

# Essential Casement/Awning

Unit Features.....	1
Certified Sizes and Rating.....	3
Egress, Lite and Vent Measurements.....	4
Sizing Guidelines - Mulls.....	7
Sizing Guidelines and Measurement Conversions.....	8
Section Details: Operating - Casement / Awning - 2".....	9
Section Details: Stationary - Picture/Transom - 2".....	10
Section Details: Operating - Casement / Awning - 4 9/16".....	11
Section Details: Stationary - Picture/Transom - 4 9/16".....	12
Section Details: Operating - Casement / Awning - 6 9/16".....	13
Section Details: Stationary - Picture/Transom - 6 9/16".....	14
Section Details: Mullions.....	15
Section Details: Reinforced Mullions.....	16
GBG Lite Cuts.....	17
Installation Suggestion - Frame Expander.....	18
Installation Suggestion - Brick Veneer with Steel Frame Construction.....	19
Installation Suggestion - Stucco with 2x6 Frame Construction.....	20
Installation Suggestion - Vinyl Siding with Steel 2x6 Frame Construction.....	21

**ATTENTION:**

- Specifications and technical data are subject to change without notice.
- Dimensions in parentheses are in millimeters or square meters.
- Allow 1/16" (2) tolerance on all measurements.
- For answers to technical questions about Marvin products, you may call our Marvin Support Line: 1-800-587-2712.
- Website: [www.marvin.com](http://www.marvin.com)



**Unit Features**

Essential Casement: ESCA

Essential Awning: ESAWN

Essential Casement Picture: ESCAP

Essential Casement Transom: ESCATR

For applicable certification and code information, refer to the Introduction and Product Performance chapter.

**Frame and Sash:**

- The frame and sash exteriors are made of Ultrex<sup>®</sup>, an advanced fiber reinforced material that is resistant to thermal conductance.
  - Exterior colors: Stone White, Pebble Gray, Bronze, Evergreen, Cashmere, or Ebony.
  - Interior colors: Stone White, Bronze, or Ebony.
- Split finishes are not available for Dark Interior options. Only Bronze interior/Bronze exterior and Ebony interior/Ebony exterior combinations are available.

**Frame:**

- Composite frame thickness is 1 1/2" (38). Total frame depth is 3 3/32" (79). Ultrex is 0.070" - 0.077" (2) thick.

**Sash:**

- Composite sash thickness is 15/16" (24). Ultrex is 0.070" - 0.077" (2) thick. Sash can be replaced by not reglazed.

**Jamb Extension:**

- Standard jamb depth is 2" (51). 4 9/16" (116) and 6 9/16" (167) maintenance free jamb extension available.
  - Available in Stone White, Bronze or Ebony. Default color will match the unit interior selection.
- Split finishes not available for Dark Interior options. Stone White jamb extension is available for all interior color selections.

**Casement Hardware:**

- Hardware finishes available in Stone White, Almond Frost, Brass, Satin Nickel, Matte Black, and Oil Rubbed Bronze
- Dual arm roto hardware factory installed on casement units
  - Roto gear hardware is an E-coated, high strength, low alloy steel
  - Call number 16 and 20, and frame sizes up to RO 25" (635) wide require dyad operators.
- The hinge track is stainless steel
  - hinge arm is E-coated high strength, low alloy steel
  - hinge shoe is injection molded with a stainless steel insert.
- A snubber on the jamb and stile, certain heights have 0, 1 or 2 sets, interlock the sash to the frame on the hinge side.
- Folding handle with removable snap fit covers.
- The locking hardware consists of multi-point locking mechanism that is actuated from a single point operation.
- Optional coastal hardware is available.
- Optional factory applied Window Opening Control Device is available. This device works in accordance to ASTM F2090-17 Standard Specification for Window Fall Prevention Devices with Emergency Escape (Egress) Release Mechanisms.
  - min size: 18 9/16" (417) x 23 1/2" (597) - max size: 35" (902) x 71" (1816)
  - Available in Stone White, Almost Frost, Oil Rubbed Bronze, and Matte Black finishes.
  - Tether housing finish, E-Gard only.

**Awning Hardware:**

- Hardware finishes available in Stone White, Almond Frost, Brass, Satin Nickel, Matte Black, and Oil Rubbed Bronze
- Scissors arm roto hardware factory installed on all awning units.
  - Roto hardware is an E-coated high strength, low alloy steel.
- The hinge track is stainless steel
  - hinge arm is E-coated high strength, low alloy steel
  - hinge shoe is injection molded with a stainless steel insert.
- Folding handle with removable snap fit covers
- A single point lock on each jamb/stile, with a removable escutcheon and handle
- Optional coastal hardware is available
- Optional factory installed or field applied stainless steel sash limiter is available

## Unit Features Continued

### Installation:

- Factory applied folding nailing fin
  - Optional installation brackets for masonry applications are available
  - Optional through jamb installation method
- Factory supplied field mulling kits are available for standard assemblies

### Glazing:

- Dual-pane units are manufactured with an 11/16" (17) IG with Low E1, E2, E3, E3/ERS, or no coating including argon gas fill.
- Tempered glass and/or obscure glass, and California Fire glass (annealed exterior and tempered interior glazing configuration) are available as an option.
- Insulating glass is manufactured and tested.
- The glazing seal is a silicone bedding on the exterior surface and vinyl glazing seal on the interior surface in a one-piece sash.
- STC/OITC values are available for 3.1 mm thickness glass.
  - Optional 3.1/4.7 STC/OITC upgrade glass is available. See the Product Performance chapter for STC and OITC ratings.
- Decorative glass options include glue chip, rain, reed, narrow reed, frost, and tinted (bronze, gray or green). Decorative glass is not available with Low E1, Low E3/ERS, or STC/OITC.

### Weather Strip:

- All units are dual weather stripped.
- The primary weather strip is a black extruded PVC foam filled bulb that attaches to all four sides of the frame.
- The secondary weather strip is a black extruded PVC hollow that is attached to the sash.

### Insect Screen:

- Charcoal fiberglass (non-corrosive) screen cloth.
- Roll formed aluminum frame finish
  - Available in Stone White, Bronze or Ebony (matches unit interior color).
- Features a bottom rail lift and top rail mounted springs that allow it to be removed from the interior of the unit.

### Grilles-Between-The-Glass (GBG):

- 23/32" (18) contoured aluminum bar placed between two panes of glass
- Patterns: Rectangular, 6 or 9 lite Prairie cut, or Cottage style
- Exterior colors: Stone White, Pebble Gray, Bronze, Evergreen, Cashmere, or Ebony
- Interior colors: Stone White, Bronze, or Ebony (matches unit interior color)
- GBG is not available with tinted glass.

### Accessories:

- Field applied j-channel, a 1" (25) or a 3" (76) frame expander, or flush fin installation kit.
- Factory applied: sheet rock return 1/2" (13) or 5/8" (16) drywall, a 3/4" (19) receiver, a frame filler or a flush fin.
  - Sheet rock return and 3/4" receiver are available for all interior color selections.
- General: mull kits are available for field assembly. Kits include instructions, mull covers, mull plugs and brackets.

### Exterior Casing:

- Non-integral to the unit.
- Fastened to the exterior wall with barb and kerf: 2" (51) brick mould as a full surround or with sill nosing.
- 3 1/2" (89) flat casing available as full surround or with sill nosing.
- Also available with 1" (25) ranch style sill and header overhang.

