ACRO
ALUMINUM INC.

2000 Series 2-Inch Curtainwall Architectural Details

Series 2000 Thermally Improved Curtain Wall System 2” x 6-1/16” For 1” Glazing

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Special Features

SECTION 08 44 13 ALUMINUM CURTAIN WALL SYSTEMS

SERIES	FACE WIDTH	BACK MEMBER DEPTH	OVERALL DEPTH	GLAZING INFILL	GLAZING METHOD
2000	2" (50.8)	4" (101.6)	6-1/16" (154)	1" (25)	Exterior

Features:

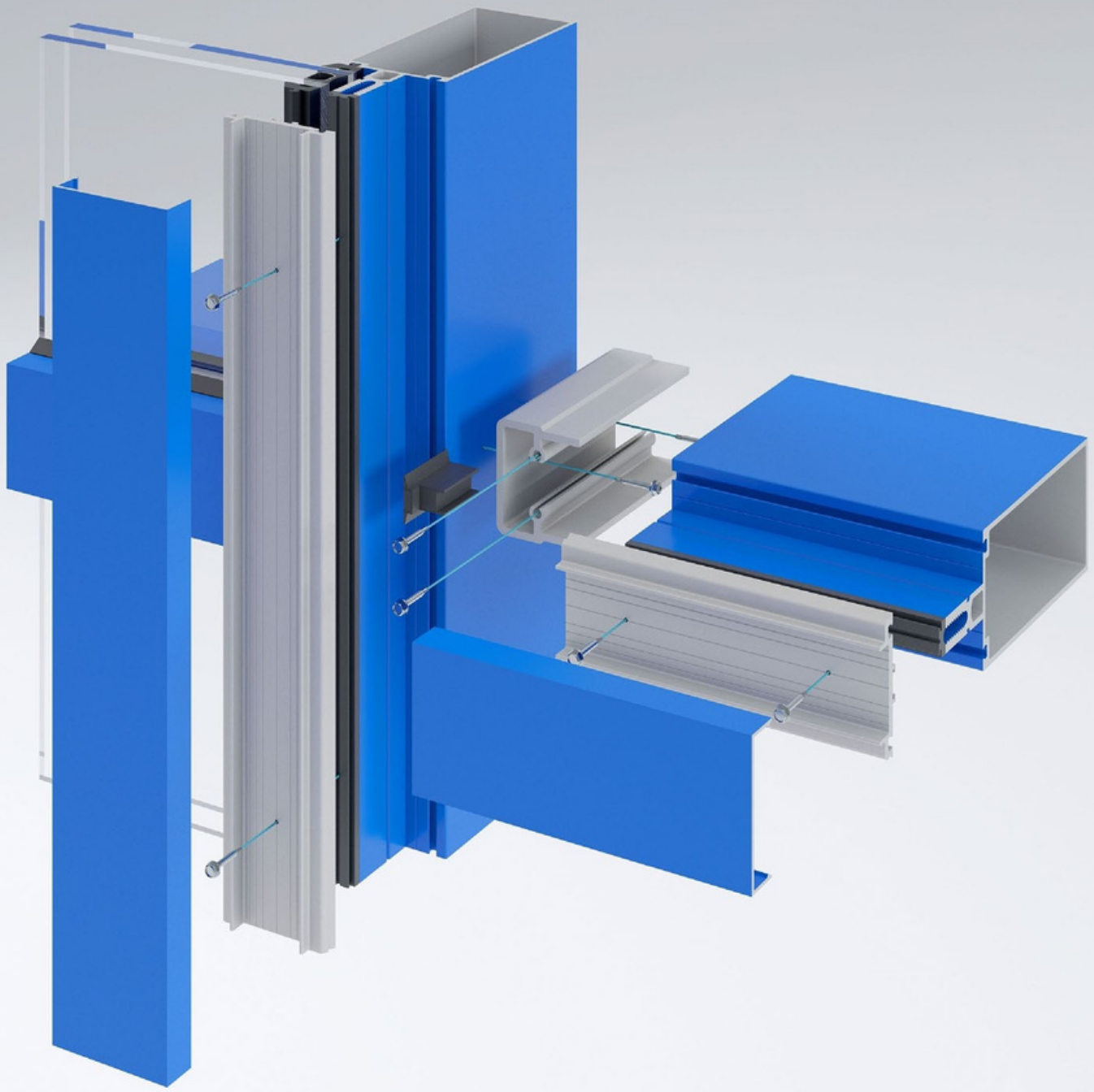
- 2" frame width
- 4" backsection (6" overall depth)
- Outside glazed captured curtainwall
- 1" infill (dual glazed)
- Concealed shear block joinery
- Continuous gasket thermal break
- Designed to integrate with door and vent systems
- Aluminum Alloy 6063 T5 temper
- Pressure-equalized rainscreen system
- Injection molded corner block to control water infiltration
- Steel reinforced mullions available
- Extended cap/sunshade available

