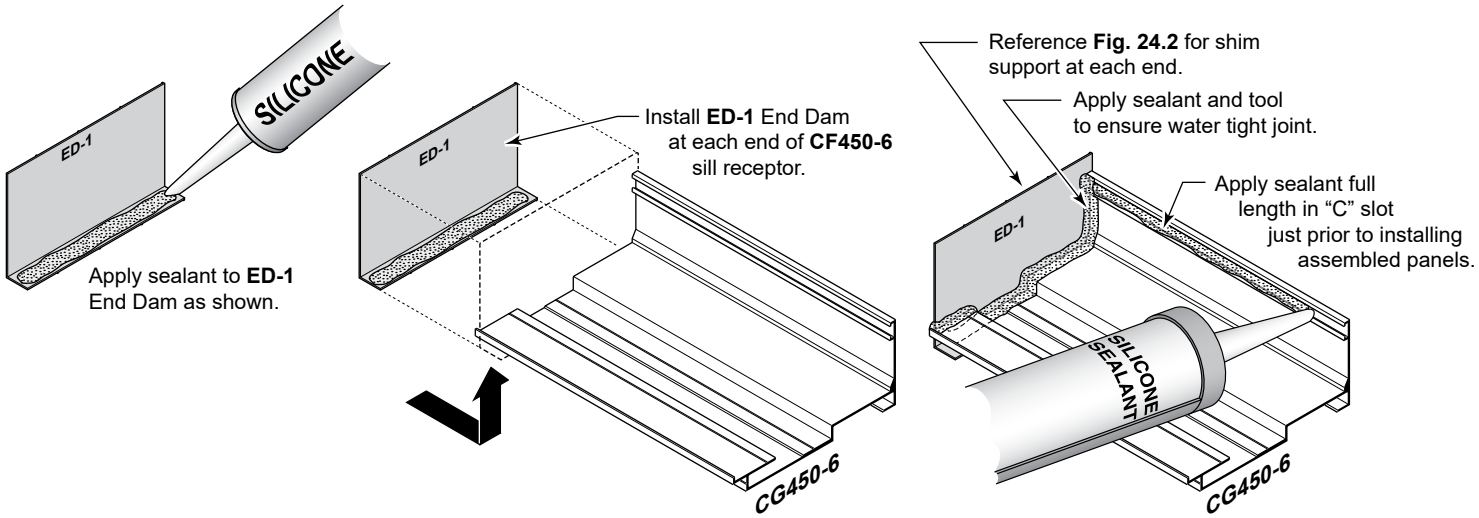


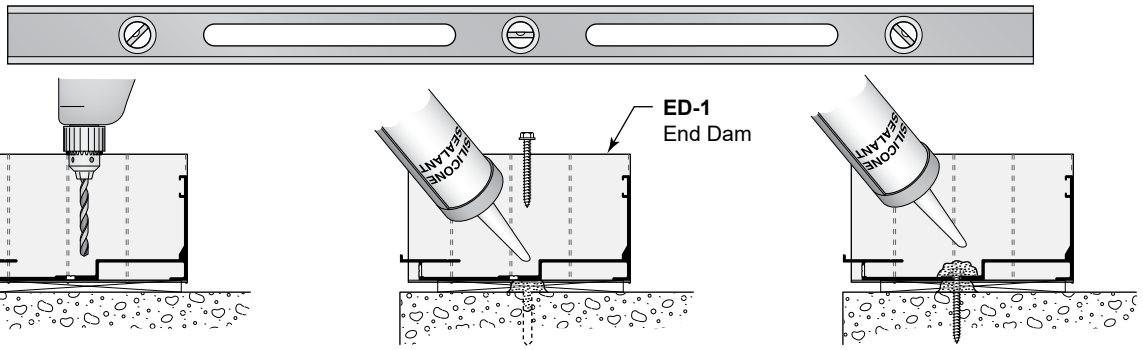
Fig. 21.2

SILL RECEPTOR INSTALLATION

Position **CG450-6** and match drill through anchor holes into substrate with required bit size to specified depth. Clean debris from drilled holes. Shim for proper gap and leveling. Shims must be placed at center of each anchor location. Force sealant into anchor holes and secure with screws. Cap seal all screw heads and tool sealant.

The Sill Receptor must be set level and straight. There is no practical way to level the sill receptor after glazed panels are installed. A sill receptor not level and straight will cause uneven gaps at verticals.

NOTE: CG450-6 sill receptor must be level. Reference **Fig. 10.1, 10.2** & **10.3**.

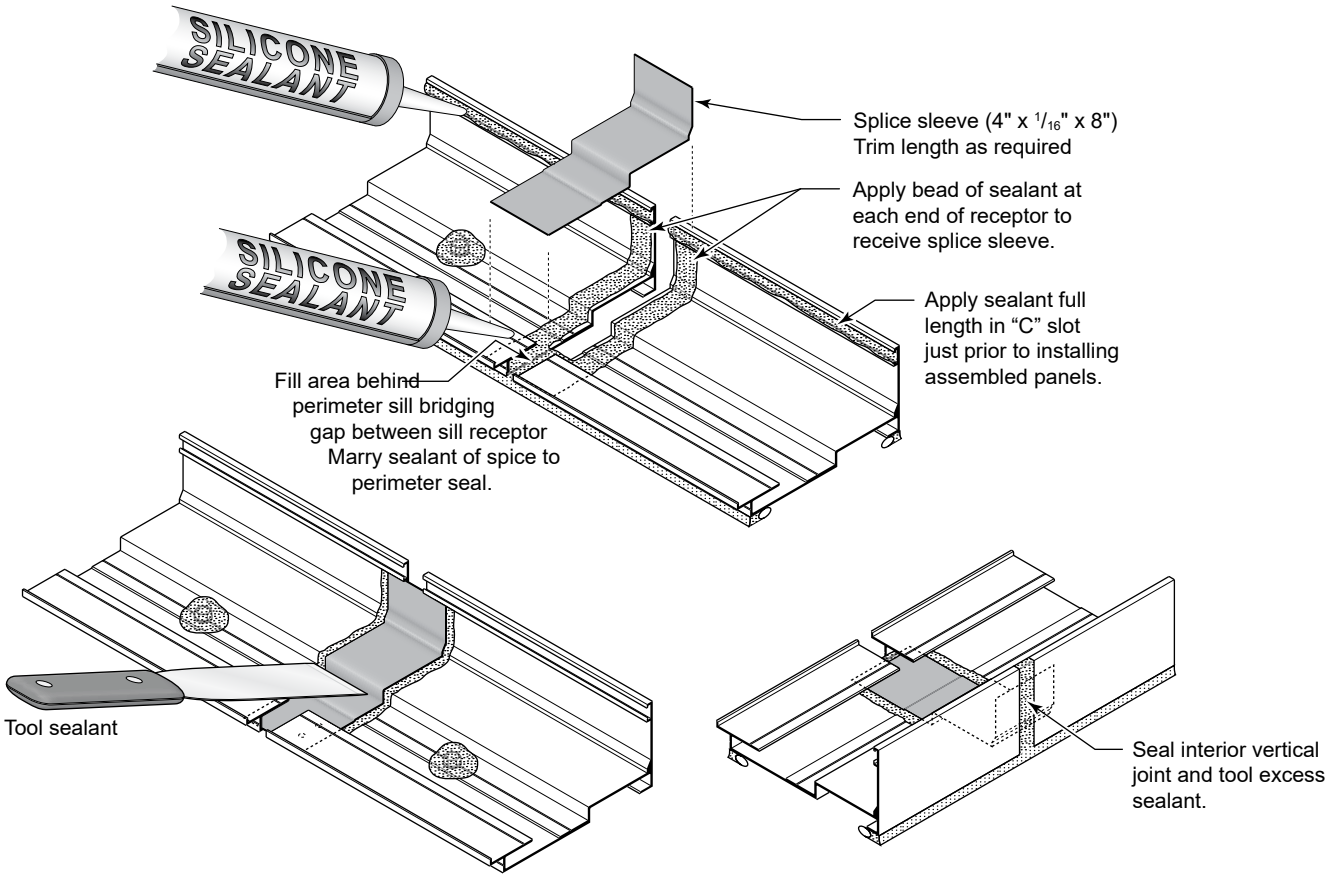


Position **CG450-6** as required. Match drill through holes into substrate as specified by fastener manufacture.

Force sealant into fixing holes and secure to substrate.

Cap seal over screw heads and tool sealant.

