

## **Features**

- 1600UT System™1 is a high thermal performance, outside glazed, captured curtain wall system
- Innovative design delivers high thermal performance while leveraging 1600 Wall System architecture
- Multiple thermal performance levels resulting from a combination of:
  - 1" (25.4), 1-1/4" (31.8), 1-5/16" (33.34) double or 1-3/4" (44.5), triple glazed insulating glass units
  - Aluminum or fiberglass pressure plates
- Thermal barrier design ensures high thermal performance without being susceptible to thermal fatigue
- Offers integrated entrance framing systems
- Corners and splays
- Comprehensively tested to latest high performance air, water, structural and thermal standards
- Glass chairs support insulating glass units enabling larger expanses of glass
- Pressure equalized system tested with vapor barrier
- Two color option
- Permanodic™ anodized finishes in seven choices
- Painted finishes in standard and custom choices

## **Optional Features**

- Steel reinforcing
- Rain screen and backpans
- Deep profile covers and bull nose covers
- Deep and heavy-weight mullions
- Integrates with standard Kawneer windows and GLASSvent™ Windows for curtain wall
- Profit\$Maker™ Plus die sets
- Storm Shelter ICC 500-2014
- Blast Mitigation
- Human Impact

## **Product Applications**

- Ideal for low to mid-rise applications where high thermal performance is desired
- High span applications

For specific product applications,  
consult your Kawneer representative.

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**Architects** - Most extrusion and window types illustrated in this catalog are standard products for Kawneer. These concepts have been expanded and modified to afford you design freedom. Some miscellaneous details are non-standard and are intended to demonstrate how the system can be modified to expand design flexibility. Please contact your Kawneer representative for further assistance.

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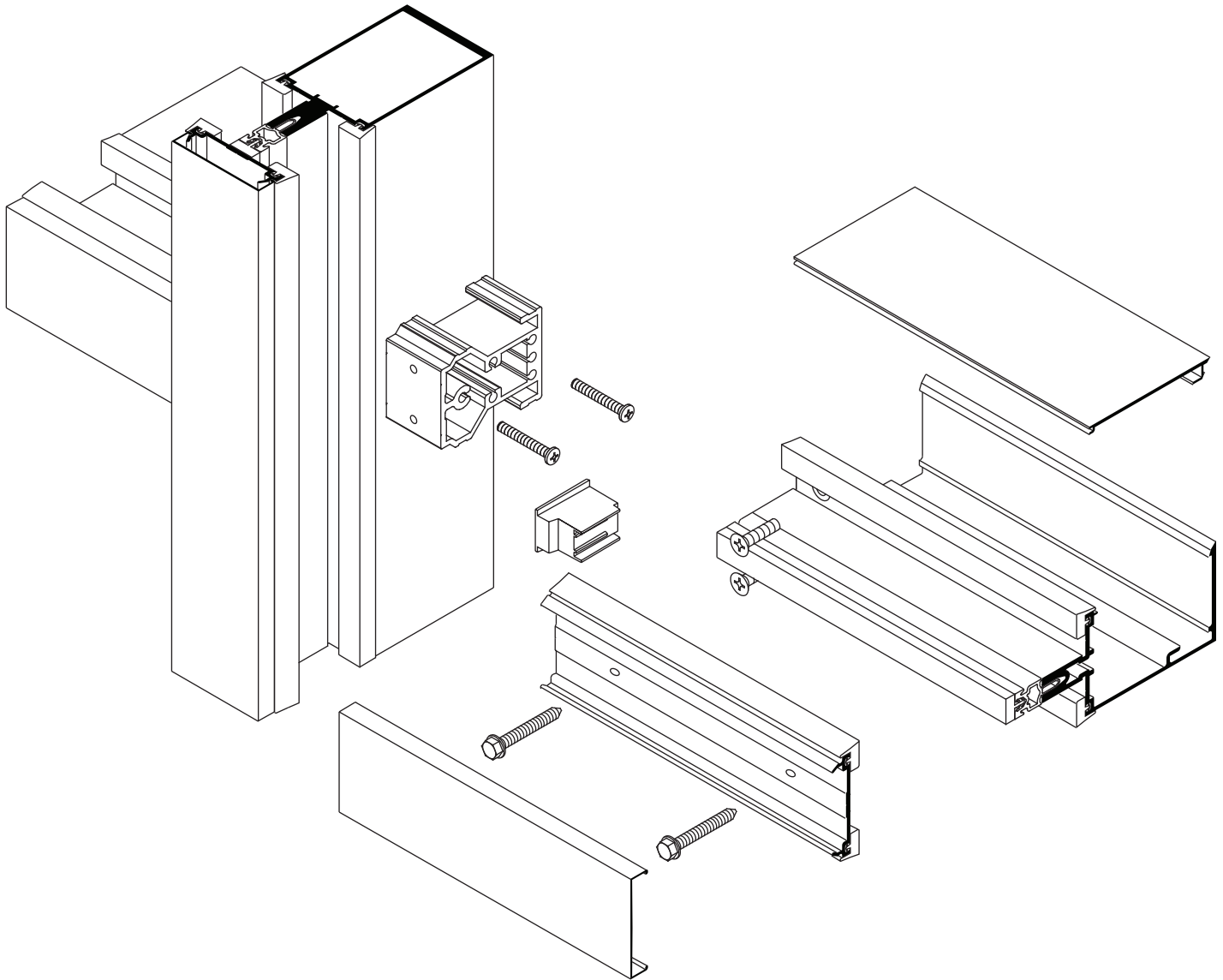
Metric (SI) conversion figures are included throughout these details for reference. Numbers in parentheses ( ) are millimeters unless otherwise noted.

The following metric (SI ) units are found in these details:

- m – meter
- cm – centimeter
- mm – millimeter
- s – second
- Pa – pascal
- MPa – megapascal

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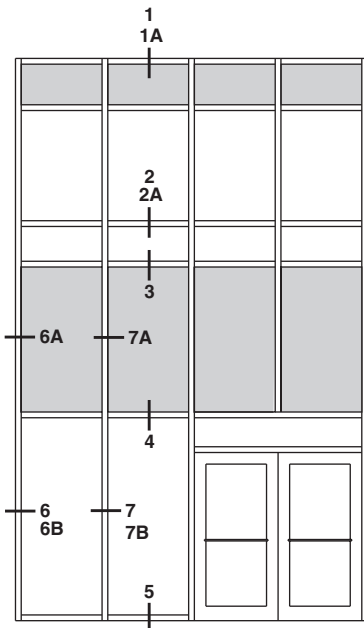
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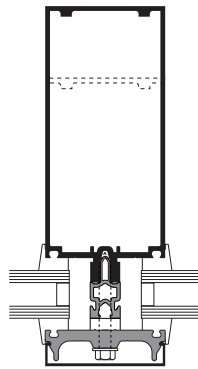
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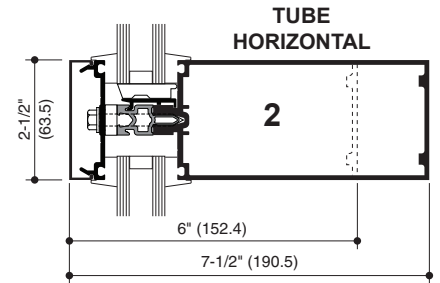
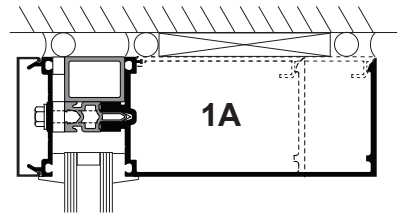
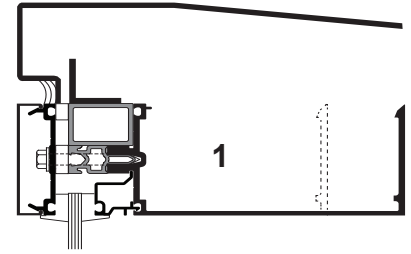
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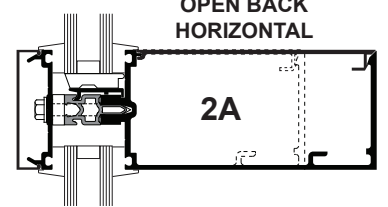
ELEVATION IS NUMBER KEYED TO DETAILS



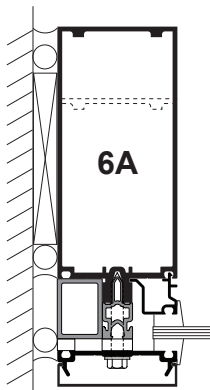
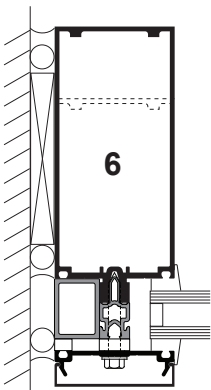
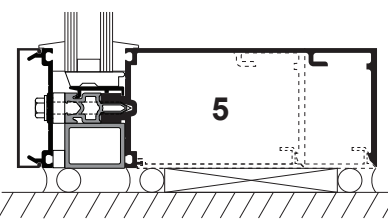
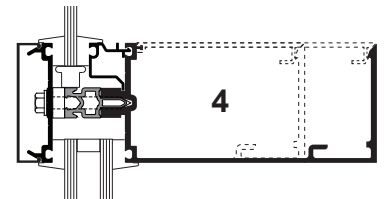
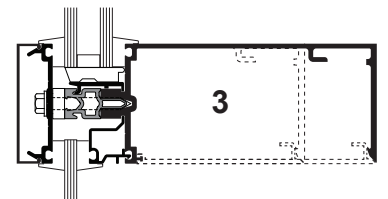
OPTIONAL  
FIBERGLASS  
PRESSURE PLATE



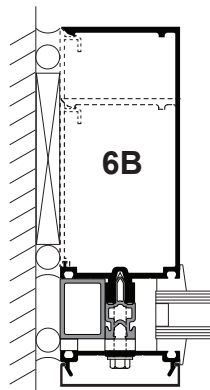
TUBE  
HORIZONTAL



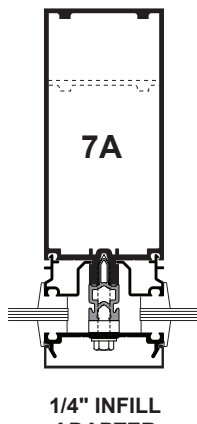
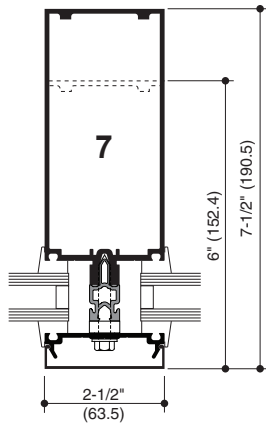
OPEN BACK  
HORIZONTAL



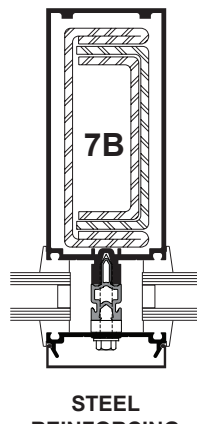
1/4" INFILL  
ADAPTER



OPEN BACK JAMB



1/4" INFILL  
ADAPTER

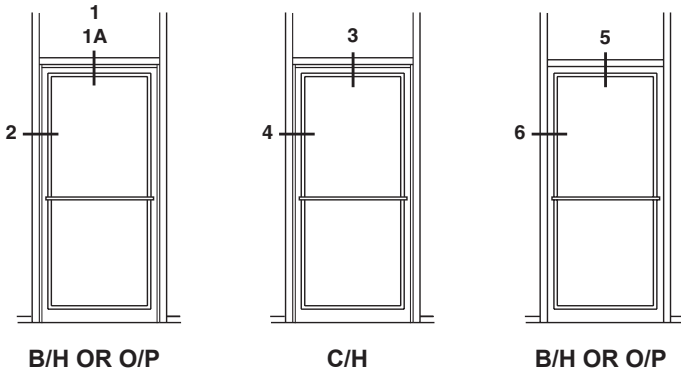


STEEL  
REINFORCING  
AS REQUIRED

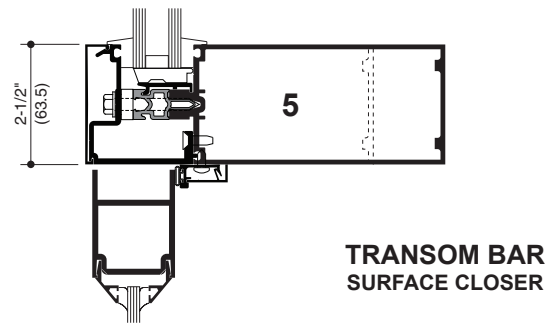
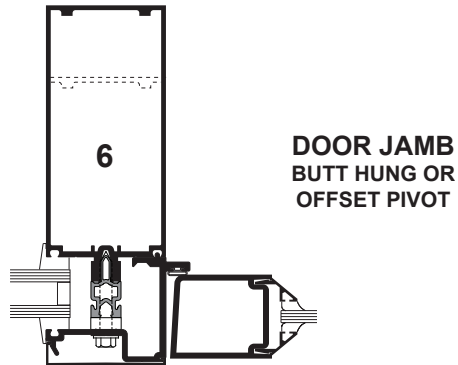
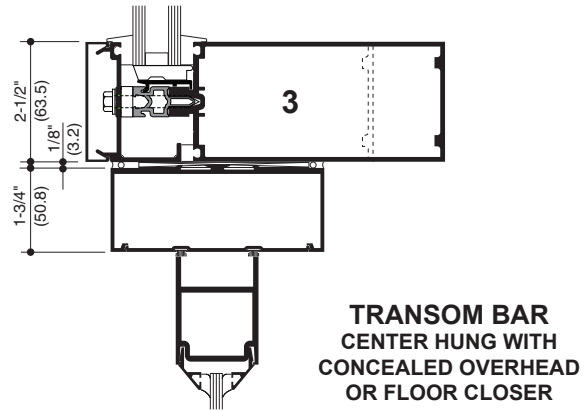
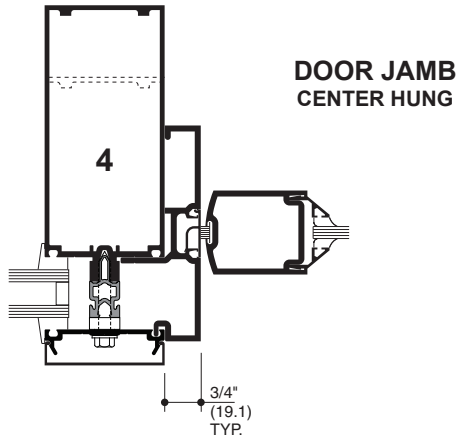
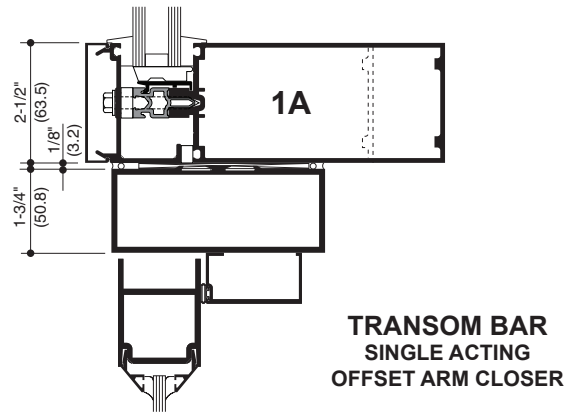
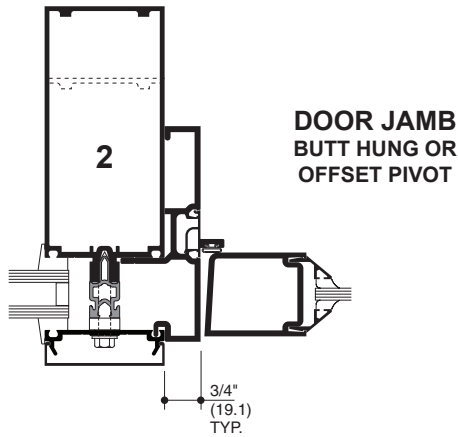
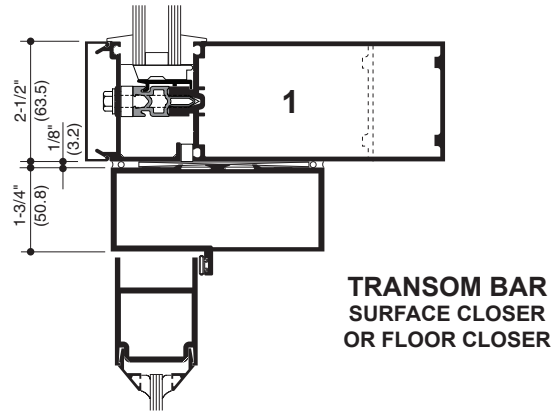
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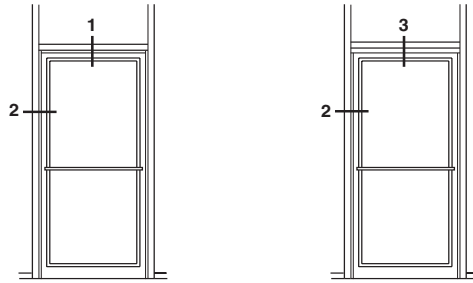
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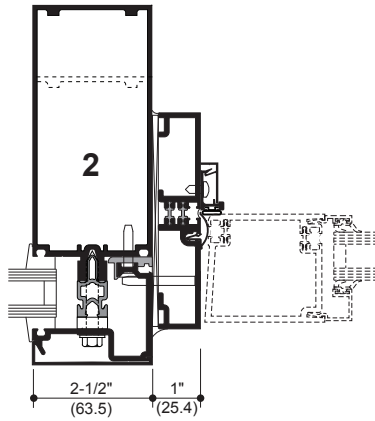
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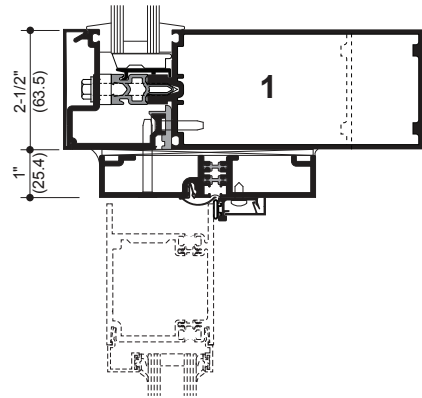


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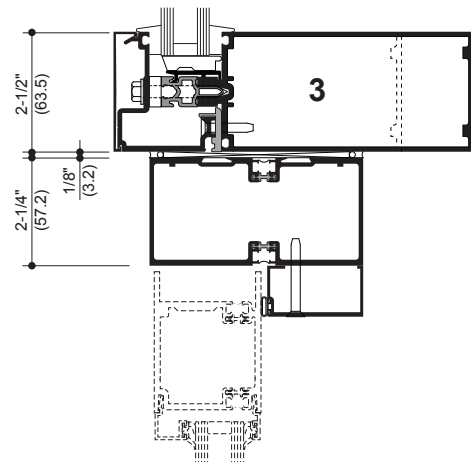
ELEVATION IS NUMBER KEYED TO DETAILS



**DOOR JAMB  
BUTT HUNG OR  
OFFSET PIVOT**



**TRANSOM BAR  
SURFACE CLOSER  
OR FLOOR CLOSER**

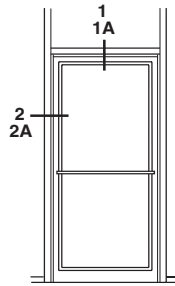


**TRANSOM BAR  
CONCEALED CLOSER**

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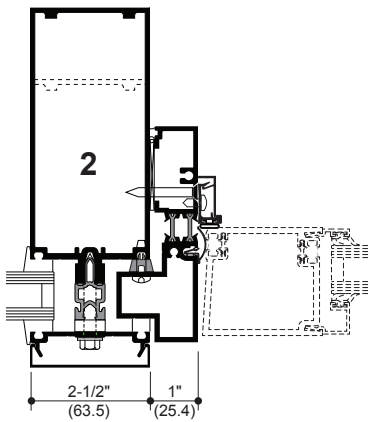
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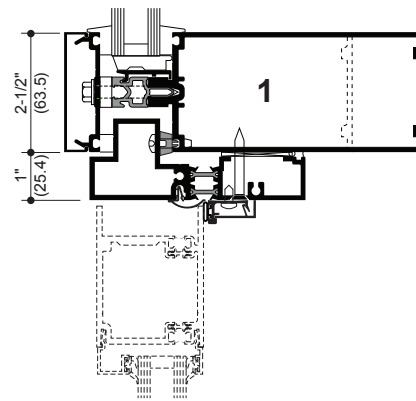


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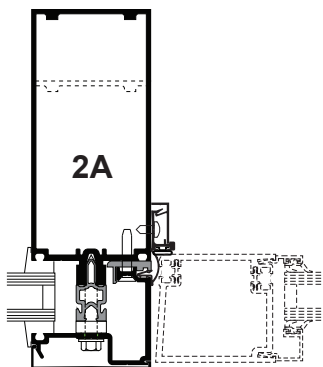
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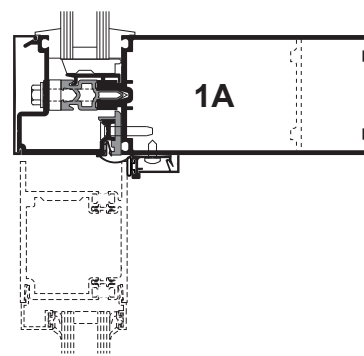
**DOOR JAMB  
BUTT HUNG OR  
OFFSET PIVOT**



**TRANSOM BAR  
SURFACE CLOSER  
OR FLOOR CLOSER**



**DOOR JAMB  
BUTT HUNG OR  
OFFSET PIVOT**

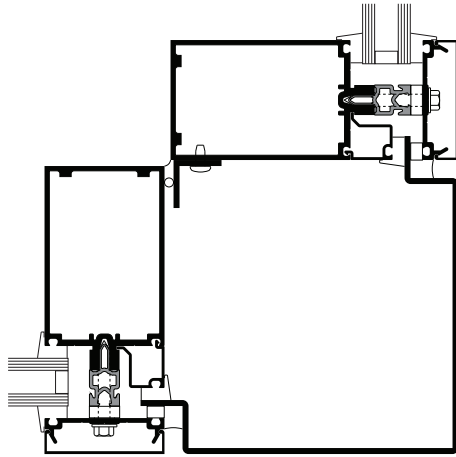


**TRANSOM BAR  
SURFACE CLOSER  
OR FLOOR CLOSER**

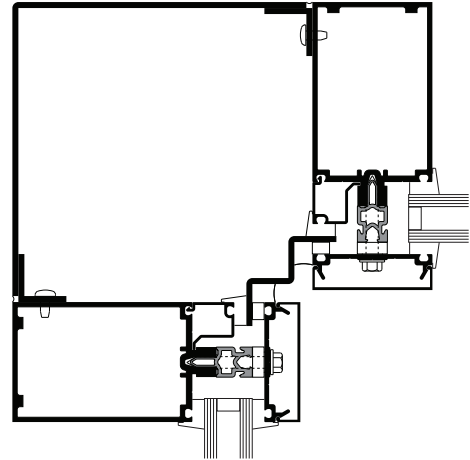
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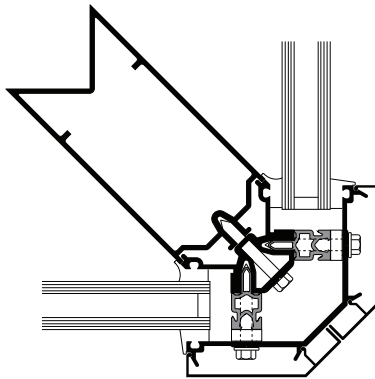
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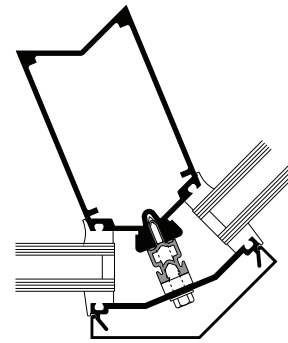
90° OUTSIDE CORNER



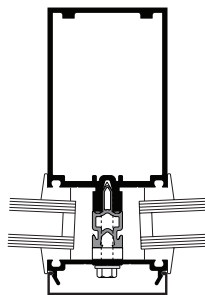
90° INSIDE CORNER



90° OUTSIDE CORNER

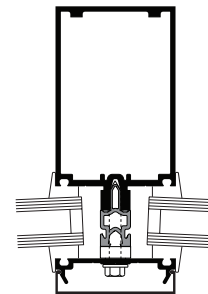


135° OUTSIDE CORNER



0° TO 5°

OUTSIDE SPLAYED MULLIONS



0° TO 5°

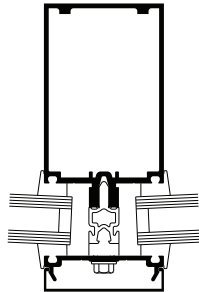
INSIDE SPLAYED MULLIONS

OTHER SPLAY OPTIONS AVAILABLE

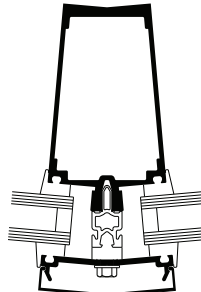
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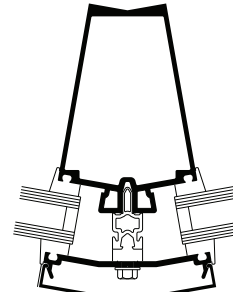
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0° TO 5°

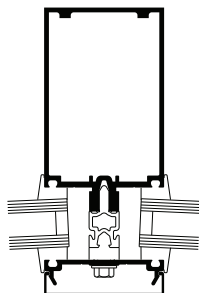


5° TO 15°

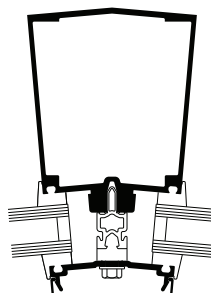


15° TO 25°

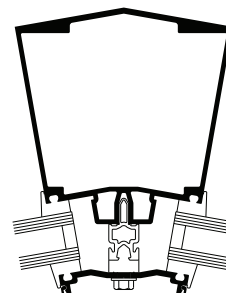
### OUTSIDE SPLAYED MULLIONS



0° TO 5°



5° TO 15°



15° TO 25°

### INSIDE SPLAYED MULLIONS

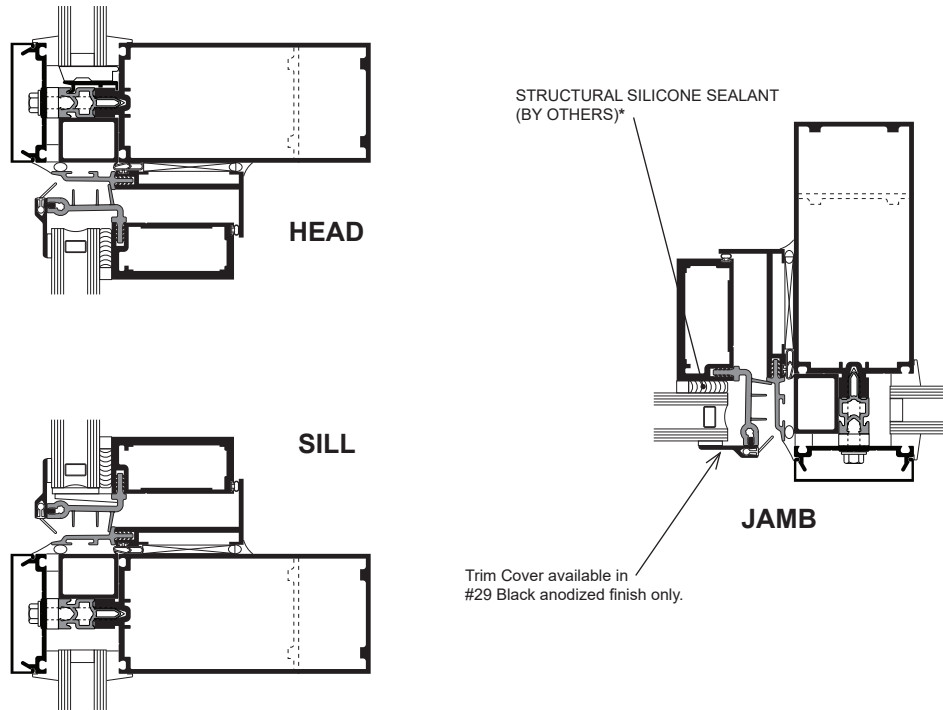
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## GLASSvent™ UT Windows

**\* INSTALLER NOTE:** Installer is responsible for all required compatibility review and approvals with the Structural Silicone Manufacturer and the Insulating Glass Unit Manufacturer.