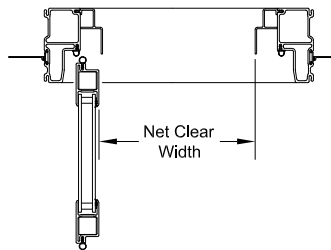
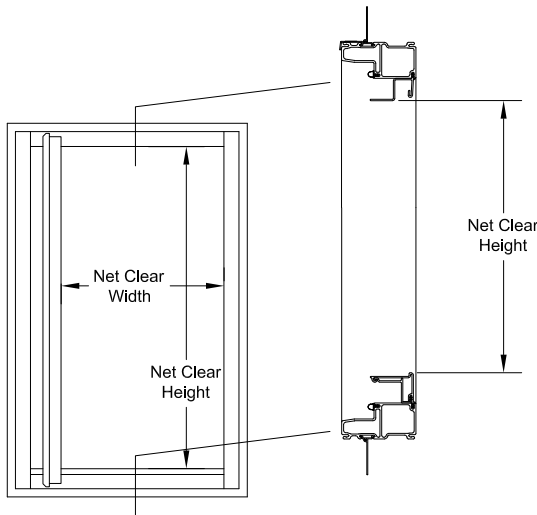
*NOTE: NFRC values are now located on [www.marvin.com](http://www.marvin.com)*

**Certified Sizes and Rating**

Product	Air Tested to PSF	Water Tested to psf	Design Pressure (DP)	Certification Rating	Max Overall Width		Max Overall Height	
					in	mm	in	mm
Essential Casement	1.57	6	40	LC-PG40-C	27	(686)	71	(1803)
Essential Casement	1.57	6	40	LC-PG40-C	35	(889)	34	(864)
Essential Casement	1.57	6	40	LC-PG40-C	35	(889)	54	(1372)
Essential Casement	1.57	6	40	LC-PG40-C	35	(889)	71	(1803)
Essential Awning	1.57	6	40	LC-PG40-AP	48	(1219)	35	(889)
Essential Casement Picture/Transom	1.57	6	40	LC-PG40-FW	71	(1803)	71	(1803)

**Egress, Lite and Vent Measurements**

**EGRESS MEASUREMENTS  
FOR  
OPERATING CASEMENTS**



Code restrictions may vary depending on your local building codes. For additional information, contact your local code department for IBC and IRC requirements.

**NOTE:**

Call numbers with an E meet the National Egress Codes requiring 5.7 SF clear opening. 20" (508) clear width and 24" (610) clear height, not to exceed a floor to sill height of 44". Code restrictions may vary depending on local building codes.

T= Tempered glass is standard for this size unit.

Floor to sill height is based on a rough opening height of 6' 10 1/2" (2096) (Inside opening height of 6' 10 1/4" (2090)).

These units (\*) may optionally include a window opening control device tested to ASTM F 2090-10, which can be released from the inside without the use of a key, tool, special knowledge, or force greater than that required for normal unit operation. This device is designed to stop your window at a specified location. This device is not designed to prevent child falls.

Units with a frame size of 18 9/16" (472) x 23 1/2" (597) – 35 1/2" (902) x 71 1/2" (1816) can have an optional "window opening control device" installed at the factory. This device is designed to meet the ASTM F 2090-10 standard specification for window fall prevention device.

**Egress, Lite and Vent Measurements - Casement**

CN	Clear Opening Width		Clear Opening Height		Egress Opening		Floor to Sill Height		Vent Opening	
	ft - in	mm	ft - in	mm	ft <sup>2</sup>	cm <sup>2</sup>	ft-in	mm	ft <sup>2</sup>	cm <sup>2</sup>
1620	0-8 43/64	(220)	1-6 5/16	(465)	1.10	(1025)	5-0 41/64	(1540)	1.10	(1025)
1626	0-8 43/64	(220)	2-0 5/16	(618)	1.46	(1360)	4-6 41/64	(1388)	1.46	(1360)
1630	0-8 43/64	(220)	2-6 5/16	(770)	1.83	(1696)	4-0 41/64	(1236)	1.83	(1696)
1636	0-8 43/64	(220)	3-0 5/16	(923)	2.19	(2032)	3-6 41/64	(1083)	2.19	(2032)
1640	0-8 43/64	(220)	3-6 5/16	(1075)	2.55	(2367)	3-0 41/64	(931)	2.55	(2367)
1646	0-8 43/64	(220)	4-0 5/16	(1227)	2.91	(2703)	2-6 41/64	(778)	2.91	(2703)
1650	0-8 43/64	(220)	4-6 5/16	(1380)	3.27	(3038)	2-0 41/64	(626)	3.27	(3038)
1656	0-8 43/64	(220)	5-0 5/16	(1532)	3.63	(3374)	1-6 41/64	(474)	3.63	(3374)
1660	0-8 43/64	(220)	5-6 5/16	(1685)	3.99	(3710)	1-0 41/64	(321)	3.99	(3710)
2020	1-2 43/64	(373)	1-6 5/16	(465)	1.87	(1734)	5-0 41/64	(1540)	1.87	(1734)
2026	1-2 43/64	(373)	2-0 5/16	(618)	2.48	(2302)	4-6 41/64	(1388)	2.48	(2302)
2030	1-2 43/64	(373)	2-6 5/16	(770)	3.09	(2870)	4-0 41/64	(1236)	3.09	(2870)
2036	1-2 43/64	(373)	3-0 5/16	(923)	3.70	(3438)	3-6 41/64	(1083)	3.70	(3438)
2040	1-2 43/64	(373)	3-6 5/16	(1075)	4.31	(4005)	3-0 41/64	(931)	4.31	(4005)
2046	1-2 43/64	(373)	4-0 5/16	(1227)	4.92	(4573)	2-6 41/64	(778)	4.92	(4573)
2050	1-2 43/64	(373)	4-6 5/16	(1380)	5.53	(5141)	2-0 41/64	(626)	5.53	(5141)
2056	1-2 43/64	(373)	5-0 5/16	(1532)	6.15	(5709)	1-6 41/64	(474)	6.15	(5709)
2060	1-2 43/64	(373)	5-6 5/16	(1685)	6.76	(6277)	1-0 41/64	(321)	6.76	(6277)
2620	1-8 43/64	(525)	1-6 5/16	(465)	2.63	(2443)	5-0 41/64	(1540)	2.63	(2443)
2626	1-8 43/64	(525)	2-0 5/16	(618)	3.49	(3243)	4-6 41/64	(1388)	3.49	(3243)
2630	1-8 43/64	(525)	2-6 5/16	(770)	4.35	(4043)	4-0 41/64	(1236)	4.35	(4043)
2636	1-8 43/64	(525)	3-0 5/16	(923)	5.21	(4843)	3-6 41/64	(1083)	5.21	(4843)
2640 E	1-8 43/64	(525)	3-6 5/16	(1075)	6.07	(5644)	3-0 41/64	(931)	6.07	(5644)
2646 E	1-8 43/64	(525)	4-0 5/16	(1227)	6.94	(6444)	2-6 41/64	(778)	6.94	(6444)
2650 E	1-8 43/64	(525)	4-6 5/16	(1380)	7.80	(7244)	2-0 41/64	(626)	7.80	(7244)
2656 E	1-8 43/64	(525)	5-0 5/16	(1532)	8.66	(8044)	1-6 41/64	(474)	8.66	(8044)
2660 E	1-8 43/64	(525)	5-6 5/16	(1685)	9.52	(8844)	1-0 41/64	(321)	9.52	(8844)
3020	2-2 43/64	(677)	1-6 5/16	(465)	3.39	(3152)	5-0 41/64	(1540)	3.39	(3152)
3026	2-2 43/64	(677)	2-0 5/16	(618)	4.50	(4185)	4-6 41/64	(1388)	4.50	(4185)
3030	2-2 43/64	(677)	2-6 5/16	(770)	5.62	(5217)	4-0 41/64	(1236)	5.62	(5217)
3036 E	2-2 43/64	(677)	3-0 5/16	(923)	6.73	(6249)	3-6 41/64	(1083)	6.73	(6249)
3040 E	2-2 43/64	(677)	3-6 5/16	(1075)	7.84	(7282)	3-0 41/64	(931)	7.84	(7282)
3046 E	2-2 43/64	(677)	4-0 5/16	(1227)	8.95	(8314)	2-6 41/64	(778)	8.95	(8314)
3050 E	2-2 43/64	(677)	4-6 5/16	(1380)	10.06	(9347)	2-0 41/64	(626)	10.06	(9347)
3056 E	2-2 43/64	(677)	5-0 5/16	(1532)	11.17	(10379)	1-6 41/64	(474)	11.17	(10379)
3060 E	2-2 43/64	(677)	5-6 5/16	(1685)	12.28	(11411)	1-0 41/64	(321)	12.28	(11411)

T= Tempered glass is standard for this size unit.