Fig. 22.1



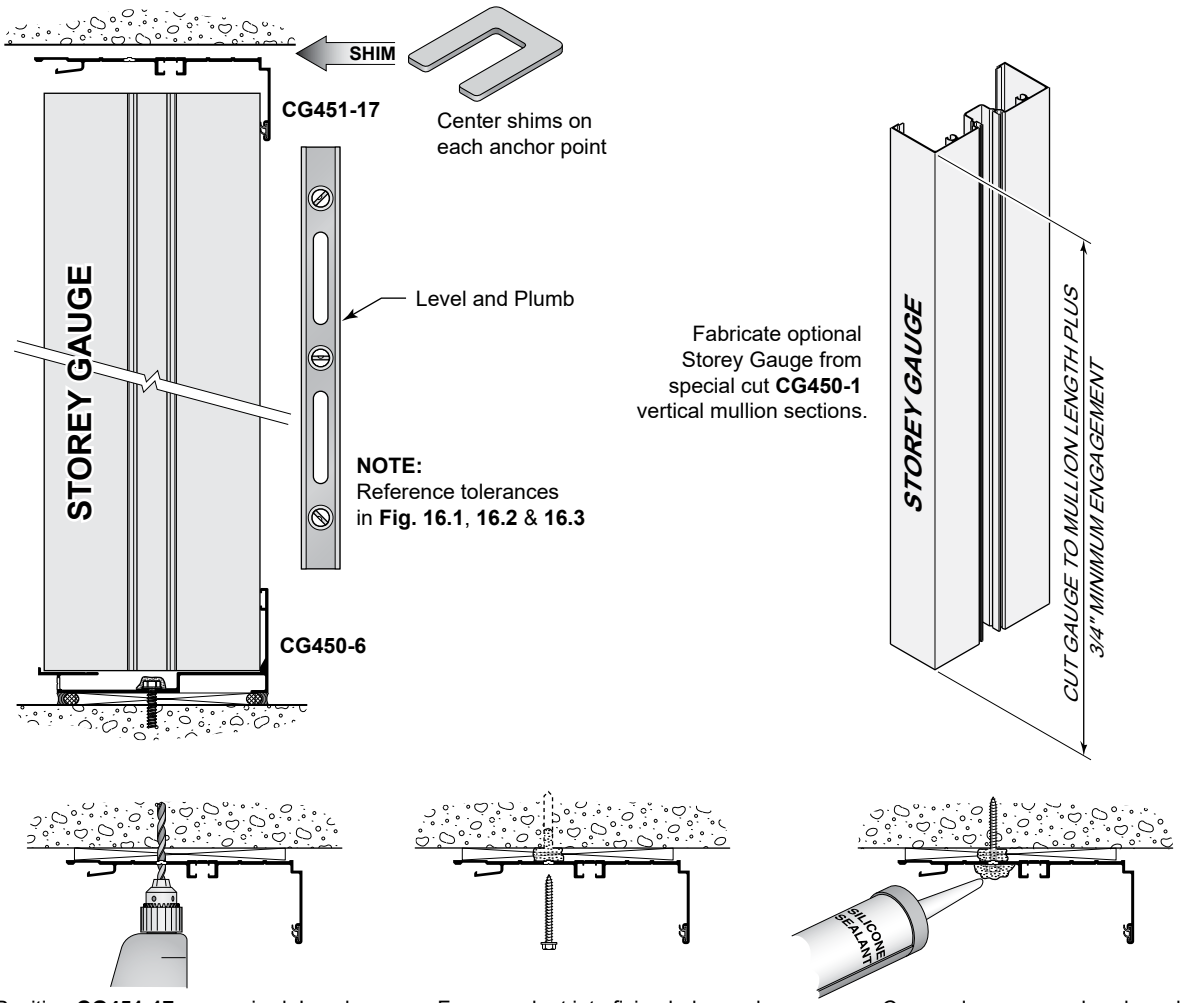
If use of optional **CG451-18** Head Receptor is required, splicing method is similar to method shown for **CG450-6** Subsill Receptor as shown above.

Fig. 22.2

OPTIONAL HEAD RECEPTOR INSTALLATION

When using a head receptor, fabricate a STOREY GAUGE to accurately gage spacing between **CG450-6** sill receptor and **CG451-18** head receptor. (Reference **Fig. 15.1** regarding number of anchor holes)
NOTE: NG-7 gasket must be installed in reglet of **CG451-18** head receptor prior to assembly.

If use of optional **CG451-18** Head Receptor is required, long runs must be spliced similar to method shown for **CG450-6** Subsill Receptor. See **Fig. 22.2**.



Position **CG451-17** as required. Level, plumb and true. Match drill through fixing holes into substrate as specified by fixing manufacture.

Force sealant into fixing holes and secure to substrate.

Cap seal over screw heads and tool sealant.

Fig. 23.1

SILL RECEPTOR INSTALLATION

Remove all debris from **CG450-6** sill receptor with Shop Vac to prevent blockage of weep holes. See **Fig 24.1**

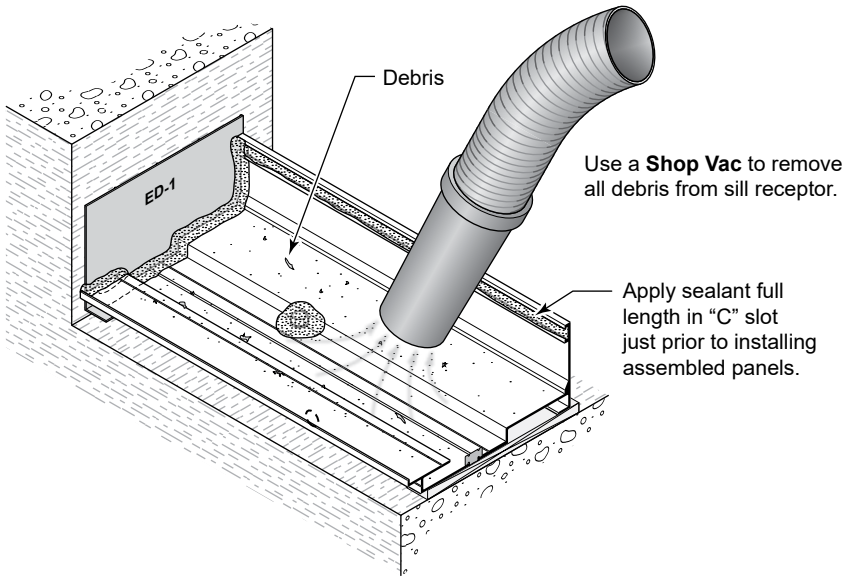


Fig. 24.1

Shim between **ED-1** End Dams and structure to prevent knocking dam loose and damaging seal.
Install **WB-1** weep baffles by pressing into reveal and center on each weep hole.

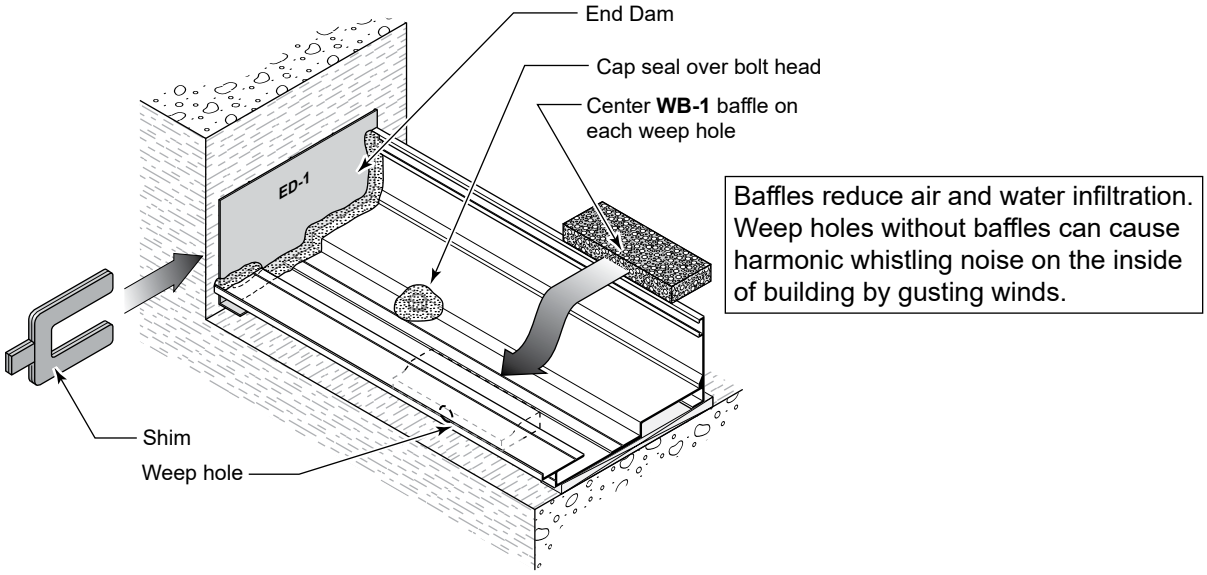


Fig. 24.2

EXPANSION MULLION

An expansion mullion is to be used every 20'-0" in wide openings. The dimension of the assembly should be adjusted based on the temperature at the time of installation.