Available finishes:

- Clear anodized finish (Class 1 or 2)
- Black/bronze anodized finish (Class 1)
- Custom color powder coating. Compliant to AAMA 2604

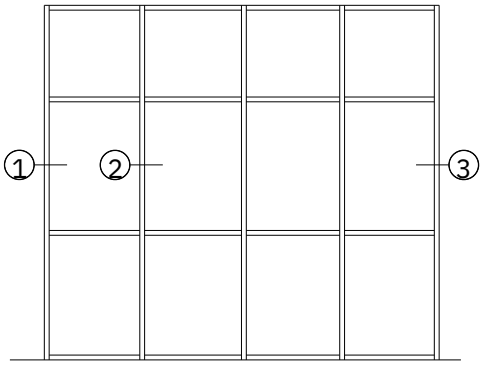
Intended Applications:

- Designed for low to mid-rise applications looking for a sleek 2" sightline with low cost

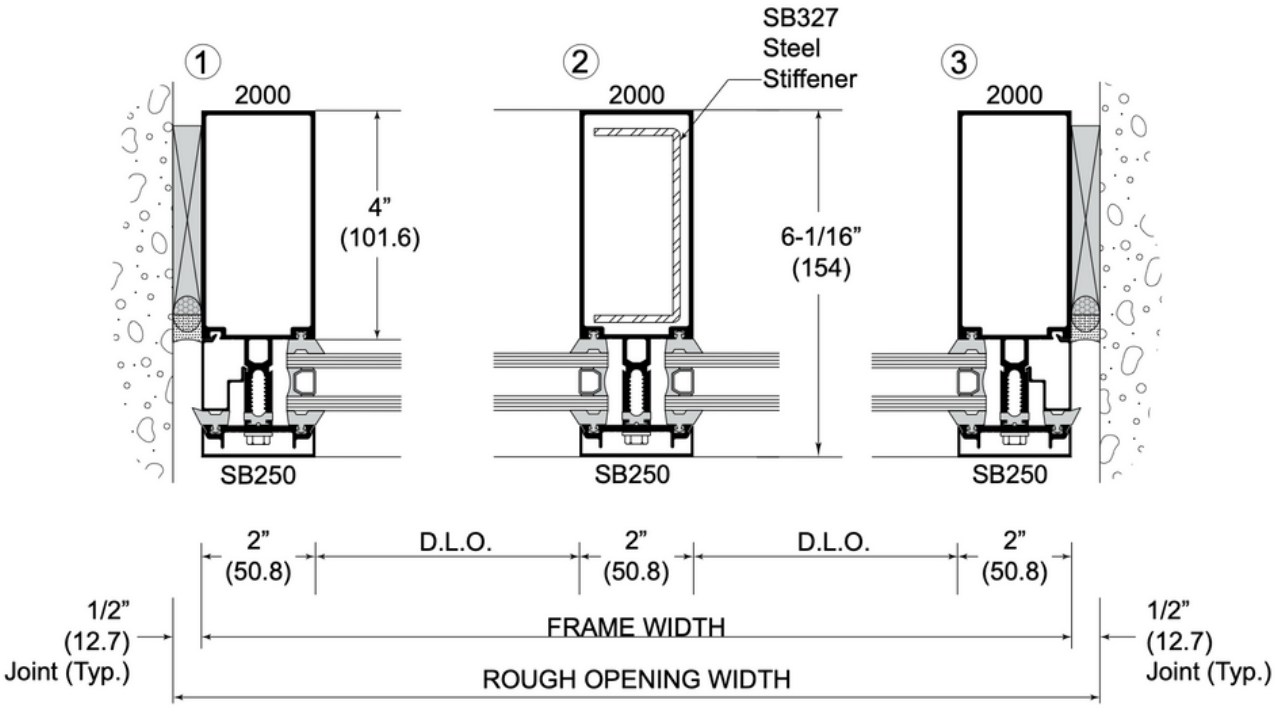


Typical Details

VERITCAL MULLIONS

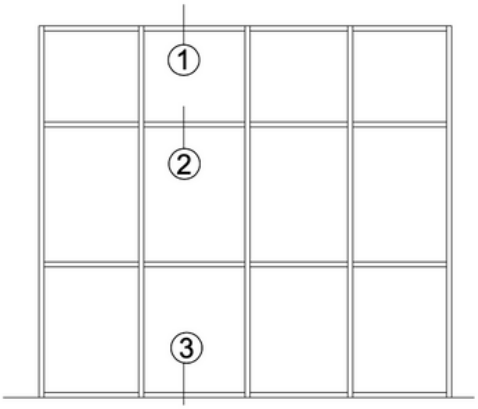


TYPICAL ELEVATION

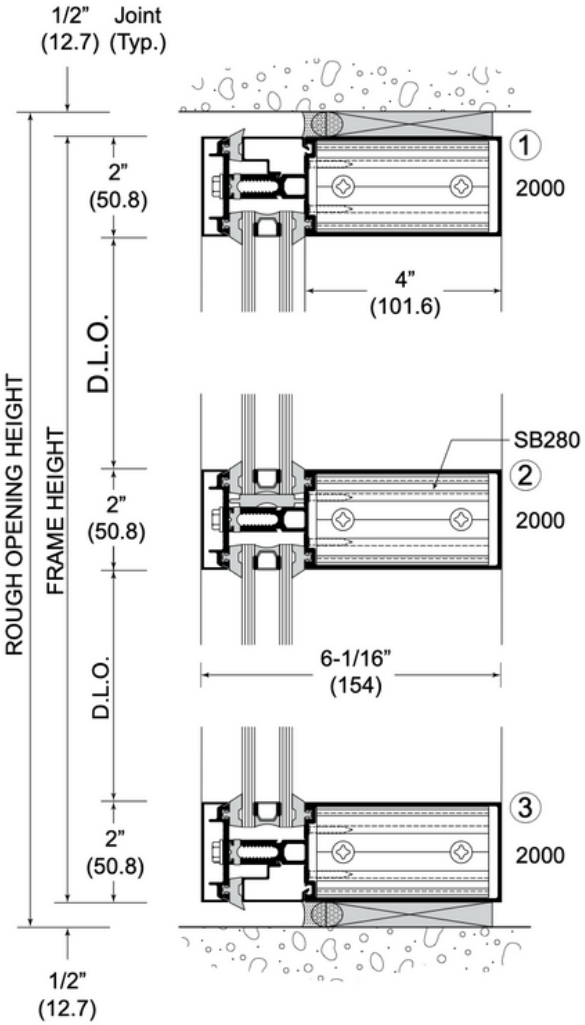


Typical Details

HORIZONTAL MULLIONS

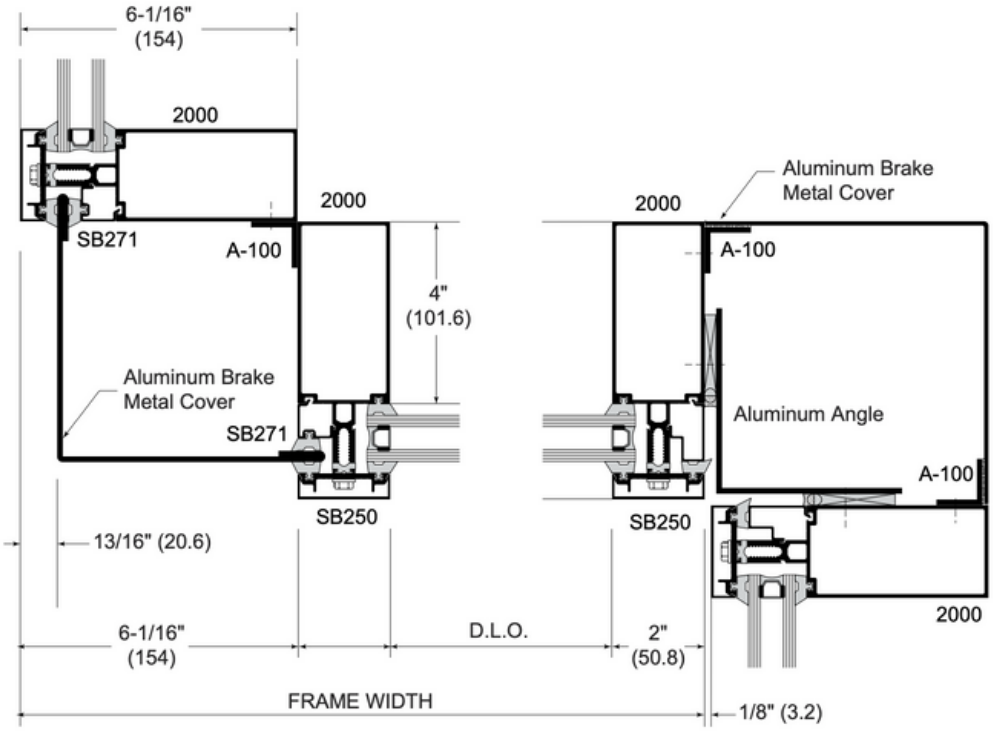


TYPICAL ELEVATION



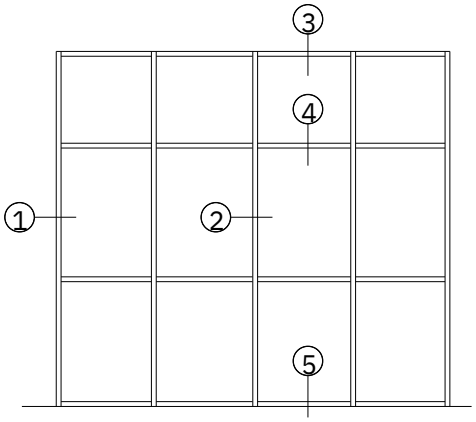
Typical Details