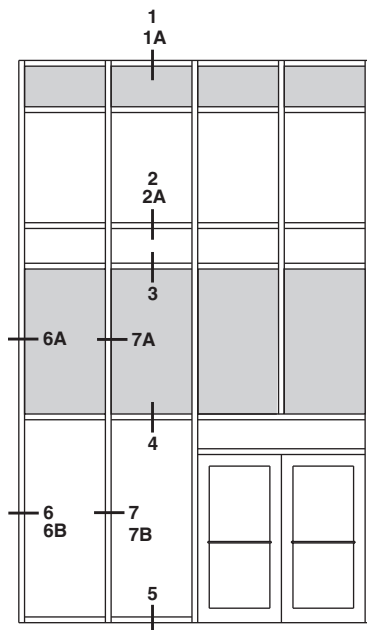


**NOTE:** AA™6400 vent can be accommodated.  
Contact your Kawneer representative for other options.

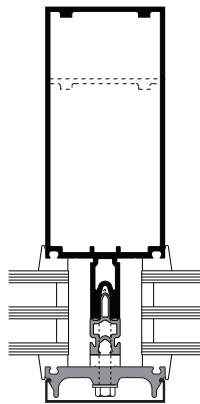
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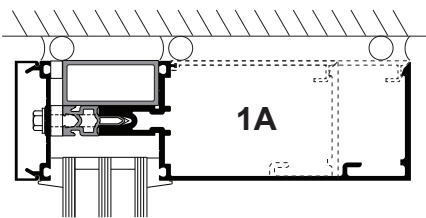
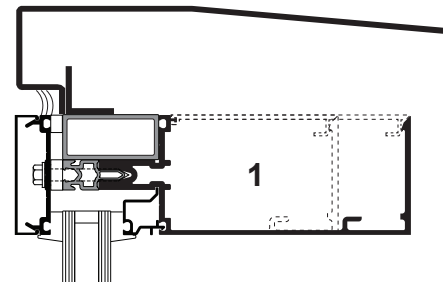
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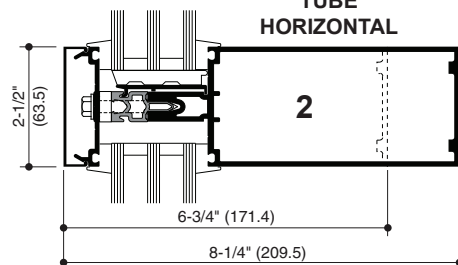
ELEVATION IS NUMBER KEYED TO DETAILS



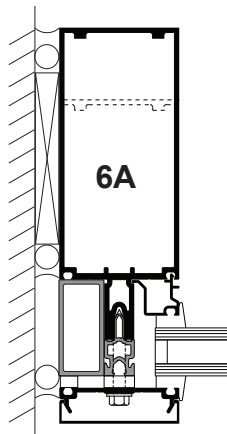
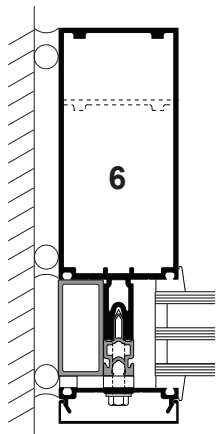
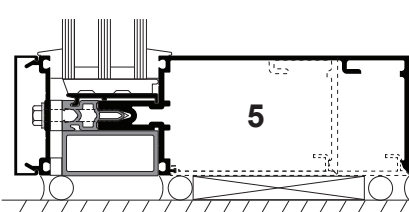
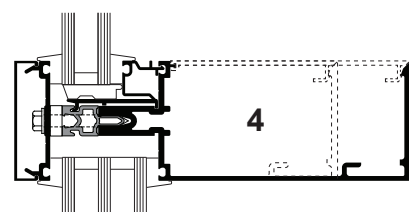
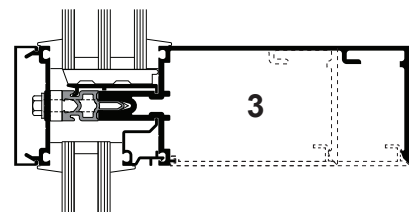
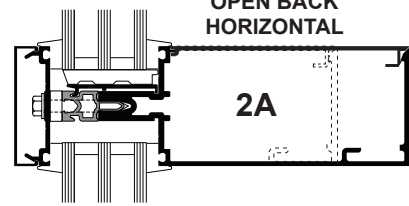
OPTIONAL  
FIBERGLASS  
PRESSURE PLATE



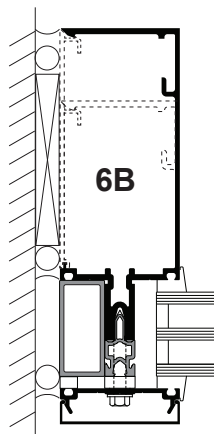
TUBE  
HORIZONTAL



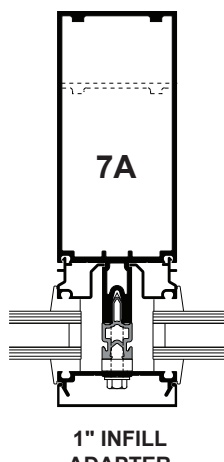
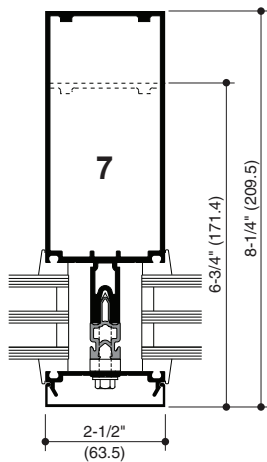
OPEN BACK  
HORIZONTAL



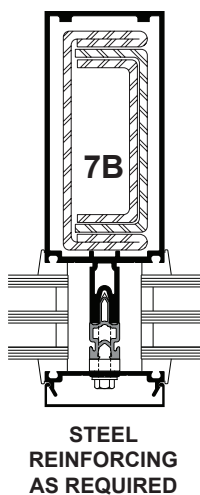
1" INFILL  
ADAPTER



OPEN BACK JAMB



1" INFILL  
ADAPTER



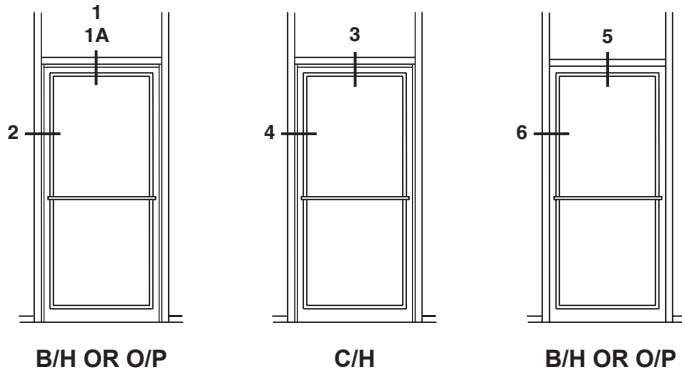
STEEL  
REINFORCING  
AS REQUIRED

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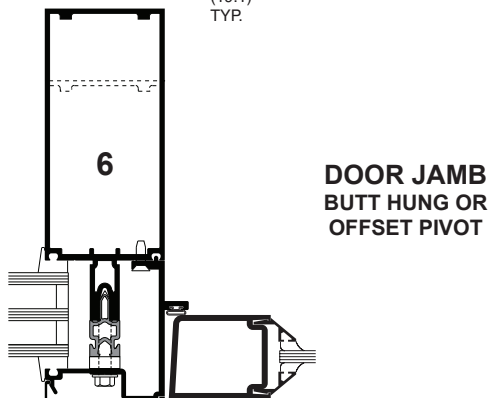
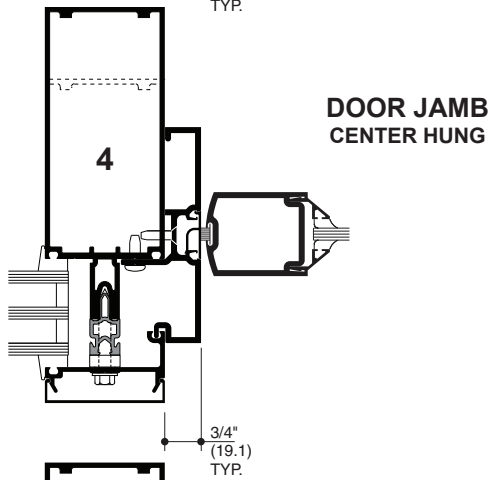
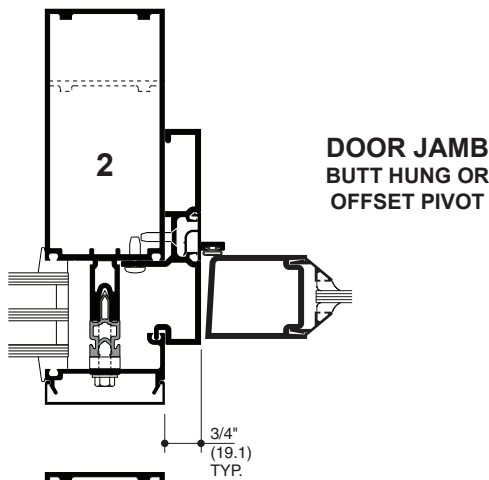
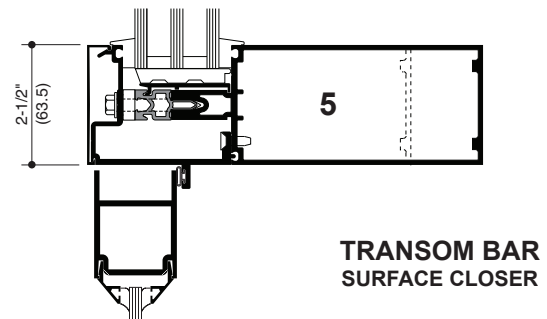
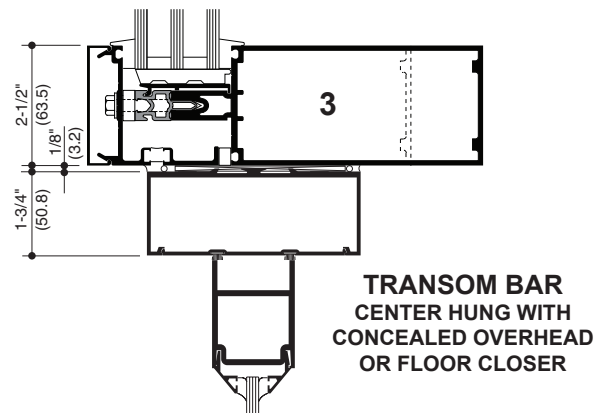
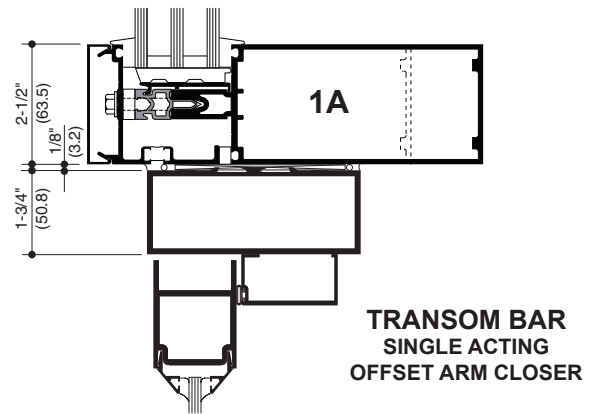
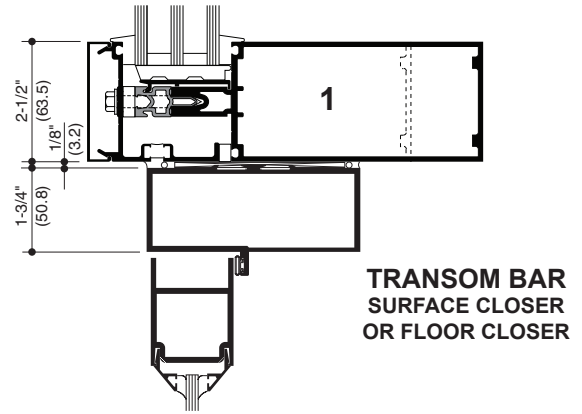
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Additional information and CAD details are available at [www.kawneer.com](http://www.kawneer.com)



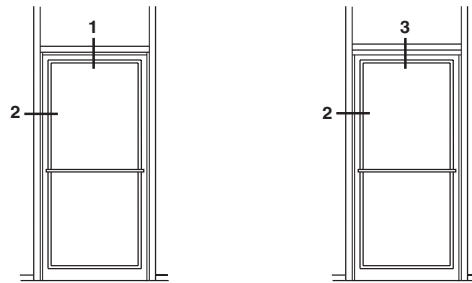
ELEVATION IS NUMBER KEYED TO DETAILS



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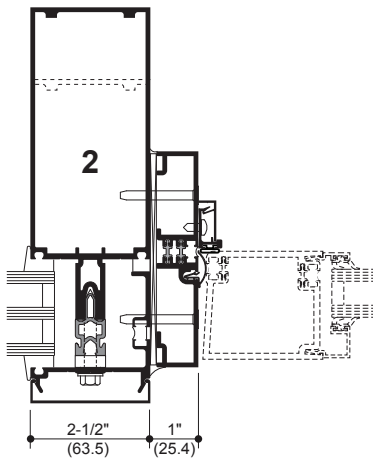
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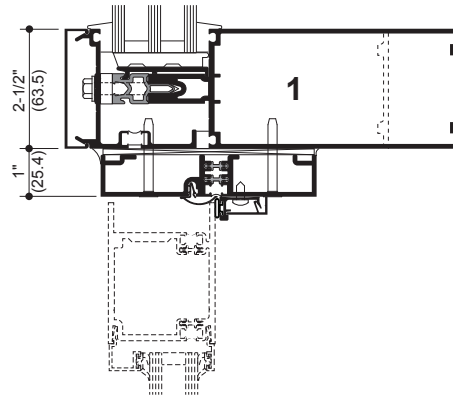


B/H OR O/P

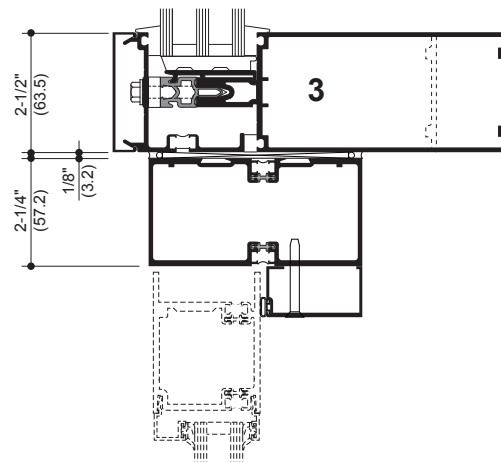
ELEVATION IS NUMBER KEYED TO DETAILS



**DOOR JAMB  
BUTT HUNG OR  
OFFSET PIVOT**



**TRANSOM BAR  
SURFACE CLOSER  
OR FLOOR CLOSER**

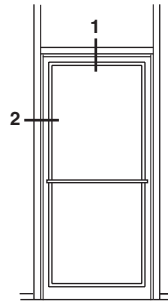


**TRANSOM BAR  
CONCEALED CLOSER**

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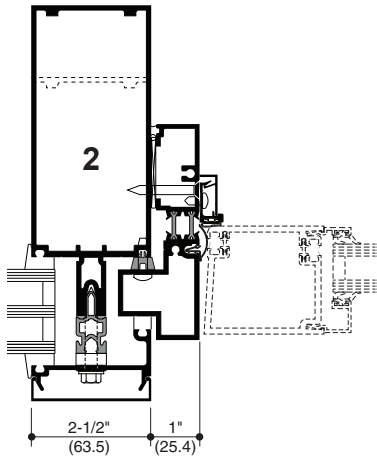
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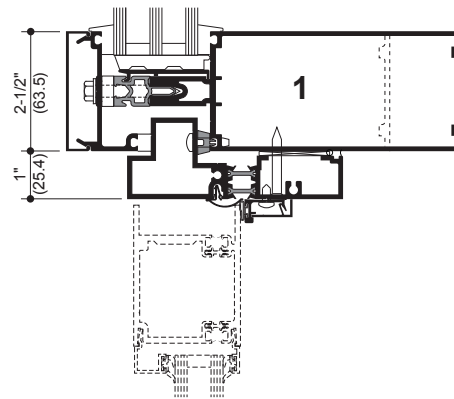


**B/H OR O/P**

**ELEVATION IS NUMBER KEYED TO DETAILS**



**DOOR JAMB  
BUTT HUNG OR  
OFFSET PIVOT**

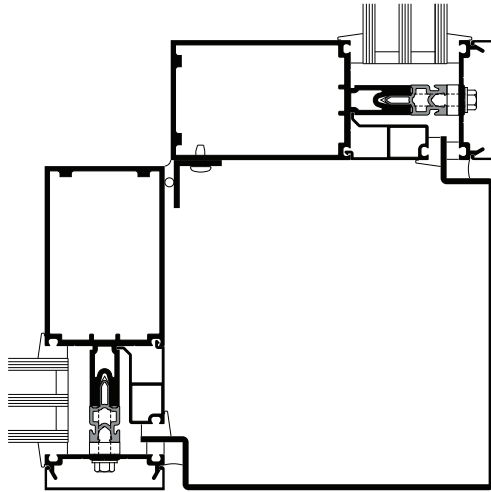


**TRANSOM BAR  
SURFACE CLOSER  
OR FLOOR CLOSER**

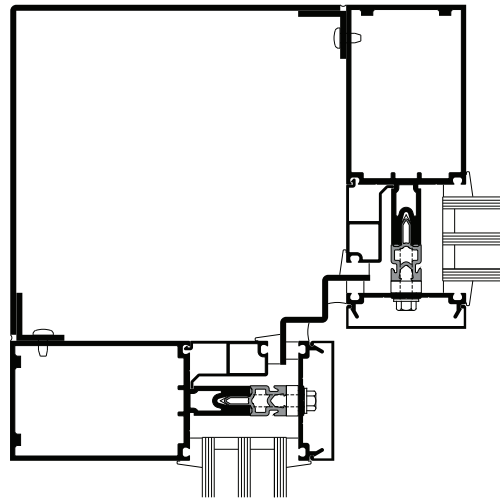
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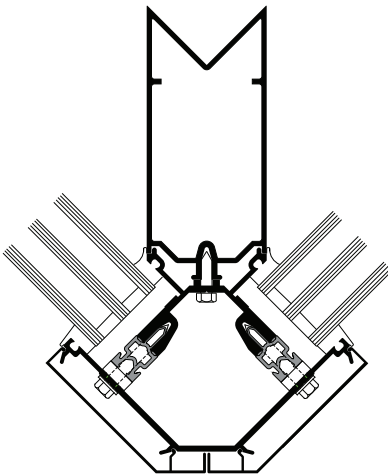
Additional information and CAD details are available at [www.kawneer.com](http://www.kawneer.com)



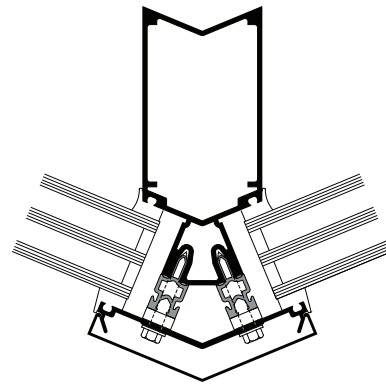
**90° OUTSIDE CORNER**



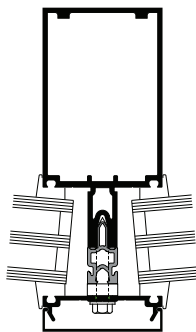
**90° INSIDE CORNER**



**90° OUTSIDE CORNER**

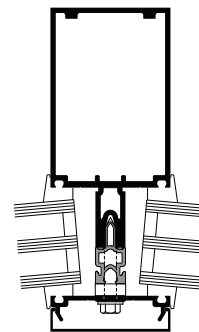


**135° OUTSIDE CORNER**



**0° TO 5°**

**OUTSIDE SPLAYED MULLIONS**



**0° TO 5°**

**INSIDE SPLAYED MULLIONS**

**OTHER SPLAY OPTIONS AVAILABLE**

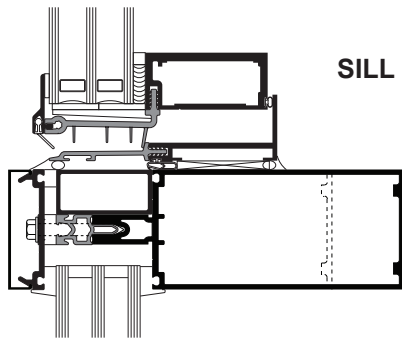
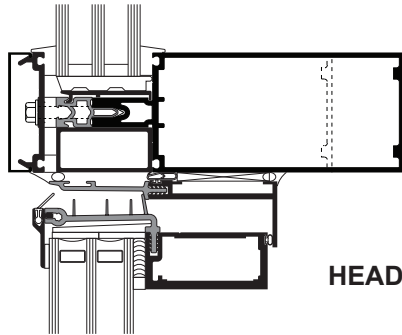
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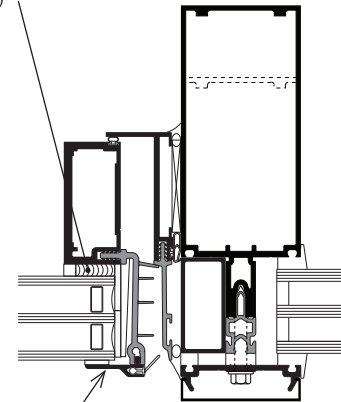
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## GLASSvent™ UT Windows

**\* INSTALLER NOTE:** Installer is responsible for all required compatibility review and approvals with the Structural Silicone Manufacturer and the Insulating Glass Unit Manufacturer.



STRUCTURAL SILICONE SEALANT  
(BY OTHERS)\*



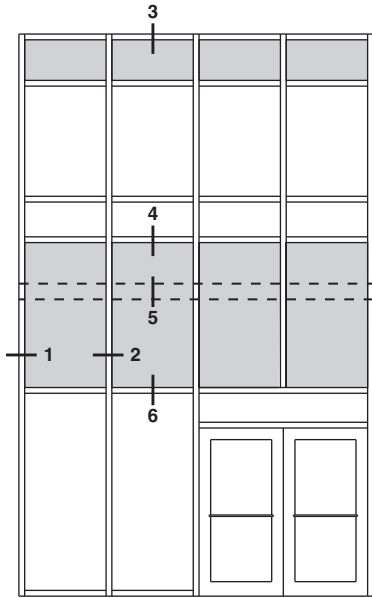
Trim Cover available in  
#29 Black anodized finish only.

**NOTE:** AA™6400 vent can be accommodated.  
Contact your Kawneer representative for other options.

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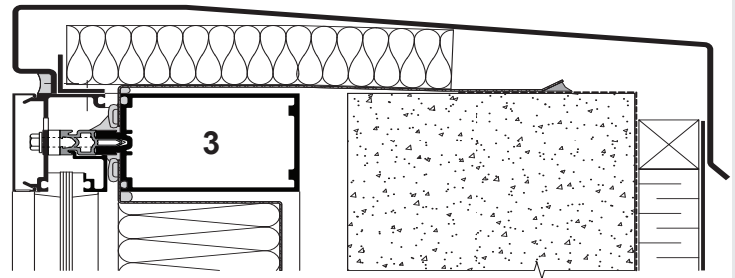
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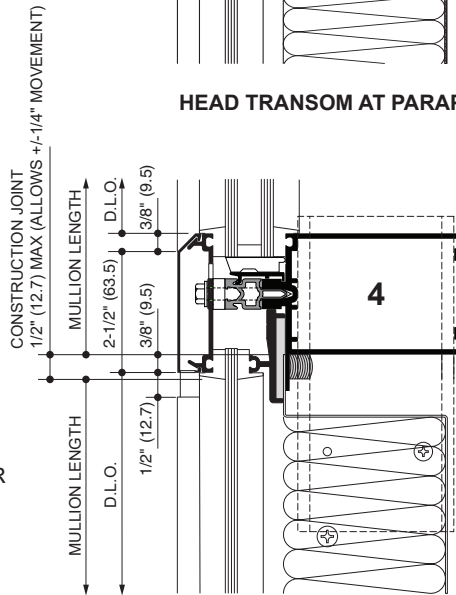


ELEVATION IS NUMBER KEYED TO DETAILS

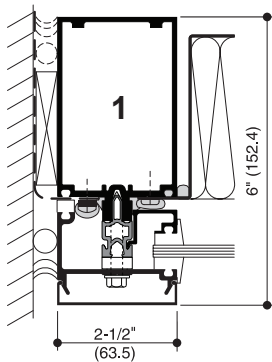
NOTE: 6" SYSTEM SHOWN, 7-1/2" SYSTEM SIMILAR



HEAD TRANSOM AT PARAPET FLASHING

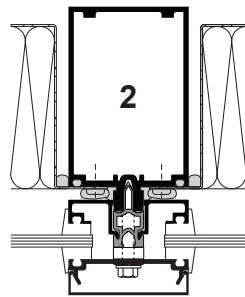


EXPANSION JOINT

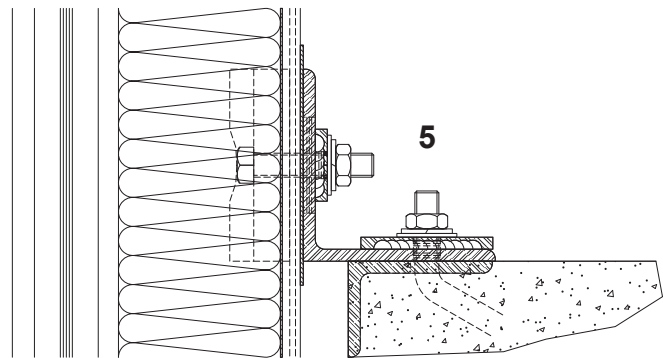


JAMB MULLION AT SPANDREL

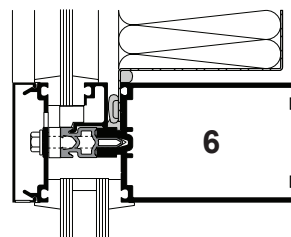
(With vapor barrier tie-in)



MULLION AT SPANDREL



TYPICAL DEADLOAD ANCHOR

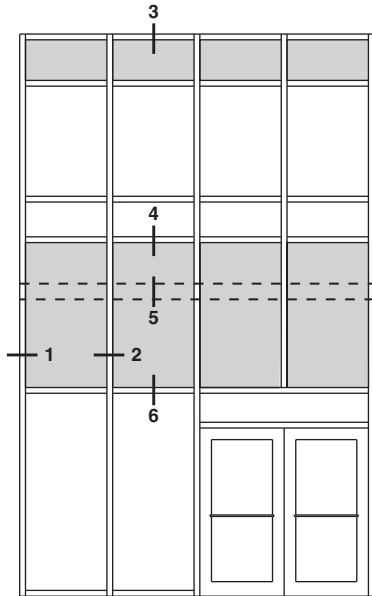


TRANSOM – SPANDREL OVER VISION

Laws and building and safety codes governing the design and use of Kawneer products, such as glazed entrance, window, and curtain wall products, vary widely. Kawneer does not control the selection of product configurations, operating hardware, or glazing materials, and assumes no responsibility therefor.