**FORMULA TO CALCULATE UNIT DAYLIGHT OPENING FOR TRANSOM OR PICTURE:**

R.O. Width - 6 3/16" (157) = Daylight Opening Width

R.O. Height - 6 3/16" (157) = Daylight Opening Height

I.O. Width - 6 1/16" (154) = Daylight Opening Width

I.O. Height - 5 15/16" (151) = Daylight Opening Height

**Lite and Vent Measurements - Awning**

CN	Clear Opening Width		Clear Opening Height		Vent Opening	
	ft - in	mm	ft - in	mm	ft <sup>2</sup>	cm <sup>2</sup>
1616	0-8 43/64	(220)	1-0 5/16	(313)	0.74	(689)
1620	0-8 43/64	(220)	1-6 5/16	(465)	1.10	(1025)
1626	0-8 43/64	(220)	2-0 5/16	(618)	1.46	(1361)
1630	0-8 43/64	(220)	2-6 5/16	(770)	1.83	(1696)
2016	1-2 43/64	(373)	1-0 5/16	(313)	1.25	(1166)
2020	1-2 43/64	(373)	1-6 5/16	(465)	1.87	(1734)
2026	1-2 43/64	(373)	2-0 5/16	(618)	2.48	(2302)
2030	1-2 43/64	(373)	2-6 5/16	(770)	3.09	(2870)
2616	1-8 43/64	(525)	1-0 5/16	(313)	1.77	(1643)
2620	1-8 43/64	(525)	1-6 5/16	(465)	2.63	(2443)
2626	1-8 43/64	(525)	2-0 5/16	(618)	3.49	(3243)
2630	1-8 43/64	(525)	2-6 5/16	(770)	4.35	(4043)
3016	2-2 43/64	(677)	1-0 5/16	(313)	2.28	(2119)
3020	2-2 43/64	(677)	1-6 5/16	(465)	3.39	(3152)
3026	2-2 43/64	(677)	2-0 5/16	(618)	4.50	(4184)
3030	2-2 43/64	(677)	2-6 5/16	(770)	5.62	(5217)
3616	2-8 43/64	(830)	1-0 5/16	(313)	2.79	(2596)
3620	2-8 43/64	(830)	1-6 5/16	(465)	4.16	(3861)
3626	2-8 43/64	(830)	2-0 5/16	(618)	5.52	(5126)
3630	2-8 43/64	(830)	2-6 5/16	(770)	6.88	(6390)
4016	3-2 43/64	(982)	1-0 5/16	(313)	3.31	(3073)
4020	3-2 43/64	(982)	1-6 5/16	(465)	4.92	(4570)
4026	3-2 43/64	(982)	2-0 5/16	(618)	6.53	(6067)
4030	3-2 43/64	(982)	2-6 5/16	(770)	8.14	(7564)

T= Tempered glass is standard for this size unit.

**FORMULA TO CALCULATE UNIT DAYLIGHT OPENING FOR TRANSOM OR PICTURE:**

R.O. Width - 6 3/16" (157) = Daylight Opening Width

R.O. Height - 6 3/16" (157) = Daylight Opening Height

I.O. Width - 6 1/16" (154) = Daylight Opening Width

I.O. Height - 5 15/16" (151) = Daylight Opening Height



**Sizing Guidelines - Mulls**

**MULTIPLE ASSEMBLIES** - Factory Mull Configuration. Mulls and Reinforced Mulls available. Field mull kits are available. Mulling beyond limitations is not recommended.

**MAXIMUM ASSEMBLY UP TO 6W1H:**

Rough Opening 96" (2438) x 96" (2438), Inside Opening 95 7/8" (2435) x 95 3/4" (2432)

**MAXIMUM ASSEMBLY UP TO 5W5H:**

Rough Opening 114" (2896) x 78" (1981), Inside Opening 113 7/8" (2892) x 77 3/4" (1975)

**Packaged Terminal Air Conditioner (PTAC) Mulling** - Factory mullled below a Picture unit.

Mull options can not affect unit or RO size. Height of PTAC window frame will accommodate all PTAC sizes.

Standard PTAC height is 19 1/4" (489); standard PTAC width will match the upper unit width.

MAXIMUM ROUGH OPENING ASSEMBLY UP TO 1W2H: 72" (1289) X 96" (2438)

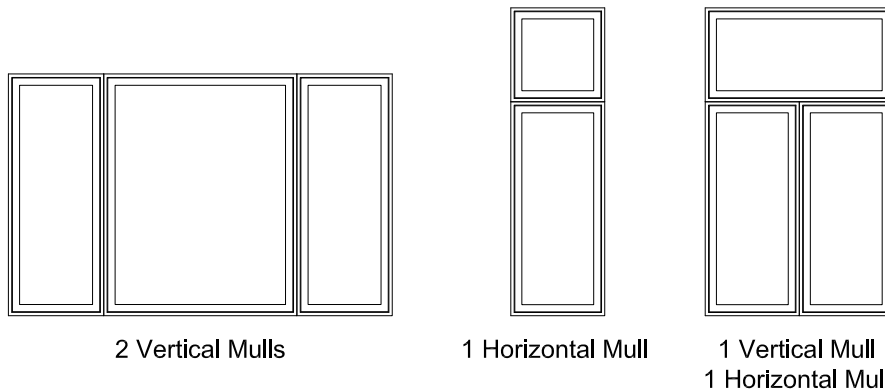
**CALCULATING TOTAL OPENING FOR ASSEMBLIES**

**WIDTH:** Rough Opening = Frame Widths + 1/2" (13) per mull + 1/2" (13), Inside Opening = Frame Widths + 1/2" (13) per mull + 3/8" (10).

Tolerance = 1/4" (6) from Frame to Rough Opening at left and right jamb, 3/16" (5) from Frame to Inside Opening at left and right jamb.

**HEIGHT:** Rough Opening = Frame Heights + 1/2" (13) per mull + 1/2" (13), Inside Opening = Frame Heights + 1/2" (13) per mull + 1/4" (6).

Tolerance = 1/2" (13) from Frame to Rough Opening at head jamb. 1/4" (6) from Frame to Inside Opening at head jamb.

