

Metro Aluminum Products is an entirely Canadian owned company manufacturing and distributing Architectural Aluminum Glazing Systems that utilize Canadian manufactured aluminum extrusions and finishes.

With our head office and main manufacturing facility in Surrey, British Columbia and a satellite warehouse located in Calgary, Alberta, Metro Aluminum is the supplier by choice, to the majority of glazing contractors throughout Western Canada.

Metro Aluminum is an innovative company with an on-going commitment to improve and expand its product line to meet industry changes and standards. Metro Aluminum is dedicated to providing the the best possible quality and service to our customers at prices that are always competitive.

Locations and Contact Information

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Fax 604-535-5319 / Toll Free 877-535-5315
Email: info@metroaluminum.com

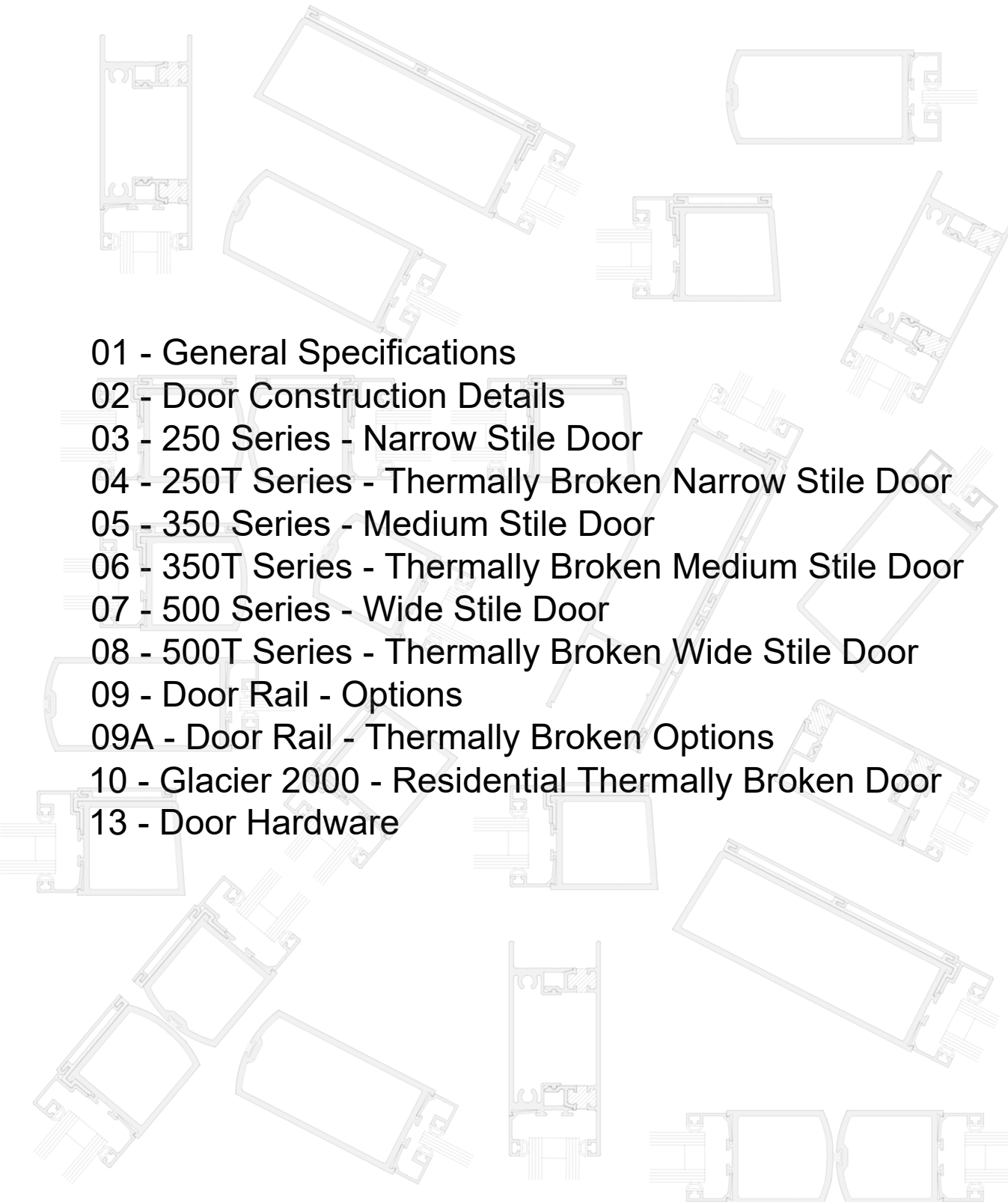


Alberta Manufacturing
261108 Wagon Wheel Way.
Rocky View County, Alberta, T4A 0E3
Telephone 403-735-5014
Fax 403-291-2695
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ARCHITECTURAL ALUMINUM CATALOGUE

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SLIDING DOORS & HARDWARE	SECTION B
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CURTAIN WALL	SECTION D
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Part 1 - GENERAL

Scope - The doors shall be _____ as manufactured by METRO ALUMINUM Products Ltd. Supply and install aluminum doors, as described on the architectural drawings and as specified herein.

Work Not Included - See: Specifier's lists of excluded items; Items furnished but not installed and/or Items installed but not furnished.

Related Work Specified Elsewhere - See: Specifier's lists and related Sections.

Design & Performance Requirements - Doors to fully comply with applicable standard specifications as typically referenced to the following performance requirements criteria: Air Tightness, Water Tightness, Wind and Other Load resistance, Temperature Index and Energy Performance. (Specifier's selection)

Submittals - Shop Drawings & Samples - Submit all documentation and samples for review by Consultant at one time, prior to fabrication of door products.

Quality Assurance - Provide all necessary information to show that all involved products meet or exceed the requirements of these specifications.

Delivery, Storage and Handling - Deliver, store, handle, protect and schedule materials and products so as to avoid any damage. Follow recommendations of AAMA CW-10 "Care and Handling of Architectural Aluminum from Shop to Site" and others as applicable.

Part 2 - PRODUCTS

Materials - All materials to meet the minimum design and materials specifications as applicable. Any defects impairing strength, durability or appearance are not acceptable. Extruded aluminum shall be AA 6063 T6 alloy and temper - $F_y = 110 \text{ MPa}$ (16 KSI) minimum. Sufficient strength and size fasteners shall be made of corrosion-resistant and compatible material such as cadmium or zinc plated carbon steel, stainless steel or aluminum, to prevent any galvanic action (electrolytic corrosion). Standard weathering at perimeter frame shall be pile cloth with a vinyl fin - minimum, or an extruded thermoplastic elastomer tubular profile with a semirigid setting key (Specifier's selection). Optional weathering at the bottom rail shall be a sweep blade type strip secured with concealed fasteners. Dry glazing method to utilize extruded dense Neoprene, EPDM, or other equal material; spline (and/or wedge) gaskets set into extruded aluminum stops. Gasket profile shall be designed and sized to fit tight and properly seal glass-metal interfacing. Glass setting to be compatible with glass unit seals and/or other parts involved as required.

System Description - Door System shall be type out-swing/in-swing _____. METRO Series for single glass (for sealed insulating glass units), uninsulated (insulated) - Specifier selection - as manufactured by METRO ALUMINUM Products Ltd.

Reference minimum thickness of extruded metal shall be: Frame 3 mm (0.12") and Glazing Stop 1.3 mm (0.05") minimum.

Frame nominal dimensions of extruded metal shall be:

Depth of frame	_____
Width of stile	_____
Height of top rail	_____
Height of middle rail	_____
Height of bottom rail	_____

Glass retention, as for dry glazing method, shall be achieved by extruded aluminum glazing stop profile and inorganic rubber gasket. Whenever substitute/alternative products are considered, supporting data to be submitted ten (10) days prior to bid date to allow for valid comparison. Approval of alternates to be confirmed in advance of bid closing by addendum only.

Fabrication - Tubular profiles of rails and stiles shall be accurately fabricated and assembled to provide tight fit hairline joints only. Corner joinery shall utilize assembly spigot-bracket. Parts involved shall be fastened by means of anticorrosive steel screws and bolts with additional securing welds to allow for permanent true and square set of frame elements. Extruded aluminum square glazing stops, equipped with hollow gaskets, shall secure glass on both sides. Specified hardware shall be connected accurately to aluminum framing as per manufacturer's specifications. No exposed fasteners are permitted. Each door leaf to be equipped with adjusting mechanism, set at the top rail, to allow for necessary installation adjustments. Both stiles of centre hung single door, hinge and meeting stile (1) sides of centre hung pair doors shall be furnished with hard-backed poly pile weather-stripping, as required. Perimeter frame of offset pivoted (or butt hung) doors to have weather-strip stops at jamb and head. Active meeting stiles of pairs to be furnished with matching weather-strip device set and secured in appropriate reveal-groove. Bottom rail to receive weather-strip sweep as required.

Finish - All exposed surfaces shall be finished as specified. The finish, as per AAM designation, shall be (Specifier's selection):

Standard clear anodizing to AA - M12C22A31

Standard perma bronze to AA - M12C22A44

Standard black anodizing to AA - M10C21A44

Duracron acrylic enamel to AA - M12C4XR1X

Custom paint qualities and colors - Specifier's selection.

Hardware to have manufacturer's standard finish.

Hardware - Hardware shall be supplied by METRO ALUMINUM Products Ltd. for factory installation, and to include: (Specifier's selection):

Top and bottom offset pivots.

Intermediate offset pivots where required, or

1 pair or 1.5 pairs of 100 mm x 115 mm (4" x 4.5") butt hinges, or

Centre hung pivots compatible with centre hung closers.

Push-pull - Metro standard.

Door closers - streamline or concealed.

Standard 150 mm (6") threshold with reinforced pivot anchor point.

Panic device. Various types available - Specifier's selection.

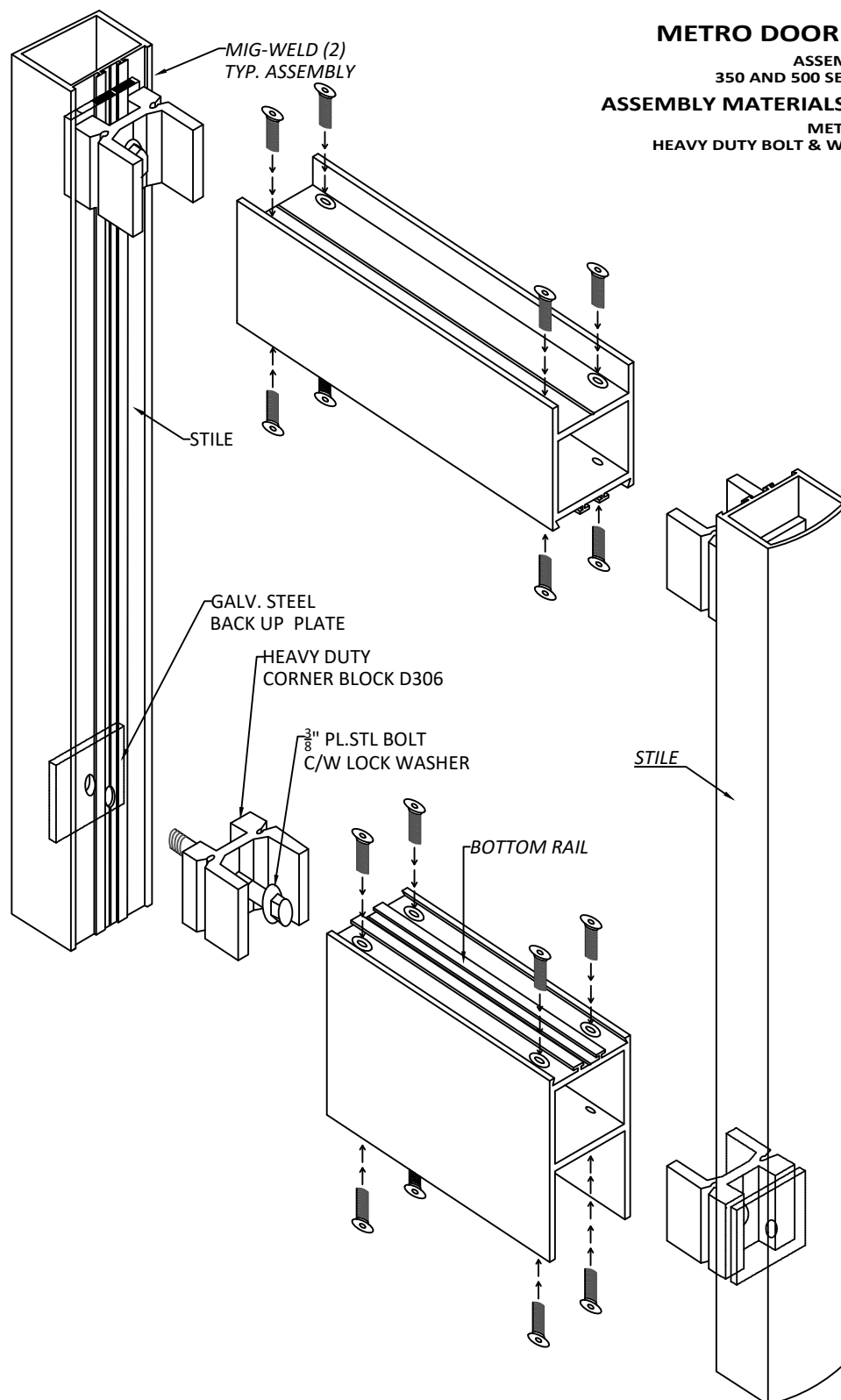
Alternative hardware clause: Hardware as specified under separate section of the Specifications. The manufacturer shall furnish all necessary templates for assembly and installation.

Part 3 - EXECUTION

Installation - Doors to be installed in prepared openings, at correct locations as shown on drawings, set level, plumb, square and aligned with other work in accordance with manufacturer's instructions, approved shop and erection drawings. Operating hardware, checked and adjusted as required, shall be left in ready for use condition. Perimeter joints to be sealed/caulked as specified and detailed to ensure weathertight assembly.

Protection and Cleaning - Work to be protected from damage during and after installation. Consult with manufacturer and installer to determine appropriate protective measures. The General Contractor shall be responsible for protection during construction and for final cleaning. After installation, aluminum work and glass to be cleaned according to instructions/manuals provided by product manufacturers and glaziers. Use appropriate cleaning materials and methods. Do not scratch or damage glass or finishes.

Note: The above Specifications should relate to The Product Specifications by METRO ALUMINUM Products Ltd. as applicable to the specific door types such as: 250, 350 and 500 Series.



METRO DOOR 250 SERIES
ASSEMBLY DETAILS FOR
350 AND 500 SERIES ARE SIMILAR
ASSEMBLY MATERIALS & METHODS
METRO'S STANDARD -
HEAVY DUTY BOLT & WELD CONNECTION



Our 250 Narrow Stile Door, the top choice for commercial applications, is renowned for its durability, versatility, functionality, and aesthetic appeal, making it an excellent choice for any business environment. Key features include:

- **Narrow Stile Design:** A sleek and modern appearance suitable for various architectural styles.
- **Single or Double Glazed Stops:** Accommodates different glazing configurations for enhanced performance and design flexibility.
- **Compatibility with Metro Framing:** Seamlessly integrates with Metro framing systems for a cohesive installation.
- **Mid and Bottom Rails:** Available in various sizes to meet your specific design and functionality requirements. (see page A-08 for details)
- **Welded Corners:** Each corner is welded & bolted for enhanced structural integrity.

Standard hardware includes: (see pages A-13 - A-13F)

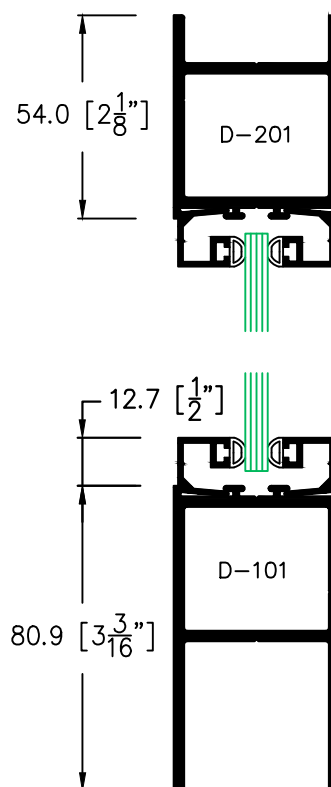
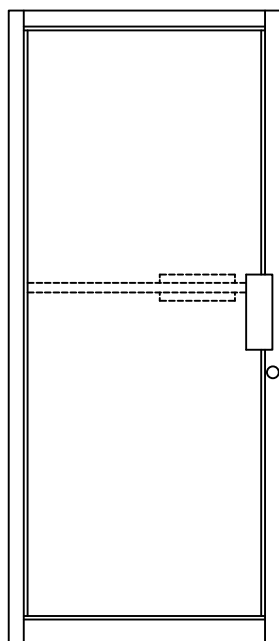
- Offset Pivots
- Construction Security Lock (Exterior)
- Thumb Turn (Interior)
- Metro Standard Push Bar/Pull Handle
- ½ Inch Threshold
- Exposed Closer

Works with hinging hardware options, including:

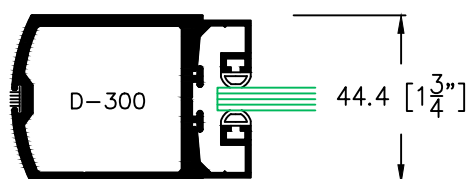
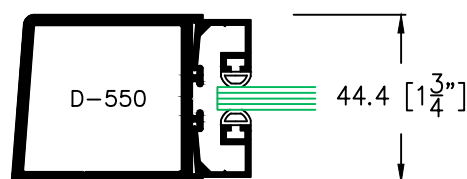
- Continuous Hinges
- Butt Hinges
- Center Hung / Walking Beam Pivots

Compatible with most hardware options, including:

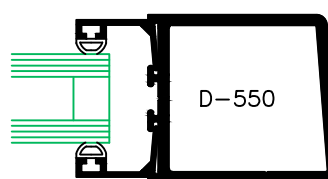
- Concealed Closer's
- Apartment Packages (Lever / Paddle)
- Offset D-Pulls and Ladder Pulls



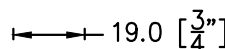
SINGLE GLAZED



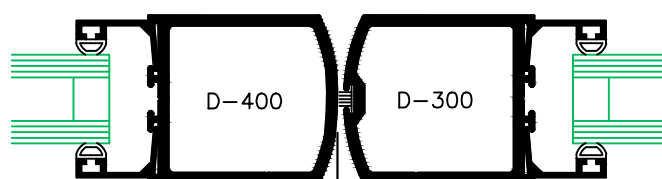
DOUBLE GLAZED



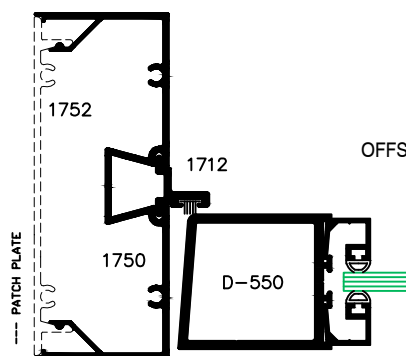
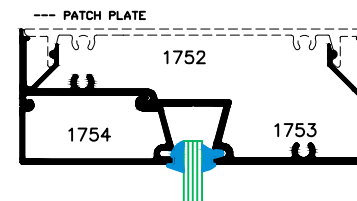
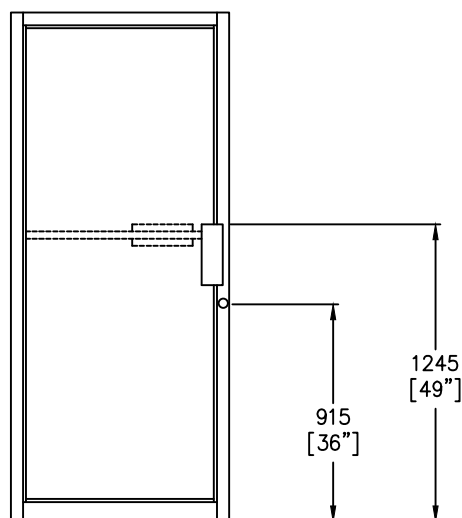
SINGLE ACTING



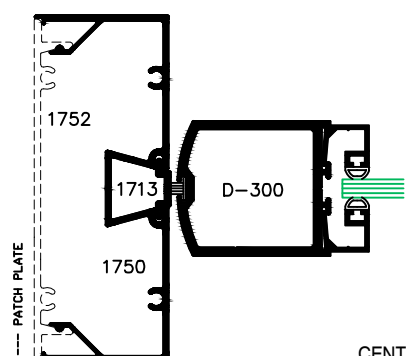
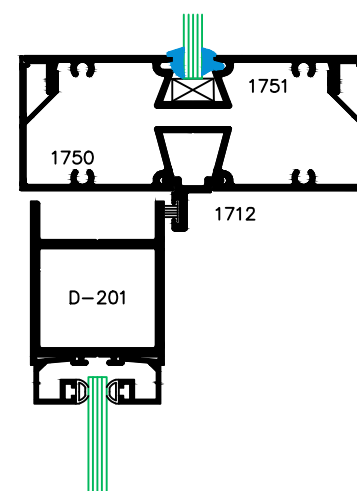
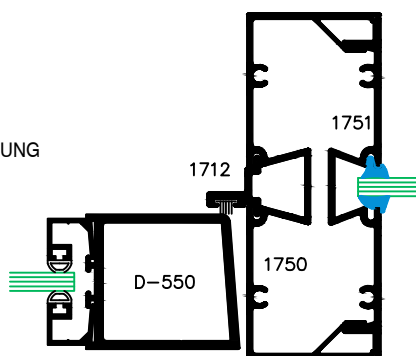
DOUBLE ACTING



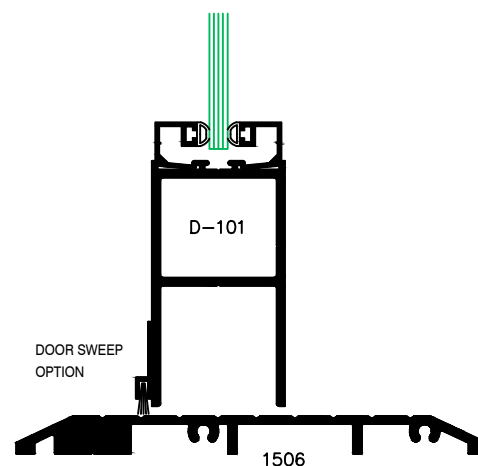
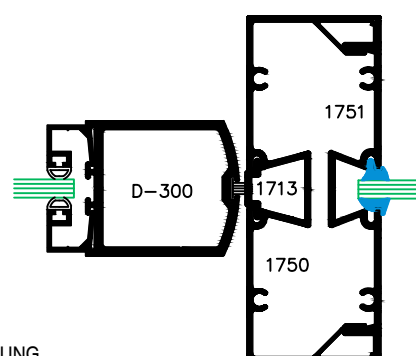
250 SERIES DOOR - 1750 SERIES FRAMING



OFFSET HUNG

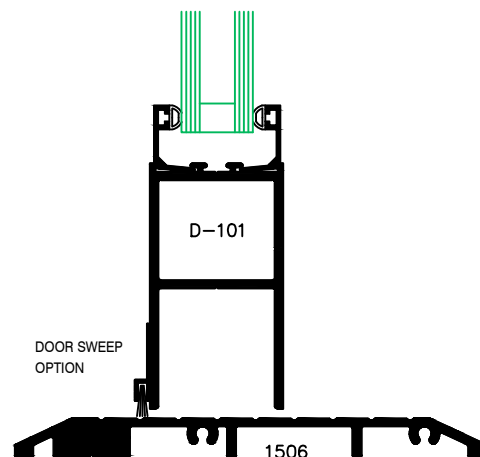
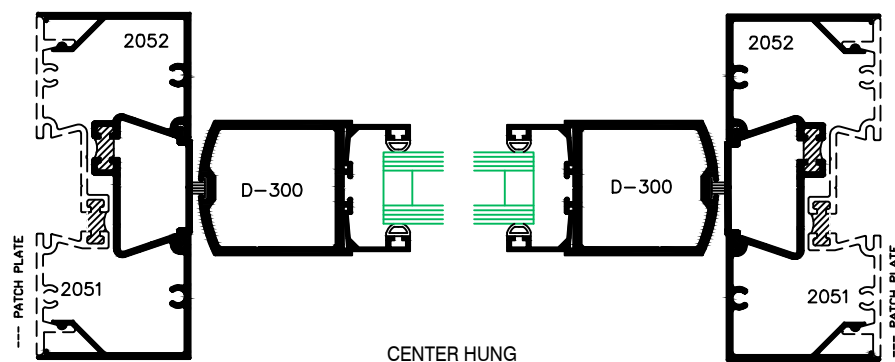
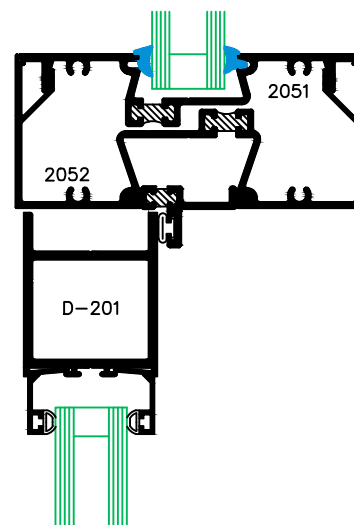
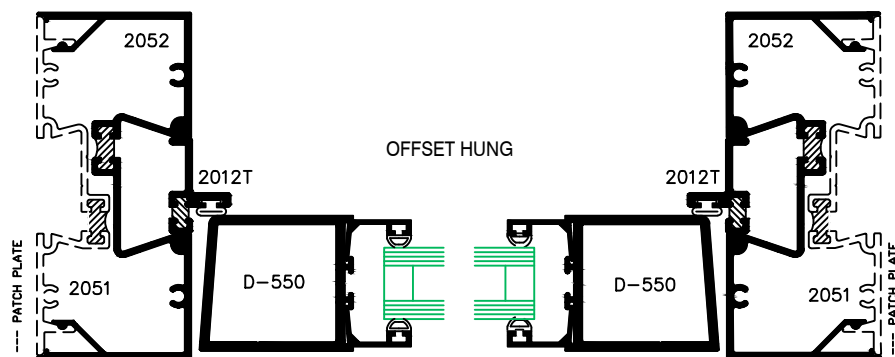
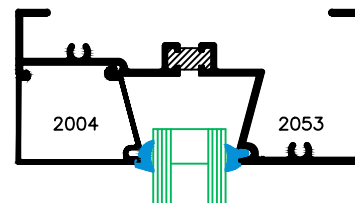
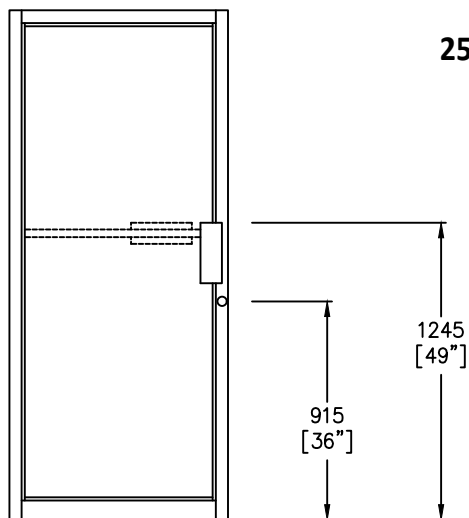


CENTER HUNG

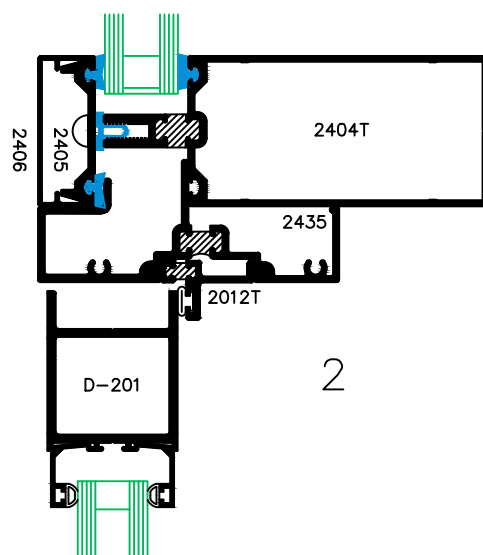
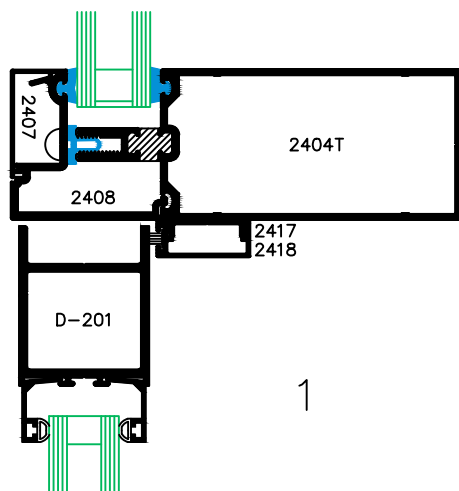


VARIOUS THRESHOLD OPTIONS
ARE AVAILABLE

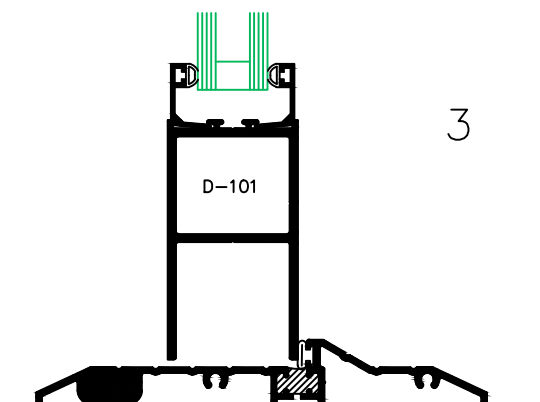
250 SERIES DOOR - 2050 SERIES FRAMING



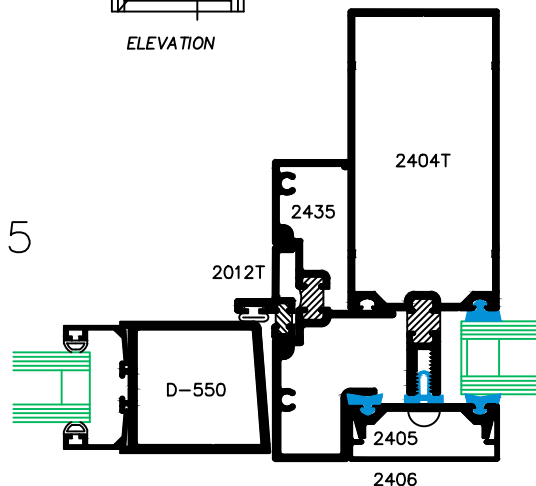
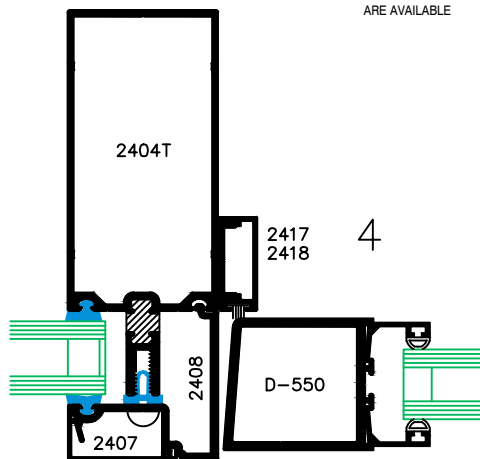
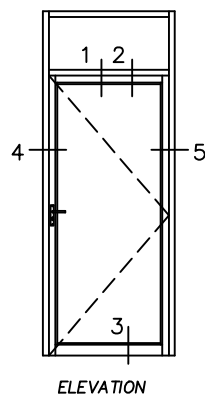
VARIOUS THRESHOLD OPTIONS
ARE AVAILABLE



**DETAILS
2400T FRAMING**



VARIOUS THRESHOLD OPTIONS
ARE AVAILABLE





The 250T Thermally Broken Narrow Stile Door is an enhanced version of our popular 250 Narrow Stile Door, offering superior thermal performance and energy efficiency. Key features include:

- **Thermally Broken/Insulated Rails and Stiles:** Ensuring optimal thermal insulation and reducing energy loss.
- **Sealed Unit Glazing:** Providing enhanced weather resistance and improved insulation.
- **Compatibility with Metro Thermally Broken Framing:** Seamlessly integrates with Metro's thermally broken framing systems for a cohesive and efficient installation.
- **Mid and Bottom Rails:** Available in various sizes to meet your specific design and functionality requirements. (see page A-08a for details)
- **Welded Corners:** Each corner is welded & bolted for enhanced structural integrity.

Standard hardware includes: (see pages A-13 - A-13F)

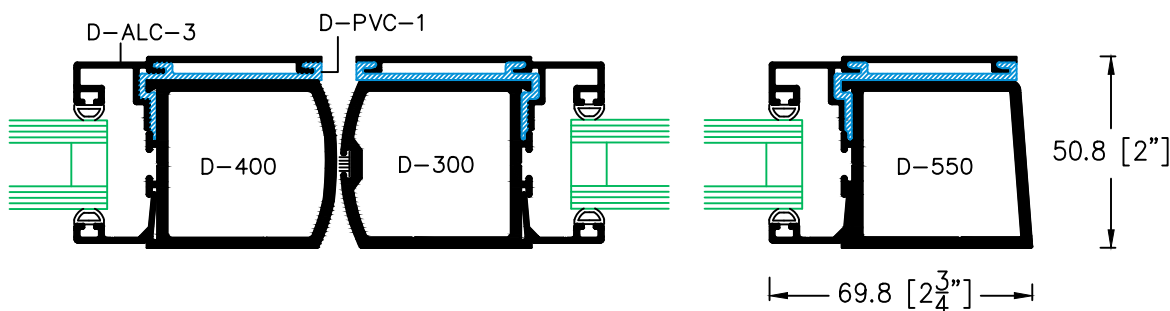
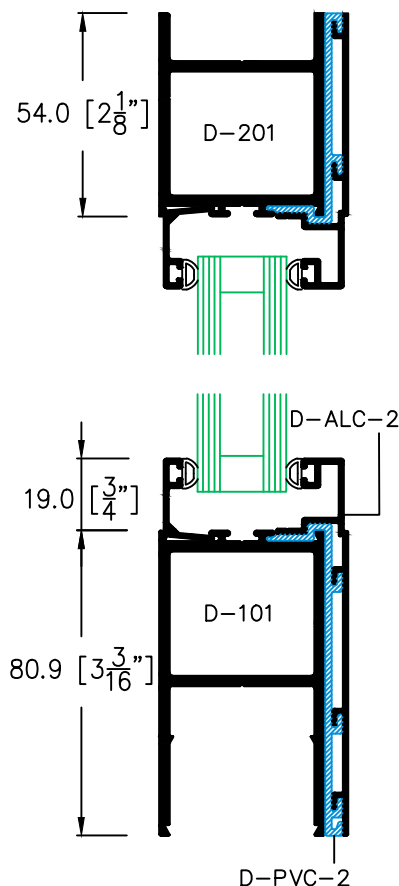
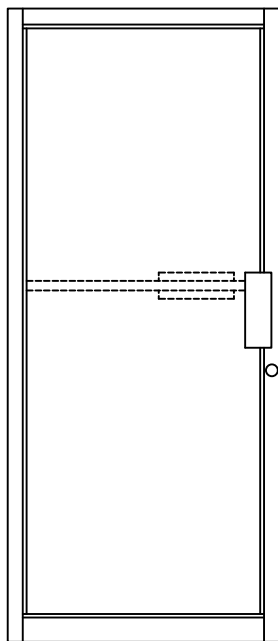
- Offset Pivots
- Construction Security Lock (Exterior)
- Thumb Turn (Interior)
- Metro Standard Push Bar/Pull Handle
- ½ Inch Threshold
- Exposed Closer

Works with hinging hardware options, including:

- Continuous Hinges
- Butt Hinges
- Center Hung / Walking Beam Pivots

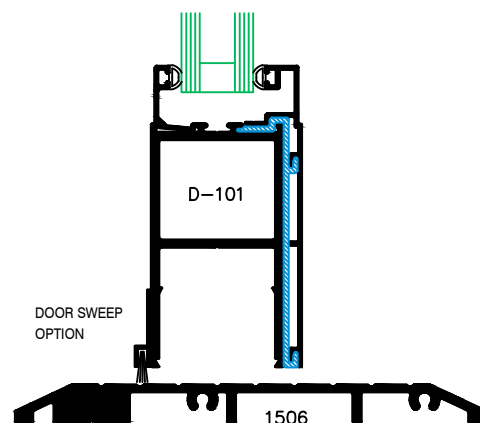
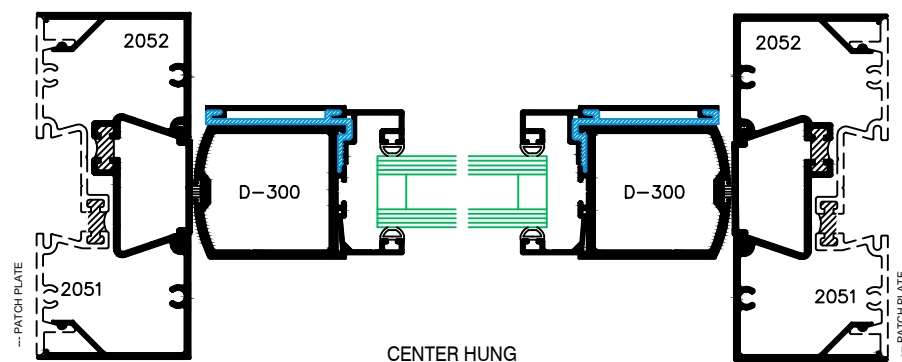
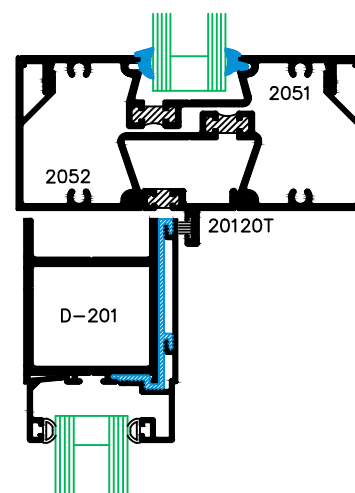
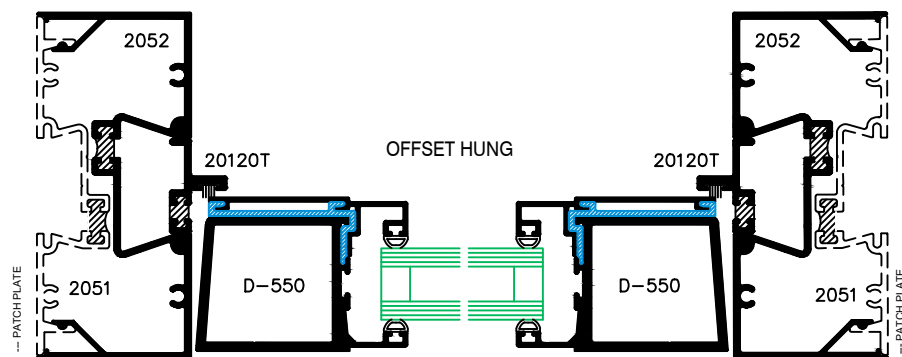
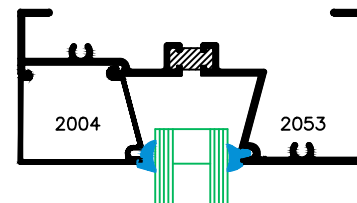
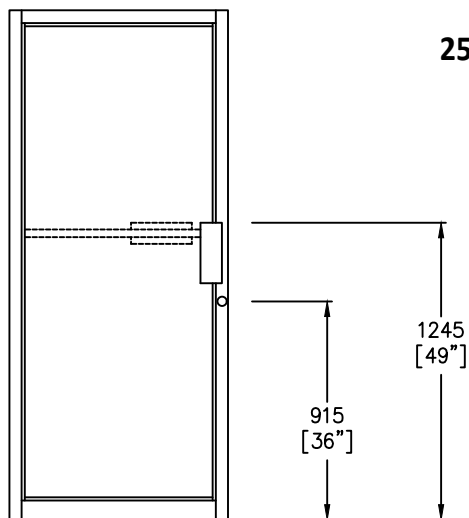
Compatible with most hardware options, including:

- Concealed Closer's
- Apartment Packages (Lever / Paddle)
- Offset D-Pulls and Ladder Pulls

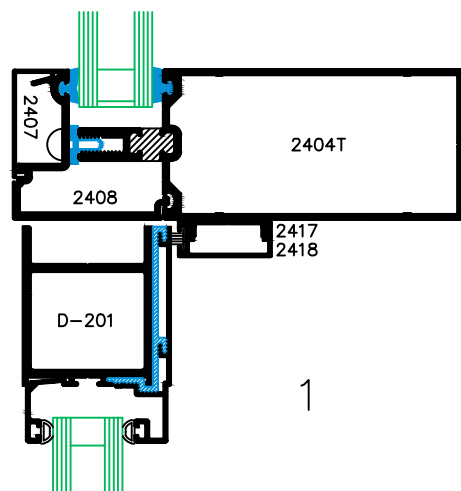


MEETING STILES

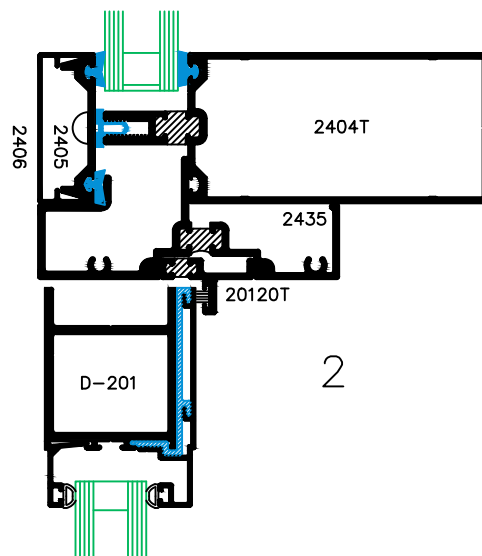
250T SERIES DOOR - 2050 SERIES FRAMING



VARIOUS THRESHOLD OPTIONS
ARE AVAILABLE

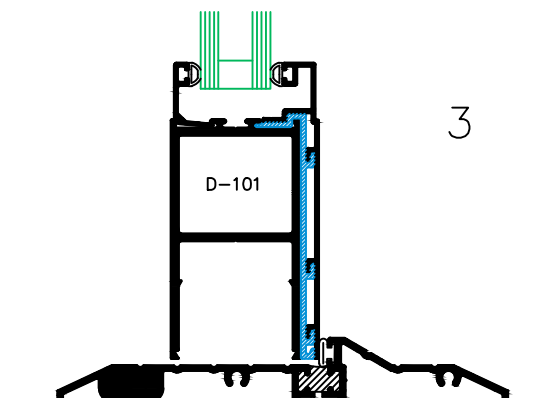


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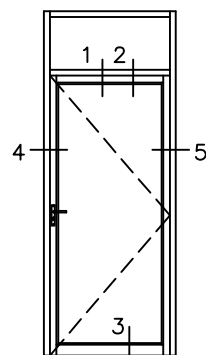
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DETAILS 2400T FRAMING

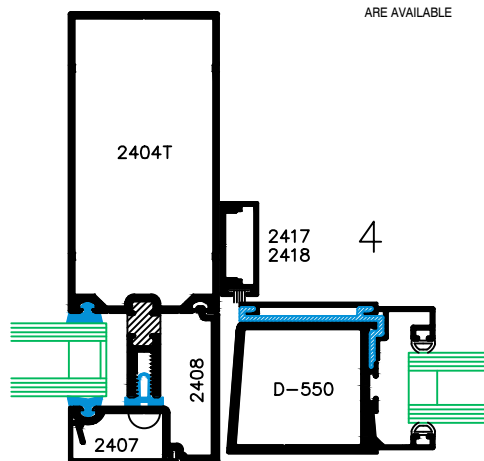


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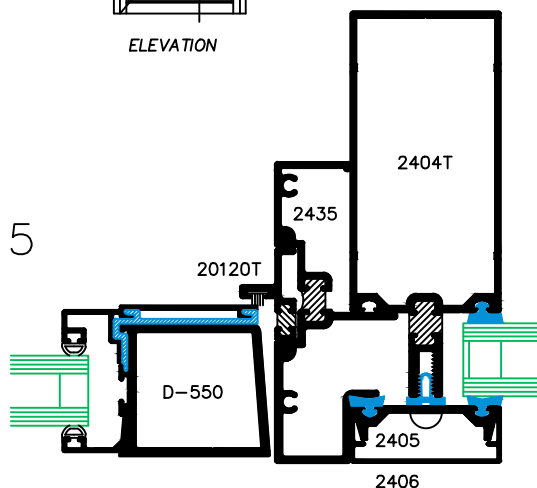
VARIOUS THRESHOLD OPTIONS
ARE AVAILABLE



ELEVATION



4



5



The 350 Medium Stile Door, designed for high-traffic areas, offers enhanced strength and durability, making it ideal for demanding commercial environments where robust performance and aesthetic appeal are essential.

- **Medium Stile Design:** Provides a sturdy and substantial appearance, suitable for high-use applications.
- **Single and Double Glazed Stops:** Accommodates different glazing configurations for enhanced performance and design flexibility.
- **Heavier Duty Construction:** Ensures long-lasting performance in high-traffic areas.
- **Compatibility with Metro Framing:** Seamlessly integrates with Metro framing systems for a cohesive installation.
- **Mid and Bottom Rails:** Available in various sizes to meet your specific design and functionality requirements. (see page A-08 for details)
- **Welded Corners:** Each corner is welded & bolted for enhanced structural integrity.

Standard hardware includes: (see pages A-13 - A-13F)

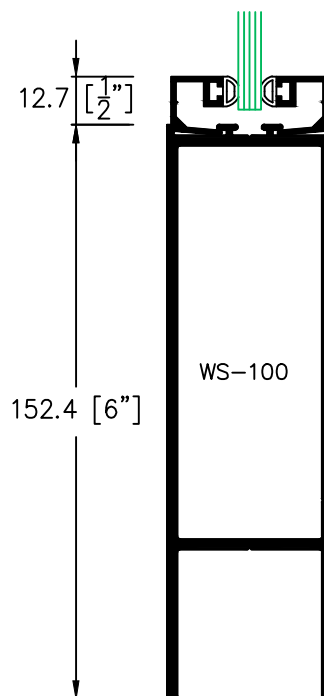
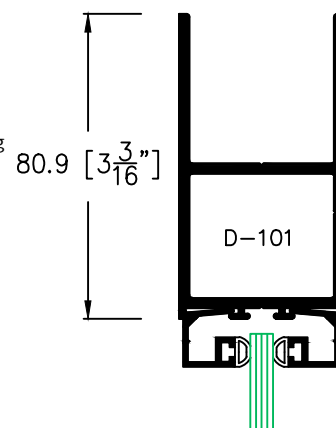
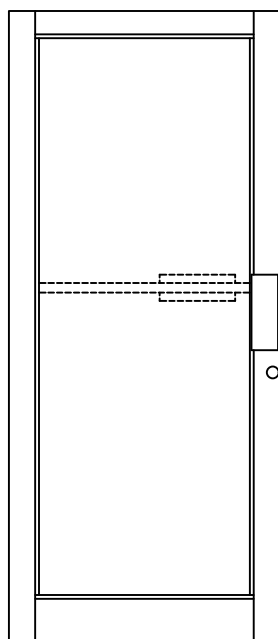
- Offset Pivots
- Construction Security Lock (Exterior)
- Thumb Turn (Interior)
- Metro Standard Push Bar/Pull Handle
- ½ Inch Threshold
- Exposed Closer

Works with hinging hardware options, including:

- Continuous Hinges
- Butt Hinges
- Center Hung / Walking Beam Pivots

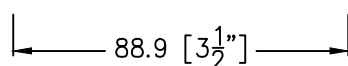
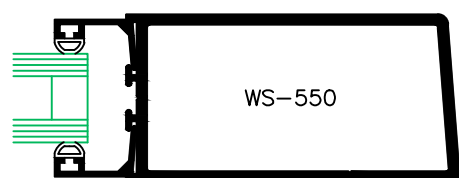
Compatible with most hardware options, including:

- Concealed Closer's
- Apartment Packages (Lever / Paddle)
- Offset D-Pulls and Ladder Pulls

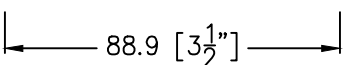
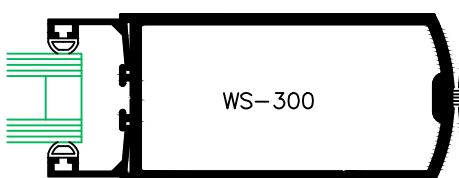
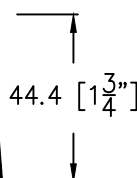
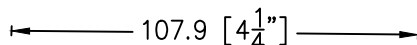


SINGLE GLAZED

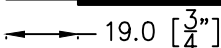
DOUBLE GLAZED



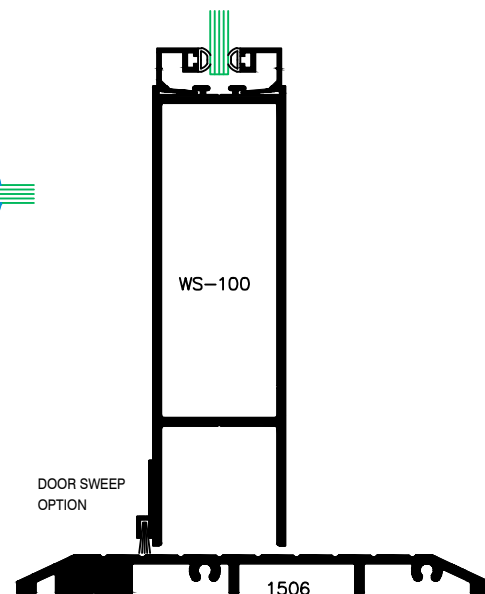
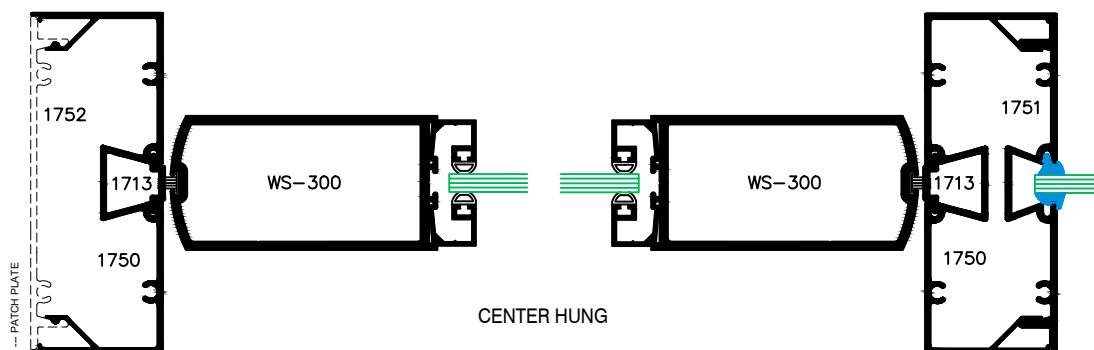
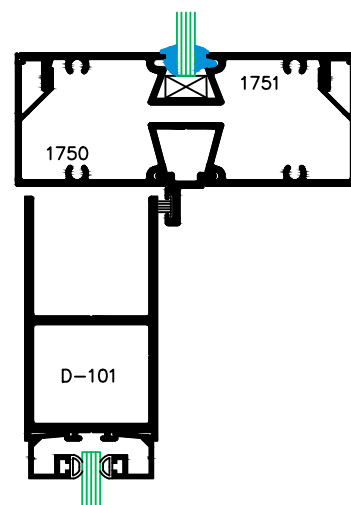
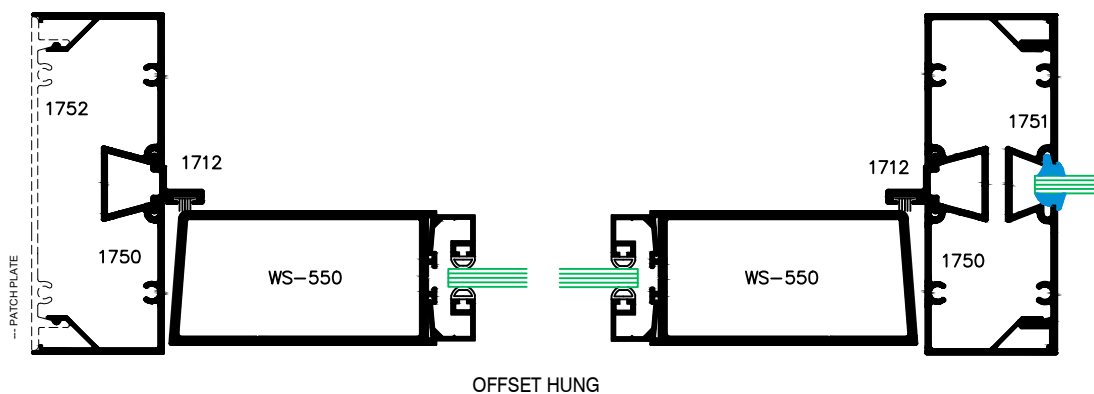
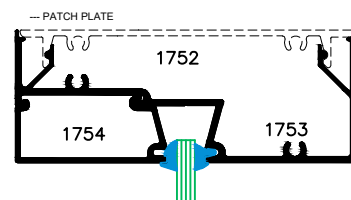
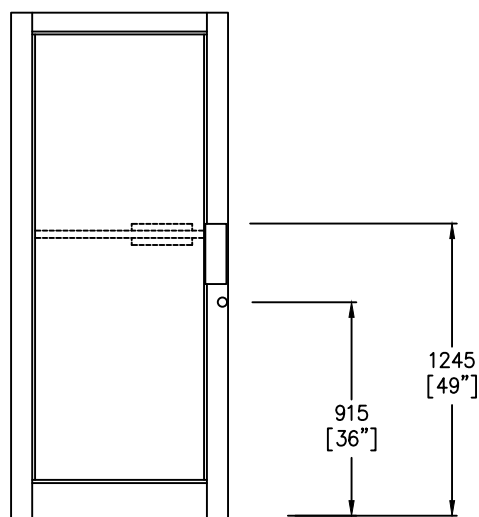
SINGLE ACTING



DOUBLE ACTING

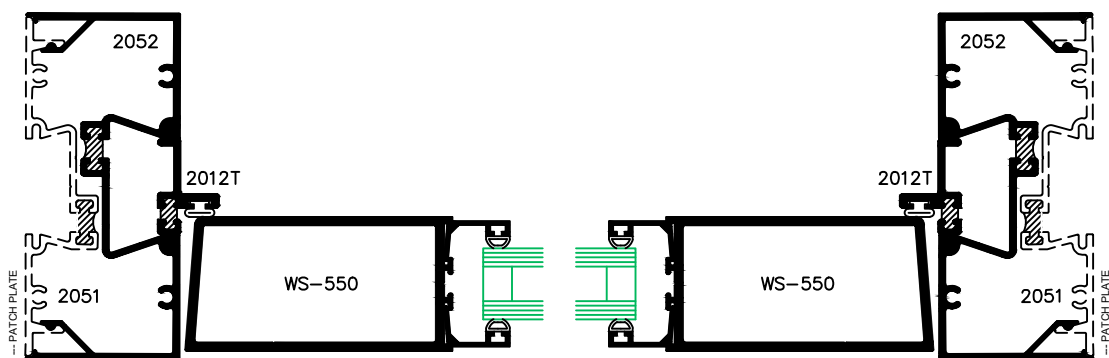
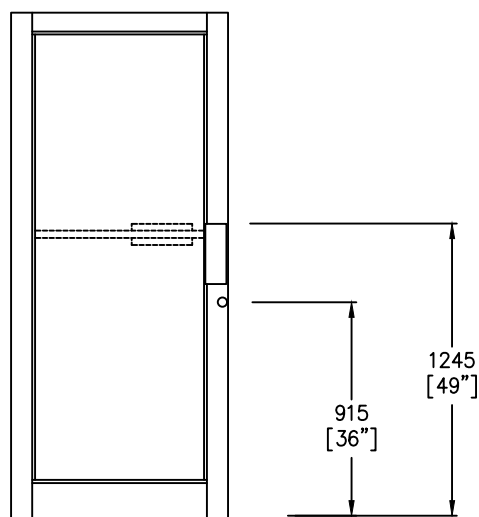


350 SERIES DOOR - 1750 SERIES FRAMING

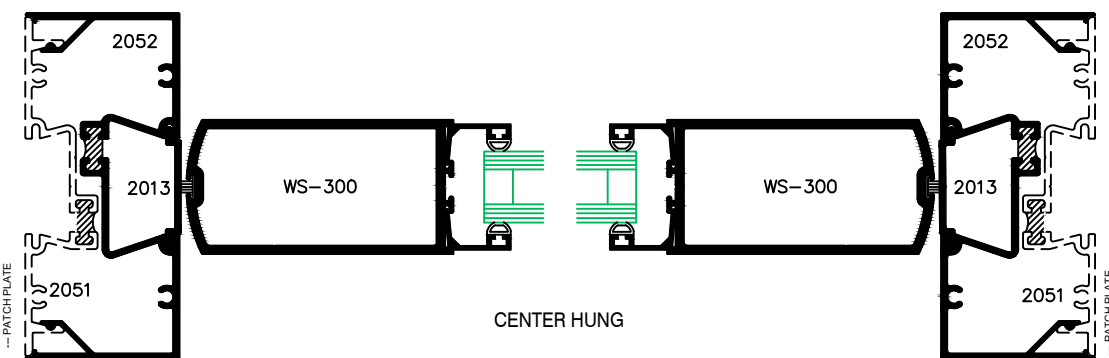


VARIOUS THRESHOLD OPTIONS
ARE AVAILABLE

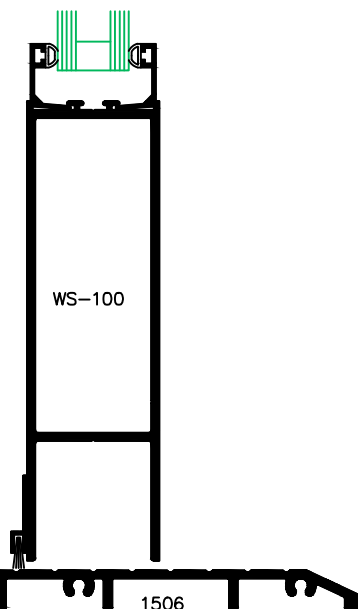
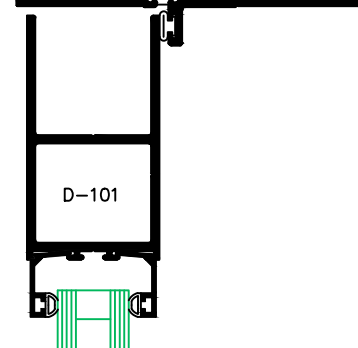
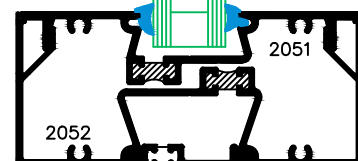
350 SERIES DOOR - 2050 SERIES FRAMING



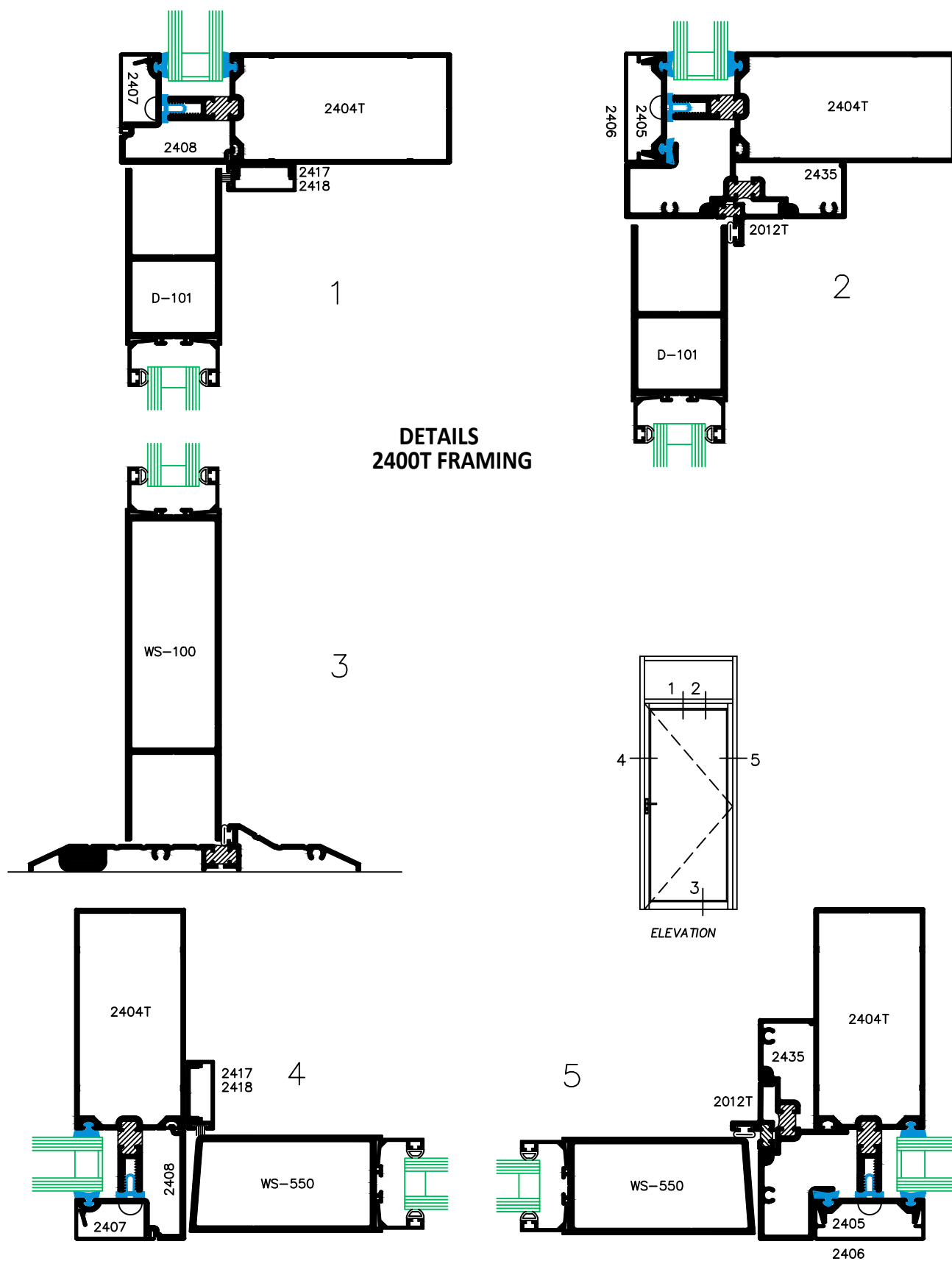
OFFSET HUNG



CENTER HUNG



VARIOUS THRESHOLD OPTIONS
ARE AVAILABLE





The 350T Thermally Broken Medium Stile Door offers superior thermal performance and energy efficiency, designed for high-traffic areas that require extra strength and durability. Key features include:

- **Thermally Broken/Insulated Rails and Stiles:** Ensuring optimal thermal insulation and reducing energy loss.
- **Sealed Unit Glazing:** Providing enhanced weather resistance and improved insulation.
- **Medium Stile Design:** A robust and substantial appearance, suitable for high-use applications.
- **Heavier Duty Construction:** Ensures long-lasting performance in high-traffic areas.
- **Compatibility with Metro Thermally Broken Framing:** Seamlessly integrates with Metro framing systems for a cohesive installation.
- **Mid and Bottom Rails:** Available in various sizes to meet your specific design and functionality requirements. (see page A-08a for details)
- **Welded Corners:** Each corner is welded & bolted for enhanced structural integrity.