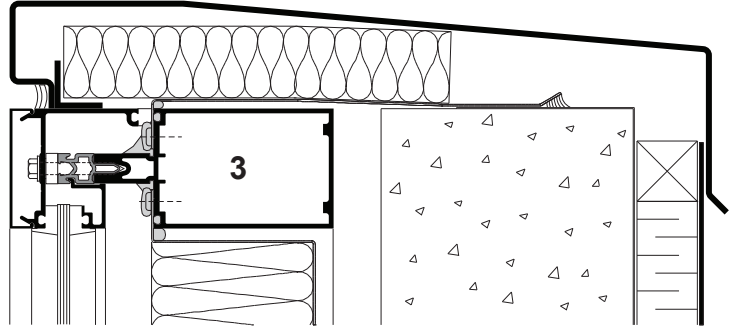
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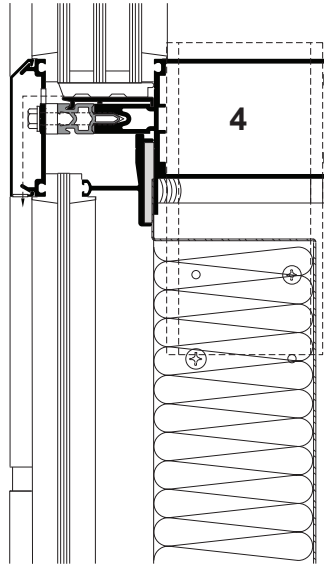


ELEVATION IS NUMBER KEYED TO DETAILS

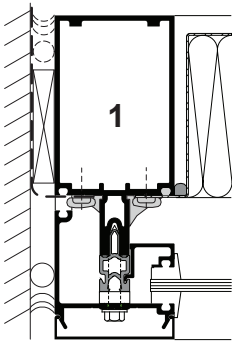
NOTE: 6" SYSTEM SHOWN, 7-1/2" SYSTEM SIMILAR



HEAD TRANSOM AT PARAPET FLASHING

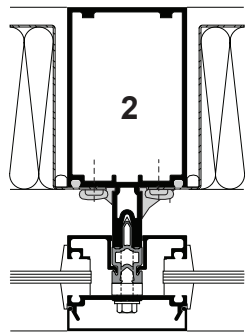


EXPANSION JOINT

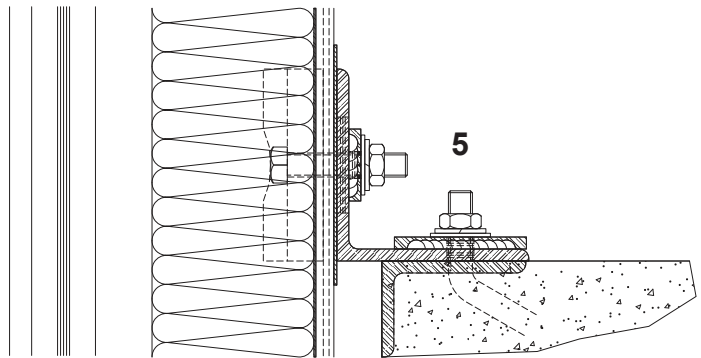


JAMB MULLION AT SPANDREL

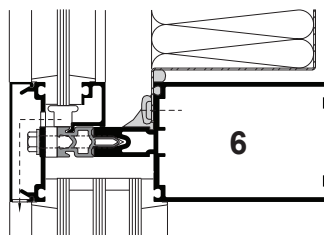
(With vapor barrier tie-in)



MULLION AT SPANDREL



TYPICAL DEADLOAD ANCHOR



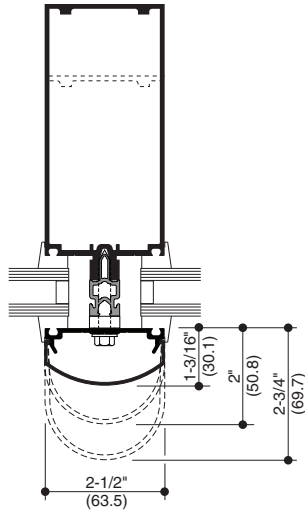
TRANSOM - SPANDREL OVER VISION

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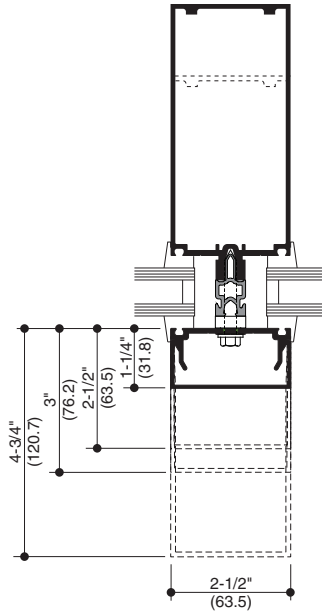
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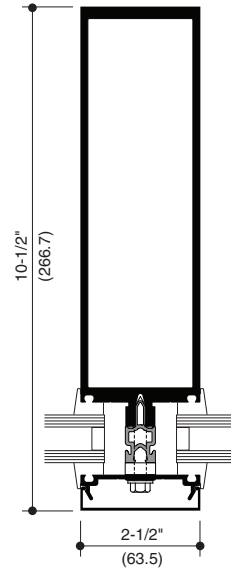
Architects – Most extrusion and window types illustrated in this catalog are standard products for Kawneer. These concepts have been expanded and modified to afford you design freedom. Some miscellaneous details are non-standard and are intended to demonstrate how the system can be modified to expand design flexibility. Please contact your Kawneer representative for further assistance.



**OPTIONAL  
BULL NOSE COVERS**

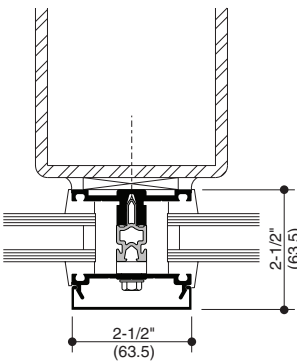


**OPTIONAL  
DEEP COVERS**

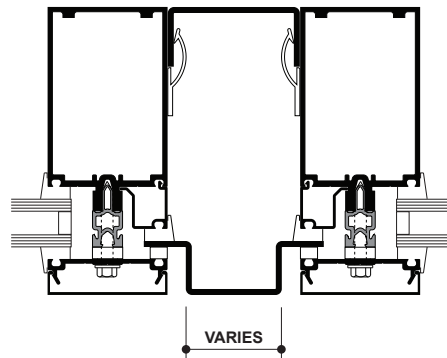
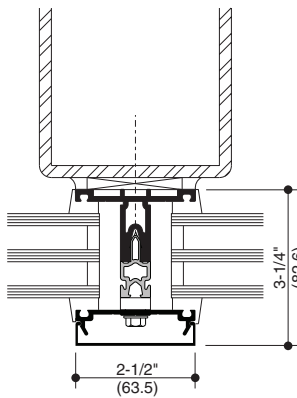


**DEEP MULLION**

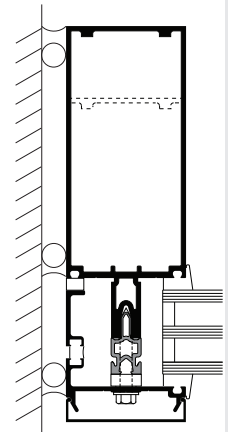
NOTE: 1-3/4" triple glazing similar.



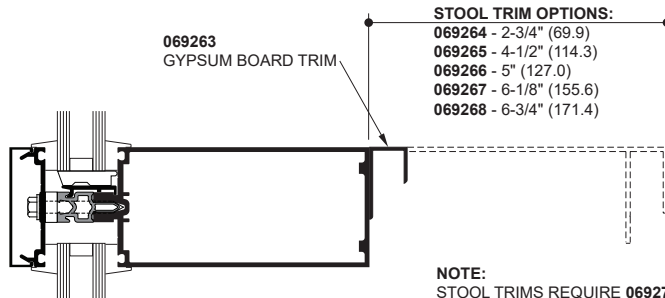
**VENEER SYSTEM**



**DOUBLE MULLION**



**THERMAL  
PERIMETER  
PRESSURE PLATE**



NOTE:  
STOOL TRIMS REQUIRE 069271 TRIM CLIP PACKAGE

**INTERIOR STOOL TRIM**

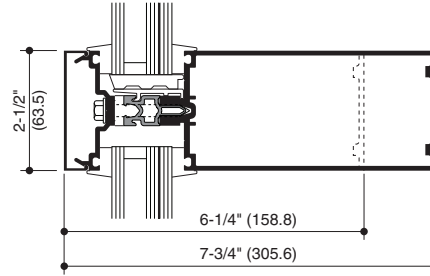
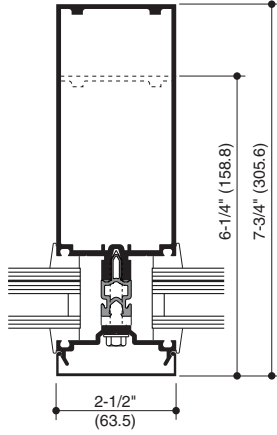
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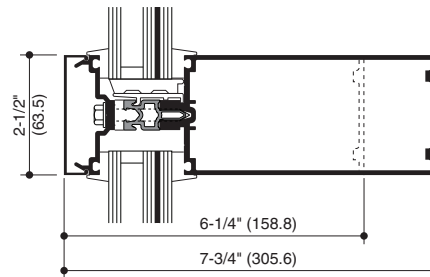
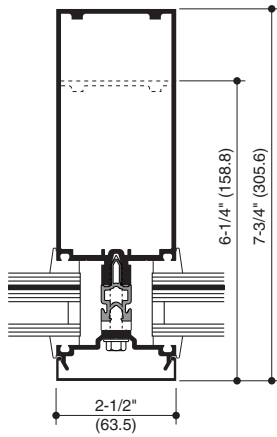


Additional information and CAD details are available at [www.kawneer.com](http://www.kawneer.com)

### 1-1/4" INFILL DETAILS



### 1-5/16" INFILL DETAILS



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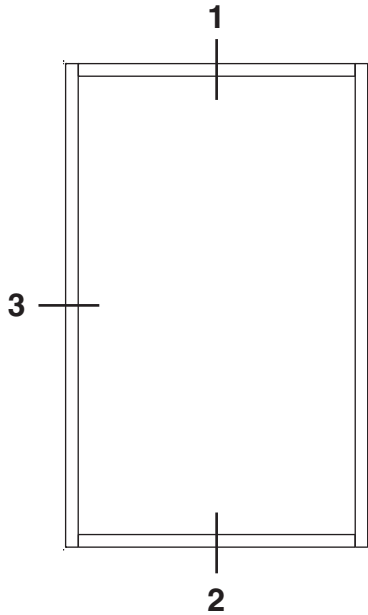
**MINIMUM AND MAXIMUM SIZES**

36" X 36" (914.4 X 914.4 MM)  
UP TO  
60" X 96" (1524 X 2438.4 MM)

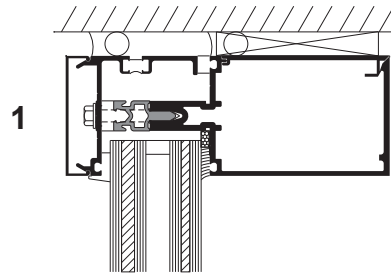
9 SQ. FT. TO 40 SQ. FT. (0.84 TO 3.72 SQ. M)  
PUNCHED OPENING, NO VERTICALS OR HORIZONTALS.

**GLASS TYPE**

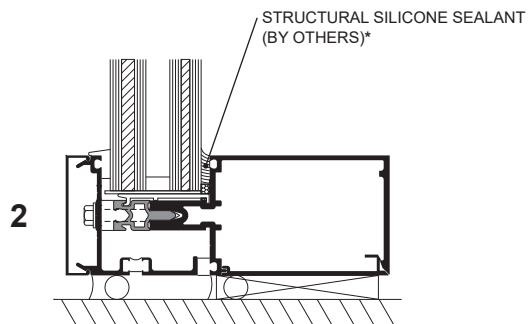
1-7/8" (47.6 MM) INFILL USING SentryGlas® INTERLAYERS WITHIN THE GLASS CONFIGURATION.



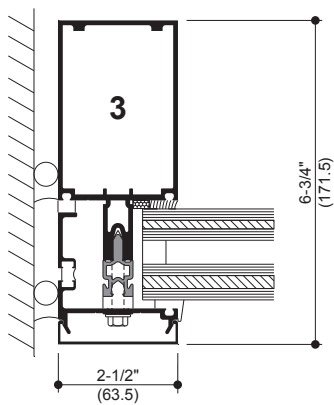
ELEVATION IS NUMBER KEYED TO DETAILS



HEAD



SILL



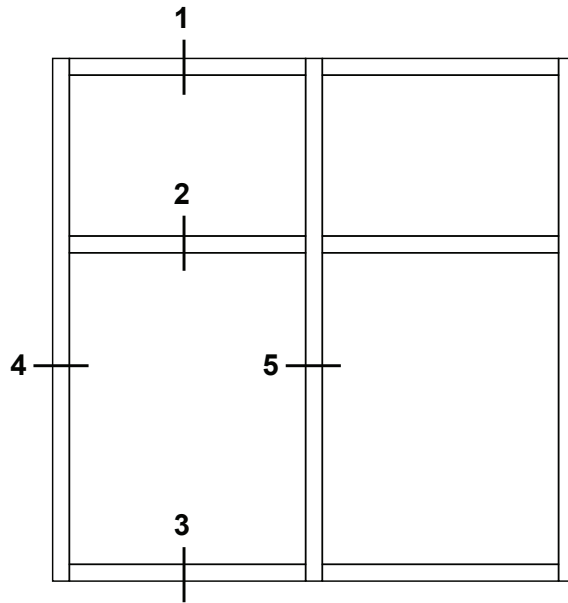
JAMB

\* **INSTALLER NOTE:** Installer is responsible for all required compatibility review and approvals with the Structural Silicone Manufacturer and the Insulating Glass Unit Manufacturer.

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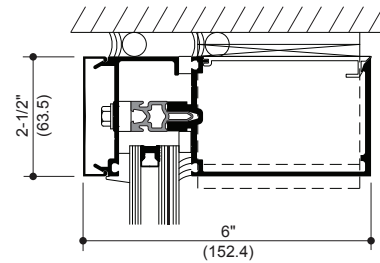
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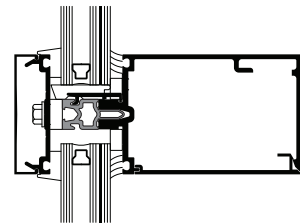


ELEVATION IS NUMBER KEYED TO DETAILS

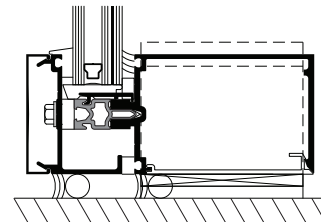
**1**  
HEAD



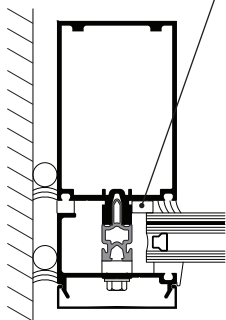
**2**  
HORIZONTAL



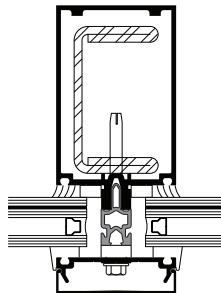
**3**  
SILL



**4**  
JAMB



**5**  
MULLION



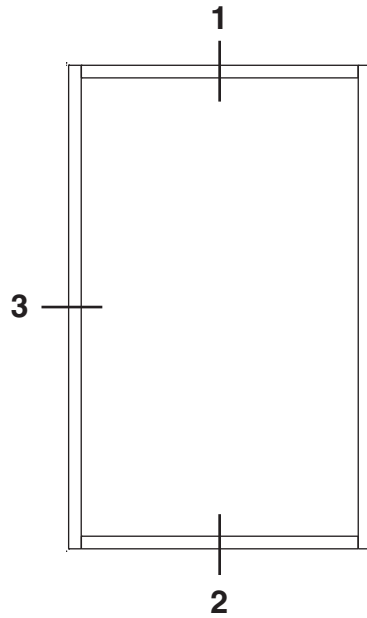
STRUCTURAL SILICONE SEALANT  
(BY OTHERS)\*

\* **INSTALLER NOTE:** Installer is responsible for all required compatibility review and approvals with the Structural Silicone Manufacturer and the Insulating Glass Unit Manufacturer.

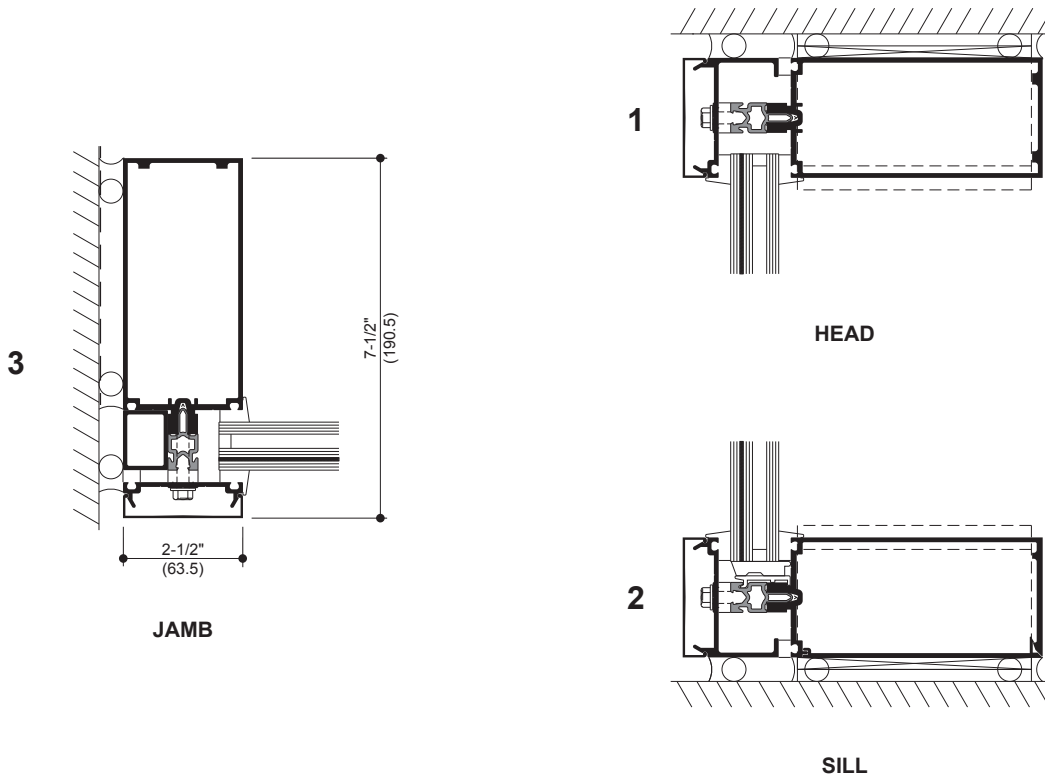
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ELEVATION IS NUMBER KEYED TO DETAILS



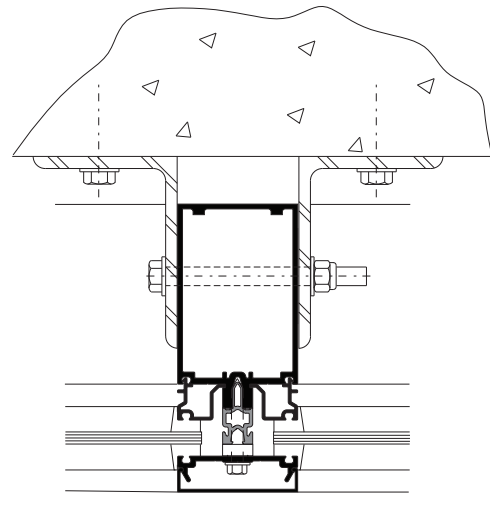
Laws and building and safety codes governing the design and use of Kawneer products, such as glazed entrance, window, and curtain wall products, vary widely. Kawneer does not control the selection of product configurations, operating hardware, or glazing materials, and assumes no responsibility therefor.

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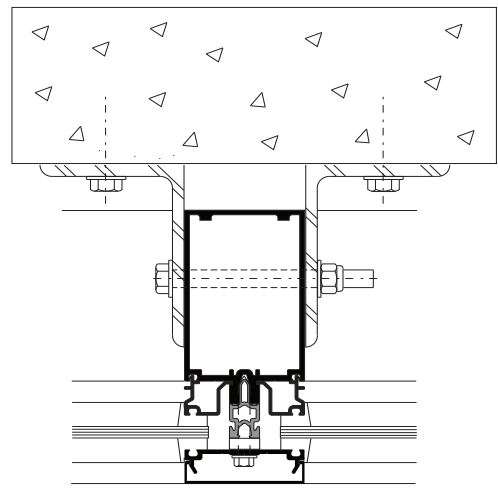
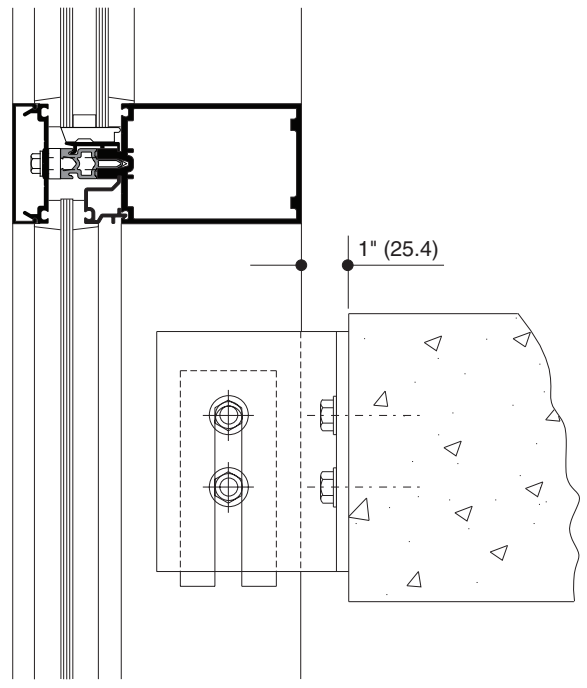
Actual project conditions will determine specific anchor design. Details on this page are for reference only.

Laws and building and safety codes governing the design and use of Kawneer products, such as glazed entrance, window, and curtain wall products, vary widely. Kawneer does not control the selection of product configurations, operating hardware, or glazing materials, and assumes no responsibility therefor.