90 DEGREE INSIDE AND OUTSIDE CORNER CONDITION



Typical Details

1/4” (6) TRANSITION GLAZING



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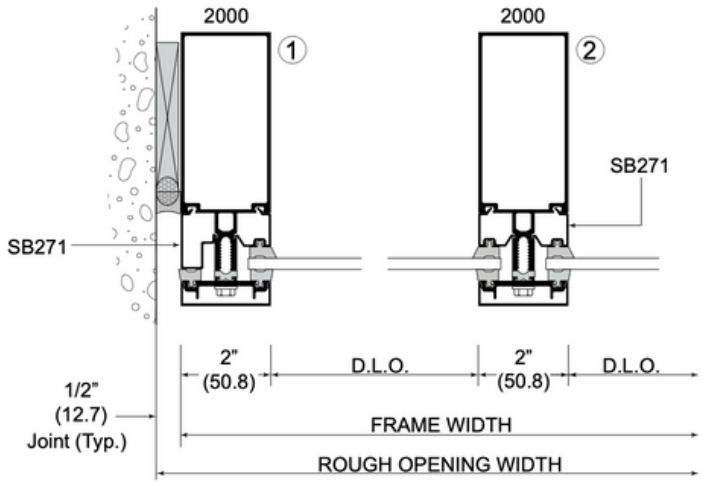
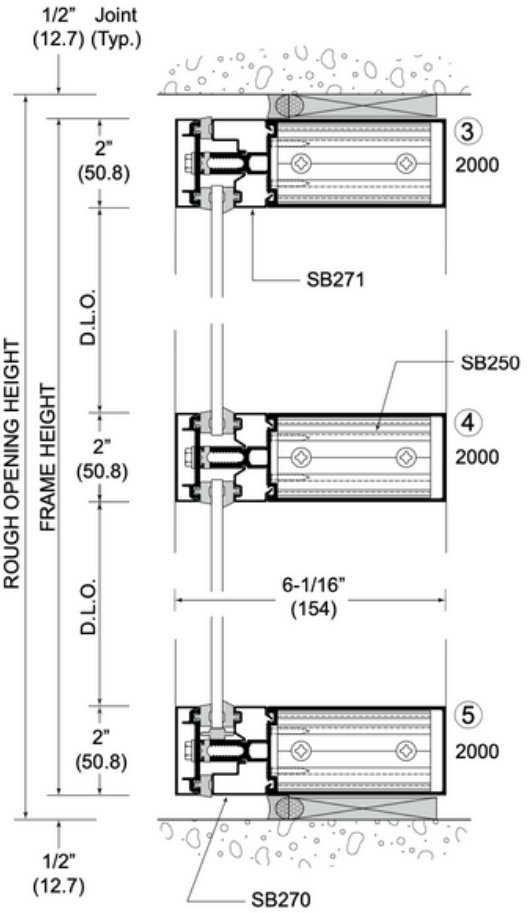
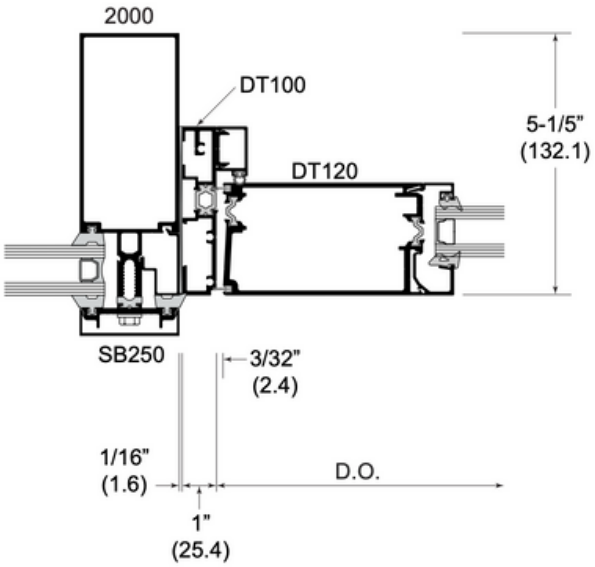
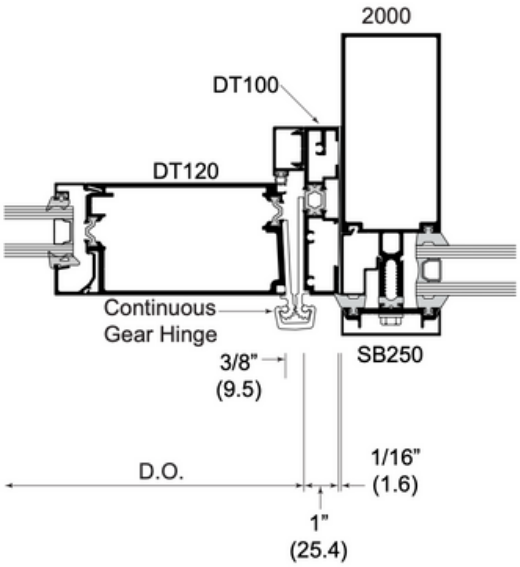