Standard hardware includes: (see pages A-13 - A-13F)

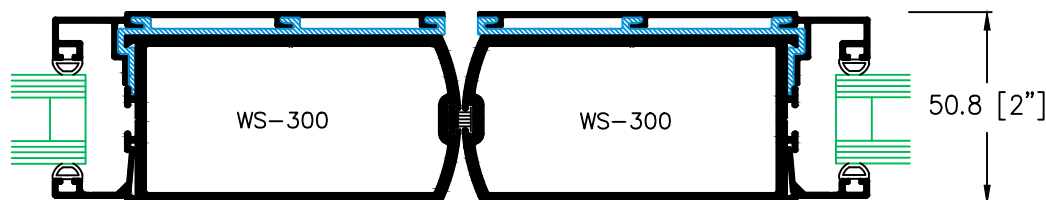
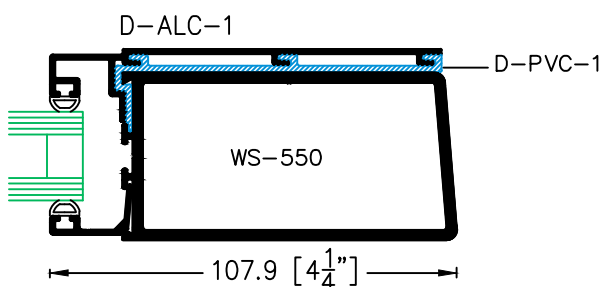
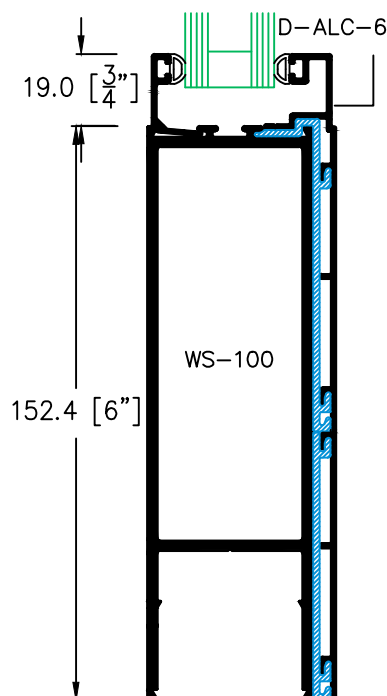
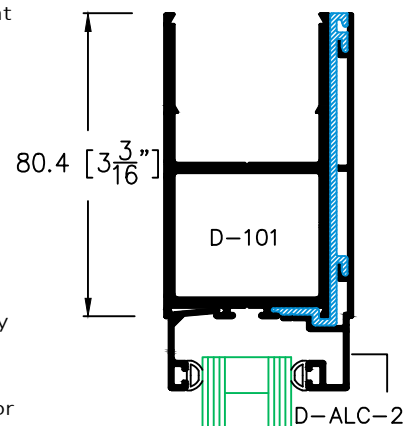
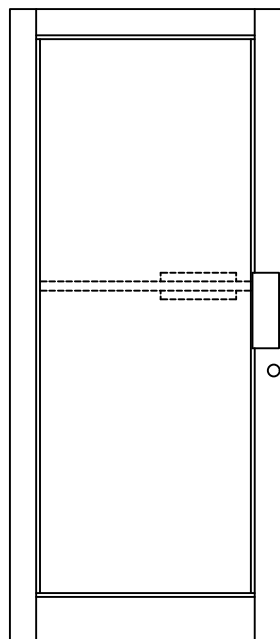
- Offset Pivots
- Construction Security Lock (Exterior)
- Thumb Turn (Interior)
- Metro Standard Push Bar/Pull Handle
- ½ Inch Threshold
- Exposed Closer

Works with hinging hardware options, including:

- Continuous Hinges
- Butt Hinges
- Center Hung / Walking Beam Pivots

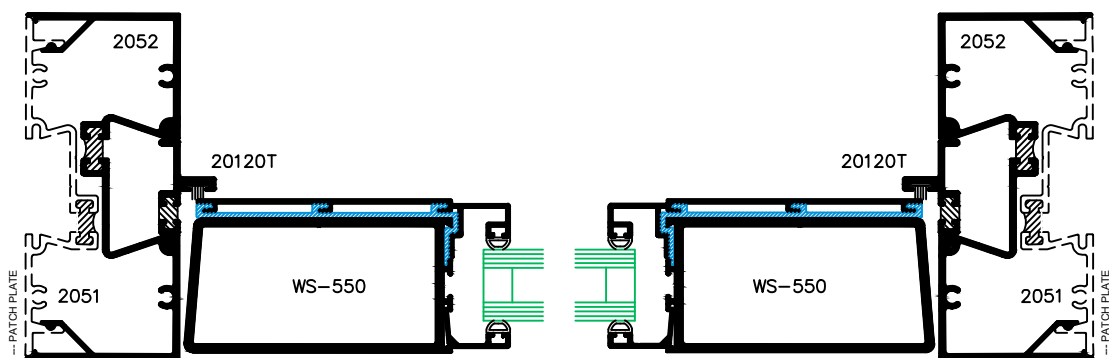
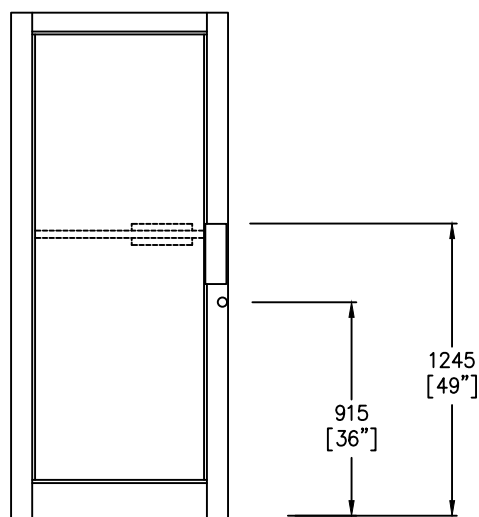
Compatible with most hardware options, including:

- Concealed Closer's
- Apartment Packages (Lever / Paddle)
- Offset D-Pulls and Ladder Pulls

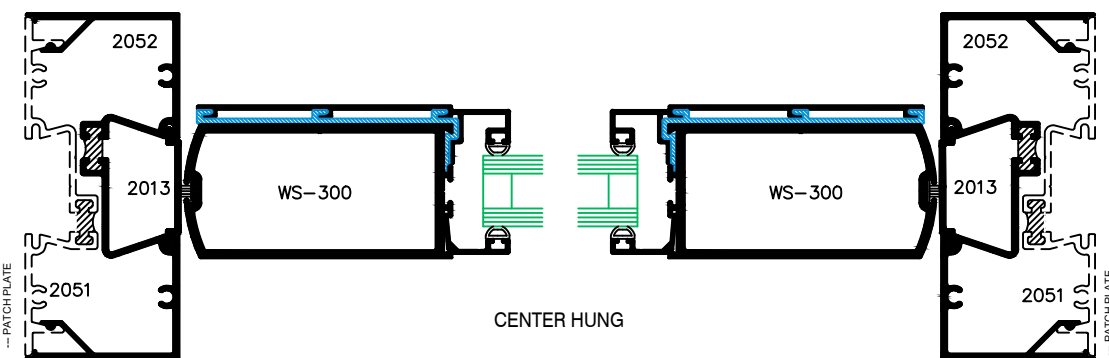


MEETING STILES

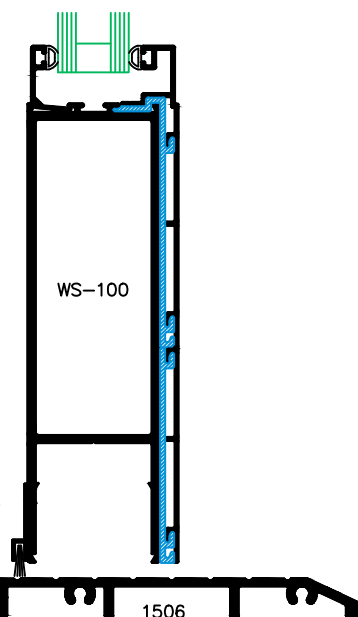
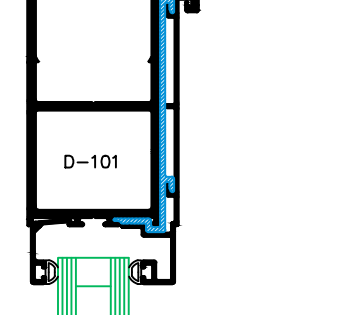
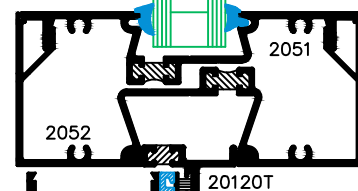
350T SERIES DOOR - 2050 SERIES FRAMING



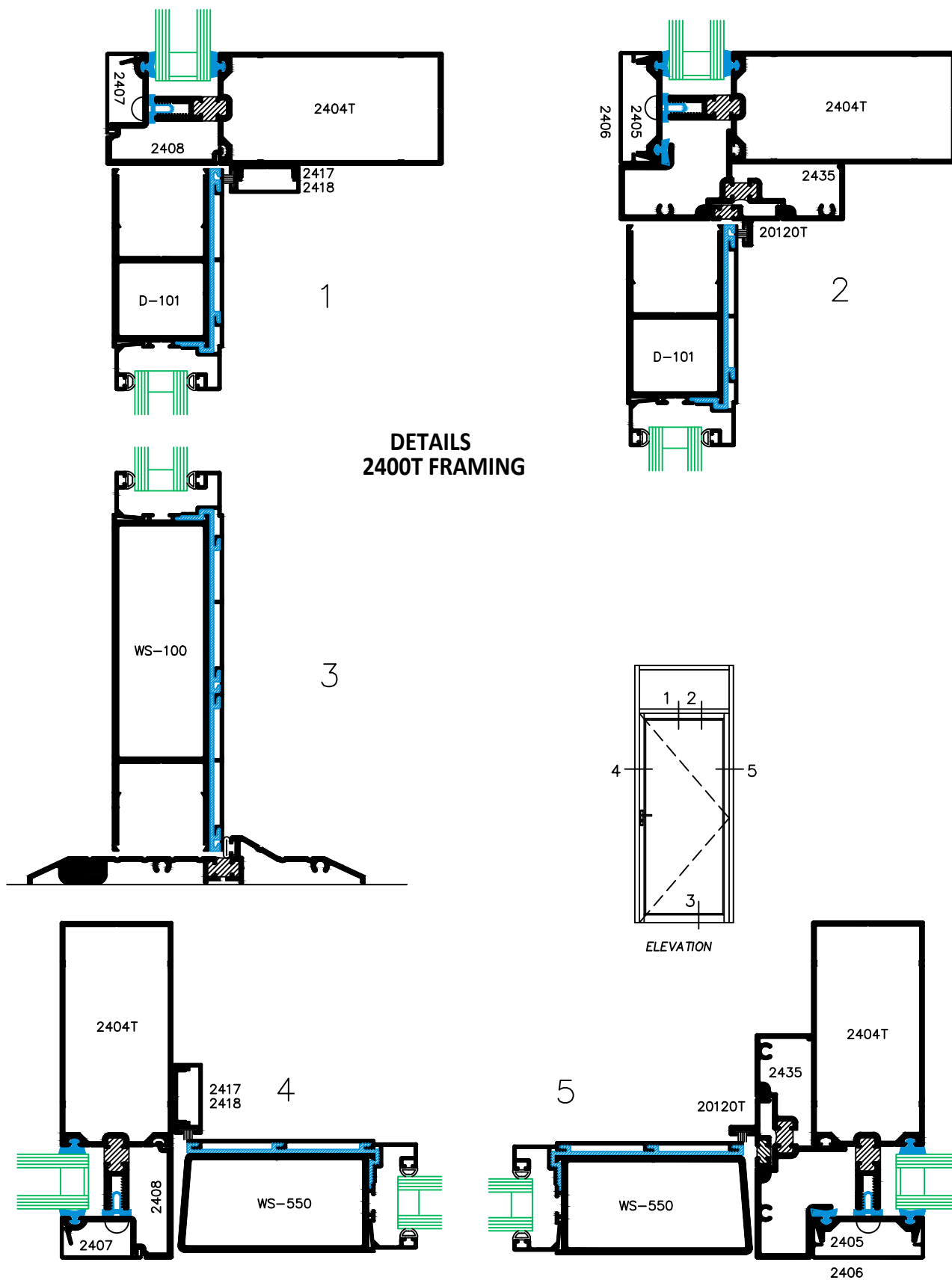
OFFSET HUNG



CENTER HUNG



VARIOUS THRESHOLD OPTIONS
ARE AVAILABLE





The 500 Series Wide Stile Door offers a truly monumental appearance with enhanced strength and durability, combining grandeur with functionality, making it ideal for prestigious commercial and institutional settings that demand both aesthetic appeal and robust performance. Key features include:

- **Wide Stile Design:** Provides a substantial and impressive aesthetic suitable for architectural statement pieces.
- **Single and Double Glazed Stops:** Accommodates different glazing configurations for enhanced performance and design flexibility.
- **Heavier Duty Construction:** Built for durability and longevity, ensuring reliable performance and high-traffic areas.
- **Compatibility with Metro Framing:** Seamlessly integrates with Metro framing systems for a cohesive installation.
- **Mid and Bottom Rails:** Available in various sizes to meet your specific design and functionality requirements. (see page A-08 for details)
- **Welded Corners:** Each corner is welded & bolted for enhanced structural integrity.

Standard hardware includes: (see pages A-13 - A-13F)

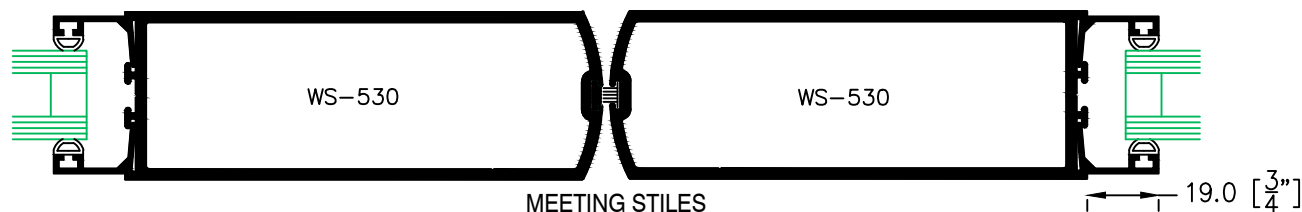
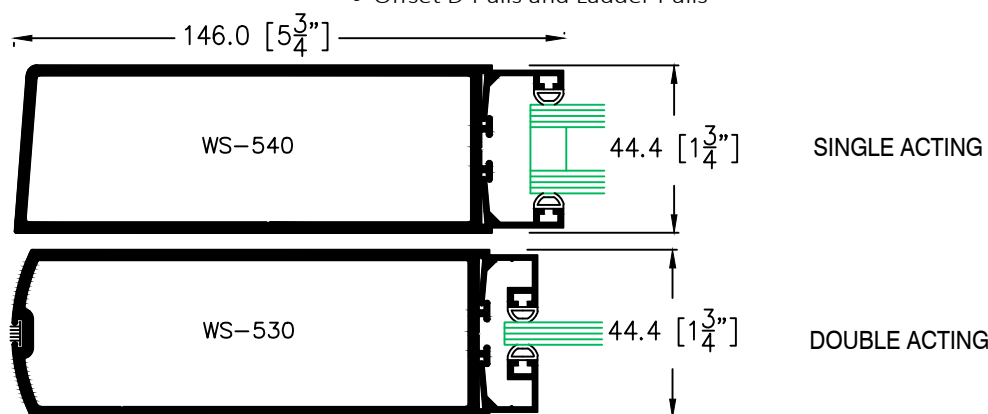
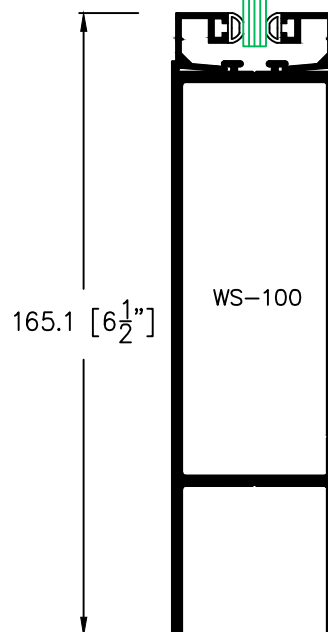
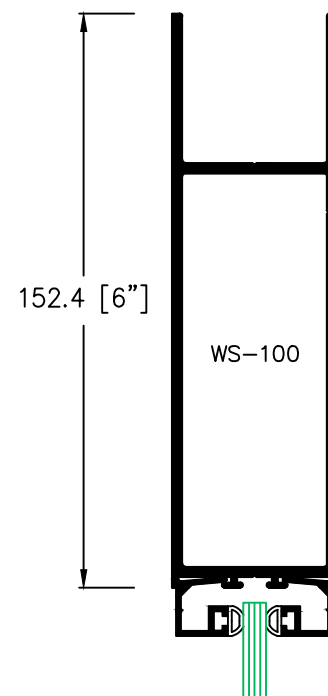
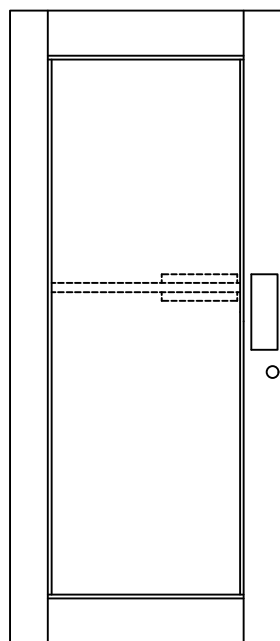
- Offset Pivots
- Construction Security Lock (Exterior)
- Thumb Turn (Interior)
- Metro Standard Push Bar/Pull Handle
- ½ Inch Threshold
- Exposed Closer

Works with hinging hardware options, including:

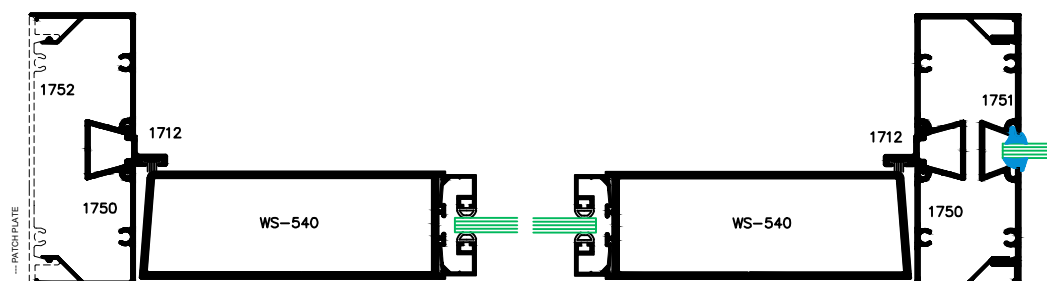
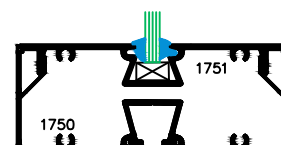
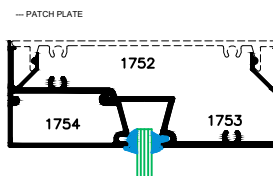
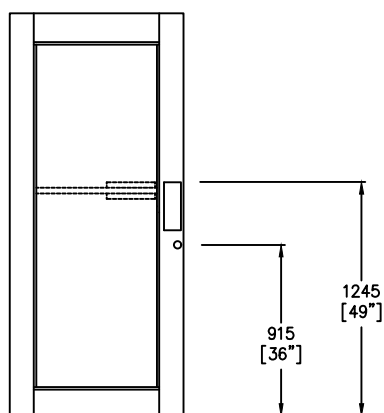
- Continuous Hinges
- Butt Hinges
- Center Hung / Walking Beam Pivots

Compatible with most hardware options, including:

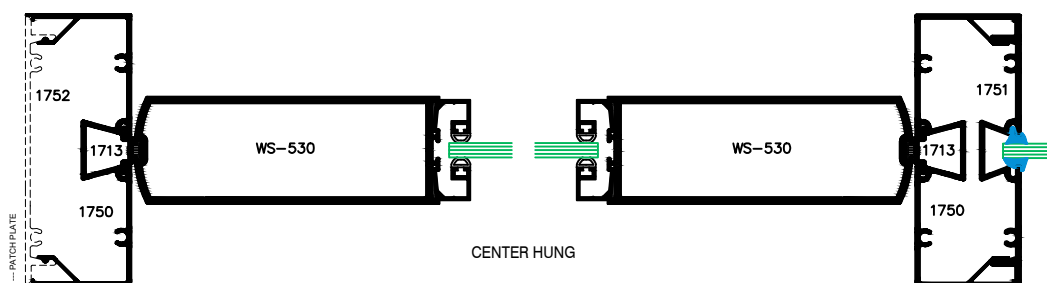
- Concealed Closer's
- Apartment Packages (Lever / Paddle)
- Offset D-Pulls and Ladder Pulls



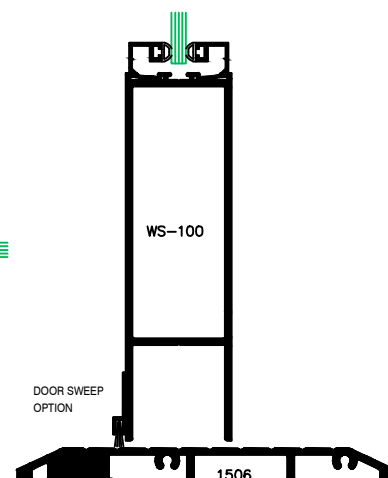
500 SERIES DOOR - 1750 SERIES FRAMING



OFFSET HUNG

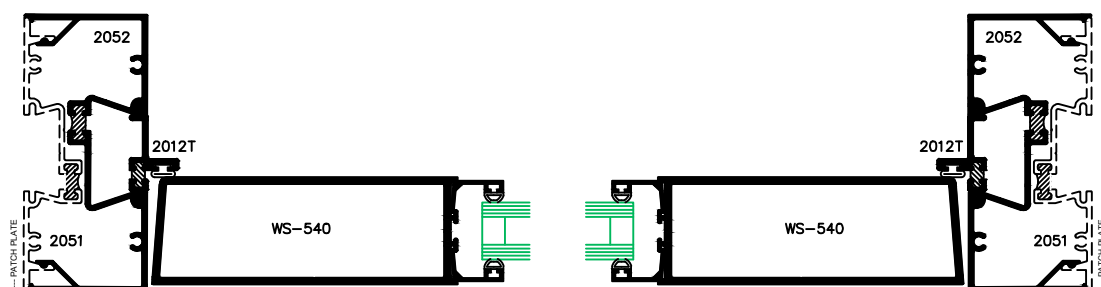
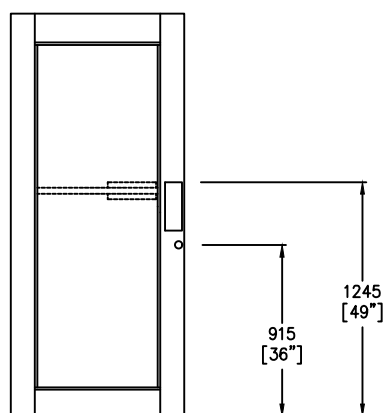


CENTER HUNG

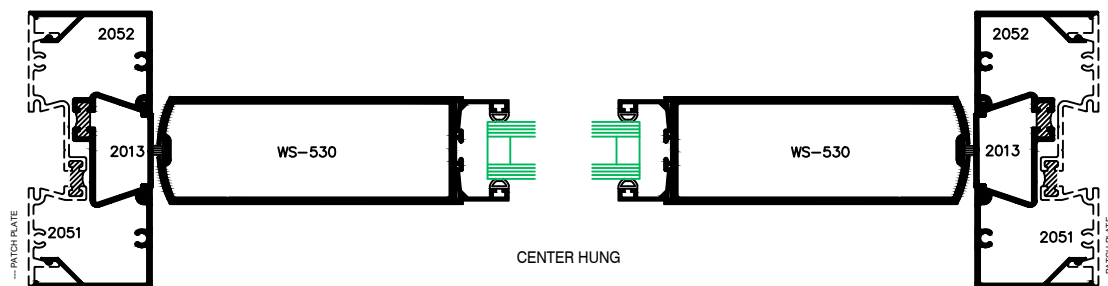


VARIOUS THRESHOLD OPTIONS
ARE AVAILABLE

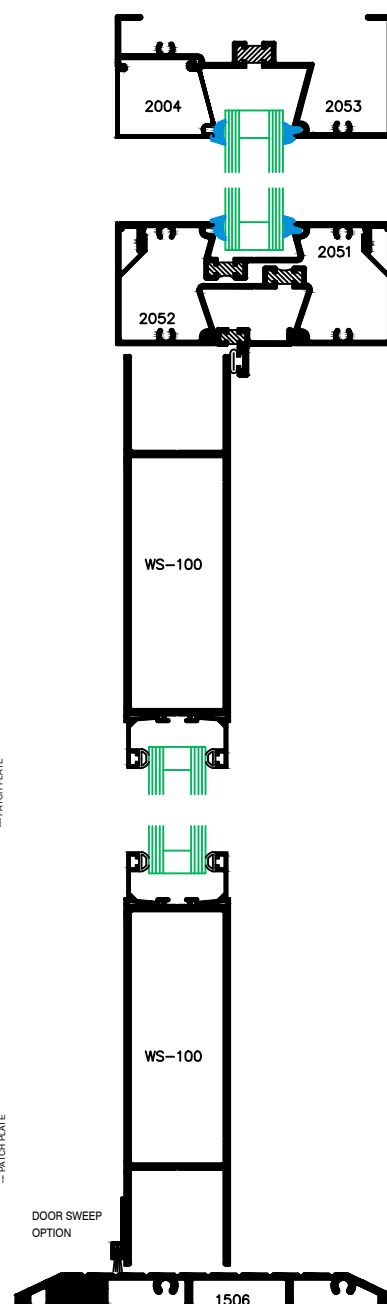
500 SERIES DOOR - 2050 SERIES FRAMING



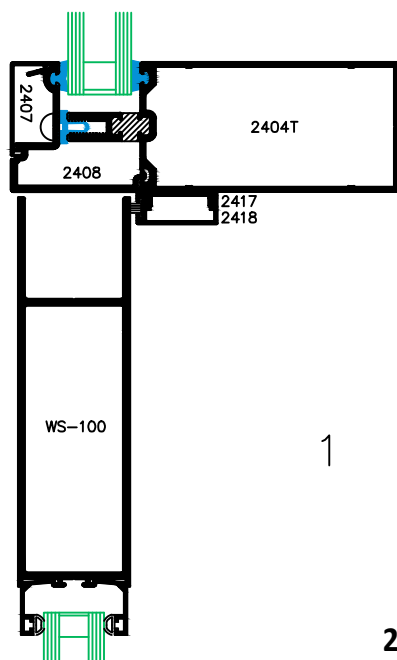
OFFSET HUNG



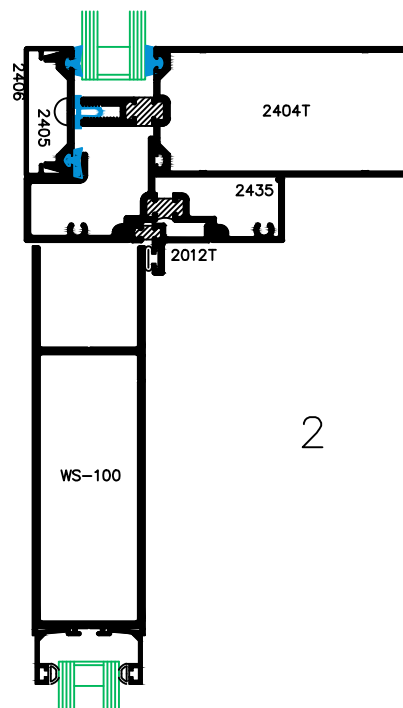
CENTER HUNG



VARIOUS THRESHOLD OPTIONS
ARE AVAILABLE

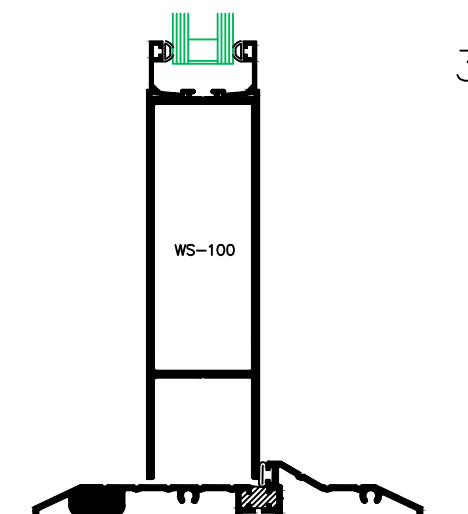


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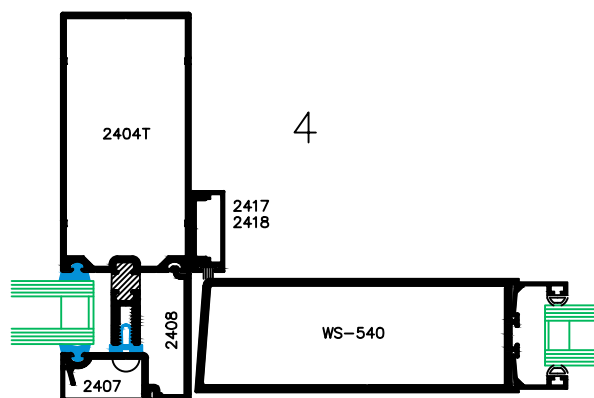
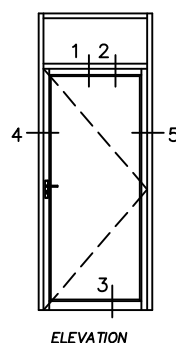


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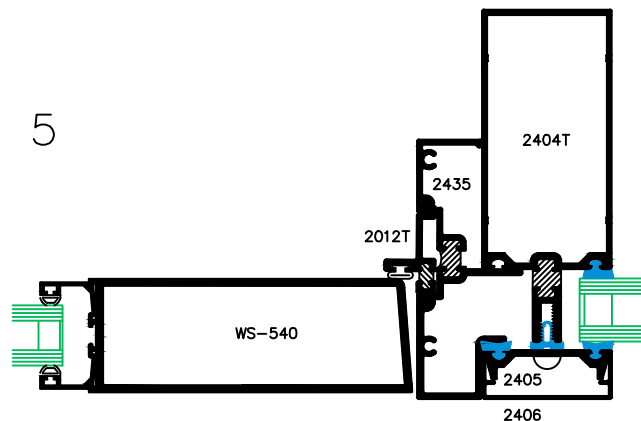
DETAILS
2400T FRAMING



3



4



5



The 500T Series Thermally Broken Wide Stile Door combines a monumental appearance with superior thermal performance and durability, ideal for prestigious commercial and institutional settings. Key features include:

- **Thermally Broken/Insulated Rails and Stiles:** Ensures optimal thermal insulation, reducing energy loss and enhancing comfort.
- **Sealed Unit Glazing:** Providing enhanced weather resistance and improved insulation.
- **Heavier Duty Construction:** Built for durability and longevity, ensuring reliable performance and high-traffic areas.
- **Compatibility with Metro Thermally Broken Framing:** Seamlessly integrates with Metro framing systems for a cohesive installation.
- **Mid and Bottom Rails:** Available in various sizes to meet your specific design and functionality requirements. (see page A-08a for details)
- **Welded Corners:** Each corner is welded & bolted for enhanced structural integrity.

Standard hardware includes: (see pages A-13 - A-13F)

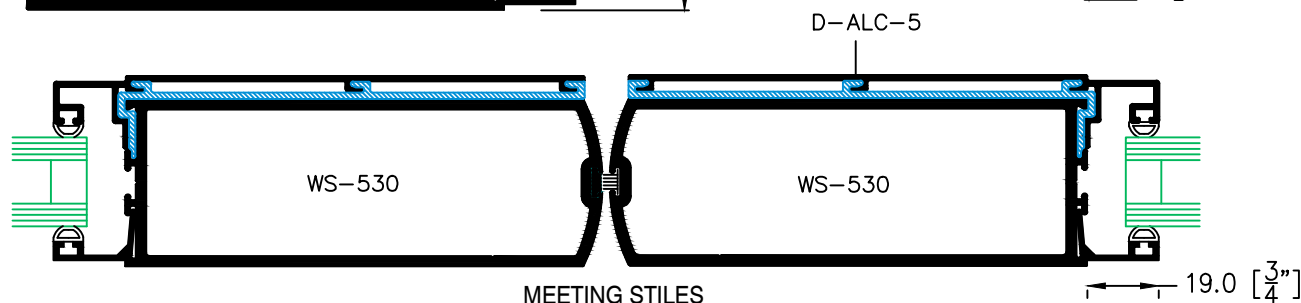
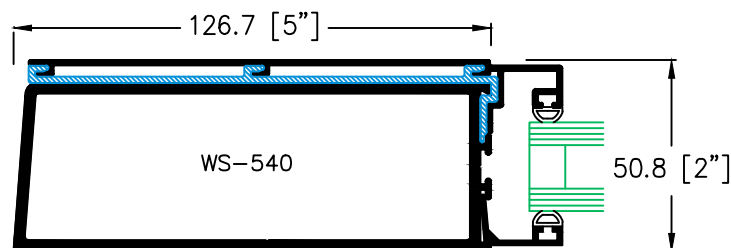
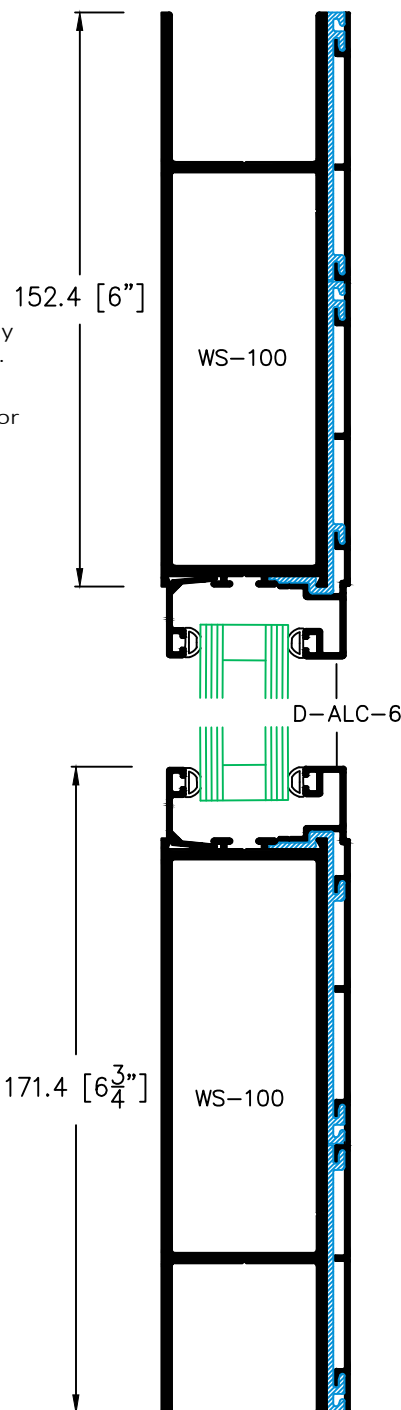
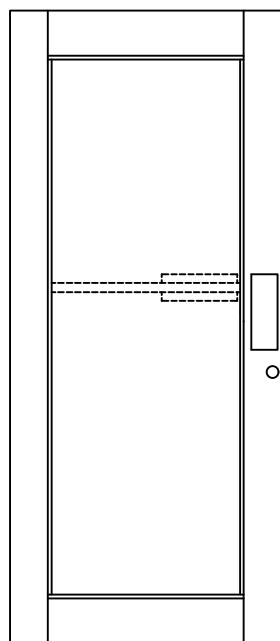
- Offset Pivots
- Construction Security Lock (Exterior)
- Thumb Turn (Interior)
- Metro Standard Push Bar/Pull Handle
- ½ Inch Threshold
- Exposed Closer

Works with hinging hardware options, including:

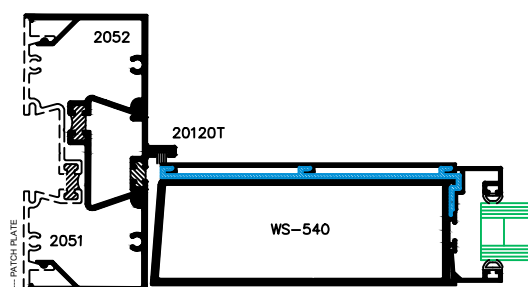
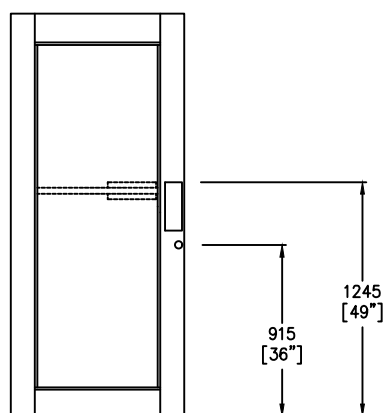
- Continuous Hinges
- Butt Hinges
- Center Hung / Walking Beam Pivots

Compatible with most hardware options, including:

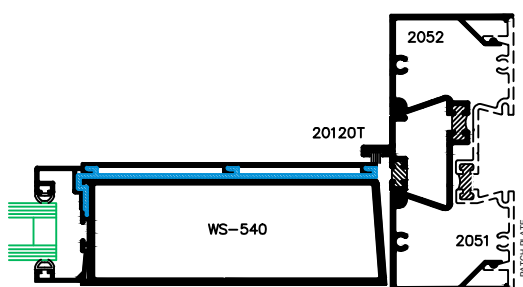
- Concealed Closer's
- Apartment Packages (Lever / Paddle)
- Offset D-Pulls and Ladder Pulls



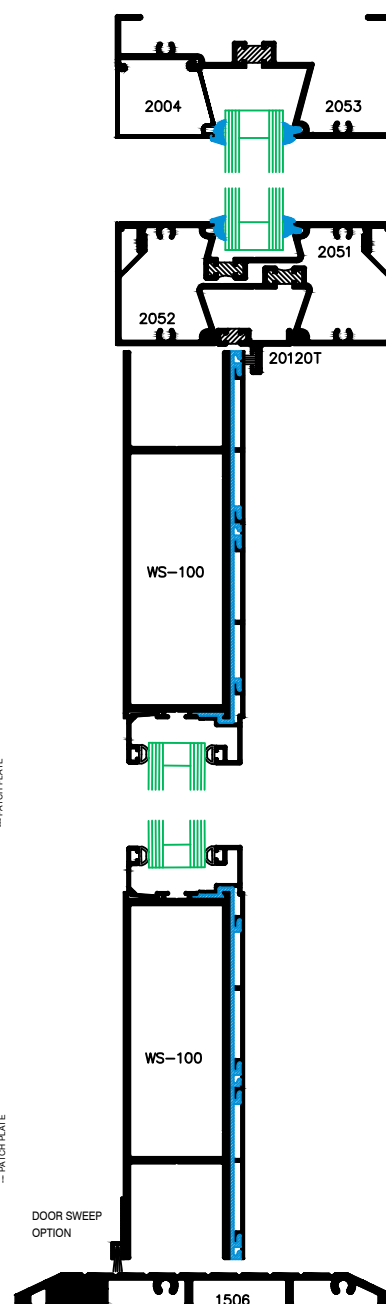
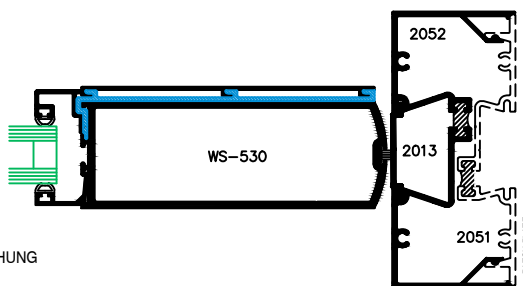
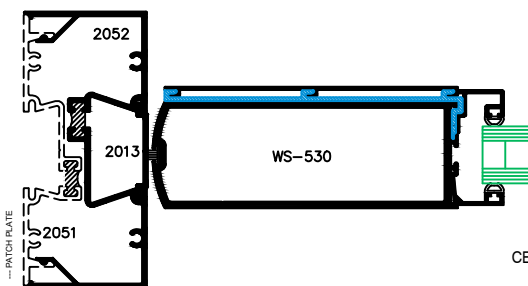
500T SERIES DOOR - 2050 SERIES FRAMING



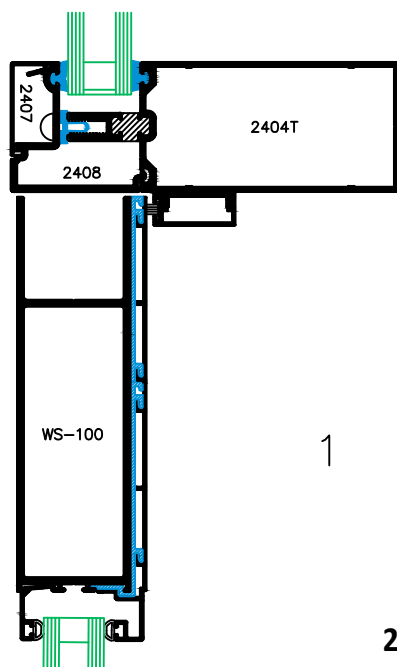
OFFSET HUNG



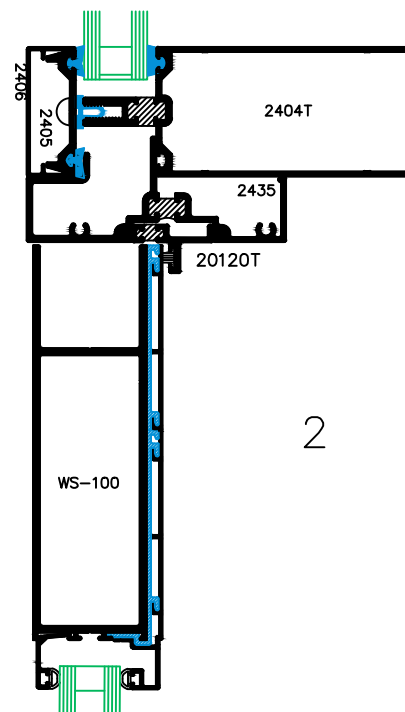
CENTER HUNG



VARIOUS THRESHOLD OPTIONS
ARE AVAILABLE

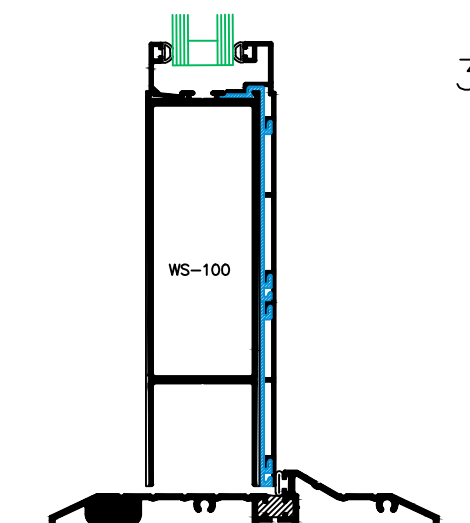


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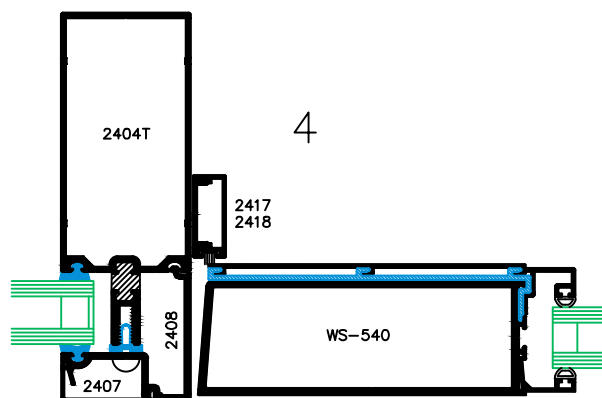
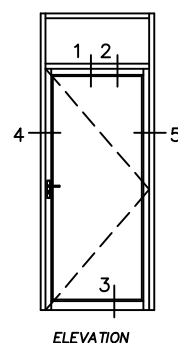


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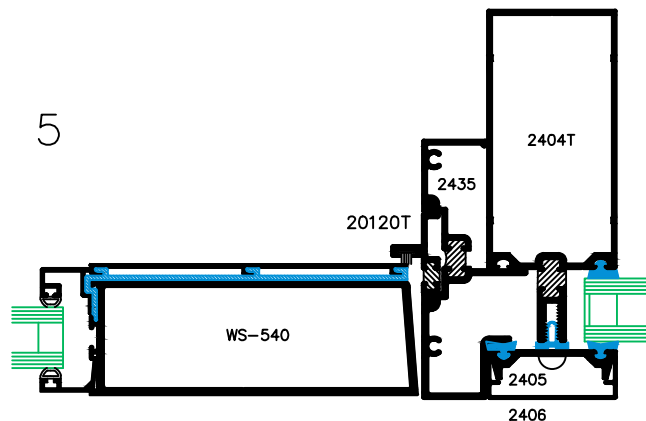
DETAILS
2400T FRAMING



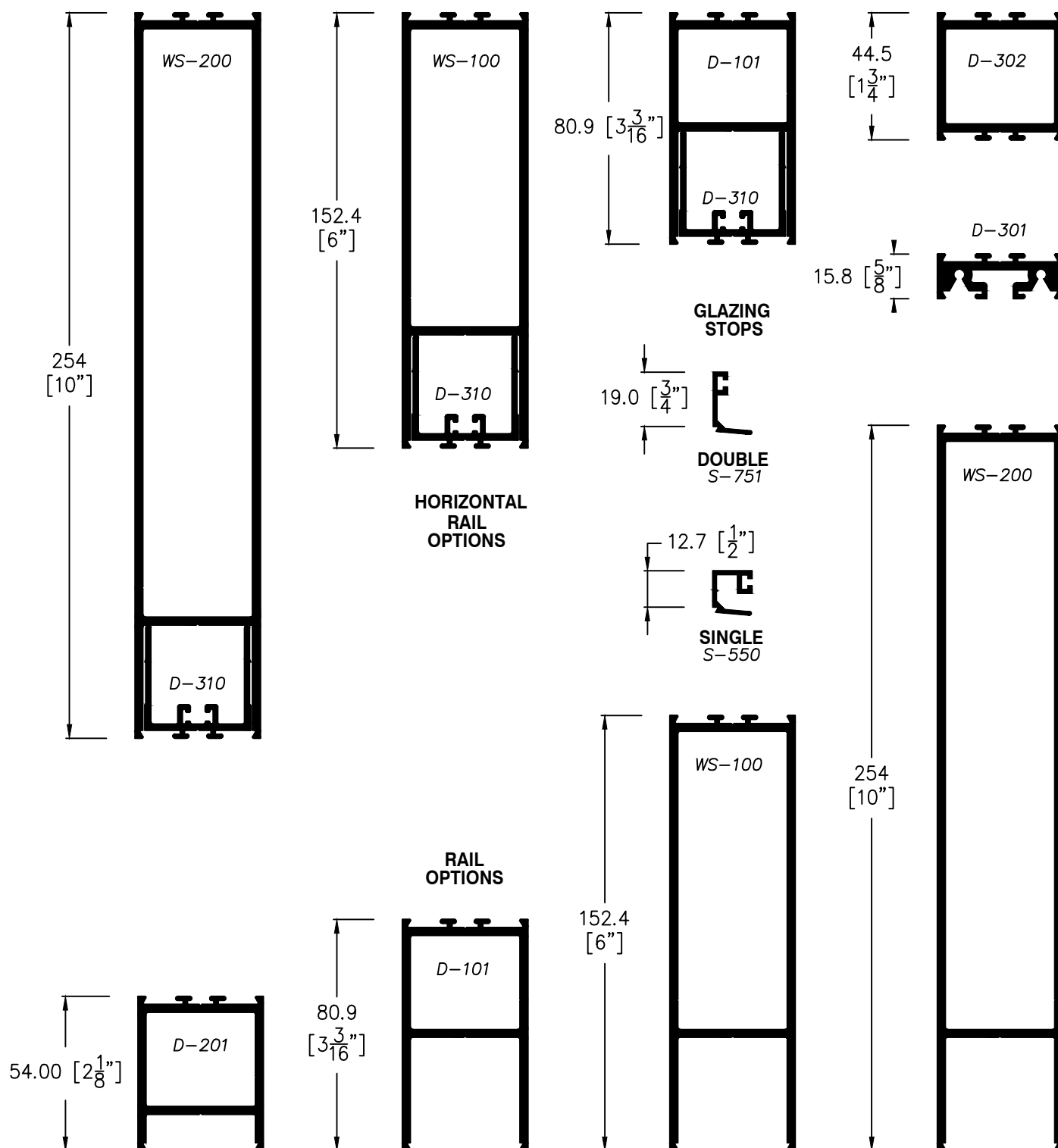
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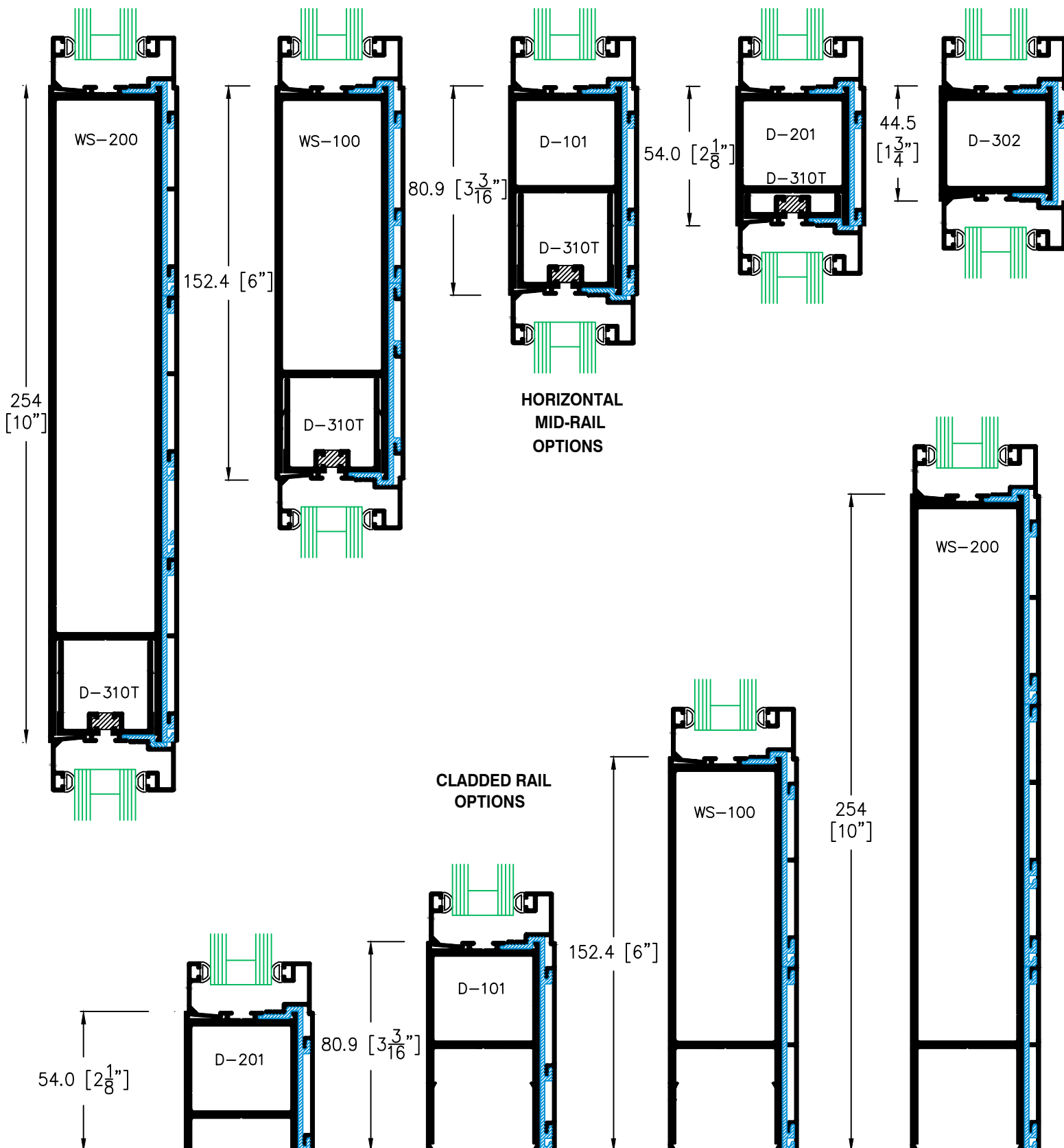
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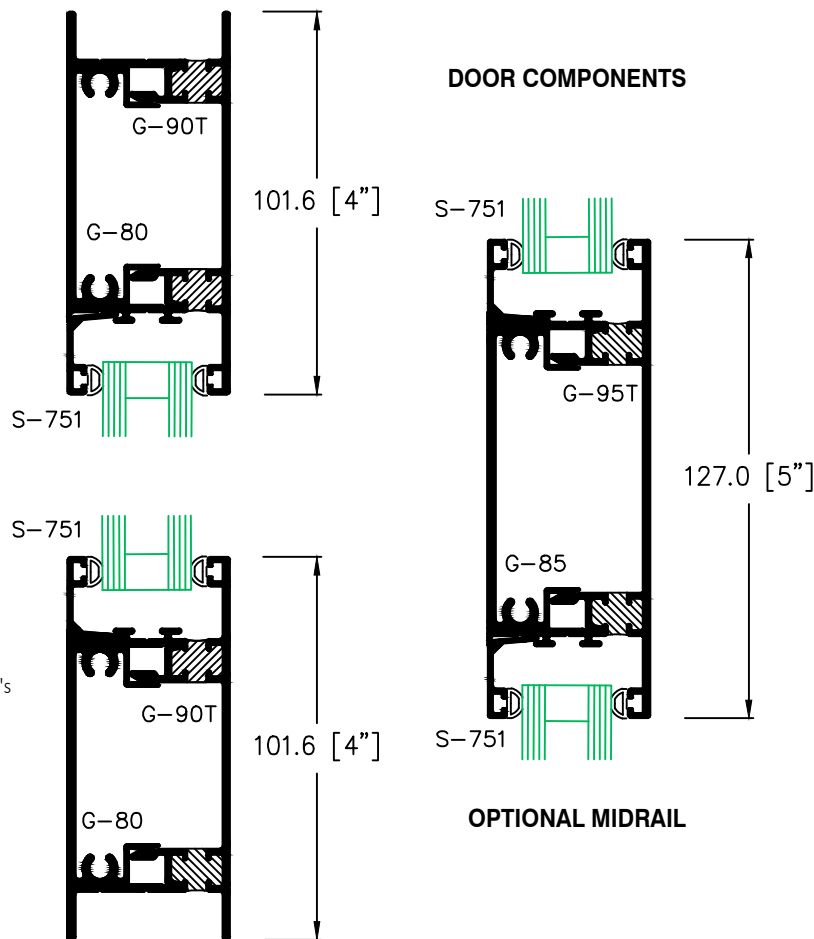
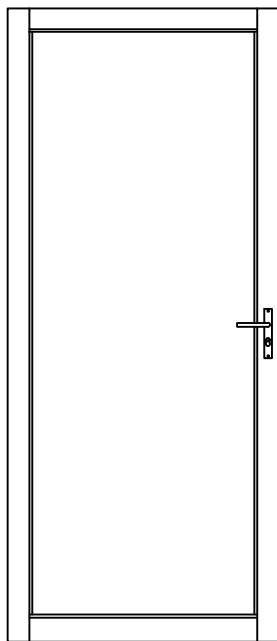
5



NOTE: CUSTOM RAILS ARE ALSO AVAILABLE

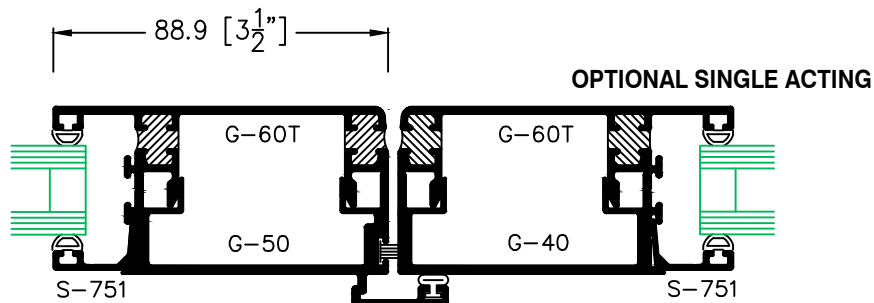
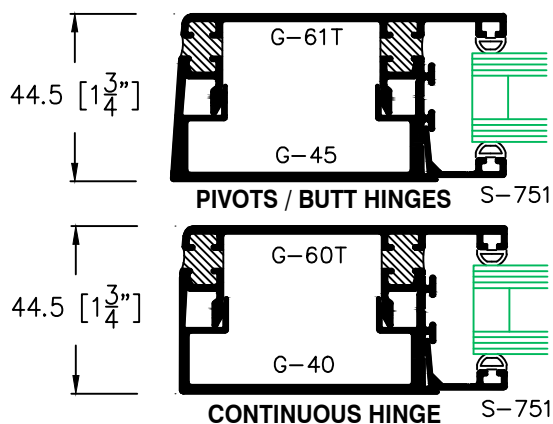
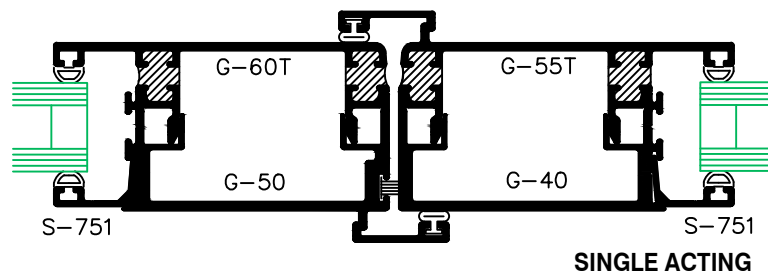


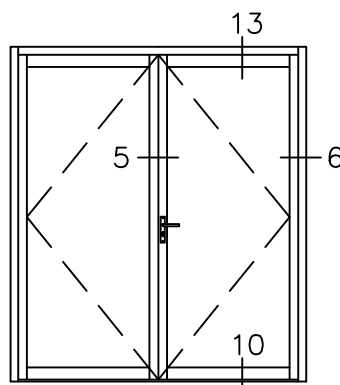
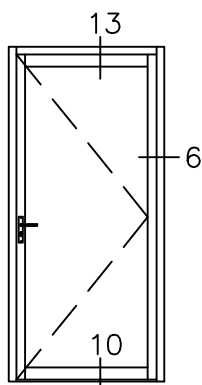
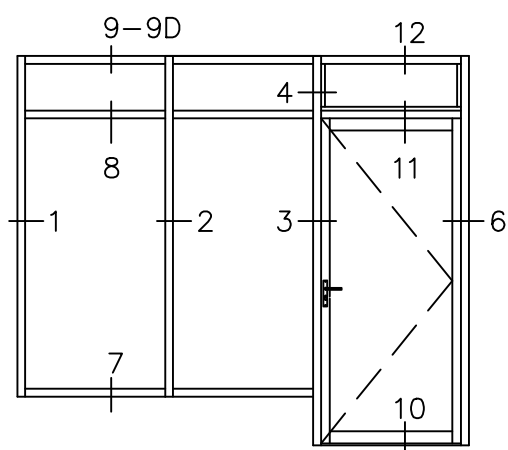




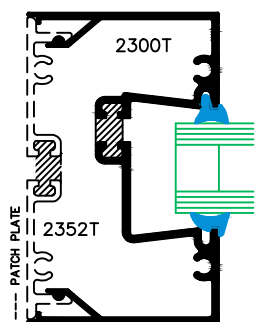
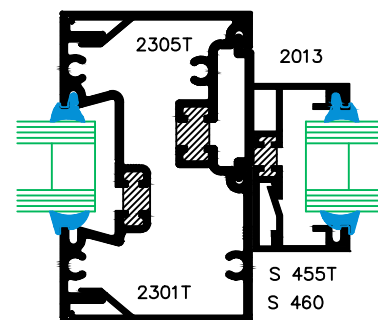
The Glacier 2000 Series Residential Door is designed for both new and replacement applications, offering superior energy savings and durability. Compatible with Metro's systems, this door combines aesthetic appeal, energy efficiency, and robust performance, making it the perfect choice for enhancing the comfort and design of any home or office setting. Key features include:

- **Energy Savings:** Durable double thermal break construction ensures excellent insulation and energy efficiency.
- **Sealed Glazing Units:** Provides enhanced weather resistance and improved insulation.
- **Color Options:** Available in standard anodized or custom painted colors, with split color options to match your unique style.
- **Size Options:** Available in standard or custom sizes to fit any application.
- **Mid-rail Option:** Adds design flexibility and functionality.
- **Exterior Key Cylinder:** Offers secure access from the outside.
- **Lever Handle:** Easy and comfortable operation.
- **Interior Thumb Turn:** Convenient interior locking mechanism.
- **Single and Pair Door Options:** Suitable for various residential or office needs and preferences.