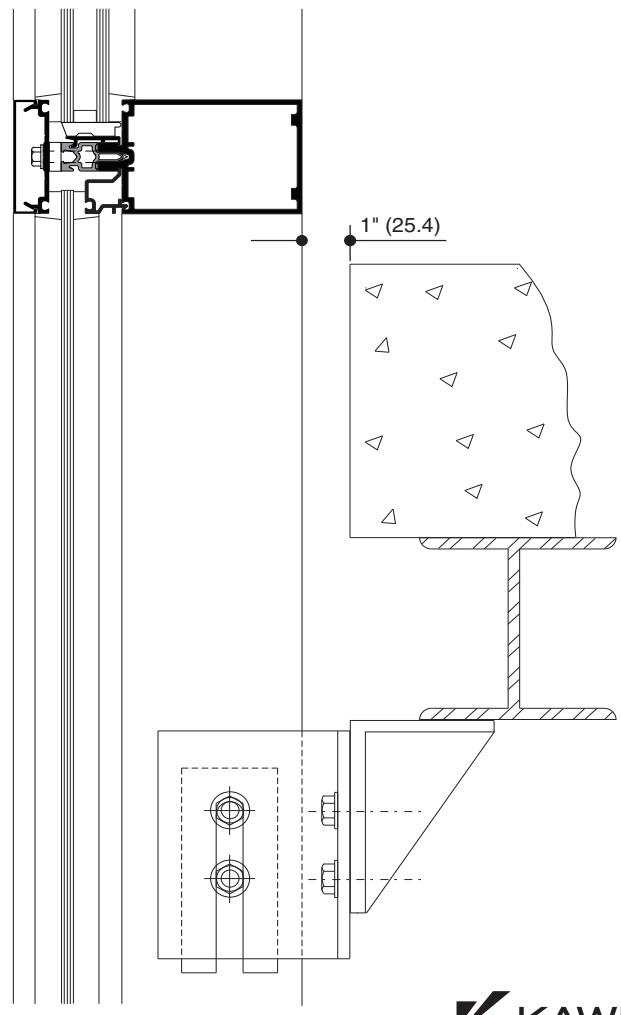
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**ANCHORING TO FLOOR SLAB**

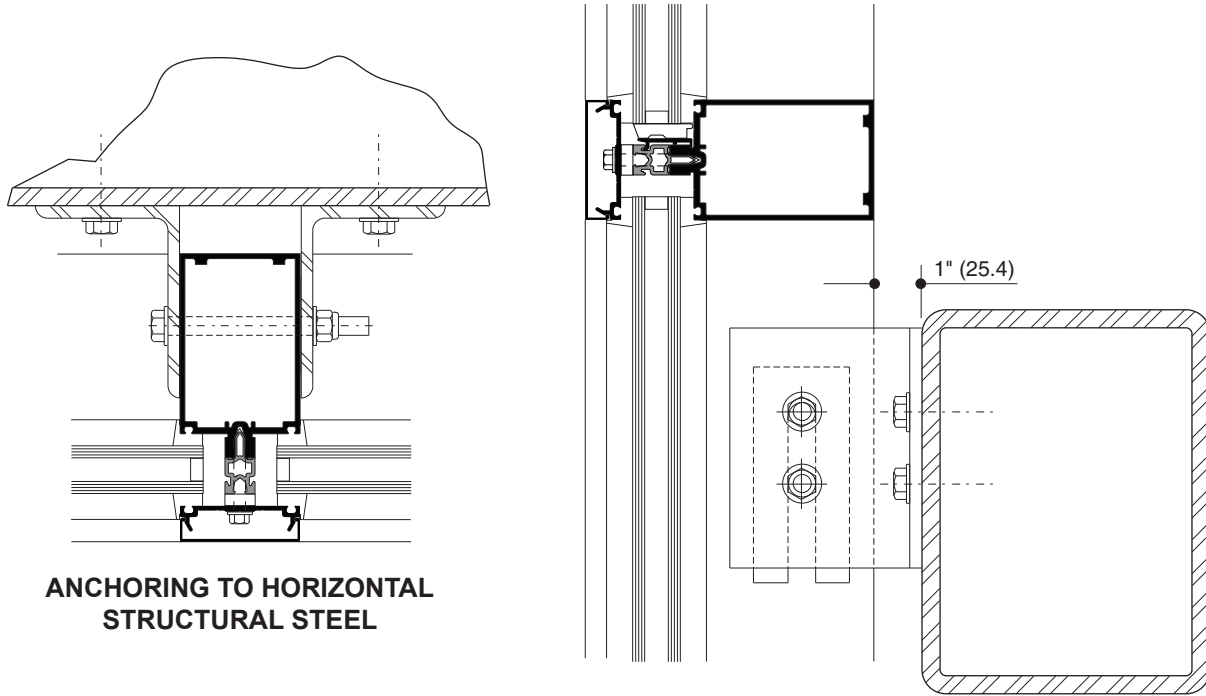


**ANCHORING TO SUPPORT STEEL**



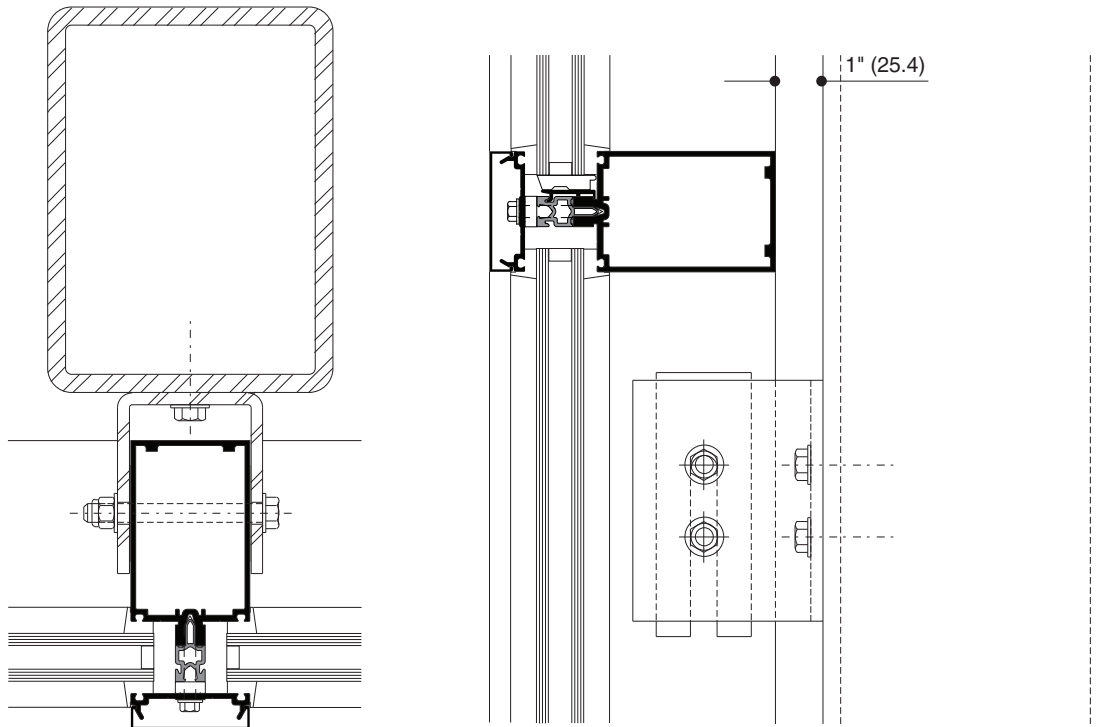
NOTE: 1-3/4" triple glazing similar.

Actual project conditions will determine specific anchor design. Details on this page are for reference only.



**ANCHORING TO HORIZONTAL STRUCTURAL STEEL**

NOTE: 1-3/4" triple glazing similar.



**ANCHORING TO VERTICAL STRUCTURAL STEEL**

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## WIND LOAD CHARTS

Mullions are designed for deflection limitations in accordance with AAMA TIR-A11 of L/175 up to 13'-6" and L/240 +1/4" above 13'-6". These curves are for mullions WITH HORIZONTALS and are based on engineering calculations for stress and deflection. Allowable wind load stress for ALUMINUM 15,152 psi (104 MPa), STEEL 30,000 psi (207 MPa). Charted curves, in all cases are for the limiting value. Wind load charts contained herein are based upon nominal wind load utilized in allowable stress design. A conversion from Load Resistance Factor Design (LRFD) is provided. To convert ultimate wind loads to nominal loads, multiply ultimate wind loads by a factor of 0.6 per ASCE/SEI 7. A 4/3 increase in allowable stress has not been used to develop these curves. For special situations not covered by these curves, contact your Kawneer representative for additional information.

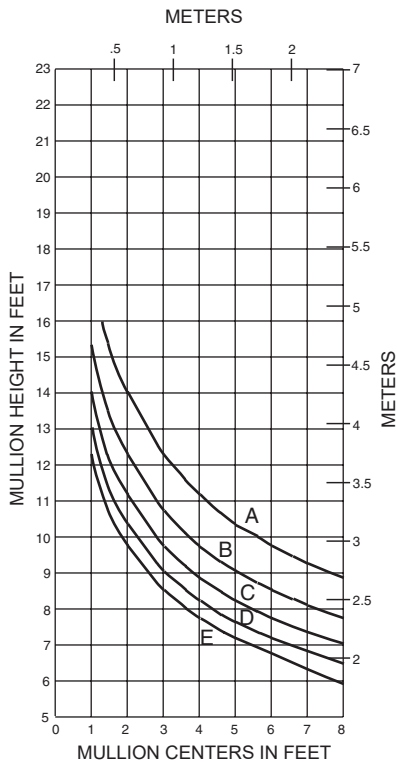
## DEADLOAD CHARTS

Horizontal or deadload limitations are based upon 1/8" (3.2), maximum allowable deflection at the center of an intermediate horizontal member. The accompanying charts are calculated for 1" (25.4) thick insulating glass or 1-3/4" (44.5) thick glass supported on two setting blocks placed at the loading points shown.

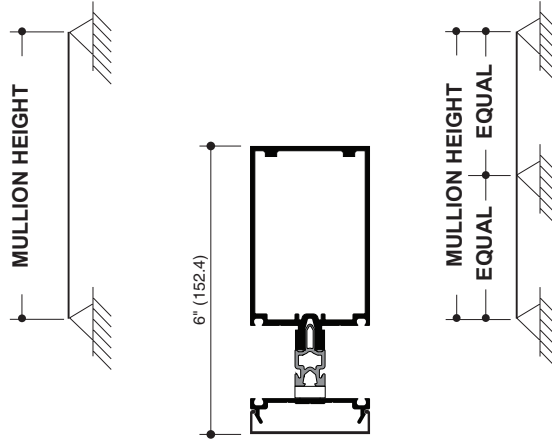
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## SINGLE SPAN



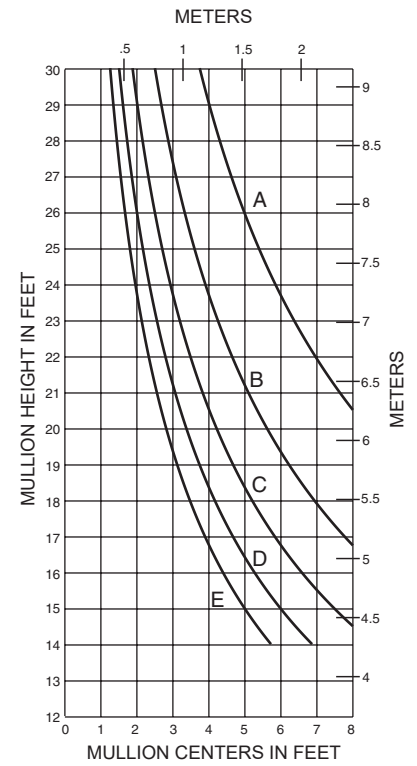
	Allowable Stress Design Load	LRFD Ultimate Design Load
A =	20 PSF (960)	33 PSF (1580)
B =	30 PSF (1440)	50 PSF (2400)
C =	40 PSF (1920)	67 PSF (3200)
D =	50 PSF (2400)	83 PSF (4000)
E =	60 PSF (2880)	100 PSF (4790)



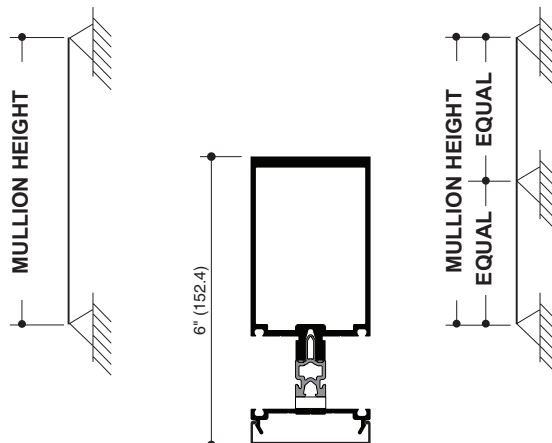
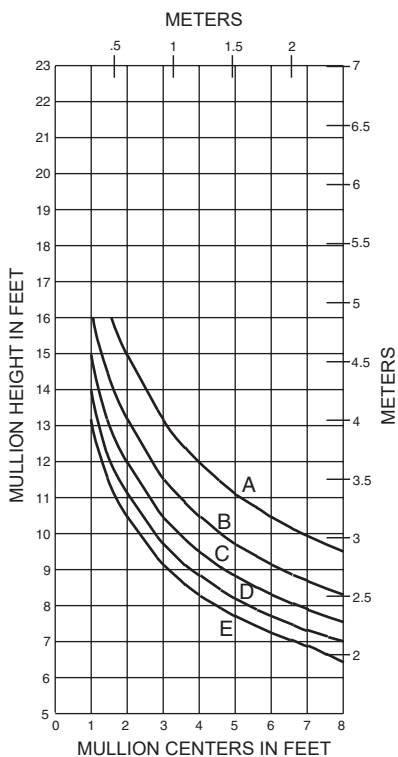
171213

I = 3.662(152.42 x 10<sup>4</sup>)  
S = 1.662(27.24 x 10<sup>3</sup>)

## TWIN SPAN



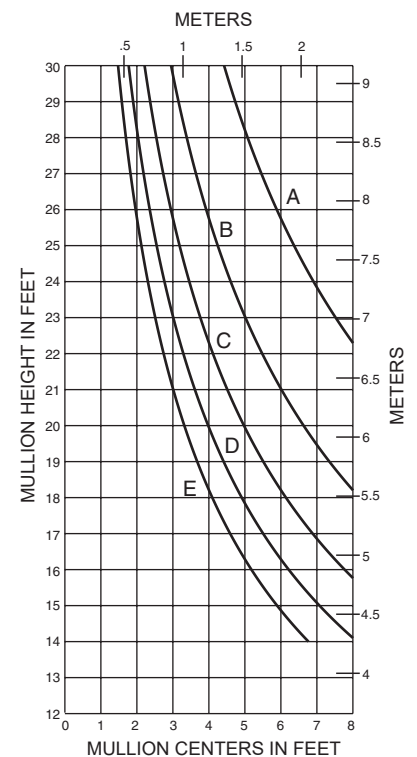
## SINGLE SPAN



171214

I = 4.5071(87.60 x 10<sup>4</sup>)  
S = 1.968(32.25 x 10<sup>3</sup>)

## TWIN SPAN

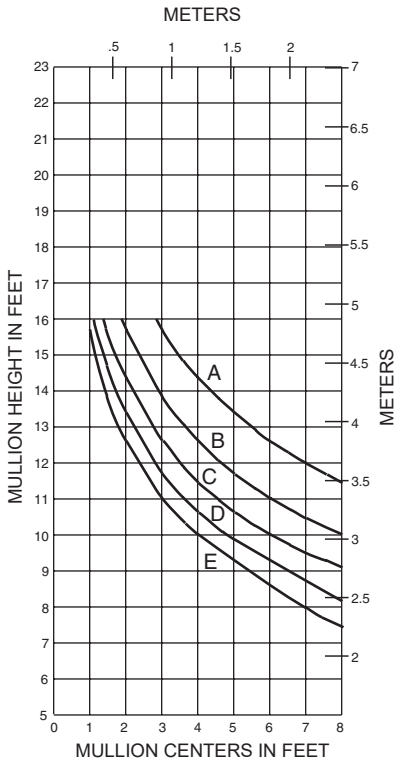


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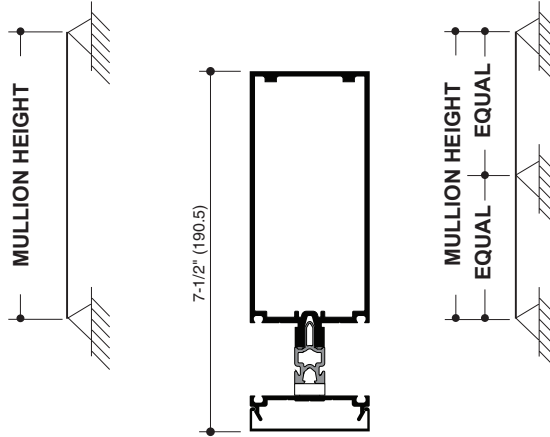
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**SINGLE SPAN**

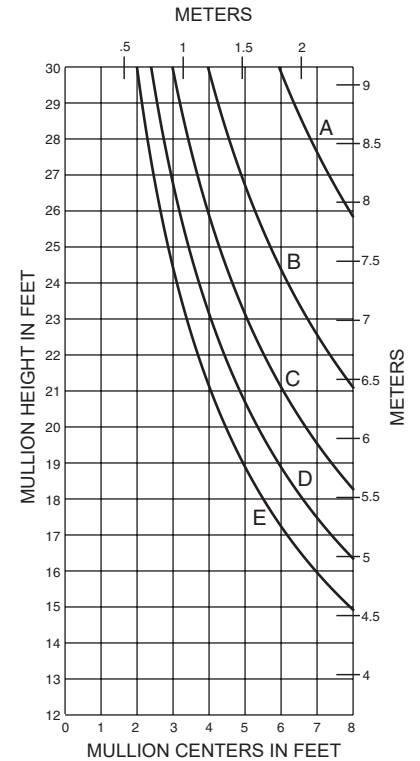


	Allowable Stress Design Load	LRFD Ultimate Design Load
A =	20 PSF (960)	33 PSF (1580)
B =	30 PSF (1440)	50 PSF (2400)
C =	40 PSF (1920)	67 PSF (3200)
D =	50 PSF (2400)	83 PSF (4000)
E =	60 PSF (2880)	100 PSF (4790)

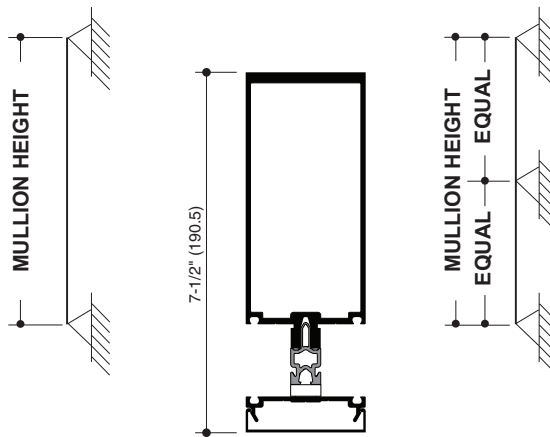
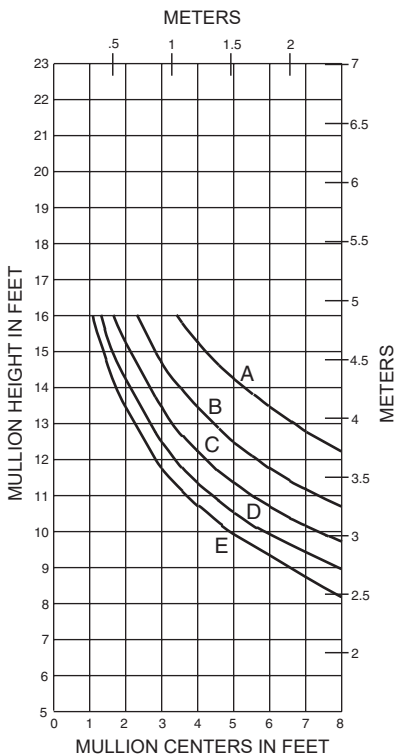


**171215**  
 $I = 7.915(329.45 \times 10^4)$   
 $S = 2.635(43.18 \times 10^3)$

**TWIN SPAN**

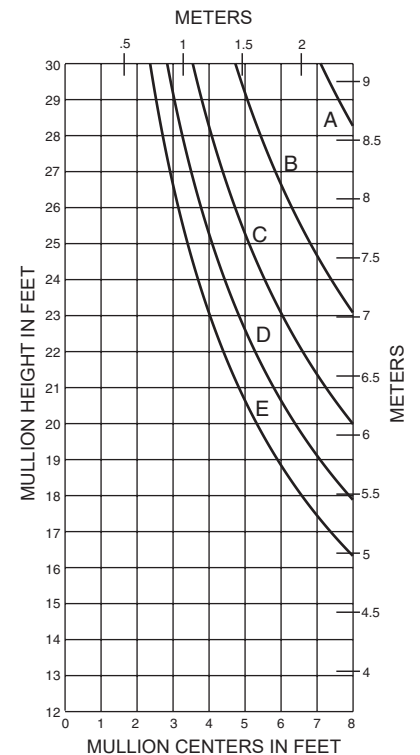


**SINGLE SPAN**



**171216**  
 $I = 9.594(399.33 \times 10^4)$   
 $S = 3.163(51.83 \times 10^3)$

**TWIN SPAN**



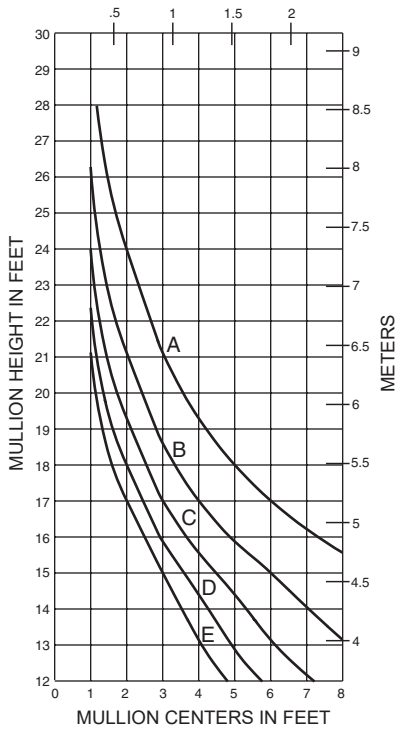
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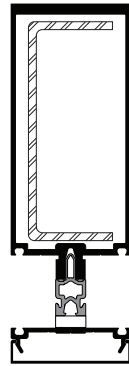
## SINGLE SPAN

162016 W/162300

METERS

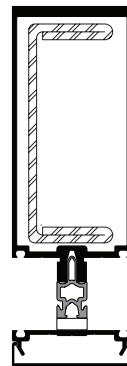


	Allowable Stress Design Load	LRFD Ultimate Design Load
A =	20 PSF (960)	33 PSF (1580)
B =	30 PSF (1440)	50 PSF (2400)
C =	40 PSF (1920)	67 PSF (3200)
D =	50 PSF (2400)	83 PSF (4000)
E =	60 PSF (2880)	100 PSF (4790)



**171216**  
**W/162300**

la = 9.594(399.33 x 10<sup>4</sup>)  
 Sa = 3.163(51.83 x 10<sup>3</sup>)  
 ls = 3.805(158.37 x 10<sup>4</sup>)  
 Ss = 1.669(27.35 x 10<sup>3</sup>)



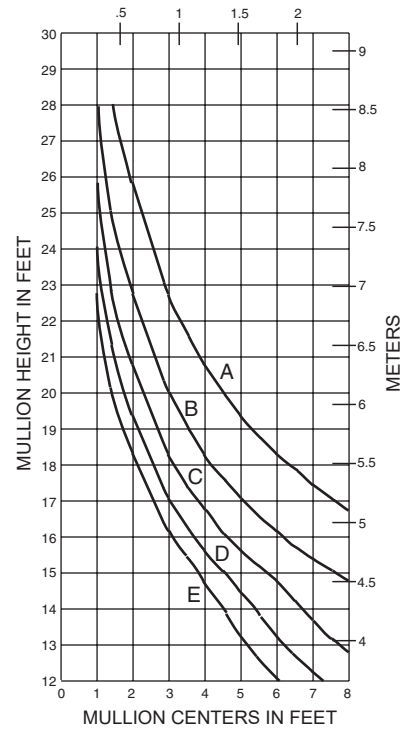
**171216**  
**W/162301**

la = 9.594(399.33 x 10<sup>4</sup>)  
 Sa = 3.163(51.83 x 10<sup>3</sup>)  
 ls = 5.684(236.59 x 10<sup>4</sup>)  
 Ss = 2.493(40.85 x 10<sup>3</sup>)

## SINGLE SPAN

162016 W/162301

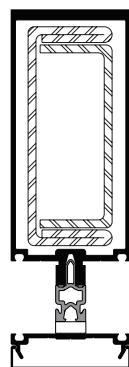
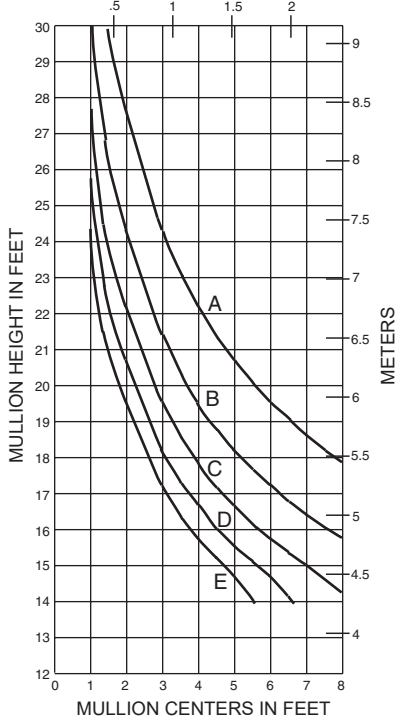
METERS



## SINGLE SPAN

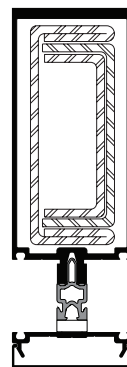
162016 W/162301/302

METERS



**171216**  
**W/162301/302**

la = 9.594(399.33 x 10<sup>4</sup>)  
 Sa = 3.163(51.83 x 10<sup>3</sup>)  
 ls = 7.893(328.53 x 10<sup>4</sup>)  
 Ss = 3.462(56.73 x 10<sup>3</sup>)



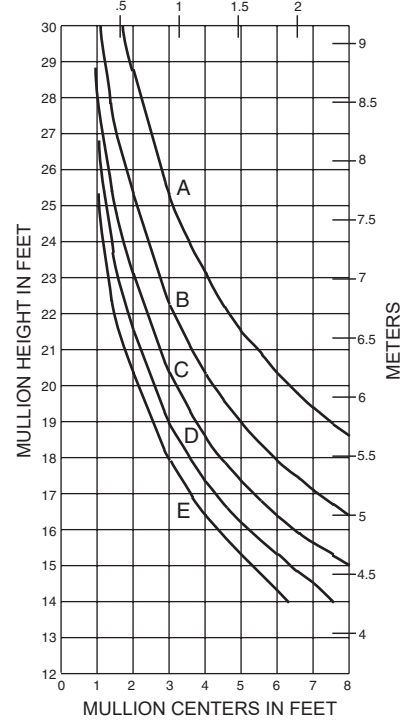
**171216**  
**W/162301/302/303**

la = 9.594(399.33 x 10<sup>4</sup>)  
 Sa = 3.163(51.83 x 10<sup>3</sup>)  
 ls = 9.347(389.05 x 10<sup>4</sup>)  
 Ss = 4.100(67.19 x 10<sup>3</sup>)

## SINGLE SPAN

162016 W/162301/302/303

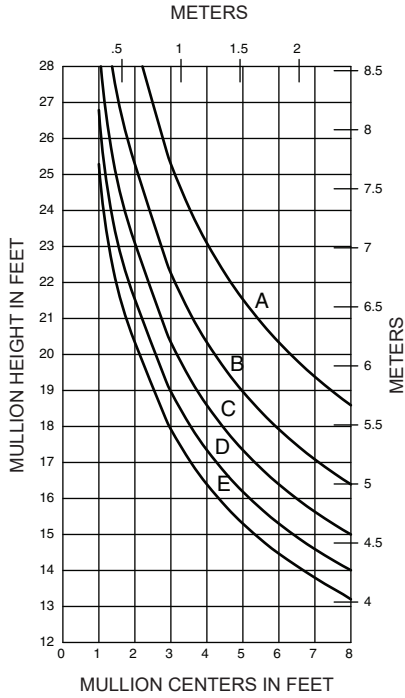
METERS



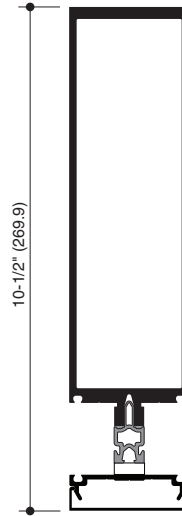
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## SINGLE SPAN



	Allowable Stress Design Load	LRFD Ultimate Design Load
A =	20 PSF (960)	33 PSF (1580)
B =	30 PSF (1440)	50 PSF (2400)
C =	40 PSF (1920)	67 PSF (3200)
D =	50 PSF (2400)	83 PSF (4000)
E =	60 PSF (2880)	100 PSF (4790)



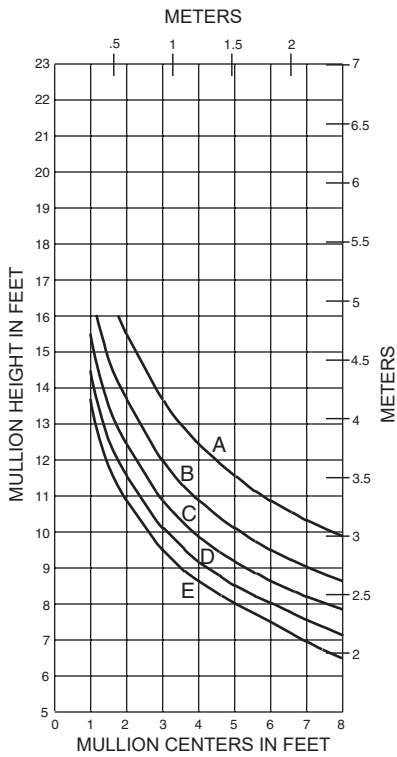
**171266**

I = 36.451(1517.20 x 10<sup>6</sup>)  
 S = 8.279(135.67 x 10<sup>3</sup>)

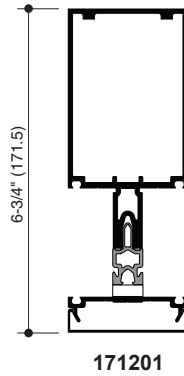
Laws and building and safety codes governing the design and use of Kawneer products, such as glazed entrance, window, and curtain wall products, vary widely. Kawneer does not control the selection of product configurations, operating hardware, or glazing materials, and assumes no responsibility therefor.