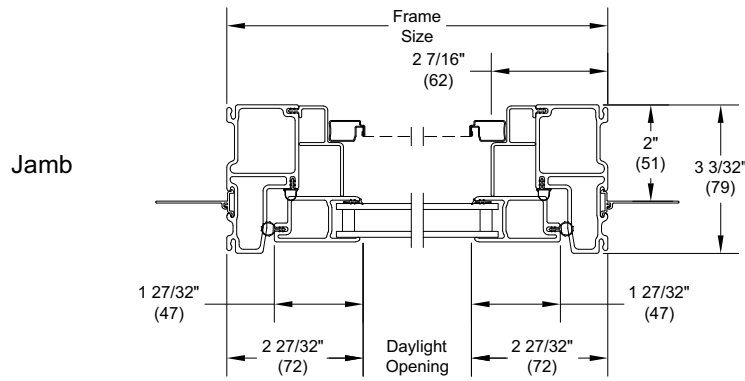
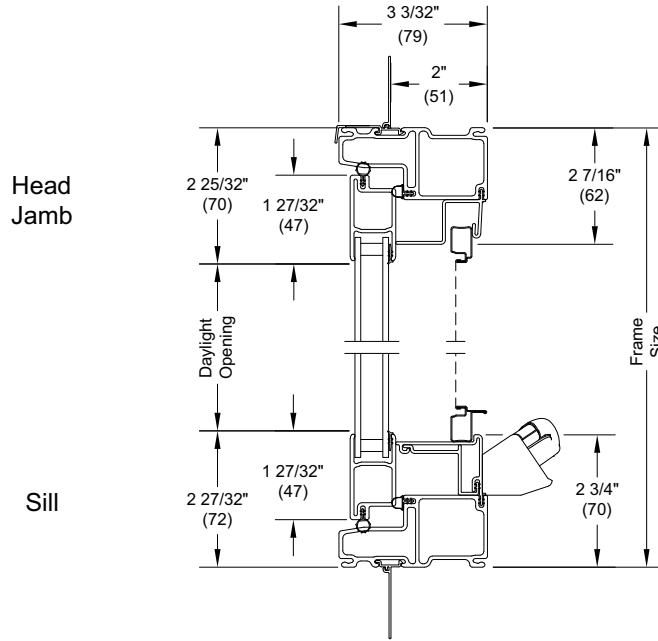


**Sizing Guidelines and Measurement Conversions**

Unit Measurements - Operator Casement and Awning					
From	To	Width		Height	
Frame Measurements		in	mm	in	mm
Masonry Opening	Rough Opening	0	()	+ 1/4	(6)
OM of Frame	Rough Opening	+ 1/2	(13)	+ 1/2	(13)
J-Channel OM	Rough Opening	-3/4	(19)	-3/4	-(19)
Glass Size	Rough Opening	+ 5 1/16	(129)	+ 5 1/16	(129)
Sash Opening	Rough Opening	+ 2 5/32	(55)	+ 2 5/32	(55)
Masonry Opening	Inside Opening	-1/8	(3)	0	()
OM of Frame	Inside Opening	+ 3/8	(10)	+ 1/4	(6)
J-Channel OM	Inside Opening	-7/8	(22)	-1	-(25)
Glass Size	Inside Opening	+ 4 15/16	(126)	+ 4 13/16	(122)
Sash Opening	Inside Opening	+ 2 1/32	(52)	+ 1 29/32	(49)
Sash		in	mm	in	mm
Glass Size	OM of Sash	+ 2 19/32	(66)	+ 2 19/32	(66)
OM of Sash	Rough Opening	+ 2 15/32	(63)	+ 2 15/32	(63)
OM of Sash	Inside Opening	+ 2 11/32	(60)	+ 2 7/32	(57)
Glass Size	Daylight Opening	-1 7/64	(28)	-1 7/64	(28)
Rough Opening	Daylight Opening	-6 11/64	(157)	-6 11/64	(157)
Inside Opening	Daylight Opening	-6 3/64	(154)	-5 59/64	(151)
Screen		in	mm	in	mm
Rough Opening	OM of Screen	-4 49/64	(121)	-5 11/64	(131)
Inside Opening	OM of Screen	-4 41/64	(118)	-4 59/64	(125)
Daylight Opening	OM of Screen	+ 1 27/64	(36)	+ 1 1/64	(26)

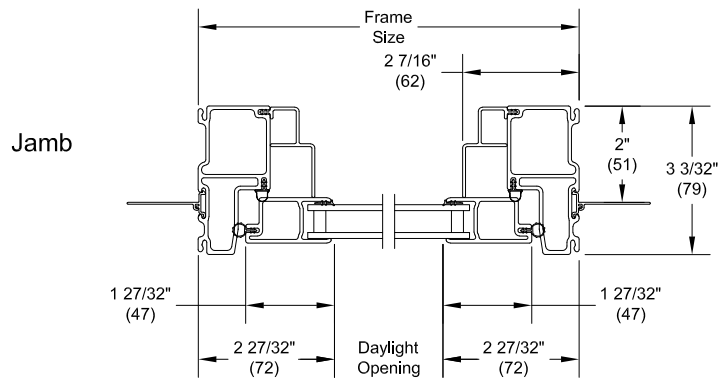
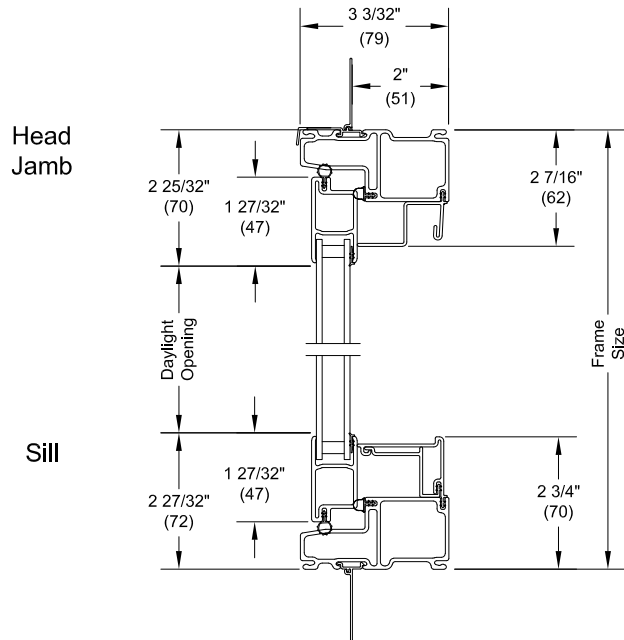
**Section Details: Operating - Casement / Awning - 2"**

Scale: 3" = 1' 0"



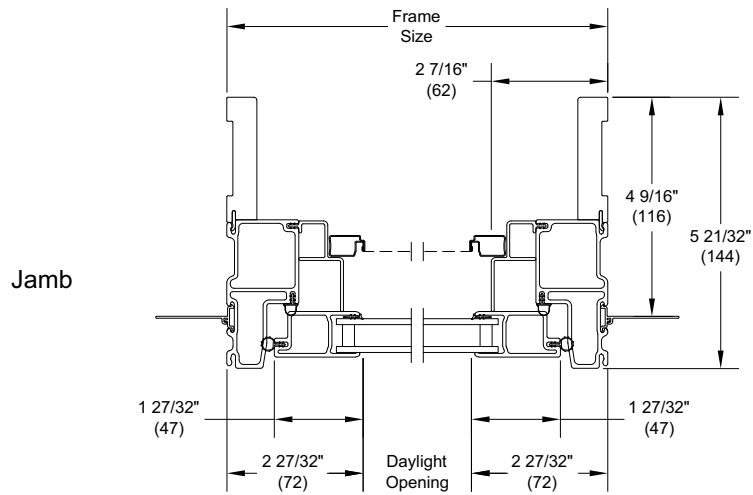
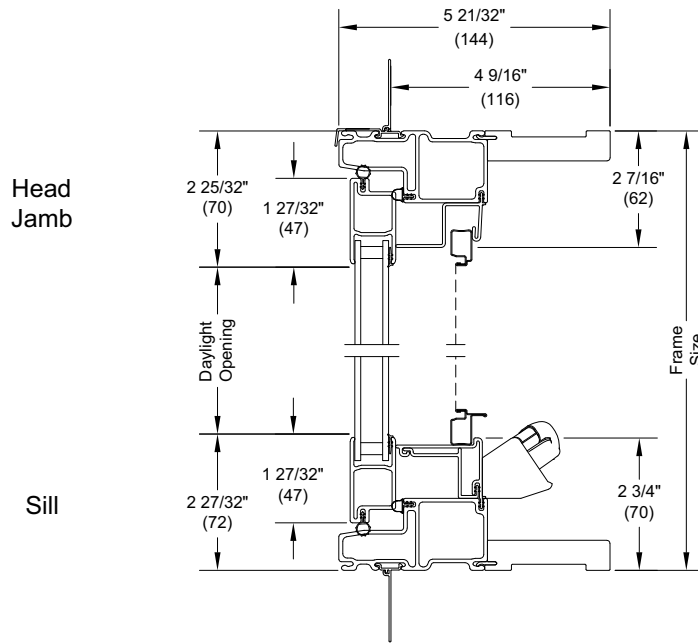
**Section Details: Stationary - Picture/Transom - 2"**