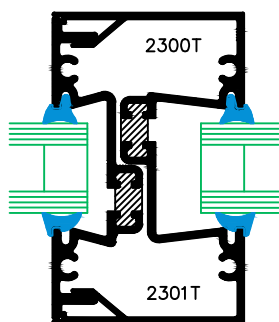




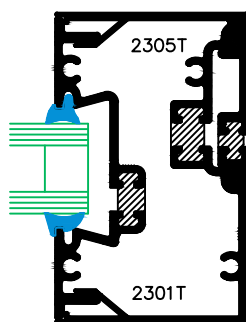
DETAILS
2300T FRAMING



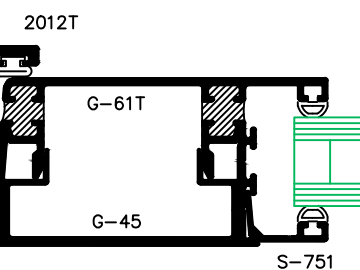
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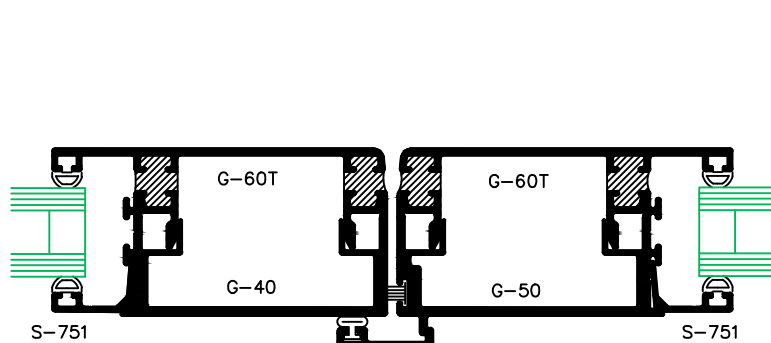
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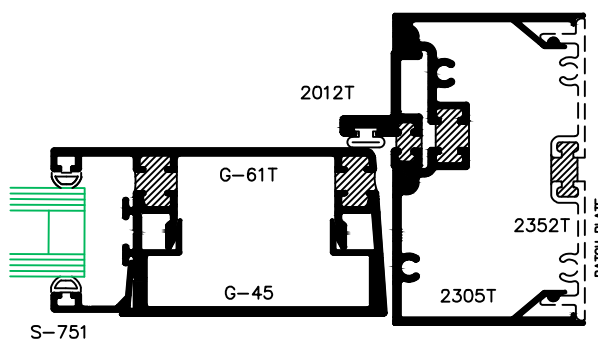
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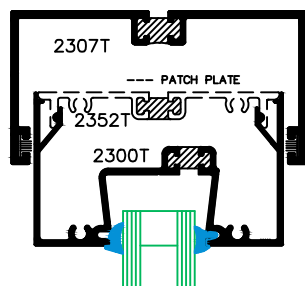
4



5

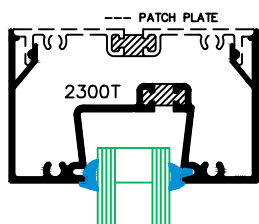


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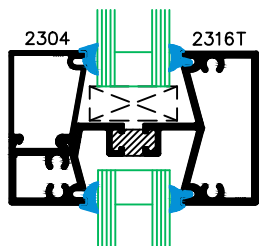


DEFLECTION HEADER OPTION

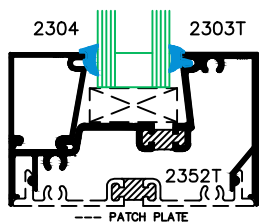
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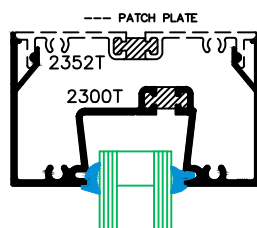
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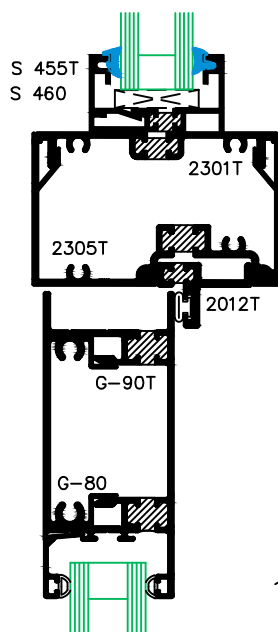
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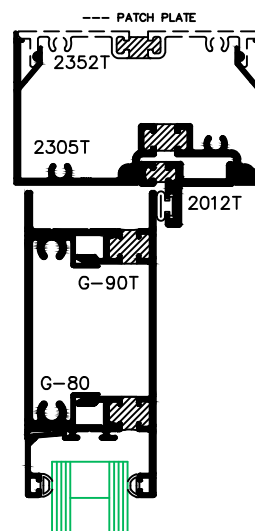
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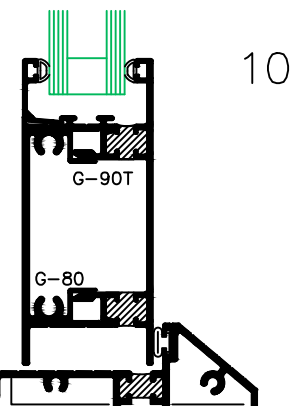
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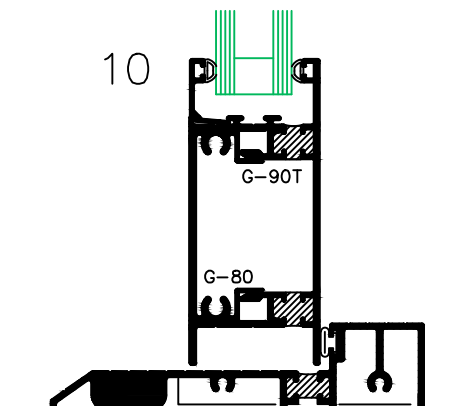
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13



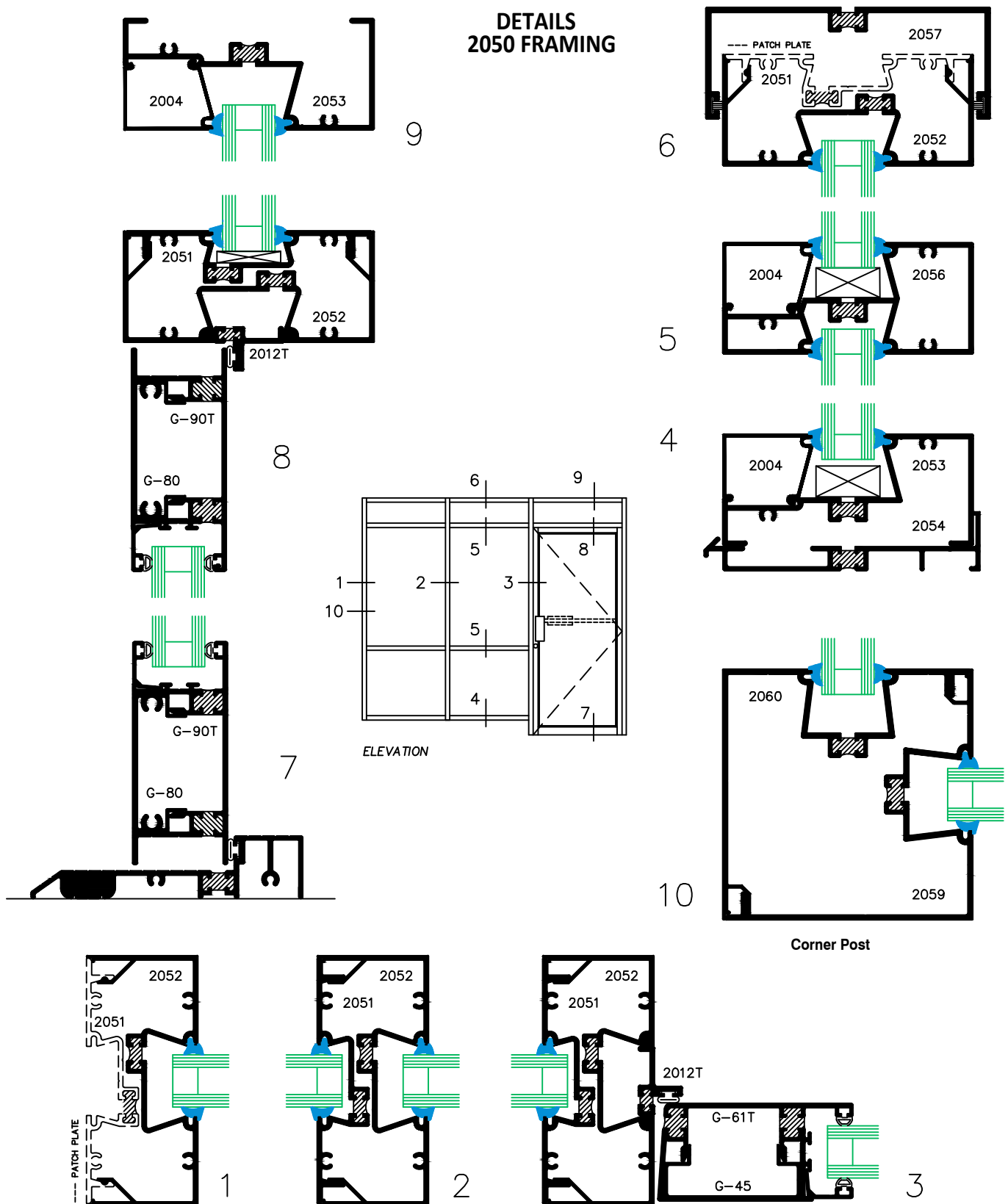
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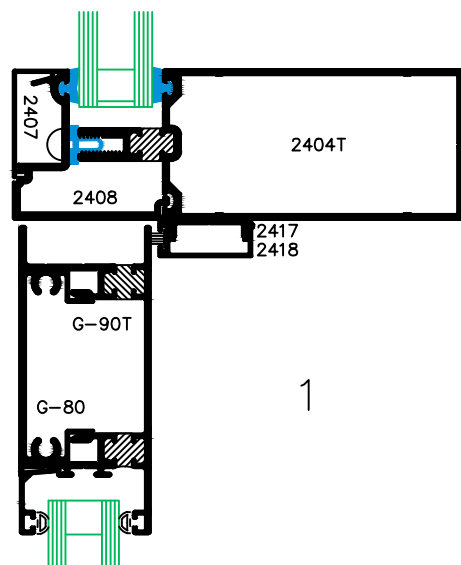


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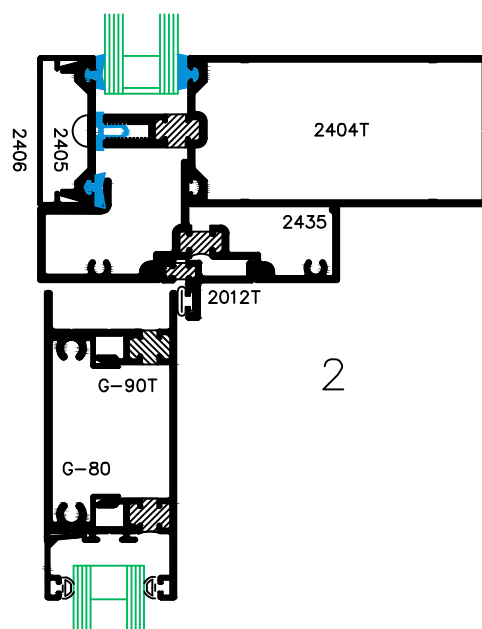
DETAILS
2300T FRAMING

DETAILS
2050 FRAMING



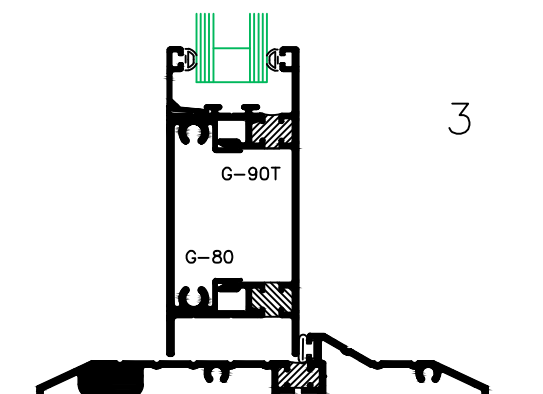


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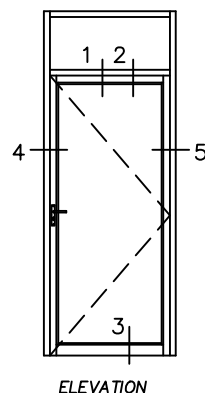


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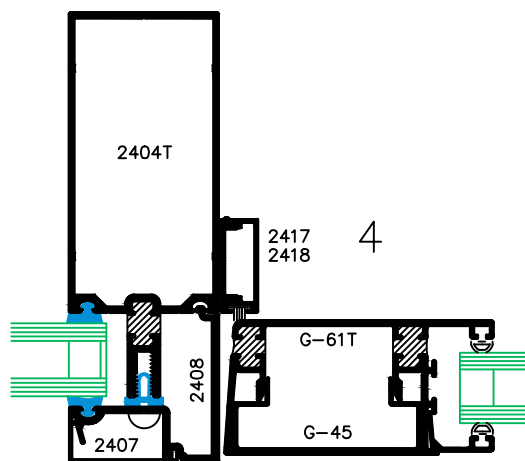
DETAILS
2400T FRAMING



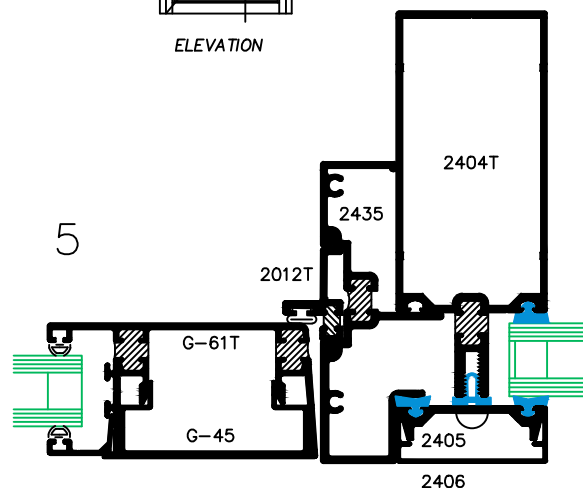
3



ELEVATION



4



5

STANDARD DOOR SIZES

SINGLE DOOR OPENING
PAIR OF DOORS OPENING

36" x 84"
72" x 84"

914 mm x 2134 mm
1829 mm x 2134 mm

GLASS SIZES FOR SINGLE AND PAIRS OF 250 SERIES DOOR

5 mm SINGLE GLASS
23.8mm GLASS UNIT

31 7/16" x 77 1/2"
31 7/16" x 77 1/2"

798 mm x 1969 mm
798 mm x 1969 mm

GLASS SIZES FOR SINGLE AND PAIRS OF 350 SERIES DOOR

5 mm SINGLE GLASS
23.8mm GLASS UNIT

28 7/16" x 73 5/8"
28 7/16" x 73 5/8"

722 mm x 1870 mm
722 mm x 1870 mm

GLASS SIZES FOR SINGLE AND PAIRS OF 500 SERIES DOOR

5 mm SINGLE GLASS
23.8mm GLASS UNIT

25 7/16" x 70 13/16"
25 7/16" x 70 13/16"

646 mm x 1798 mm
646 mm x 1798 mm

PAIR OF DOORS VIEWED FROM OUTSIDE

INACTIVE LEFT LEAF
INACTIVE RIGHT LEAF

i.e. FLUSH BOLTS
i.e. LOCK and CYLINDER

AVAILABLE GLASS STOPS

5 mm GLASS

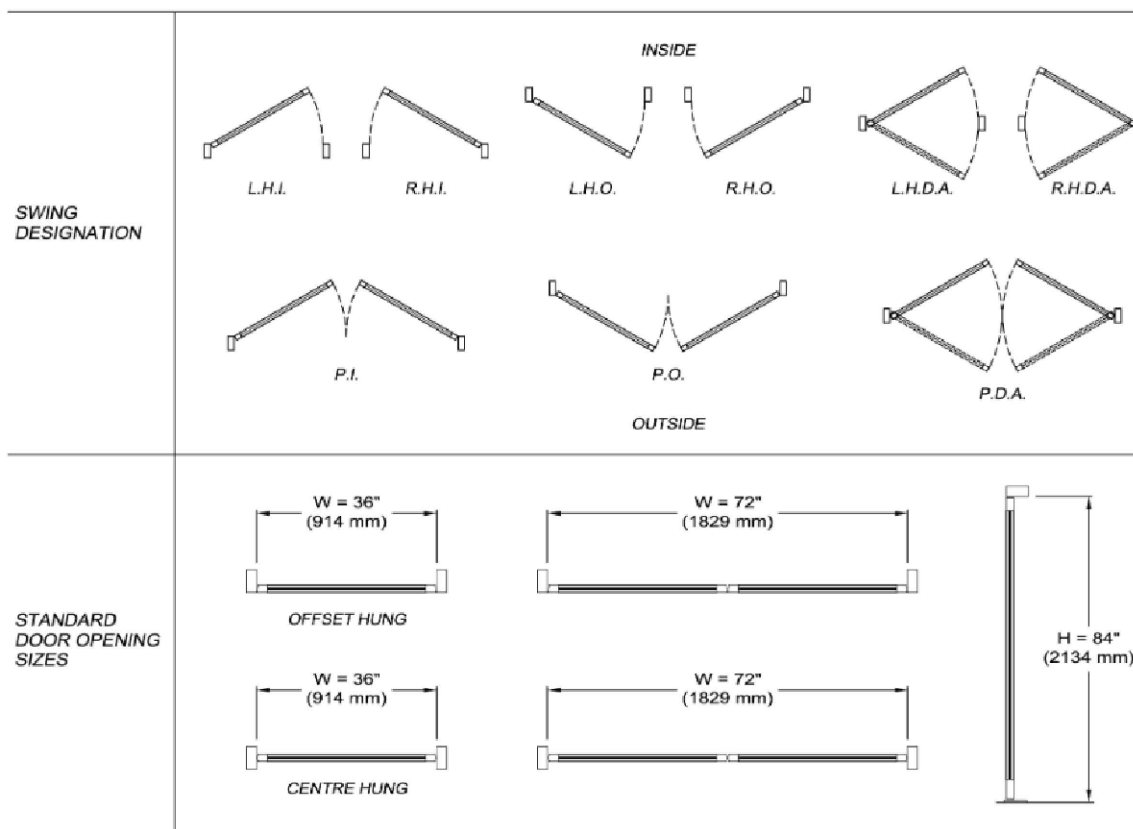
SINGLE GLAZED DOOR

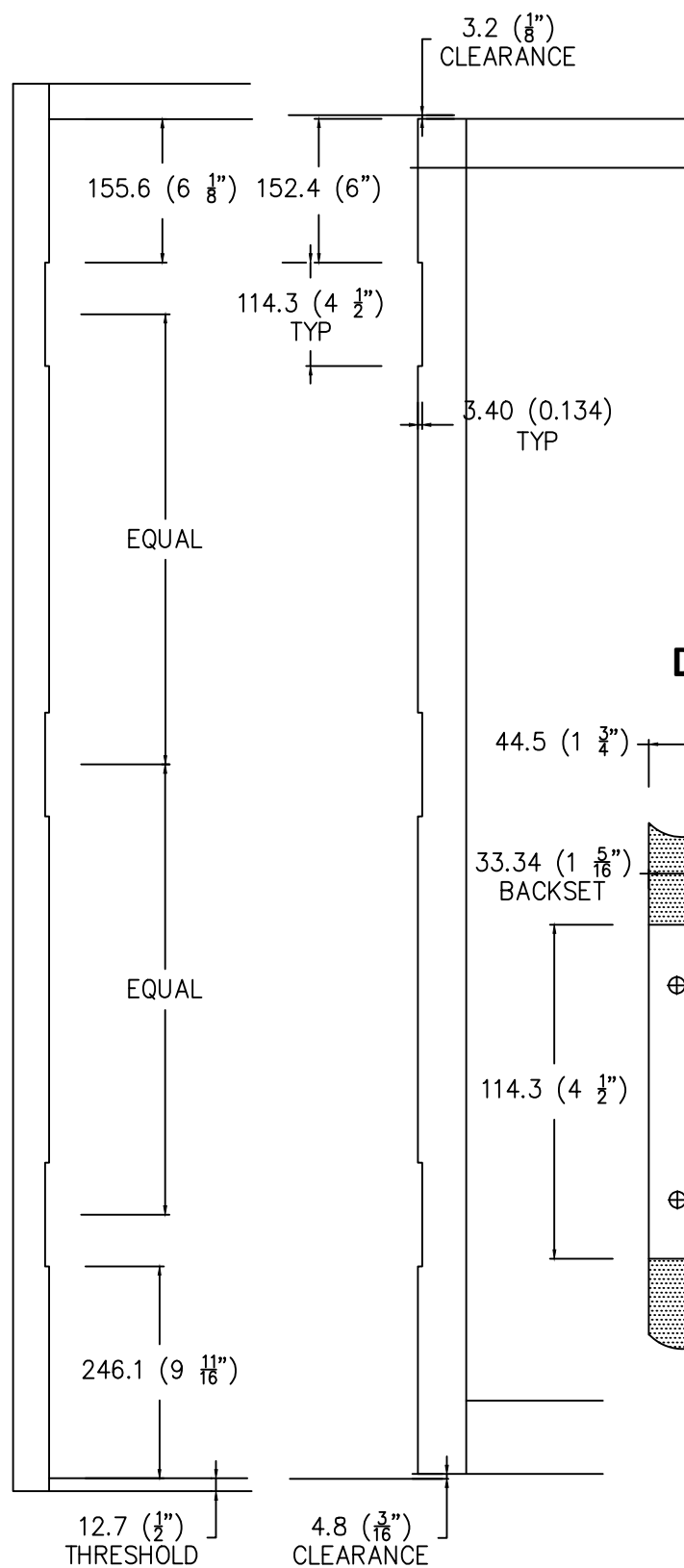
23.8mm GLASS UNIT

DOUBLE GLAZED DOOR

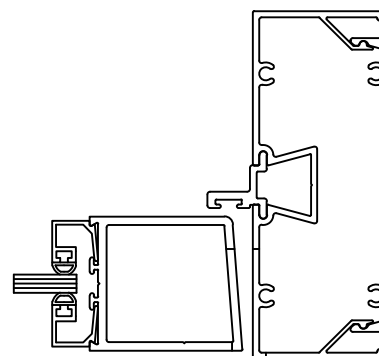
SQUARE STOP 1/2" FACE WIDTH

SQUARE STOP 3/4" FACE WIDTH





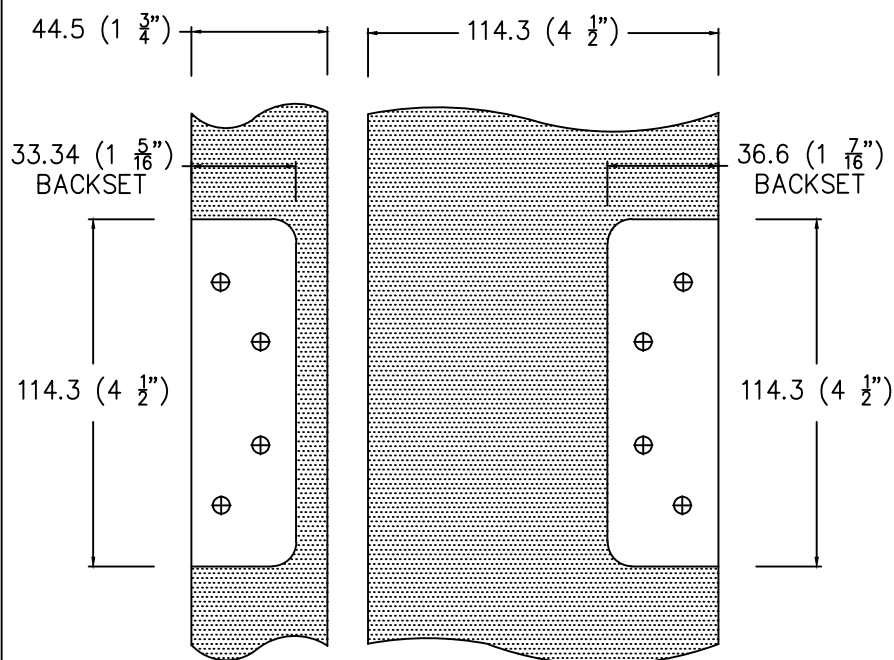
STANDARD BUTT LOCATIONS



3.40 (0.134)

DOOR

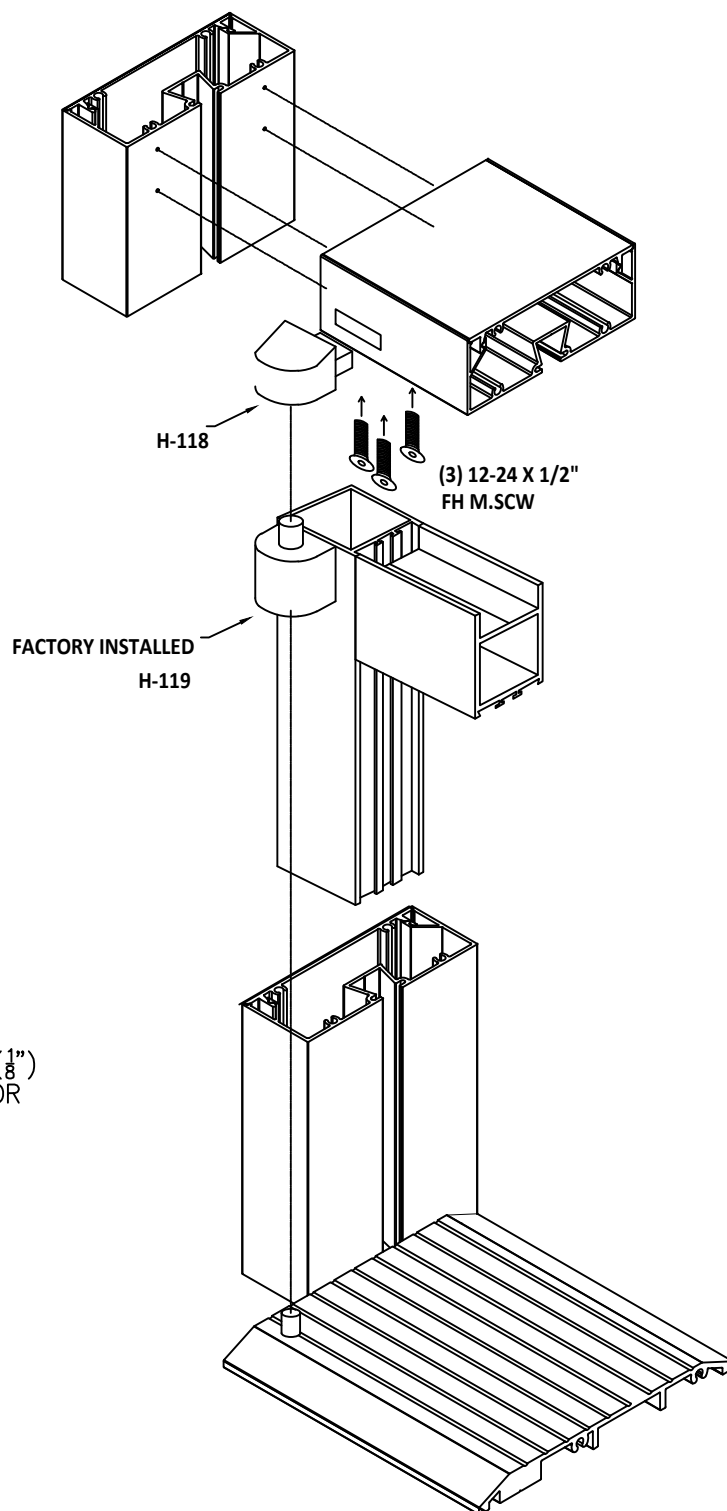
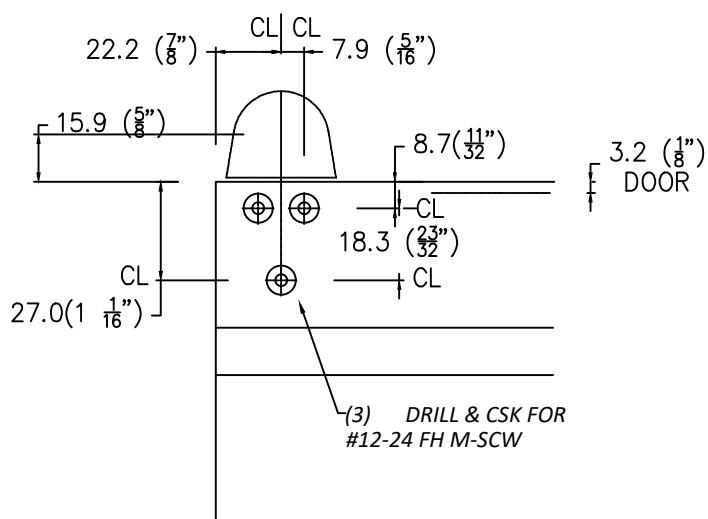
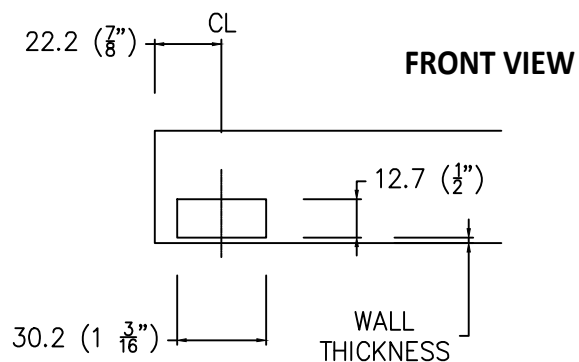
FRAME



FRAME

DOOR

INSTALLATION DETAILS





H-100A
M.S DEAD LOCK



H-102A
HOOK LOCK



H-104A
LATCH LOCK



H-104AR
A.R LATCH LOCK



H-114/H-115
KEYED CYLINDER & THUMB TURN



H-118
FRAME PORTION PIVOT



H-119
TOP DOOR PORTION PIVOT



H-120
BOTTOM DOOR PORTION PIVOT



H-121
THRESHOLD PIN



H-121F
FLOOR MOUNTED PIVOT



H-250-1
METRO STANDARD PULL HANDLE



H-104AR
A.R LATCH LOCK



H-250-5
12" OFFSET D-PULL



H-250-5/H-250-5P
OFFSET D-PULL & TUBULAR PUSH BAR



H-250-6
12" B/B D-PULLS



H-250-5GLP S.S
72" X 1 1/4" OFFSET LADDER PULL



H-250-6GLP S.S
72" X 1 1/4" B/B OFFSET LADDER PULL



H-122
4" X 4 1/2" BUTT HINGE S.S



H-122 BP
4" X 4 1/2" BUTT HINGE BLACK



H-122 PKG
BUTT HINGE WITH BACK UP PLATES



H-122E
4 WIRE BUTT HINGE S.S



H-123A
4 1/2" X 4 1/2" BUTT HINGE S.S



H-124D
BUTT HINGE DOOR BACK UP PLATE



H-124F
BUTT HINGE FRAME BACK UP PLATE



H-130
METRO STANDARD CLOSER



H-130X
STANDARD CLOSER ARM EXTENSION



H-130A DR
STANDARD CLOSER DROP PLATE



H-130 DA
DELAYED ACTION CLOSER



H-128
GLOBAL TC204 CLASS 1 CLOSER



H-1300P
PARALLEL ARM BRACKET



H-4040
GLOBAL 4040 CLOSER



H-4040-18G
GLOBAL 4040 CLOSER DROP PLATE



H-4040-18PA
GLOBAL PARALLEL ARM DROP PLATE



H-4040LA
4040 CLOSER ARM EXTENSION



H-4040XLA
4040 CLOSER XL ARM EXTENSION



H-4040 HOA
4040 CLOSER HOLD OPEN ARM



H-158/H-159/H-160
CONTINUOUS HINGE



H-103AR
A.R. DUAL FORCE 2190



H-100EI
EXIT INDICATOR



H-104RL
ROLLER LATCH



1550
S/G LETTER SLOT



1555
INSULATED LETTER SLOT



H-112
LEVER HANDLE



H-113
LATCH PADDLE



H-108P/H-108S
ELECTRIC STRIKES



H-110
RECTIFIER



H-111
ELECTRICAL CONNECTORS



H-104S
G.J. HEAVY DUTY DOOR CLOSER



H-107
LATCH LOCK STRIKE



H-107A
LATCH DOUBLE STRIKE



H-106
CYLINDER GUARD



H-114A
GMS R-118 RIM CYLINDER



H-114B
A.R LATCH LOCK



H-114E
2 1/4" SPINDLE EXTENSION KIT



H-116
BLACK CYLINDER



H-117
FLUSH BOLTS



H-126
WALKING BEAM



H-126/H-127
WALKING BEAM PIVOT SET



H-127
A.R POWER TRANSFER



H-137A
ASTRAGAL



H-135
A.R 8400 PANIC



H-135S
8400 PANIC STRIKE



H-135X
8400 PANIC EXTENSION FOR 2" DOORS



H-136
A.R 8600 PANIC



H-136B
8600 PANIC STRIKE



H-136X
8600 PANIC EXTENSION FOR 2" DOORS



H-136
PS-LR POWER SUPPLY



H-136A
CYLINDER MOUNTING PAD



H-148 S.S
G.J SURFACE MOUNTED DOOR STOP



H-131
CONCEALED CLOSER



H-132
CENTER HUNG SIDE LOAD ARM



H-105
COVER PLATES



H-096
HOPPE HANDLE SET - EXTERIOR



H-096
HOPPE HANDLE SET - INTERIOR



H-096AS
HOPPE LOCK STRIKE



H-096HA
GLOBAL ACTIVE HANDLE SET

Part 1 - GENERAL

Scope - The aluminum sliding door system shall be _____ Series as manufactured by METRO ALUMINUM Products Ltd. Supply and install glazed aluminum sliding doors, as described on the architectural drawings and as specified herein.

Work Not Included - See: Specifier's lists of excluded items; Items furnished but not installed and/or Items installed but not furnished.

Related Work Specified Elsewhere - See: Specifier's lists and related Sections.

Design & Performance Requirements - Sliding doors to fully comply with applicable standard specifications as typically referenced to the following performance requirements criteria: Air Tightness, Water Tightness, Wind and Other Load resistance. (Note: Applicable Specifier's selection)

Submittals - Shop Drawings & Samples - Submit all documentation and samples for review by Consultant at one time, prior to fabrication of door products.

Quality Assurance - Provide all necessary information to show that all involved products meet or exceed the requirements of these specifications.

Delivery, Storage and Handling - Deliver, store, handle, protect and schedule materials and products so as to avoid any damage. Follow recommendations of AAMA CW-10 "Care and Handling of Architectural Aluminum from Shop to Site" and others as applicable.

Part 2 - PRODUCTS

Materials - All materials to meet the minimum design and specifications as applicable. Any defects impairing strength, durability or appearance are not acceptable. Extruded aluminum shall be AA 6063 T6 alloy and temper with Fy = 110 MPa (16 KSI) minimum. Sufficient strength and size fasteners shall be made of corrosion-resistant and compatible material such as cadmium or zinc plated carbon steel, stainless steel or aluminum, to prevent any galvanic action (electrolytic corrosion). Standard gaskets shall be for dry-dry glazing method, extruded from dense Neoprene, EPDM, or other equal material. Gasket profile shall be designed and sized to fit tight and properly seal glass-metal interfacing. Glass setting to be compatible with glass unit seals and/or other parts involved as required. Heavy-duty pile type weather-stripping to be applied to all interfacing joints between individual panels and perimeter framing as required.

System Description ☐ System shall be (Specifier's selection) single glazed / double glazed Series: SD 1000 - Interior Multi Track Mall Sliding Door with flush recessed sill track; SD 1100 - Exterior Heavy-Duty Patio Door with fully weather-stripped stepped bottom track and double weather-stripped head, jams and interlock - as manufactured by METRO ALUMINUM Products Ltd. Door configuration type to be: OX, XO, OOX, XOO or OXXO (Specifier's selection). System to accommodate panel sizes up to 1220 x 2440 mm (48" x 96").

Glass retention, as for dry glazing method, shall be achieved by utilizing inorganic rubber gasket on 4-sides of glass pane at interfacing with extruded aluminum glazing stop.

Head track to be equipped with woven pile to allow for necessary air tightness of the system and smooth operation of sliding panels. Interlock weather-stripping to be doubled as required. Slider operation to utilize adjustable tandem ball bearing rollers and security hook bolts. Head track to accommodate up to 19 mm (3/4") differential deflection.

Whenever substitute/alternative products are considered, supporting data to be submitted ten (10) days prior to bid date to allow for valid comparison. Approval of alternates to be confirmed in advance of bid closing by addendum only.

Fabrication - Extruded profiles shall be accurately fabricated and assembled to provide tight fit hairline joints only. Corner joinery shall utilize concealed assembly anticorrosive fasteners to allow for true and square set of frame elements. Frame assemblies shall be free of warp. Uniformly compressed glazing gaskets shall secure glass in place and uniform weather-stripping to suit air tightness and operation requirements. No exposed fasteners are permitted.

Finish - All exposed surfaces shall be finished as specified. The finish, as per AAM designation, shall be (Specifier's selection):

Standard clear anodizing to AA - M12C22A31

Standard perma bronze to AA - M12C22A44

Standard black anodized to AA - M10C21A44

Duracron acrylic enamel to AA - M12C4XR1X

Custom paint qualities and colors - Specifier's selection.

Hardware to have manufacturer's standard finish.

Part 3 - EXECUTION

Installation - Prefabricated framing to be installed in prepared openings, at correct locations as shown on drawings, set level, plumb, square and aligned with other work in accordance with manufacturer's instructions, approved shop and erection drawings. Tracks and panels to be set level, plumb and parallel not exceeding overall length combined tolerance of 3 mm (1/8") from established reference lines. Anchoring shall suit perimeter conditions of rough openings and seals as required. Perimeter joints to be sealed/caulked as specified and detailed.

Protection and Cleaning - Work to be protected from damage during and after installation. Consult with manufacturer and installer to determine appropriate protective measures. The General Contractor shall be responsible for protection during construction and for final cleaning. After installation, aluminum work and glass to be cleaned according to instructions/manuals provided by product manufacturers and glaziers. Use appropriate cleaning materials and methods. Do not scratch or damage glass or finishes.

Commercial and Institutional Sliding Doors

01 - General Specifications

02 - 1000 Series Multi-Track Interior Sliding Doors

- Interior use
- Multi-track parallel stacking
- Heavy duty tandem rollers
- Single or double glazed

03 - 1100 Series Monumental Patio Sliding Doors

- Exterior use
- Single or double glazed
- Full weather-stripping
- Heavy duty tandem rollers
- Stepped sill for drainage
- Screens available

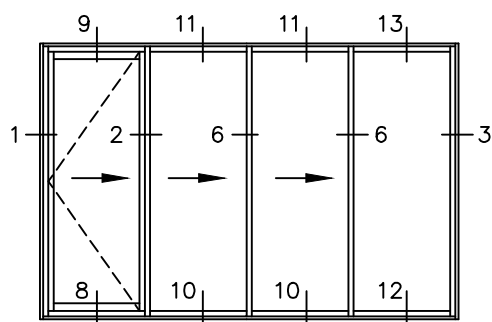
04 - 1100T Series Monumental Exterior Sliding Doors

- 2 panels up to 8'0" x 8'0"
- 3 panels up to 12'0" x 8'0"
- 4 panels up to 16'0" x 8'0"
- Heavy duty tandem rollers
- Anodized and custom painted finishes
- Split-colour options
- Double thermal break
- Slopped sill track for easy drainage
- Flush finger pulls and hook lock
- Screens available

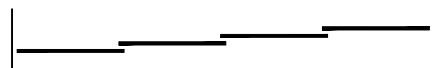
05 - Slider Hardware



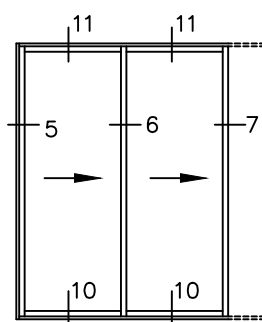
ELEVATIONS & PLAN DETAILS



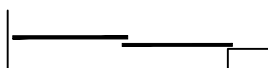
ELEVATION



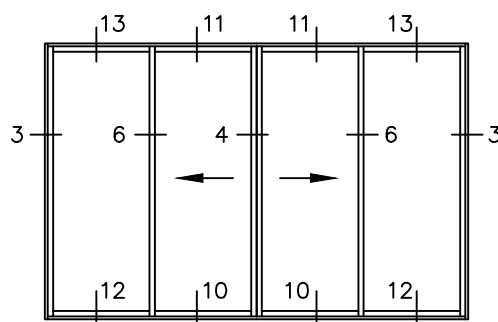
REF. PLAN



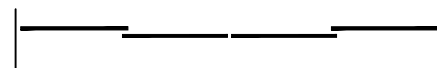
ELEVATION



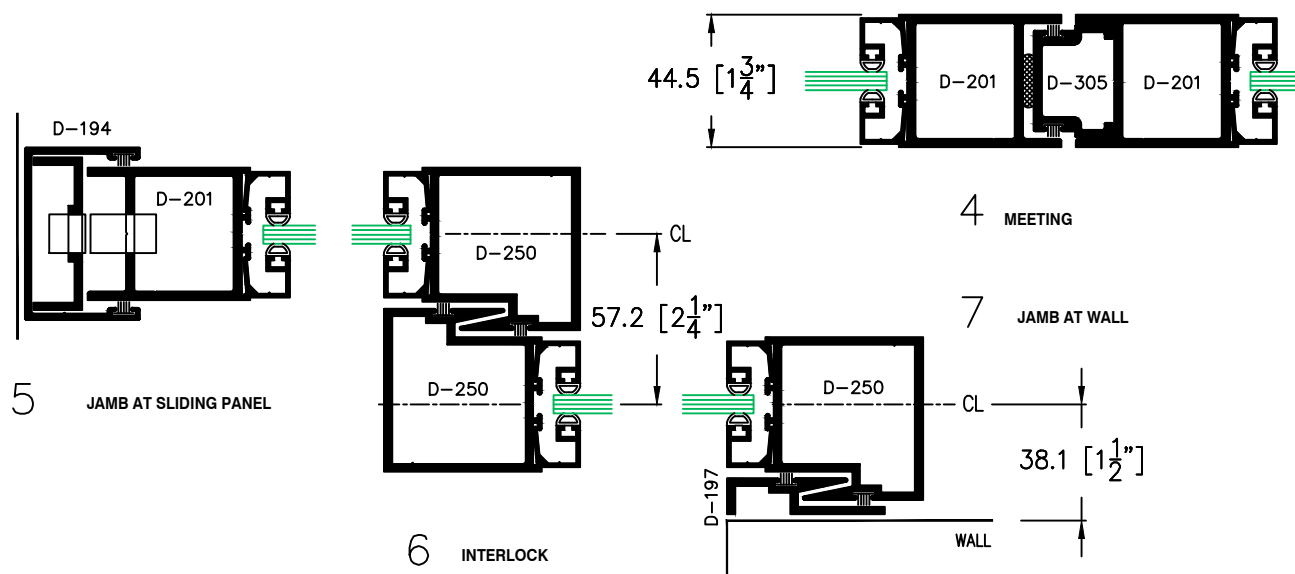
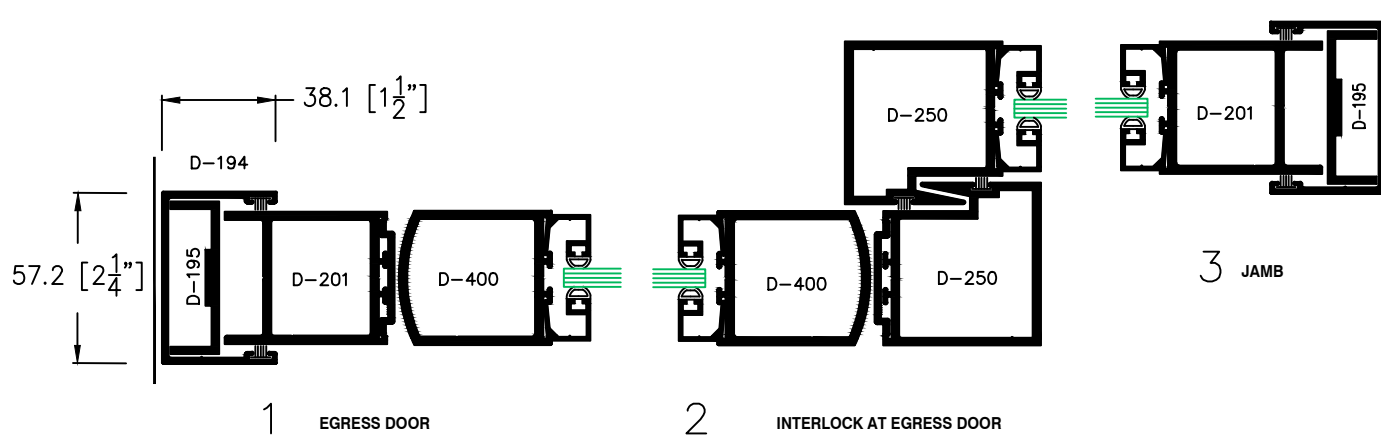
REF. PLAN