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## SINGLE SPAN



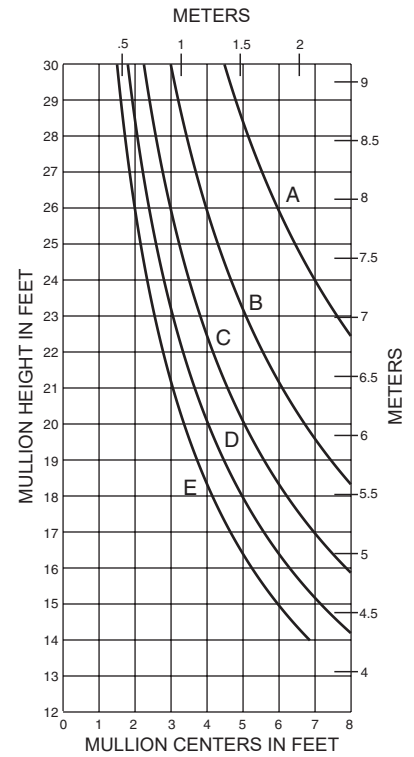
	Allowable Stress Design Load	LRFD Ultimate Design Load
A =	20 PSF (960)	33 PSF (1580)
B =	30 PSF (1440)	50 PSF (2400)
C =	40 PSF (1920)	67 PSF (3200)
D =	50 PSF (2400)	83 PSF (4000)
E =	60 PSF (2880)	100 PSF (4790)



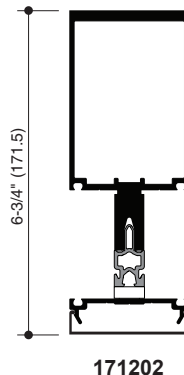
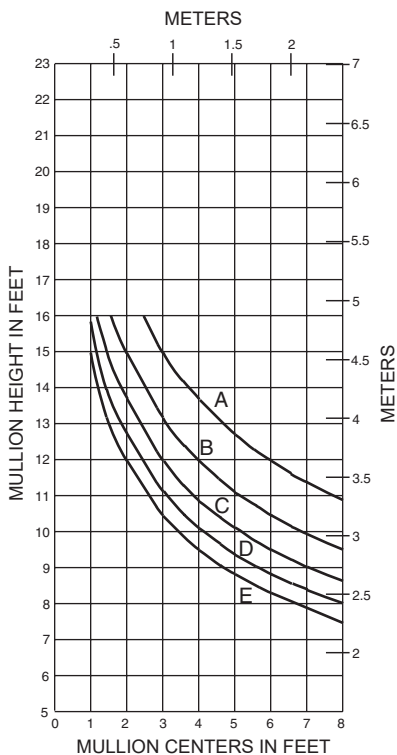
171201  
 $I = 5.035(209.57 \times 10^4)$   
 $S = 1.993(32.66 \times 10^3)$



## TWIN SPAN



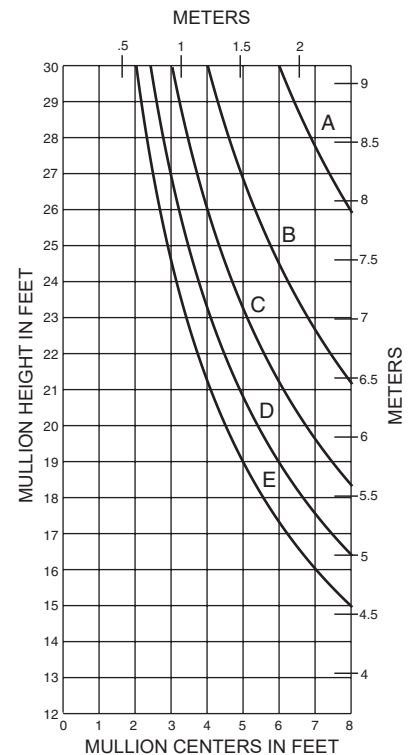
## SINGLE SPAN



171202  
 $I = 6.779(282.16 \times 10^4)$   
 $S = 2.652(43.46 \times 10^3)$



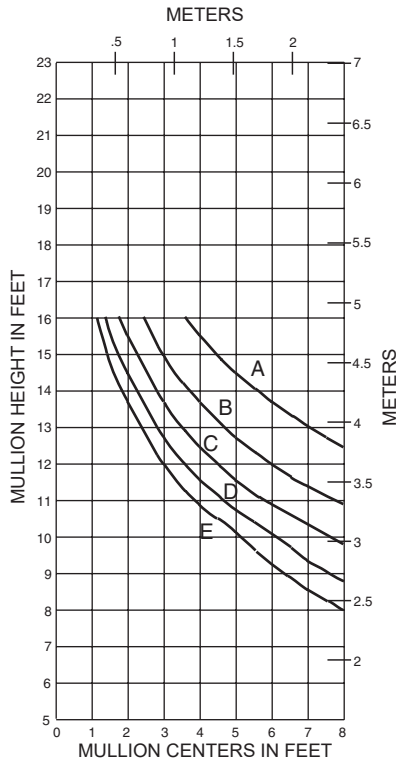
## TWIN SPAN



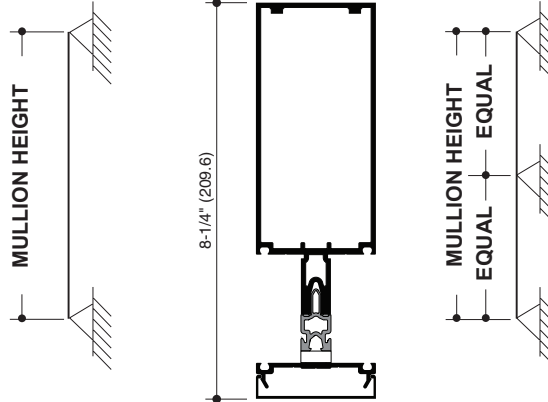
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## SINGLE SPAN



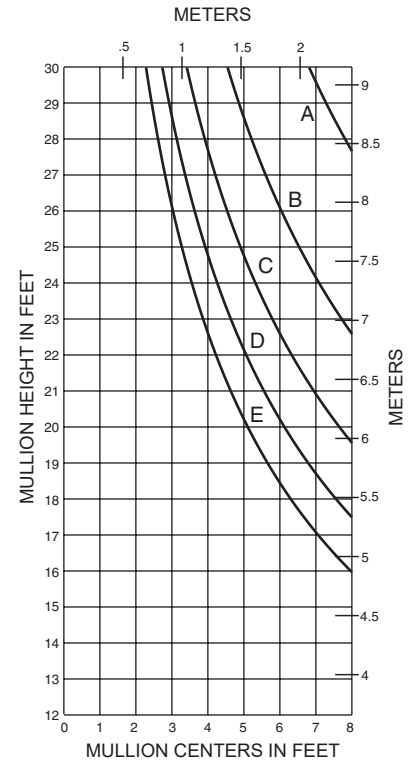
	Allowable Stress Design Load	LRFD Ultimate Design Load
A =	20 PSF (960)	33 PSF (1580)
B =	30 PSF (1440)	50 PSF (2400)
C =	40 PSF (1920)	67 PSF (3200)
D =	50 PSF (2400)	83 PSF (4000)
E =	60 PSF (2880)	100 PSF (4790)



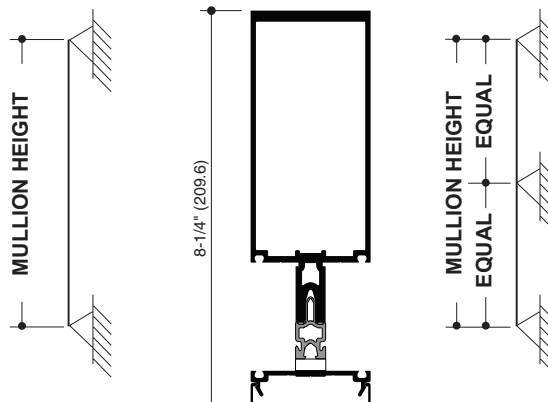
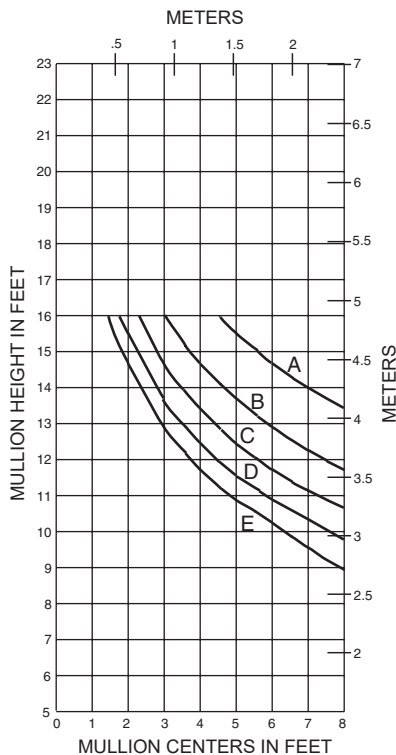
171203

I = 10.135(421.85 x 10<sup>4</sup>)  
S = 3.027(49.60 x 10<sup>3</sup>)

## TWIN SPAN



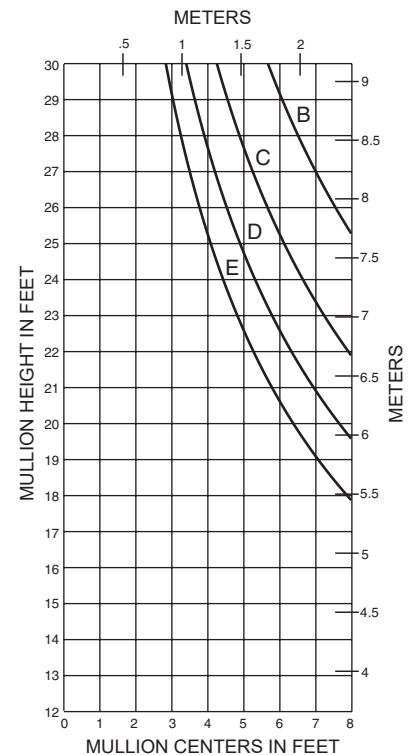
## SINGLE SPAN



171204

I = 12.736(530.11 x 10<sup>4</sup>)  
S = 3.791(62.12 x 10<sup>3</sup>)

## TWIN SPAN

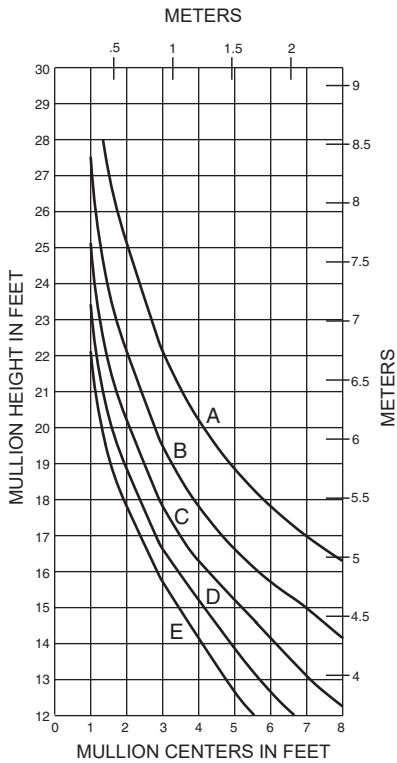


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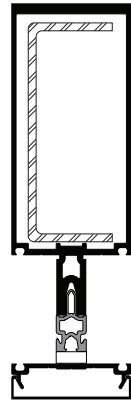
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## SINGLE SPAN

162004 W/162300

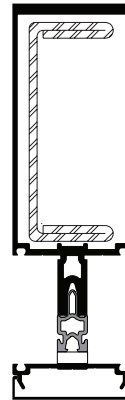


	Allowable Stress Design Load	LRFD Ultimate Design Load
A =	20 PSF (960)	33 PSF (1580)
B =	30 PSF (1440)	50 PSF (2400)
C =	40 PSF (1920)	67 PSF (3200)
D =	50 PSF (2400)	83 PSF (4000)
E =	60 PSF (2880)	100 PSF (4790)



171204  
W/162300

la = 12.736(530.11 x 10<sup>4</sup>)  
Sa = 3.791(62.12 x 10<sup>3</sup>)  
ls = 3.805(158.37 x 10<sup>4</sup>)  
Ss = 1.669(27.35 x 10<sup>3</sup>)

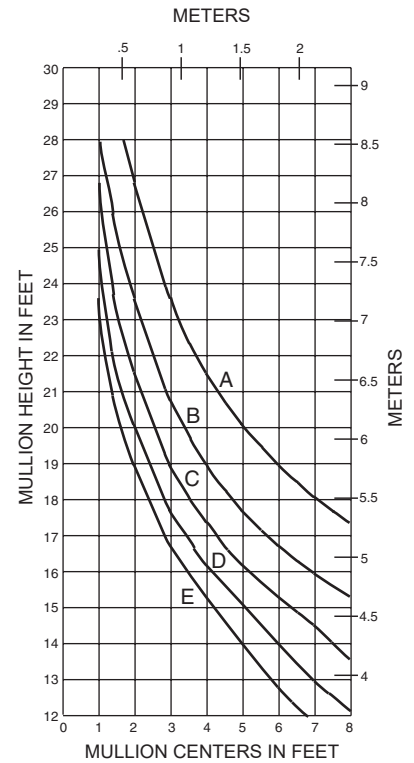


171204  
W/162301

la = 12.736(530.11 x 10<sup>4</sup>)  
Sa = 3.791(62.12 x 10<sup>3</sup>)  
ls = 5.684(236.59 x 10<sup>4</sup>)  
Ss = 2.493(40.85 x 10<sup>3</sup>)

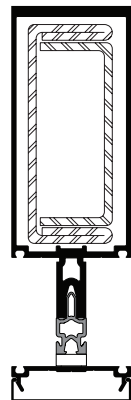
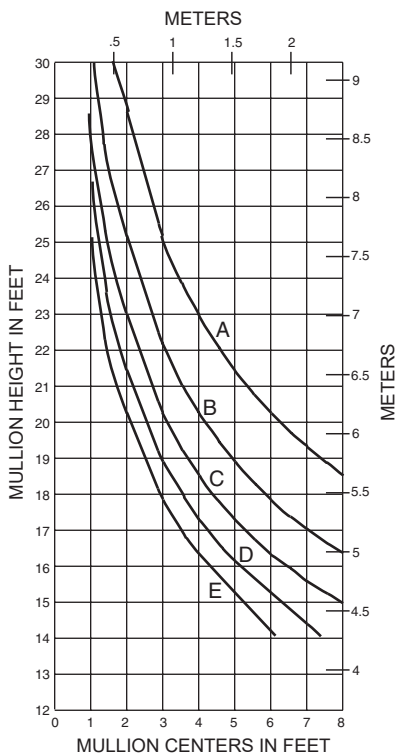
## SINGLE SPAN

162004 W/162301



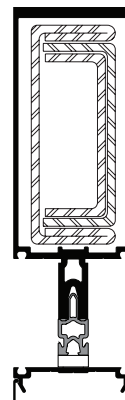
## SINGLE SPAN

162004 W/162301/302



171204  
W/162301/302

la = 12.736(530.11 x 10<sup>4</sup>)  
Sa = 3.791(62.12 x 10<sup>3</sup>)  
ls = 7.893(328.53 x 10<sup>4</sup>)  
Ss = 3.462(56.73 x 10<sup>3</sup>)

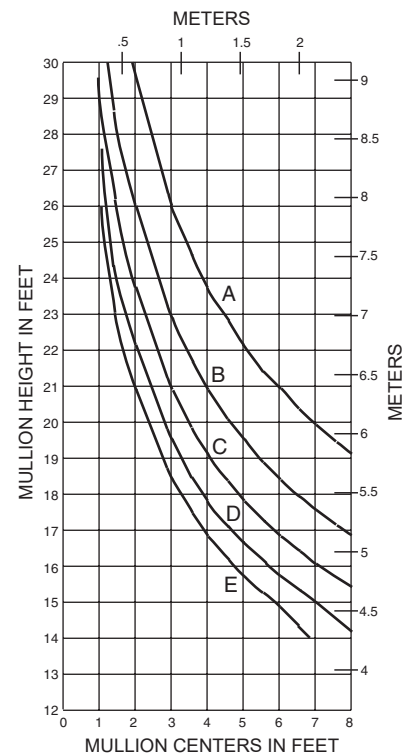


171204  
W/162301/302/303

la = 12.736(530.11 x 10<sup>4</sup>)  
Sa = 3.791(62.12 x 10<sup>3</sup>)  
ls = 9.347(389.05 x 10<sup>4</sup>)  
Ss = 4.100(67.19 x 10<sup>3</sup>)

## SINGLE SPAN

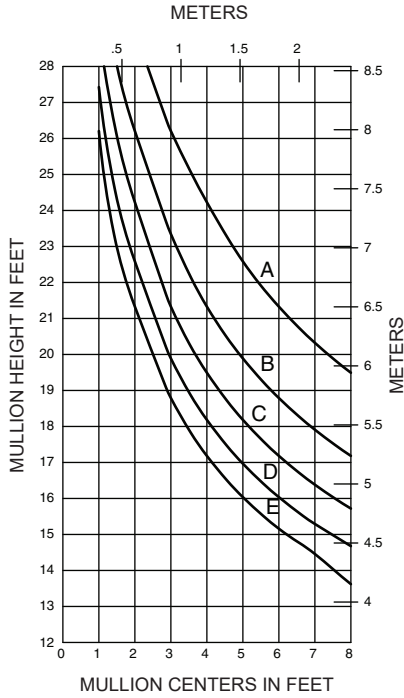
162004 W/162301/302/303



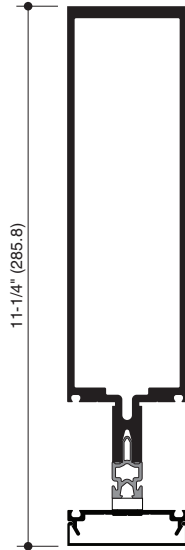
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**SINGLE SPAN**



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A =	20 PSF (960)	33 PSF (1580)
B =	30 PSF (1440)	50 PSF (2400)
C =	40 PSF (1920)	67 PSF (3200)
D =	50 PSF (2400)	83 PSF (4000)
E =	60 PSF (2880)	100 PSF (4790)

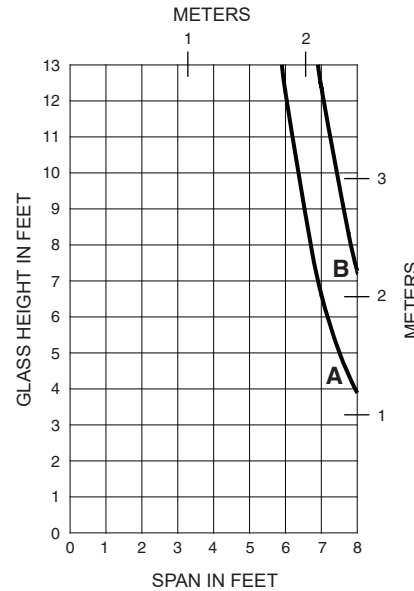
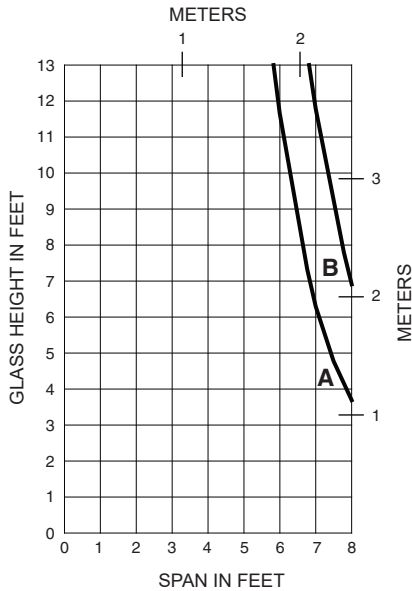
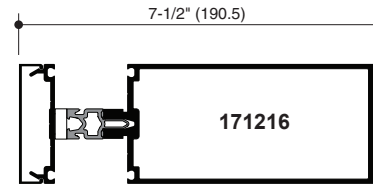
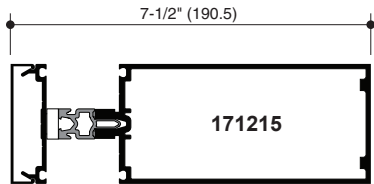
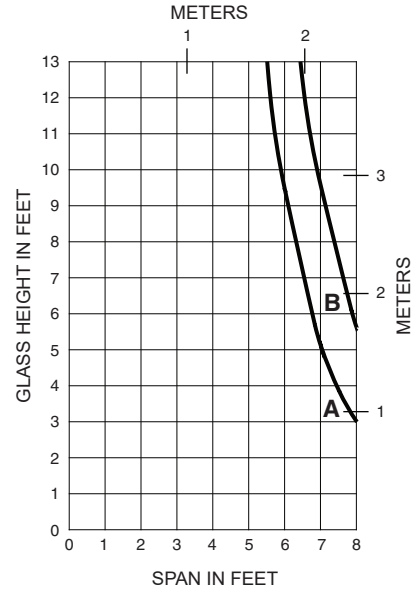
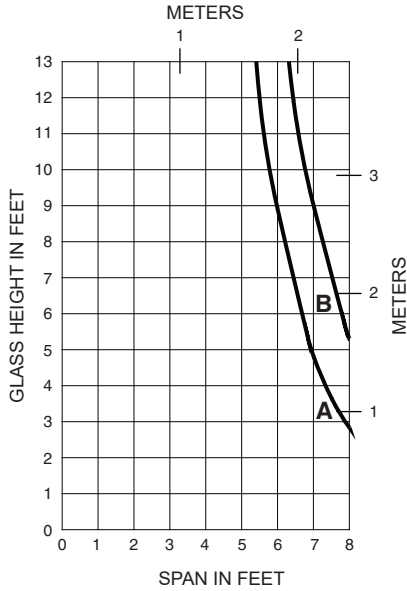
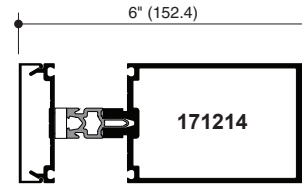
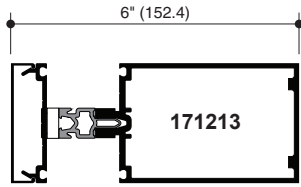


**171264**  
 $I = 42.441 (1766.52 \times 10^4)$   
 $S = 8.816 (144.47 \times 10^3)$

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A - 1" GLASS (1/4 POINT LOADING)  
 B - 1" GLASS (1/8 POINT LOADING)

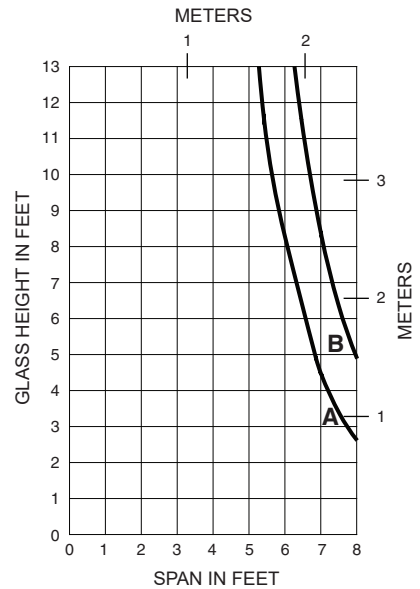
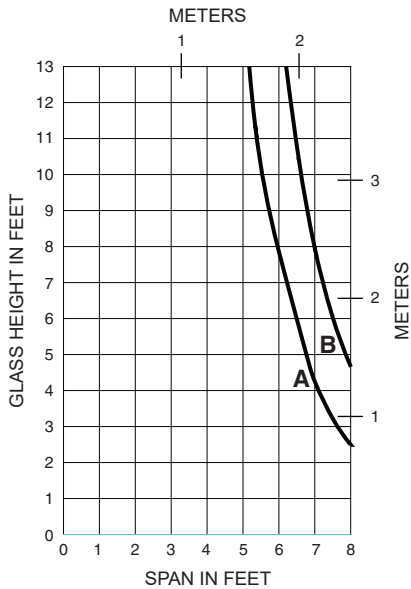
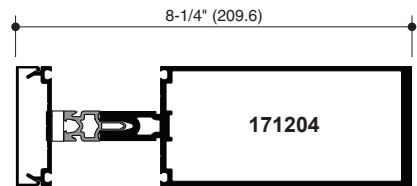
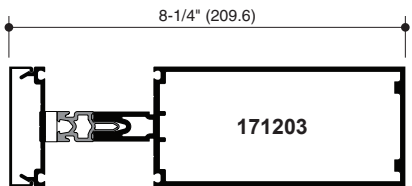
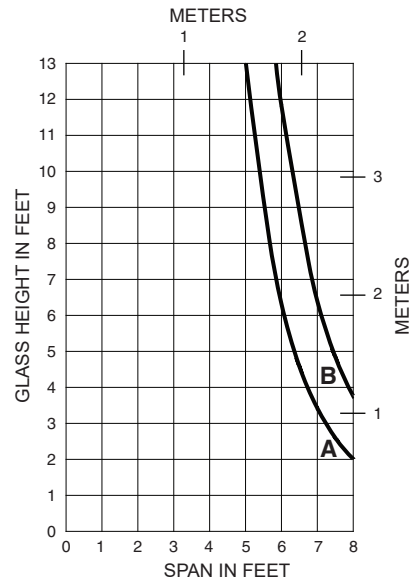
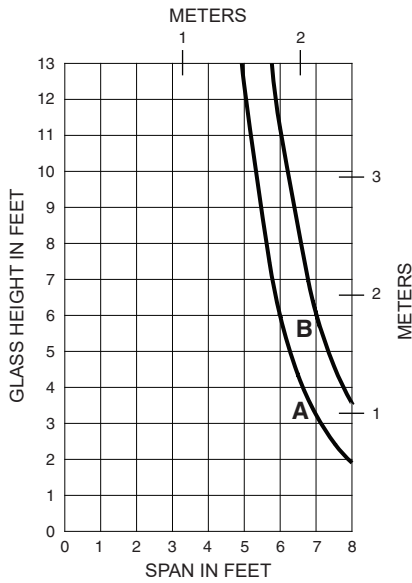
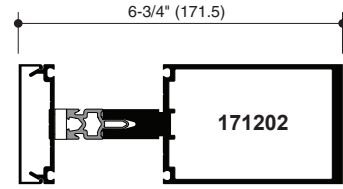
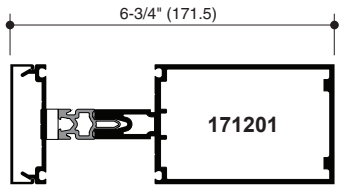