Scale: 3" = 1' 0"



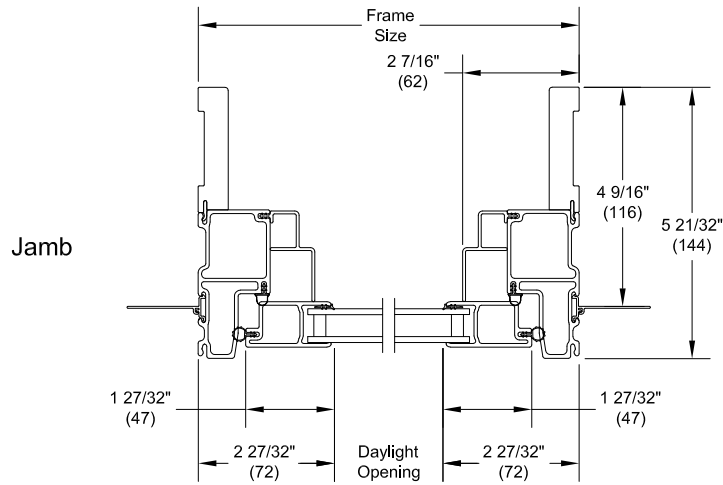
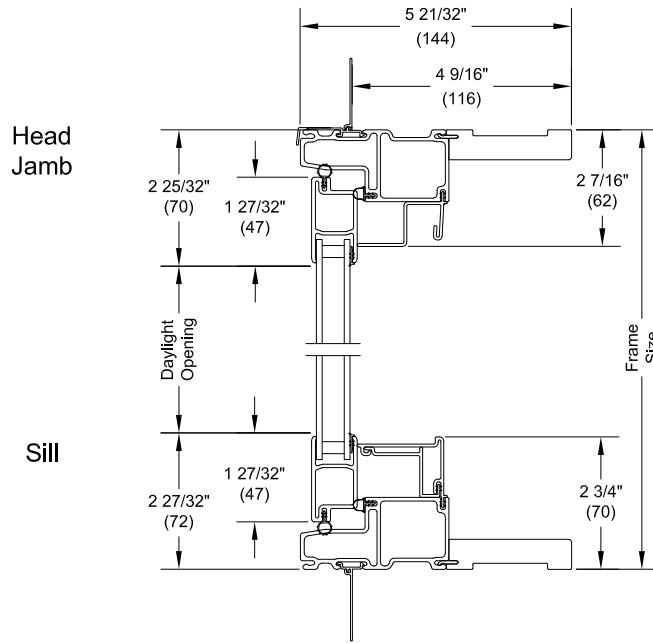
**Section Details: Operating - Casement / Awning - 4 9/16"**

Scale: 3" = 1' 0"



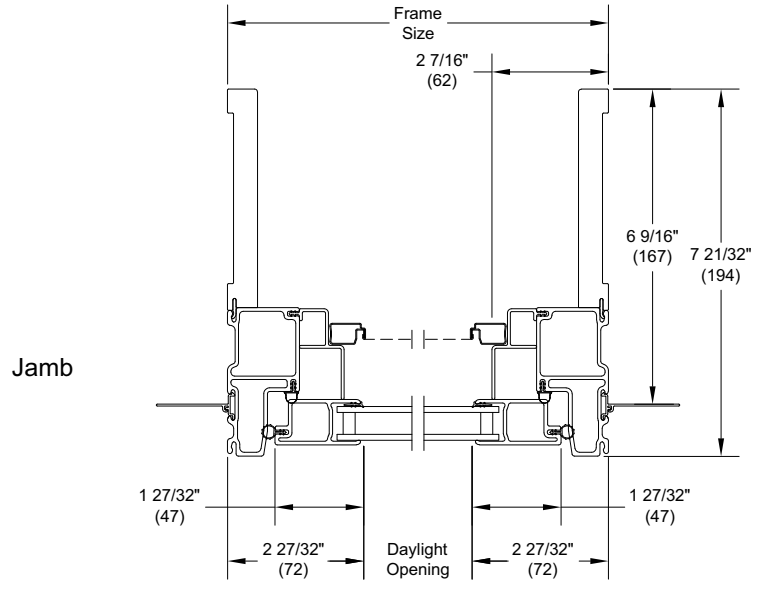
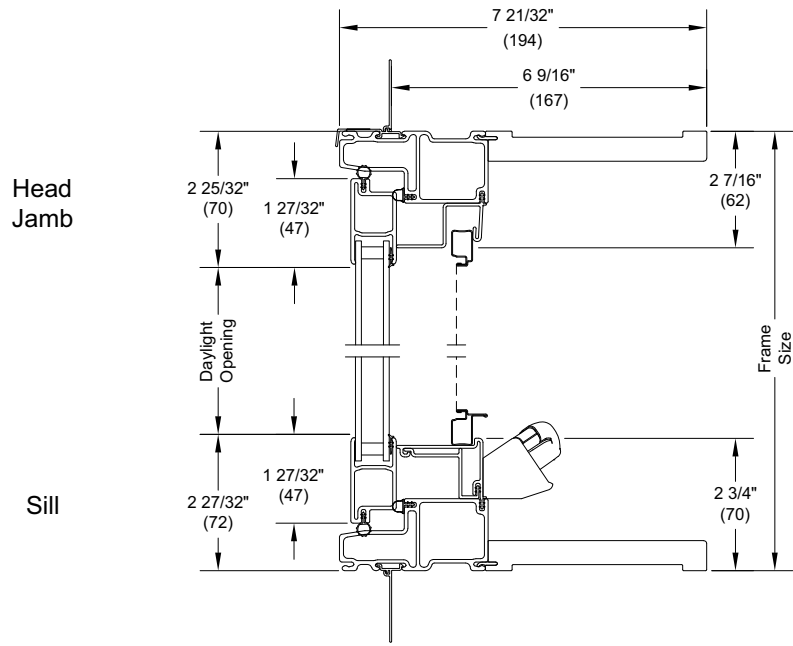
**Section Details: Stationary - Picture/Transom - 4 9/16"**

Scale: 3" = 1' 0"