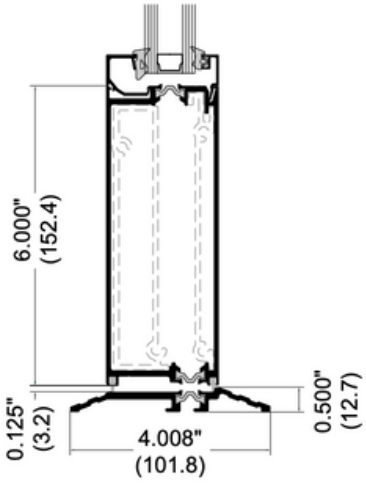


Typical Details

DOOR FRAMING

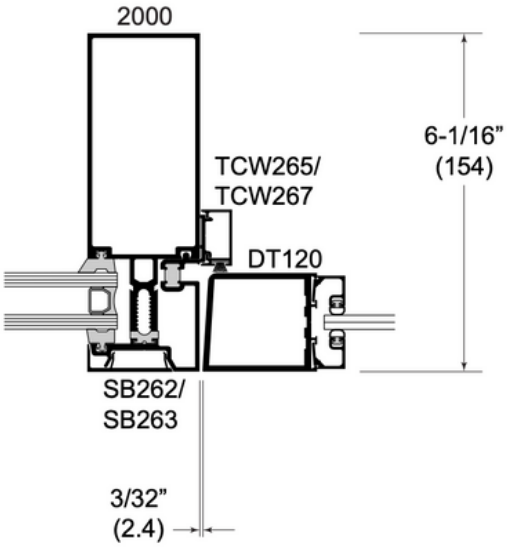


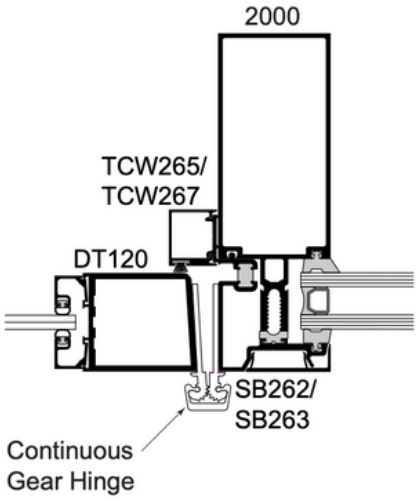


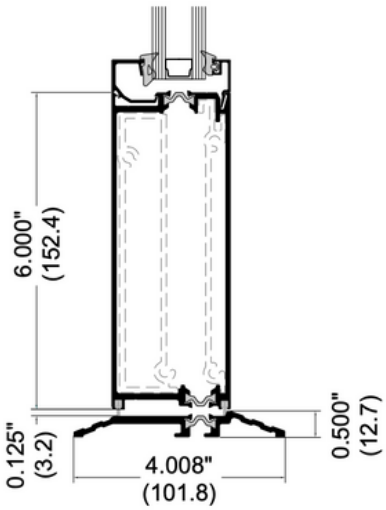


Typical Details

DOOR FRAMING WITH FLUSH DOOR ADAPTOR

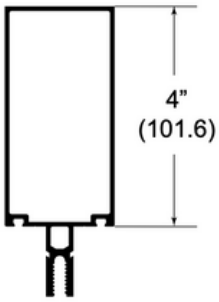




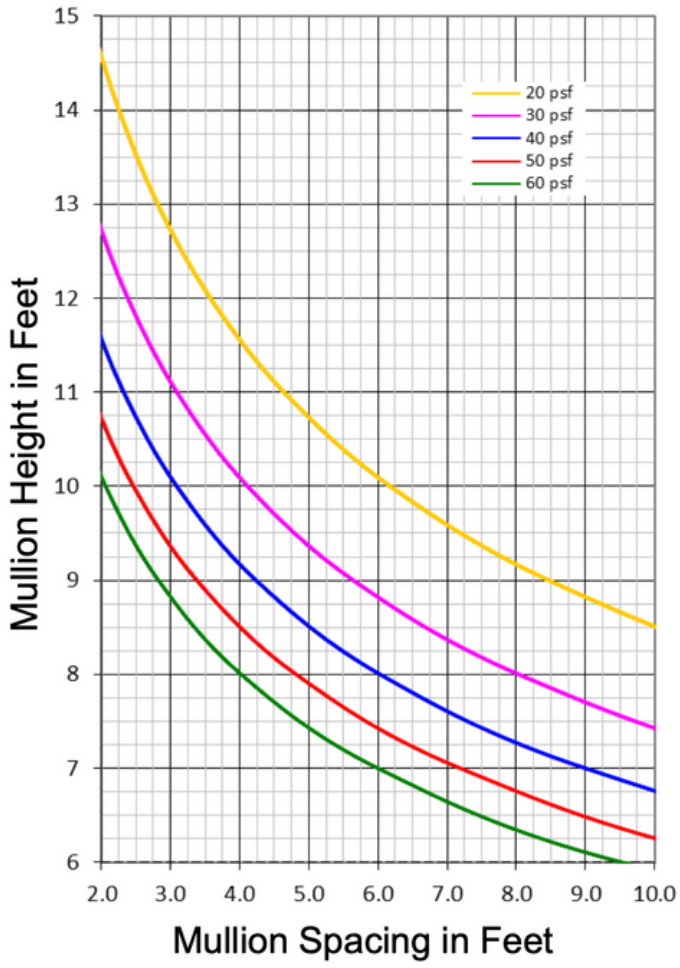


Windload Charts

CAPTURED VERTICAL MULLIONS



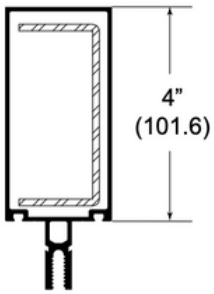
2000



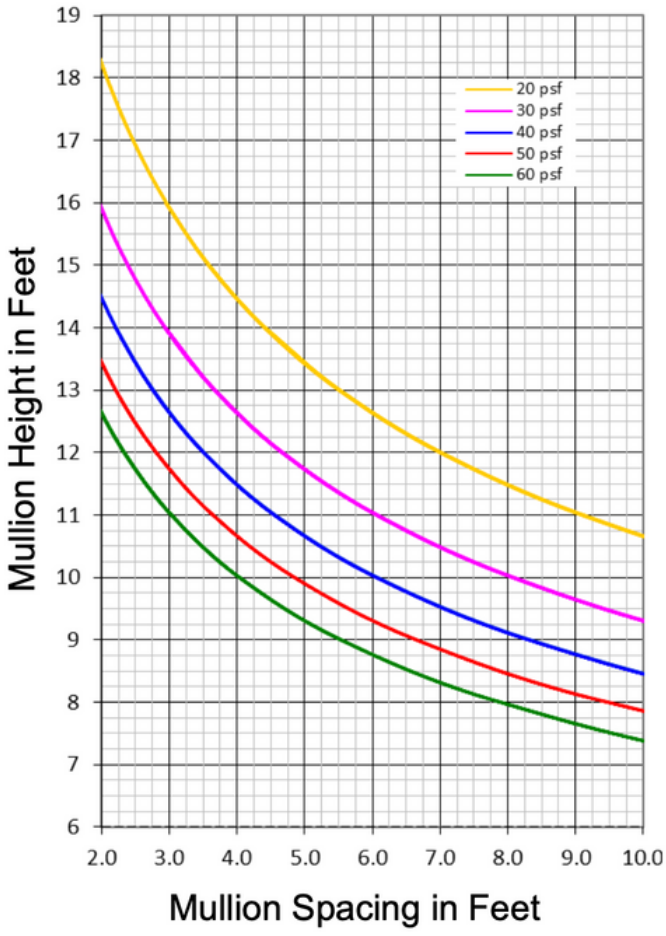
SYSTEM PROPERTIES	
Moment of Inertia, Section Modulus & Area	