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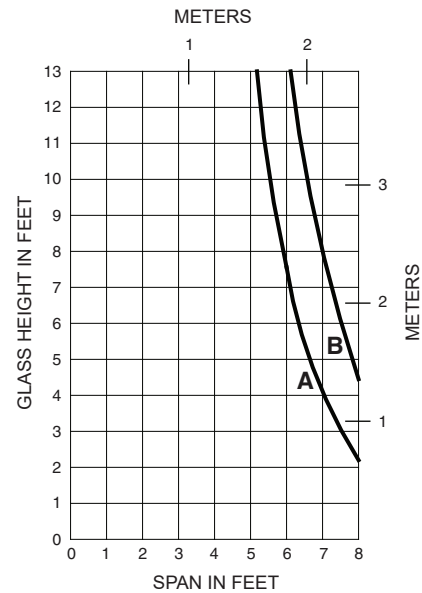
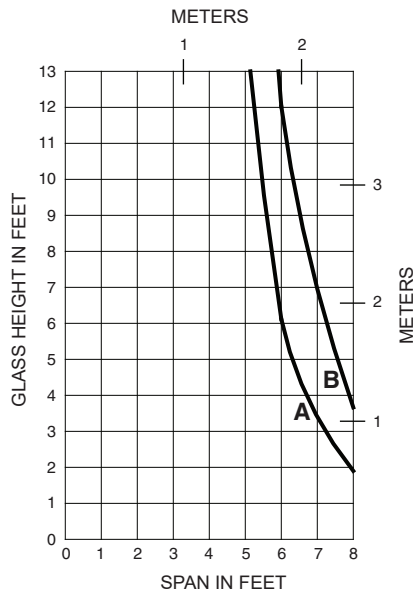
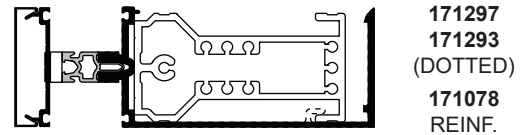
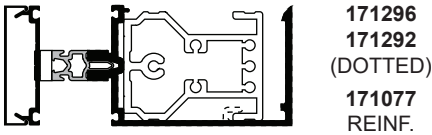
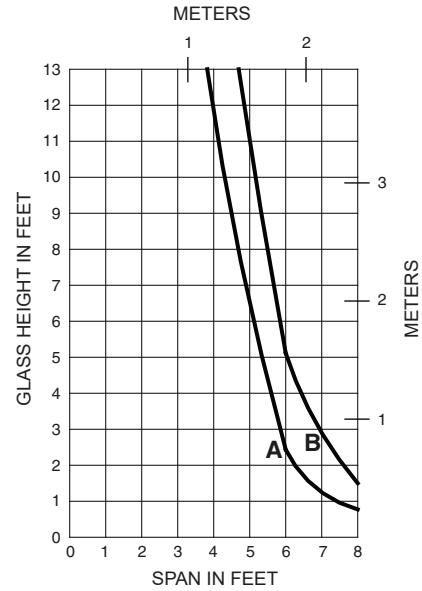
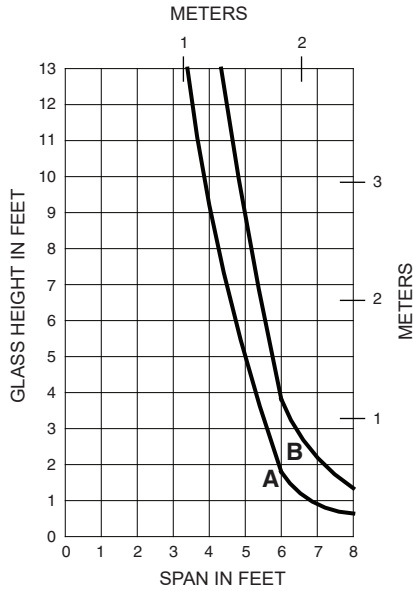
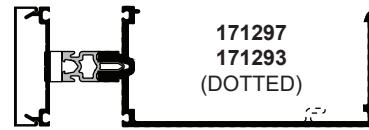
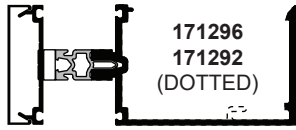
A - 1-3/4" GLASS (1/4 POINT LOADING)  
B - 1-3/4" GLASS (1/8 POINT LOADING)



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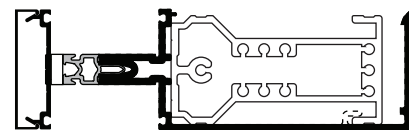
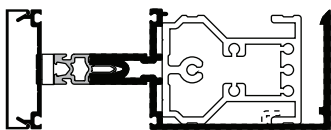
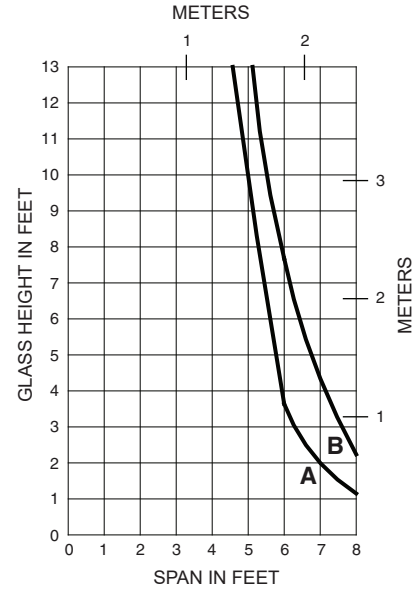
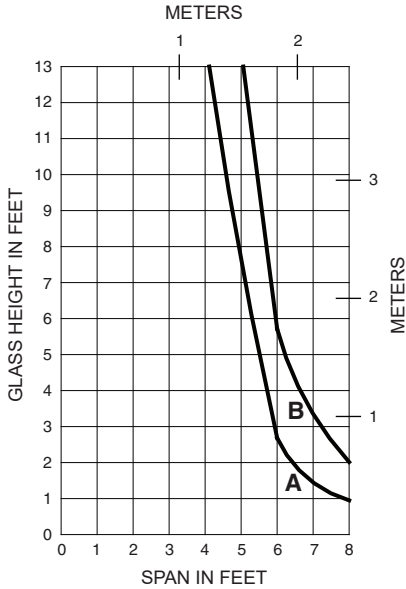
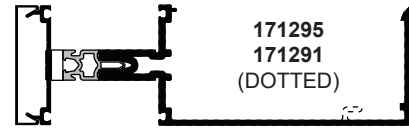
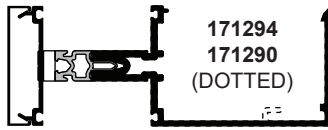
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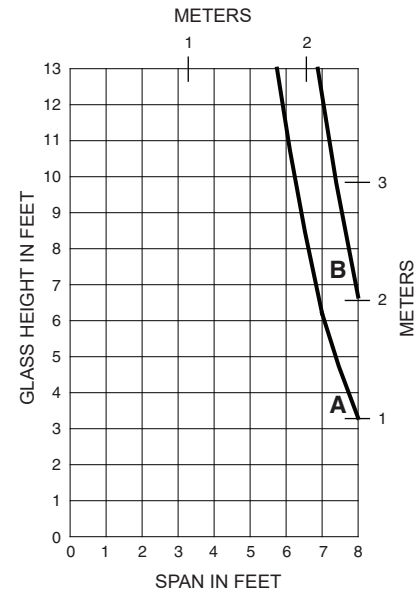
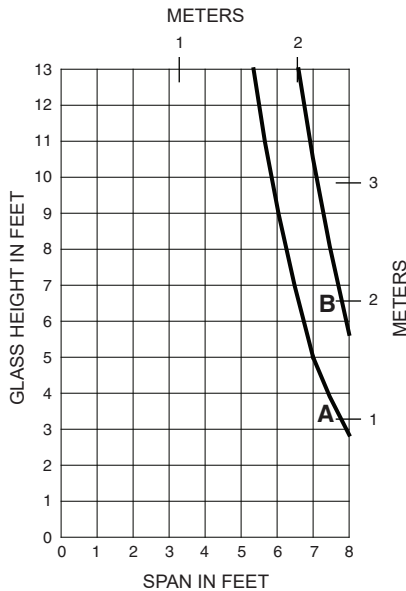
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A - 1" GLASS (1/4 POINT LOADING)  
B - 1" GLASS (1/8 POINT LOADING)



171294  
171290  
(DOTTED)  
171077  
REINF.

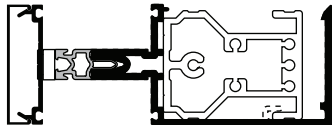
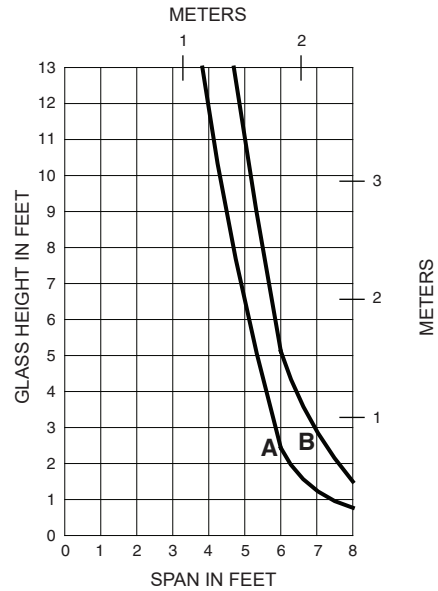
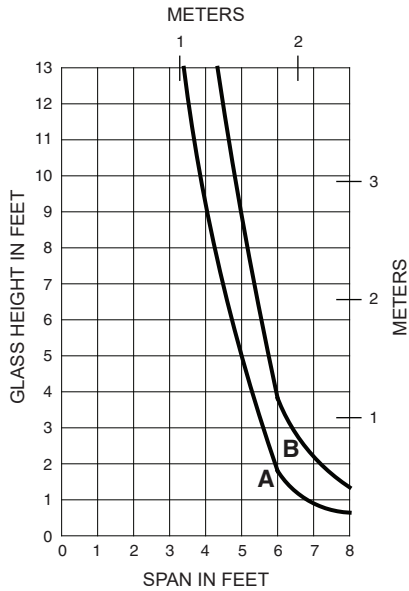
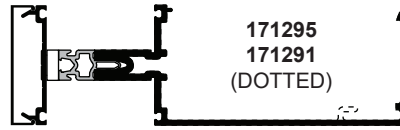
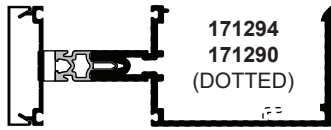
171295  
171291  
(DOTTED)  
171078  
REINF.



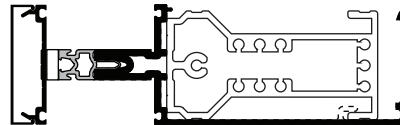
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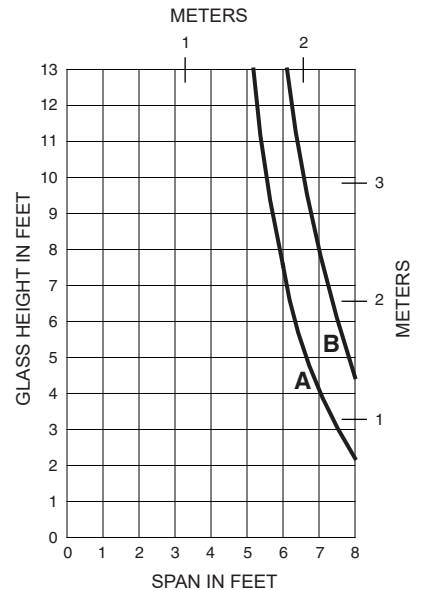
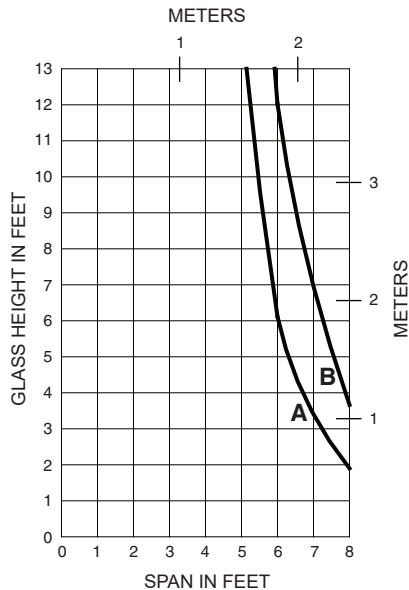
A - 1-3/4" GLASS (1/4 POINT LOADING)  
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171294  
 171290  
 (DOTTED)  
 171077  
 REINF.



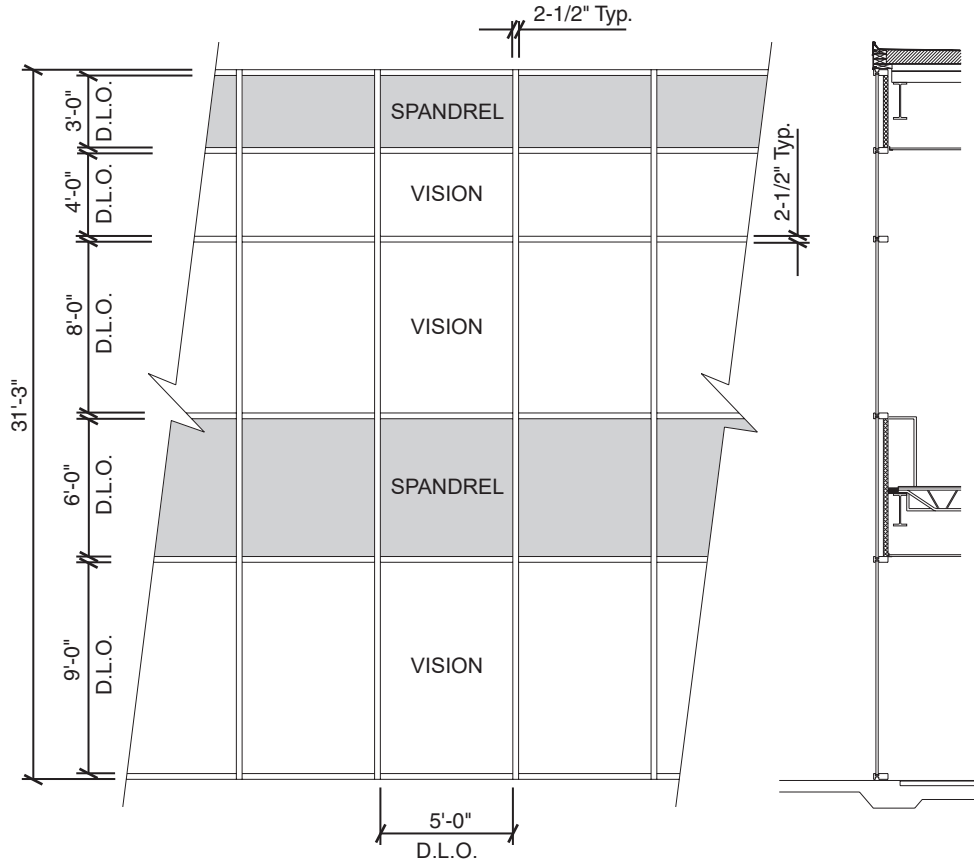
171295  
 171291  
 (DOTTED)  
 171078  
 REINF.



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**Generic Project Specific U-factor Example Calculation**  
 (Percent of Glass will vary on specific products depending on sitelines)  
 (Based on single bay of Curtain Wall/Window Wall)



**Vision Area**

Example Glass U-factor	= 0.48 Btu/(ft <sup>2</sup> · h · °F)
Vision Area	= 5(9 + 8 + 4) = 105.0 ft <sup>2</sup>
Total Area (Vision)	= 5' 2-1/2" (9' 3-3/4" + 8' 2-1/2" + 4' 2-1/2") = 113.2 ft <sup>2</sup>
Percentage of Vision Glass	= (Vision Area ÷ Total Area)100 = (105.0 ÷ 113.2)100 = 93%

**Spandrel Area**

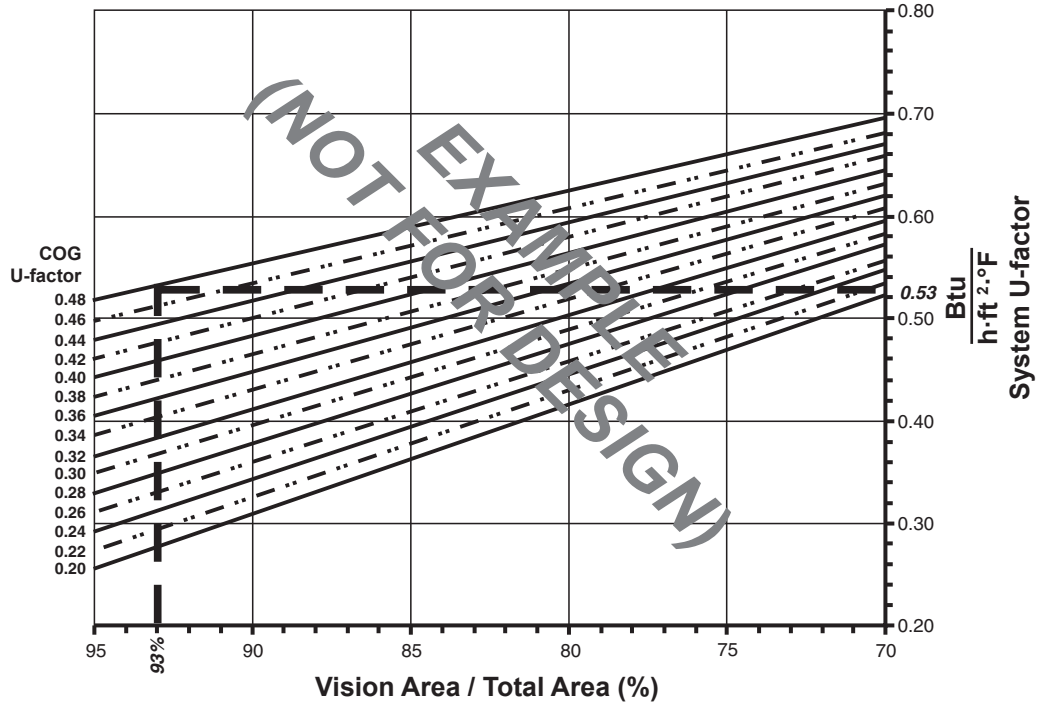
Example Spandrel R-value	= 15 (ft <sup>2</sup> · h · °F)/Btu
Spandrel Area	= 5(6 + 3) = 45.0 ft <sup>2</sup>
Total Area (Spandrel)	= 5' 2-1/2" (6' 2-1/2" + 3' 3-3/4") = 49.6 ft <sup>2</sup>
Percent of Spandrel	= (Spandrel Area ÷ Total Area)100 = (45.0 ÷ 49.6)100 = 91%

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Vision Area Chart

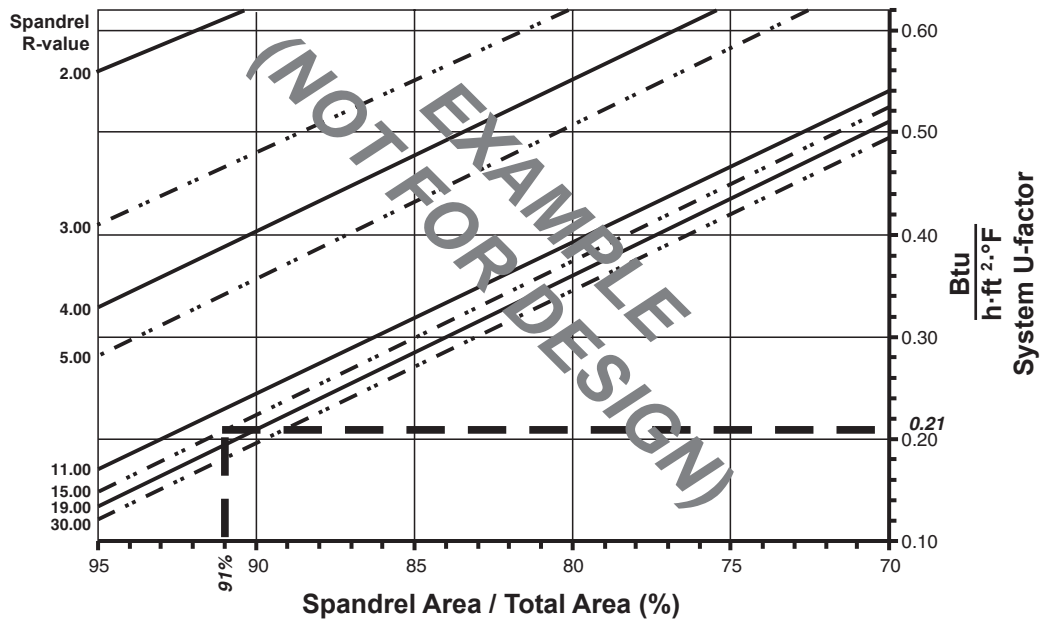
System U-factor vs Percent of Vision Area



Based on a single curtain wall bay of 93% vision glass and center of glass U-factor of 0.48, System U-factor is equal to 0.53 Btu/(h·ft<sup>2</sup>·°F)

Spandrel Area Chart

System U-factor vs Percent of Spandrel Area



Based on a single curtain wall bay of 91% spandrel and center of spandrel R-value of 15, system U-factor is equal to 0.21 Btu/(h·ft<sup>2</sup>·°F)

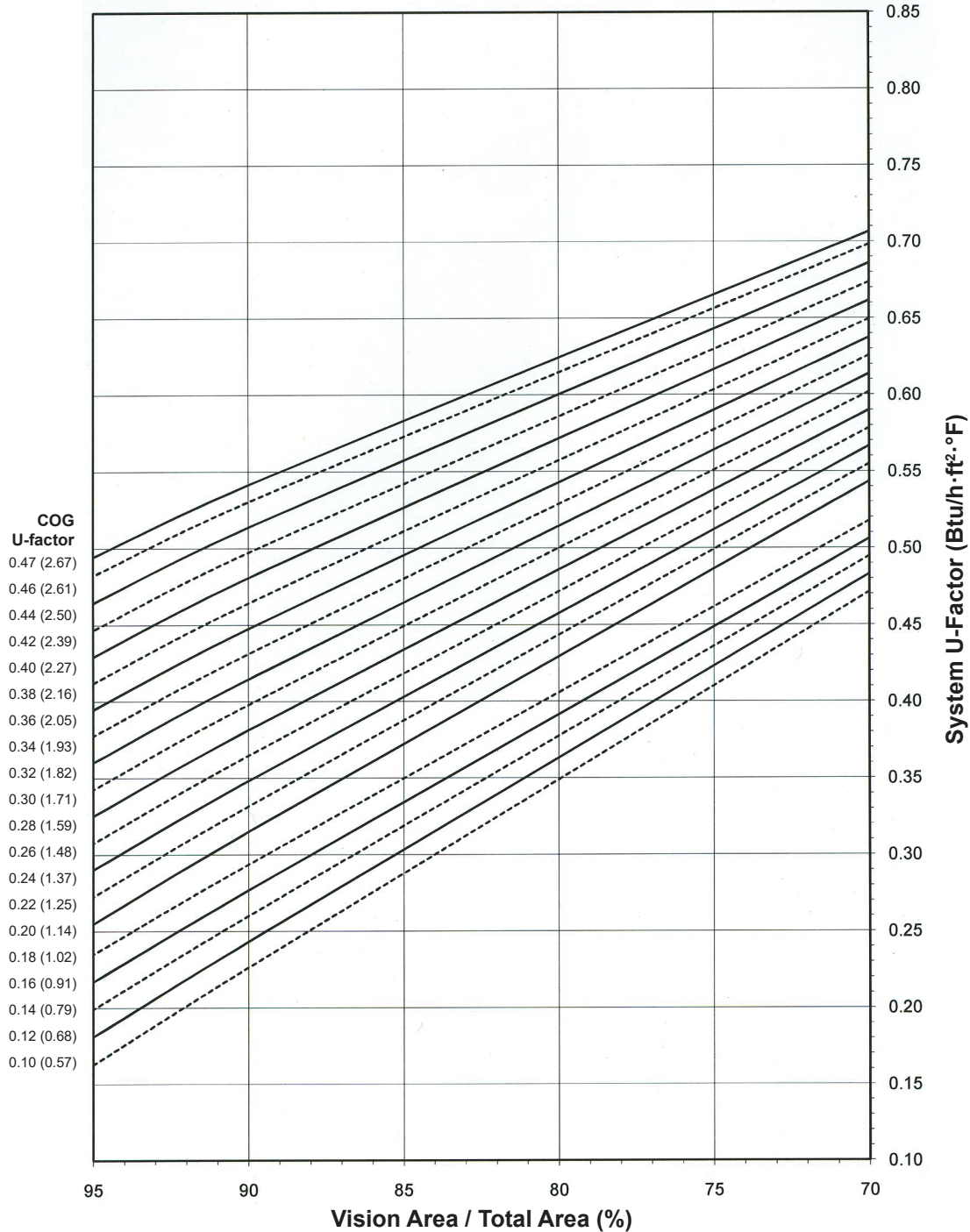
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Note:  
 Values in parentheses are metric.  
 COG=Center of Glass.  
 Charts are generated per AAMA 507.