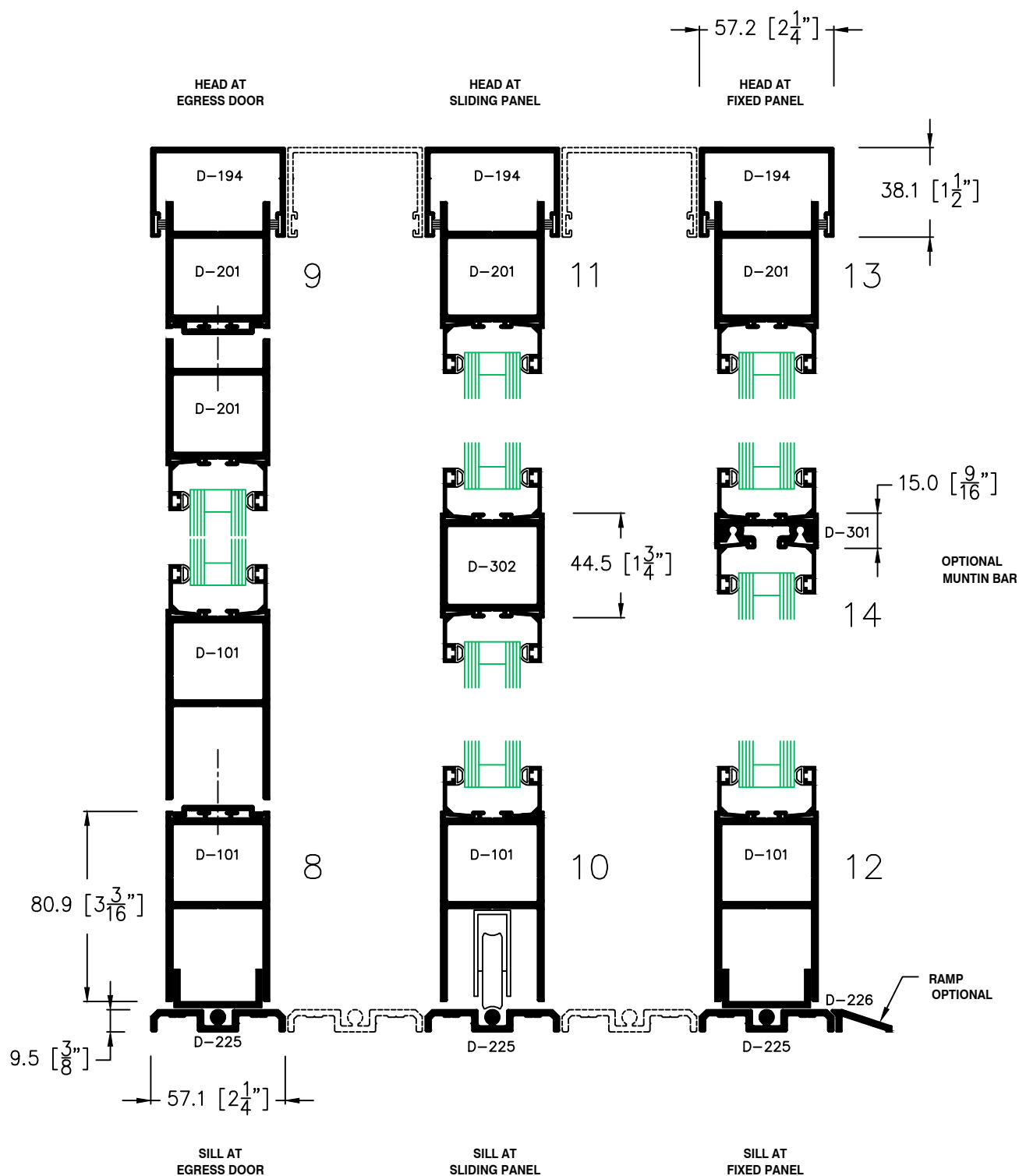
ELEVATION



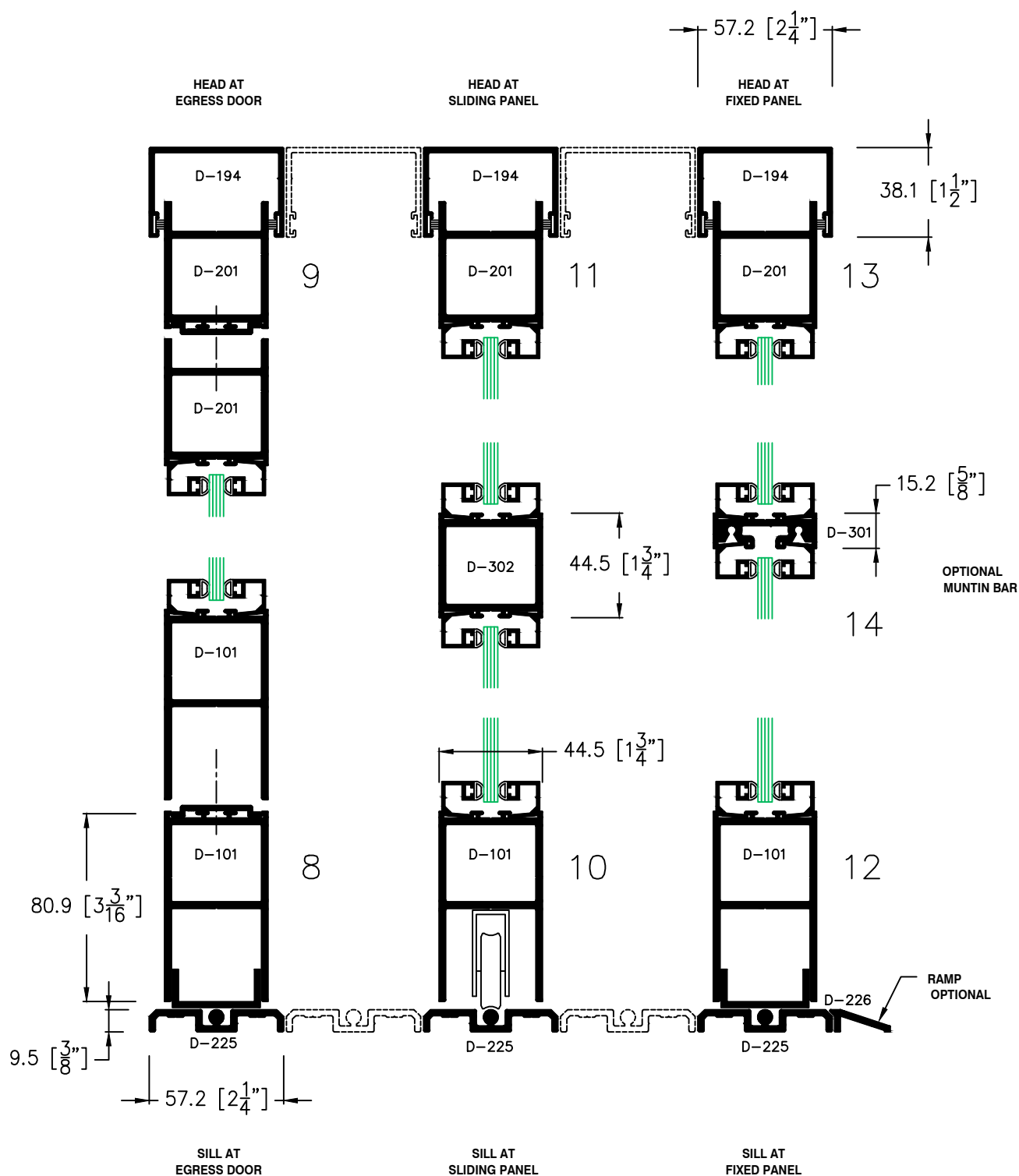
REF. PLAN



SECTION DETAILS

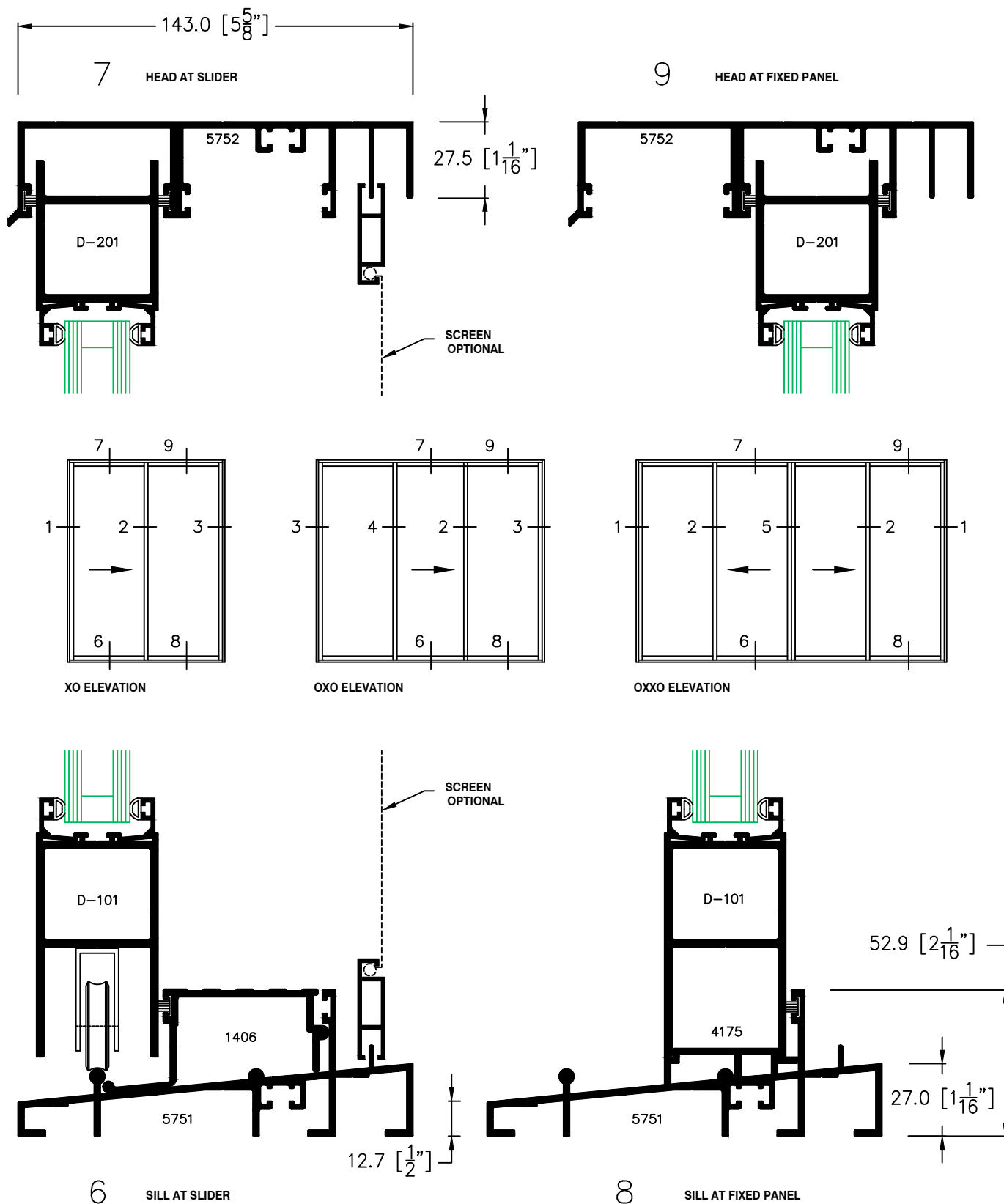


SECTION DETAILS

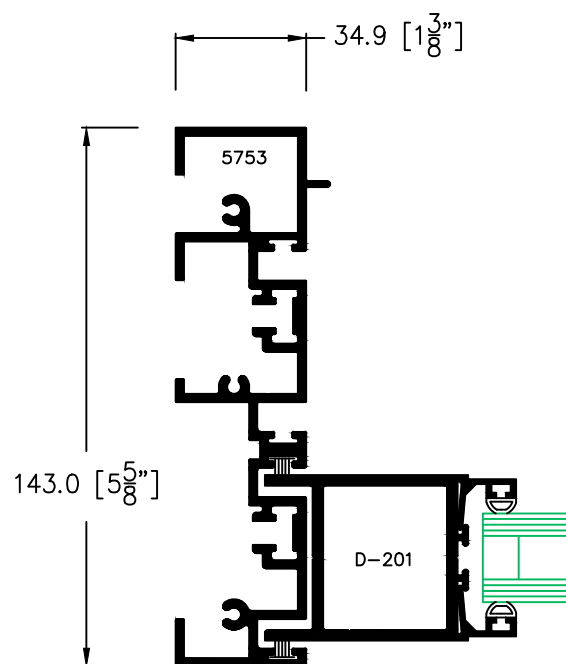




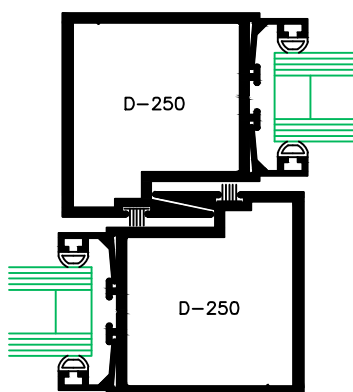
TYPICAL DETAILS



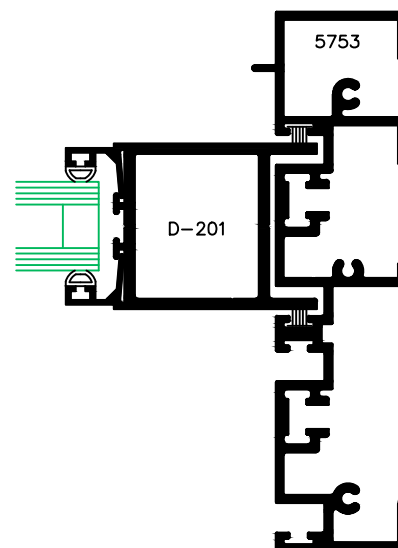
TYPICAL DETAILS



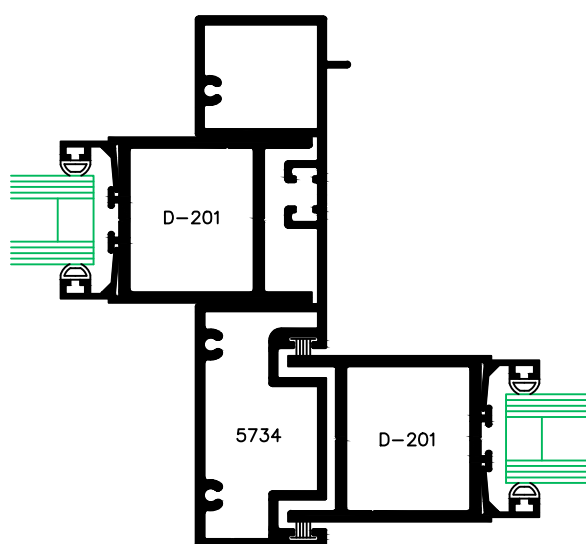
1 JAMB AT SLIDER



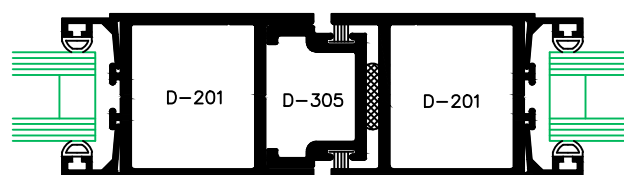
2 INTERLOCK



3 JAMB AT FIXED PANEL



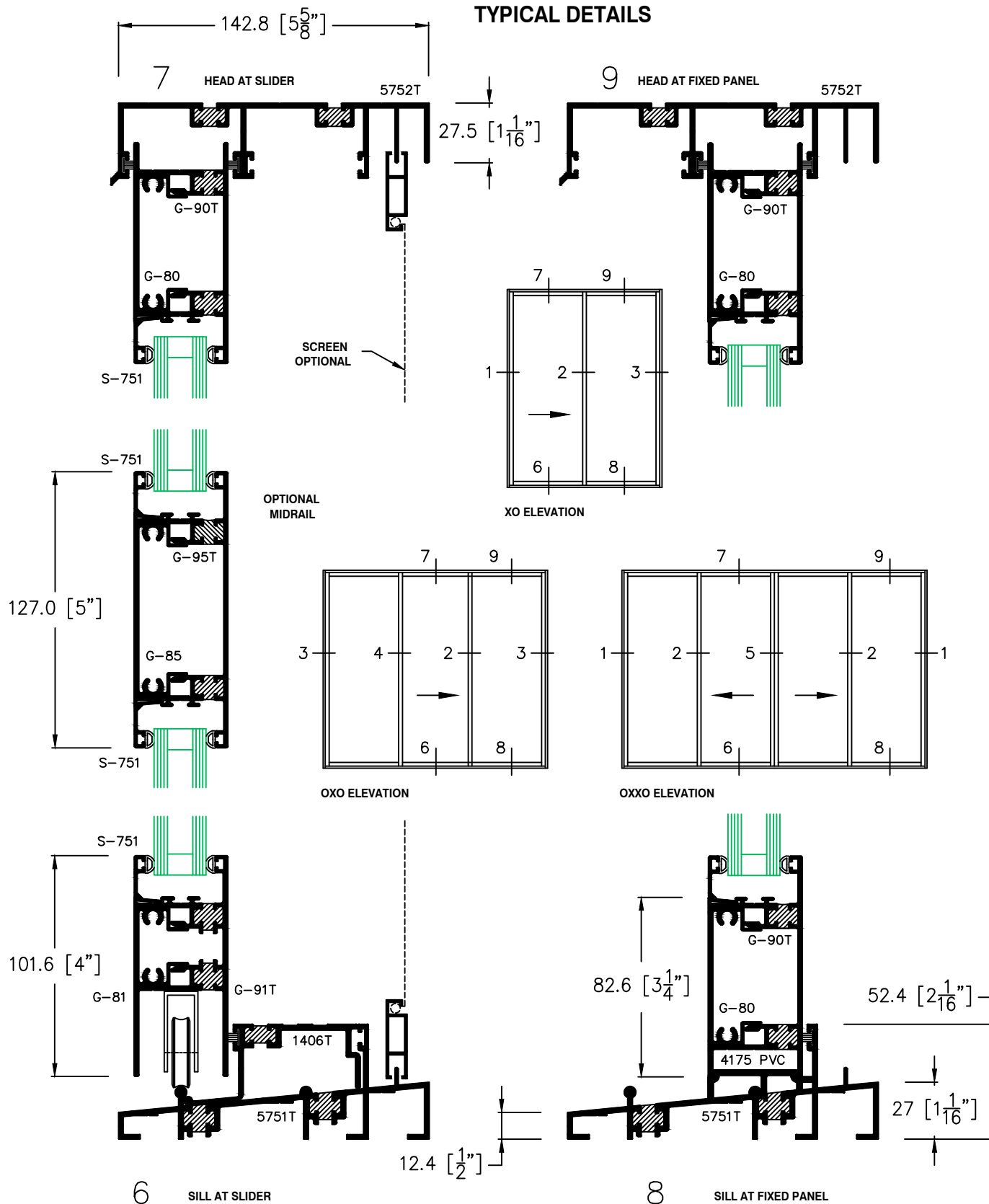
4 OXO



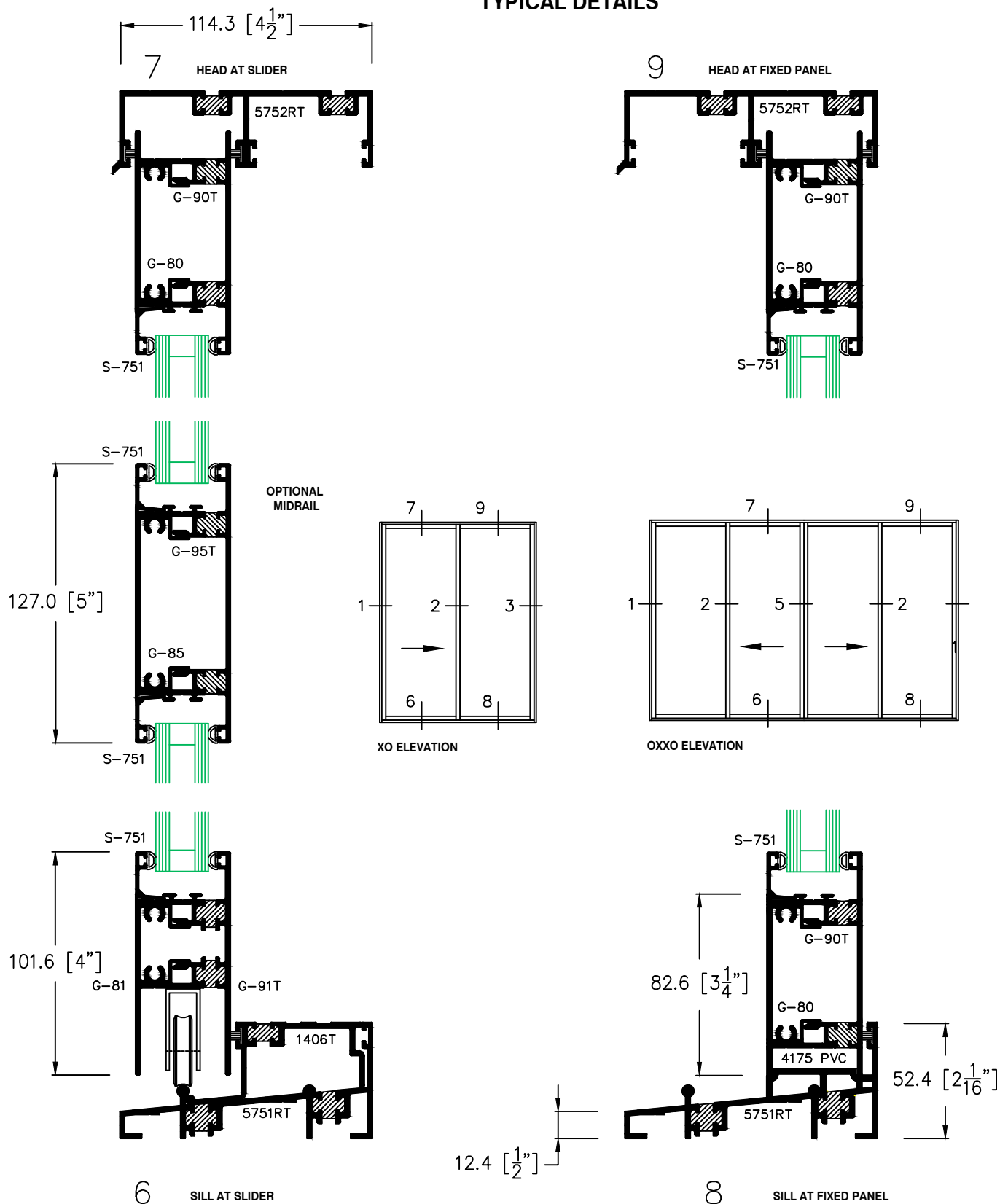
5 OXO MEETING STILE



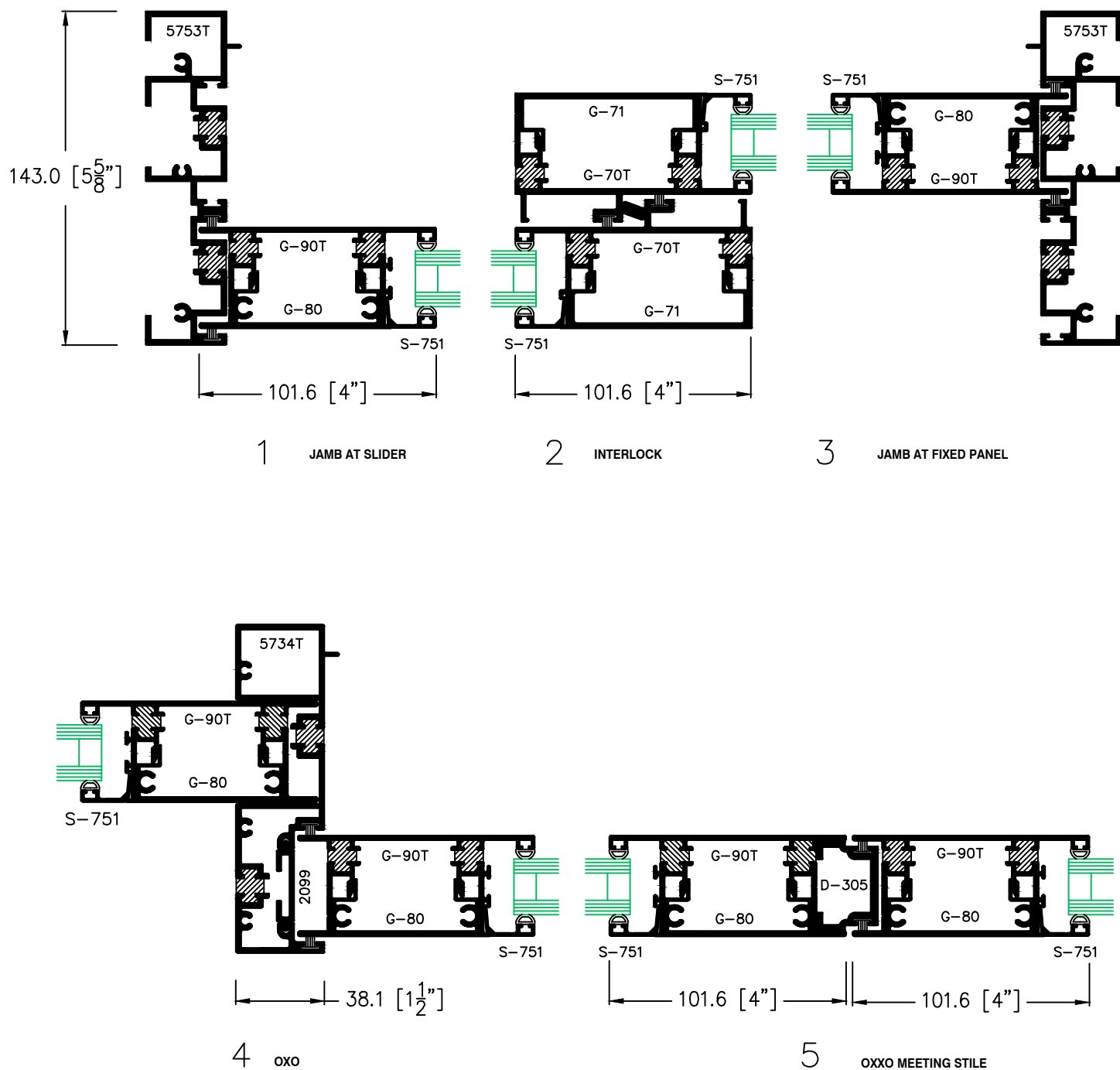
TYPICAL DETAILS



TYPICAL DETAILS



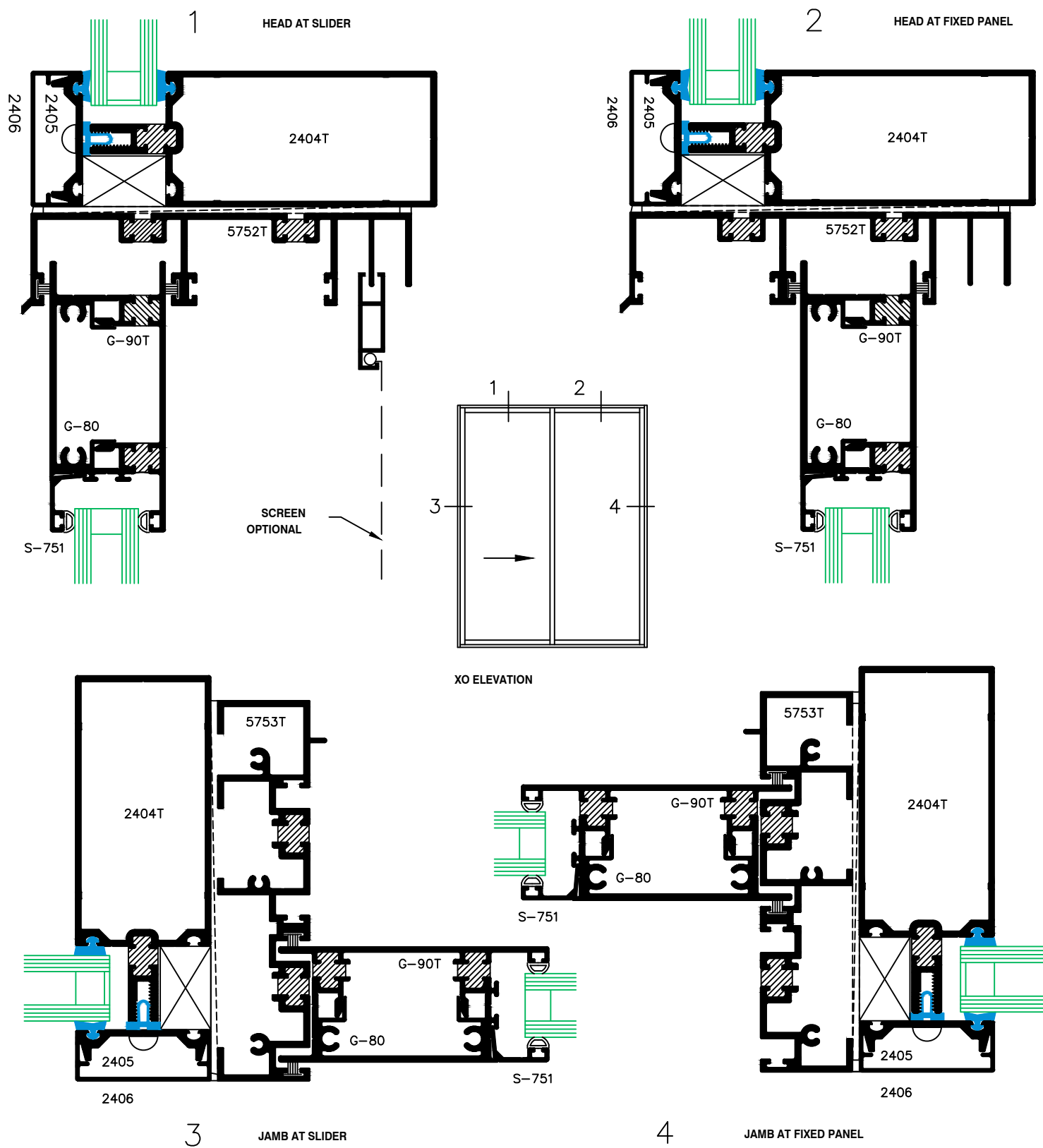
TYPICAL DETAILS



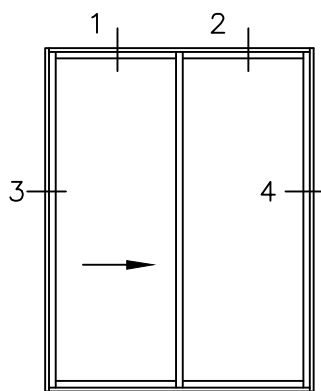
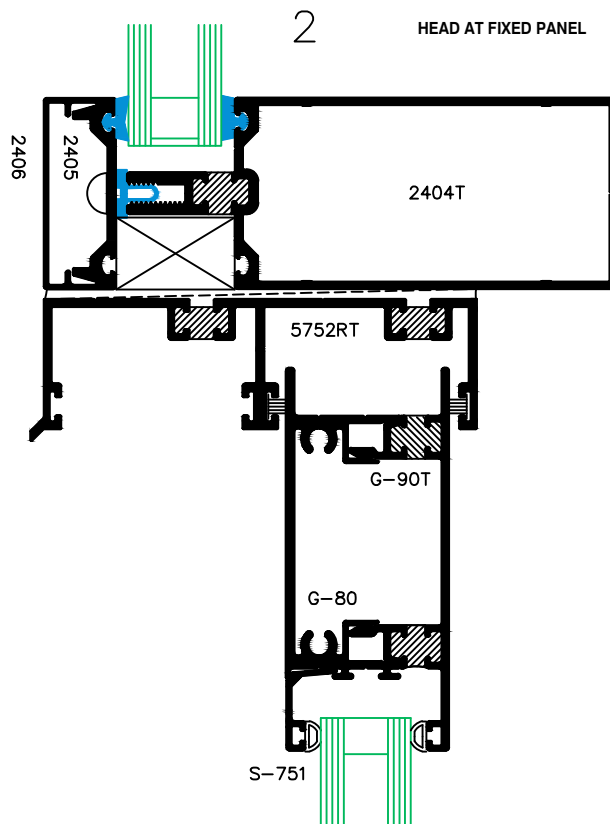
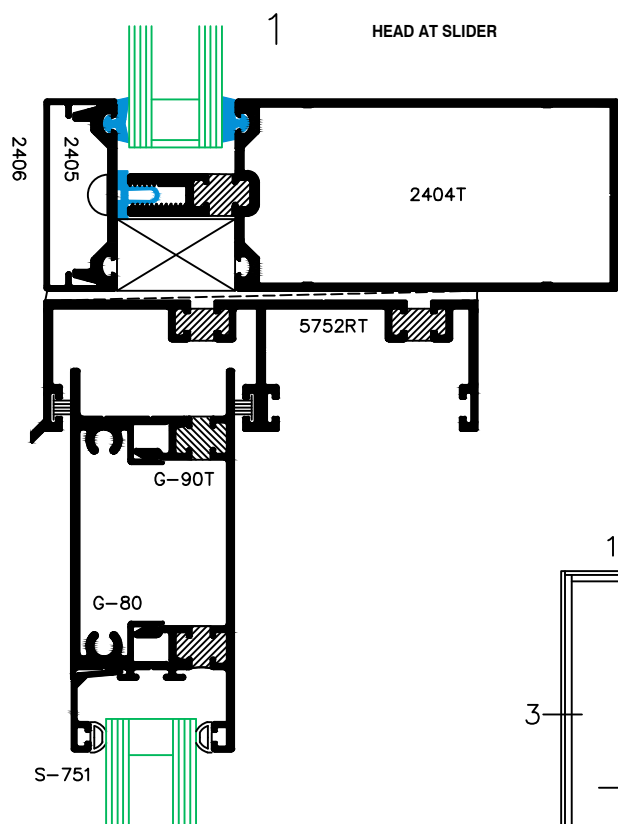
TYPICAL DETAILS



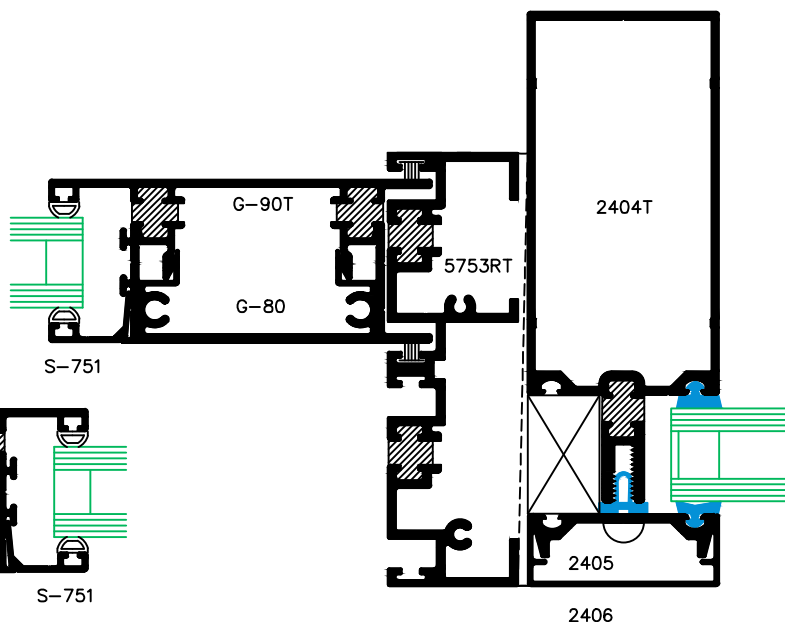
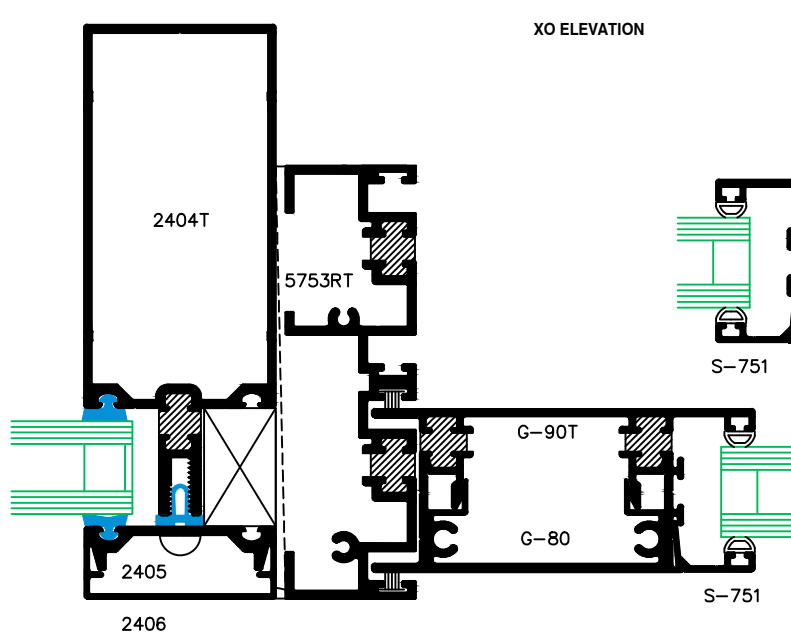
INTO CURTAIN WALL FRAMING



INTO CURTAIN WALL FRAMING



XO ELEVATION





H-90
TANDEM SLIDER ROLLER



H-90 S.S
TANDEM SLIDER ROLLER STAINLESS



H-91
SLIDER FINGER PULL



H-92
SLIDER FINGER PULL - KEYED



H-93
SLIDER FINGER PULL - NO KEY



H-94
SLIDER FINGER PULL - BLANK



H-096L
SLIDER SINGLE POINT LOCK



H-102
M.S HOOK LOCK 31/32" BS



PD/BUMP
PATIO SLIDER BUMPERS



PD/HAND
PATIO SLIDER SCREEN HANDLE



PD/WHL
PATIO SLIDER SCREEN WHEEL



PD/COR
PATIO SLIDER SCREEN INTERNAL CORNER



H-95
ANGLE WITH BUMPER PUSH IN



H-95
RUBBER BUMPER PUSH IN



H-105
COVER PLATE

The following METRO storefront systems are all screw-port construction and designed for center pocket, flushing glazing

01 - General Specifications

02 - 1300 Series - Single Glazed

05 - 2300 Series - Double Glazed

08 - 2300T Series - Double Glazed Thermally Broken

11 - 1750 Series - Single Glazed

14 - 2050 Series - Double Glazed Thermally Broken

17 - 2100T Series - Double Glazed Thermally Broken

Part 1 - GENERAL

Scope - The storefront framing system shall be _____ Series as manufactured by METRO ALUMINUM Products Ltd. Supply and install aluminum framing, as described on the architectural drawings and as specified herein.

Work Not Included - See: Specifier's lists of excluded items; Items furnished but not installed and/or Items installed but not furnished.

Related Work Specified Elsewhere - See: Specifier's lists and related Sections.

Design & Performance Requirements - Framing to fully comply with applicable standard specifications as typically referenced to the following performance requirements criteria: Air Tightness, Water Tightness, Wind and Other Load resistance, Temperature Index and Energy Performance. (Specifier's selection)

Submittals - Shop Drawings & Samples - Submit all documentation and samples for review by Consultant at one time, prior to fabrication of door products.

Quality Assurance - Provide all necessary information to show that all involved products meet or exceed the requirements of these specifications.

Delivery, Storage and Handling - Deliver, store, handle, protect and schedule materials and products so as to avoid any damage. Follow recommendations of AAMA CW-10 "Care and Handling of Architectural Aluminum from Shop to Site" and others as applicable.

Part 2 - PRODUCTS

Materials - All materials to meet the applicable minimum design and specifications requirements. Any defects impairing strength, durability or appearance are not acceptable. Extruded aluminum shall be AA 6063 T6 alloy and temper - Fy = 110 MPa (16 KSI) minimum. Sufficient strength and size fasteners shall be made of corrosion-resistant and compatible material such as cadmium or zinc plated carbon steel, stainless steel or aluminum, to prevent any galvanic action (electrolytic corrosion). Standard gaskets shall be extruded from dense Neoprene, EPDM, or other equal material. Gasket profiles, for dry-dry, outside-flush glazing method, shall be designed and sized to fit tight and properly seal glass-metal interfacing. Glass setting to be compatible with glass unit seals and/or other parts involved as required.

System Description - Framing System shall be 1750, 2000, 2050, 1300, 2300 - non-thermally broken/uninsulated (thermally broken/insulated - T), for single glass (sealed insulating glass units) METRO Series - Specifier selection - as manufactured by METRO ALUMINUM Products Ltd.

Reference dimensions of extruded profiles shall be:
1750 - 1.75" (44.5 mm) x 4.5" (114.3 mm) - 0.5" (12.7 mm) GP - NTB
2100 - 2" (50.8 mm) x 4.5" (114.3 mm) - 1.25" (37.7 mm) GP - TB
2050 - 2" (50.8 mm) x 4.5" (114.3 mm) - 1.25" (37.7 mm) GP - TB

1300 - 1.75" (44.5 mm) x 3.25" (82.6 mm) - 0.5" (12.7 mm)

GP - NTB

2300 - 2" (50.8 mm) x 3.25" (82.6 mm) - 1.25" (37.7 mm) GP - NTB

2300T - 2" (50.8 mm) x 3.25" (82.6 mm) - 1.25" (37.7 mm) GP - TB

Glass retention, as for dry-flush glazing method, shall be achieved by 3-side fixed pockets and a sill glazing stop profile and inorganic rubber gasket. Where applicable, thermal break shall be polyurethane poured-in resin type. Whenever substitute/alternative products are considered, supporting data to be submitted ten (10) days prior to bid date to allow for valid comparison. Approval of alternates to be confirmed in advance of bid closing by addendum only.

Fabrication - Extruded profiles shall be accurately fabricated and assembled to provide tight fit hairline joints only. Corner joinery shall utilize concealed assembly screws or spigots. Parts involved shall be fastened by means of anticorrosive steel screws to allow for permanent true and square set of frame elements. Frame assemblies shall be free of warp. Uniformly compressed glazing gaskets shall secure glass in place. No exposed fasteners are permitted.

Finish - All exposed surfaces shall be finished as specified. The finish, as per AAM designation, shall be (Specifier's selection):

Standard clear anodizing to AA - M12C22A31

Standard perma bronze to AA - M12C22A44

Standard black anodized to AA - M10C21A44

Duracron acrylic enamel to AA - M12C4XR1X

Custom paint qualities and colors - Specifier's selection.

Hardware to have manufacturer's standard finish.

Part 3 - EXECUTION

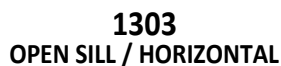
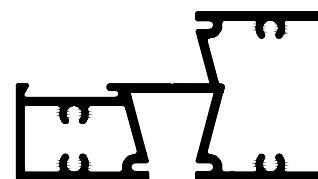
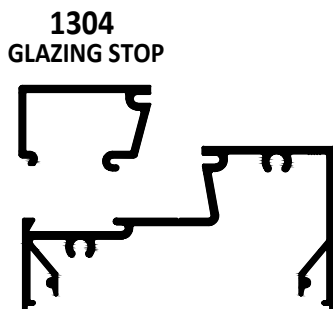
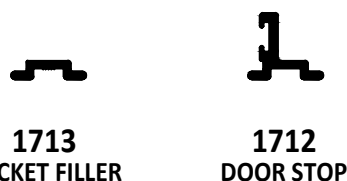
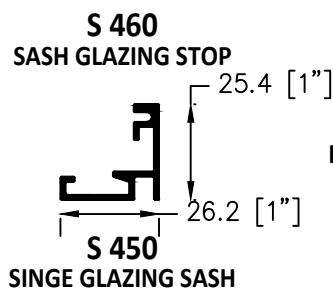
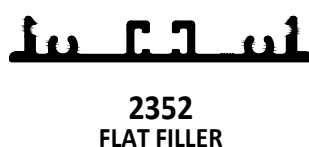
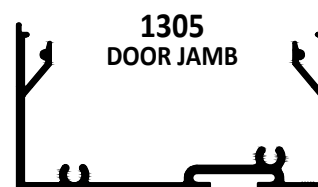
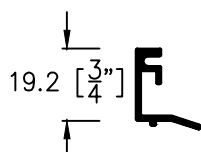
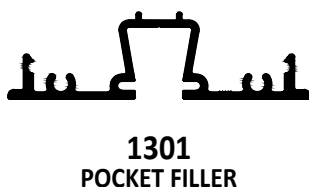
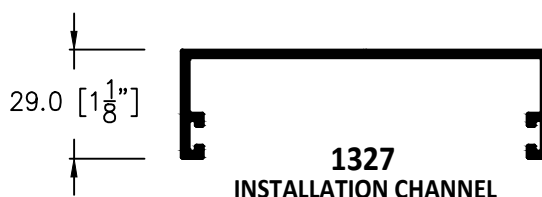
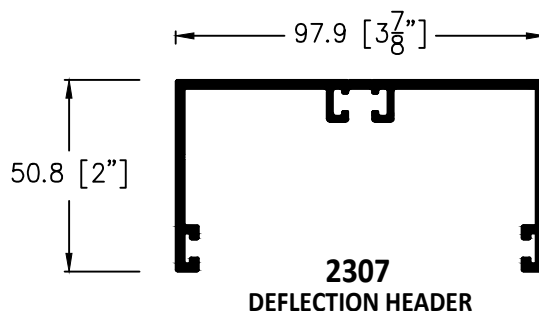
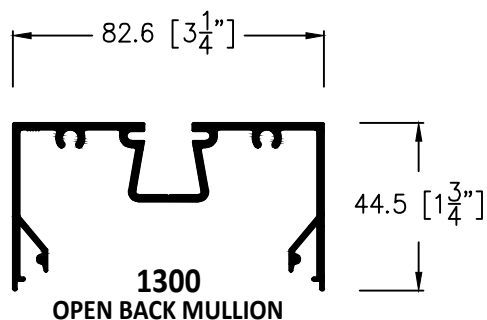
Installation - Extruded subsills, completed with integrated end dams, to be set and sealed as required. Prefabricated framing to be installed in prepared openings, at correct locations as shown on drawings, set level, plumb, square and aligned with other work in accordance with manufacturer's instructions, approved shop and erection drawings.

Anchoring shall suit perimeter conditions of rough openings and seals as required. Perimeter joints to be sealed/caulked as specified and detailed to ensure weathertight assembly.

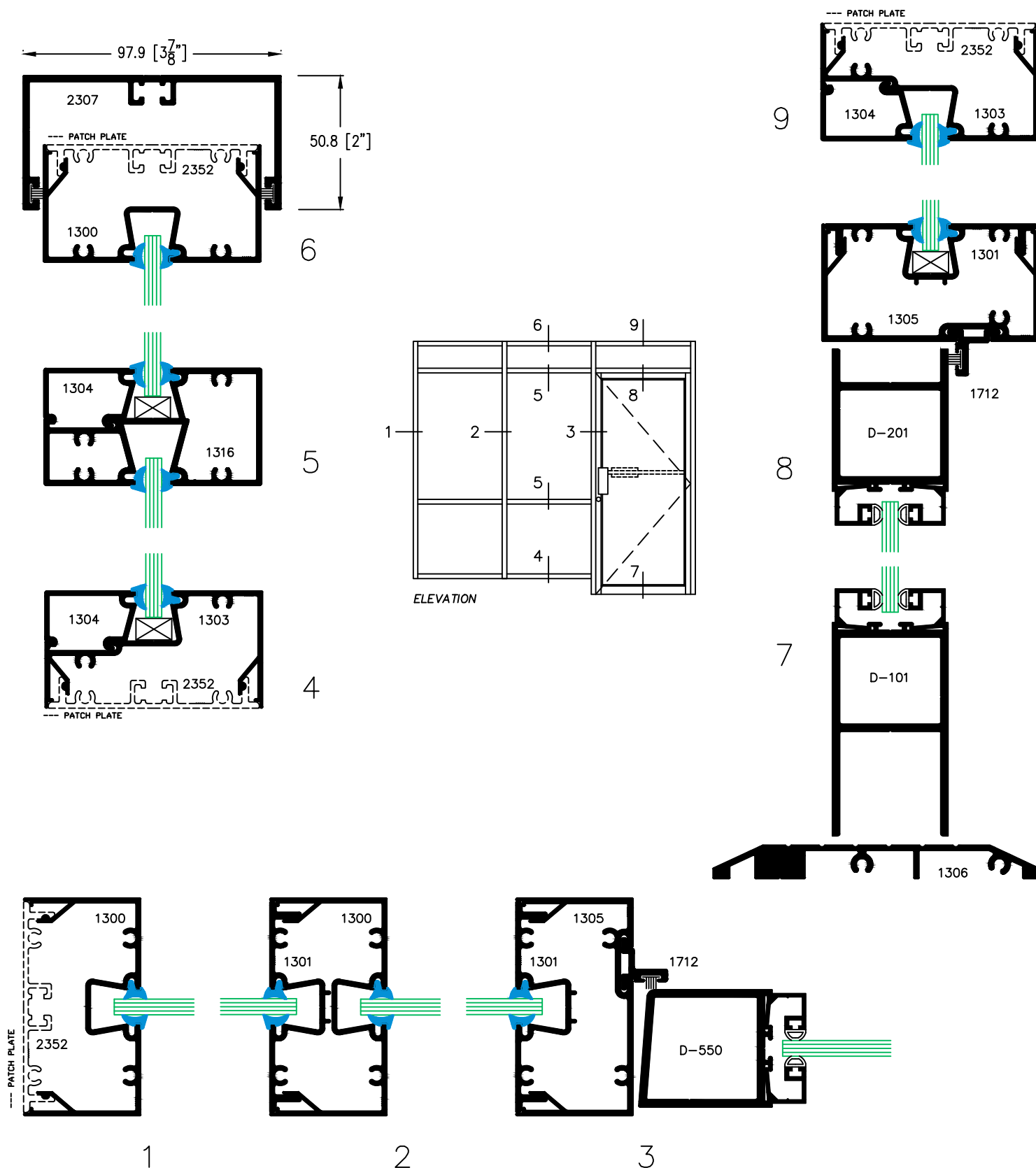
Protection and Cleaning - Work to be protected from damage during and after installation. Consult with manufacturer and installer to determine appropriate protective measures. The General Contractor shall be responsible for protection during construction and for final cleaning. After installation, aluminum work and glass to be cleaned according to instructions/manuals provided by product manufacturers and glaziers. Use appropriate cleaning materials and methods. Do not scratch or damage glass or finishes.



COMPONENTS



TYPICAL DETAILS

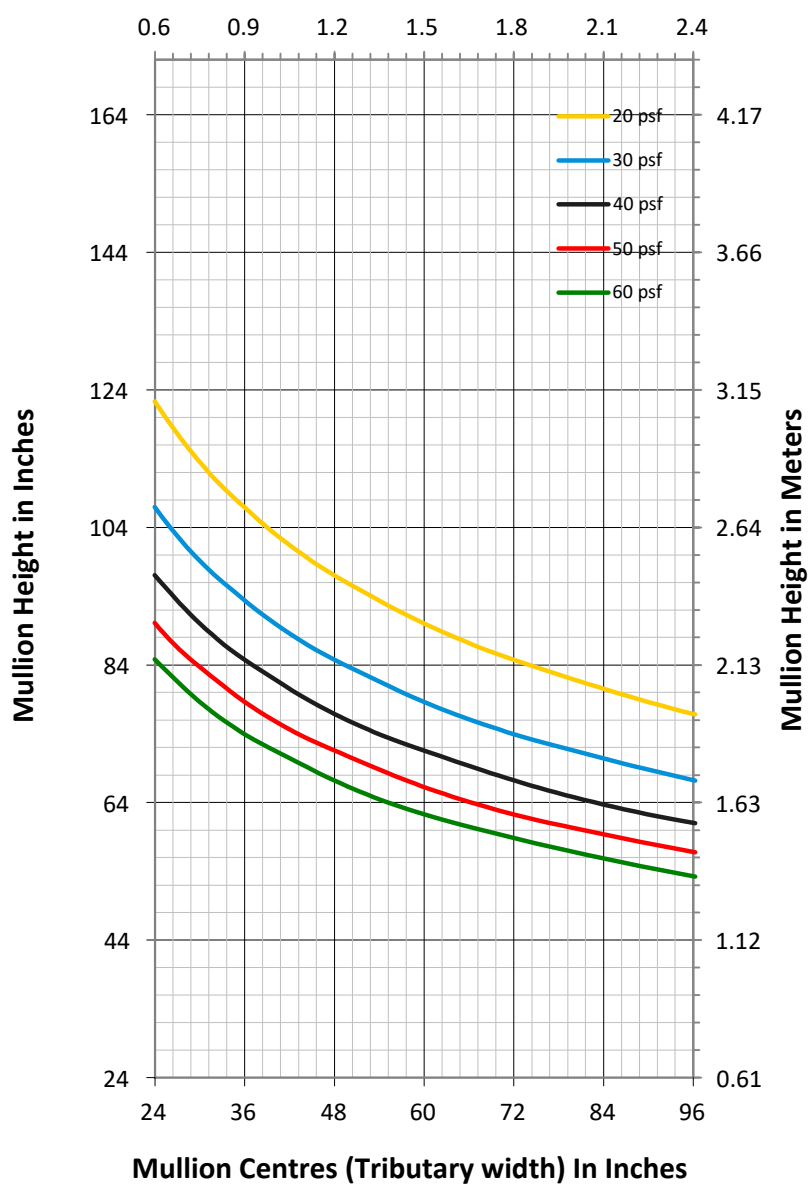


WIND LOAD CHART FOR 1300 SERIES - PART # 1300/1301

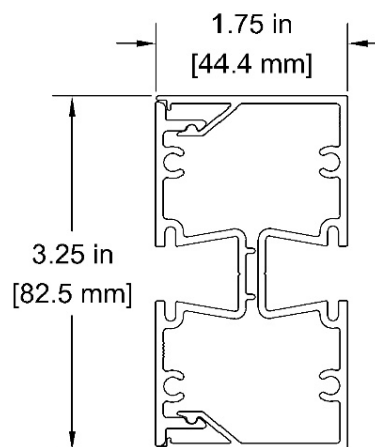
SPAN CHART

SPAN CHART IS FOR ESTIMATION ONLY.
DO NOT UTILIZE FOR DETAILED DESIGN.
CHART IS BASED ON DEFLECTION ANALYSIS
ONLY

Mullion Centres (Tributary width) In Meters



MULLION SECTION



SYSTEM PROPERTIES

Moment of Inertia, Section Modulus & Area

Moment of Inertia, Ixx	Ixx = 1.39 in ⁴
Section Modulus, Sxx	Sxx = 0.81 in ³
Total Area	A = 1.22 in ²

Modulus of Elasticity

Aluminum	10,000,000 PSI
Steel	29,000,000 PSI

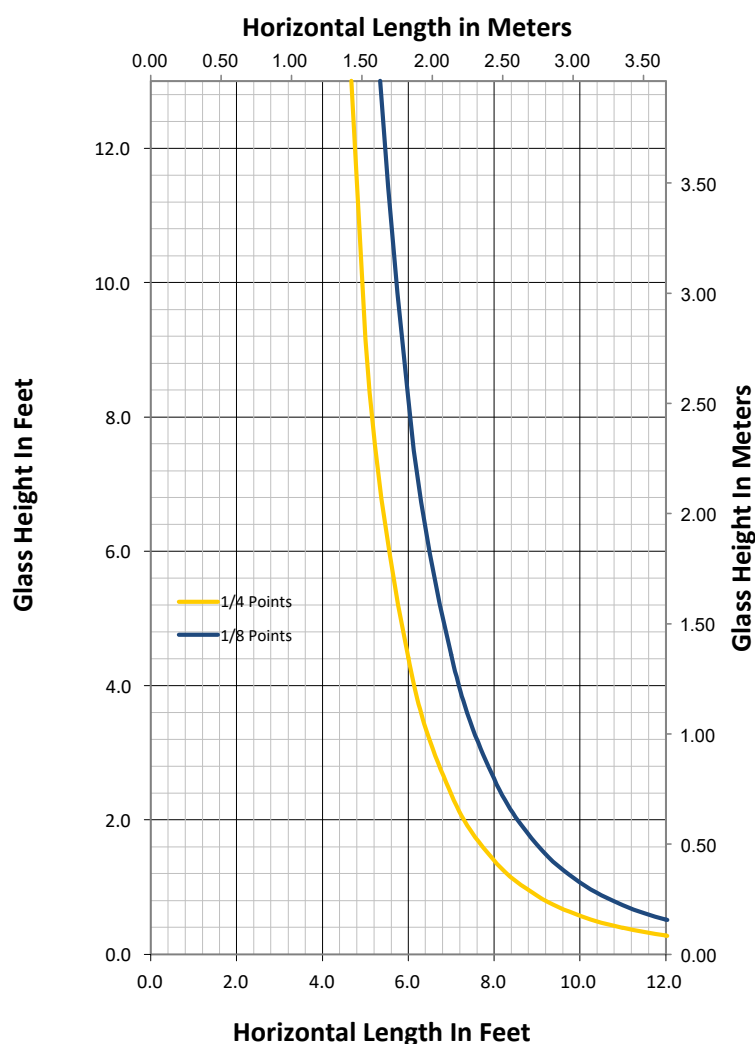
GENERAL NOTES

1. Deflection Limit: L/175 up to 13.5ft, L/240 + 0.25" over 13.5ft
2. Assume horizontal members provide lateral support
3. Steel moment of inertia converted to polyester, vinyl or 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 2020).

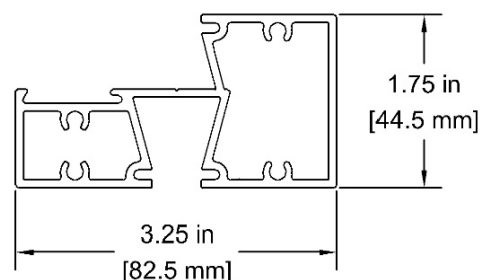
DEAD LOAD CHART FOR 1300 SERIES - PART # 1316

SPAN CHART

SPAN CHART IS FOR ESTIMATION ONLY.
DO NOT UTILIZE FOR DETAILED DESIGN.
CHART IS BASED ON DEFLECTION ANALYSIS
ONLY



MULLION SECTION



SYSTEM PROPERTIES

Moment of Inertia, Section Modulus & Area

Moment of Inertia, I_{yy}	$I_{yy} = 0.34 \text{ in}^4$
Section Modulus, S_{yy}	$S_{yy} = 0.33 \text{ in}^3$
Total Area	$A = 1.05 \text{ in}^2$

Modulus of Elasticity

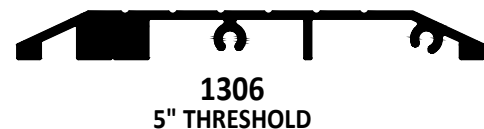
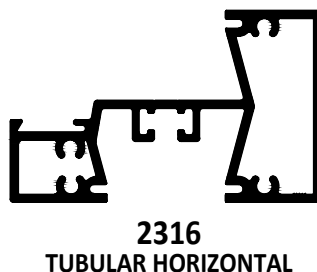
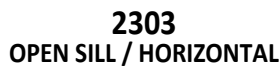
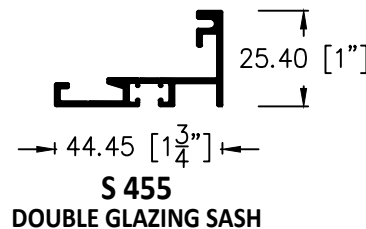
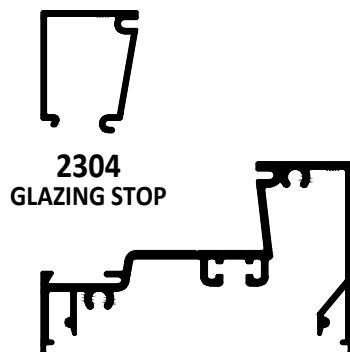
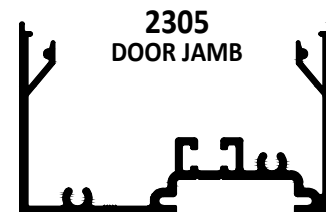
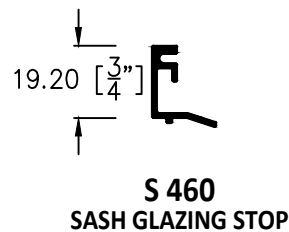
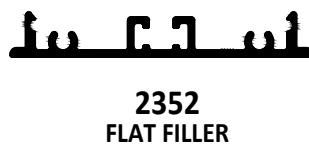
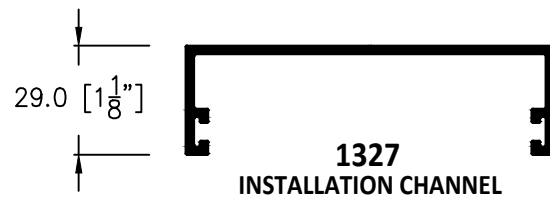
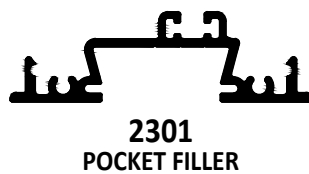
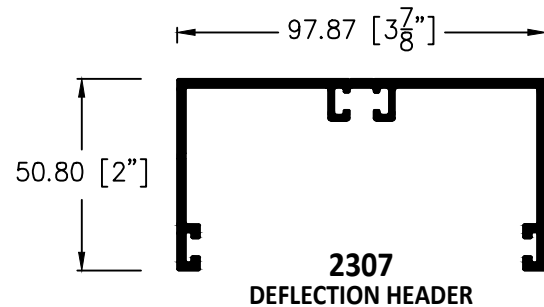
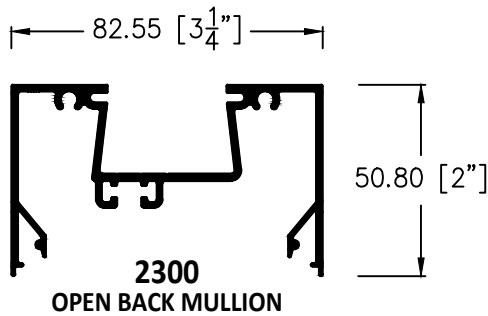
Aluminum	10,000,000 PSI
Steel	29,000,000 PSI

GENERAL NOTES

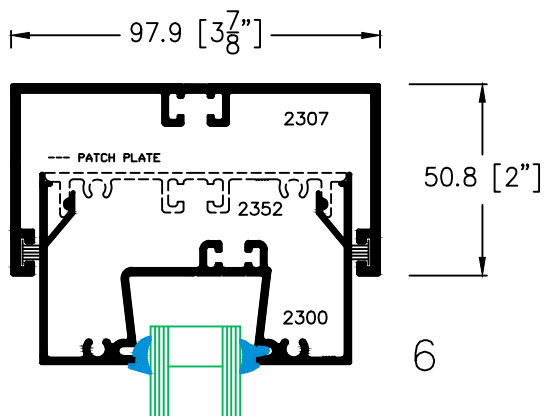
1. Deflection Limit: 0.125" (3.2mm).
2. Charts are calculated assuming 6mm single pane glass.
3. Calculations are based on the position of the setting blocks being placed at 1/4 or 1/8 points.



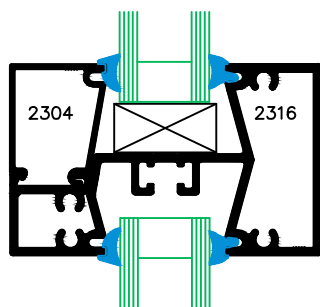
COMPONENTS



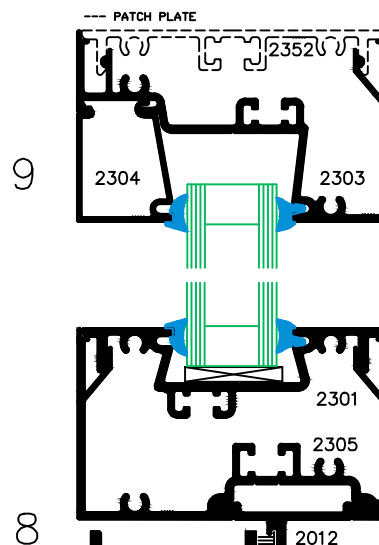
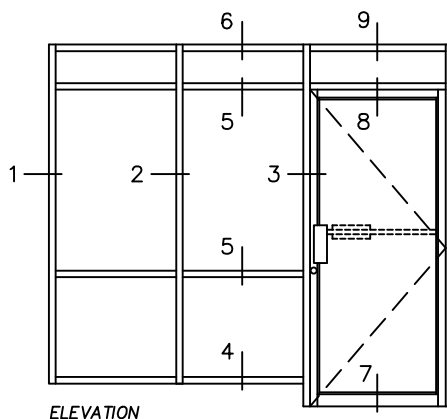
TYPICAL DETAILS



6

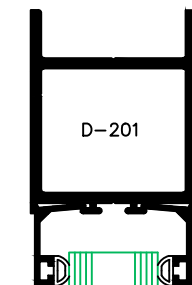
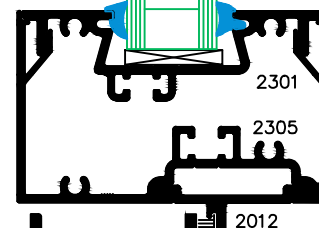


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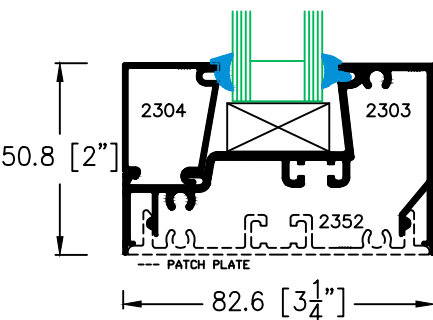
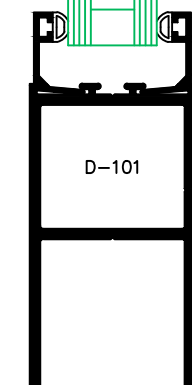


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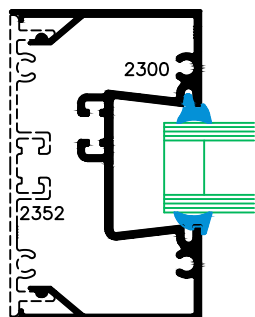
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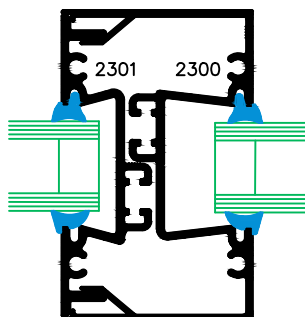
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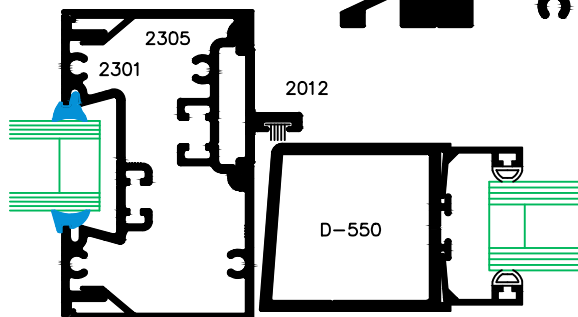
4



1



2



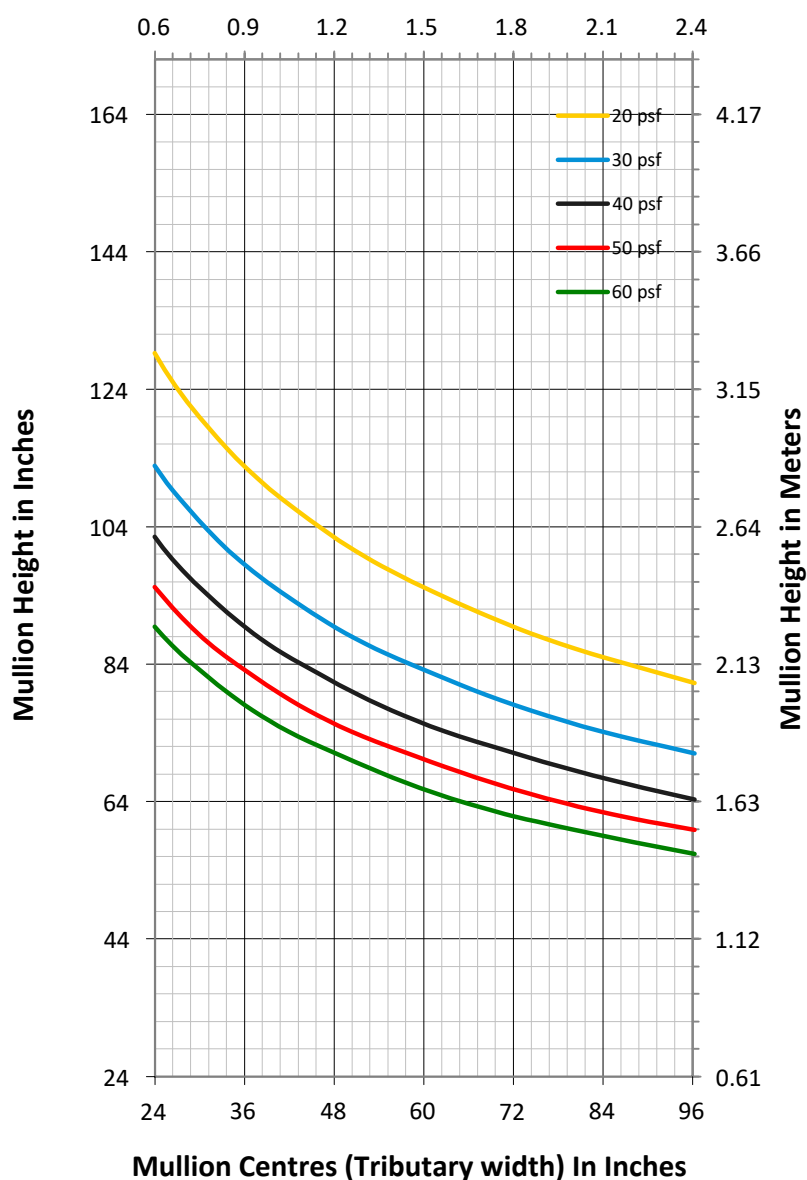
3

WIND LOAD CHART FOR 2300 SERIES - PART # 2300/2301

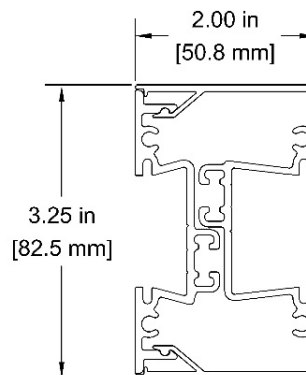
SPAN CHART

SPAN CHART IS FOR ESTIMATION ONLY.
DO NOT UTILIZE FOR DETAILED DESIGN.
CHART IS BASED ON DEFLECTION ANALYSIS
ONLY

Mullion Centres (Tributary width) In Meters



MULLION SECTION



SYSTEM PROPERTIES

Moment of Inertia, Section Modulus & Area

Moment of Inertia, I_{xx}	$I_{xx} = 1.64 \text{ in}^4$
Section Modulus, S_{xx}	$S_{xx} = 1.01 \text{ in}^3$
Total Area	$A = 1.43 \text{ in}^2$

Modulus of Elasticity

Aluminum	10,000,000 PSI
Steel	29,000,000 PSI

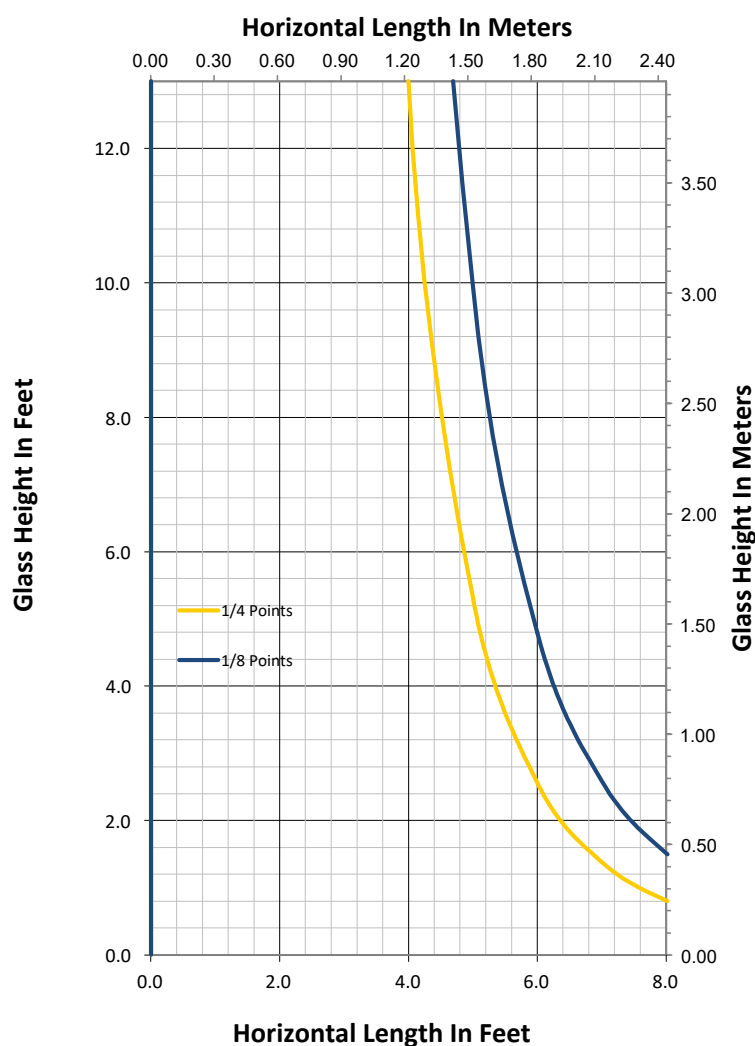
GENERAL NOTES

1. Deflection Limit: $L/175$ up to 13.5ft, $L/240 + 0.25"$ over 13.5ft
2. Assume horizontal members provide lateral support
3. Steel moment of inertia converted to polyester, vinyl or 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 $p_{net} = 40 \text{ psf}$, utilize 30 psf on this chart ($0.75 \times 40 = 30$). (Based on NBCC 2020).

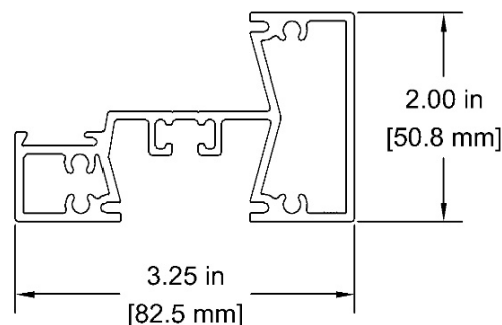
DEAD LOAD CHART FOR 2300 SERIES - PART # 2316

SPAN CHART

SPAN CHART IS FOR ESTIMATION ONLY.
DO NOT UTILIZE FOR DETAILED DESIGN.
CHART IS BASED ON DEFLECTION ANALYSIS
ONLY



MULLION SECTION



SYSTEM PROPERTIES

Moment of Inertia, Section Modulus & Area

Moment of Inertia, I_{yy}	$I_{yy} = 0.39 \text{ in}^4$
Section Modulus, S_{yy}	$S_{yy} = 0.33 \text{ in}^3$
Total Area	$A = 1.09 \text{ in}^2$

Modulus of Elasticity

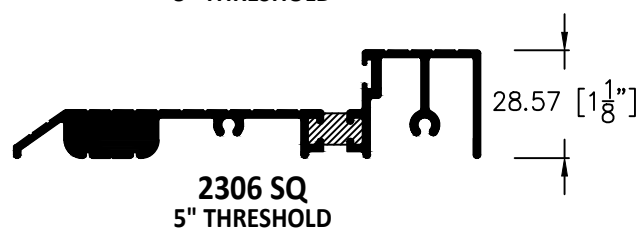
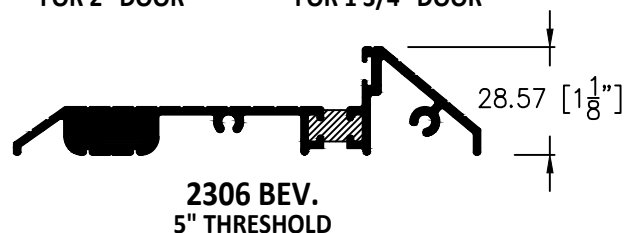
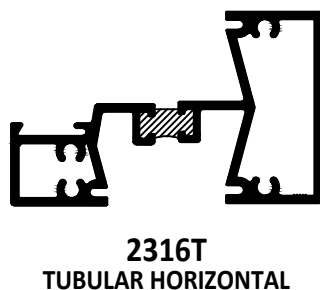
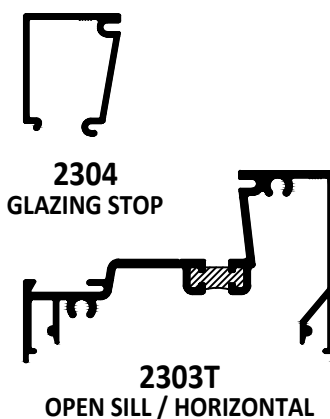
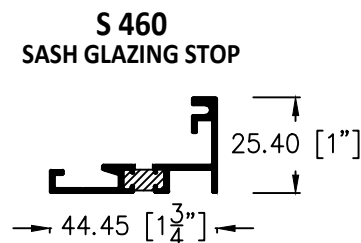
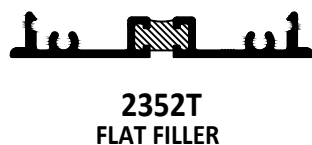
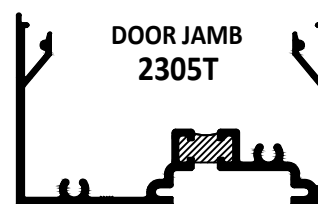
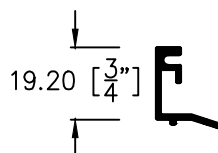
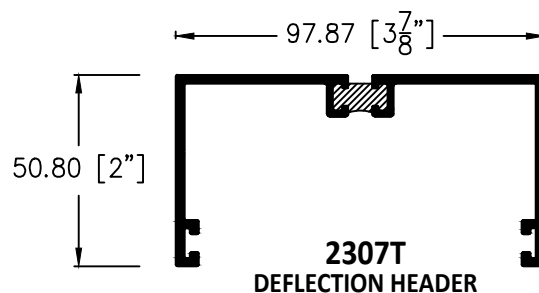
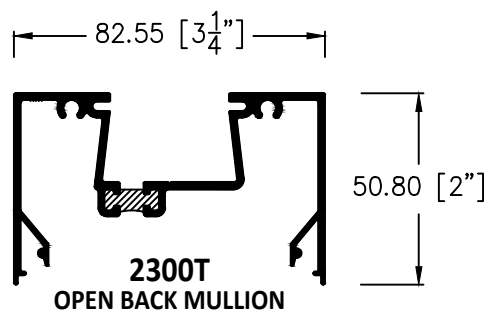
Aluminum	10,000,000 PSI
Steel	29,000,000 PSI

GENERAL NOTES

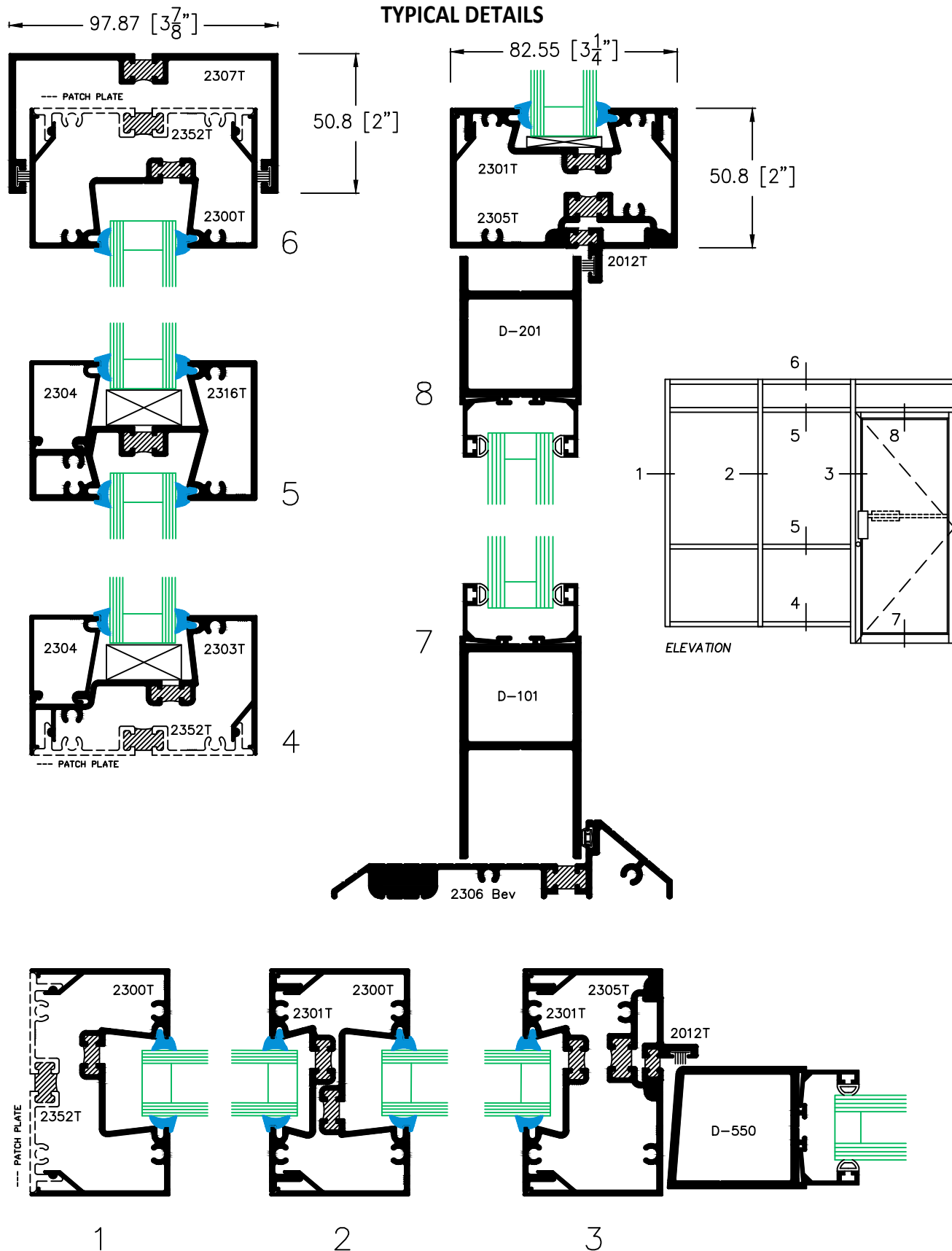
Deflection Limit: 0.125" (3.2mm).
Charts are calculated assuming a 15/16" overall sealed unit (6mm/12mm spacer/6mm).
Calculations are based on the position of the setting blocks being placed at either 1/4 or 1/8 points.