Moment of Inertia, I_{xx}	I_{xx} = 4.05 in^4
Section Modules, S_{xx}	S_{xx} = 1.48 in^3
Total Area	A = 1.39 in^2
Modulus of Elasticity	
Aluminum	10,000,000 PSI
Steel	29,000,000 PSI

Windload Charts

CAPTURED VERTICAL MULLIONS



2000
with SB327



SYSTEM PROPERTIES	
Moment of Inertia, Section Modulus & Area	
Moment of Inertia, I_{xx}	I_{xx} = 7.94 in^4
Section Modules, S_{xx}	S_{xx} = 2.61 in^3
Total Area	A = 2.34 in^2
Modulus of Elasticity	
Aluminum	10,000,000 PSI
Steel	29,000,000 PSI

1. Deflection Limit: L/175.

2. Assume horizontal members provide lateral support

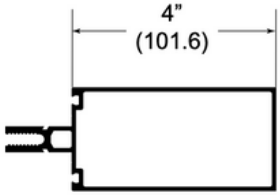
3. Inertia values, I, are expressed in terms of aluminum. Steel moment of inertia converted to aluminum equivalent.

4. CANADIAN PROJECTS: Use SLS wind loads or modify the specified wind load by 0.75 before utilizing this chart. i.e. if project specifications require pnet = 40 psf, utilize 30 psf on this chart (0.75 x 40 = 30). (Based on NBCC 2015)

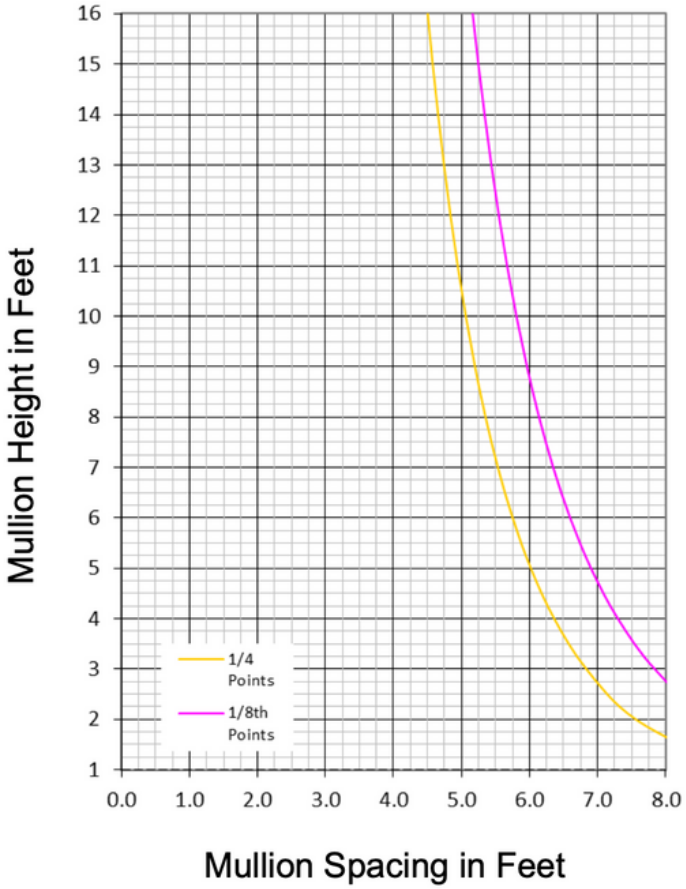
5. Value of the mullion includes the back section, and steel reinforcing.