**1" GLAZING WITH ALUMINUM PRESSURE PLATE**

**System U-Factor for Vision Glass**



**Notes for System U-Factor, SHGC and VT charts:**

For glass values that are not listed, linear interpolation is permitted.  
 Glass properties are based on center of glass values (winter conditions) and are obtained from your glass supplier.

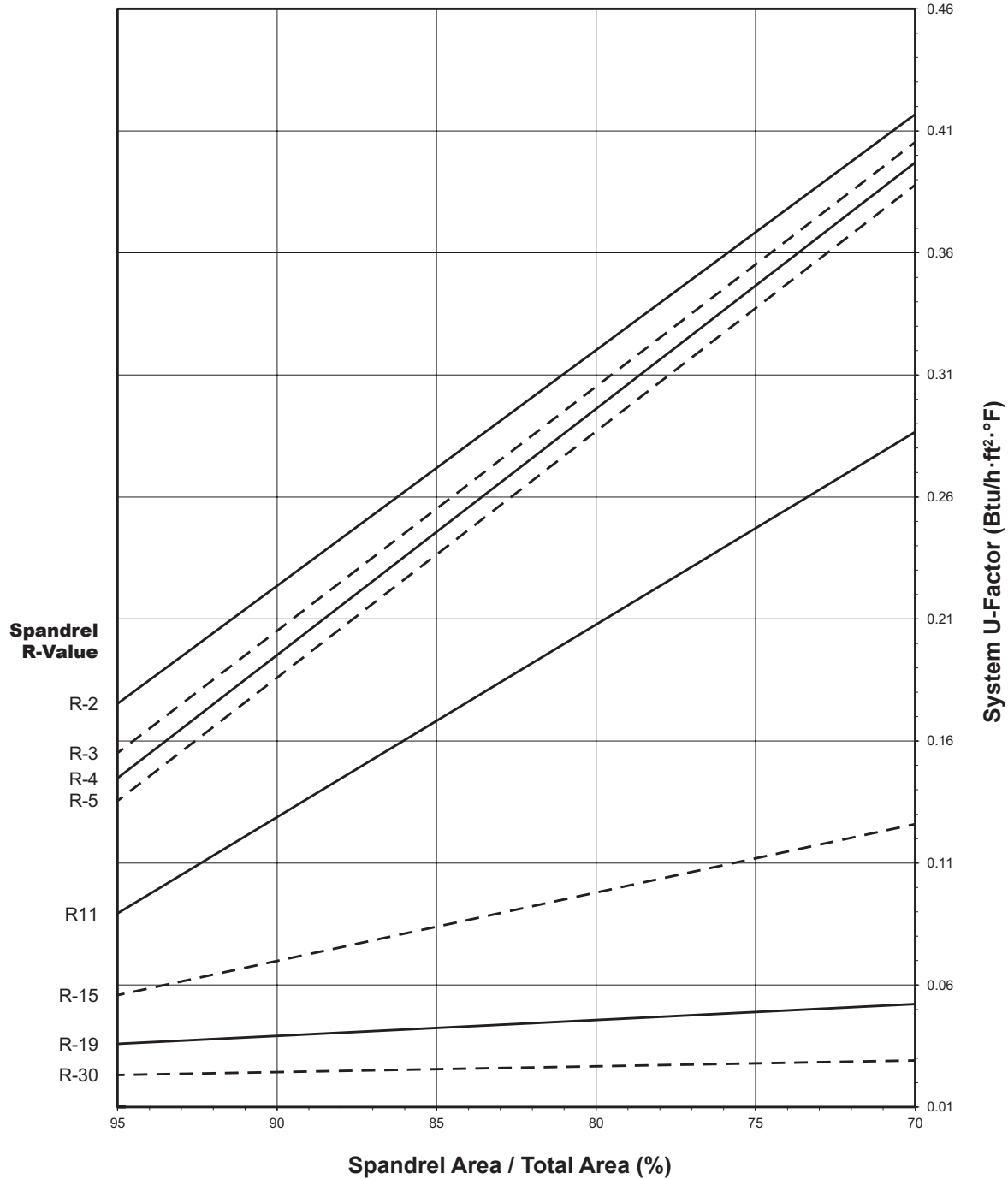
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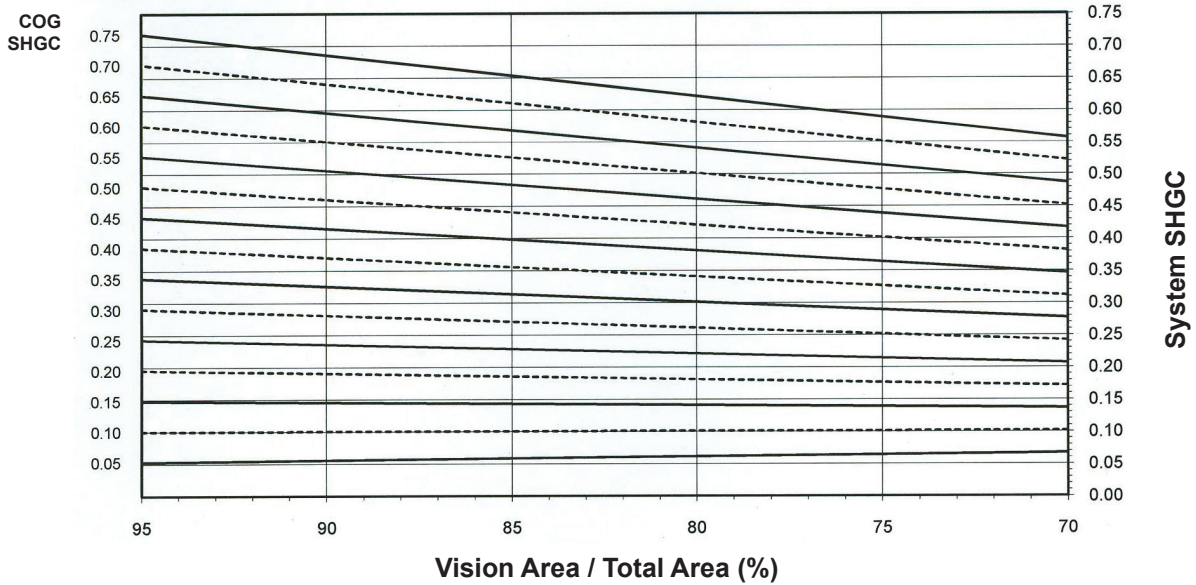
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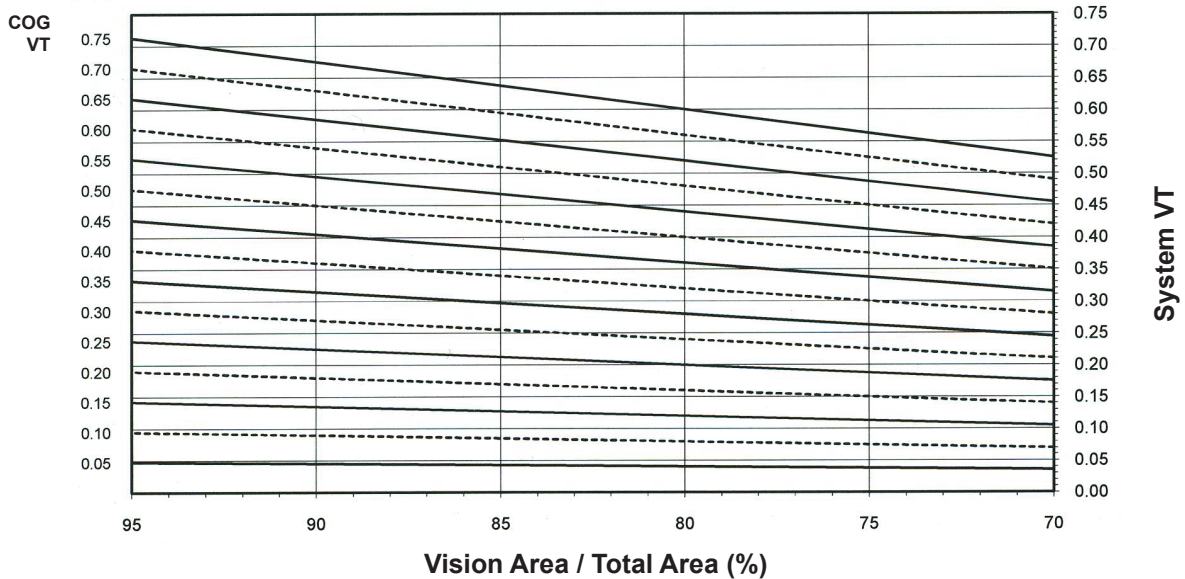
## 1" GLAZING WITH ALUMINUM PRESSURE PLATE

System Solar Heat Gain Coefficient (SHGC) vs Percent of Vision Area



Charts are generated per AAMA 507.

System Visible Transmittance (VT) vs Percent of Vision Area



Charts are generated per AAMA 507.

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**Thermal Transmittance**<sup>1</sup> (BTU/hr • ft<sup>2</sup> • °F)

Glass U-Factor <sup>3</sup>	Overall U-Factor <sup>4</sup>
0.47	0.54
0.46	0.53
0.44	0.52
0.42	0.50
0.40	0.48
0.38	0.47
0.36	0.45
0.34	0.43
0.32	0.42
0.30	0.40
0.28	0.38
0.26	0.37
0.24	0.35
0.22	0.33
0.20	0.32
0.18	0.30
0.16	0.28
0.14	0.26
0.12	0.25
0.10	0.23

**1" GLAZING WITH  
ALUMINUM PRESSURE PLATE**

**NOTE:** For glass values that are not listed, linear interpolation is permitted.

1. U-Factors are determined in accordance with NFRC 100.
2. SHGC and VT values are determined in accordance with NFRC 200.
3. Glass properties are based on center of glass values and are obtained from your glass supplier.
4. Overall U-Factor, SHGC, and VT Matricies are based on the standard NFRC specimen size of 2,000 mm wide by 2,000 mm high (78-3/4" by 78-3/4").

**SHGC Matrix**<sup>2</sup>

Glass SHGC <sup>3</sup>	Overall SHGC <sup>4</sup>
0.75	0.68
0.70	0.64
0.65	0.59
0.60	0.55
0.55	0.50
0.50	0.46
0.45	0.41
0.40	0.37
0.35	0.32
0.30	0.28
0.25	0.24
0.20	0.19
0.15	0.15
0.10	0.10
0.05	0.06

**Visible Transmittance**<sup>2</sup>

Glass VT <sup>3</sup>	Overall VT <sup>4</sup>
0.75	0.67
0.70	0.63
0.65	0.58
0.60	0.54
0.55	0.49
0.50	0.45
0.45	0.40
0.40	0.36
0.35	0.31
0.30	0.27
0.25	0.22
0.20	0.18
0.15	0.13
0.10	0.09
0.05	0.04

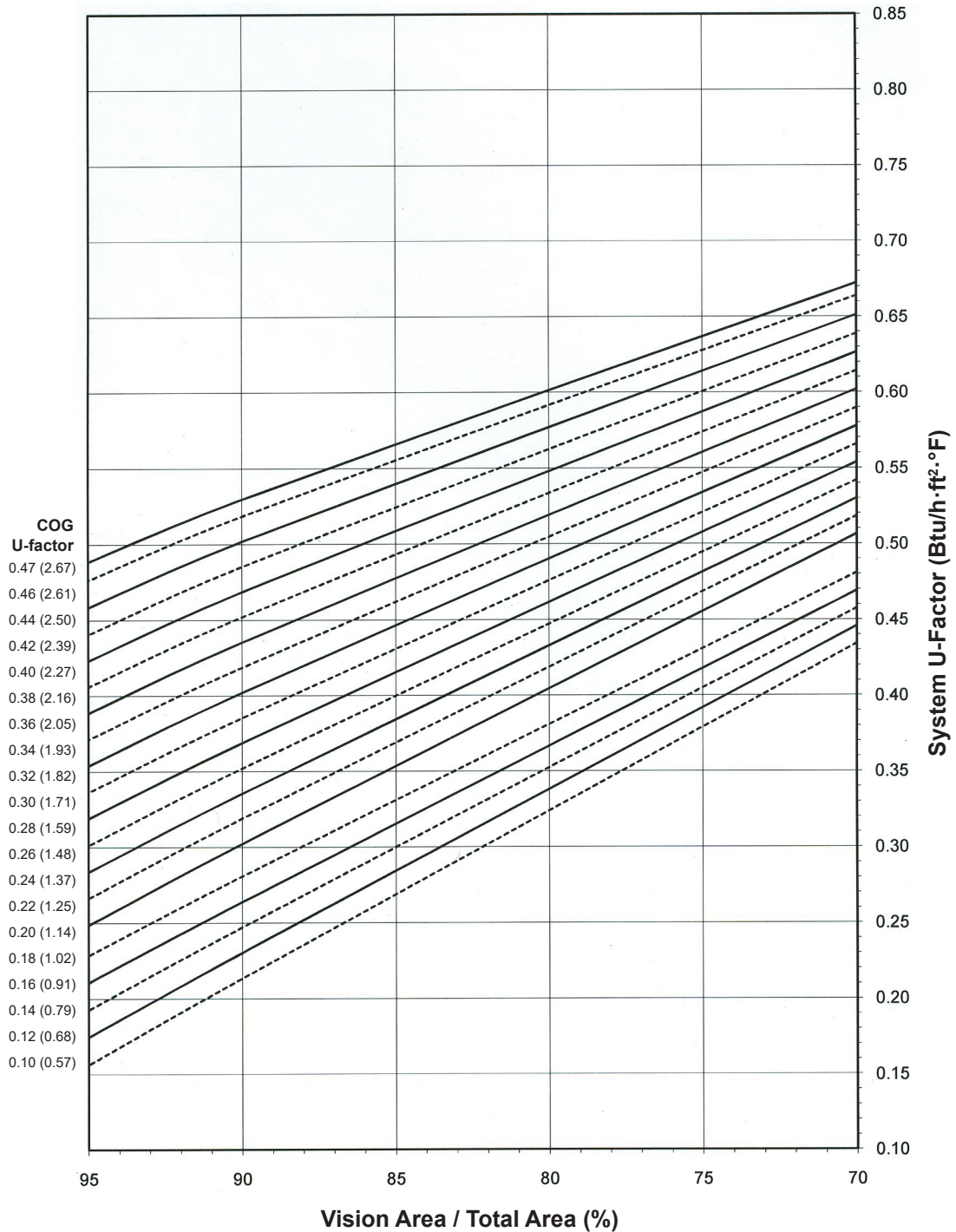
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Note:  
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 COG=Center of Glass.  
 Charts are generated per AAMA 507.

**1" GLAZING WITH FIBERGLASS PRESSURE PLATE**

**System U-Factor for Vision Glass**



**Notes for System U-Factor, SHGC and VT charts:**

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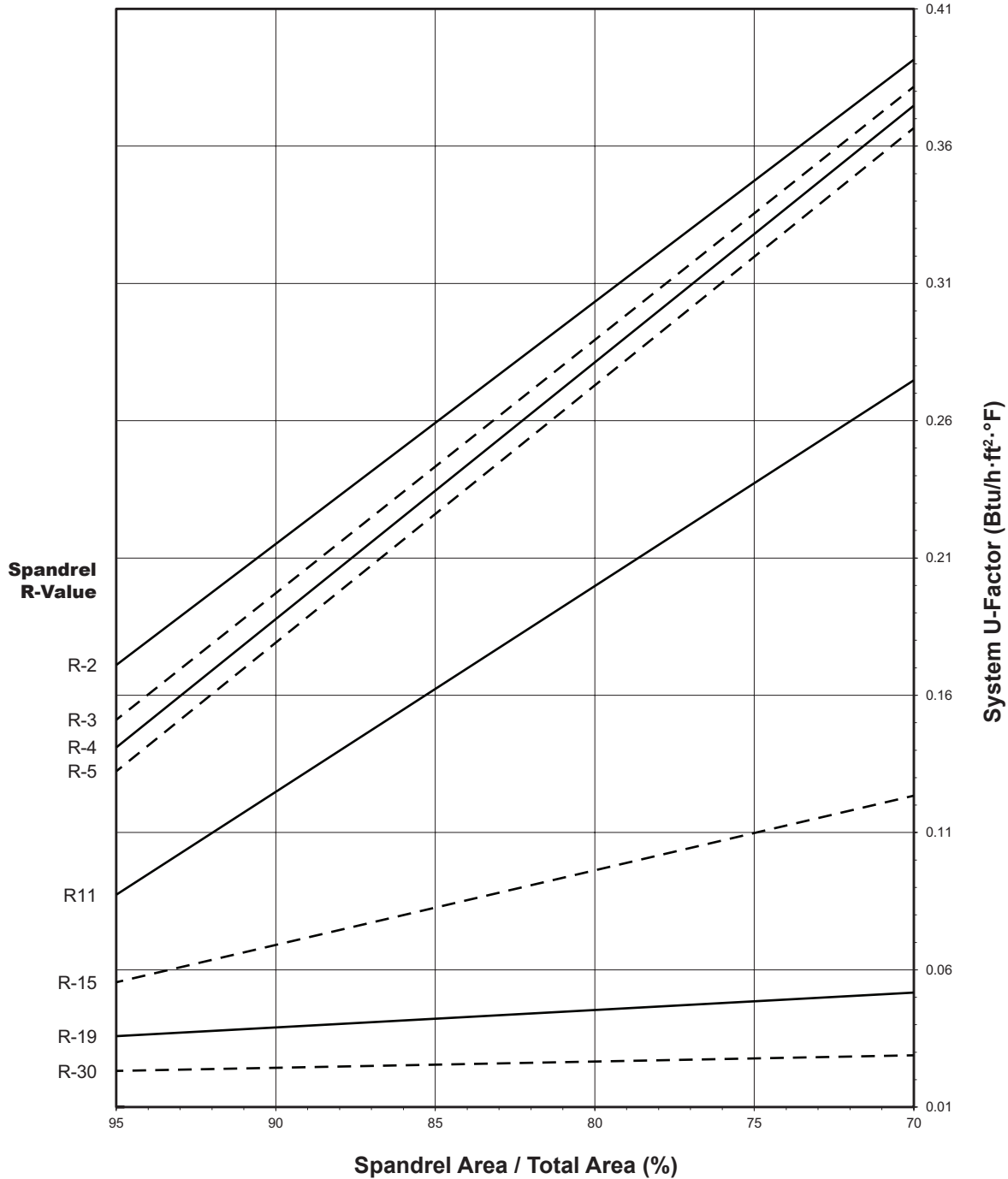
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**1" GLAZING WITH FIBERGLASS PRESSURE PLATE**

**System U-Factor for Spandrel Glass**



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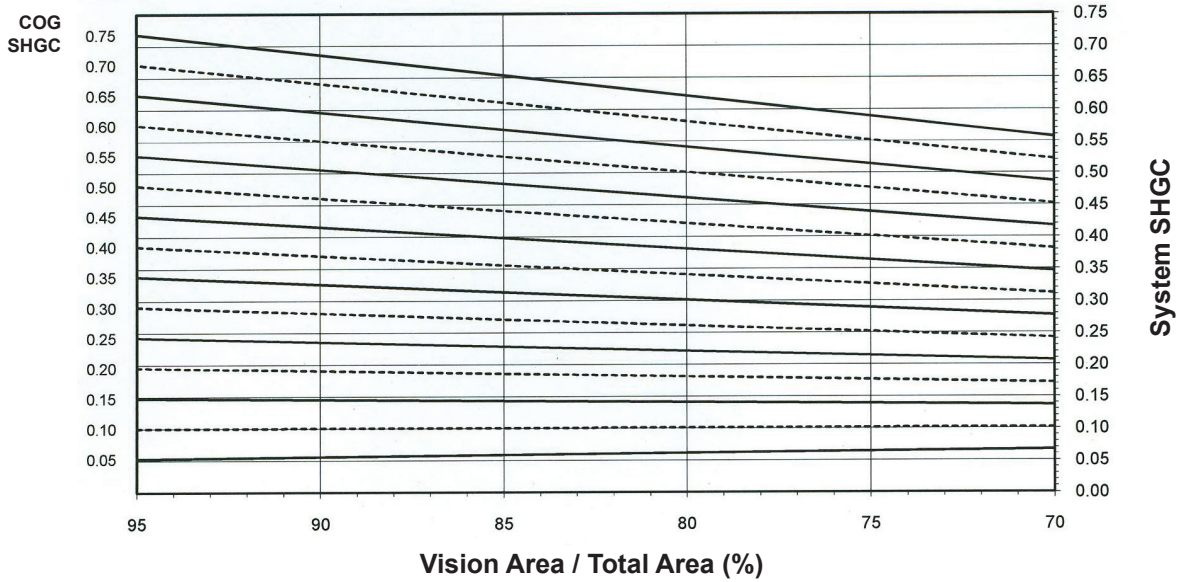
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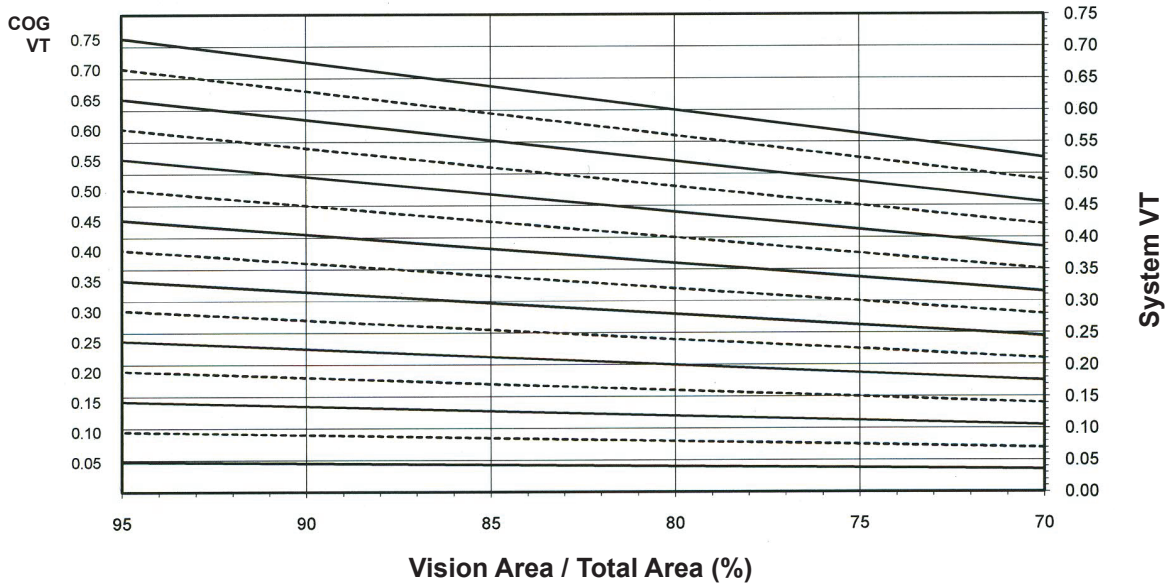
## 1" GLAZING WITH FIBERGLASS PRESSURE PLATE

System Solar Heat Gain Coefficient (SHGC) vs Percent of Vision Area



Charts are generated per AAMA 507.

System Visible Transmittance (VT) vs Percent of Vision Area



Charts are generated per AAMA 507.

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0.16	0.27
0.14	0.25
0.12	0.23
0.10	0.22

**1" GLAZING WITH  
FIBERGLASS PRESSURE PLATE**

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Glass SHGC <sup>3</sup>	Overall SHGC <sup>4</sup>
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0.35	0.32
0.30	0.28
0.25	0.24
0.20	0.19
0.15	0.15
0.10	0.10
0.05	0.06

**Visible Transmittance** <sup>2</sup>

Glass VT <sup>3</sup>	Overall VT <sup>4</sup>
0.75	0.67
0.70	0.63
0.65	0.58
0.60	0.54
0.55	0.49
0.50	0.45
0.45	0.40
0.40	0.36
0.35	0.31
0.30	0.27
0.25	0.22
0.20	0.18
0.15	0.13
0.10	0.09
0.05	0.04

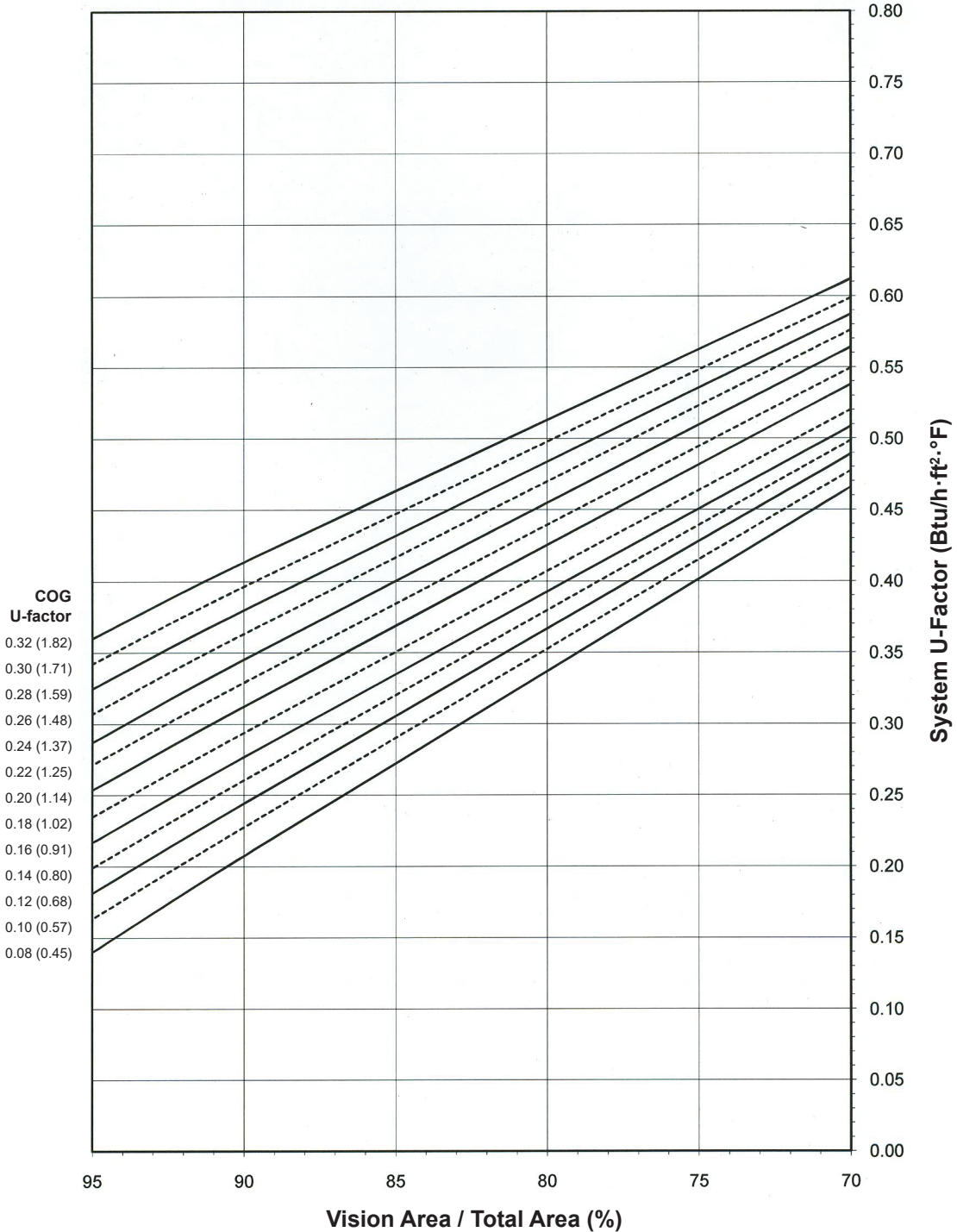
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**1-3/4" GLAZING WITH ALUMINUM PRESSURE PLATE**

**System U-Factor for Vision Glass**



**Notes for System U-Factor, SHGC and VT charts:**

For glass values that are not listed, linear interpolation is permitted.  
 Glass properties are based on center of glass values (winter conditions) and are obtained from your glass supplier.