COMPONENTS



TYPICAL DETAILS

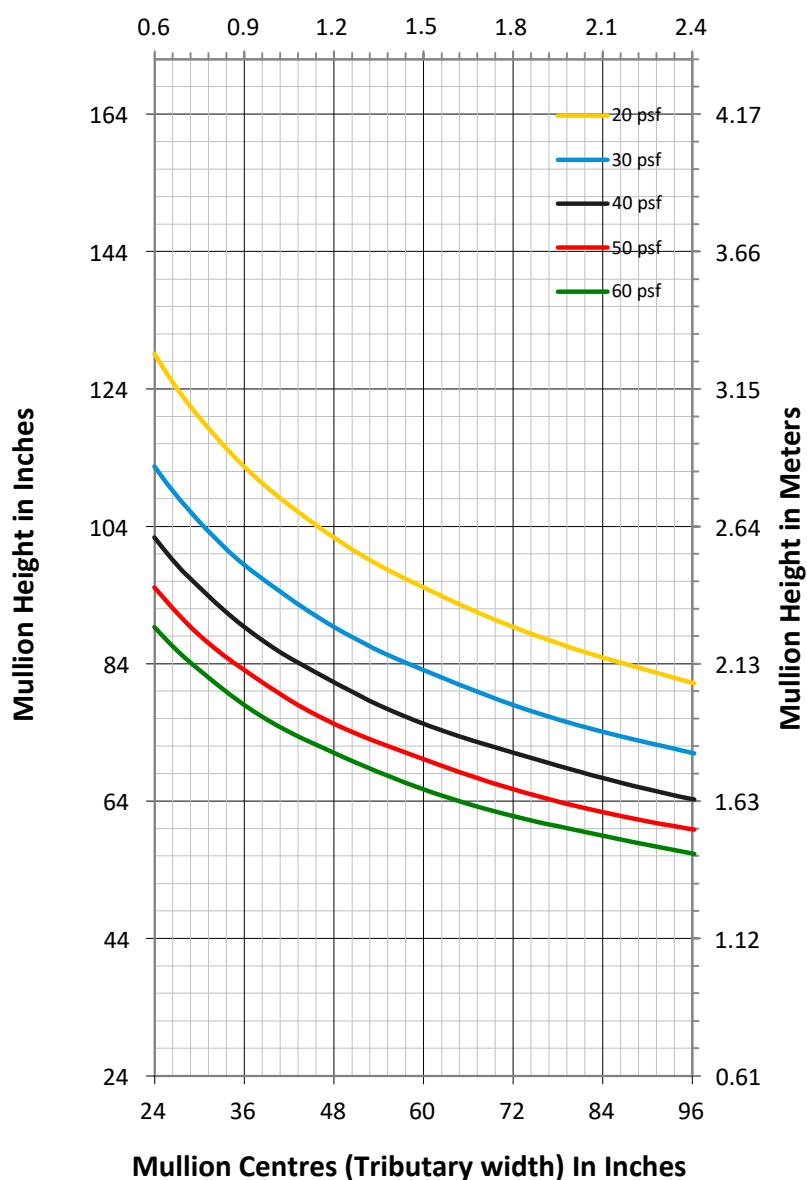


WIND LOAD CHART FOR 2300T SERIES - PART # 2300T/2301T

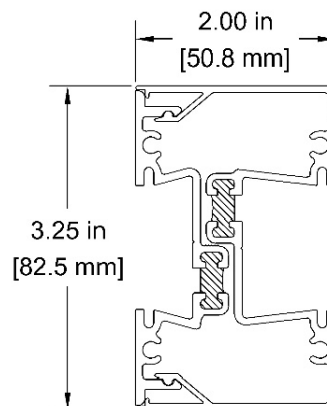
SPAN CHART

SPAN CHART IS FOR ESTIMATION ONLY.
DO NOT UTILIZE FOR DETAILED DESIGN.
CHART IS BASED ON DEFLECTION ANALYSIS
ONLY

Mullion Centres (Tributary width) In Meters



MULLION SECTION



SYSTEM PROPERTIES

Moment of Inertia, Section Modulus & Area

Moment of Inertia, I_{xx}	$I_{xx} = 1.63 \text{ in}^4$
Section Modulus, S_{xx}	$S_{xx} = 1.00 \text{ in}^3$
Total Area	$A = 1.39 \text{ in}^2$

Modulus of Elasticity

Aluminum	10,000,000 PSI
Steel	29,000,000 PSI

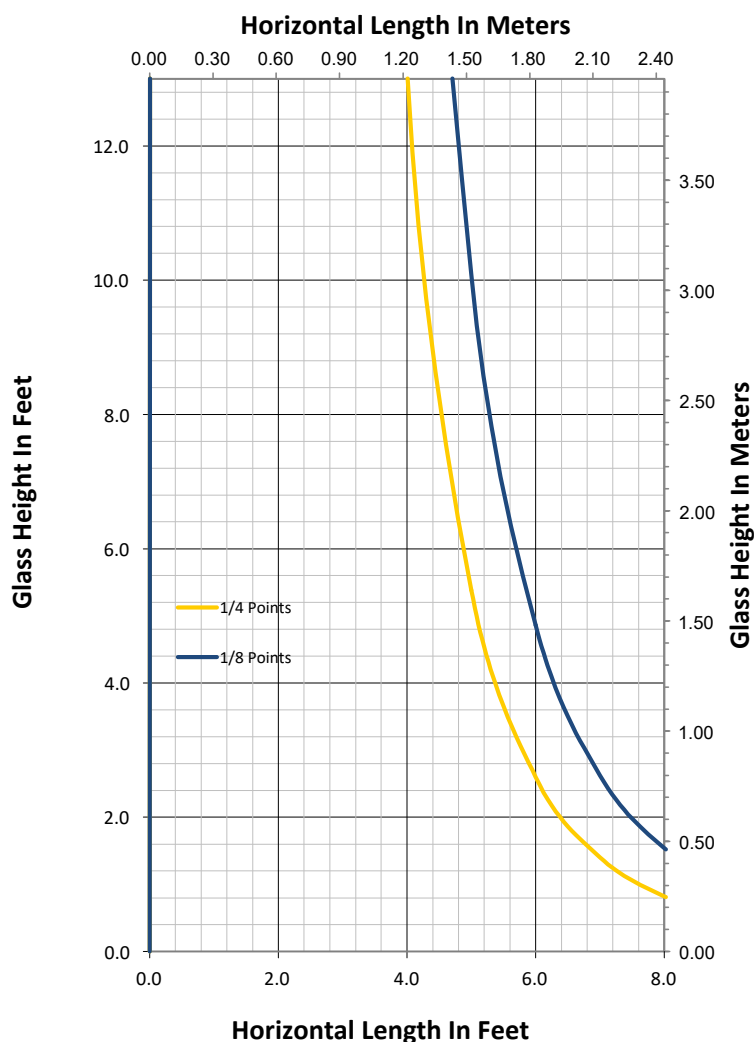
GENERAL NOTES

1. Deflection Limit: $L/175$ up to 13.5ft, $L/240 + 0.25"$ over 13.5ft
2. Assume horizontal members provide lateral support
3. Steel moment of inertia converted to polyester, vinyl or 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 $p_{net} = 40 \text{ psf}$, utilize 30 psf on this chart ($0.75 \times 40 = 30$). (Based on NBCC 2020).

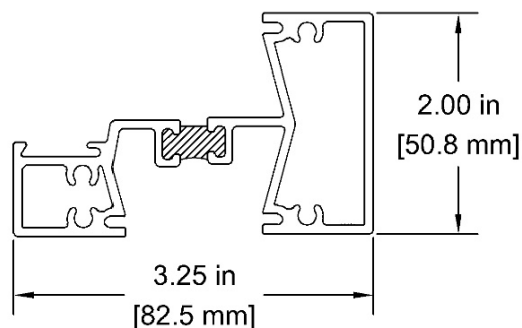
DEAD LOAD CHART FOR 2300T SERIES - PART # 2316T

SPAN CHART

SPAN CHART IS FOR ESTIMATION ONLY.
DO NOT UTILIZE FOR DETAILED DESIGN.
CHART IS BASED ON DEFLECTION ANALYSIS
ONLY



MULLION SECTION



SYSTEM PROPERTIES

Moment of Inertia, Section Modulus & Area

Moment of Inertia, I_{yy}	$I_{yy} = 0.40 \text{ in}^4$
Section Modulus, S_{yy}	$S_{yy} = 0.33 \text{ in}^3$
Total Area	$A = 1.07 \text{ in}^2$

Modulus of Elasticity

Aluminum	10,000,000 PSI
Steel	29,000,000 PSI

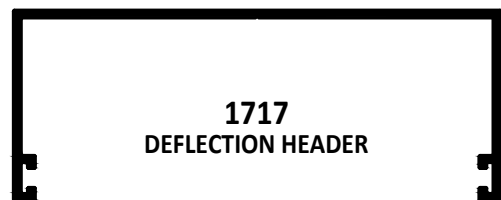
GENERAL NOTES

Deflection Limit: 0.125" (3.2mm).
Charts are calculated assuming a 15/16" overall sealed unit (6mm/12mm spacer/6mm).
Calculations are based on the position of the setting blocks being placed at either 1/4 or 1/8 points.



COMPONENTS

129.6 [5¹/₈"]



1717
DEFLECTION HEADER

50.8 [2"]



1727
INSTALLATION CHANNEL



5134
FACE GASKET



5130
BACK GASKET



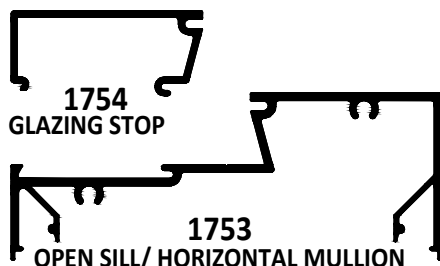
1750
OPEN BACK MULLION



1751
DEEP POCKET FILLER

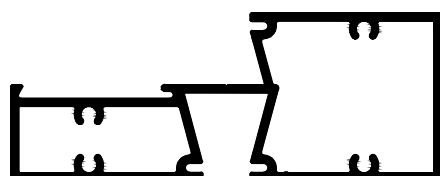


1752
FLAT POCKET FILLER



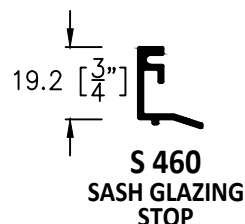
1754
GLAZING STOP

1753
OPEN SILL/ HORIZONTAL MULLION



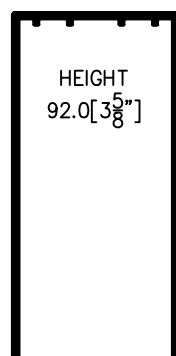
1716
TUBULAR SILL/ HORIZONTAL MULLION

29.0 [1¹/₈"]

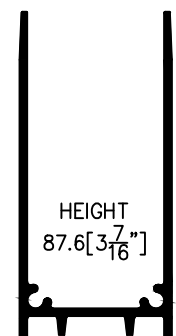


S 460
SASH GLAZING
STOP

5082
SIDELITE BASE/ UPPER



HEIGHT
92.0 [3⁵/₈"]



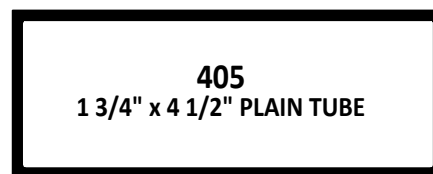
5081
SIDELITE BASE/ LOWER

HEIGHT
87.6 [3⁷/₁₆"]

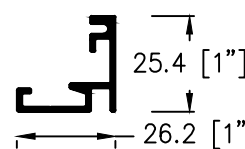


1713
1/2" POCKET FILLER

1712
DOOR STOP



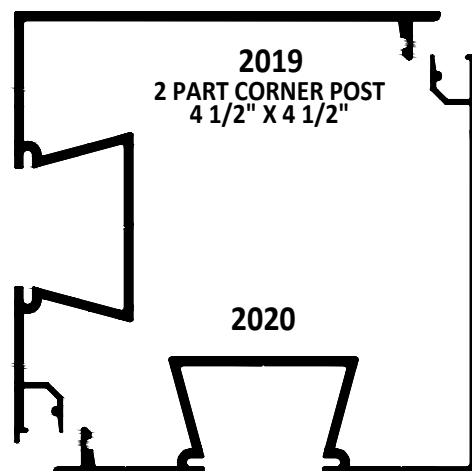
405
1 3/4" x 4 1/2" PLAIN TUBE



S 450
SINGLE GLAZING
SASH

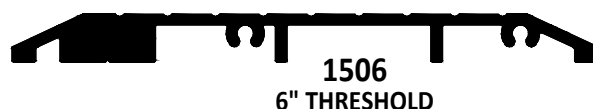


2021
SINGLE GLAZING
ADAPTER

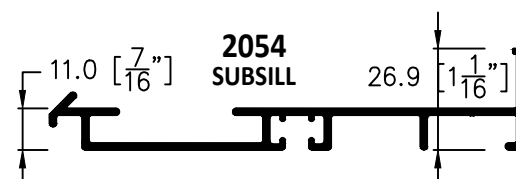


2019
2 PART CORNER POST
4 1/2" X 4 1/2"

2020



1506
6" THRESHOLD

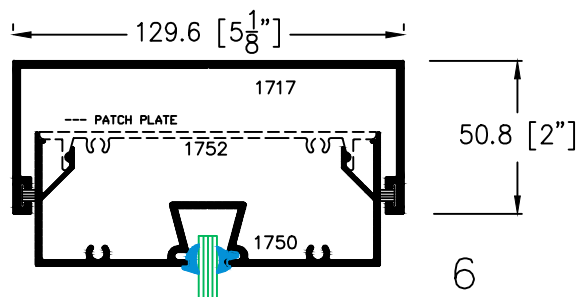


2054
SUBSILL

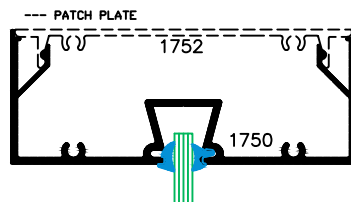
26.9 [1¹/₁₆"]

11.0 [7/₁₆"]

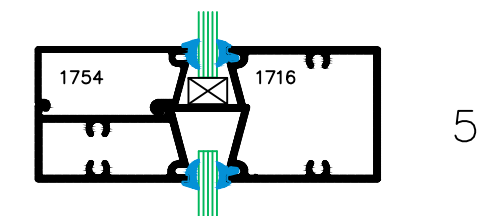
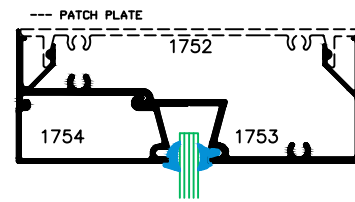
TYPICAL DETAILS



6a

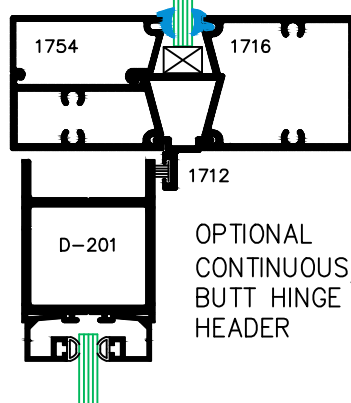


6a



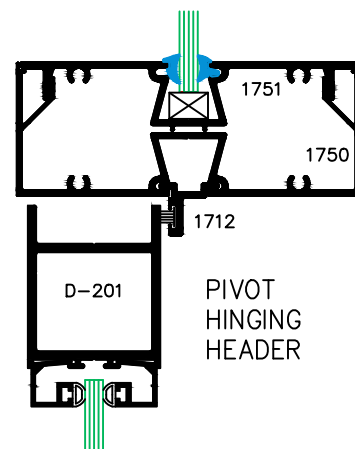
5

8

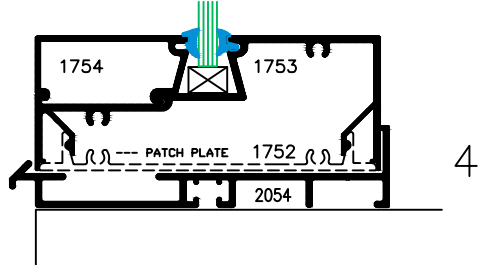


OPTIONAL
CONTINUOUS/
BUTT HINGE
HEADER

8

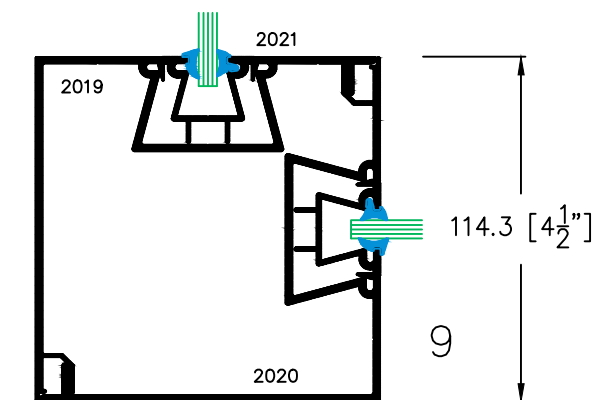
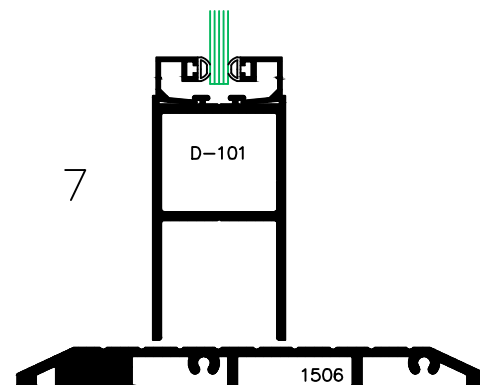


PIVOT
HINGING
HEADER

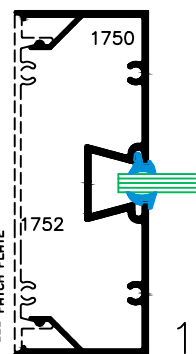


4

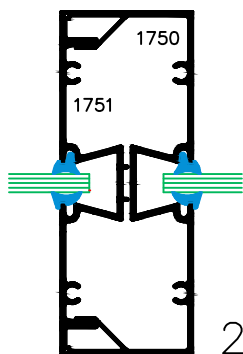
7



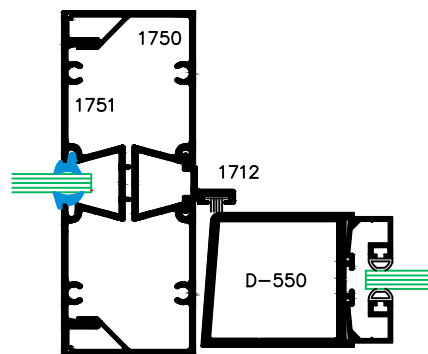
9



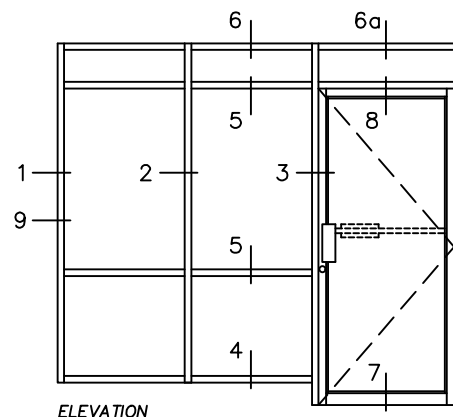
1



2



3



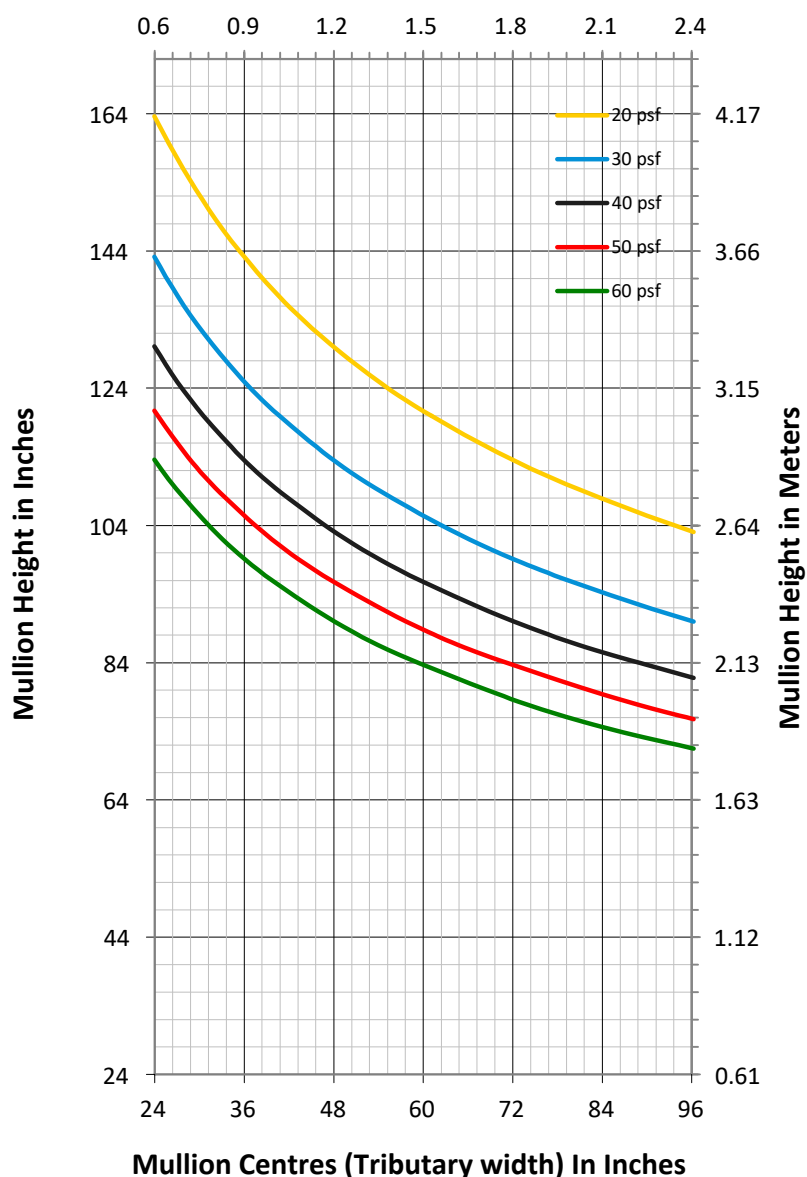
ELEVATION

WIND LOAD CHART FOR 1750 SERIES - PART # 1750/1751

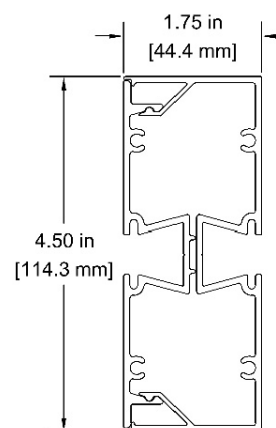
SPAN CHART

SPAN CHART IS FOR ESTIMATION ONLY.
DO NOT UTILIZE FOR DETAILED DESIGN.
CHART IS BASED ON DEFLECTION ANALYSIS
ONLY

Mullion Centres (Tributary width) In Meters



MULLION SECTION



SYSTEM PROPERTIES

Moment of Inertia, Section Modulus & Area

Moment of Inertia, Ixx	Ixx = 3.34 in ⁴
Section Modulus, Sxx	Sxx = 1.48 in ³
Total Area	A = 1.60 in ²

Modulus of Elasticity

Aluminum	10,000,000 PSI
Steel	29,000,000 PSI

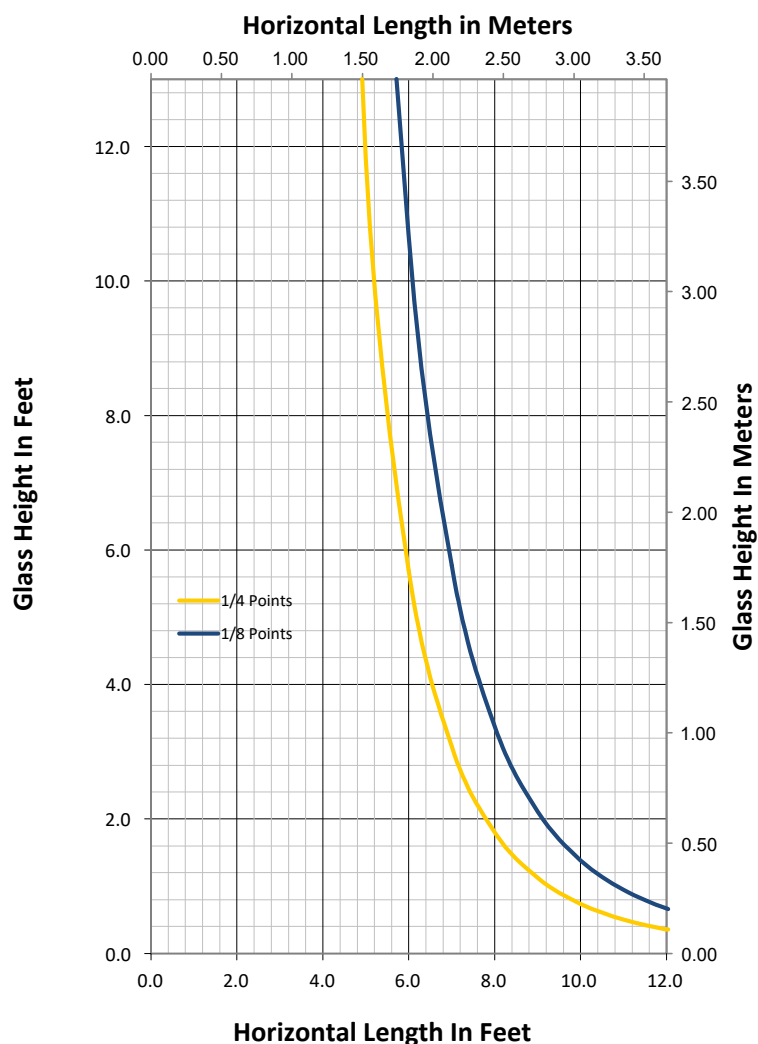
GENERAL NOTES

1. Deflection Limit: L/175 up to 13.5ft, L/240 + 0.25" over 13.5ft
2. Assume horizontal members provide lateral support
3. Steel moment of inertia converted to polyester, vinyl or 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 2020).

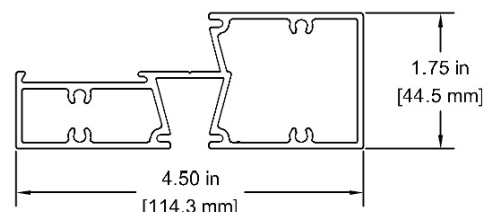
DEAD LOAD CHART FOR 1750 SERIES - PART # 1716

SPAN CHART

SPAN CHART IS FOR ESTIMATION ONLY.
DO NOT UTILIZE FOR DETAILED DESIGN.
CHART IS BASED ON DEFLECTION ANALYSIS
ONLY



MULLION SECTION



SYSTEM PROPERTIES

Moment of Inertia, Section Modulus & Area

Moment of Inertia, I_{yy}	$I_{yy} = 0.44 \text{ in}^4$
Section Modulus, S_{yy}	$S_{yy} = 0.42 \text{ in}^3$
Total Area	$A = 1.25 \text{ in}^2$

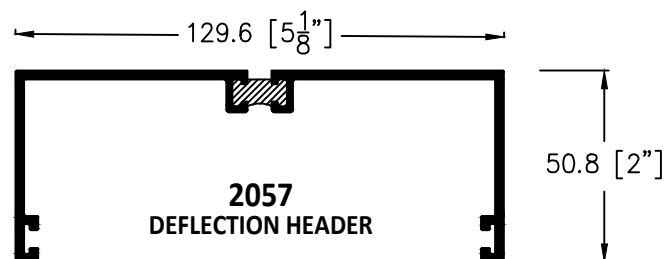
Modulus of Elasticity

Aluminum	10,000,000 PSI
Steel	29,000,000 PSI

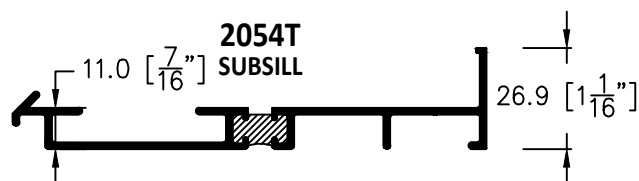
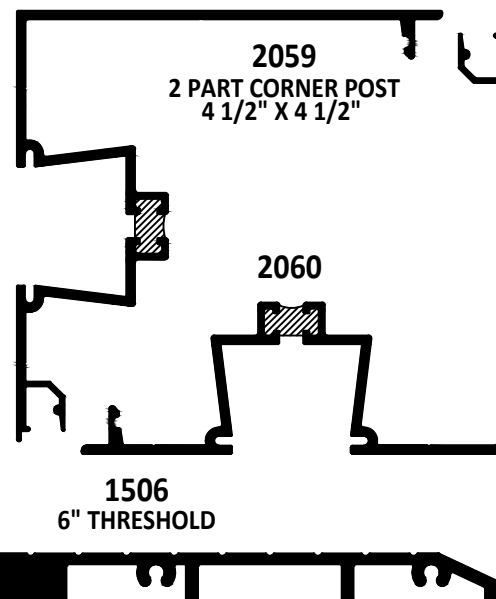
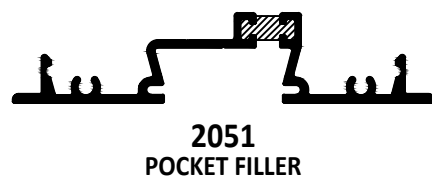
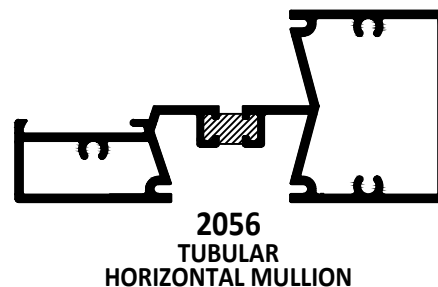
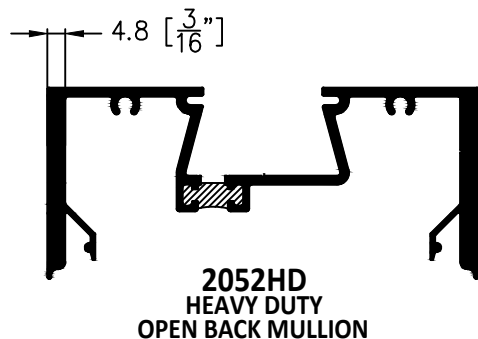
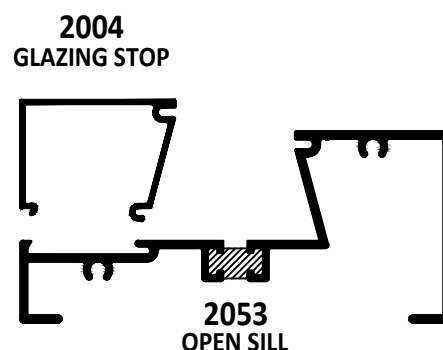
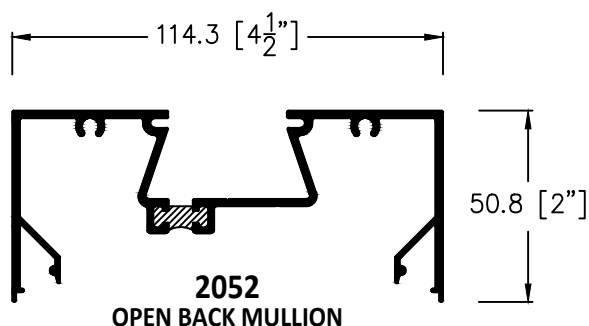
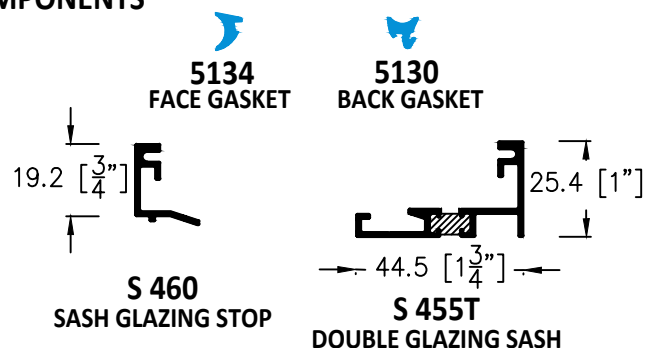
GENERAL NOTES

1. Deflection Limit: 0.125" (3.2mm).
2. Charts are calculated assuming 6mm single pane glass.
3. Calculations are based on the position of the setting blocks being placed at 1/4 or 1/8 points.

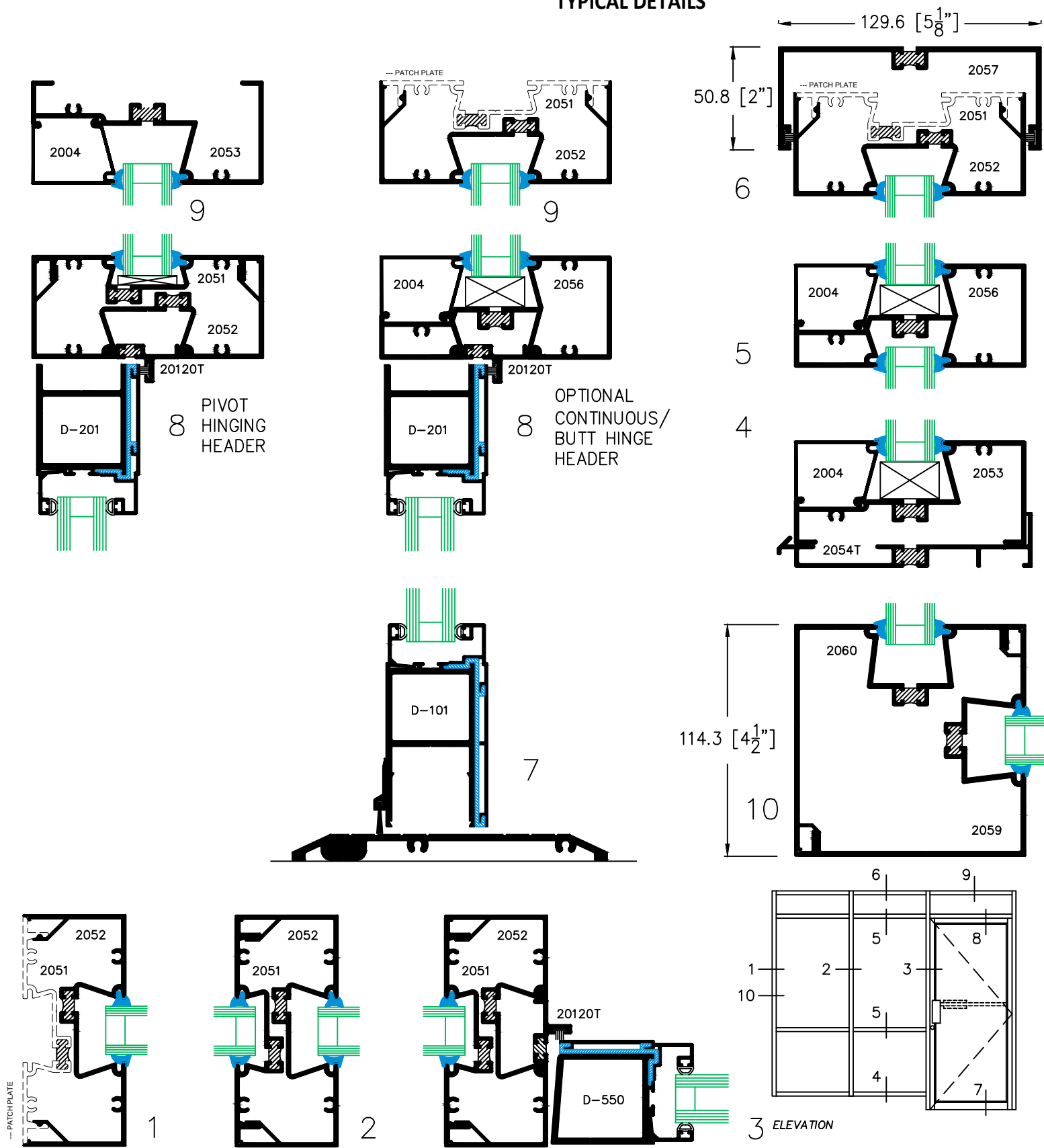




COMPONENTS



TYPICAL DETAILS

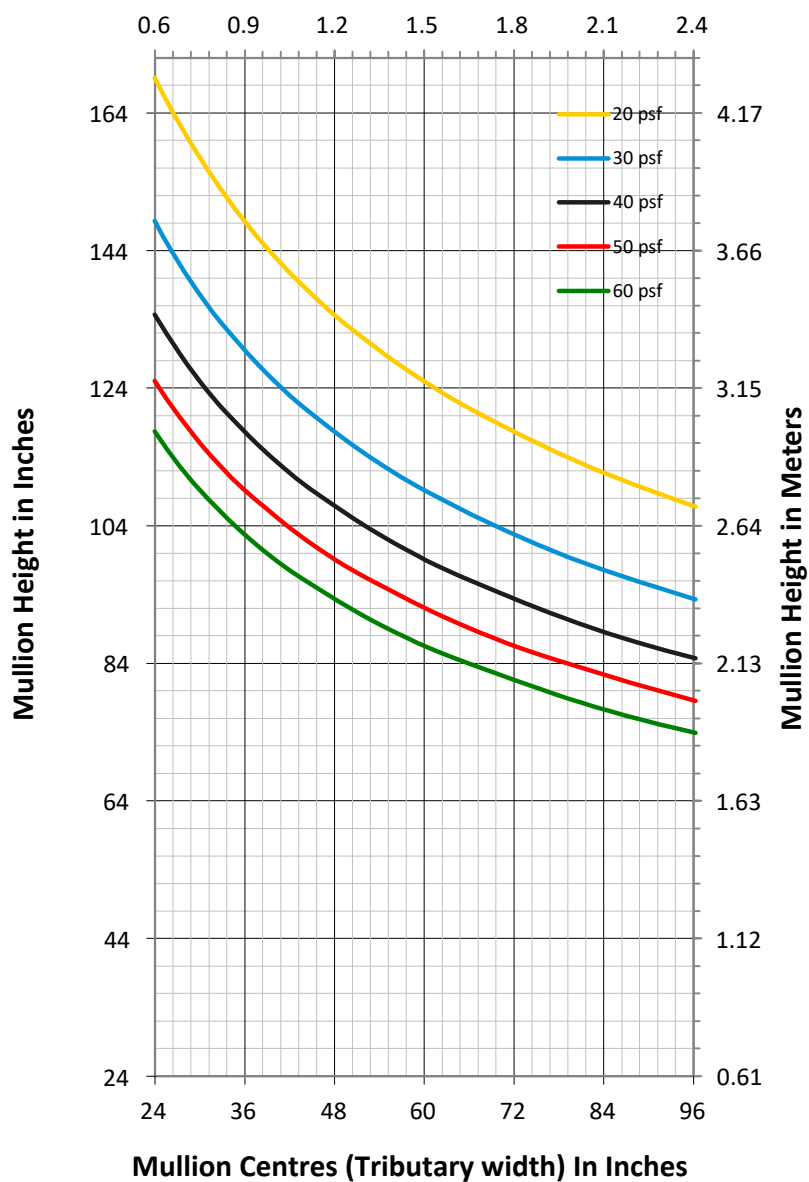


WIND LOAD CHART FOR 2050 SERIES - PART # 2052/2051

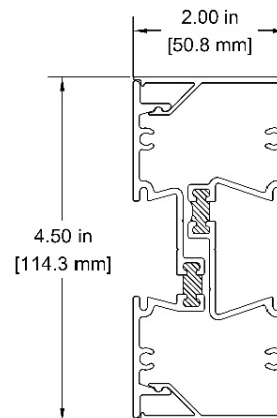
SPAN CHART

SPAN CHART IS FOR ESTIMATION ONLY.
DO NOT UTILIZE FOR DETAILED DESIGN.
CHART IS BASED ON DEFLECTION ANALYSIS
ONLY

Mullion Centres (Tributary width) In Meters



MULLION SECTION



SYSTEM PROPERTIES

Moment of Inertia, Section Modulus & Area

Moment of Inertia, Ixx	Ixx = 3.71 in ⁴
Section Modulus, Sxx	Sxx = 1.65 in ³
Total Area	A = 1.72 in ²

Modulus of Elasticity

Aluminum	10,000,000 PSI
Steel	29,000,000 PSI

GENERAL NOTES

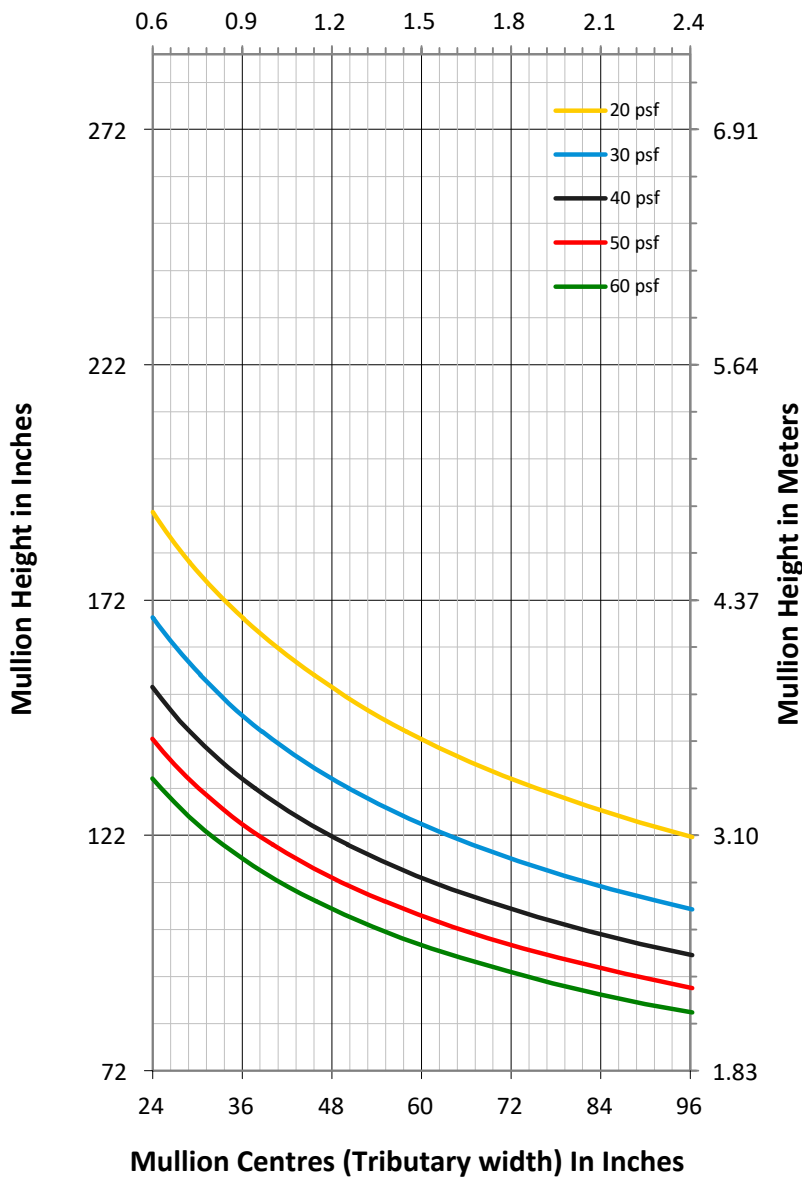
1. Deflection Limit: L/175 up to 13.5ft, L/240 + 0.25" over 13.5ft
2. Assume horizontal members provide lateral support
3. Steel moment of inertia converted to polyester, vinyl or aluminum equivalent
4. CANADIAN PROJECTS: Use SLS wind loads or modify the specified wind load by 0.75 before utilizing this chart. i.e. if project specifications require pnet = 40 psf, utilize 30 psf on this chart (0.75 x 40 = 30). (Based on NBCC 2020).

WIND LOAD CHART FOR 2050 SERIES - PART # 2052HD/2051

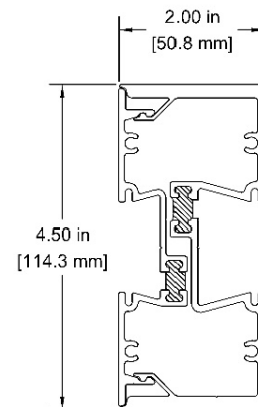
SPAN CHART

SPAN CHART IS FOR ESTIMATION ONLY.
DO NOT UTILIZE FOR DETAILED DESIGN.
CHART IS BASED ON DEFLECTION ANALYSIS
ONLY

Mullion Centres (Tributary width) In Meters



MULLION SECTION



SYSTEM PROPERTIES

Moment of Inertia, Section Modulus & Area

Moment of Inertia, I_{xx}	$I_{xx} = 5.48 \text{ in}^4$
Section Modulus, S_{xx}	$S_{xx} = 2.44 \text{ in}^3$
Total Area	$A = 2.18 \text{ in}^2$

Modulus of Elasticity

Aluminum	10,000,000 PSI
Steel	29,000,000 PSI

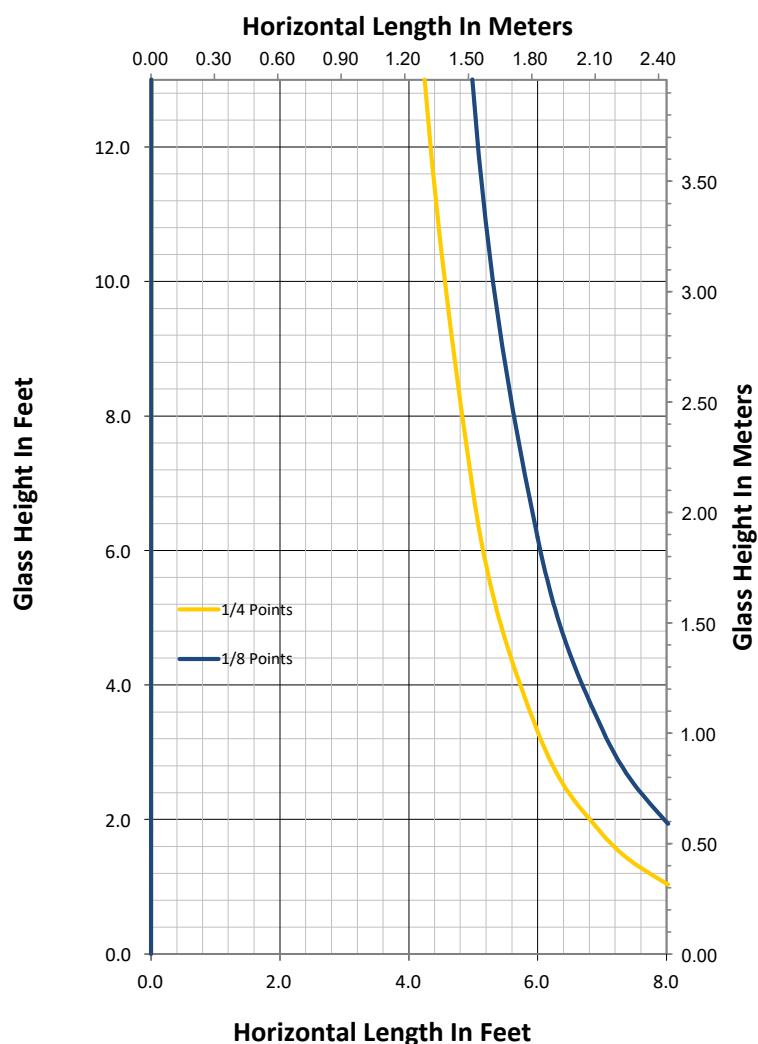
GENERAL NOTES

1. Deflection Limit: $L/175$ up to 13.5ft, $L/240 + 0.25"$ over 13.5ft
2. Assume horizontal members provide lateral support
3. Steel moment of inertia converted to polyester, vinyl or 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 $p_{net} = 40 \text{ psf}$, utilize 30 psf on this chart ($0.75 \times 40 = 30$). (Based on NBCC 2020).

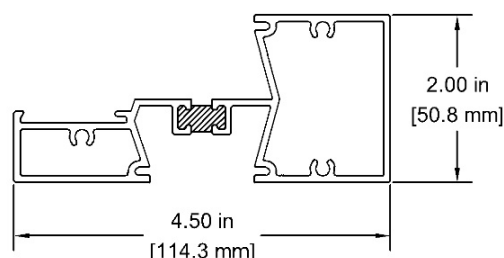
DEAD LOAD CHART FOR 2050 SERIES - PART # 2056

SPAN CHART

SPAN CHART IS FOR ESTIMATION ONLY.
DO NOT UTILIZE FOR DETAILED DESIGN.
CHART IS BASED ON DEFLECTION ANALYSIS
ONLY



MULLION SECTION



SYSTEM PROPERTIES

Moment of Inertia, Section Modulus & Area

Moment of Inertia, I_{yy}	$I_{yy} = 0.51 \text{ in}^4$
Section Modulus, S_{yy}	$S_{yy} = 0.42 \text{ in}^3$
Total Area	$A = 1.24 \text{ in}^2$

Modulus of Elasticity

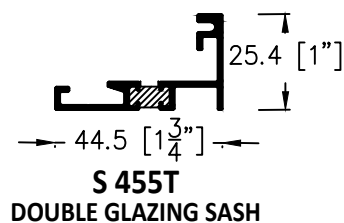
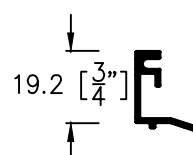
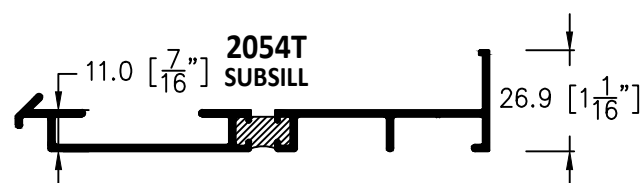
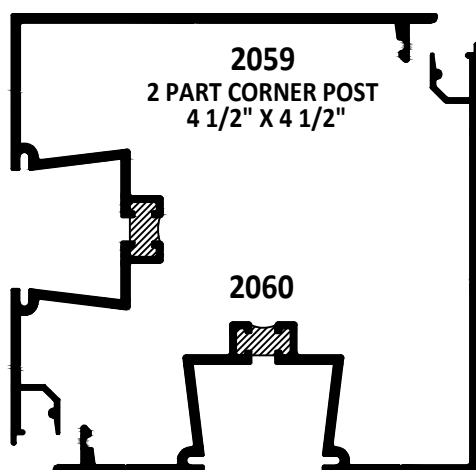
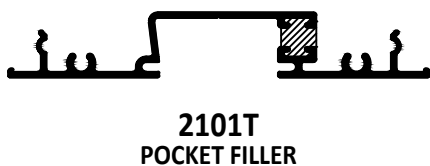
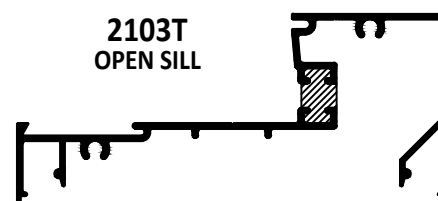
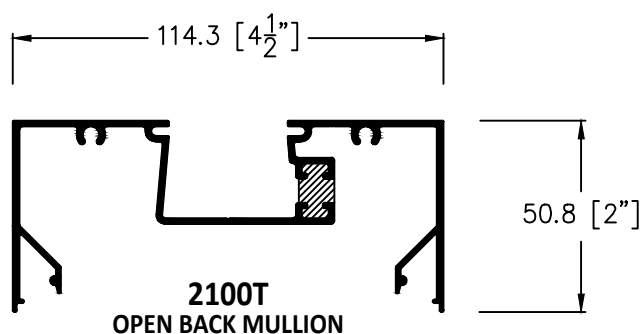
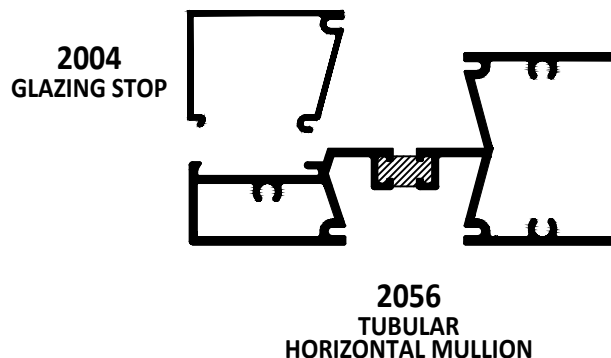
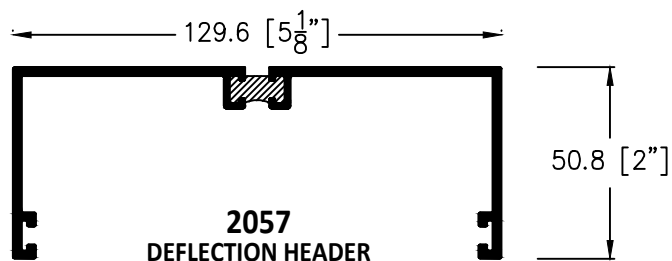
Aluminum	10,000,000 PSI
Steel	29,000,000 PSI

GENERAL NOTES

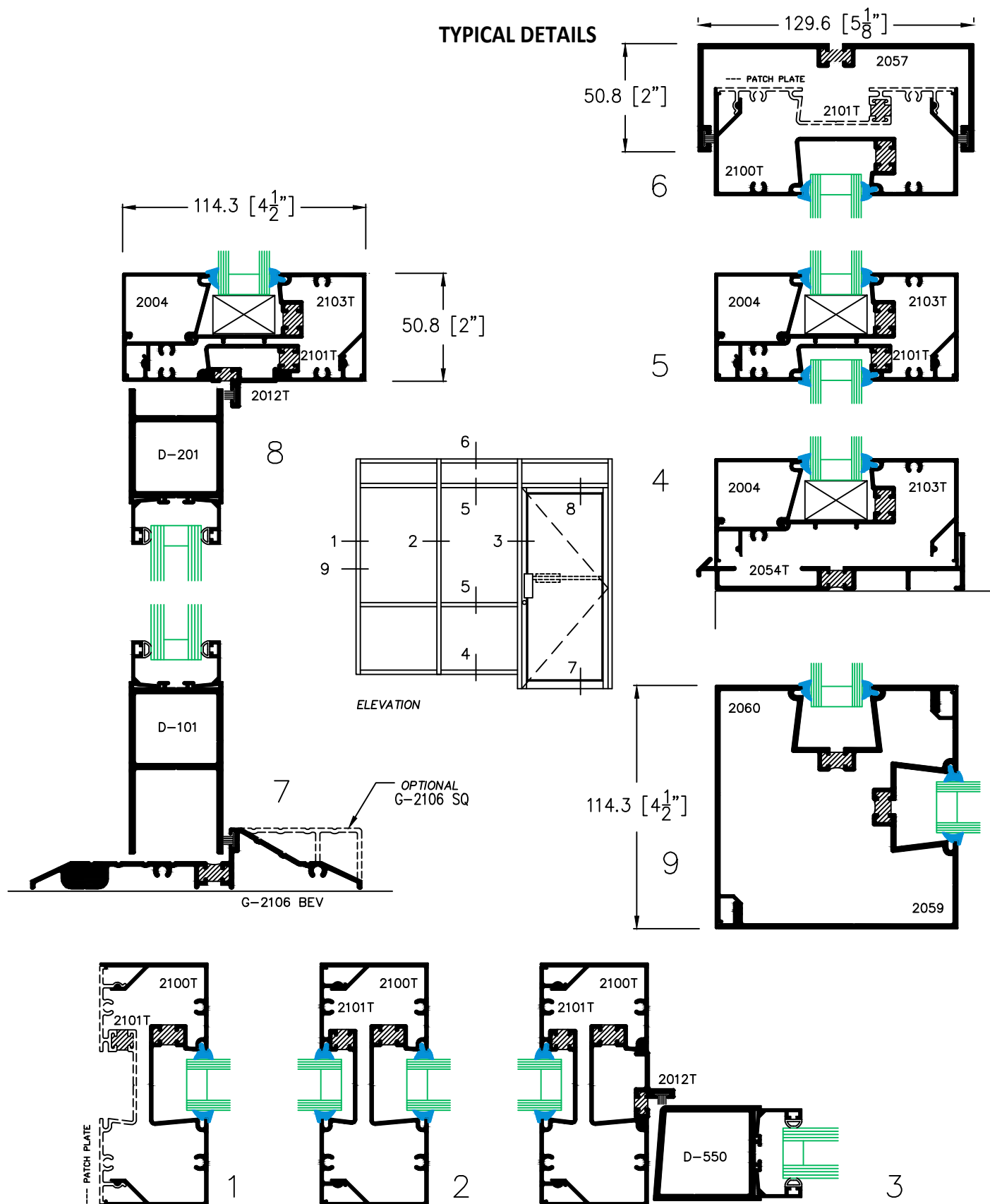
Deflection Limit: 0.125" (3.2mm).
Charts are calculated assuming a 15/16" overall sealed unit (6mm/12mm spacer/6mm).
Calculations are based on the position of the setting blocks being placed at either 1/4 or 1/8 points.



COMPONENTS



TYPICAL DETAILS

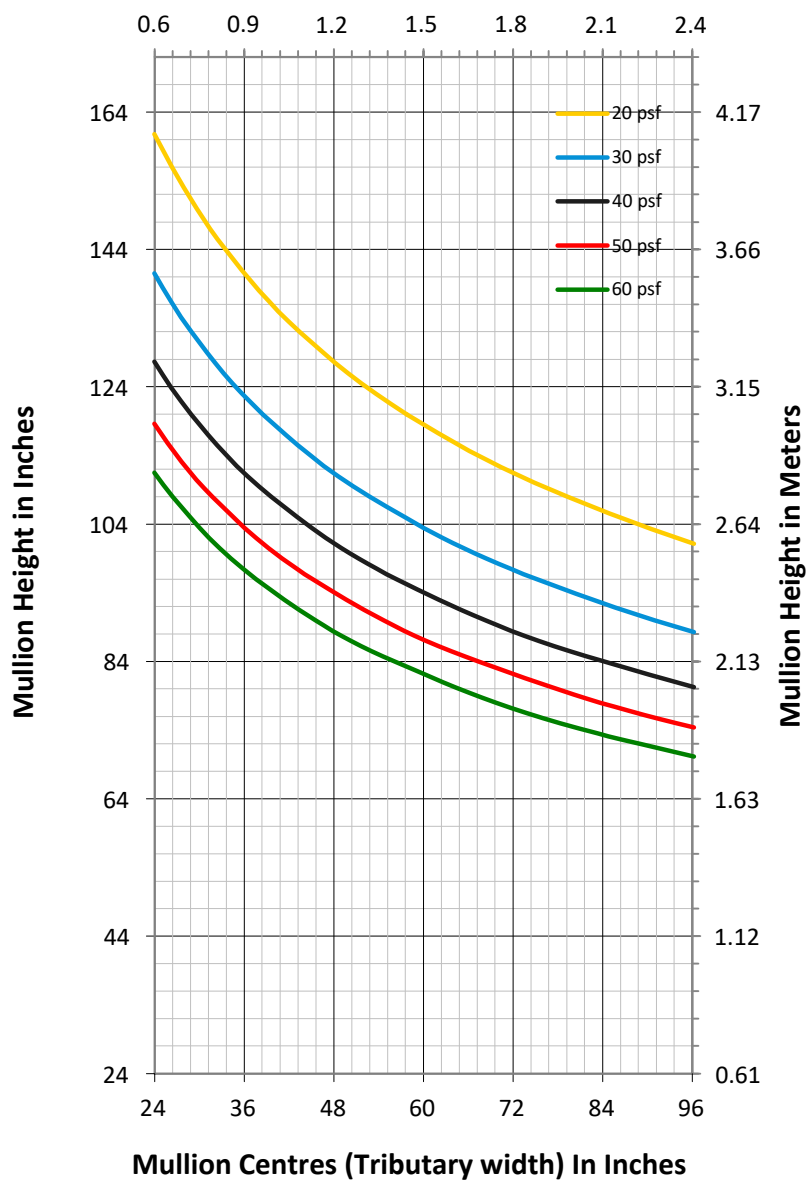


WIND LOAD CHART FOR 2100T SERIES - PART # 2100T/2101T

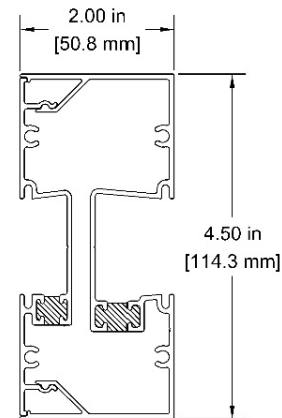
SPAN CHART

SPAN CHART IS FOR ESTIMATION ONLY.
DO NOT UTILIZE FOR DETAILED DESIGN.
CHART IS BASED ON DEFLECTION ANALYSIS
ONLY

Mullion Centres (Tributary width) In Meters



MULLION SECTION



SYSTEM PROPERTIES

Moment of Inertia, Section Modulus & Area

Moment of Inertia, Ixx	Ixx = 3.16 in4
Section Modulus, Sxx	Sxx = 1.36 in3
Total Area	A = 1.40 in2

Modulus of Elasticity

Aluminum	10,000,000 PSI
Steel	29,000,000 PSI

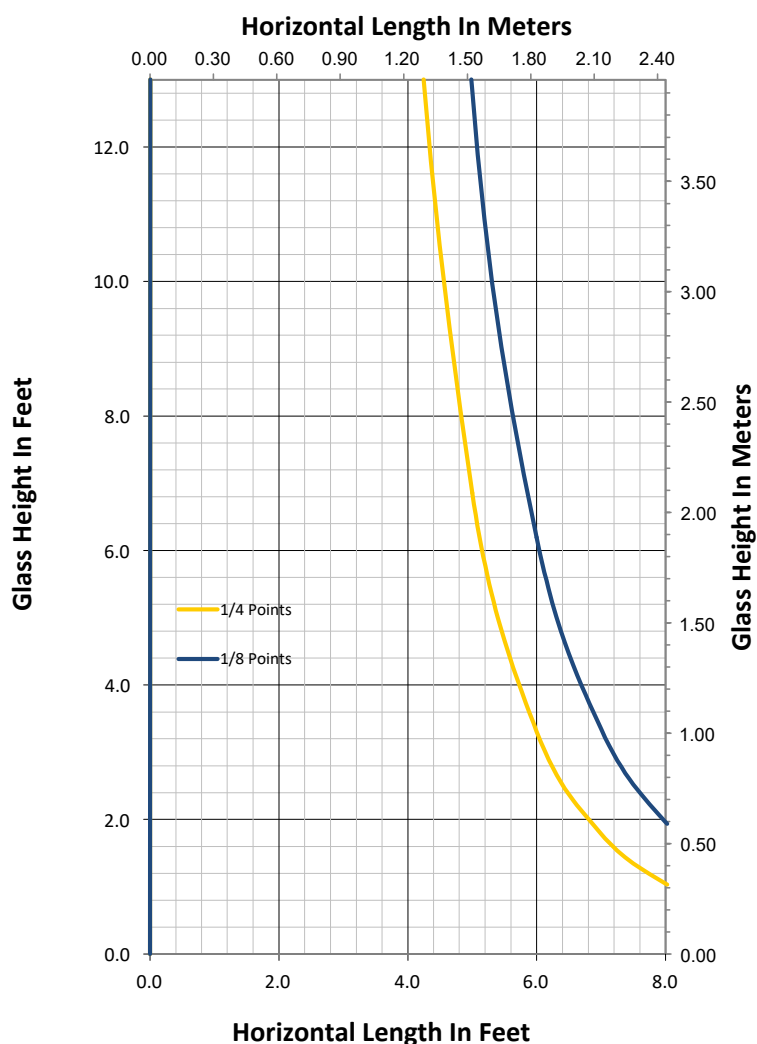
GENERAL NOTES

1. Deflection Limit: L/175 up to 13.5ft, L/240 + 0.25" over 13.5ft
2. Assume horizontal members provide lateral support
3. Steel moment of inertia converted to polyester, vinyl or 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 2020).