Deadload Charts

HORIZONTAL MULLIONS



2000



Deadload charts are based on 1/8" (3.2) maximum deflection at the center point of the horizontal member and on a glass weight of 6.5 psf (31.74 Kg/m2). Glass shall rest on two setting blocks located at:
YELLOW CURVE: 1/4 points
PURPLE CURVE: 1/8 points or 8" (203.2) from corners, whichever is larger.

Thermal Performance

The standard NFRC sizes for curtainwall windows was used, the standard size is 2000 x 2000 mm (78.74 x 78.74 in). That standard size consists of half frames used around the perimeter, as well as a full vertical frame in the centre as shown in the figure below (taken from the NFRC 2017 Simulation manual Section 8.9.2).

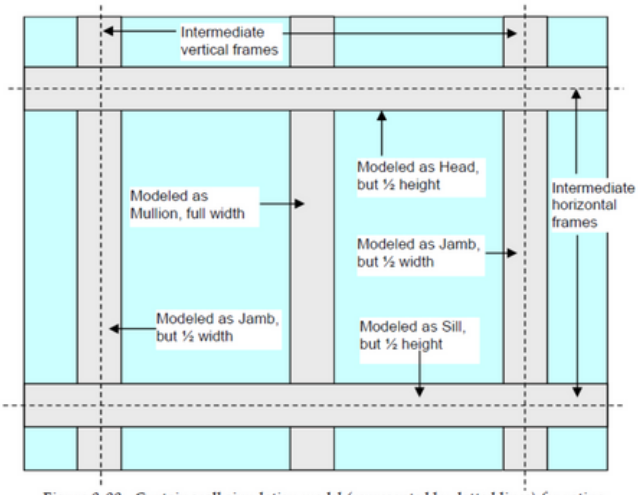


Figure 8-88. Curtain wall simulation model (represented by dotted lines) for rating, where the framing members are modeled at half their width.

Insulated Glazing Unit (IGU) Details:
GL1: Generic Clear Glass / 12.7mm Air (10%) - Argon (90%) Mix / Generic Clear Glass (Total Thickness = 24.1mm)

GL2a: Solarban® 60 on Clear 6mm (Surface #2, ε = 0.035) / 12.7mm Air (10%) - Argon (90%) Mix / Generic Clear Glass (Total Thickness = 24.1mm)

GL2b: LoE³ 366 on 6mm Clear (Surface #2, ε = 0.02) / 12.7mm Air (10%) - Argon (90%) Mix / Generic Clear Glass (Total Thickness = 24.1mm)

GL2c: LoE² 270 on 6mm Clear (Surface #2, ε = 0.035) / 12.7mm Air (10%) - Argon (90%) Mix / Generic Clear Glass (Total Thickness = 24.1mm)

GL3: Solarban® 60 on Clear 6mm (Surface #2, ε = 0.035) / 12.7mm Air (10%) - Argon (90%) Mix / Energy Advantage? Low-E (Surface #4, ε = 0.157) (Total Thickness = 24mm)

2000 SERIES: Thermal Modelling Results

Glazing Type	Low-E Coating	Center of Glass U-Factor (W/m²·K)	Overall U-Factor (W/m²·K)	Overall U-Factor (Btu/h·ft²·°F)	SHGC	VT
GL1	None	2.54	3.23	0.57	0.66	0.72
GL2a	SB60	1.39	2.25	0.40	0.37	0.64
GL2b	366	1.35	2.22	0.39	0.26	0.57
GL2c	270	1.39	2.25	0.40	0.34	0.62
GL3	SB60 + EnAdv	1.13	2.02	0.36	0.35	0.60