Generally, horizontal expansion joints should be no further apart than 20 feet. Expansion should be from the center toward both ends to minimize joint movements and thereby reduce stresses on sealants and connectors.

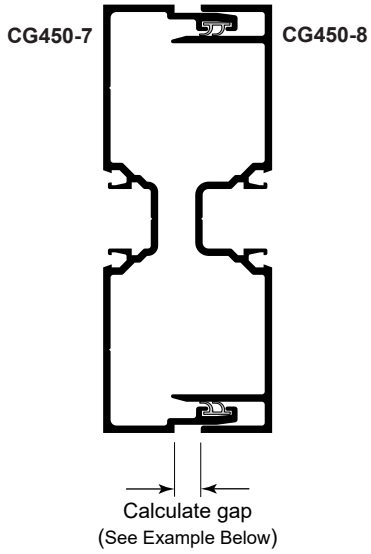


Fig. 25.1

Expansion gap is determined by job conditions, project specifications and temperature at time of installation. Expansion mullions allow for 3/8" maximum movement.

EXPANSION GAP SIZE FORMULA = LENGTH (") X F° DIFFERENCE X .0000129

L = Length in inches between centerline of expansion mullion in elevation.
F° = Specified temperature variation
.0000129 = Thermal coefficient for aluminum

EXAMPLE:

Assume 100° temperature variation specified and temperature at job site on day of installation is 60°.

1. 100° - 60° = 40° temperature difference
2. Length of elevation between expansion mullions equals 20'-0" or 240"
3. 240" x .0000129 x 40° = .124". Therefore, set expansion gap at 1/8".

Cut expansion mullions as determined in **Fig. 12.1** and **14.1**.
Fabricate expansion mullions as shown in **Fig. 16.1.**
Cut **NG-7** gaskets 1/8" longer per foot than mullion length.
Lace **NG-7** gaskets into interior and exterior reglets.
Crimp reglet at each end to prevent gasket slippage.

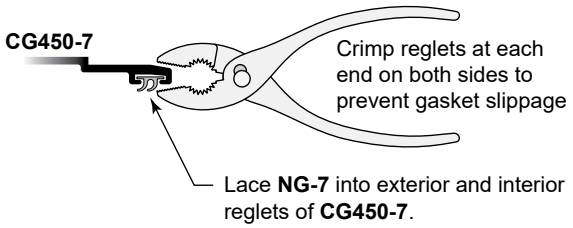
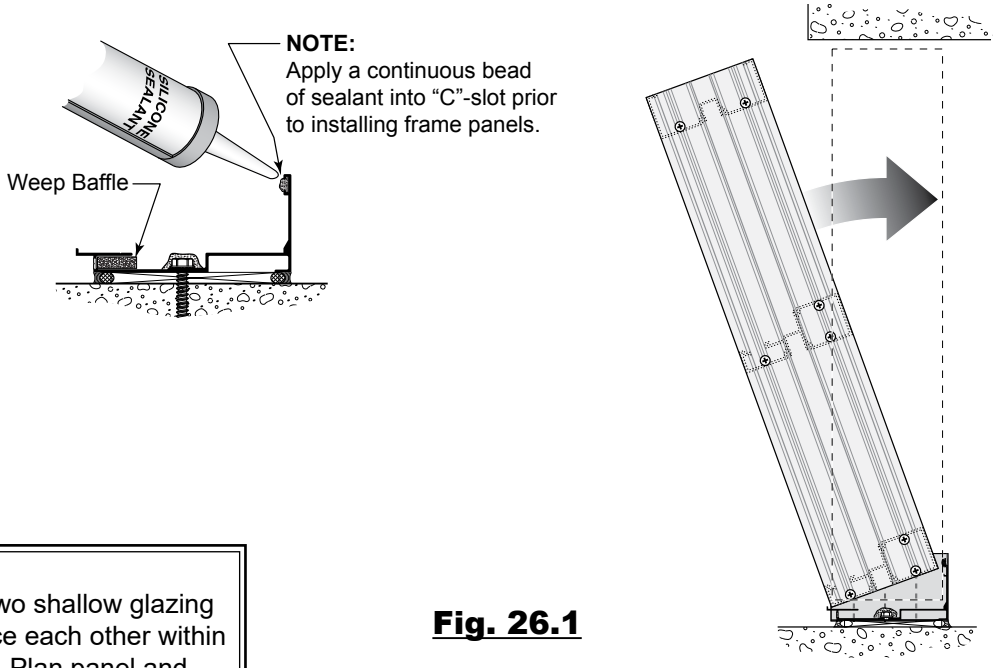


Fig. 25.2

PANEL INSTALLATION

Install assembled panels into sill receptor.



NOTE:
Never allow two shallow glazing pockets to face each other within any elevation. Plan panel and mullion fabrication accordingly.

Fig. 26.1

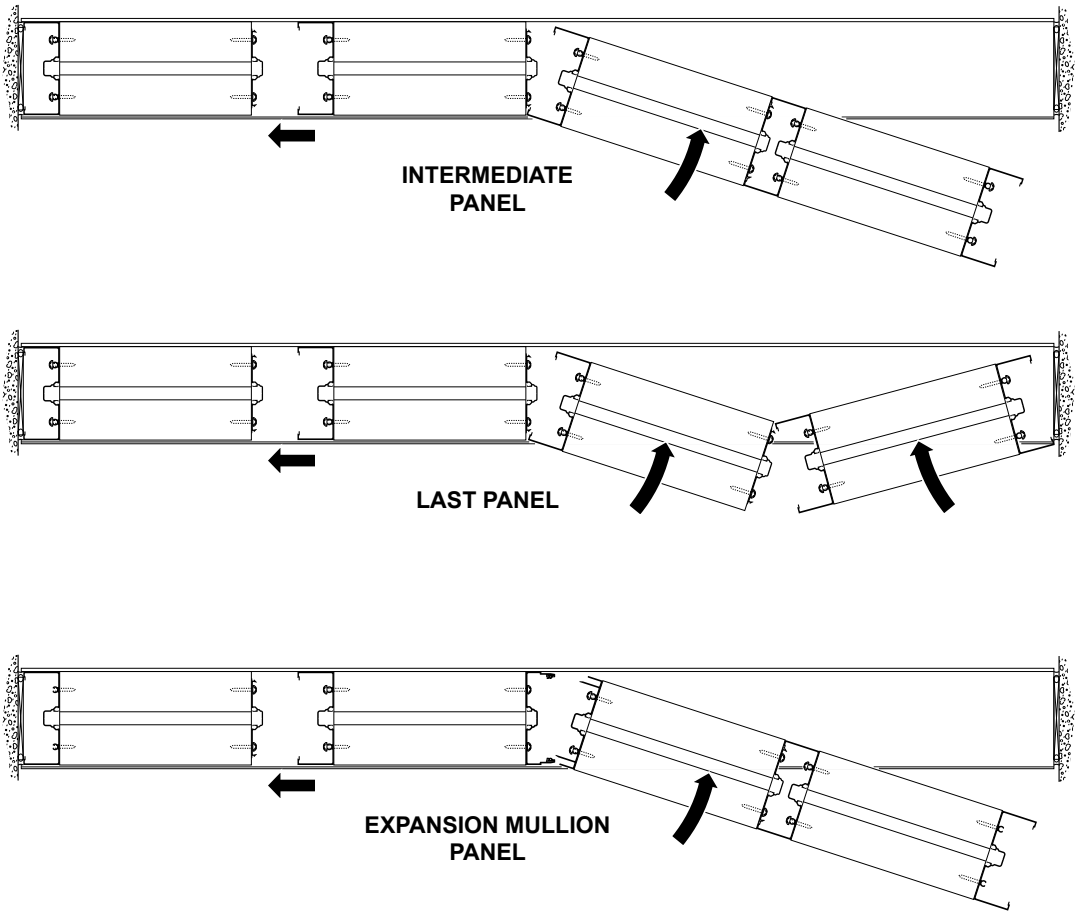
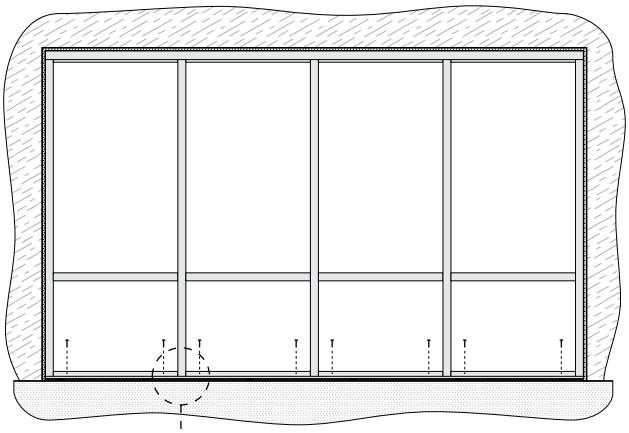