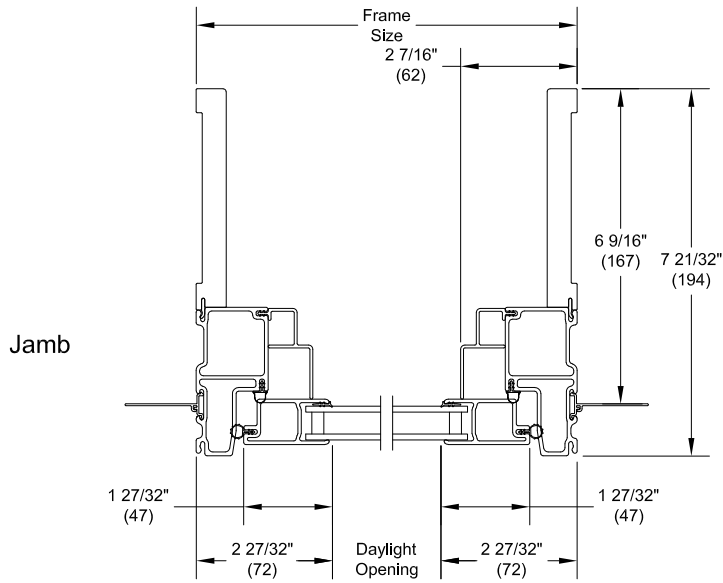
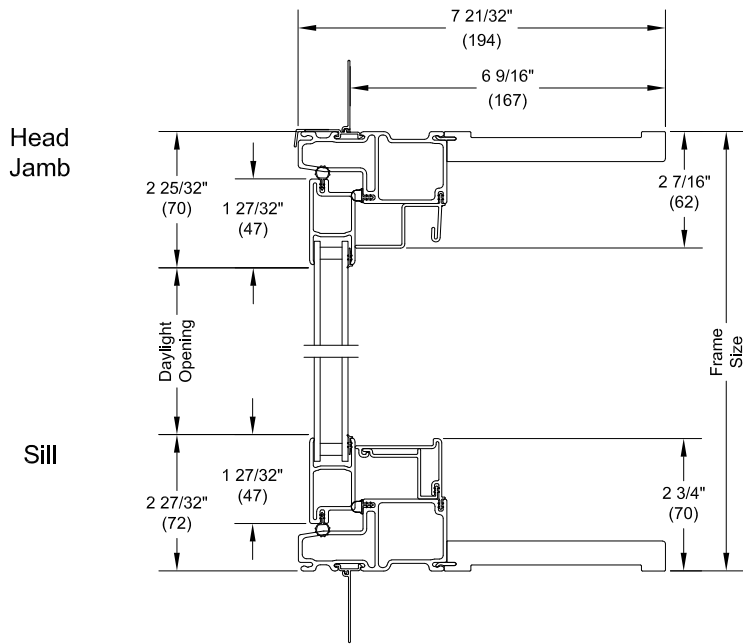
**Section Details: Operating - Casement / Awning - 6 9/16"**

Scale: 3" = 1' 0"



**Section Details: Stationary - Picture/Transom - 6 9/16"**

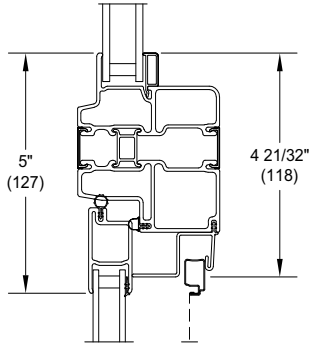
Scale: 3" = 1' 0"



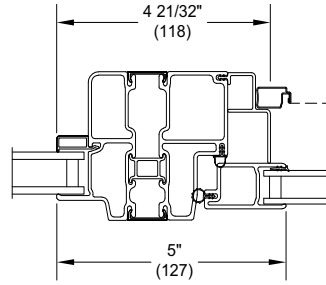


**Section Details: Mullions**

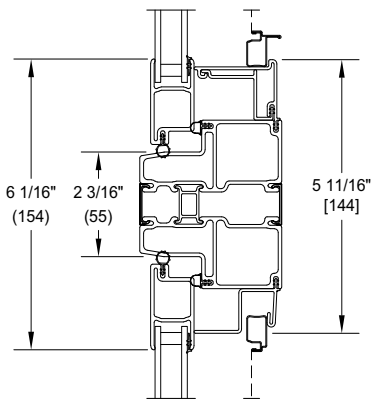
Scale: 3" = 1' 0"



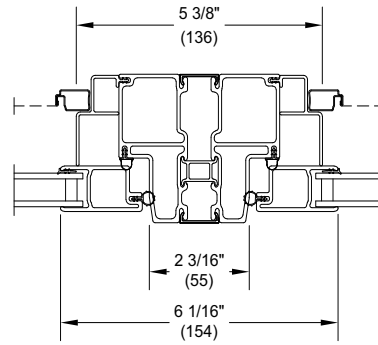
Horizontal Mull  
Polygon To  
Casement/Awning



Vertical Mull  
Polygon To  
Casement/Awning



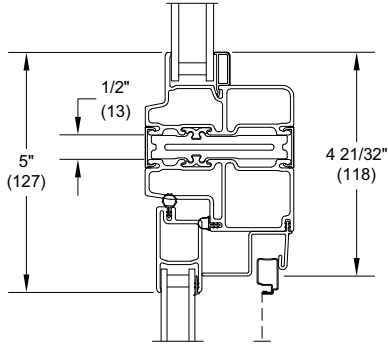
Horizontal Mull  
Casement/Awning To  
Casement/Awning



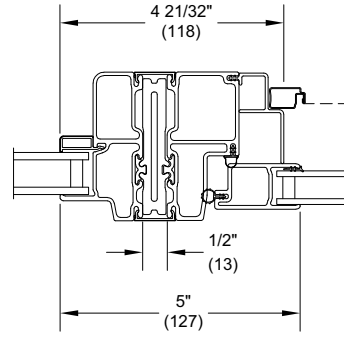
Vertical Mull  
Casement/Awning To  
Casement/Awning

**Section Details: Reinforced Mullions**

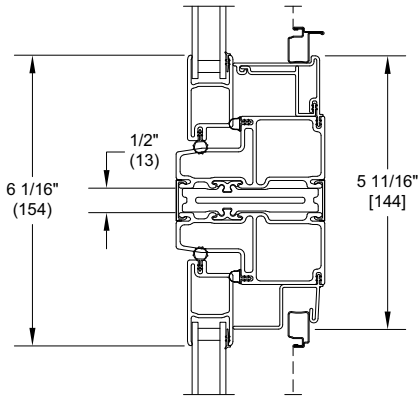
Scale: 3" = 1' 0"



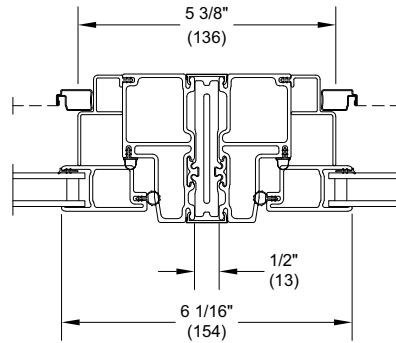
Horizontal Mull  
Polygon To  
Casement/Awning



Vertical Mull  
Polygon To  
Casement/Awning



Horizontal Mull  
Casement/Awning To  
Casement Awning



Vertical Mull  
Casement/Awning To  
Casement Awning

**GBG Lite Cuts**

**Divided Lite Patterns**

Standard CN Height	Standard CN Width							
	16	20	26	30	36	40	50	60
10	2W1H	3W1H	3W1H	3W1H	4W1H	4W1H	5W1H	7W1H
16	2W1H	3W1H	3W1H	3W1H	4W1H	4W1H	5W1H	7W1H
20	2W2H	3W2H	3W2H	3W2H	4W2H	4W2H	5W2H	7W2H
26	2W2H	3W2H	3W2H	3W2H	4W2H	4W2H	5W2H	7W2H
30	2W2H	3W2H	3W2H	3W2H	4W2H	4W2H	5W2H	7W2H
36	2W3H	3W3H	3W3H	3W3H	4W3H	4W3H	5W3H	7W3H
40	2W3H	3W3H	3W3H	3W3H	4W3H	4W3H	5W3H	7W3H
46	2W4H	3W4H	3W4H	3W4H	4W4H	4W4H	5W4H	7W4H
50	2W4H	3W4H	3W4H	3W4H	4W4H	4W4H	5W4H	7W4H
56	2W5H	3W5H	3W5H	3W5H	4W5H	4W5H	5W5H	N/A
60	2W5H	3W5H	3W5H	3W5H	4W5H	4W5H	5W5H	N/A

**Optional Standard Cottage Pattern per sash - GBG**

Standard CN Height	Standard CN Width							
	16	20	26	30	36	40	50	60
All Heights	4-Lite	4-Lite	4-Lite	4-Lite	5-Lite	5-Lite	6-Lite	8-Lite