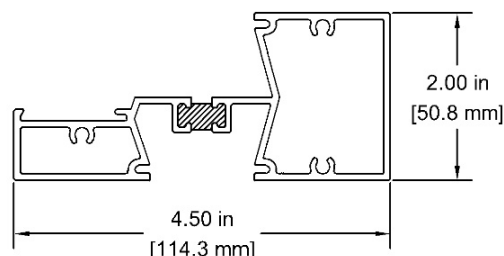
DEAD LOAD CHART FOR 2100T SERIES - PART # 2056

SPAN CHART

SPAN CHART IS FOR ESTIMATION ONLY.
DO NOT UTILIZE FOR DETAILED DESIGN.
CHART IS BASED ON DEFLECTION ANALYSIS
ONLY



MULLION SECTION



SYSTEM PROPERTIES

Moment of Inertia, Section Modulus & Area

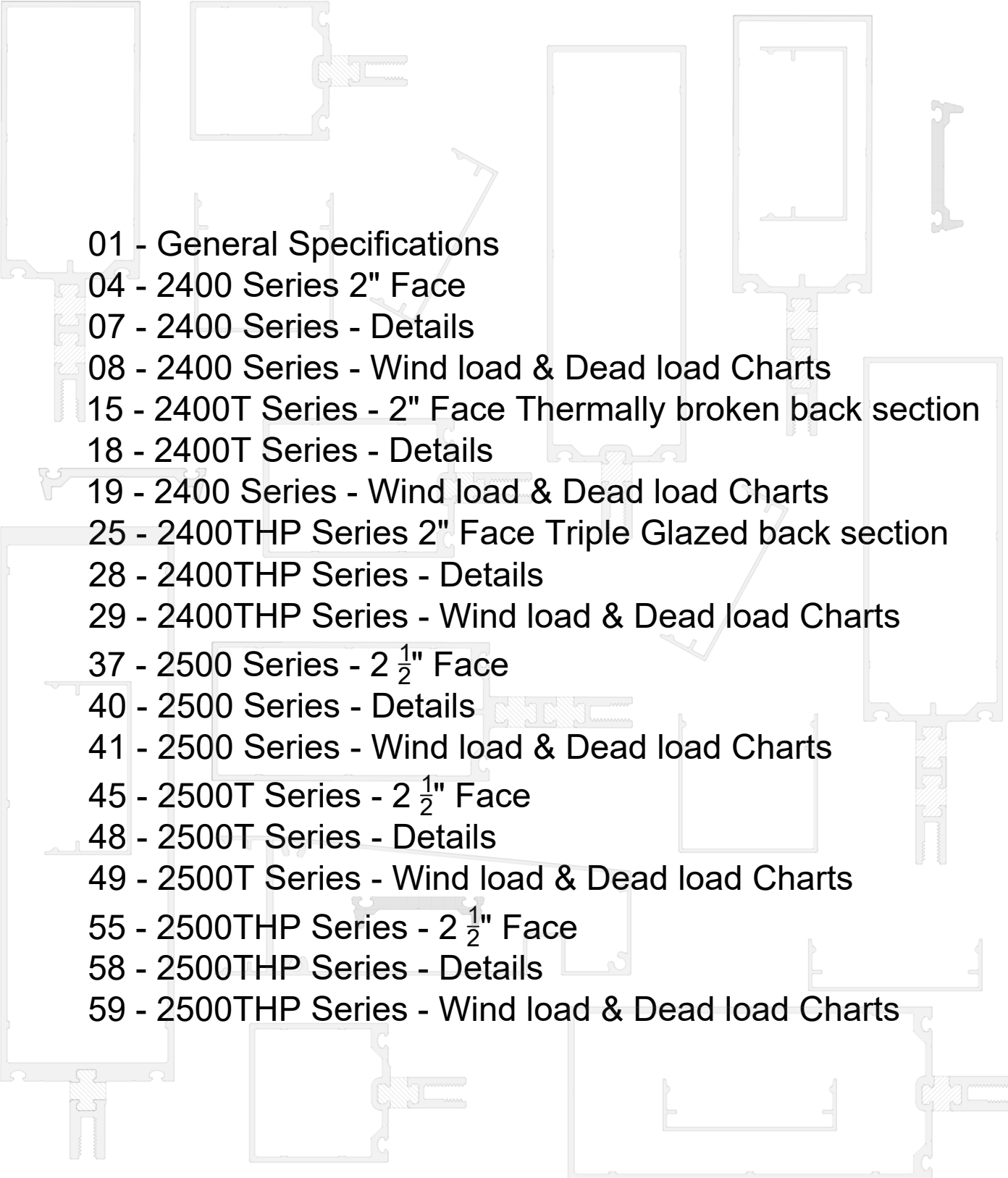
Moment of Inertia, I_{yy}	$I_{yy} = 0.51 \text{ in}^4$
Section Modulus, S_{yy}	$S_{yy} = 0.42 \text{ in}^3$
Total Area	$A = 1.24 \text{ in}^2$

Modulus of Elasticity

Aluminum	10,000,000 PSI
Steel	29,000,000 PSI

GENERAL NOTES

Deflection Limit: 0.125" (3.2mm).
Charts are calculated assuming a 15/16" overall sealed unit (6mm/12mm spacer/6mm).
Calculations are based on the position of the setting blocks being placed at either 1/4 or 1/8 points.

- 
- 01 - General Specifications
 - 04 - 2400 Series 2" Face
 - 07 - 2400 Series - Details
 - 08 - 2400 Series - Wind load & Dead load Charts
 - 15 - 2400T Series - 2" Face Thermally broken back section
 - 18 - 2400T Series - Details
 - 19 - 2400 Series - Wind load & Dead load Charts
 - 25 - 2400THP Series 2" Face Triple Glazed back section
 - 28 - 2400THP Series - Details
 - 29 - 2400THP Series - Wind load & Dead load Charts
 - 37 - 2500 Series - 2 $\frac{1}{2}$ " Face
 - 40 - 2500 Series - Details
 - 41 - 2500 Series - Wind load & Dead load Charts
 - 45 - 2500T Series - 2 $\frac{1}{2}$ " Face
 - 48 - 2500T Series - Details
 - 49 - 2500T Series - Wind load & Dead load Charts
 - 55 - 2500THP Series - 2 $\frac{1}{2}$ " Face
 - 58 - 2500THP Series - Details
 - 59 - 2500THP Series - Wind load & Dead load Charts

Part 1 - GENERAL

Scope - The curtain wall framing system shall be _____ Series as manufactured by METRO ALUMINUM Products Ltd. Supply and install aluminum framing, as described on the architectural drawings and as specified herein.

Work Not Included - See: Specifier's lists of excluded items; Items furnished but not installed and/or Items installed but not furnished.

Related Work Specified Elsewhere - See: Specifier's lists and related Sections.

Design & Performance Requirements - Framing to fully comply with applicable standard specifications as typically referenced to the following performance requirements criteria: Air Tightness, Water Tightness, Wind (and other applicable) Load Resistance, Temperature Index and Energy Performance. (Specifier's selection)

Submittals - Shop Drawings & Samples - Submit all documentation and samples for review by Consultant at one time, prior to fabrication of curtain wall products.

Quality Assurance - Provide all necessary information to show that all involved products meet or exceed the requirements of these specifications.

Delivery, Storage and Handling - Deliver, store, handle, protect and schedule materials and products so as to avoid any damage. Follow recommendations of AAMA CW-10 "Care and Handling of Architectural Aluminum from Shop to Site" and others as applicable.

Part 2 - PRODUCTS

Materials - All materials to meet the applicable minimum design and specifications requirements. Any defects impairing strength, durability or appearance are not acceptable. Extruded aluminum shall be AA 6063 T6 alloy and temper - Fy = 110 MPa (16 KSI) minimum. Sufficient strength and size assembly fasteners and anchoring bolts shall be made of corrosion-resistant and compatible material such as cadmium or zinc plated carbon steel or stainless steel. Separate incompatible materials and prevent galvanic action (electrolytic corrosion). Structurally adequate anchoring metal brackets shall be anticorrosive painted. Standard gaskets, dense exterior and sponge interior, shall be extruded from Neoprene, EPDM, or other equal material as required for conventional dry-dry, outside glazing method. Gasket profile shall be designed and sized to uniformly fit tight and properly seal glass-metal interfacing. Acceptable gasket compression range to be 0.7 to 1.7 kN/m (4 – 10 lbs/in). Glass setting to be compatible with glass unit seals and/or other parts involved as required.

System Description - Framing System, thermally broken/insulated for sealed insulating glass units and spandrel single glass, utilizing Rainscreen Principle and allowing for full integration with the building envelope, shall be 2400/2500 - METRO Series (Specifier's selection) as manufactured by METRO ALUMINUM Products Ltd.

Reference dimensions of extruded profiles shall be (Specifier's selection):

2400 Series - 2" (50.8 mm) face width, and
2500 Series - 2.5" (63.5 mm) face width.

Glass retention, as for dry-dry glazing method, shall be achieved by 4-side pressure plate (retainer) profile and inorganic rubber gasket. Glass hard bite to be 12.7 mm (0.5") minimum.

Whenever substitute/alternative products are considered, supporting data to be submitted ten (10) days prior to bid date to allow for valid comparison. Approval of alternates to be confirmed in advance of bid closing by addendum only.

Fabrication - Extruded profiles shall be accurately fabricated and assembled and sealed to provide air/water tight fit hairline joints only. Fastening shall allow for permanent true and square set of frame elements. Assembly shall utilize concealed spigots and screws and/or screws only. Properly sealed frame assembly joints and corner blocks to result in continuity of air barrier and full compartmentization. Frame assemblies shall be free of warp. Uniformly compressed glazing gaskets shall secure glass in place. No exposed fasteners are permitted.

Finish - All exposed surfaces shall be finished as specified. The finish, as per AAM designation, shall be (Specifier's selection):

Standard clear anodizing to AA - M12C22A31

Standard perma bronze to AA - M12C22A44

Standard black anodized to AA - M10C21A44

Duracron acrylic enamel to AA - M12C4XR1X

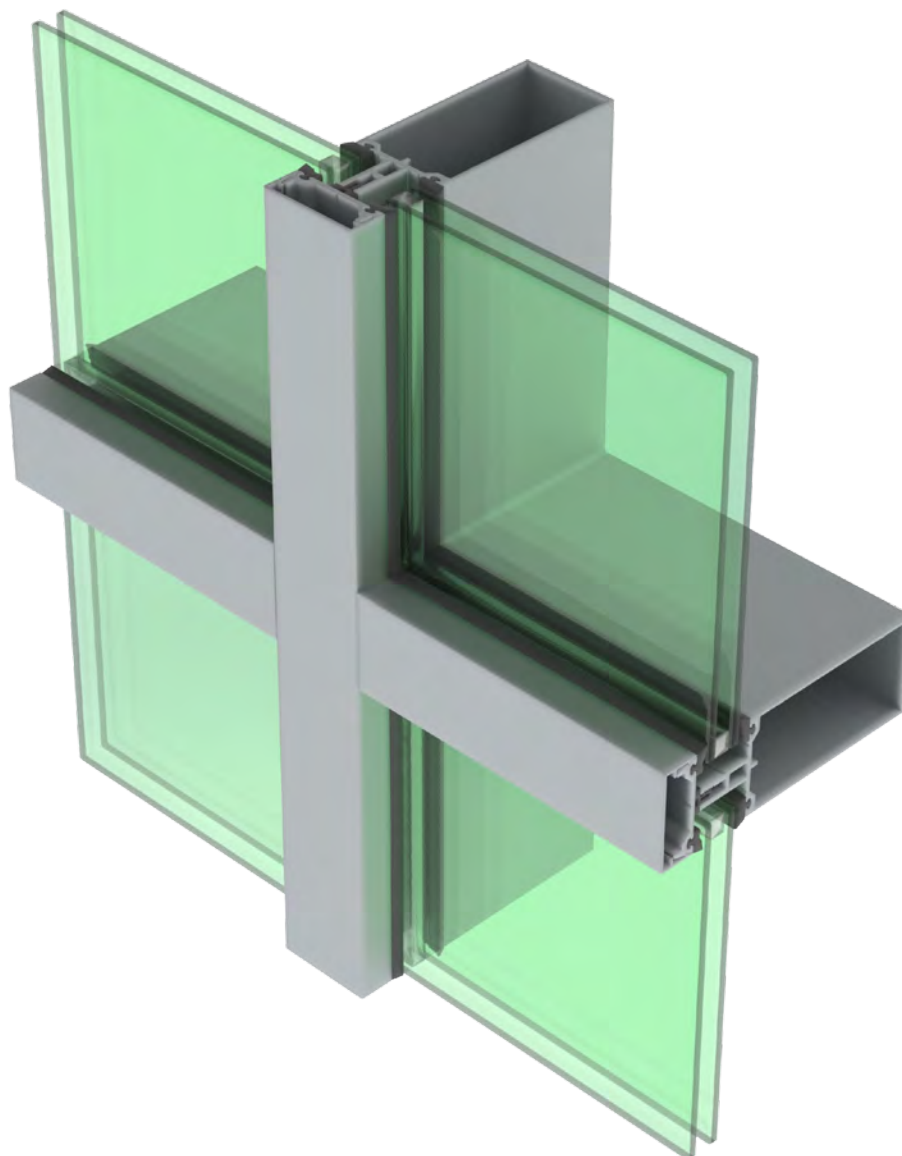
Custom paint qualities and colors - Specifier's selection.

Hardware to have manufacturer's standard finish.

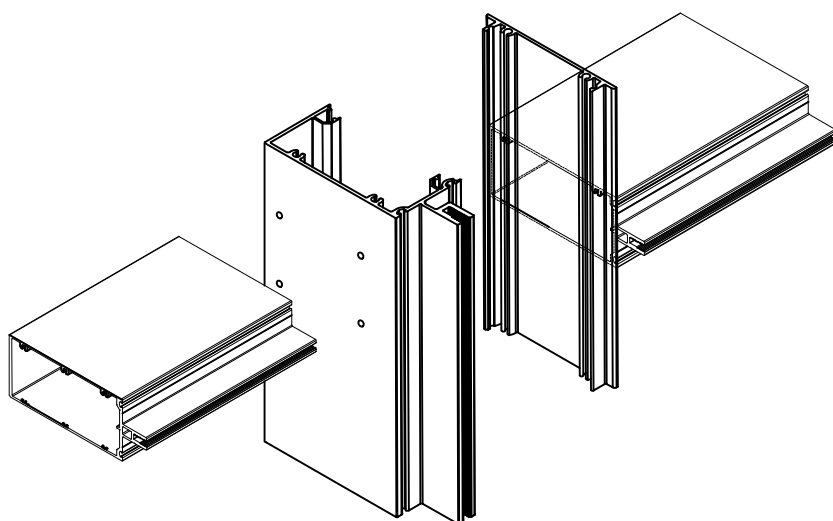
Part 3 - EXECUTION

Installation - Steel embeds and anchoring brackets to be placed and ready as required. Anchoring shall suit perimeter conditions of rough openings and seals as required. Stick or prefabricated framing to be installed at prepared structure, at correct locations as shown on drawings, set level, plumb, square and aligned with other work in accordance with manufacturer's instructions, approved shop and erection drawings. Perimeter joints to be sealed/caulked as specified and detailed to ensure weathertight assembly.

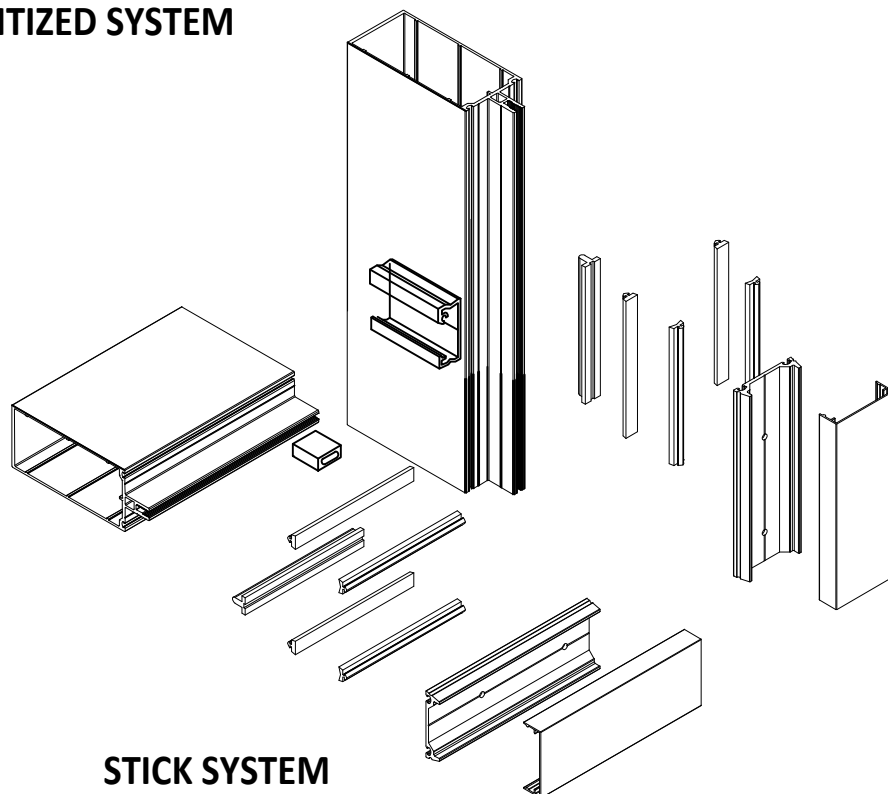
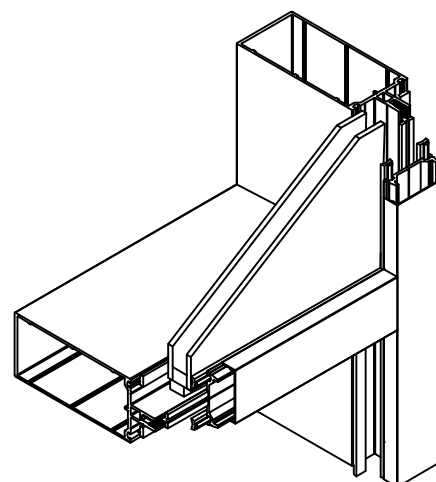
Protection and Cleaning - Work to be protected from damage during and after installation. Consult with manufacturer and installer to determine appropriate protective measures. The General Contractor shall be responsible for protection during construction and for final cleaning. After installation, aluminum work and glass to be cleaned according to instructions/manuals provided by product manufacturers and glaziers. Use appropriate cleaning materials and methods. Do not scratch or damage glass or finishes.



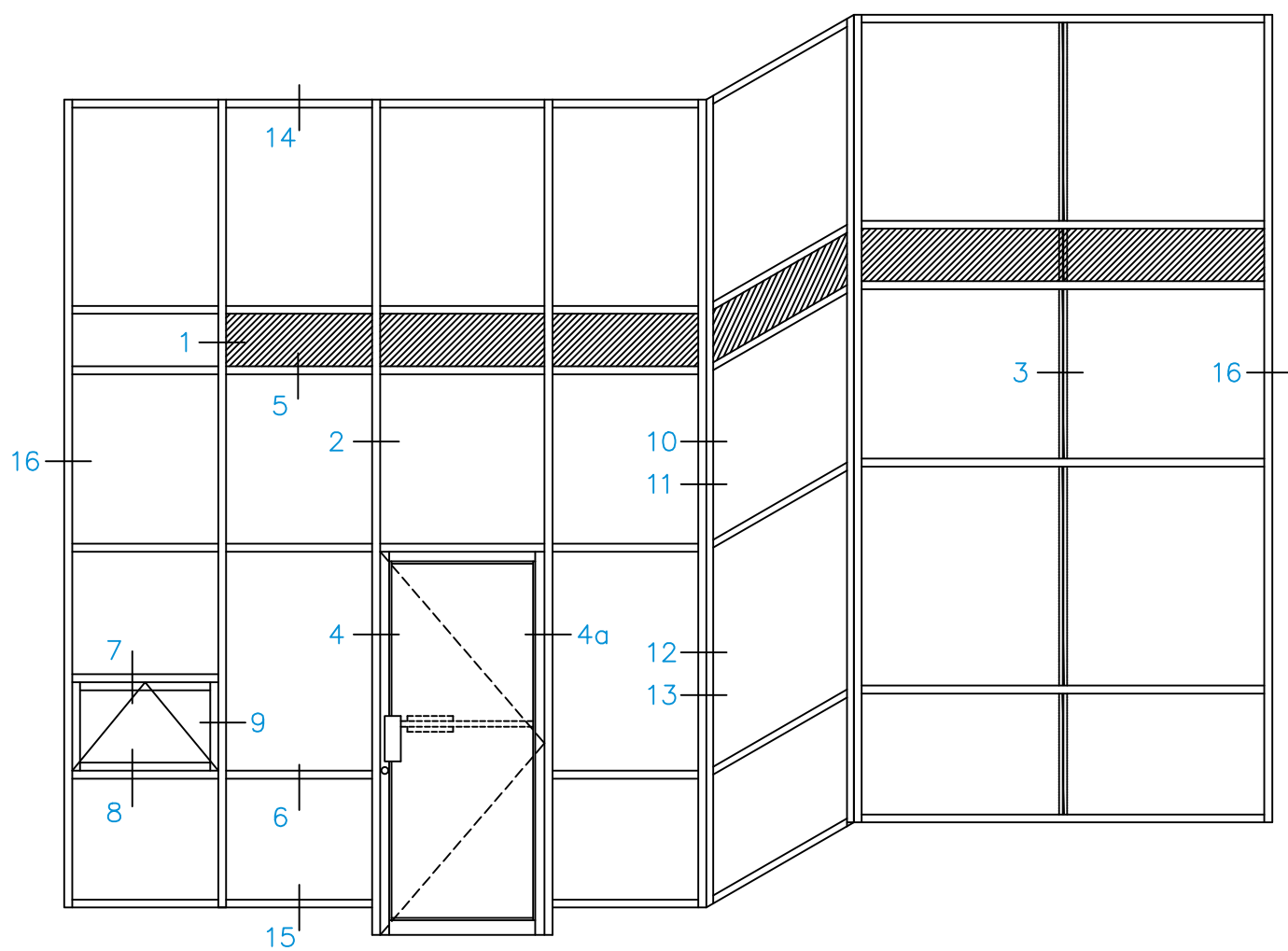
PICTORIAL (3D) PRESENTATION



UNITIZED SYSTEM

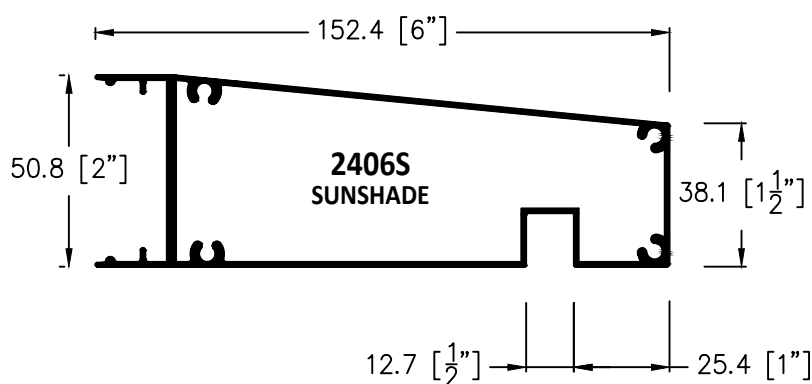
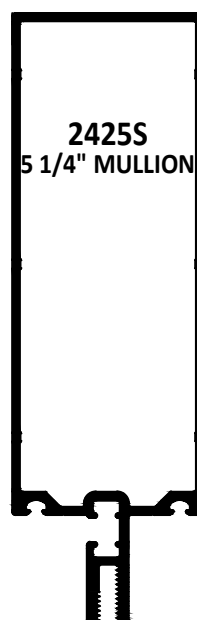
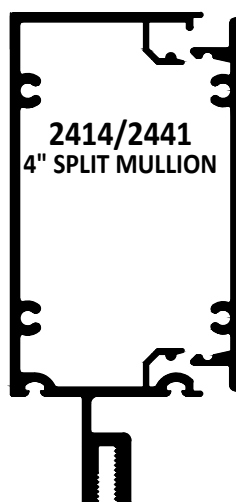
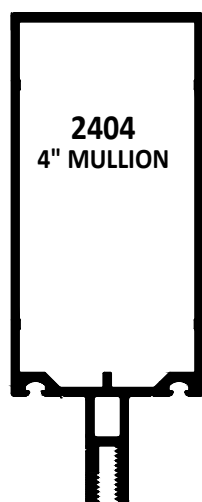
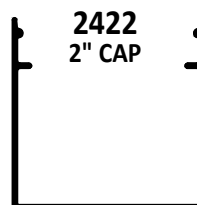
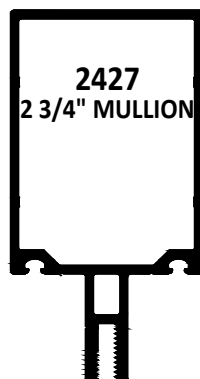
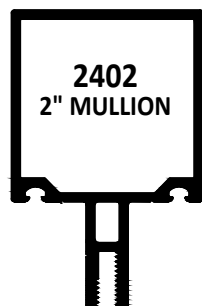


STICK SYSTEM

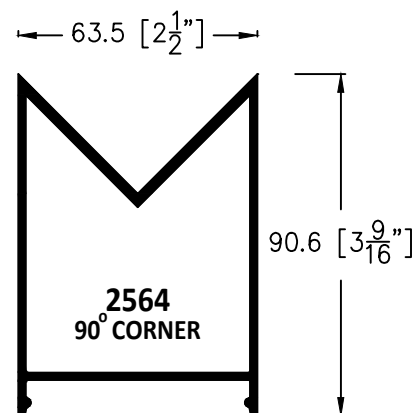
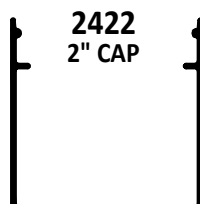


ELEVATION

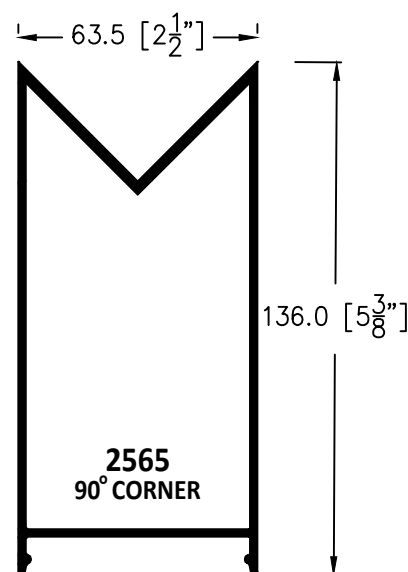
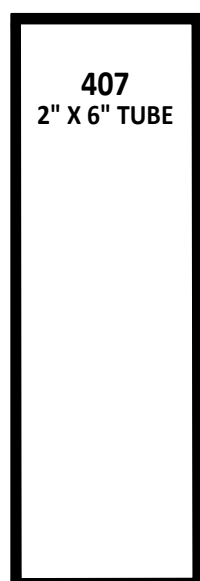
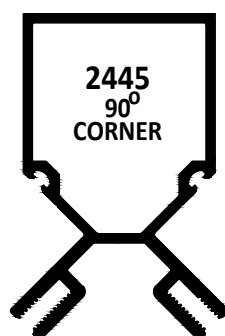
BACK SECTIONS & CAPS



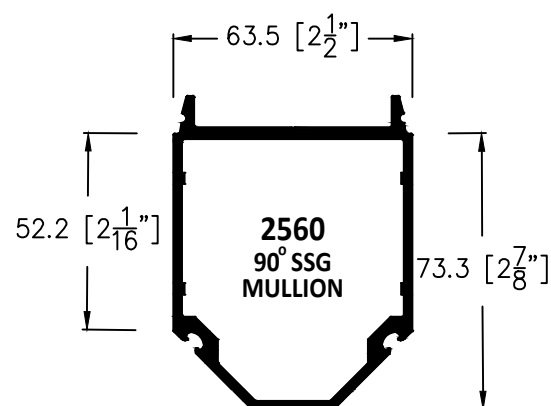
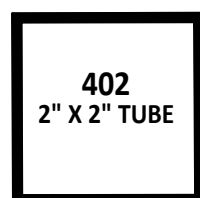
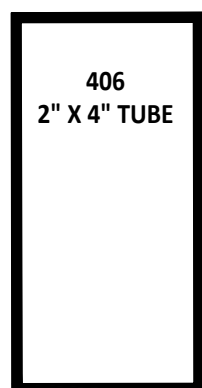
SSG & CORNERS



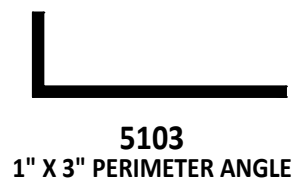
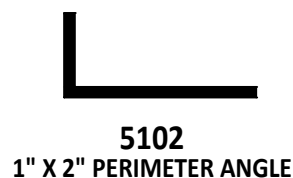
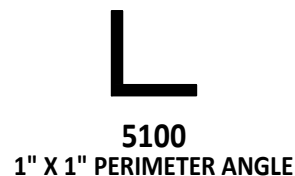
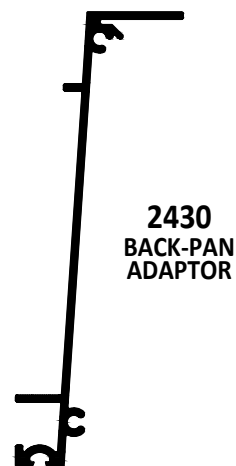
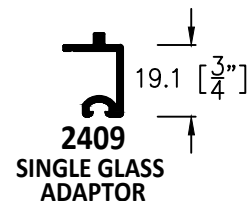
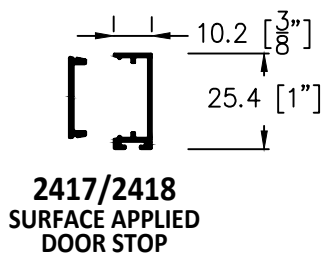
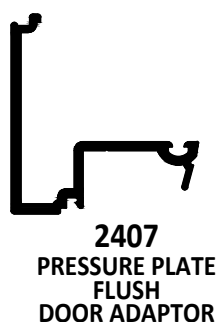
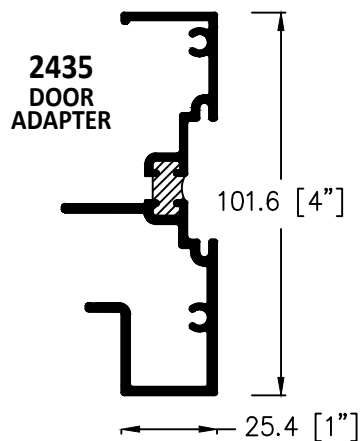
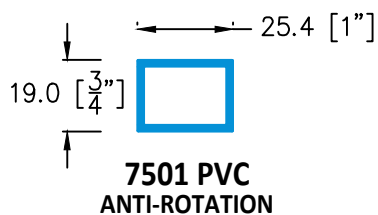
EXTENSION CAP FOR 4" BACK



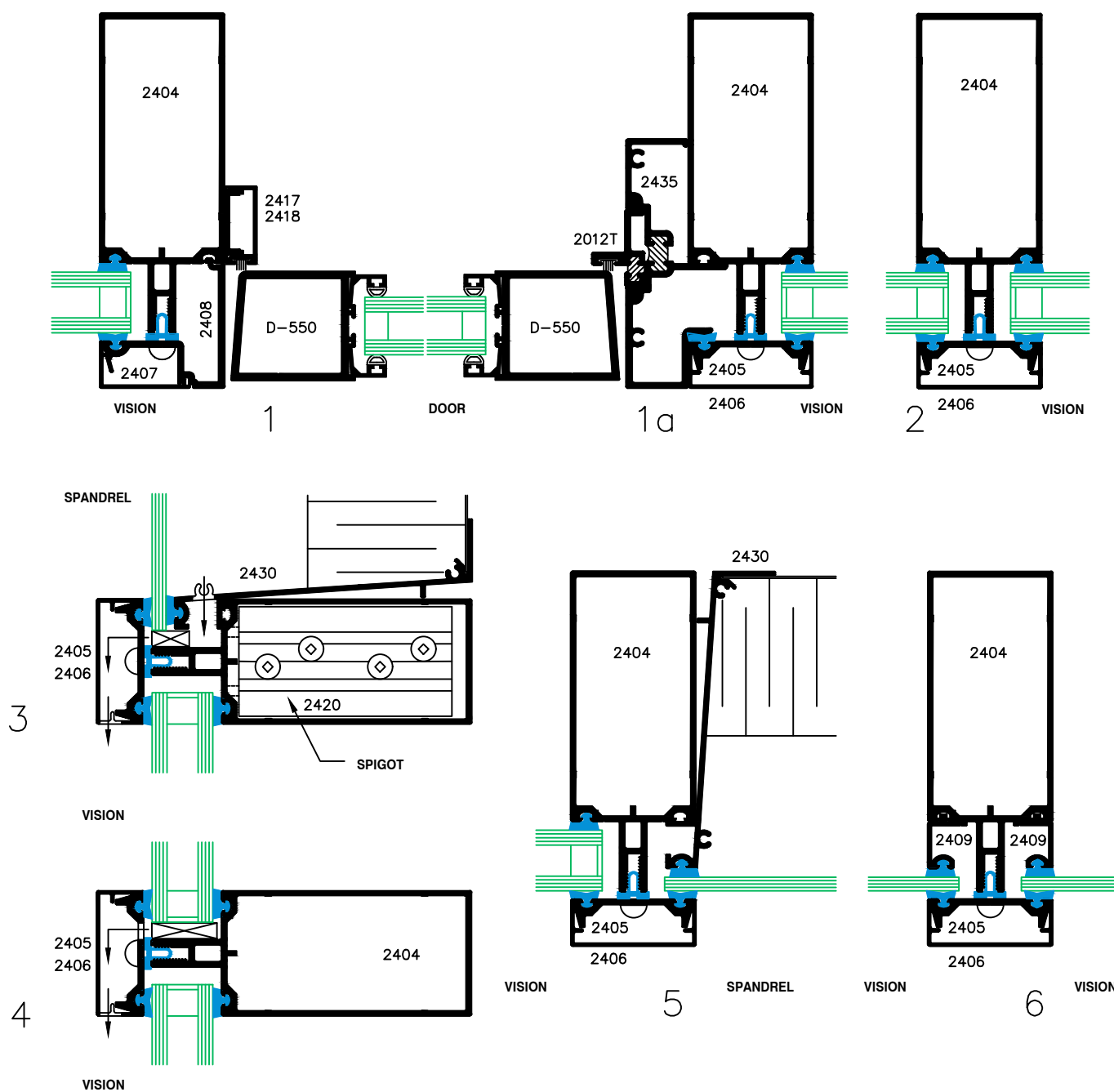
EXTENSION CAP FOR 5 1/4" BACK



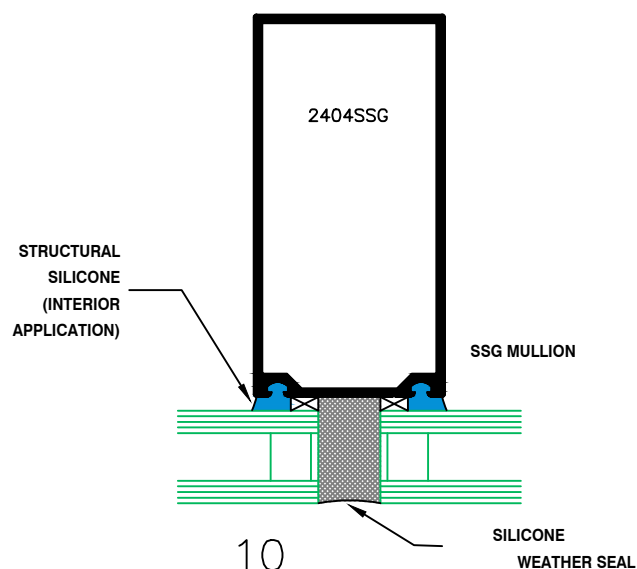
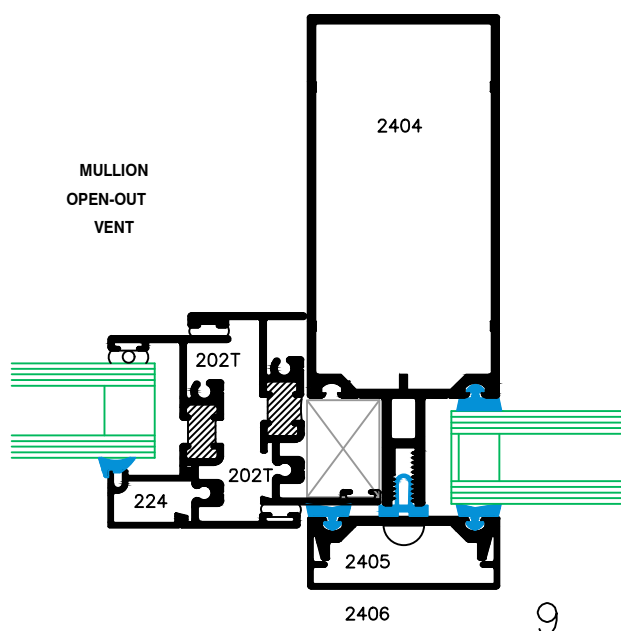
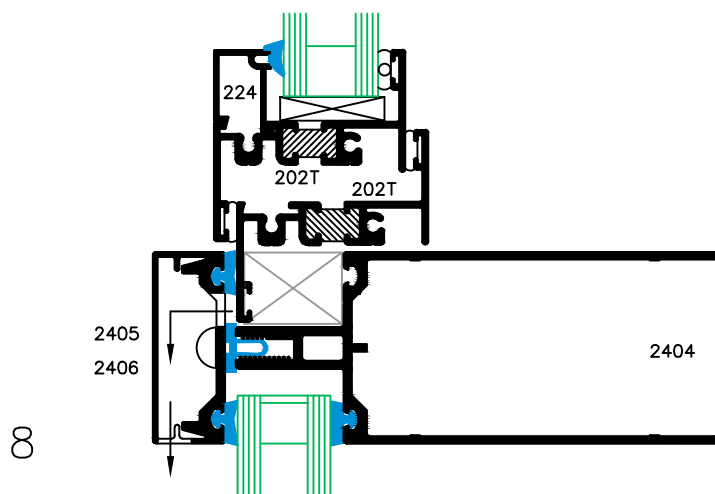
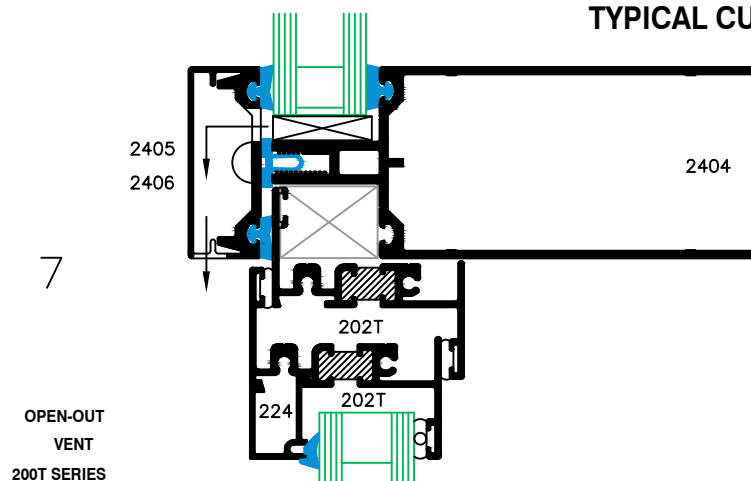
MISC. COMPONENTS



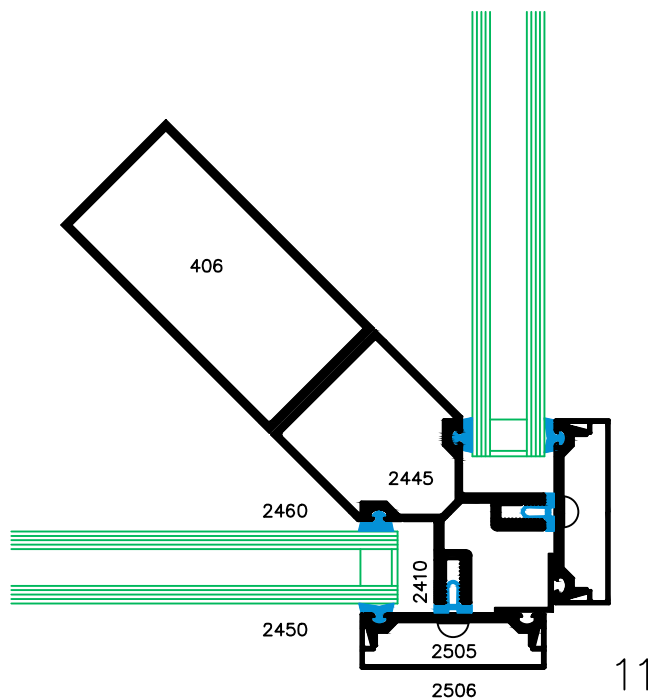
TYPICAL DETAILS



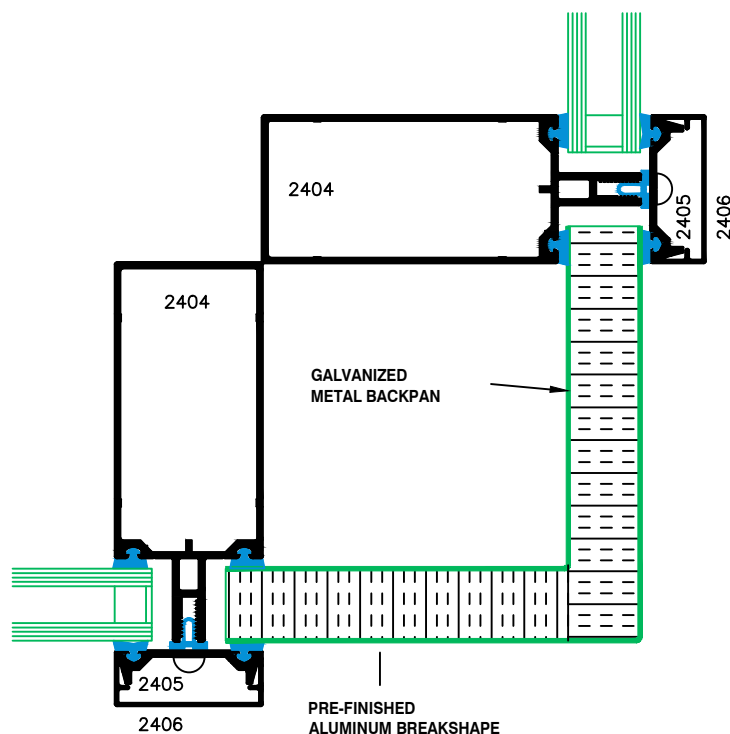
TYPICAL CURTAIN WALL DETAILS



TYPICAL CAPTURED CORNER DETAILS

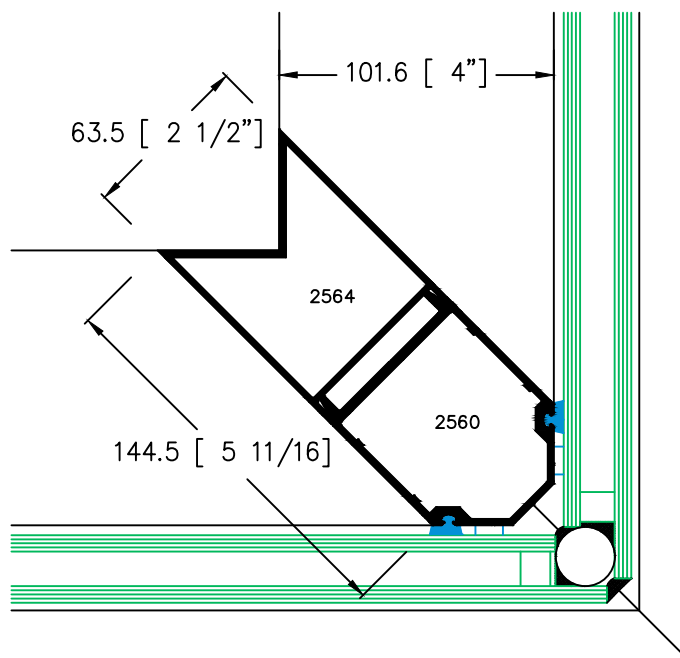


90° CAPTURED CORNER



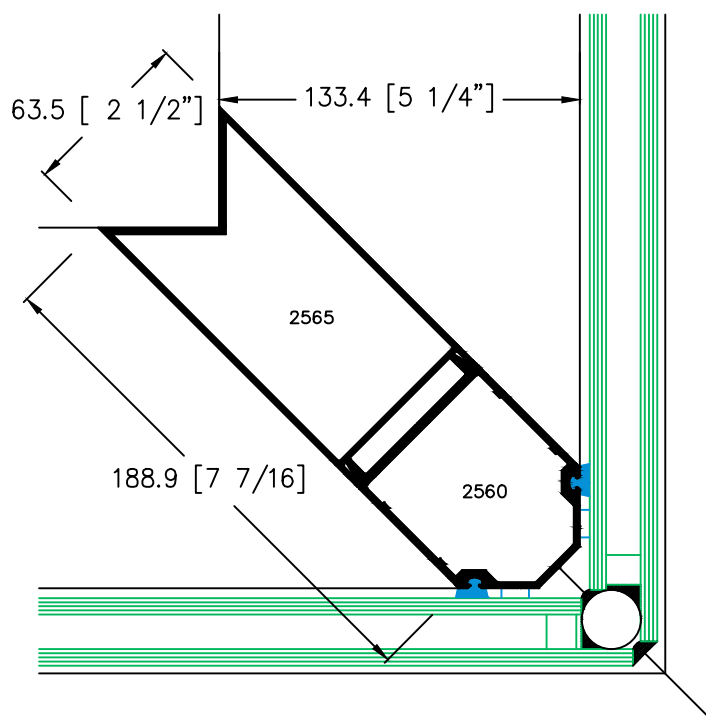
90° BREAKSHAPE CORNER

TYPICAL BUTT-JOINT CORNER DETAILS



90° BUTT-JOINT CORNER
AT 4" BACK MEMBER

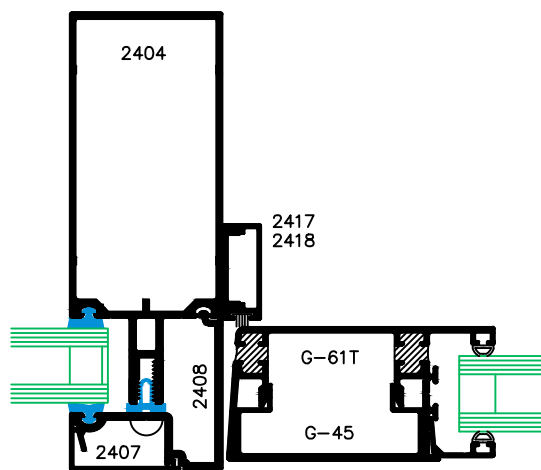
13



90° BUTT-JOINT CORNER
AT 5 1/4" BACK MEMBER

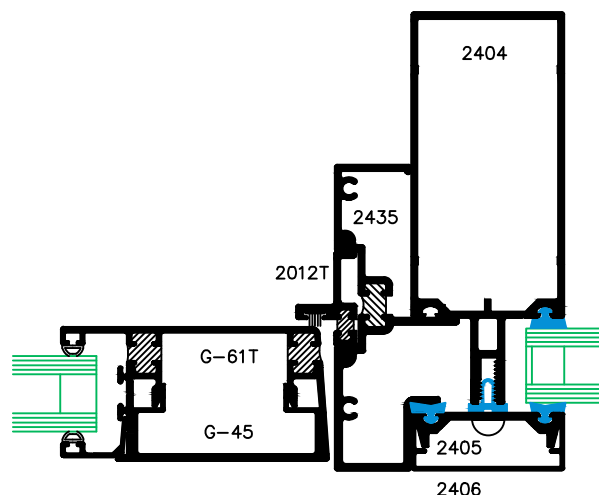
14

ALTERNATE DOOR DETAILS



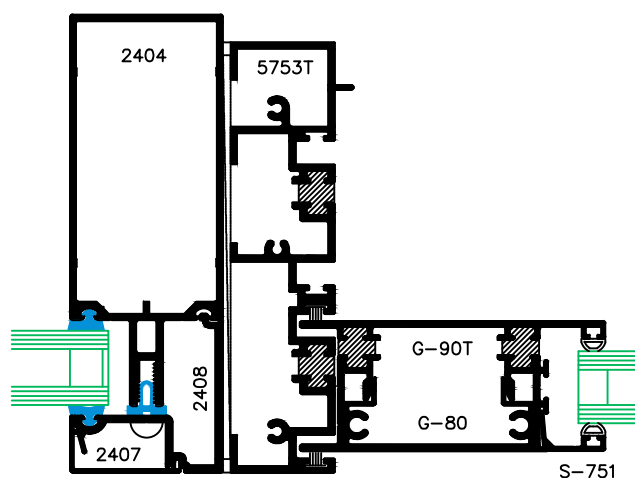
GLACIER DOOR

15



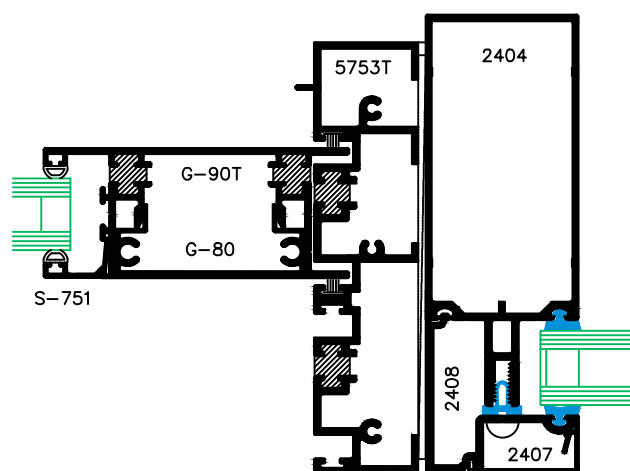
SWING DOORS

15a



1100T JAMB AT SLIDER

16

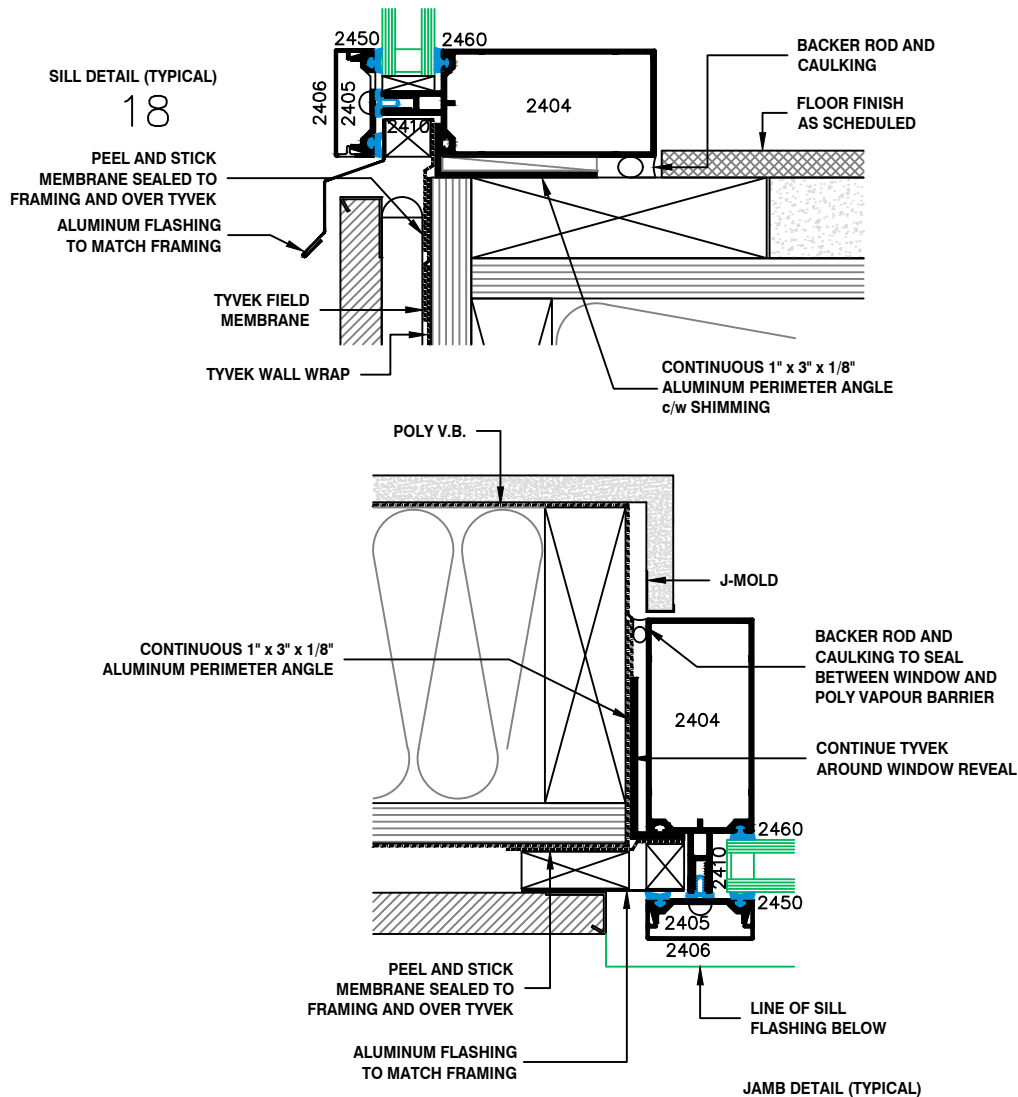
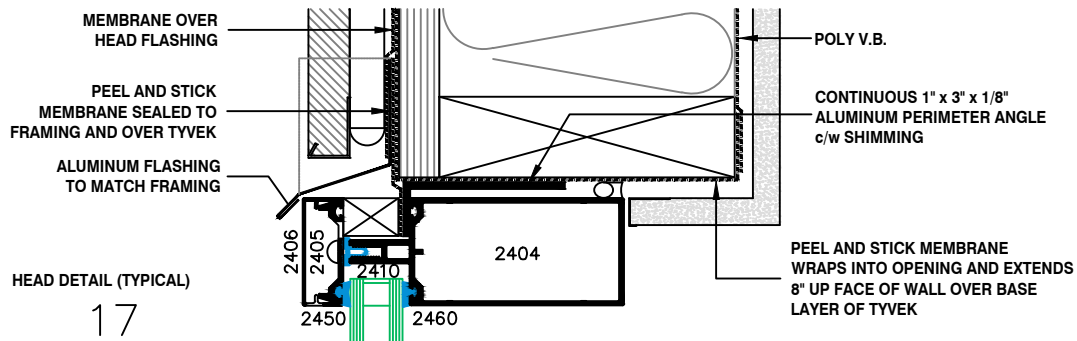


SLIDING DOORS

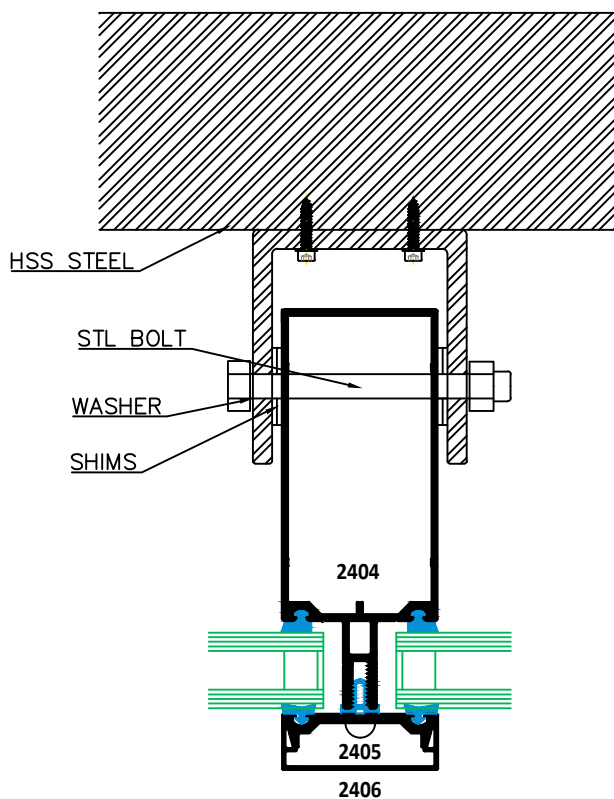
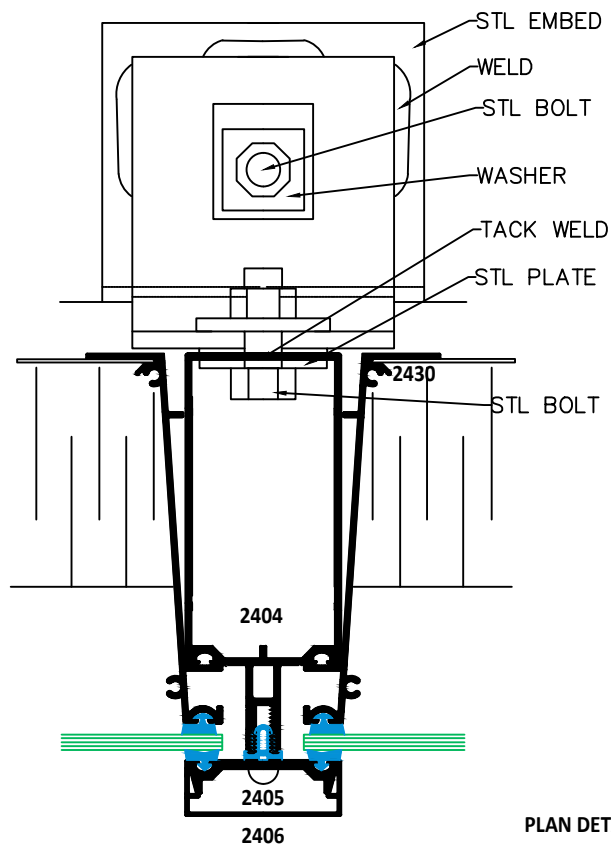
16a

1100T JAMB AT FIXED PANEL

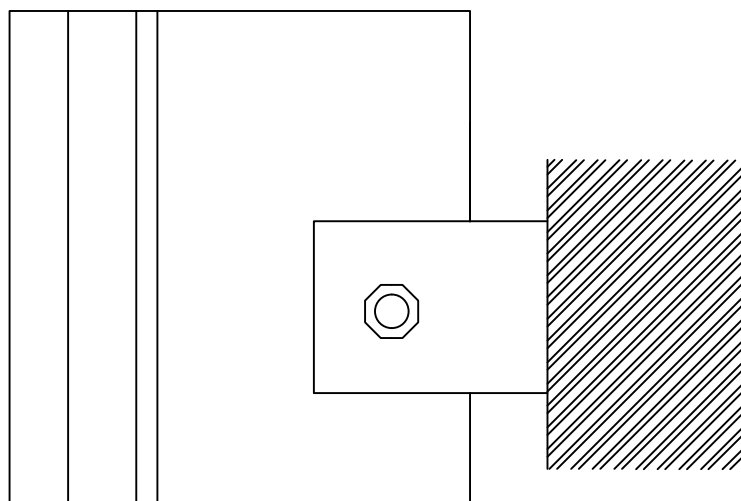
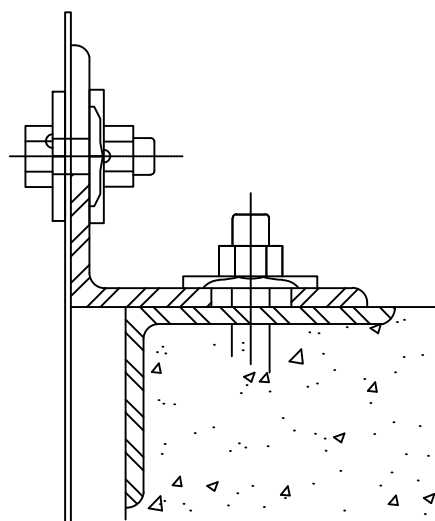
INTERFACE DETAILS
(SUGGESTED ONLY)