Fig. 26.2

PANEL INSTALLATION

After assembled panels have been installed, anchor **CG450-2** sill to **CG450-6** subsill with **FAS10-4** (#10 x 3/8" PPH SMS) as shown in **Fig. 27.1**. For hole/screw location see **Fig. 15.1**.



ELEVATION

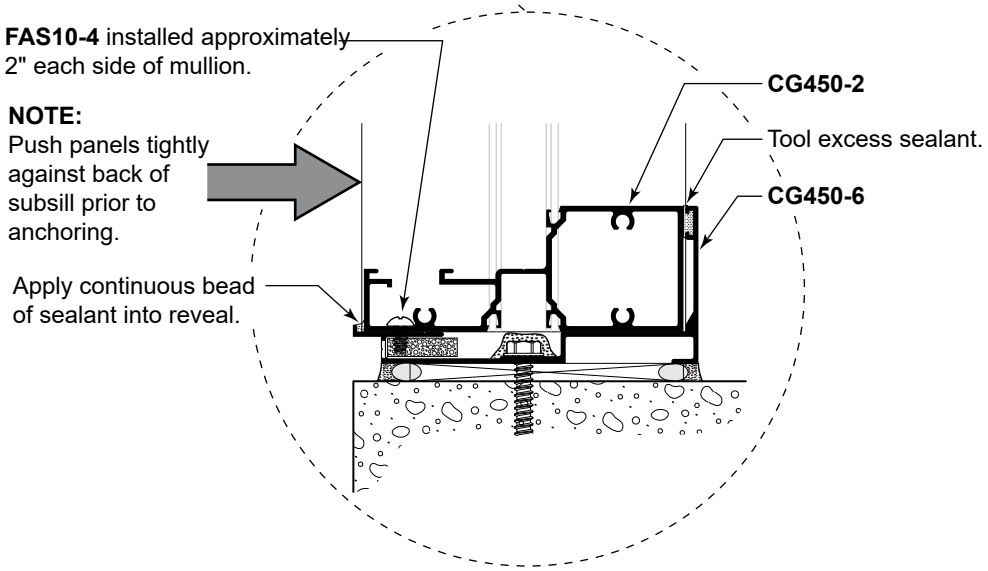


Fig. 27.1

GLAZING

REMOVE ALL TRASH FROM GLAZING POCKETS AND REGLETS

Set glass on setting blocks positioned at 1/4 points in opening. Reference "Dead Load Charts" for location of setting blocks at horizontal. Setting blocks should not be placed closer than 6" from the edge of glass for typical conditions.

GLASS SIZE = DAYLIGHT OPENING (D.L.O.) + 5/8"

Note: This formula does not allow for undersized or out of square daylight openings. The glass manufacturer must indicate the specific glazing requirements for the material being used.

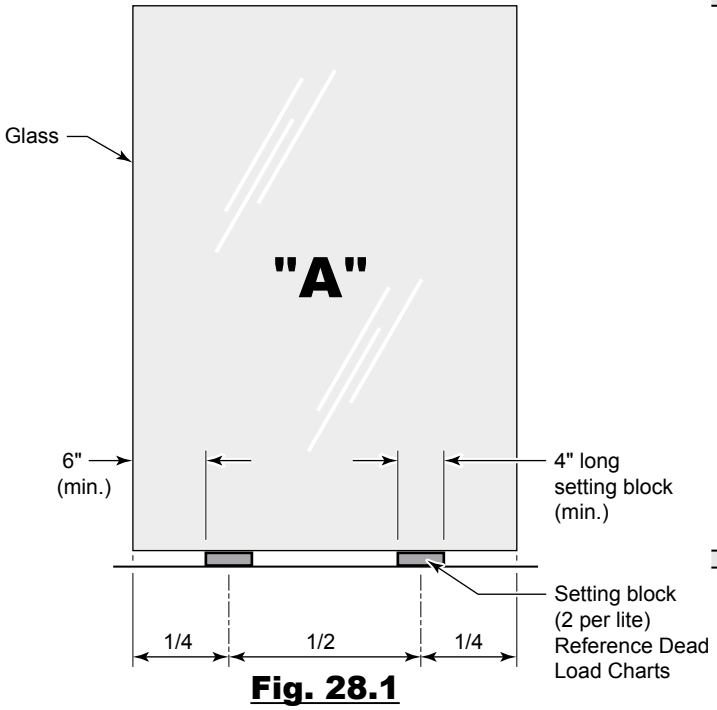


Fig. 28.1

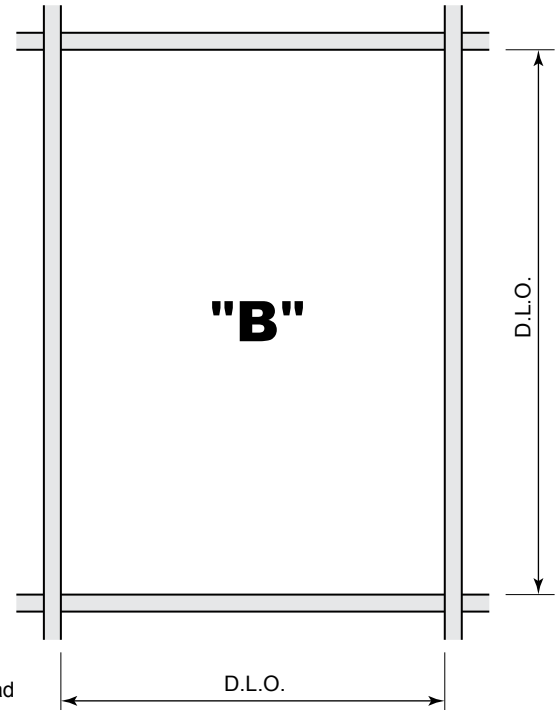


Fig. 28.2

Cut horizontal and vertical gaskets D.L.O. **+** 1/8" per foot of D.L.O. to allow for shrinkage. (Ref. **Fig. 28.2**)
It is important that gaskets are cut and installed as shown in **Fig. 28.3**.

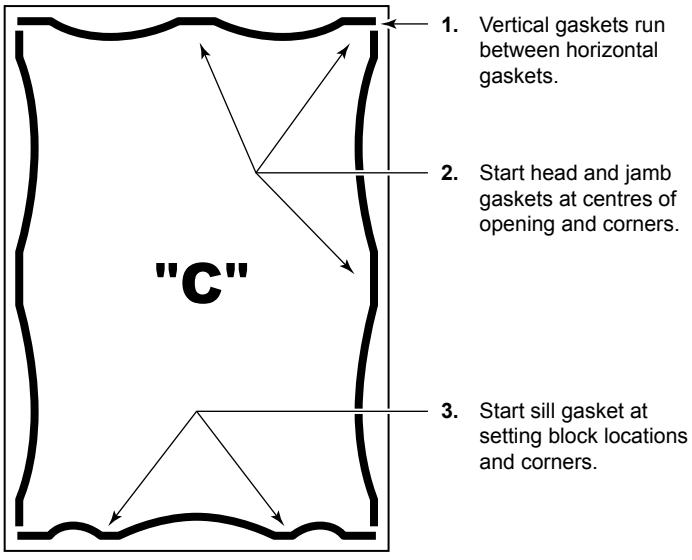


Fig. 28.3

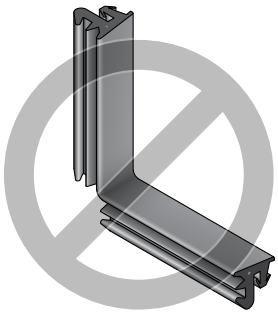
GLAZING

CORNER TREATMENT

Glazing gaskets are prone to shrink and pull away at the corners over a period of time allowing for excessive air and water infiltration at the corners. Standard glazing practice is to provide corner treatment to ensure tightness on the exterior and interior corner intersections.