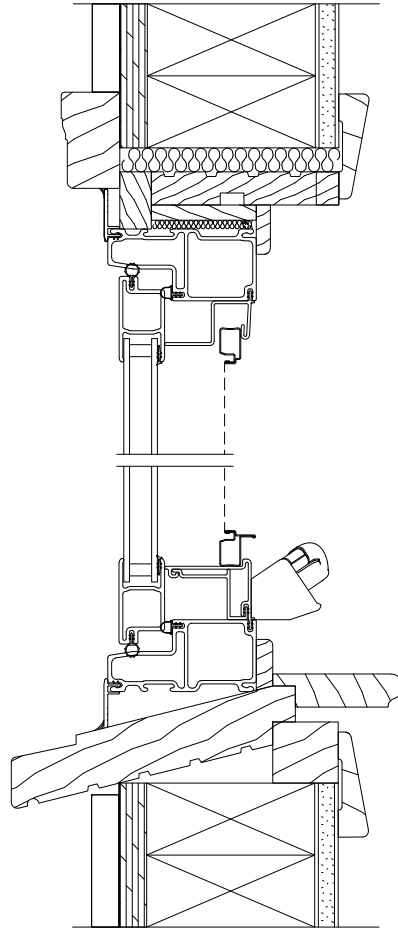
**NOTES:**

- Rectangle GBGs for special size units will default to the next smaller standard size lite pattern. Also available will be Prairie patterns, Cottage patterns, and customer specified equal rectangular lite pattern.
- Prairie available in 9 lite and 6 lite top, bottom, left, and right patterns.
- Cottage GBGs for special size units will default to the next smaller standard size lite pattern. Cottage GBGs are also available in customer selected lite patterns.
- Minimum DLO measurement for equal lite GBG option is 3" (76) and will be validated by OMS.
- Standard DLO measurement for Prairie GBG option is 4" (102). Special DLO corners are not applicable.
- Standard DLO height measurement for Cottage GBG option is 10" (254). Minimum DLO height is 3" (76) for both one and two high patterns.

**Installation Suggestion - Frame Expander**

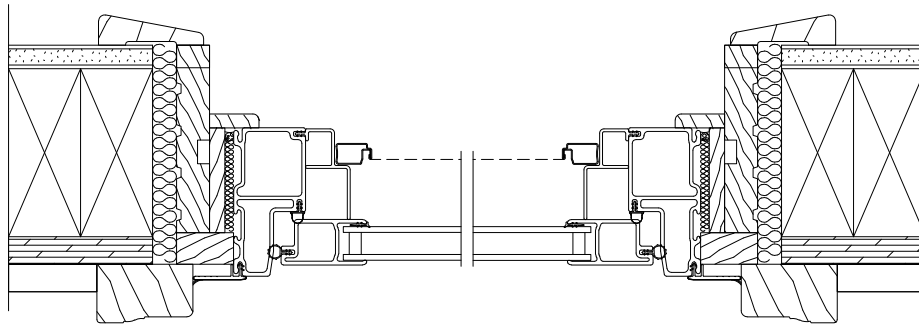
Scale: 1 1/2" - 1' 0"

Head  
Jamb



Sill

Jamb

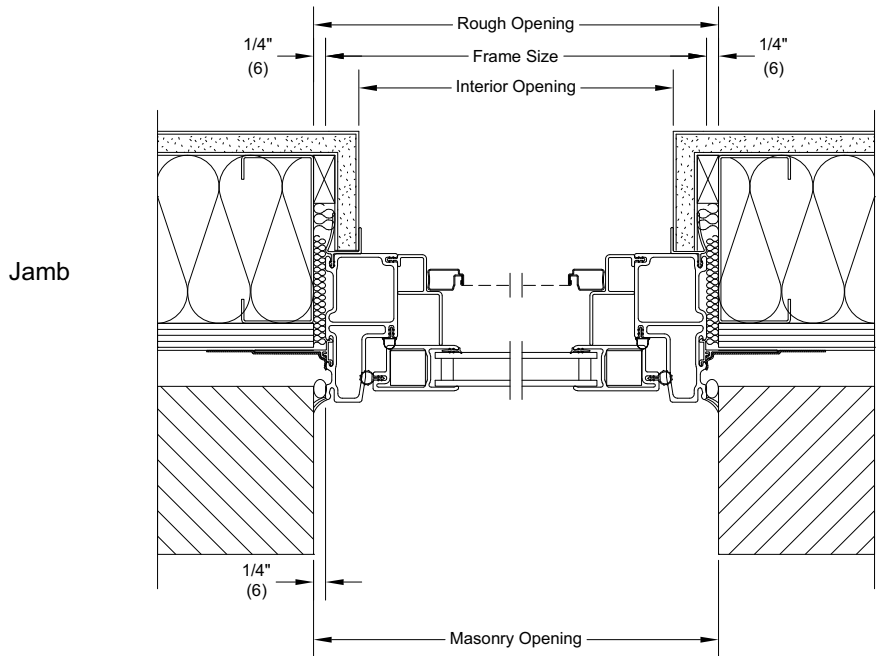
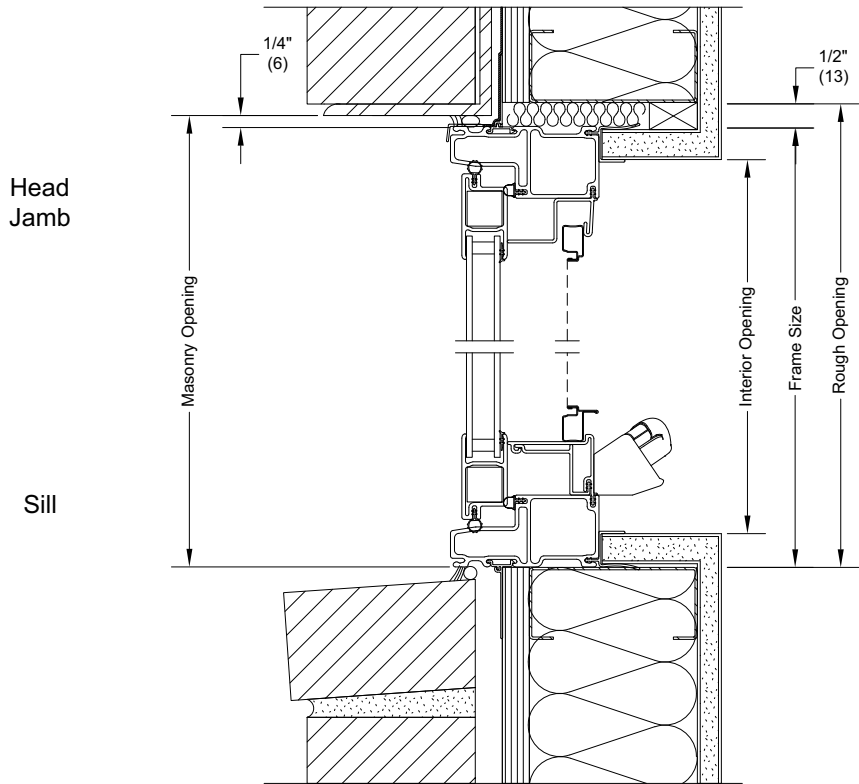


**NOTES:**

*The above wall sections represent typical wall conditions, these details are not intended as installation instructions. Please refer to the installation instructions provided with the purchased units.*

**Installation Suggestion - Brick Veneer with Steel Frame Construction**

Scale: 1 1/2" - 1' 0"