TYPICAL ANCHORING DETAILS

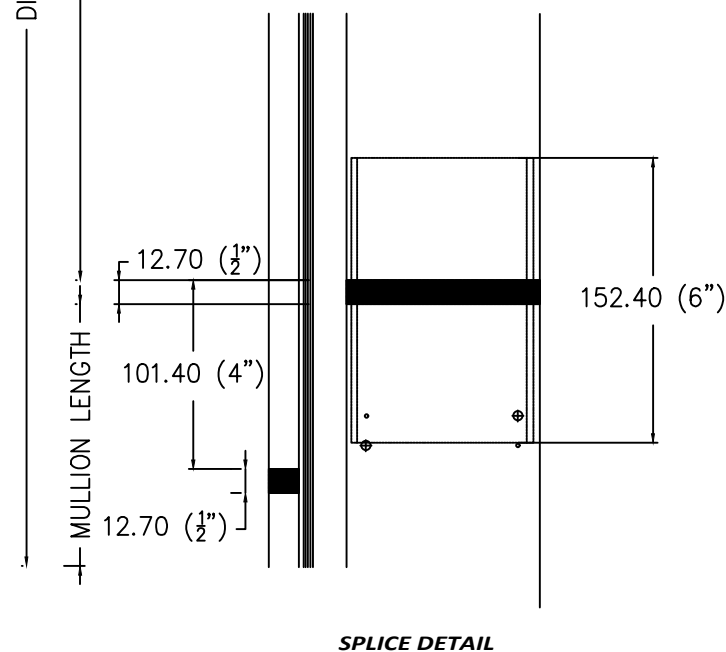
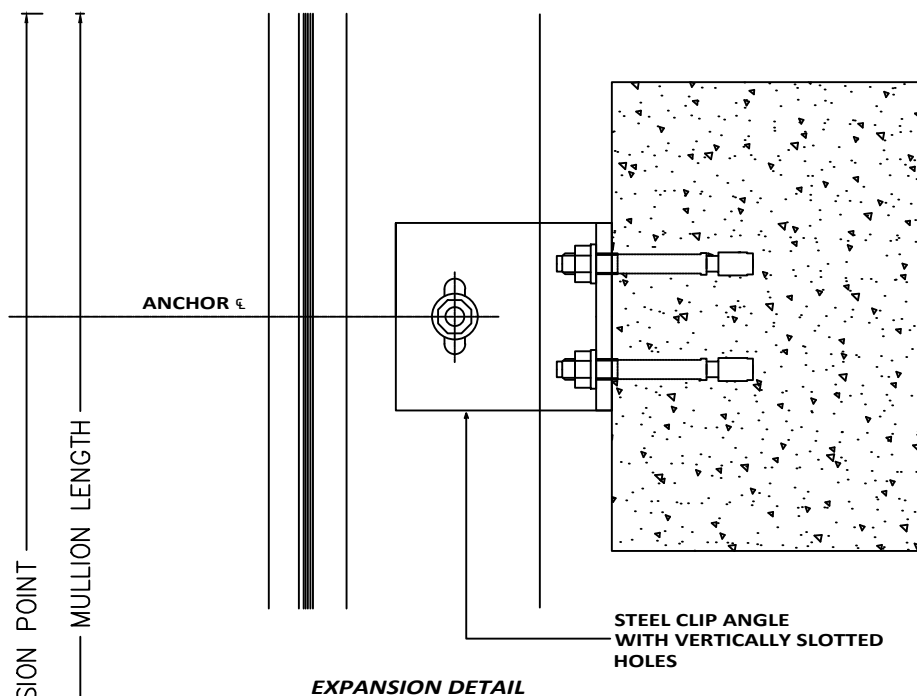


PLAN DETAILS



SECTION DETAILS

EXPANSION & SPLICE DETAILS



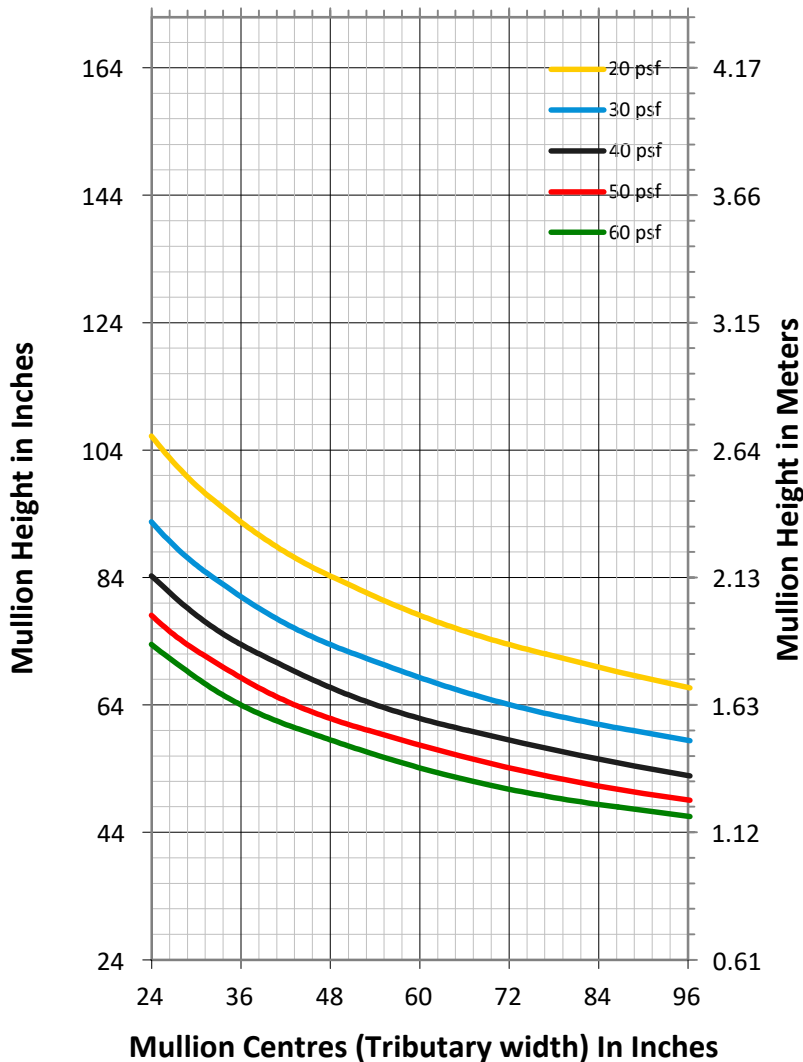
WIND LOAD CHART FOR 2" x 2" MULLION - PART # 2402

SPAN CHART

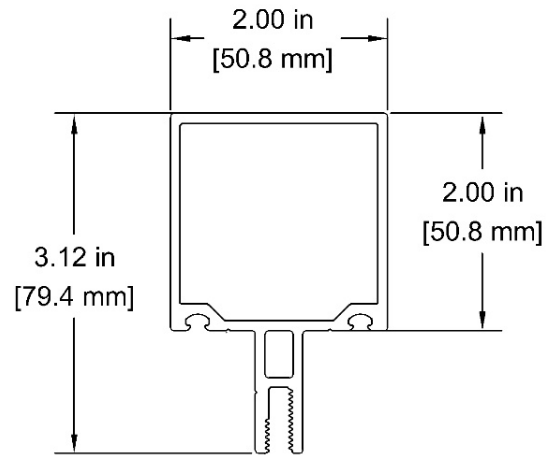
SPAN CHART IS FOR ESTIMATION ONLY.
DO NOT UTILIZE FOR DETAILED DESIGN.
CHART IS BASED ON DEFLECTION ANALYSIS
ONLY

Mullion Centres (Tributary width) In Meters

0.6 0.9 1.2 1.5 1.8 2.1 2.4



MULLION SECTION



SYSTEM PROPERTIES

Moment of Inertia, Section Modulus & Area

Moment of Inertia, Ixx	Ixx = 0.91 in ⁴
Section Modulus, Sxx	Sxx = 0.54 in ³
Total Area	A = 0.99 in ²

Modulus of Elasticity

Aluminum	10,000,000 PSI
Steel	29,000,000 PSI

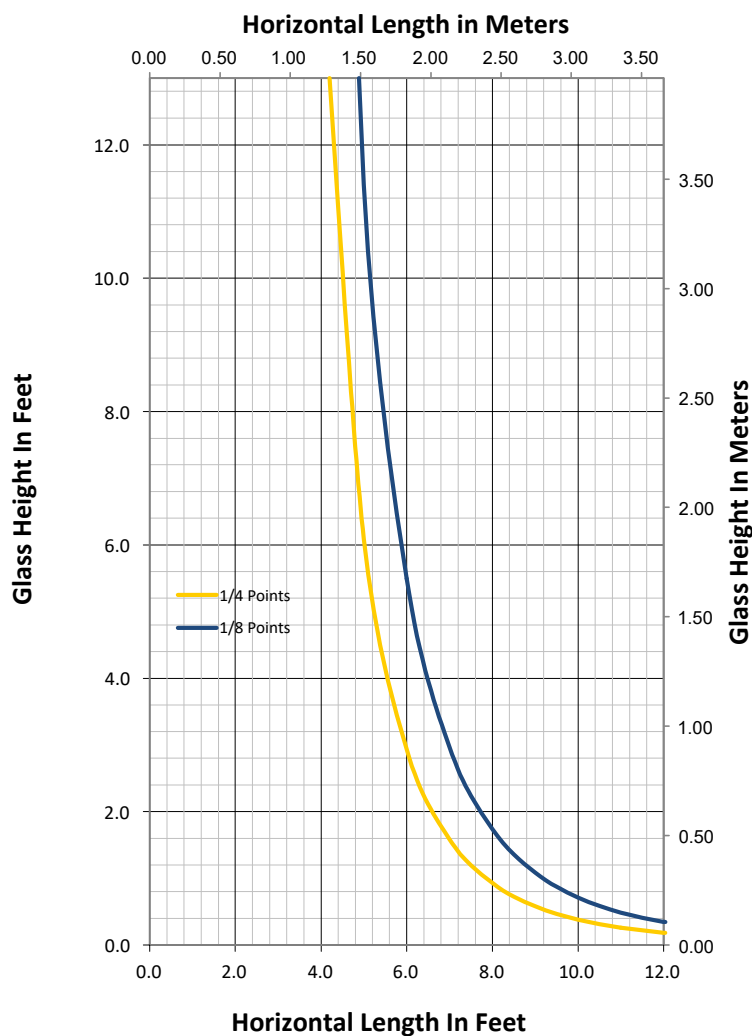
GENERAL NOTES

1. Deflection Limit: L/175 up to 13.5ft, L/240 + 0.25" over 13.5ft
2. Assume horizontal members provide lateral support
3. Steel moment of inertia converted to polyester, vinyl or 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 2020).

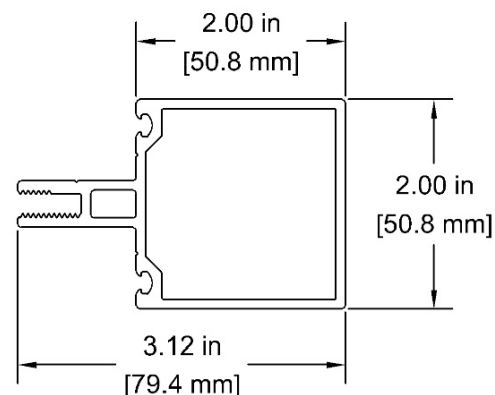
DEAD LOAD CHART FOR 2" x 2" MULLION - PART # 2402

SPAN CHART

SPAN CHART IS FOR ESTIMATION ONLY.
DO NOT UTILIZE FOR DETAILED DESIGN.
CHART IS BASED ON DEFLECTION ANALYSIS
ONLY



MULLION SECTION



SYSTEM PROPERTIES

Moment of Inertia, Section Modulus & Area

Moment of Inertia, I_{yy}	$I_{yy} = 0.45 \text{ in}^4$
Section Modulus, S_{yy}	$S_{yy} = 0.45 \text{ in}^3$
Total Area	$A = 0.99 \text{ in}^2$

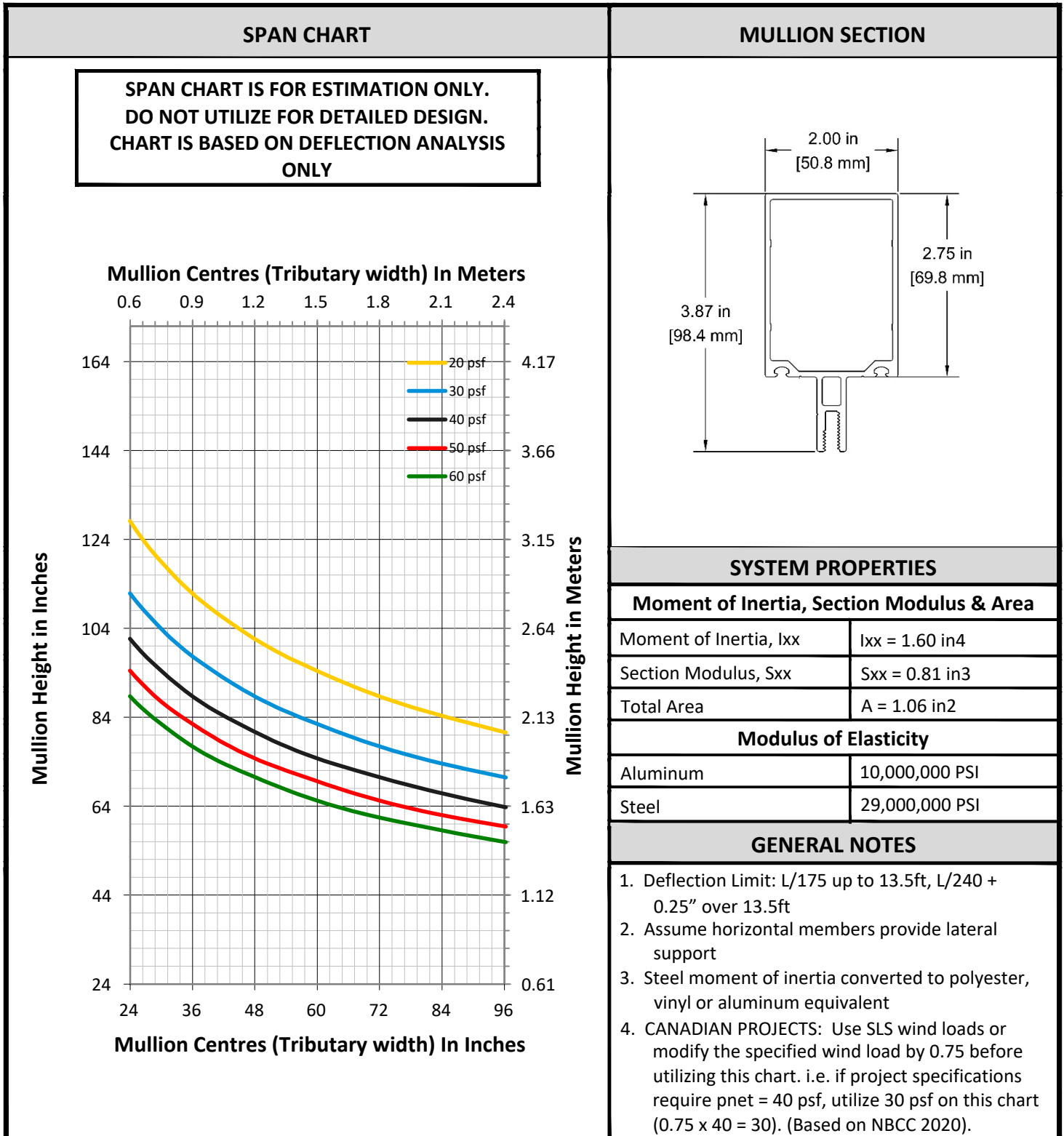
Modulus of Elasticity

Aluminum	10,000,000 PSI
Steel	29,000,000 PSI

GENERAL NOTES

1. Deflection Limit: 0.125" (3.2mm).
2. Charts are calculated assuming a 1" overall sealed unit (6mm/13mm spacer/6mm)
3. Calculations are based on the position of the setting blocks being placed at 1/4 or 1/8 points.

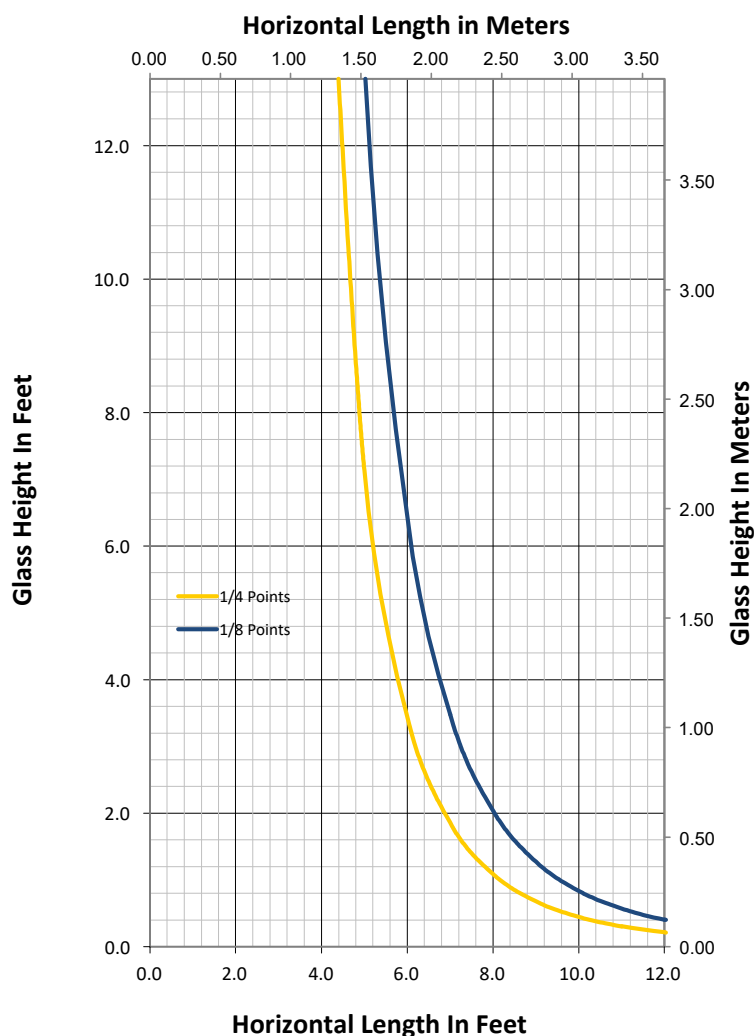
WIND LOAD CHART FOR 2" x 2 3/4" MULLION - PART # 2427



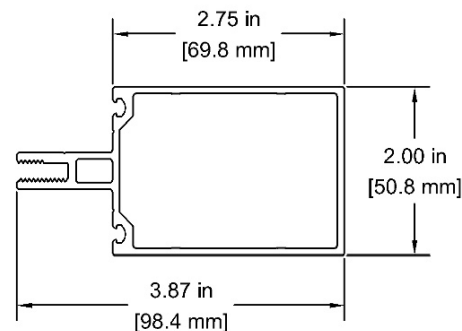
DEAD LOAD CHART FOR 2" x 2 3/4" MULLION - PART # 2427

SPAN CHART

SPAN CHART IS FOR ESTIMATION ONLY.
DO NOT UTILIZE FOR DETAILED DESIGN.
CHART IS BASED ON DEFLECTION ANALYSIS
ONLY



MULLION SECTION



SYSTEM PROPERTIES

Moment of Inertia, Section Modulus & Area

Moment of Inertia, I_{yy}	$I_{yy} = 0.53 \text{ in}^4$
Section Modulus, S_{yy}	$S_{yy} = 0.53 \text{ in}^3$
Total Area	$A = 1.06 \text{ in}^2$

Modulus of Elasticity

Aluminum	10,000,000 PSI
Steel	29,000,000 PSI

GENERAL NOTES

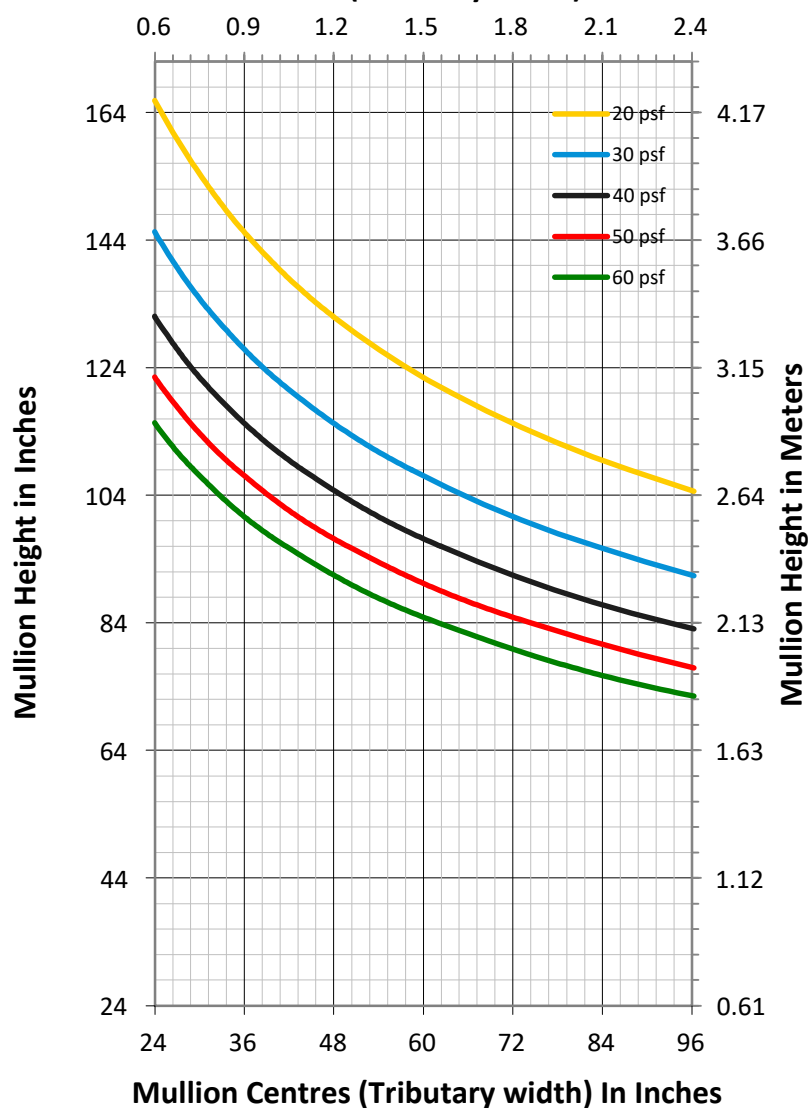
1. Deflection Limit: 0.125" (3.2mm).
2. Charts are calculated assuming a 1" overall sealed unit (6mm/13mm spacer/6mm)
3. Calculations are based on the position of the setting blocks being placed at 1/4 or 1/8 points.

WIND LOAD CHART FOR 2" x 4" MULLION - PART # 2404

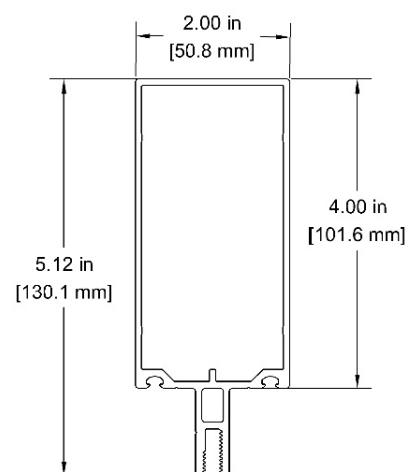
SPAN CHART

SPAN CHART IS FOR ESTIMATION ONLY.
DO NOT UTILIZE FOR DETAILED DESIGN.
CHART IS BASED ON DEFLECTION ANALYSIS
ONLY

Mullion Centres (Tributary width) In Meters



MULLION SECTION



SYSTEM PROPERTIES

Moment of Inertia, Section Modulus & Area

Moment of Inertia, I_{xx}	$I_{xx} = 3.49 \text{ in}^4$
Section Modulus, S_{xx}	$S_{xx} = 1.35 \text{ in}^3$
Total Area	$A = 1.27 \text{ in}^2$

Modulus of Elasticity

Aluminum	10,000,000 PSI
Steel	29,000,000 PSI

GENERAL NOTES

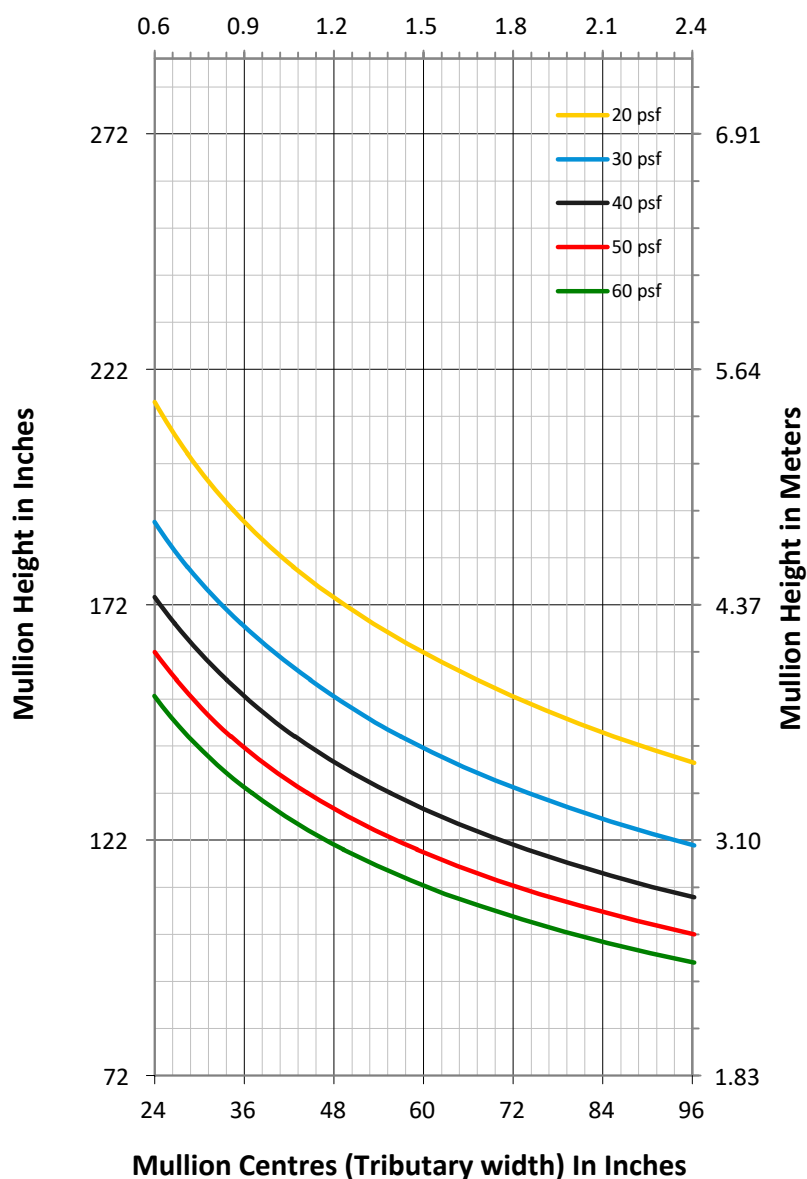
1. Deflection Limit: $L/175$ up to 13.5ft, $L/240 + 0.25"$ over 13.5ft
2. Assume horizontal members provide lateral support
3. Steel moment of inertia converted to polyester, vinyl or aluminum equivalent
4. CANADIAN PROJECTS: Use SLS wind loads or modify the specified wind load by 0.75 before utilizing this chart. i.e. if project specifications require $p_{net} = 40 \text{ psf}$, utilize 30 psf on this chart ($0.75 \times 40 = 30$). (Based on NBCC 2020).

STEEL LOADED WIND LOAD CHART FOR 2" x 4" MULLION - PART # 2404

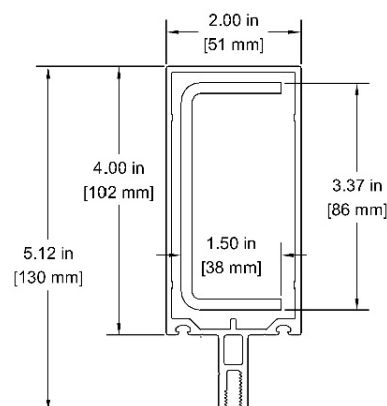
SPAN CHART

SPAN CHART IS FOR ESTIMATION ONLY.
DO NOT UTILIZE FOR DETAILED DESIGN.
CHART IS BASED ON DEFLECTION ANALYSIS
ONLY

Mullion Centres (Tributary width) In Meters



MULLION SECTION



SYSTEM PROPERTIES

Moment of Inertia, Section Modulus & Area

Moment of Inertia, I_{xx}	$I_{xx} = 8.08 \text{ in}^4$
Section Modulus, S_{xx}	$S_{xx} = 2.84 \text{ in}^3$
Total Area	$A = 1.26 \text{ in}^2$

Modulus of Elasticity

Aluminum	10,000,000 PSI
Steel	29,000,000 PSI

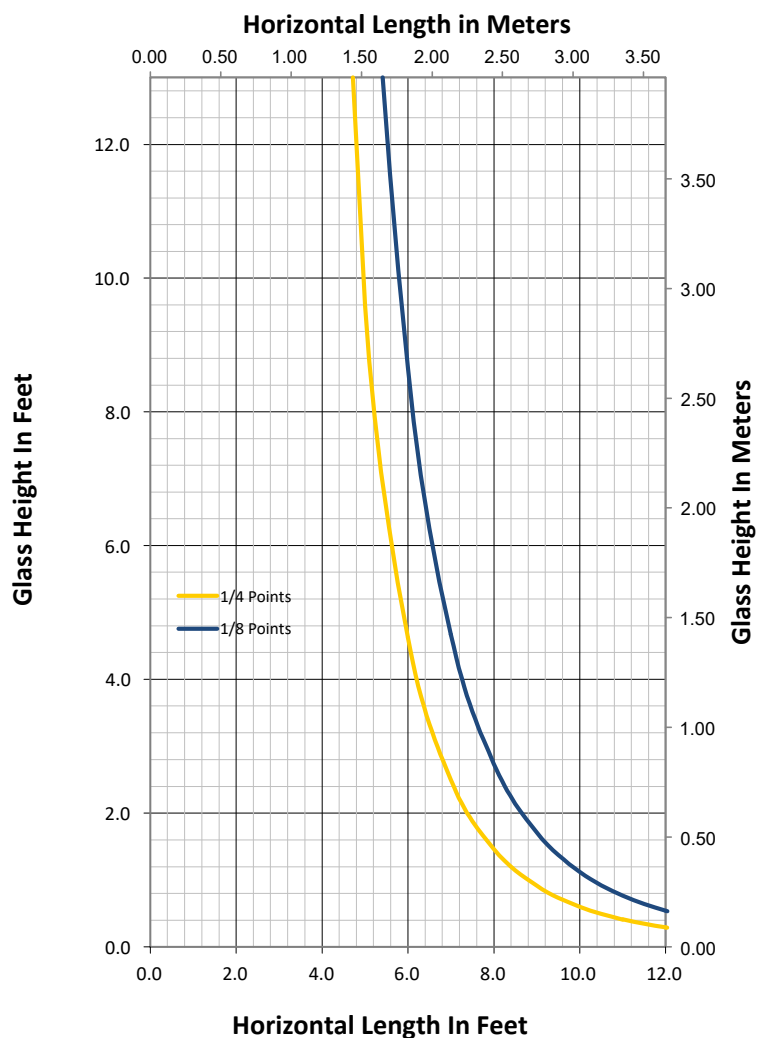
GENERAL NOTES

1. Deflection Limit: $L/175$ up to 13.5ft, $L/240 + 0.25"$ over 13.5ft
2. Assume horizontal members provide lateral support
3. Steel moment of inertia converted to polyester, vinyl or 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 $p_{net} = 40 \text{ psf}$, utilize 30 psf on this chart ($0.75 \times 40 = 30$). (Based on NBCC 2020).

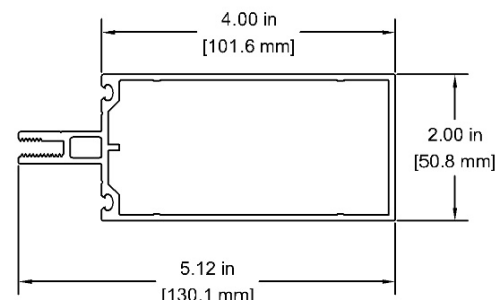
DEAD LOAD CHART FOR 2" x 4" MULLION - PART # 2404

SPAN CHART

SPAN CHART IS FOR ESTIMATION ONLY.
DO NOT UTILIZE FOR DETAILED DESIGN.
CHART IS BASED ON DEFLECTION ANALYSIS
ONLY



MULLION SECTION



SYSTEM PROPERTIES

Moment of Inertia, Section Modulus & Area

Moment of Inertia, I_{yy}	$I_{yy} = 0.71 \text{ in}^4$
Section Modulus, S_{yy}	$S_{yy} = 0.71 \text{ in}^3$
Total Area	$A = 1.27 \text{ in}^2$

Modulus of Elasticity

Aluminum	10,000,000 PSI
Steel	29,000,000 PSI

GENERAL NOTES

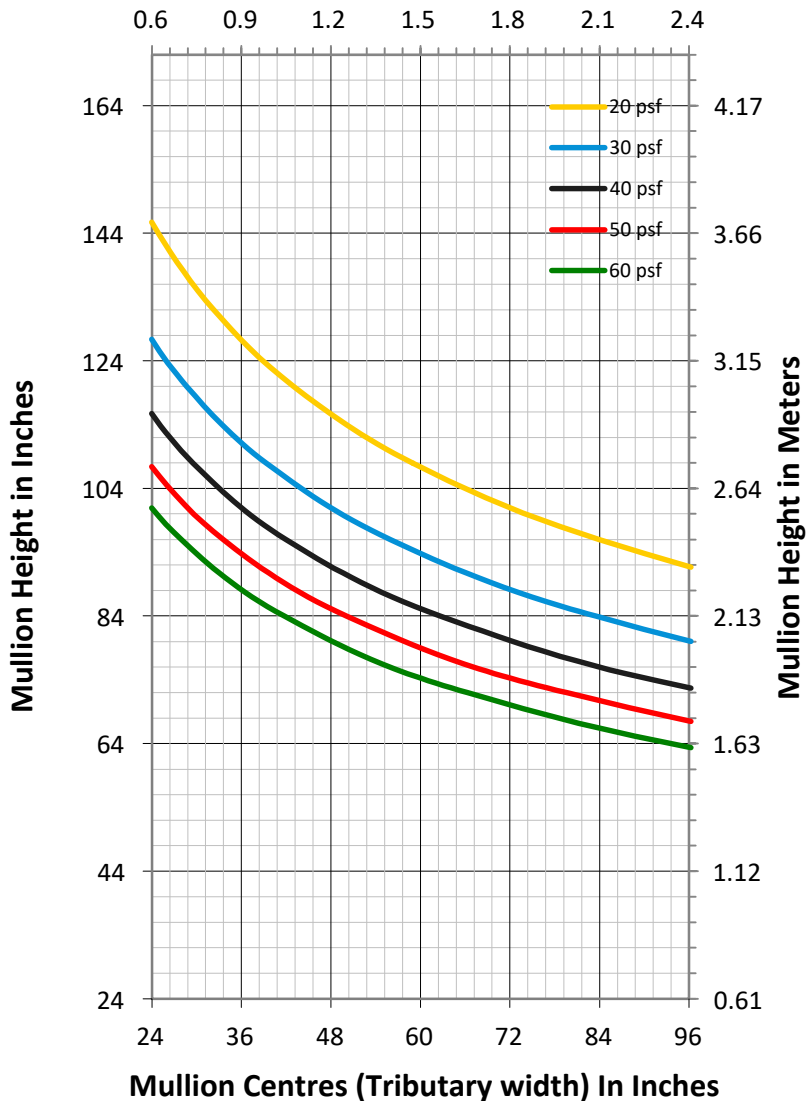
1. Deflection Limit: 0.125" (3.2mm).
2. Charts are calculated assuming a 1" overall sealed unit (6mm/13mm spacer/6mm)
3. Calculations are based on the position of the setting blocks being placed at 1/4 or 1/8 points.

WIND LOAD CHART FOR 2" x 4" SSG MULLION - PART # 2404SSG

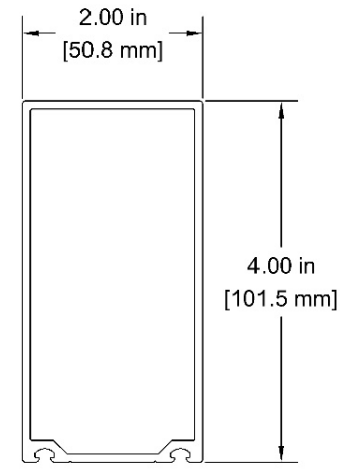
SPAN CHART

SPAN CHART IS FOR ESTIMATION ONLY.
DO NOT UTILIZE FOR DETAILED DESIGN.
CHART IS BASED ON DEFLECTION ANALYSIS
ONLY

Mullion Centres (Tributary width) In Meters



MULLION SECTION



SYSTEM PROPERTIES

Moment of Inertia, Section Modulus & Area

Moment of Inertia, I_{xx}	$I_{xx} = 2.35 \text{ in}^4$
Section Modulus, S_{xx}	$S_{xx} = 1.13 \text{ in}^3$
Total Area	$A = 1.10 \text{ in}^2$

Modulus of Elasticity

Aluminum	10,000,000 PSI
Steel	29,000,000 PSI

GENERAL NOTES

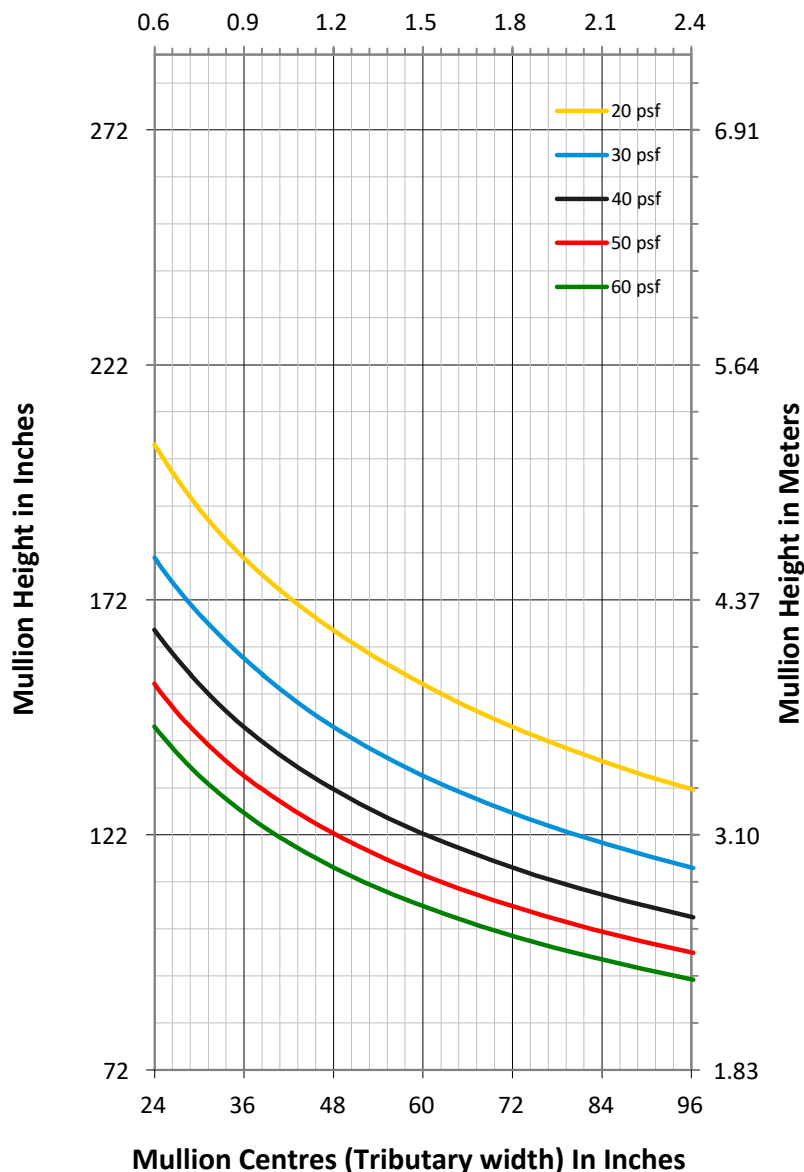
1. Deflection Limit: $L/175$ up to 13.5ft, $L/240 + 0.25"$ over 13.5ft
2. Assume horizontal members provide lateral support
3. Steel moment of inertia converted to polyester, vinyl or aluminum equivalent
4. CANADIAN PROJECTS: Use SLS wind loads or modify the specified wind load by 0.75 before utilizing this chart. i.e. if project specifications require $p_{net} = 40 \text{ psf}$, utilize 30 psf on this chart ($0.75 \times 40 = 30$). (Based on NBCC 2020).

STEEL LOADED WIND LOAD CHART FOR 2" x 4" SSG MULLION - PART # 2404SSG

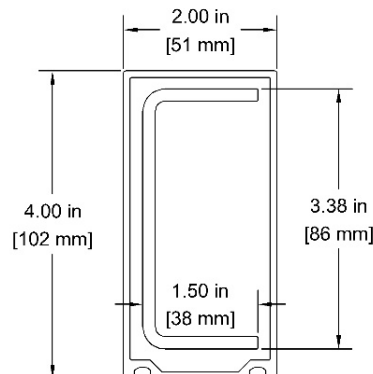
SPAN CHART

SPAN CHART IS FOR ESTIMATION ONLY.
DO NOT UTILIZE FOR DETAILED DESIGN.
CHART IS BASED ON DEFLECTION ANALYSIS
ONLY

Mullion Centres (Tributary width) In Meters



MULLION SECTION



SYSTEM PROPERTIES

Moment of Inertia, Section Modulus & Area

Moment of Inertia, I_{xx}	$I_{xx} = 6.94 \text{ in}^4$
Section Modulus, S_{xx}	$S_{xx} = 4.34 \text{ in}^3$
Total Area	$A = 1.10 \text{ in}^2$

Modulus of Elasticity

Aluminum	10,000,000 PSI
Steel	29,000,000 PSI

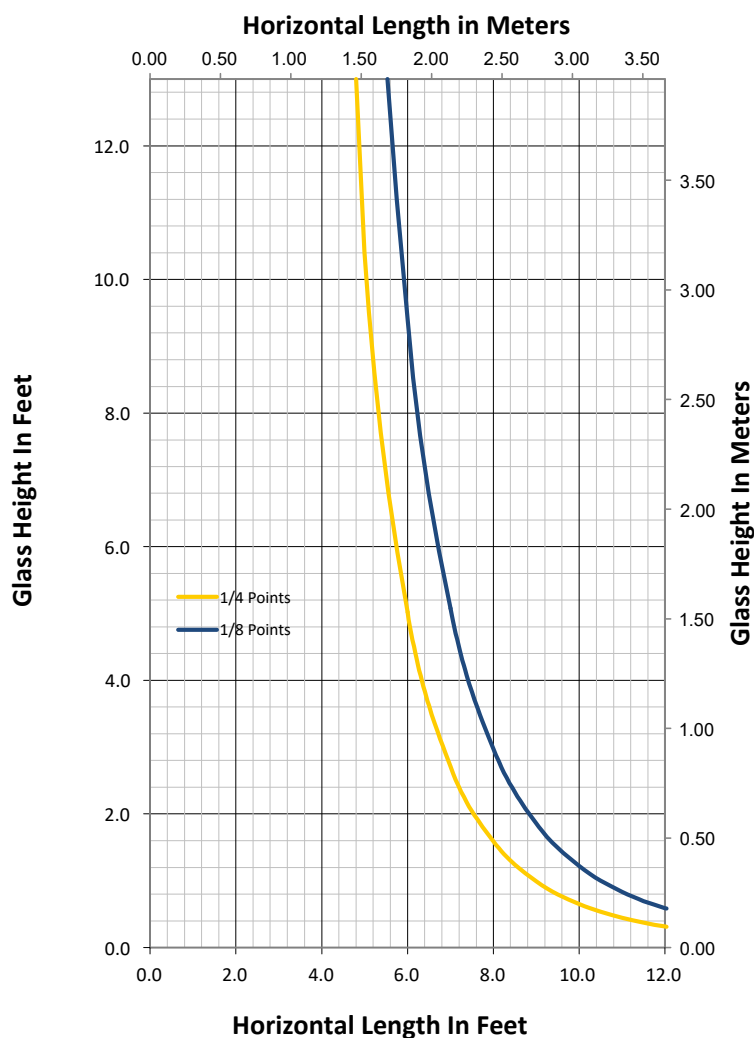
GENERAL NOTES

1. Deflection Limit: $L/175$ up to 13.5ft, $L/240 + 0.25"$ over 13.5ft
2. Assume horizontal members provide lateral support
3. Steel moment of inertia converted to polyester, vinyl or 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 $p_{net} = 40 \text{ psf}$, utilize 30 psf on this chart ($0.75 \times 40 = 30$). (Based on NBCC 2020).

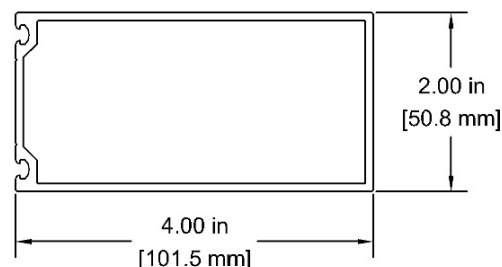
DEAD LOAD CHART FOR 2" x 4" SSG MULLION - PART # 2404SSG

SPAN CHART

SPAN CHART IS FOR ESTIMATION ONLY.
DO NOT UTILIZE FOR DETAILED DESIGN.
CHART IS BASED ON DEFLECTION ANALYSIS
ONLY



MULLION SECTION



SYSTEM PROPERTIES

Moment of Inertia, Section Modulus & Area

Moment of Inertia, I_{yy}	$I_{yy} = 0.77 \text{ in}^4$
Section Modulus, S_{yy}	$S_{yy} = 0.77 \text{ in}^3$
Total Area	$A = 1.10 \text{ in}^2$

Modulus of Elasticity

Aluminum	10,000,000 PSI
Steel	29,000,000 PSI

GENERAL NOTES

1. Deflection Limit: 0.125" (3.2mm).
2. Charts are calculated assuming a 1" overall sealed unit (6mm/13mm spacer/6mm)
3. Calculations are based on the position of the setting blocks being placed at 1/4 or 1/8 points.

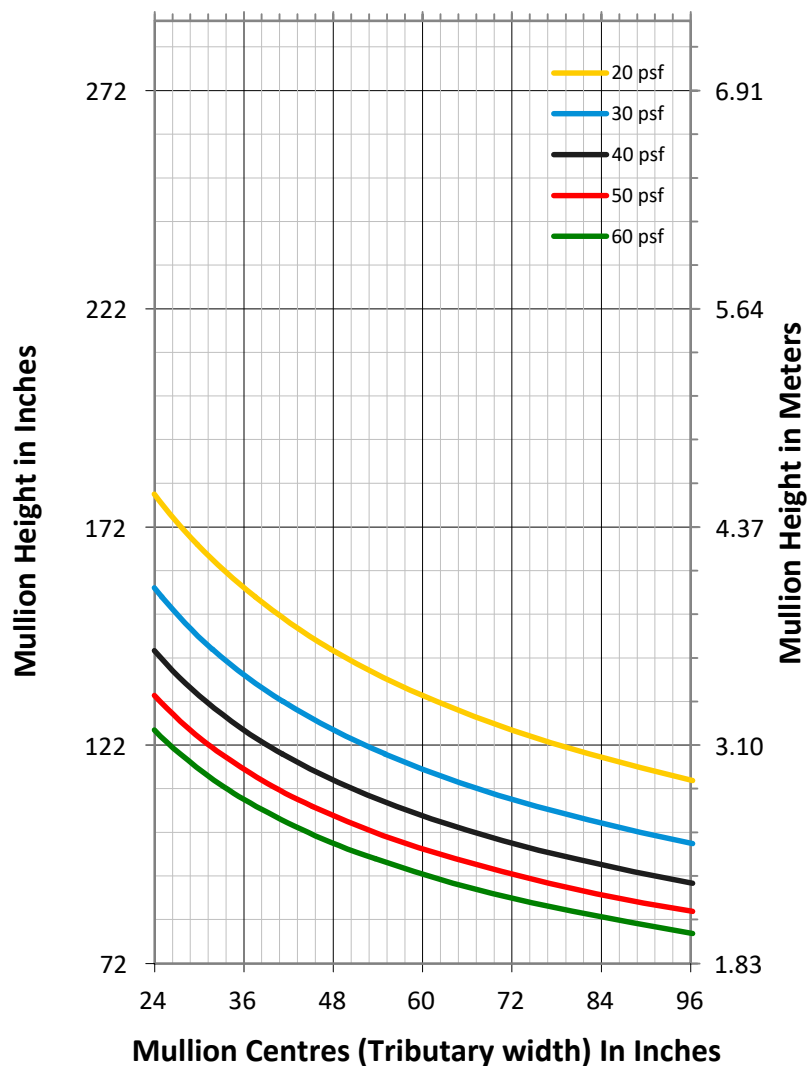
WIND LOAD CHART FOR 2" x 4" SPLIT MULLION - PART # 2414/2441

SPAN CHART

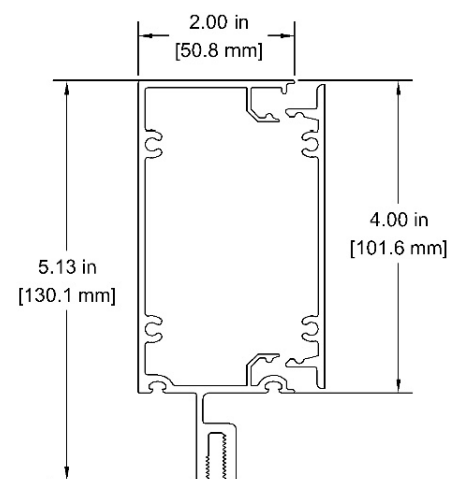
SPAN CHART IS FOR ESTIMATION ONLY.
DO NOT UTILIZE FOR DETAILED DESIGN.
CHART IS BASED ON DEFLECTION ANALYSIS
ONLY

Mullion Centres (Tributary width) In Meters

0.6 0.9 1.2 1.5 1.8 2.1 2.4



MULLION SECTION



SYSTEM PROPERTIES

Moment of Inertia, Section Modulus & Area

Moment of Inertia, Ixx	Ixx = 4.51 in ⁴
Section Modulus, Sxx	Sxx = 1.70 in ³
Total Area	A = 1.64 in ²

Modulus of Elasticity

Aluminum	10,000,000 PSI
Steel	29,000,000 PSI

GENERAL NOTES

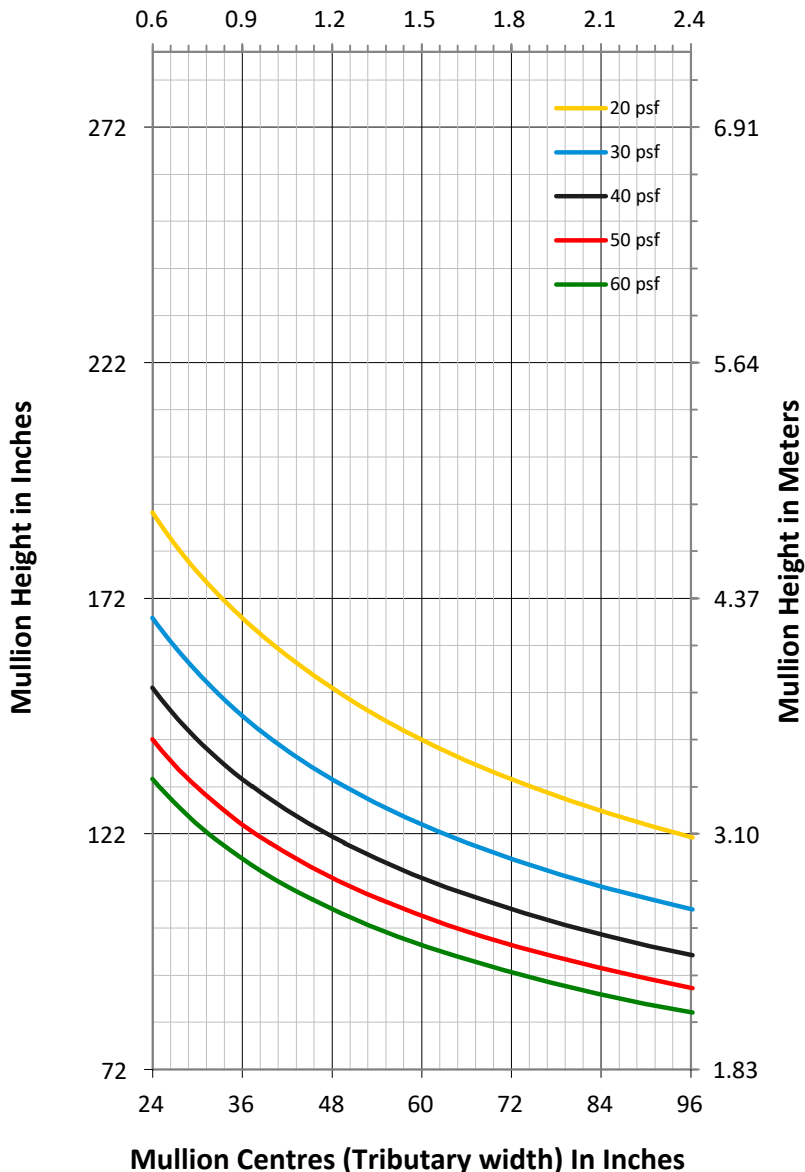
1. Deflection Limit: L/175 up to 13.5ft, L/240 + 0.25" over 13.5ft
2. Assume horizontal members provide lateral support
3. Steel moment of inertia converted to polyester, vinyl or aluminum equivalent
4. CANADIAN PROJECTS: Use SLS wind loads or modify the specified wind load by 0.75 before utilizing this chart. i.e. if project specifications require pnet = 40 psf, utilize 30 psf on this chart (0.75 x 40 = 30). (Based on NBCC 2020).

STEEL LOADED WIND LOAD CHART FOR 2" x 4" SPLIT MULLION - PART # 2414/2441

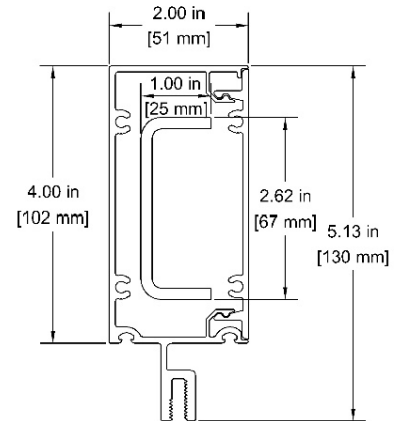
SPAN CHART

SPAN CHART IS FOR ESTIMATION ONLY.
DO NOT UTILIZE FOR DETAILED DESIGN.
CHART IS BASED ON DEFLECTION ANALYSIS
ONLY

Mullion Centres (Tributary width) In Meters



MULLION SECTION



SYSTEM PROPERTIES

Moment of Inertia, Section Modulus & Area

Moment of Inertia, Ixx	Ixx = 5.43 in ⁴
Section Modulus, Sxx	Sxx = 2.01 in ³
Total Area	A = 1.17 in ²

Modulus of Elasticity

Aluminum	10,000,000 PSI
Steel	29,000,000 PSI

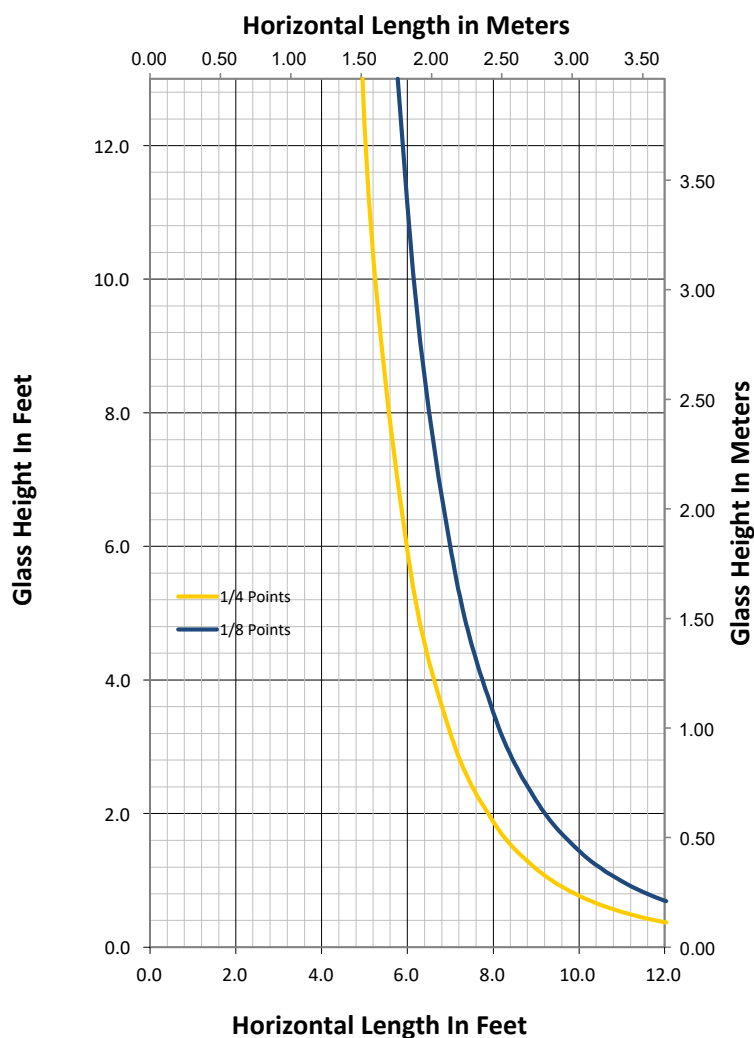
GENERAL NOTES

1. Deflection Limit: L/175 up to 13.5ft, L/240 + 0.25" over 13.5ft
2. Assume horizontal members provide lateral support
3. Steel moment of inertia converted to polyester, vinyl or 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 2020).

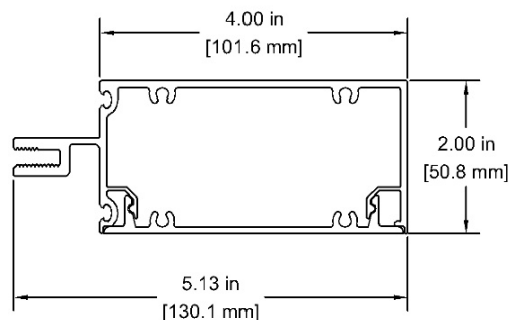
DEAD LOAD CHART FOR 2" x 4" SPLIT MULLION - PART # 2414/2441

SPAN CHART

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CHART IS BASED ON DEFLECTION ANALYSIS
ONLY



MULLION SECTION



SYSTEM PROPERTIES

Moment of Inertia, Section Modulus & Area

Moment of Inertia, I_{yy}	$I_{yy} = 0.92 \text{ in}^4$
Section Modulus, S_{yy}	$S_{yy} = 0.89 \text{ in}^3$
Total Area	$A = 1.64 \text{ in}^2$

Modulus of Elasticity

Aluminum	10,000,000 PSI
Steel	29,000,000 PSI

GENERAL NOTES

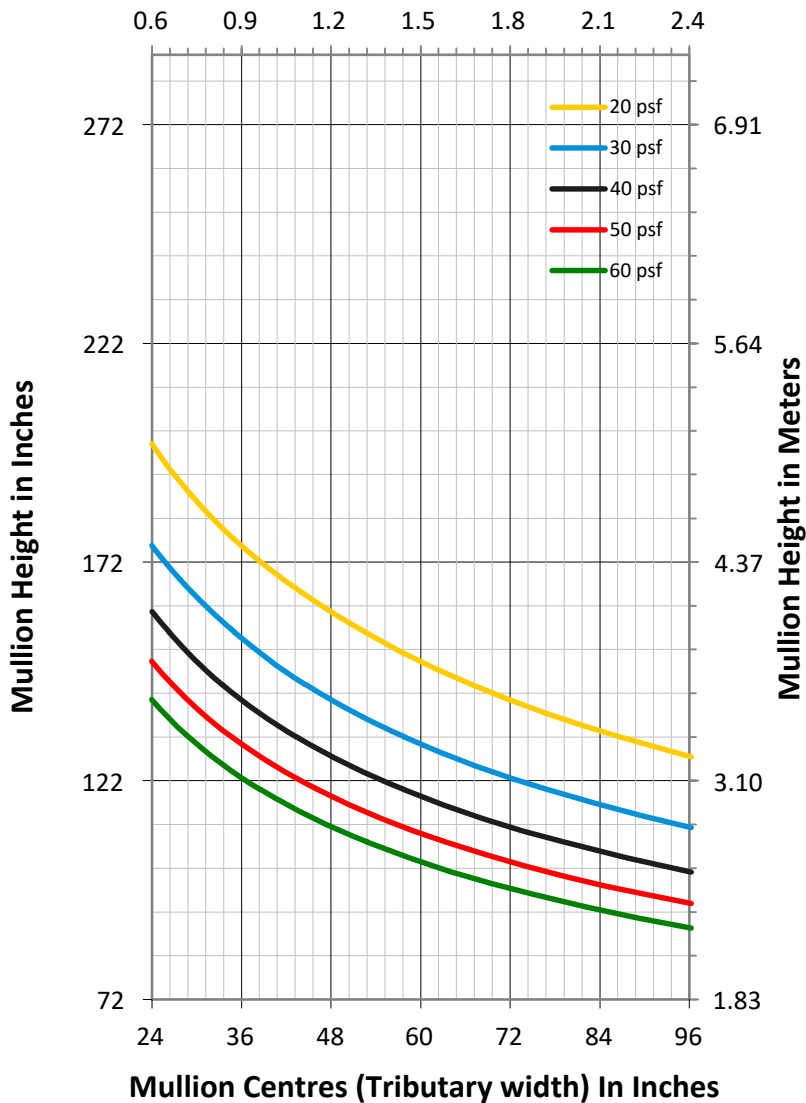
1. Deflection Limit: 0.125" (3.2mm).
2. Charts are calculated assuming a 1" overall sealed unit (6mm/13mm spacer/6mm)
3. Calculations are based on the position of the setting blocks being placed at 1/4 or 1/8 points.