NOT RECOMMENDED

Notched Corners - The corners of the rubber gaskets are notched on the underside without cutting the nearside. The gasket is installed in one length and is butt joined in the center of horizontal section. While this method of glazing is widely used for marine glazing, residential sliding doors and shower doors, it is not recommended for commercial window wall glazing.

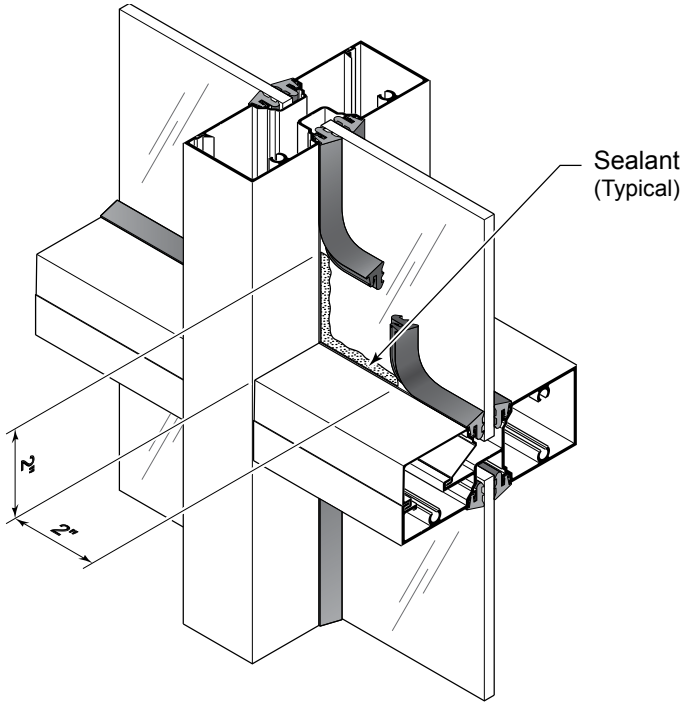


Notched Corner - Not Recommended

Fig. 29.1

RECOMMENDED

Seal Corners - Pull gaskets back 2" in both directions from interior and exterior corners as shown in **Fig. 29.2** and apply sealant. This should be done on the interior (inside glaze) or exterior (outside glaze) for best performance. While long-term adhesion to the rubber gaskets with sealant is nor assured, historical field experience has proven this type of corner treatment to be the next best method short of vulcanized gasket corners.
Reference **ABC's** of Glazing **Fig. 28.1**, **28.2** & **28.3**.



VIEWED FROM EXTERIOR

Fig. 29.2

GLAZING

NOTE:
Glaze system from bottom to top. Installing **WD-2** water deflector at ends of intermediate horizontal as glass is being installed. **WD-2** are installed into a bed of sealant as shown in **Fig. 30.1** & **30.2**.

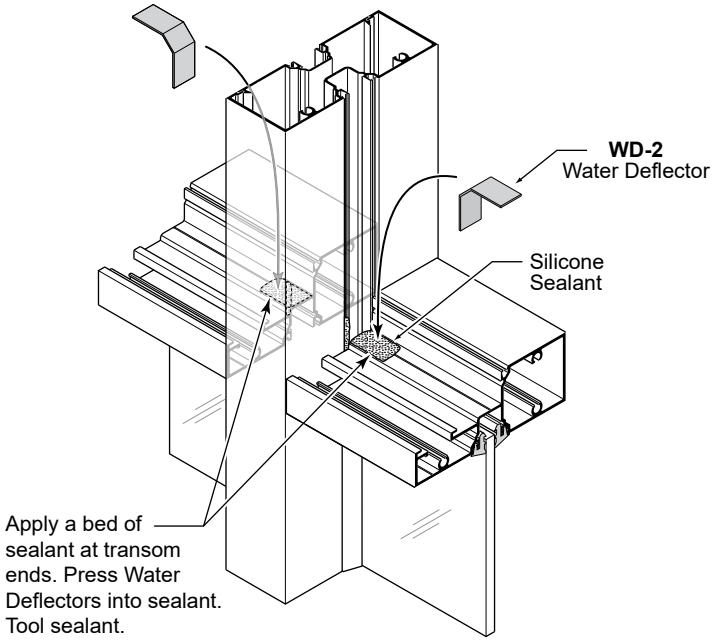


Fig. 30.1

Force sealant into reglets on vertical members as shown in **Fig. 30.2**.
Tool sealant smooth around flat of Water Deflector in horizontal member to limit water damming.

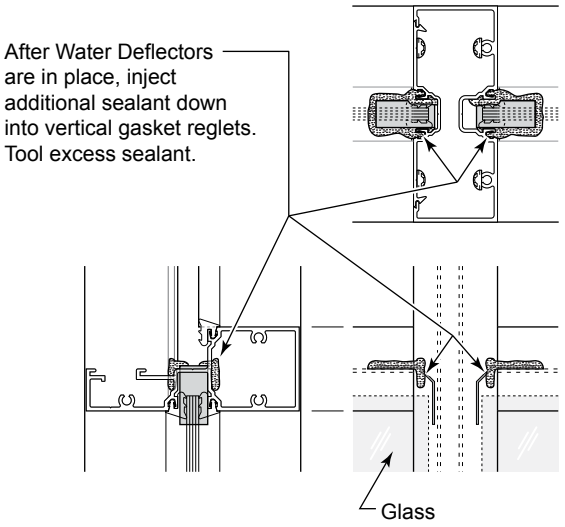
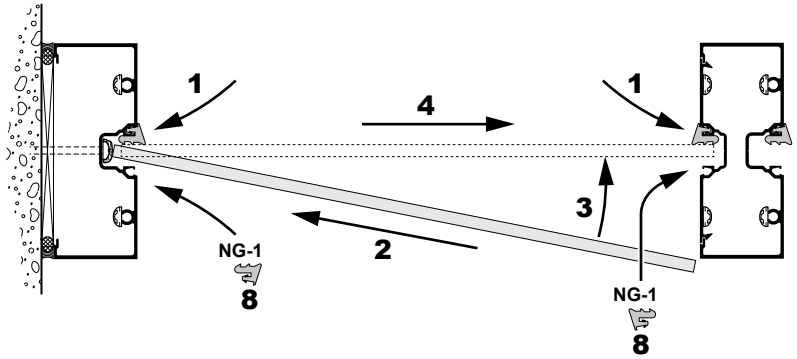


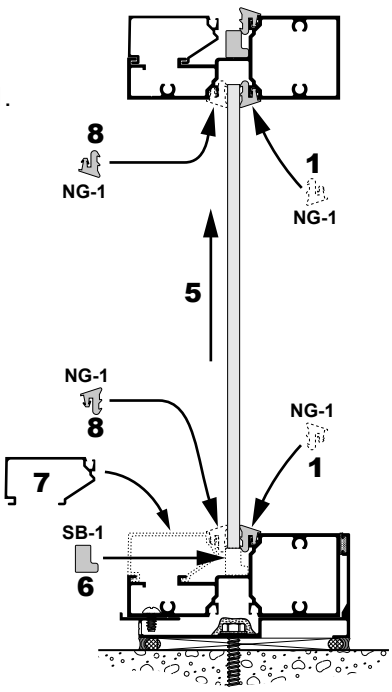
Fig. 30.2

GLAZING

EXTERIOR GLAZING

1. Press interior gaskets into reglets on all four sides. See **Fig. 21.1** & **28.3**.
2. From the exterior, insert edge of glass into deep pocket vertical.
3. Swing opposite edge in and align with pocket.
4. Center glass in opening.
5. Lift glass to allow setting block insertion.
6. Position setting blocks at points under glass as required. See **Fig. 28.1**.
7. Install glazing bead.
8. Press exterior gaskets into reglets on all four sides. See **Fig. 28.3**.