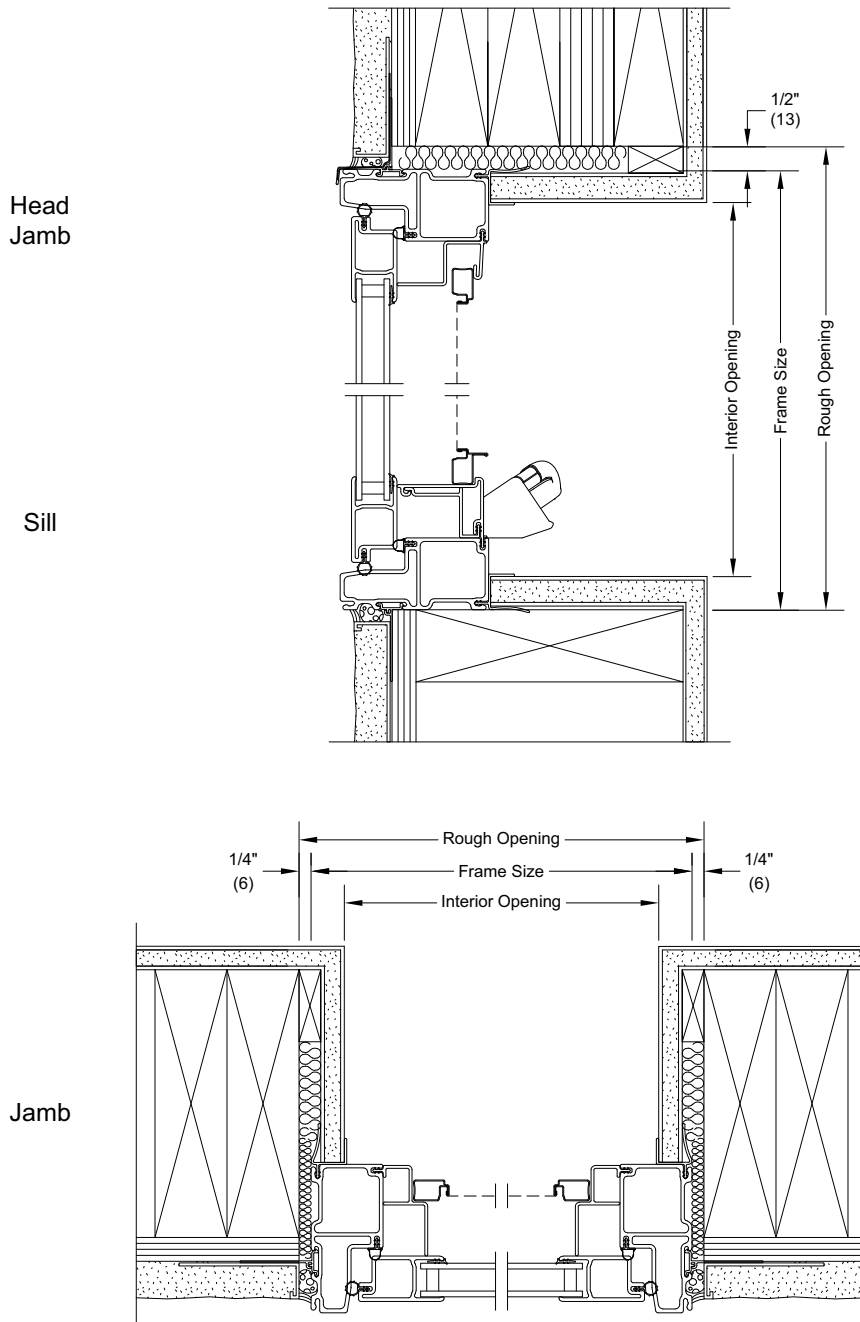
**NOTES:**

*Shown with optional sheet rock return. Picture unit installation similar.*

*The above wall sections represent typical wall conditions, these details are not intended as installation instructions. Please refer to the installation instructions provided with the purchased units.*

**Installation Suggestion - Stucco with 2x6 Frame Construction**

Scale: 1 1/2" - 1' 0"



**NOTES:**

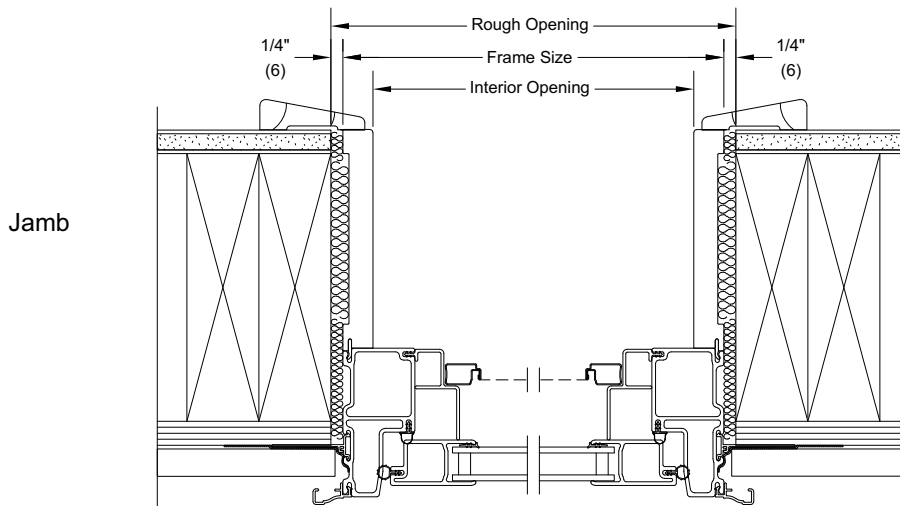
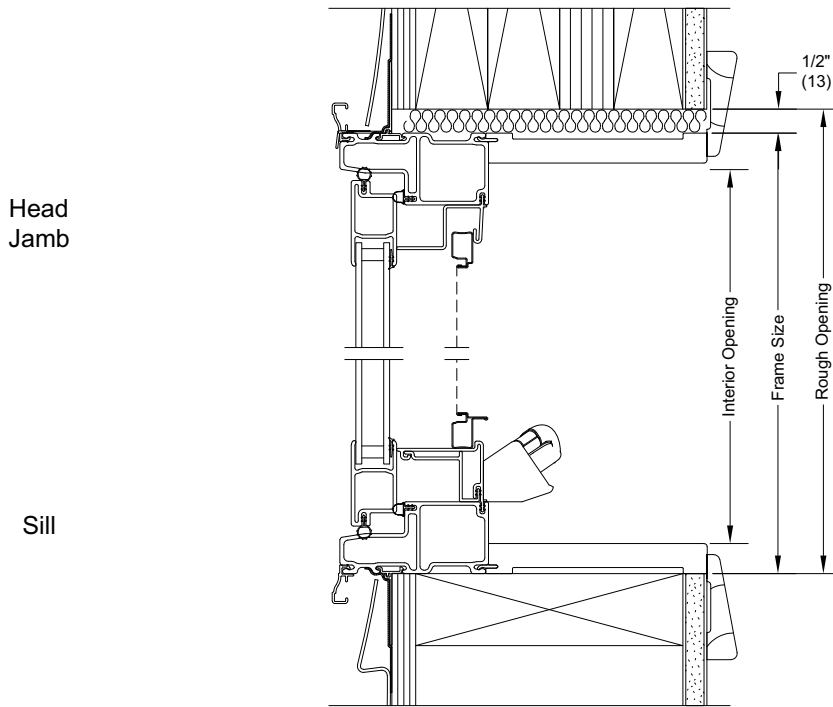
*Shown with optional sheet rock return.*

*Picture unit installation similar.*

*The above wall sections represent typical wall conditions, these details are not intended as installation instructions. Please refer to the installation instructions provided with the purchased units.*

**Installation Suggestion - Vinyl Siding with Steel 2x6 Frame Construction**

Scale: 1 1/2" - 1' 0"



**NOTES:**

*Shown with optional sheet rock return. Picture unit installation similar.*

*The above wall sections represent typical wall conditions, these details are not intended as installation instructions. Please refer to the installation instructions provided with the purchased units.*