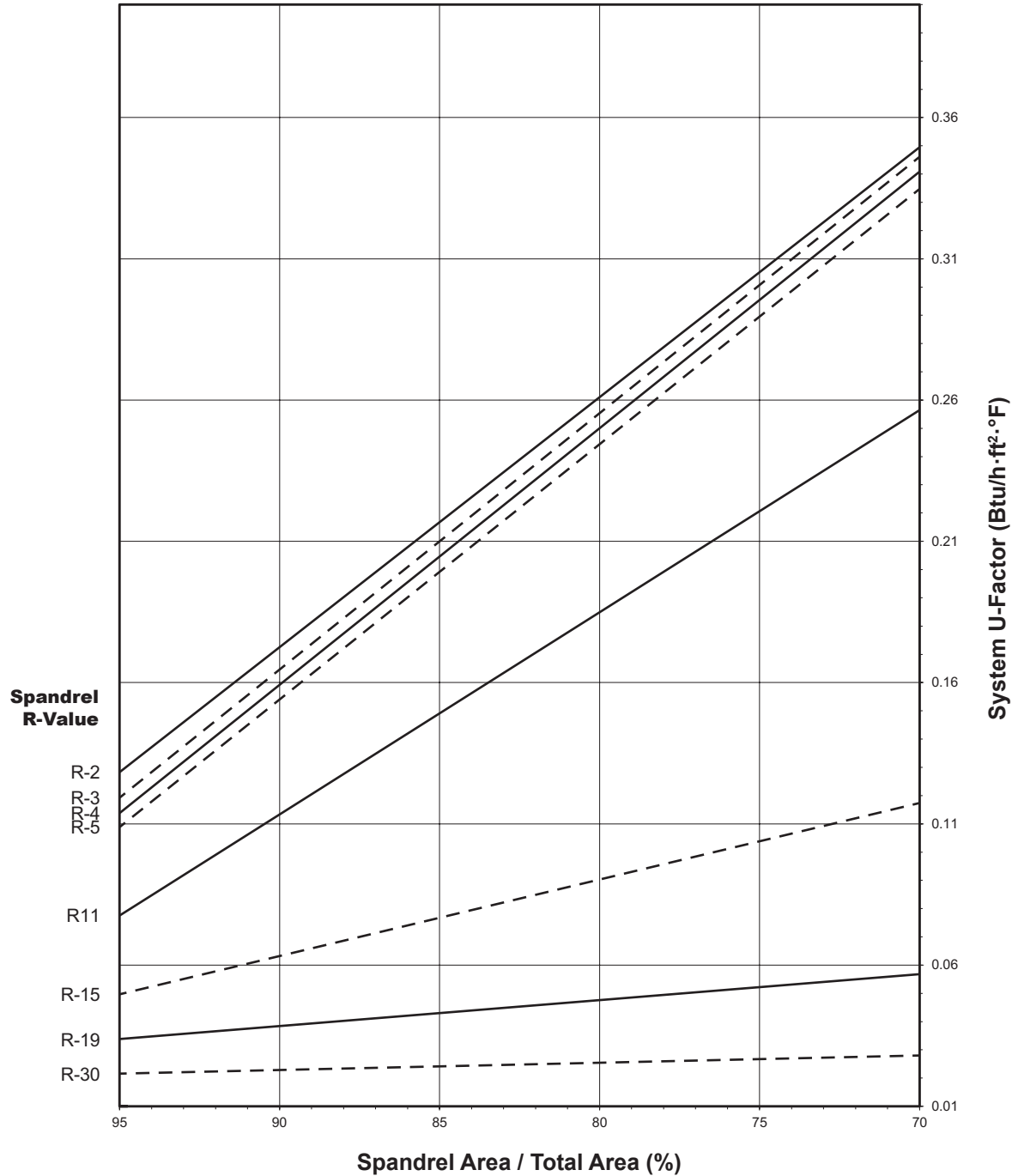
Laws and building and safety codes governing the design and use of Kawneer products, such as glazed entrance, window, and curtain wall products, vary widely. Kawneer does not control the selection of product configurations, operating hardware, or glazing materials, and assumes no responsibility therefor.

Kawneer reserves the right to change configuration without prior notice when deemed necessary for product improvement.  
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Note:  
 Values in parentheses are metric.  
 COG=Center of Glass.  
 Charts are generated per AAMA 507.

**1-3/4" GLAZING WITH ALUMINUM PRESSURE PLATE**

**System U-Factor for Spandrel Glass**



**Notes for System U-Factor, SHGC and VT charts:**

For glass values that are not listed, linear interpolation is permitted.  
 Glass properties are based on center of glass values (winter conditions) and are obtained from your glass supplier.

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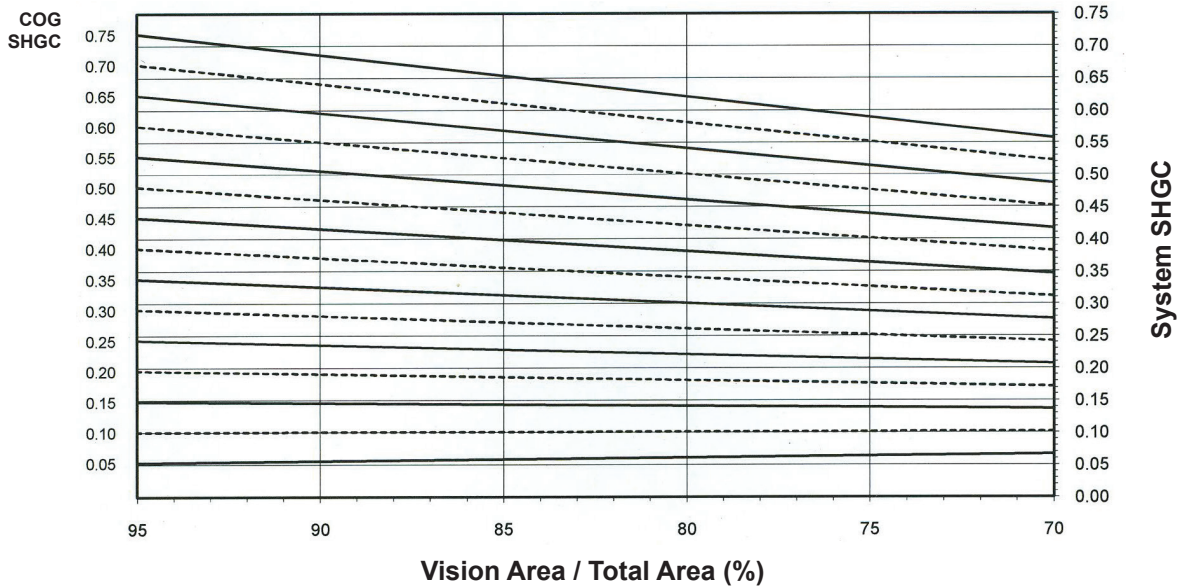
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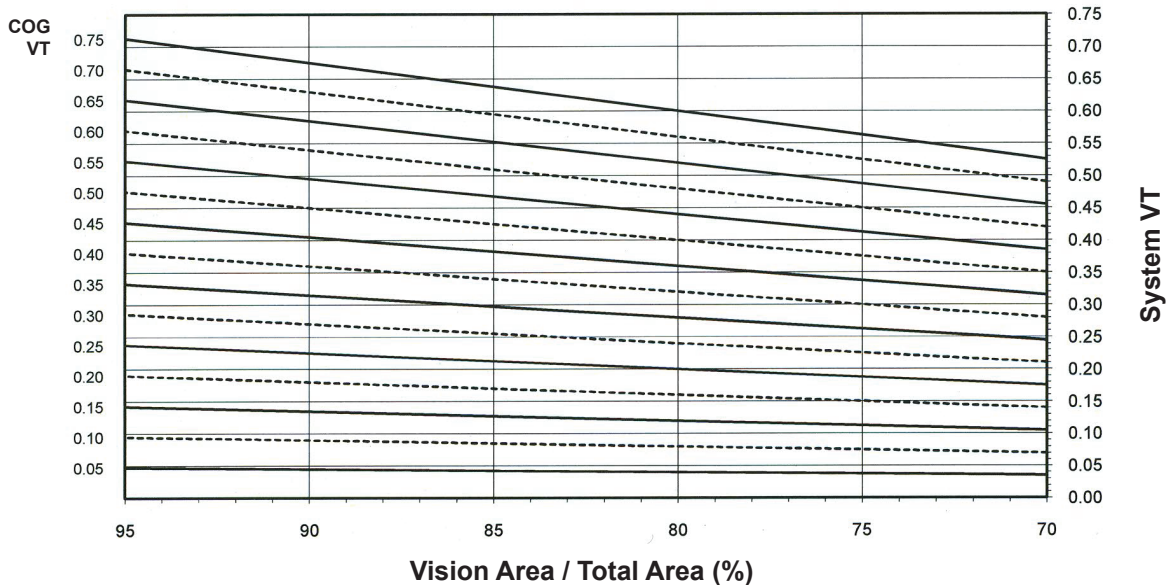
**1-3/4" GLAZING WITH ALUMINUM PRESSURE PLATE**

**System Solar Heat Gain Coefficient (SHGC) vs Percent of Vision Area**



Charts are generated per AAMA 507.

**System Visible Transmittance (VT) vs Percent of Vision Area**



Charts are generated per AAMA 507.

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Thermal Transmittance <sup>1</sup> (BTU/hr • ft<sup>2</sup> • °F)

Glass U-Factor <sup>3</sup>	Overall U-Factor <sup>4</sup>
0.32	0.42
0.30	0.40
0.28	0.38
0.26	0.37
0.24	0.35
0.22	0.33
0.20	0.32
0.18	0.30
0.16	0.28
0.14	0.26
0.12	0.25
0.10	0.23
0.08	0.21

**1-3/4" GLAZING WITH  
ALUMINUM PRESSURE PLATE**

**NOTE:** For glass values that are not listed, linear interpolation is permitted.

1. U-Factors are determined in accordance with NFRC 100.
2. SHGC and VT values are determined in accordance with NFRC 200.
3. Glass properties are based on center of glass values and are obtained from your glass supplier.
4. Overall U-Factor, SHGC, and VT Matricies are based on the standard NFRC specimen size of 2,000 mm wide by 2,000 mm high (78-3/4" by 78-3/4").

SHGC Matrix <sup>2</sup>

Glass SHGC <sup>3</sup>	Overall SHGC <sup>4</sup>
0.75	0.68
0.70	0.64
0.65	0.59
0.60	0.55
0.55	0.50
0.50	0.46
0.45	0.41
0.40	0.37
0.35	0.32
0.30	0.28
0.25	0.24
0.20	0.19
0.15	0.15
0.10	0.10
0.05	0.06

Visible Transmittance <sup>2</sup>

Glass VT <sup>3</sup>	Overall VT <sup>4</sup>
0.75	0.67
0.70	0.63
0.65	0.58
0.60	0.54
0.55	0.49
0.50	0.45
0.45	0.40
0.40	0.36
0.35	0.31
0.30	0.27
0.25	0.22
0.20	0.18
0.15	0.13
0.10	0.09
0.05	0.04

Laws and building and safety codes governing the design and use of Kawneer products, such as glazed entrance, window, and curtain wall products, vary widely. Kawneer does not control the selection of product configurations, operating hardware, or glazing materials, and assumes no responsibility therefor.

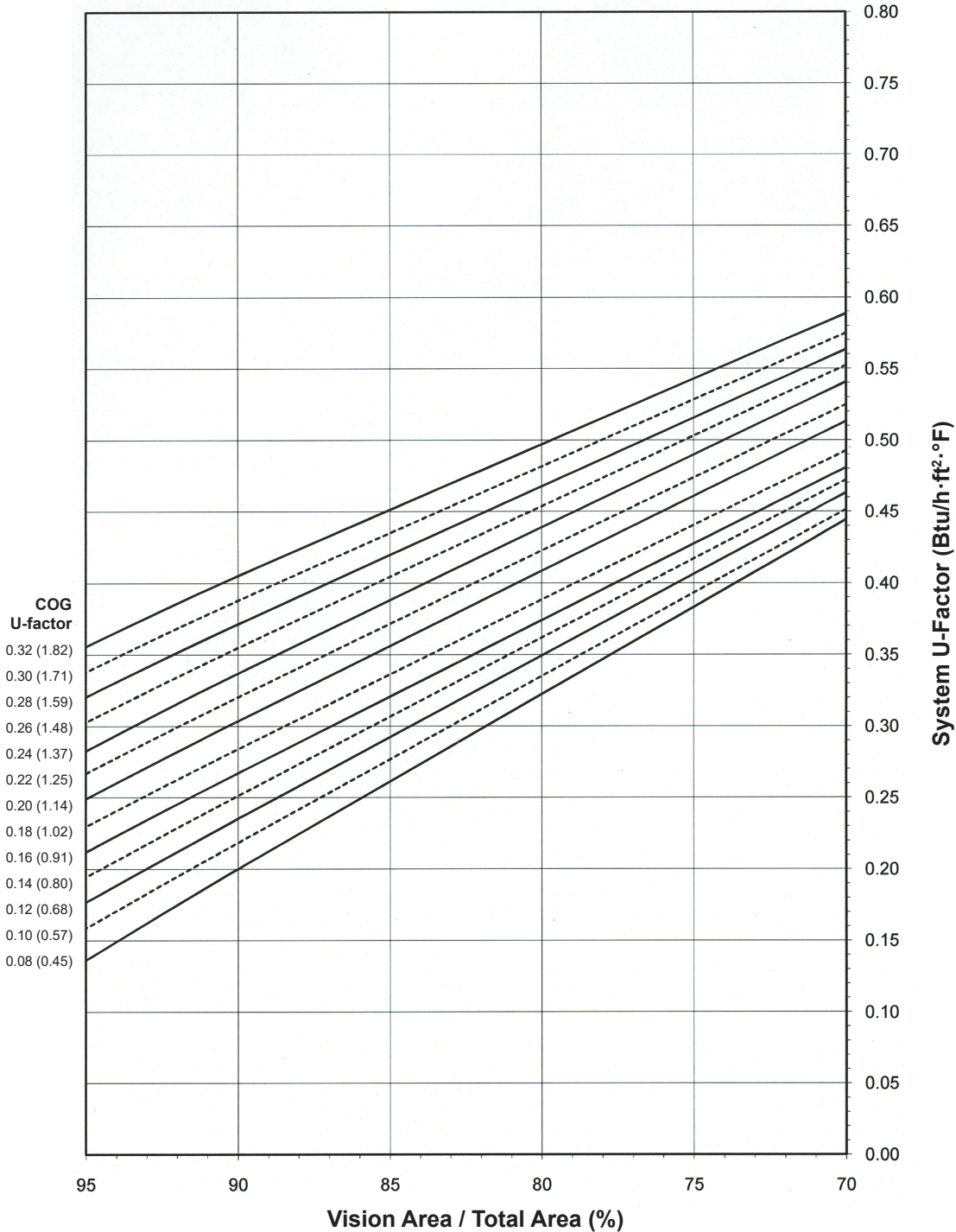
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Note:  
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 COG=Center of Glass.  
 Charts are generated per AAMA 507.

**1-3/4" GLAZING WITH FIBERGLASS PRESSURE PLATE**

**System U-Factor for Vision Glass**



**Notes for System U-Factor, SHGC and VT charts:**

For glass values that are not listed, linear interpolation is permitted.  
 Glass properties are based on center of glass values (winter conditions) and are obtained from your glass supplier.

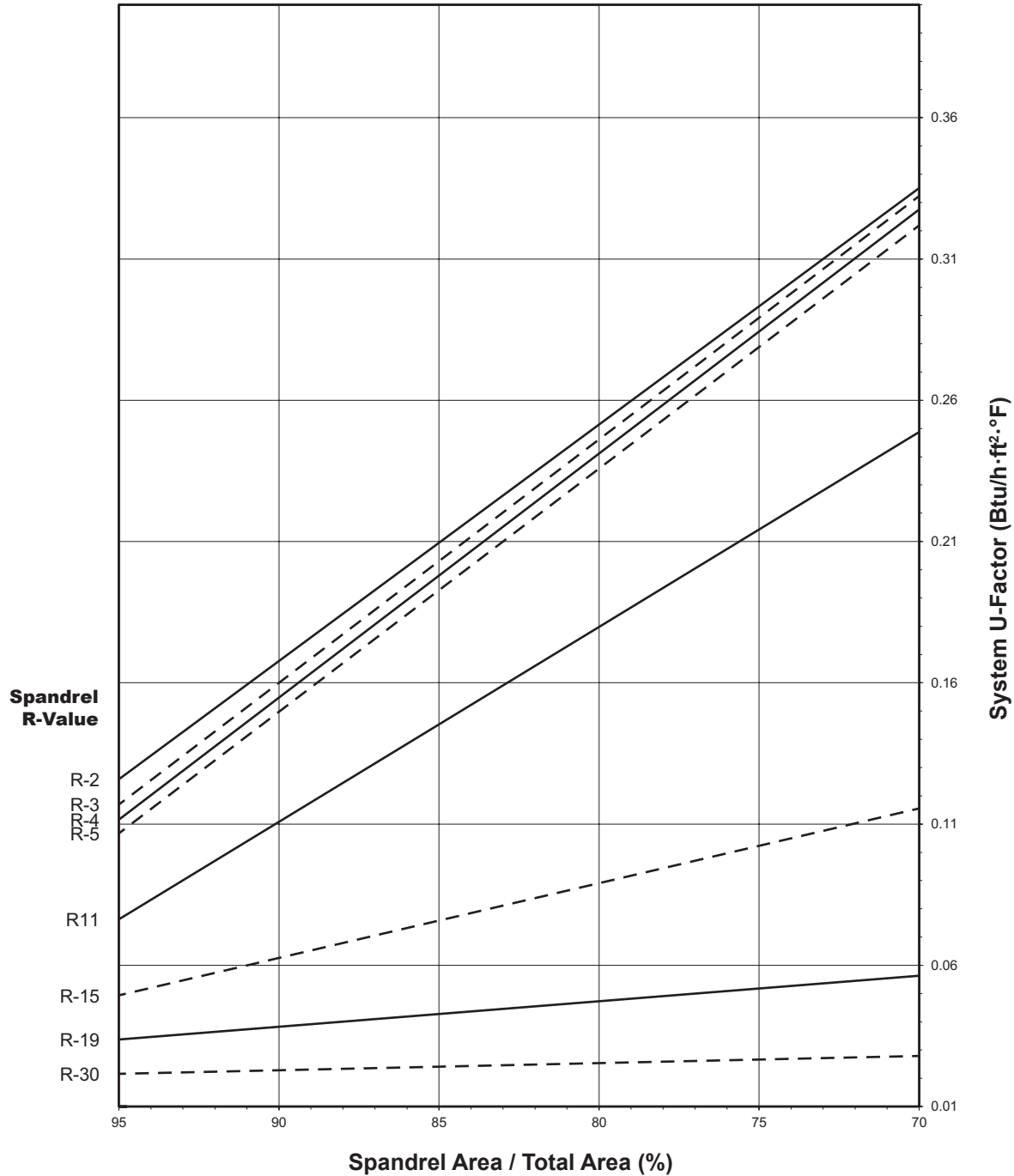
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Note:  
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**1-3/4" GLAZING WITH FIBERGLASS PRESSURE PLATE**

**System U-Factor for Spandrel Glass**



**Notes for System U-Factor, SHGC and VT charts:**

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 Glass properties are based on center of glass values (winter conditions) and are obtained from your glass supplier.

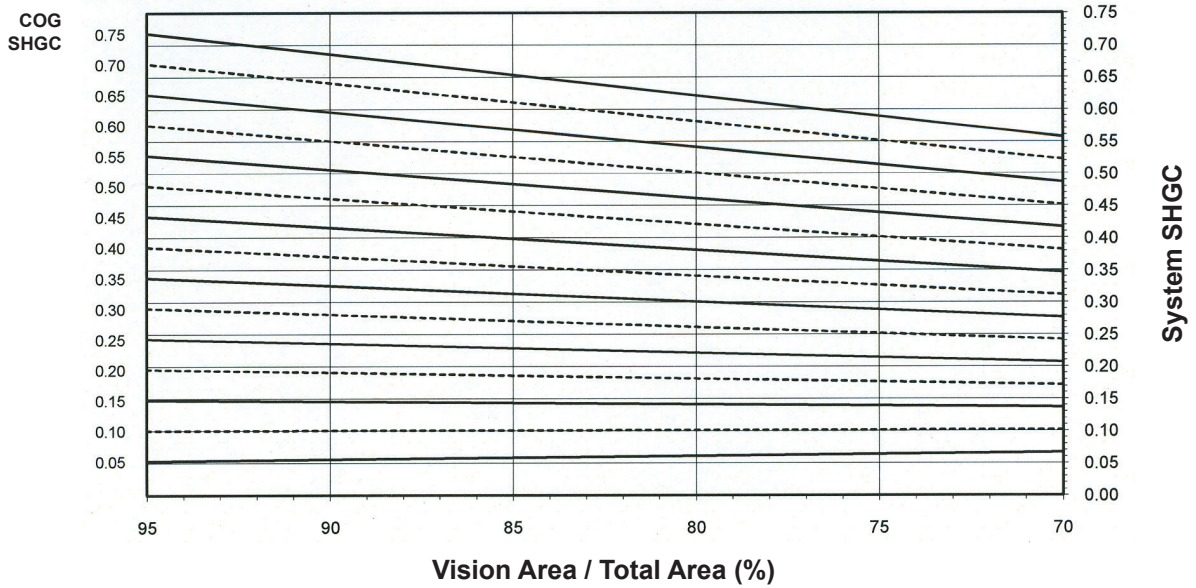
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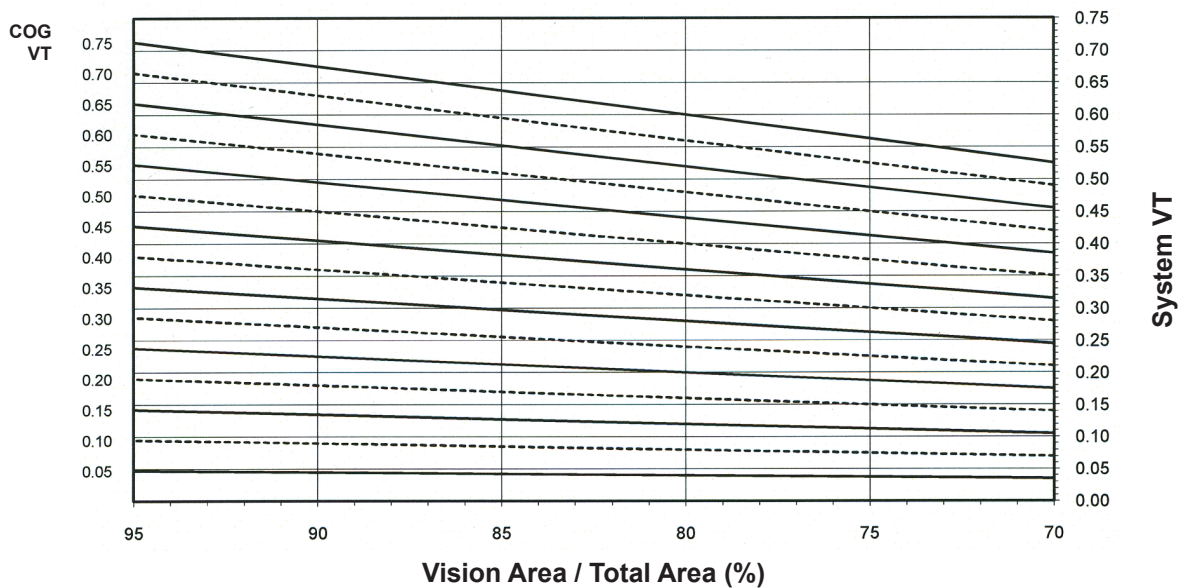
## 1-3/4" GLAZING WITH FIBERGLASS PRESSURE PLATE

System Solar Heat Gain Coefficient (SHGC) vs Percent of Vision Area



Charts are generated per AAMA 507.

System Visible Transmittance (VT) vs Percent of Vision Area



Charts are generated per AAMA 507.

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**Thermal Transmittance** <sup>1</sup> (BTU/hr • ft<sup>2</sup> • °F)

Glass U-Factor <sup>3</sup>	Overall U-Factor <sup>4</sup>
0.32	0.41
0.30	0.39
0.28	0.37
0.26	0.36
0.24	0.34
0.22	0.32
0.20	0.31
0.18	0.29
0.16	0.27
0.14	0.25
0.12	0.24
0.10	0.22
0.08	0.20

**1-3/4" GLAZING WITH  
FIBERGLASS PRESSURE PLATE**

**NOTE:** For glass values that are not listed, linear interpolation is permitted.

1. U-Factors are determined in accordance with NFRC 100.
2. SHGC and VT values are determined in accordance with NFRC 200.
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Glass SHGC <sup>3</sup>	Overall SHGC <sup>4</sup>
0.75	0.68
0.70	0.64
0.65	0.59
0.60	0.55
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0.50	0.46
0.45	0.41
0.40	0.37
0.35	0.32
0.30	0.28
0.25	0.24
0.20	0.19
0.15	0.15
0.10	0.10
0.05	0.06

**Visible Transmittance** <sup>2</sup>

Glass VT <sup>3</sup>	Overall VT <sup>4</sup>
0.75	0.67
0.70	0.63
0.65	0.58
0.60	0.54
0.55	0.49
0.50	0.45
0.45	0.40
0.40	0.36
0.35	0.31
0.30	0.27
0.25	0.22
0.20	0.18
0.15	0.13
0.10	0.09
0.05	0.04

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CONDENSATION RESISTANCE

	PRESSURE PLATE TYPE	CRF		I-VALUE	
		FRAME	GLASS	FRAME	GLASS
1" DOUBLE GLAZING INFILL	ALUMINUM FIBERGLASS	79	76	71	67
				76	68
1-3/4" TRIPLE GLAZING INFILL	ALUMINUM FIBERGLASS	82	81	74	77
				76	78

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