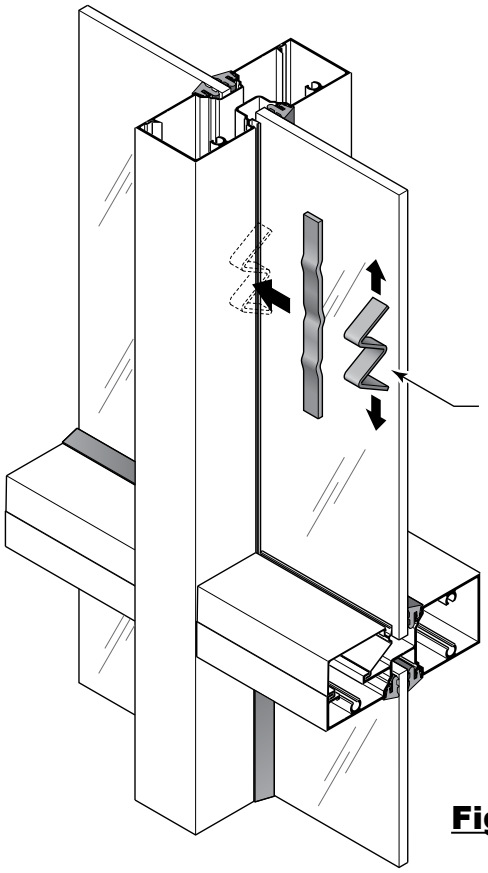


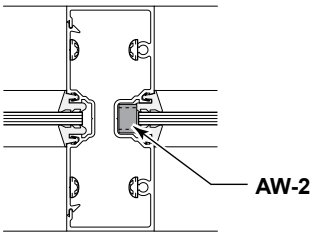


NOTES:
- **NG-1** Interior Gasket should be installed into panels at shop prior to transporting to job site.
- **NG-1** gasket is used interor and exterior of glass.

Fig. 31.1

Install **AW-1** Anti-Walk block into deep pocket near mid-point of vertical mullion.

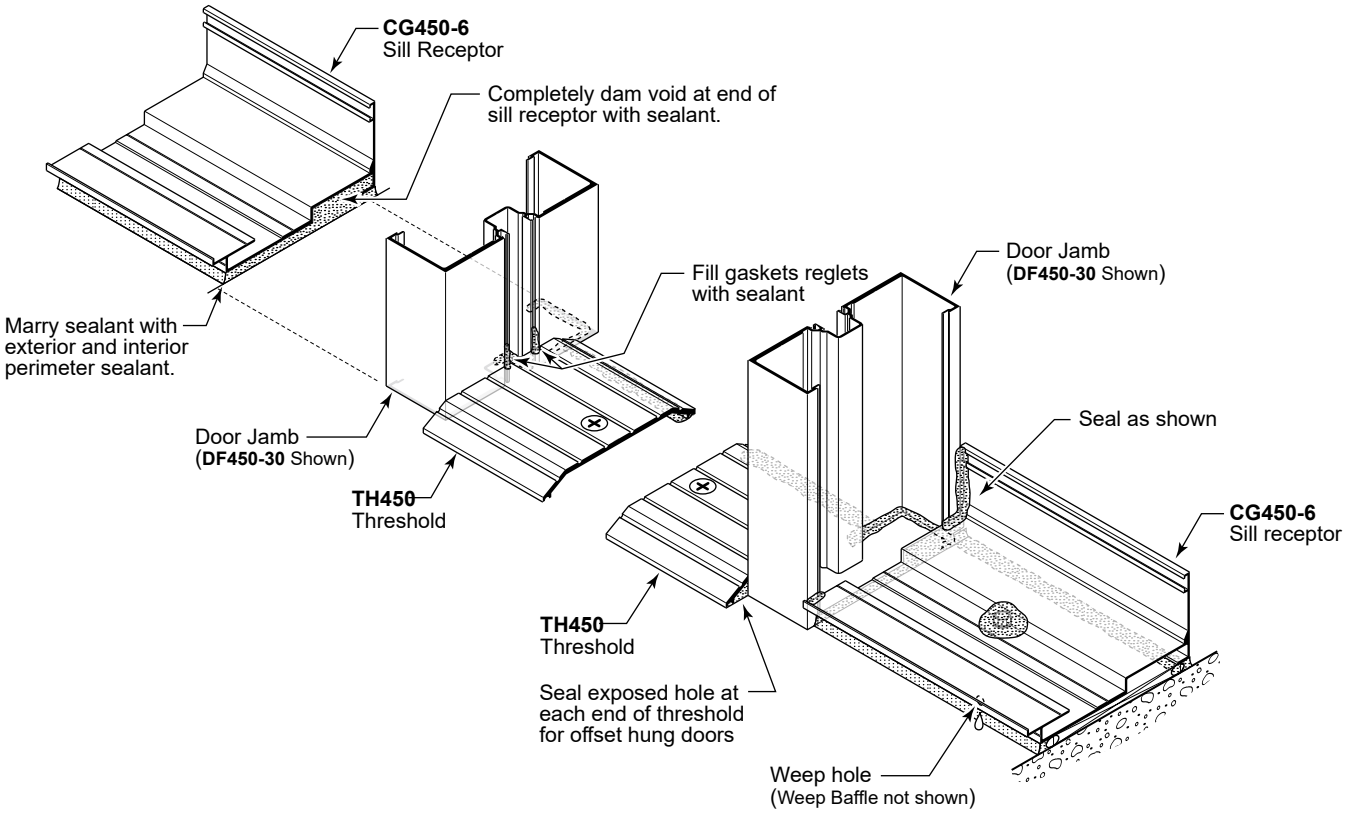




TOP VIEW

Fig. 31.2

SPECIAL CONDITIONS
SILL RECEPTOR AT DOOR FRAME



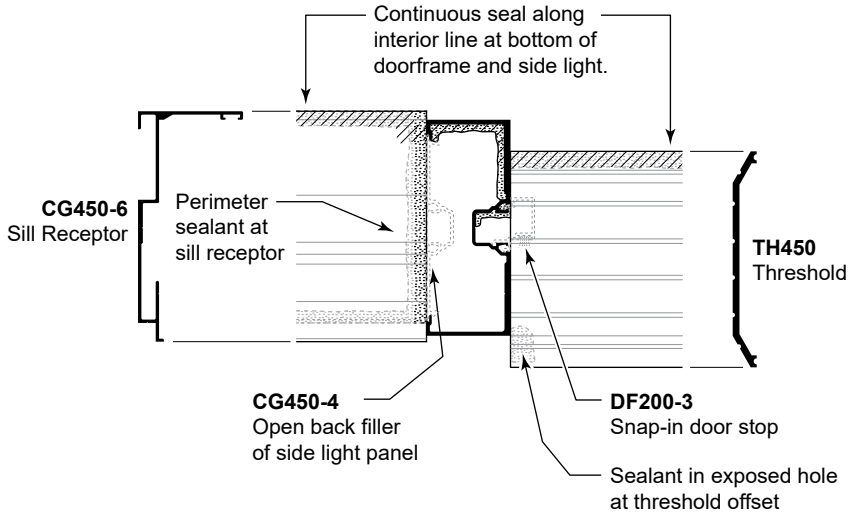


Fig. 32.1

SPECIAL CONDITIONS
CORNER INSTALLATION

Construct sill receptor corners as shown in **Fig. 33.1**.
90° Outside Corner is shown, Inside corners and other corner angles are similar.

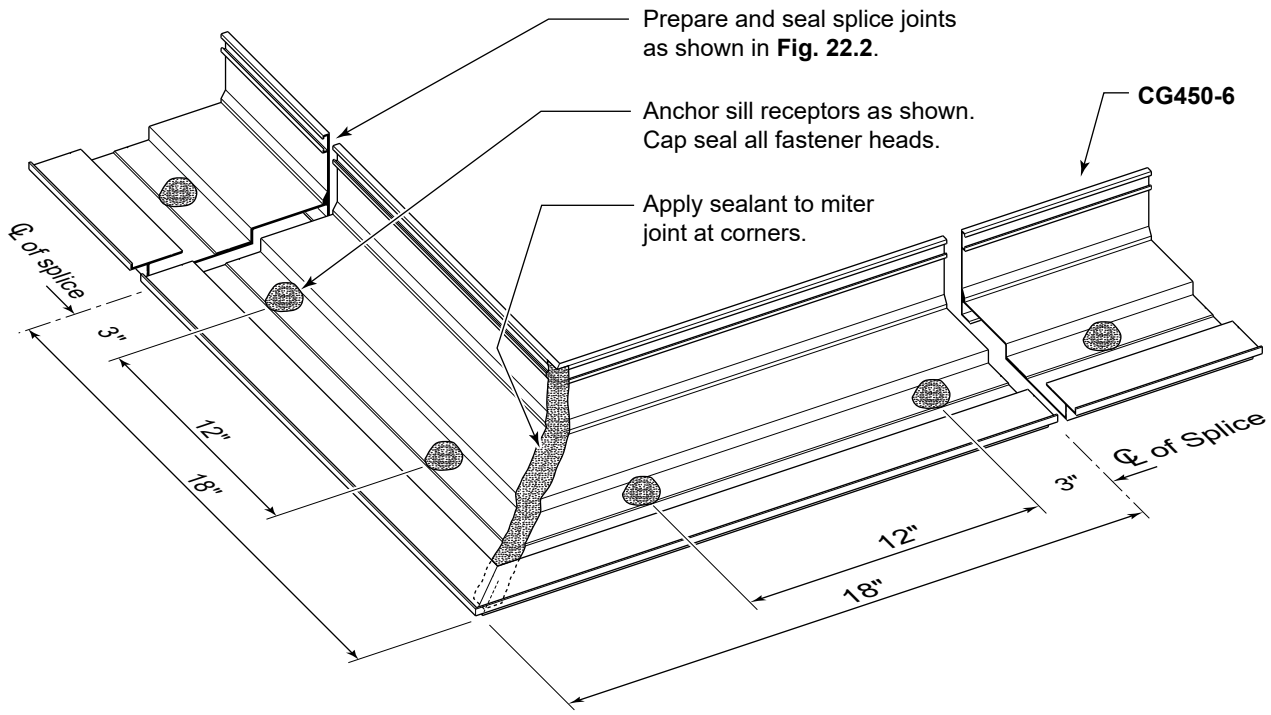


Fig. 33.1

Install each corner half. Install adjacent straight panels working out from corner assembly.

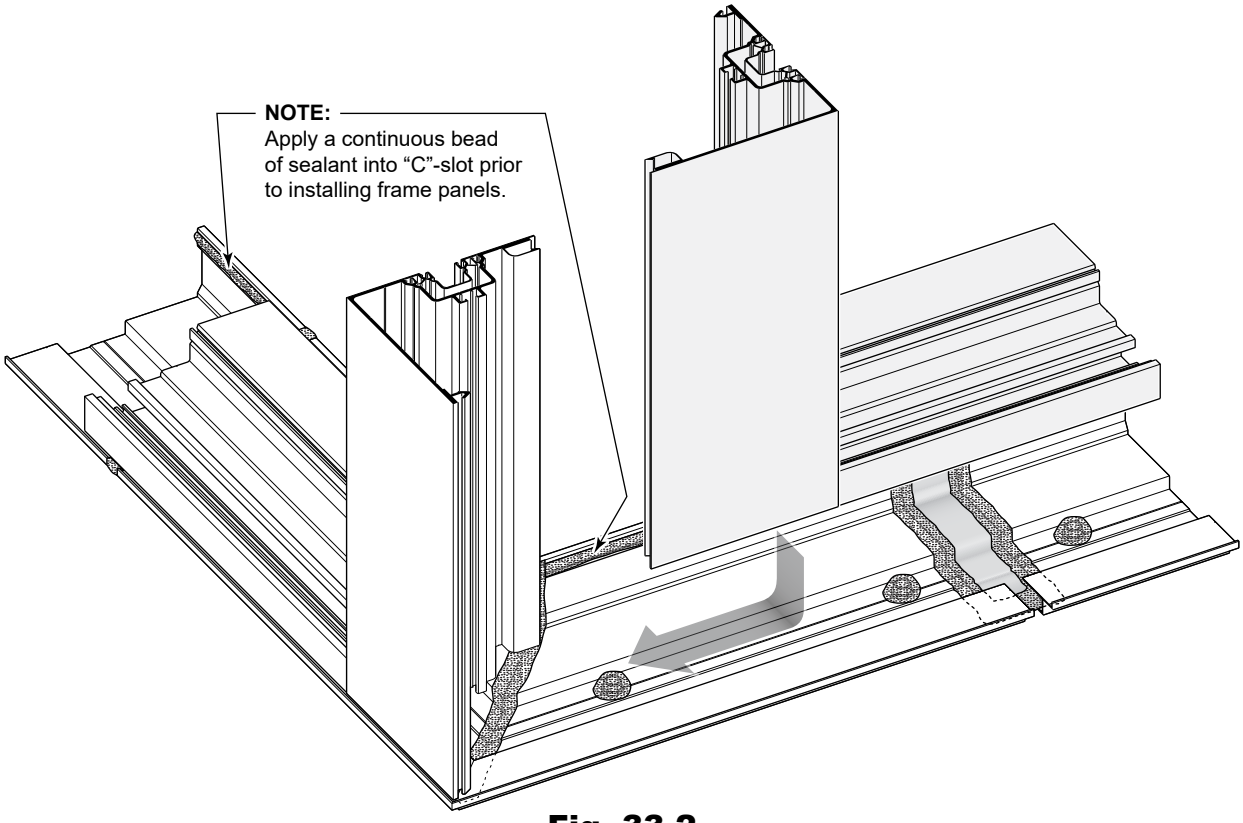


Fig. 33.2

SPECIAL CONDITIONS
COLUMN COVER INSTALLATION

Fabricate **CG450-8** female half of expansion mullion as shown in **Fig. 12.1** and **14.1**.
Assemble column cover panels and install as shown in **Fig. 34.1** below.

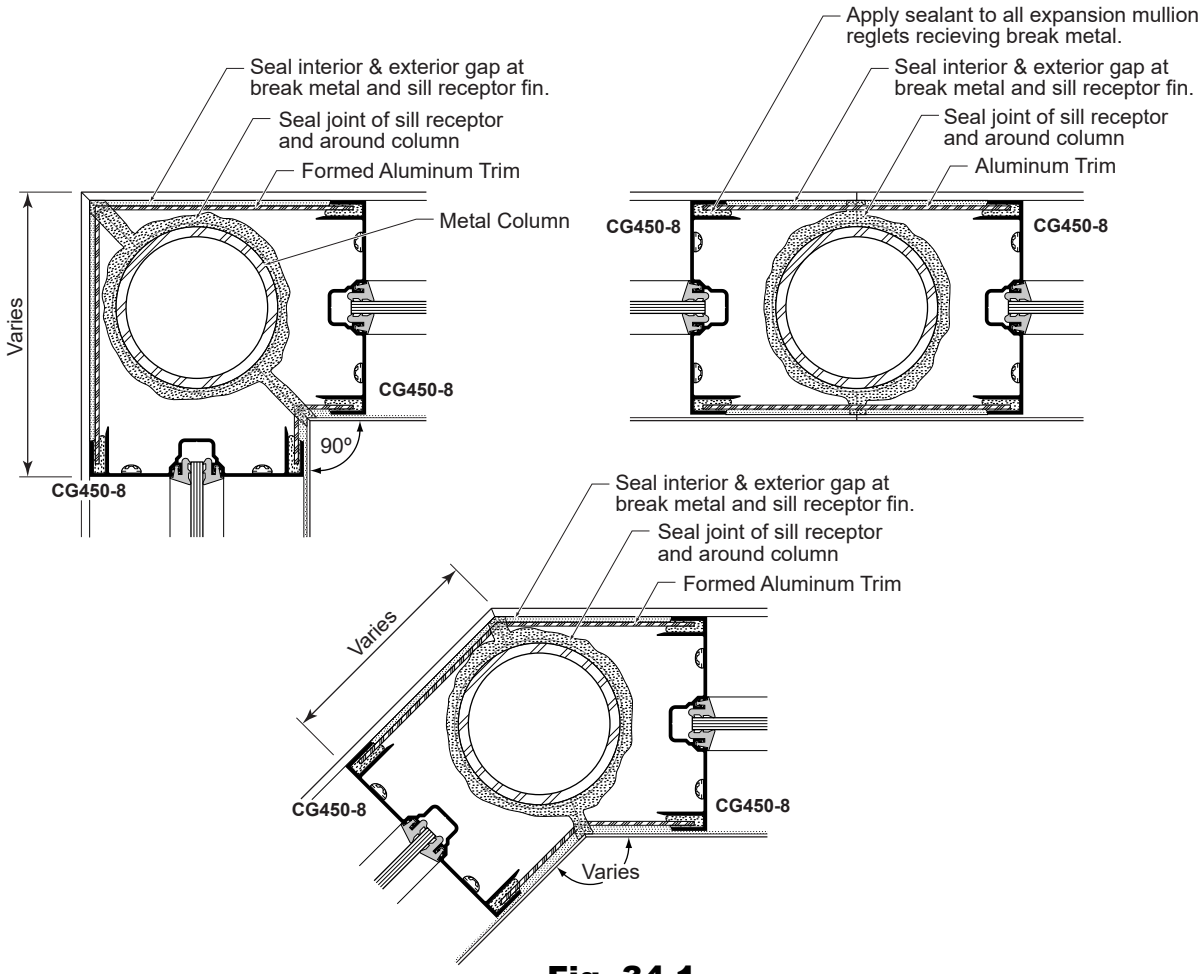
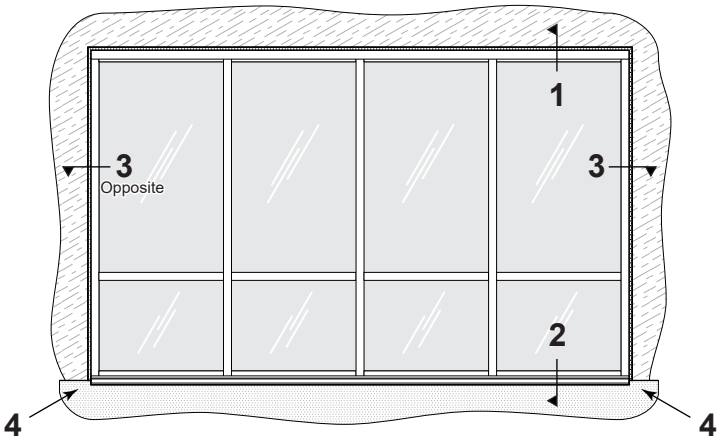


Fig. 34.1

PERIMETER SEAL

Apply continuous exterior and interior perimeter seal to elevation as shown in **Fig. 35.1**.
Marry exterior and interior sealant as shown below in **Detail 4 of Fig. 35.2**.



ELEVATION

Fig. 35.1

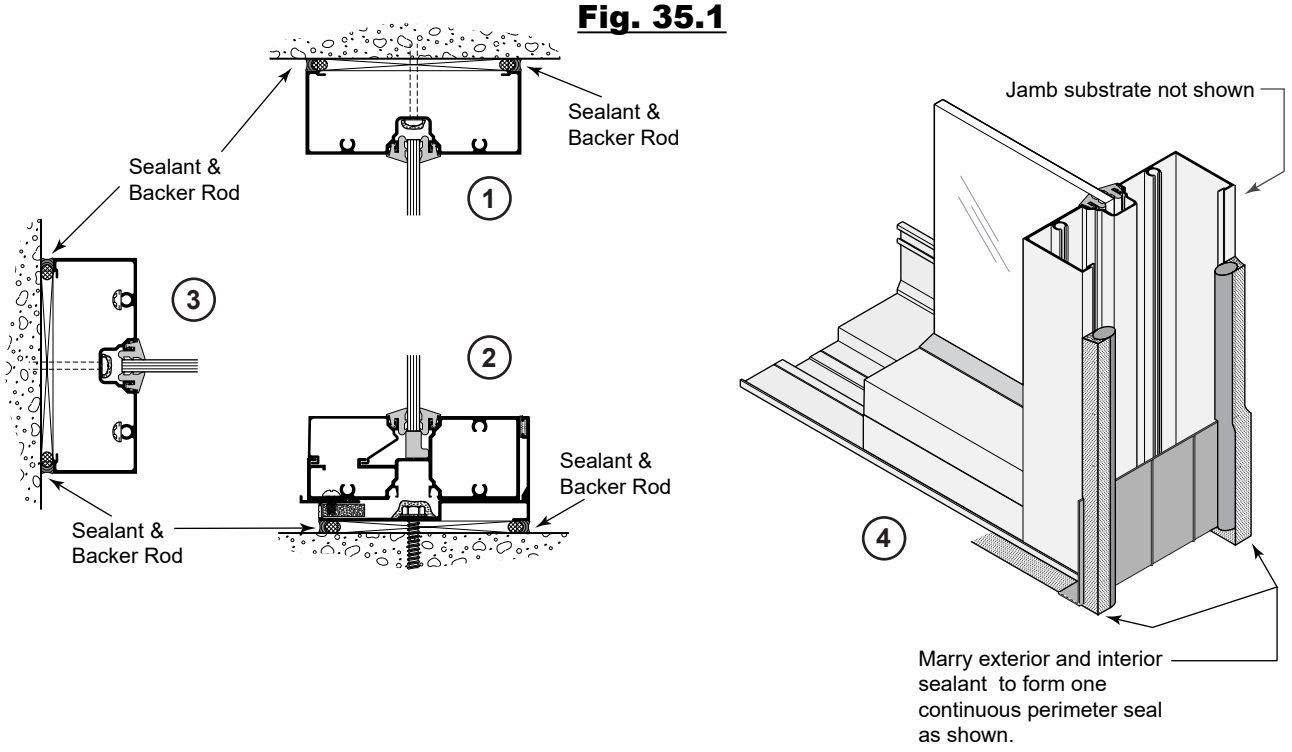


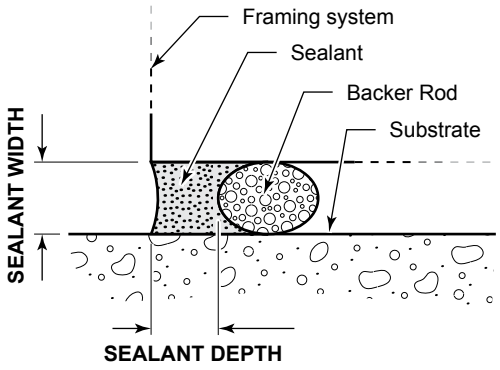
Fig. 35.2

PERIMETER SEALANT COVERAGE

SEALANT COVERAGE CHART

This chart may be used to estimate the sealant tubes or sausages required based on the average joint size and lineal feet to be sealed. To use the chart you must know the depth and width of the joint. For example, 1 tube of sealant yields approximately 16.2 feet in a joint 3/8" deep x 1/4" wide. (See other Example below in **Fig. 36.1**)

JOINT SIZE Depth X Width (Inches)	**FEET** per **TUBE**	**FEET** per **SAUSAGE**
.125 x .125	97.21	192.50
.125 x .250	48.61	96.25
.125 x .375	32.40	64.17
.125 x .500	24.30	48.13
.125 x .625	19.44	38.50
.125 x .750	16.20	32.08
.125 x .875	13.89	27.50
.125 x 1.00	12.15	24.06
.250 x .250	24.30	48.13
.250 x .375	16.20	32.08
.250 x .500	12.15	24.06
.250 x .625	9.72	19.25
.250 x .750	8.10	16.04
.250 x .875	6.94	13.75
.250 x 1.00	6.08	12.03
.375 x .375	10.80	24.39
.375 x .500	8.10	16.04
.375 x .625	6.48	12.83
.375 x .750	5.40	10.69
.375 x .875	4.63	9.17
.375 x 1.00	4.05	8.02
.500 x .500	6.08	12.03
.500 x .625	4.86	9.63
.500 x .750	4.05	8.02
.500 x .875	3.47	6.88
.500 x 1.00	3.04	6.02
.625 x .625	3.89	7.70
.625 x .750	3.24	6.42
.625 x .875	2.78	5.50
.625 x 1.00	2.43	4.81
.750 x .750	2.70	5.35
.750 x .875	2.31	4.58
.750 x 1.00	2.03	4.01
.875 x .875	1.98	3.93
.875 x 1.00	1.74	3.44
1.00 x 1.00	1.52	3.01



1 tube = 10.1 Ounce

1 Sausage = 20 Ounce

FOR EXAMPLE:

1. Job requires 1000 feet exterior and interior caulking.
2. Aveage caulk space = .25 X .25
3. Yield/tube from chart = 24.30
   Yield/sausage from chart = 48.13
4. 1000 ÷ 24.30 = 42 tubes required (Rounded up)
   1000 ÷ 48.13 = 21 sausages required (Rounded up)

Fig. 36.1