WIND LOAD CHART FOR 2" x 5 1/4" MULLION - PART # 2425S

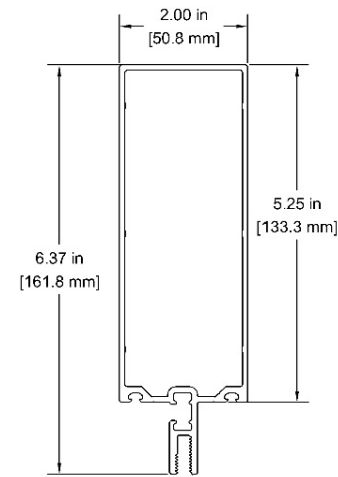
SPAN CHART

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CHART IS BASED ON DEFLECTION ANALYSIS
ONLY

Mullion Centres (Tributary width) In Meters



MULLION SECTION



SYSTEM PROPERTIES

Moment of Inertia, Section Modulus & Area

Moment of Inertia, Ixx	Ixx = 6.32 in ⁴
Section Modulus, Sxx	Sxx = 1.93 in ³
Total Area	A = 1.46 in ²

Modulus of Elasticity

Aluminum	10,000,000 PSI
Steel	29,000,000 PSI

GENERAL NOTES

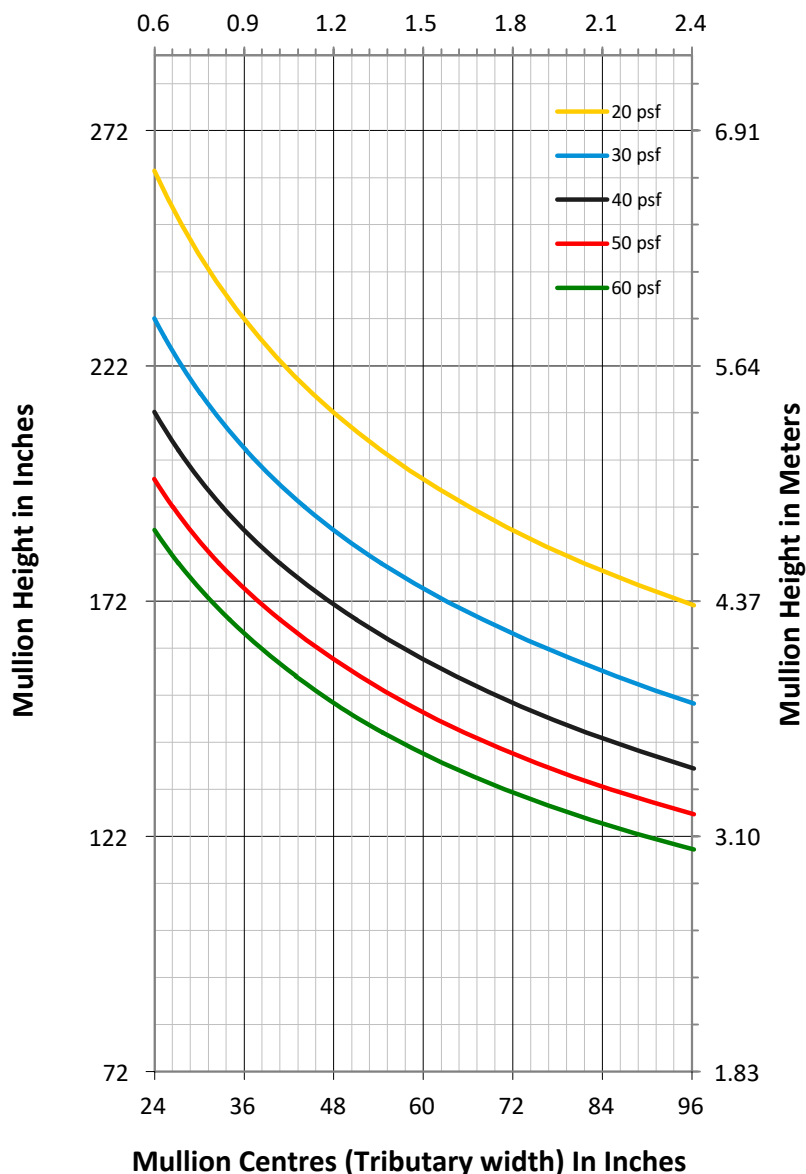
1. Deflection Limit: L/175 up to 13.5ft, L/240 + 0.25" over 13.5ft
2. Assume horizontal members provide lateral support
3. Steel moment of inertia converted to polyester, vinyl or aluminum equivalent
4. CANADIAN PROJECTS: Use SLS wind loads or modify the specified wind load by 0.75 before utilizing this chart. i.e. if project specifications require pnet = 40 psf, utilize 30 psf on this chart (0.75 x 40 = 30). (Based on NBCC 2020).

STEEL LOADED WIND LOAD CHART FOR 2" x 5 1/4" MULLION - PART # 2425S

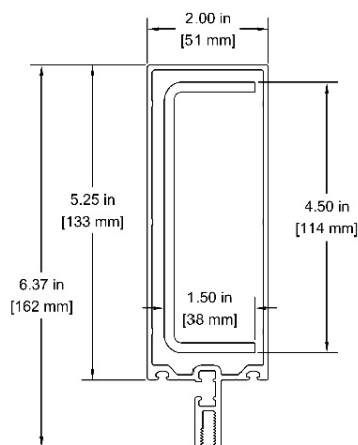
SPAN CHART

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CHART IS BASED ON DEFLECTION ANALYSIS
ONLY

Mullion Centres (Tributary width) In Meters



MULLION SECTION



SYSTEM PROPERTIES

Moment of Inertia, Section Modulus & Area

Moment of Inertia, Ixx	Ixx = 15.48 in ⁴
Section Modulus, Sxx	Sxx = 4.44 in ³
Total Area	A = 1.46 in ²

Modulus of Elasticity

Aluminum	10,000,000 PSI
Steel	29,000,000 PSI

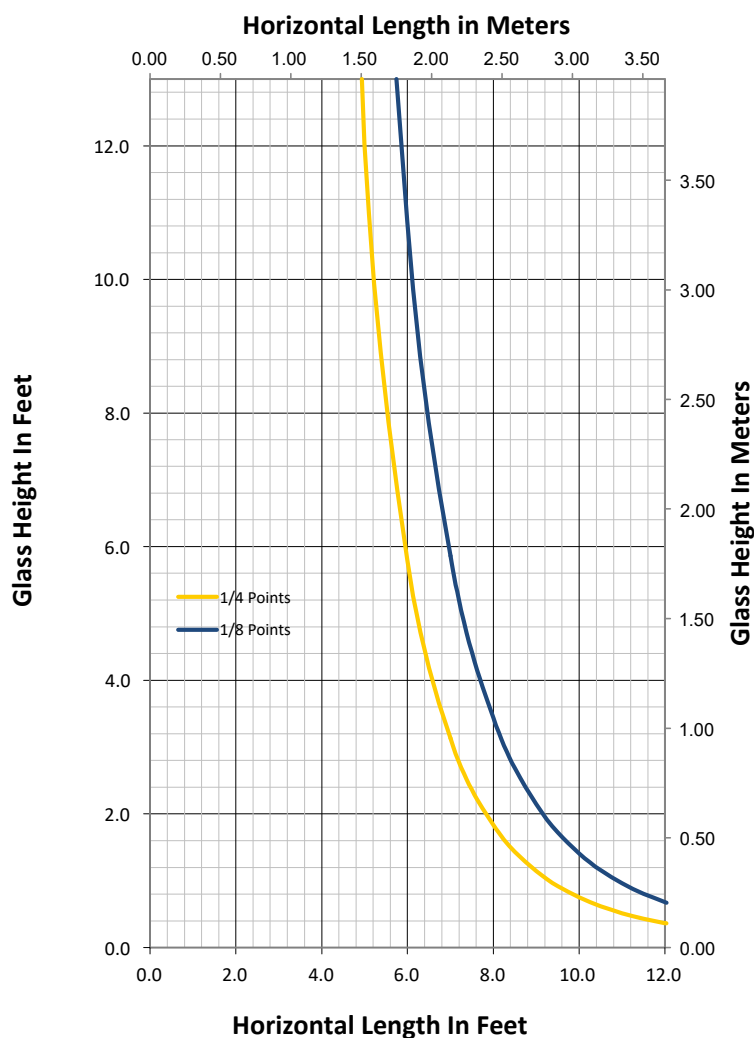
GENERAL NOTES

1. Deflection Limit: L/175 up to 13.5ft, L/240 + 0.25" over 13.5ft
2. Assume horizontal members provide lateral support
3. Steel moment of inertia converted to polyester, vinyl or 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 2020).

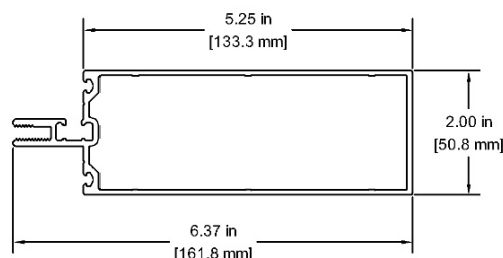
DEAD LOAD CHART FOR 2" x 5 1/4" MULLION - PART # 2425S

SPAN CHART

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ONLY



MULLION SECTION



SYSTEM PROPERTIES

Moment of Inertia, Section Modulus & Area

Moment of Inertia, I_{yy}	$I_{yy} = 0.89 \text{ in}^4$
Section Modulus, S_{yy}	$S_{yy} = 0.89 \text{ in}^3$
Total Area	$A = 1.46 \text{ in}^2$

Modulus of Elasticity

Aluminum	10,000,000 PSI
Steel	29,000,000 PSI

GENERAL NOTES

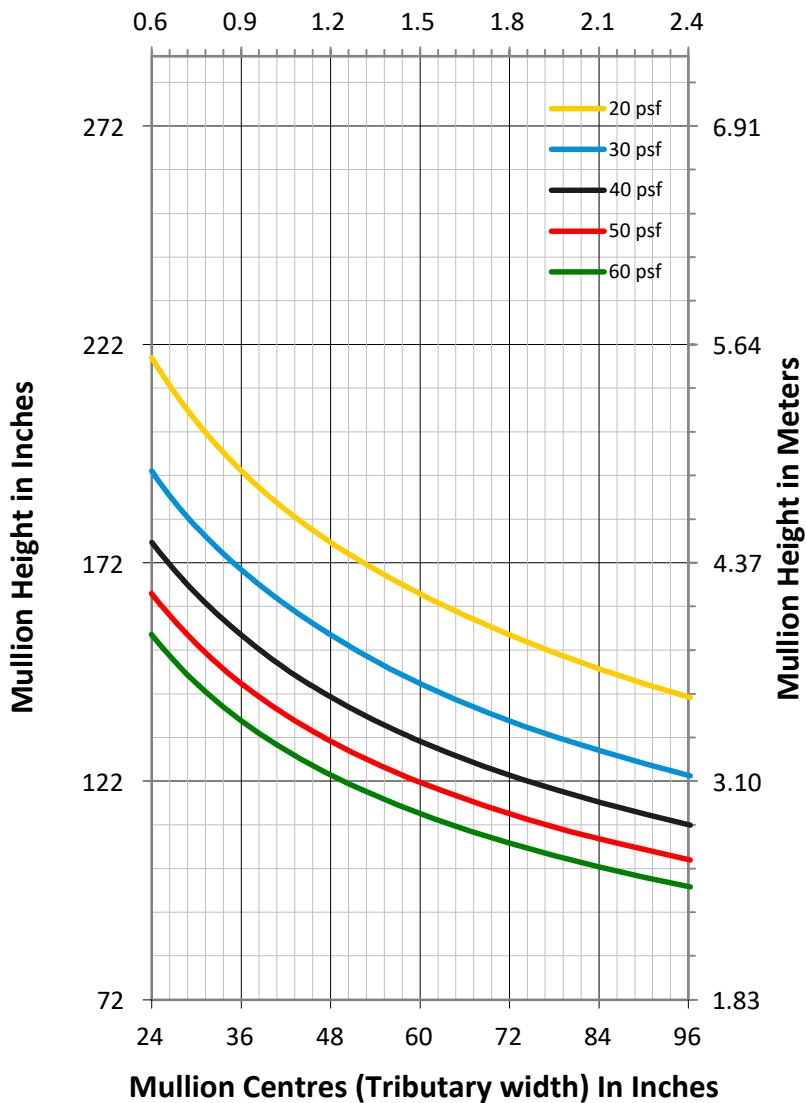
1. Deflection Limit: 0.125" (3.2mm).
2. Charts are calculated assuming a 1" overall sealed unit (6mm/13mm spacer/6mm)
3. Calculations are based on the position of the setting blocks being placed at 1/4 or 1/8 points.

WIND LOAD CHART FOR 2" x 6" MULLION - PART # 2426S

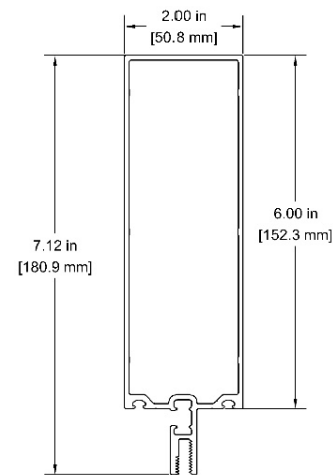
SPAN CHART

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ONLY

Mullion Centres (Tributary width) In Meters



MULLION SECTION



SYSTEM PROPERTIES

Moment of Inertia, Section Modulus & Area

Moment of Inertia, Ixx	Ixx = 8.57 in ⁴
Section Modulus, Sxx	Sxx = 2.33 in ³
Total Area	A = 1.58 in ²

Modulus of Elasticity

Aluminum	10,000,000 PSI
Steel	29,000,000 PSI

GENERAL NOTES

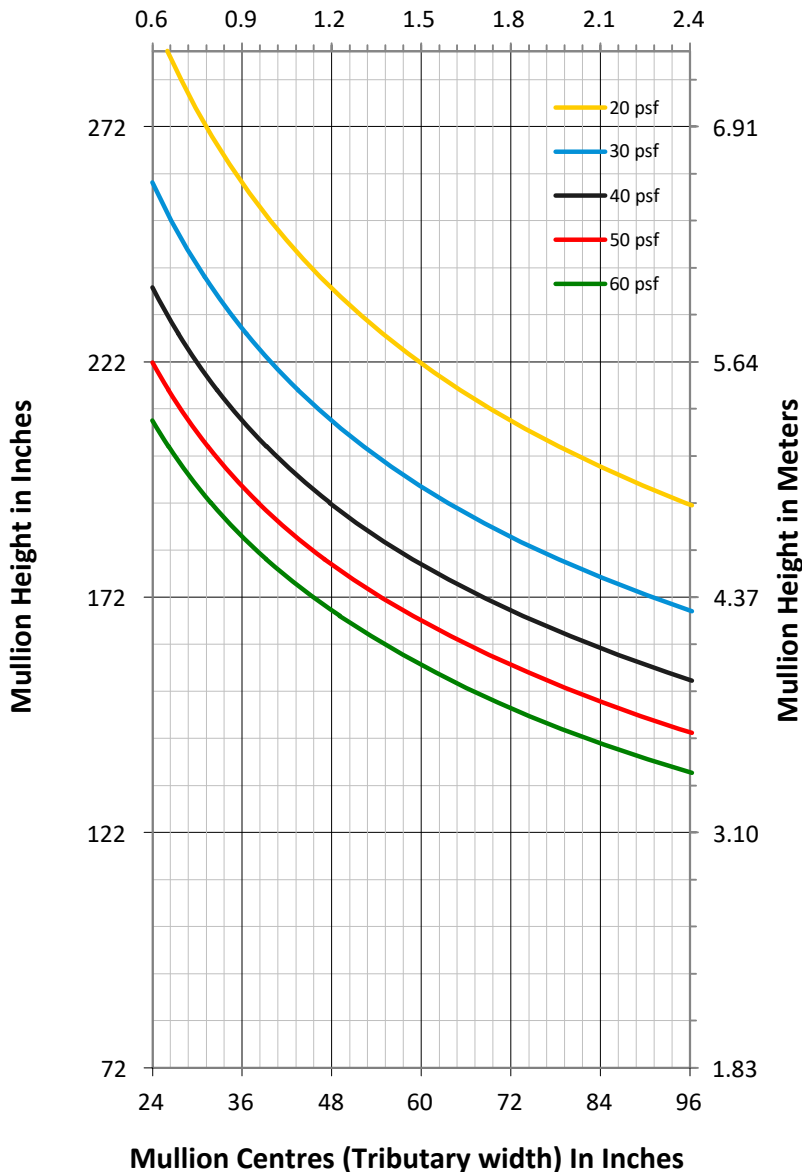
1. Deflection Limit: L/175 up to 13.5ft, L/240 + 0.25" over 13.5ft
2. Assume horizontal members provide lateral support
3. Steel moment of inertia converted to polyester, vinyl or aluminum equivalent
4. CANADIAN PROJECTS: Use SLS wind loads or modify the specified wind load by 0.75 before utilizing this chart. i.e. if project specifications require pnet = 40 psf, utilize 30 psf on this chart (0.75 x 40 = 30). (Based on NBCC 2020).

STEEL LOADED WIND LOAD CHART FOR 2" x 6" MULLION - PART # 2426S

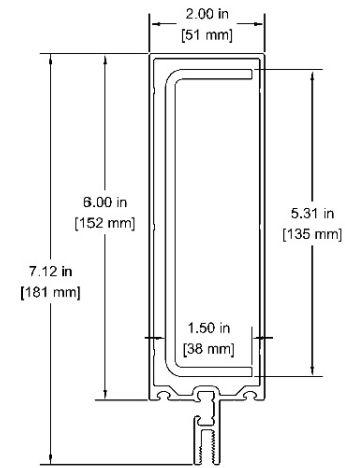
SPAN CHART

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CHART IS BASED ON DEFLECTION ANALYSIS
ONLY

Mullion Centres (Tributary width) In Meters



MULLION SECTION



SYSTEM PROPERTIES

Moment of Inertia, Section Modulus & Area

Moment of Inertia, Ixx	Ixx = 22.33 in ⁴
Section Modulus, Sxx	Sxx = 4.58 in ³
Total Area	A = 1.58 in ²

Modulus of Elasticity

Aluminum	10,000,000 PSI
Steel	29,000,000 PSI

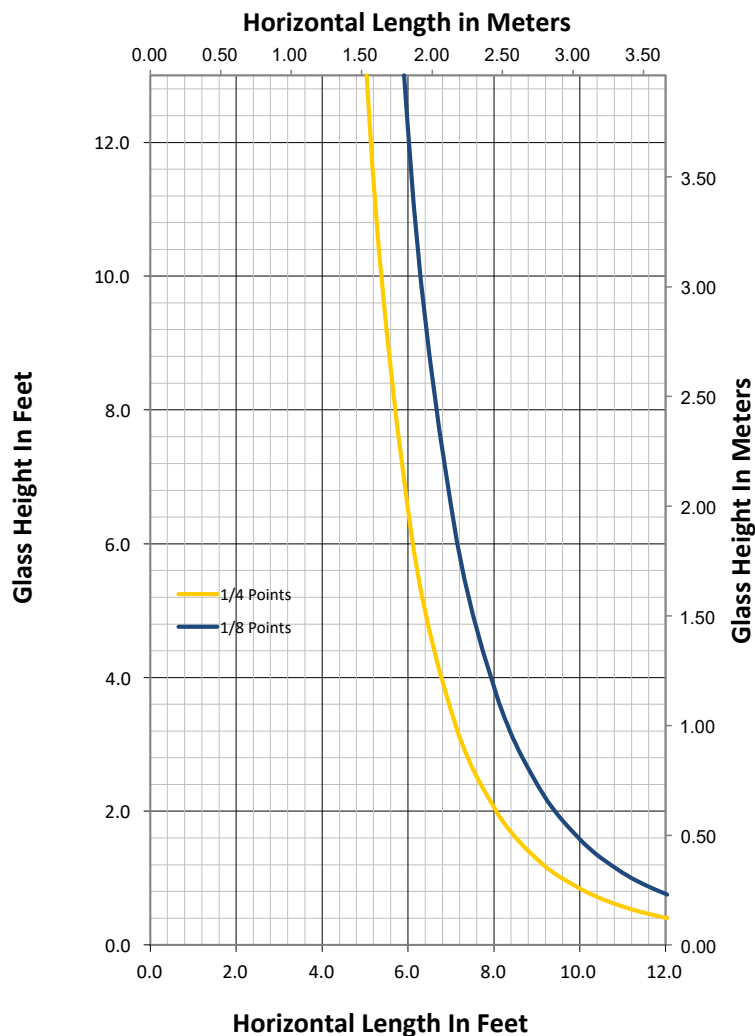
GENERAL NOTES

1. Deflection Limit: L/175 up to 13.5ft, L/240 + 0.25" over 13.5ft
2. Assume horizontal members provide lateral support
3. Steel moment of inertia converted to polyester, vinyl or 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 2020).

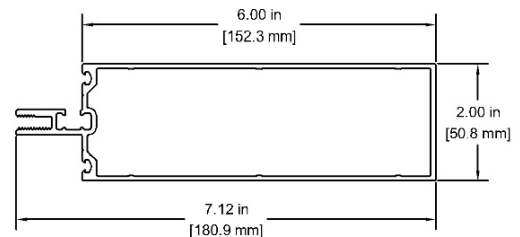
DEAD LOAD CHART FOR 2" x 6" MULLION - PART # 2426S

SPAN CHART

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ONLY



MULLION SECTION



SYSTEM PROPERTIES

Moment of Inertia, Section Modulus & Area

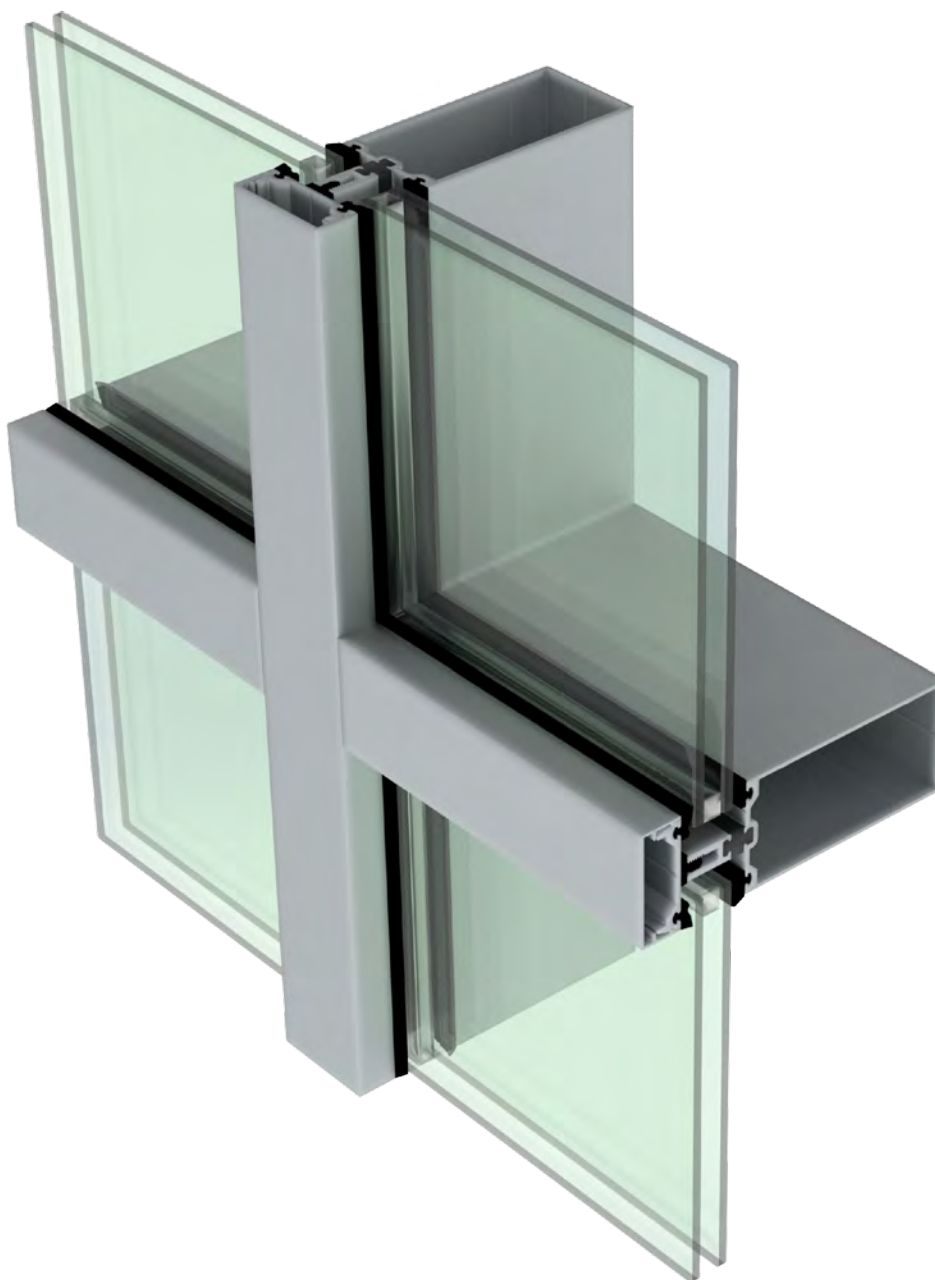
Moment of Inertia, I_{yy}	$I_{yy} = 1.00 \text{ in}^4$
Section Modulus, S_{yy}	$S_{yy} = 1.00 \text{ in}^3$
Total Area	$A = 1.58 \text{ in}^2$

Modulus of Elasticity

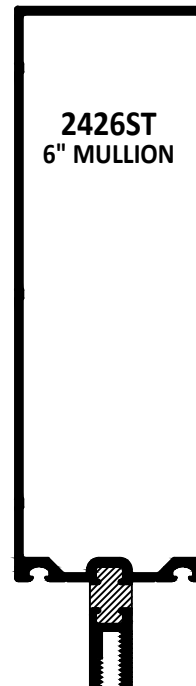
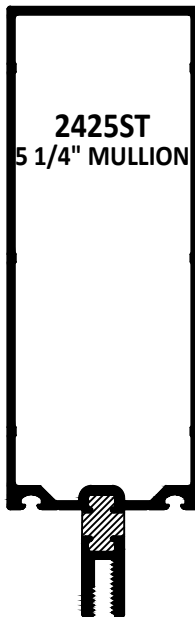
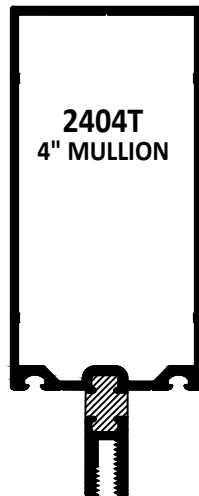
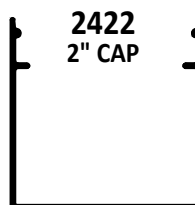
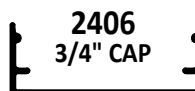
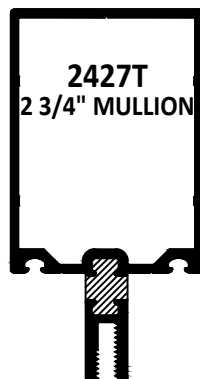
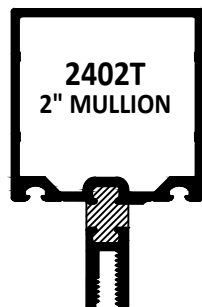
Aluminum	10,000,000 PSI
Steel	29,000,000 PSI

GENERAL NOTES

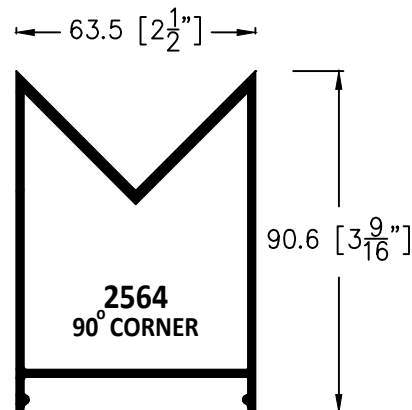
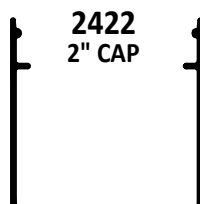
1. Deflection Limit: 0.125" (3.2mm).
2. Charts are calculated assuming a 1" overall sealed unit (6mm/13mm spacer/6mm)
3. Calculations are based on the position of the setting blocks being placed at 1/4 or 1/8 points.



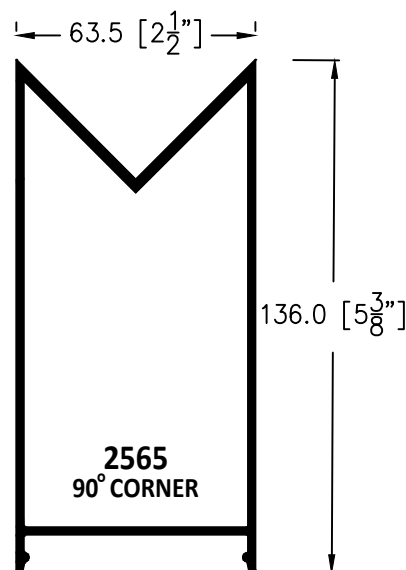
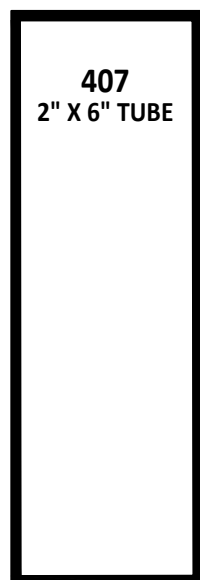
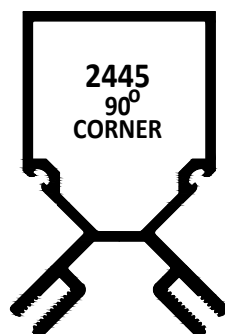
BACK SECTIONS & CAPS



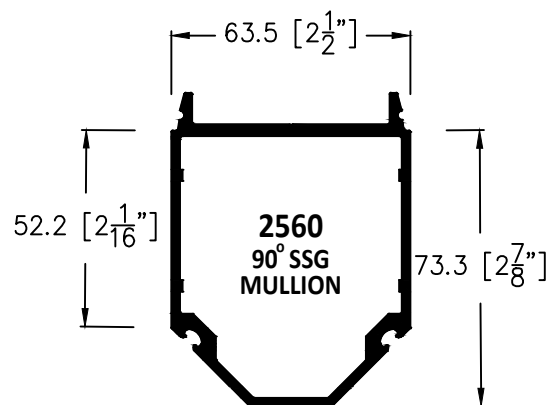
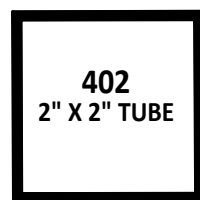
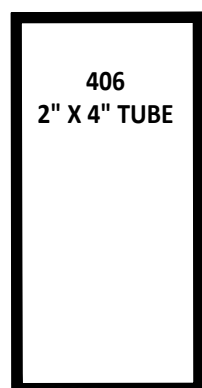
SSG & CORNERS



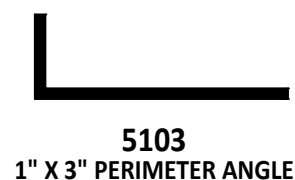
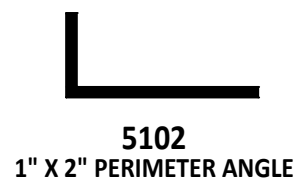
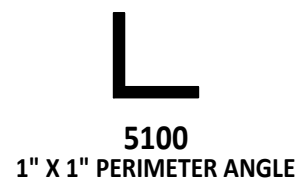
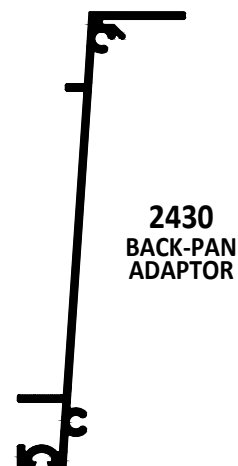
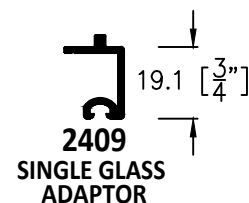
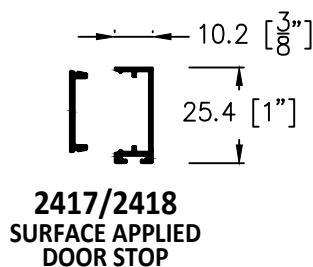
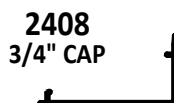
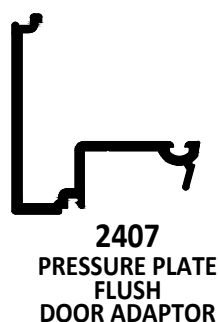
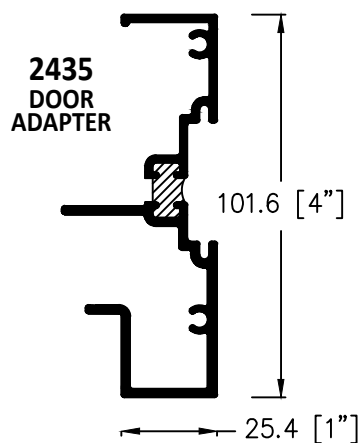
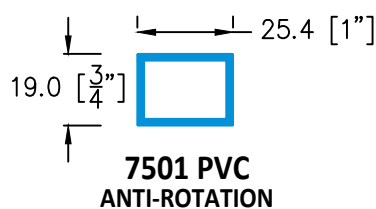
EXTENSION CAP FOR 4" BACK



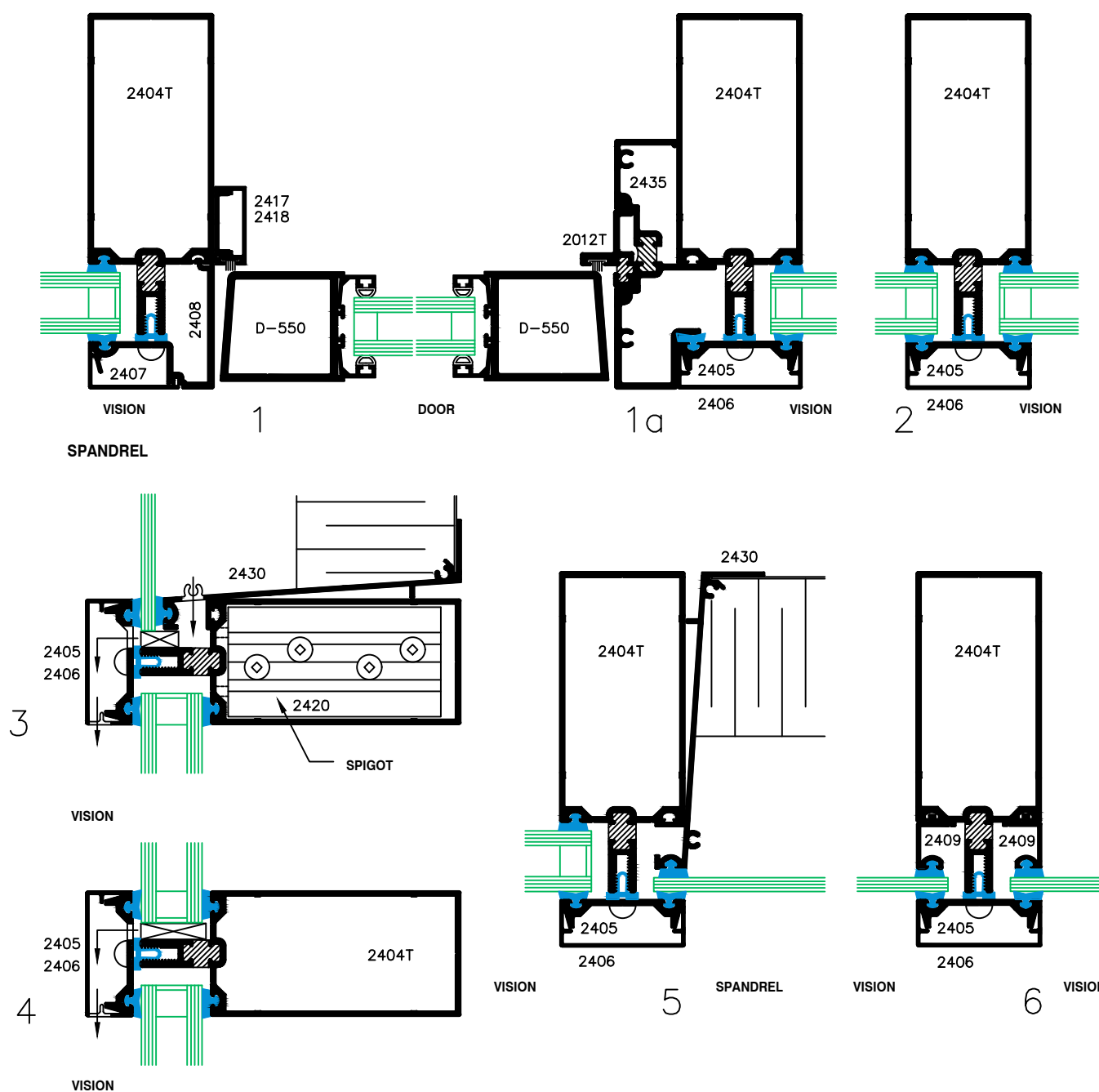
EXTENSION CAP FOR 5 1/4" BACK



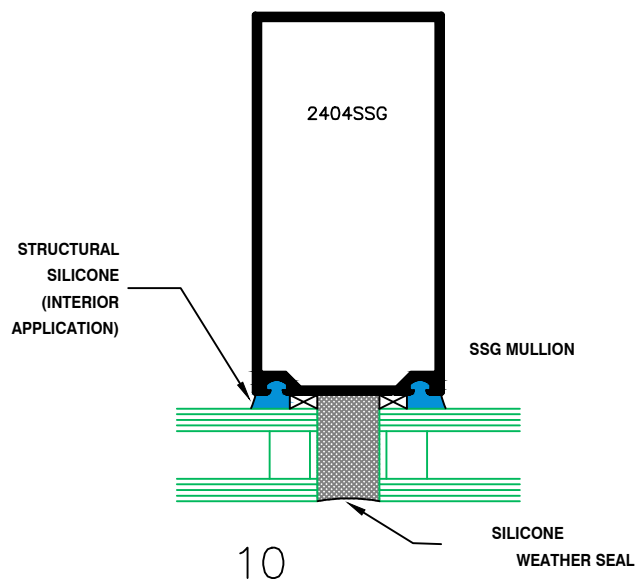
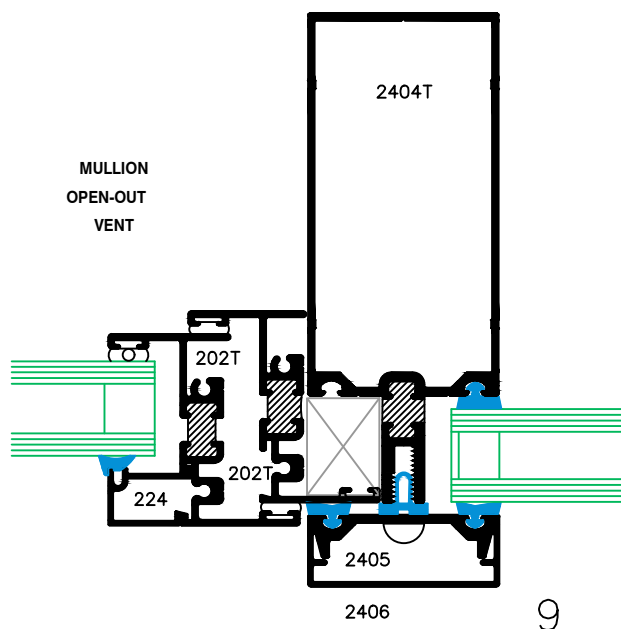
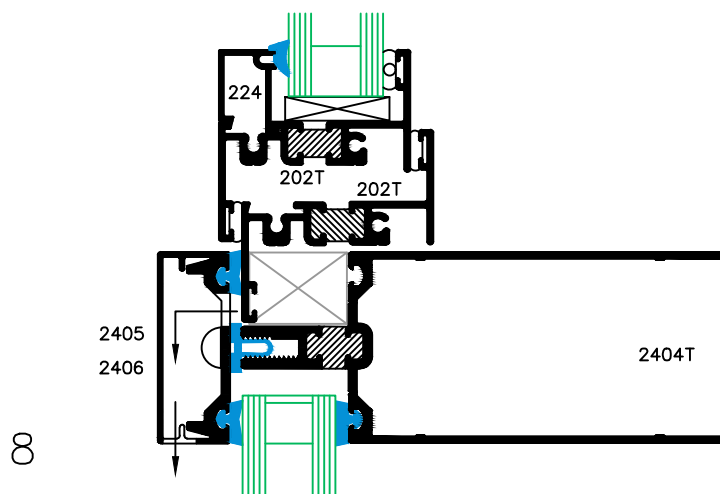
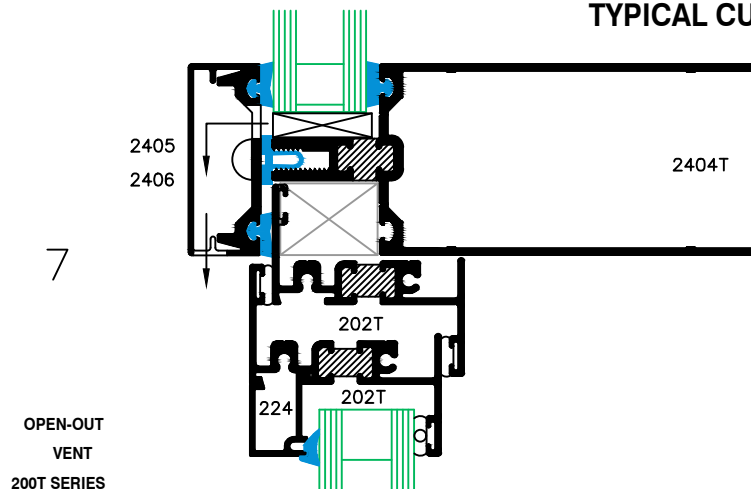
MISC. COMPONENTS



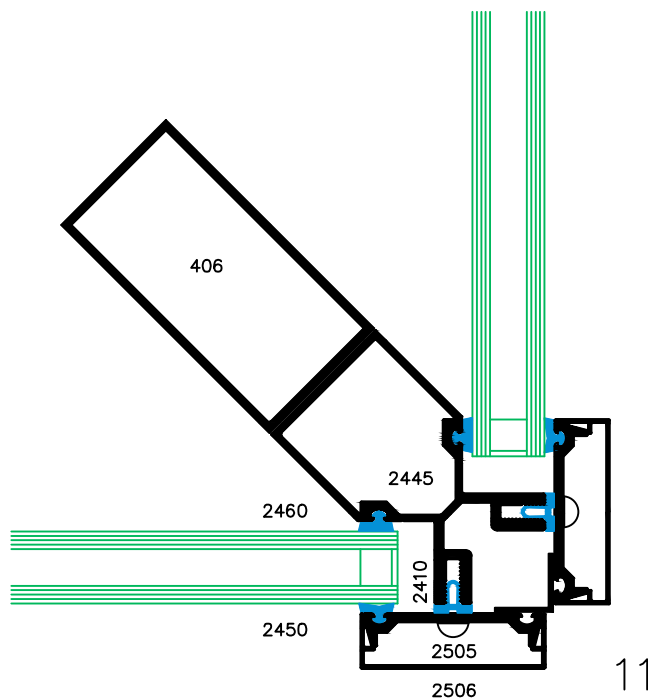
TYPICAL DETAILS



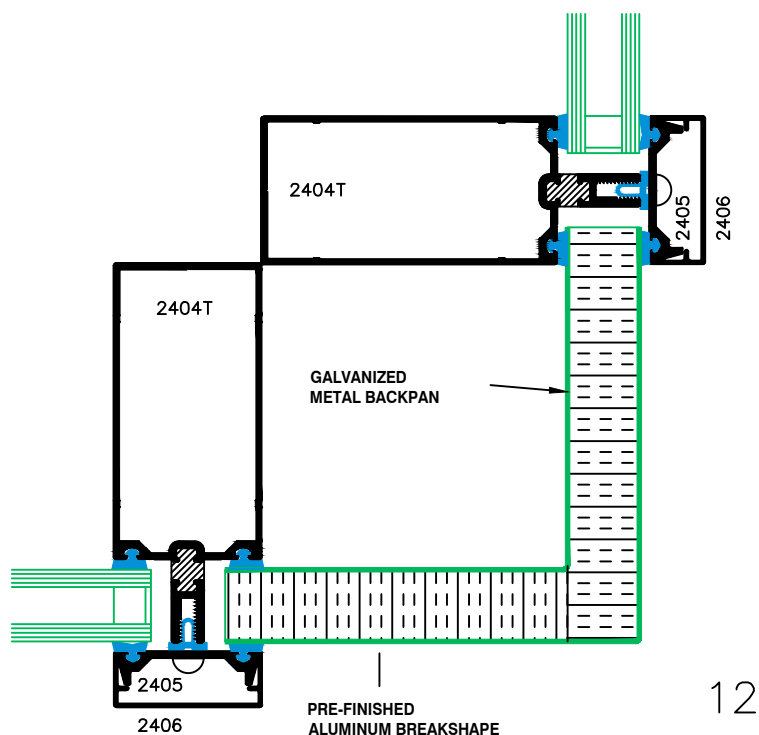
TYPICAL CURTAIN WALL DETAILS



TYPICAL CAPTURED CORNER DETAILS

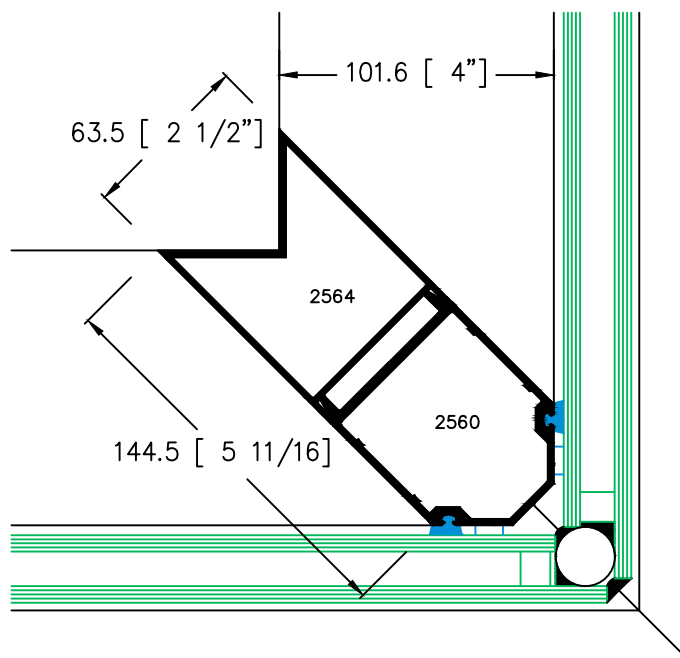


90° CAPTURED CORNER



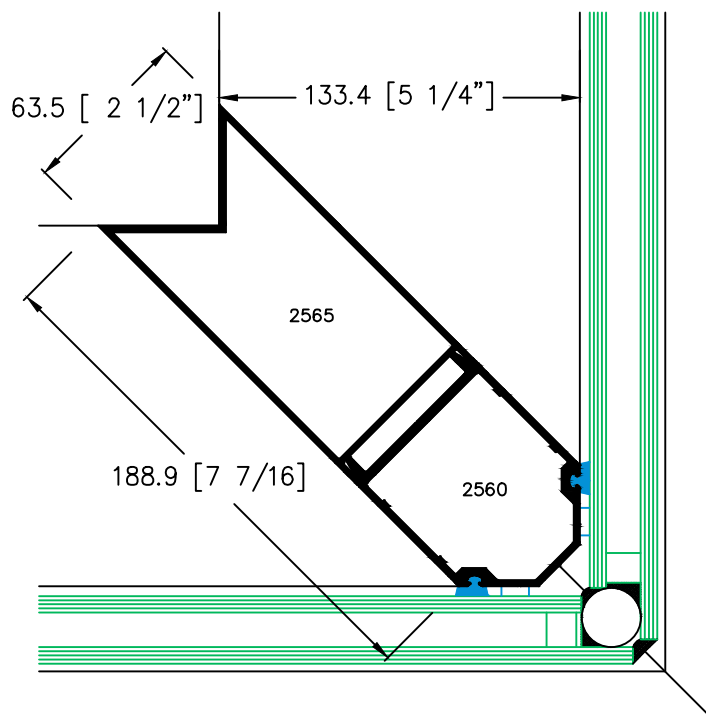
90° BREAKSHAPE CORNER

TYPICAL BUTT-JOINT CORNER DETAILS



90° BUTT-JOINT CORNER
AT 4" BACK MEMBER

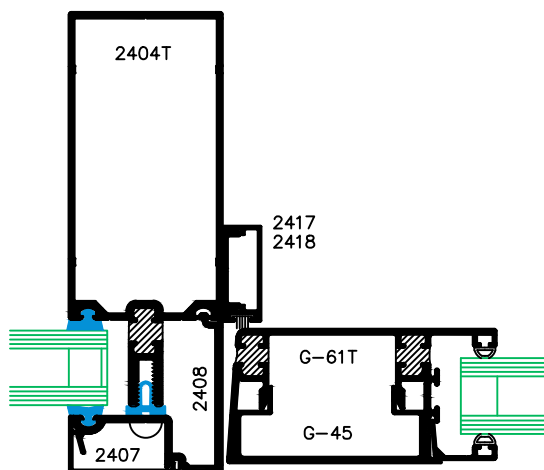
13



90° BUTT-JOINT CORNER
AT 5 1/4" BACK MEMBER

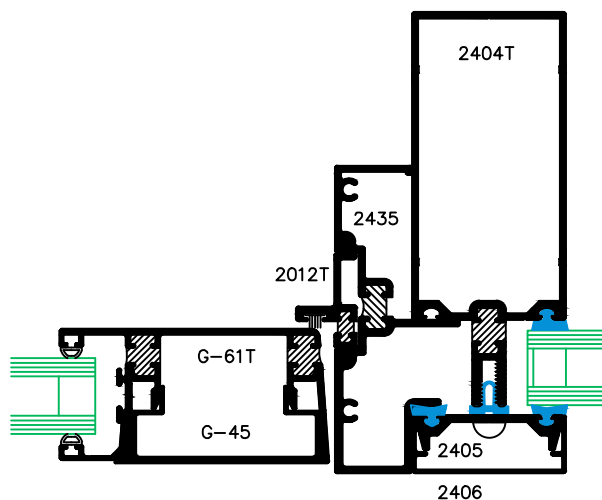
14

ALTERNATE DOOR DETAILS



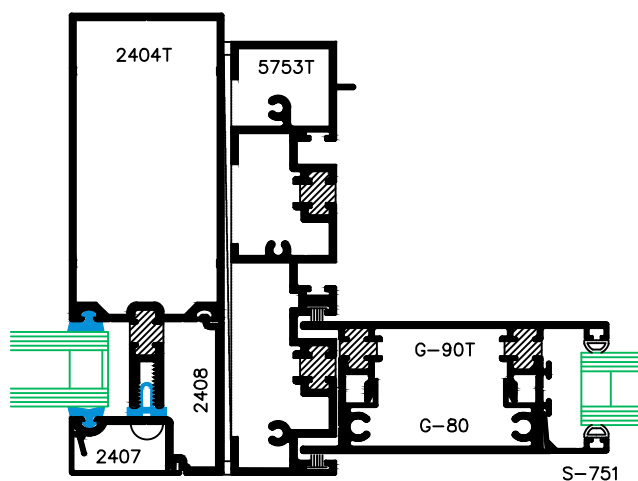
GLACIER DOOR

15



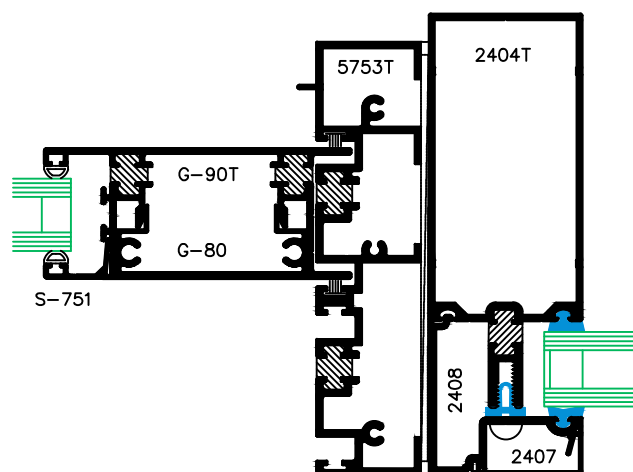
SWING DOORS

15a



1100T JAMB AT SLIDER

16

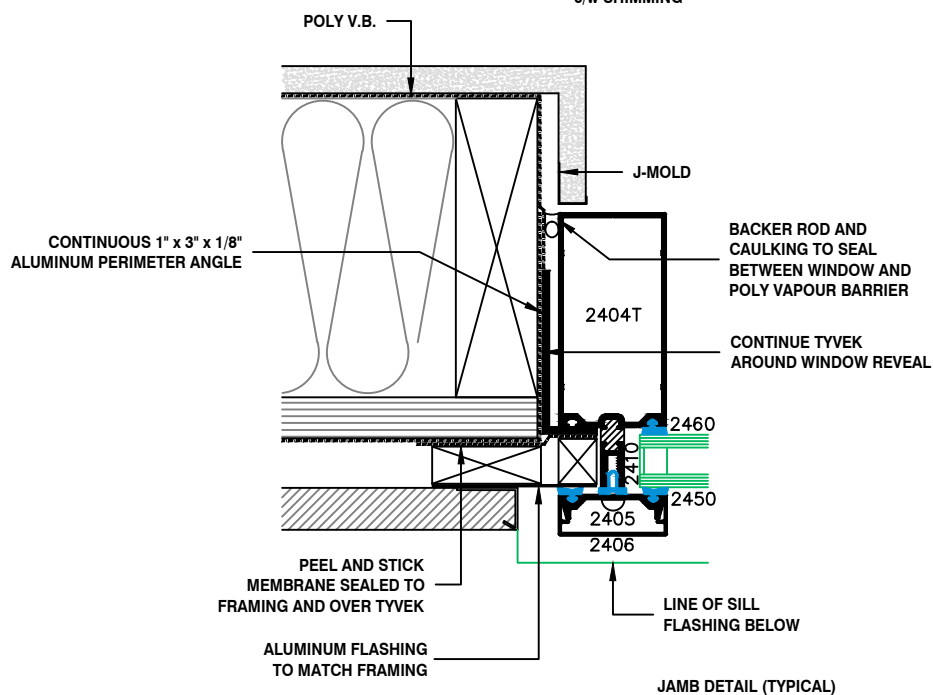
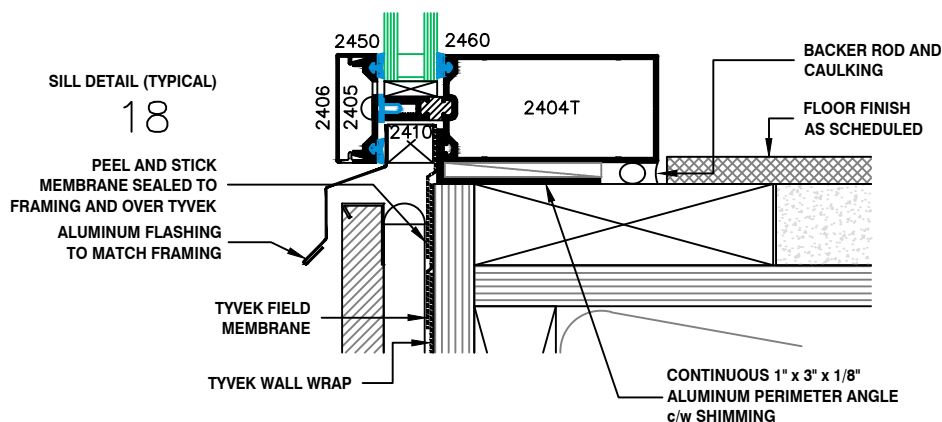
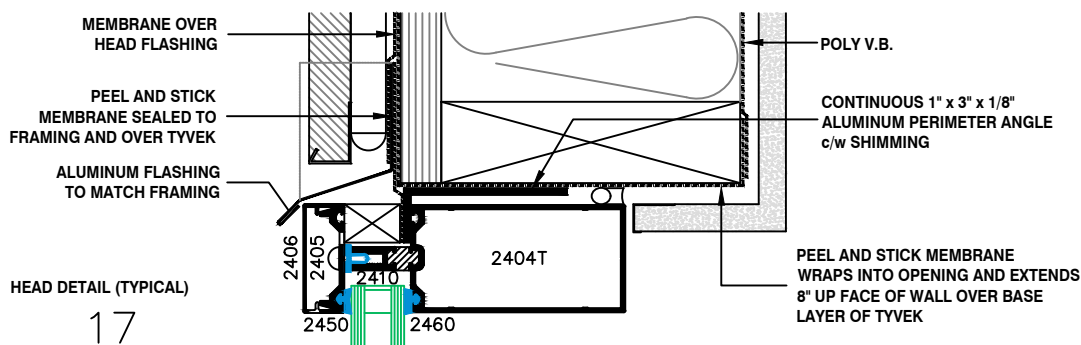


SLIDING DOORS

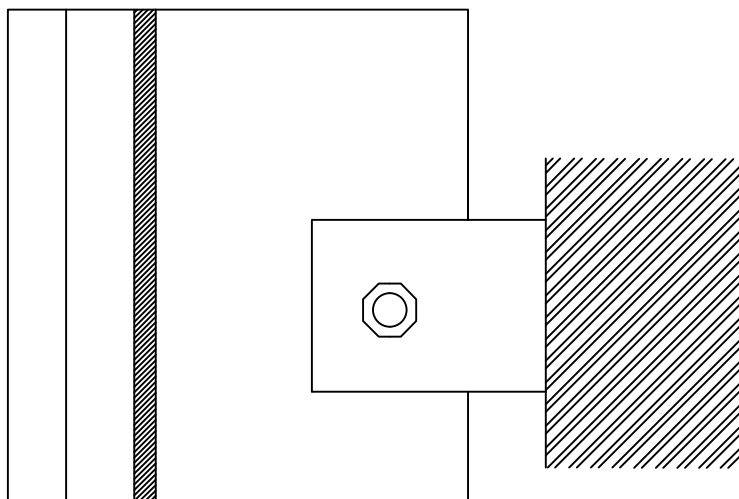
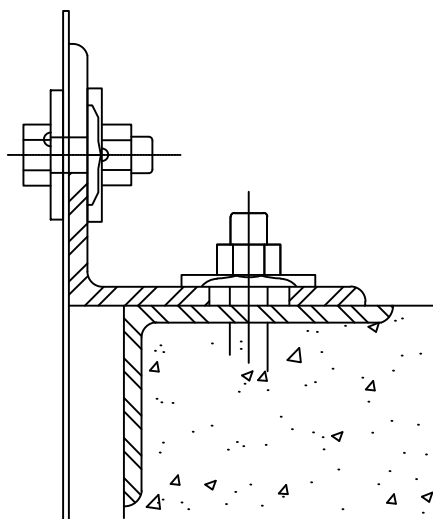
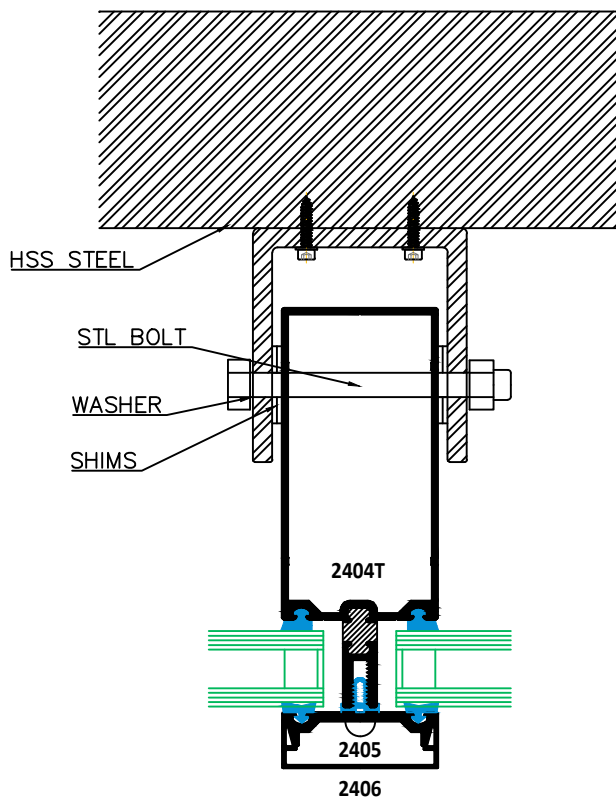
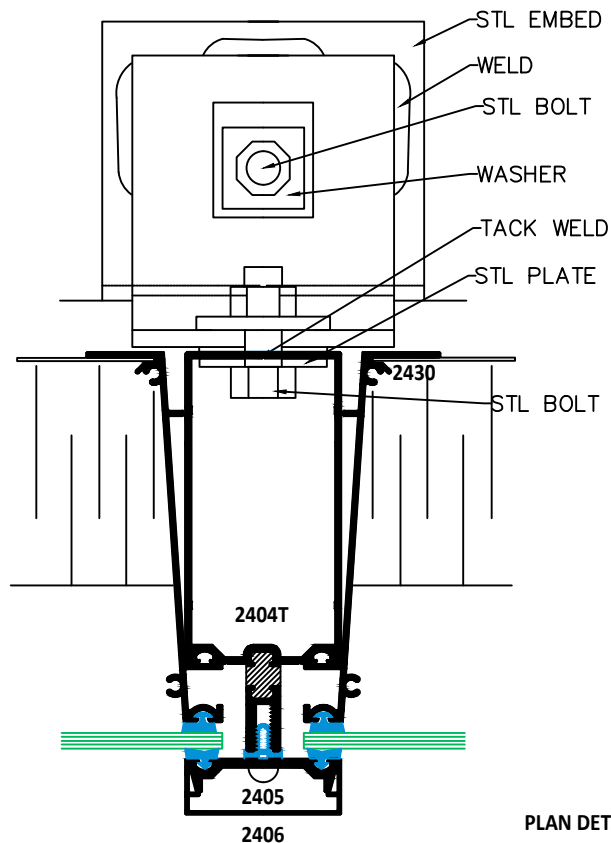
16a

1100T JAMB AT FIXED PANEL

INTERFACE DETAILS (SUGGESTED ONLY)

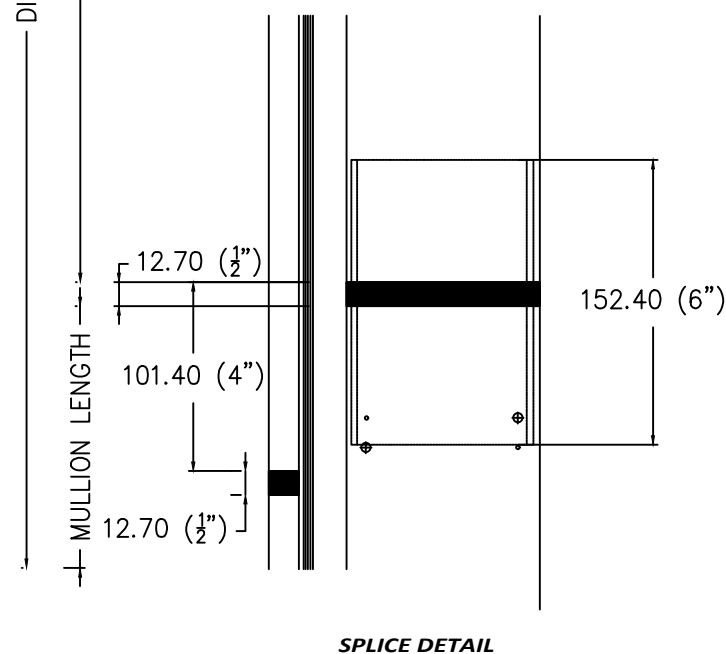
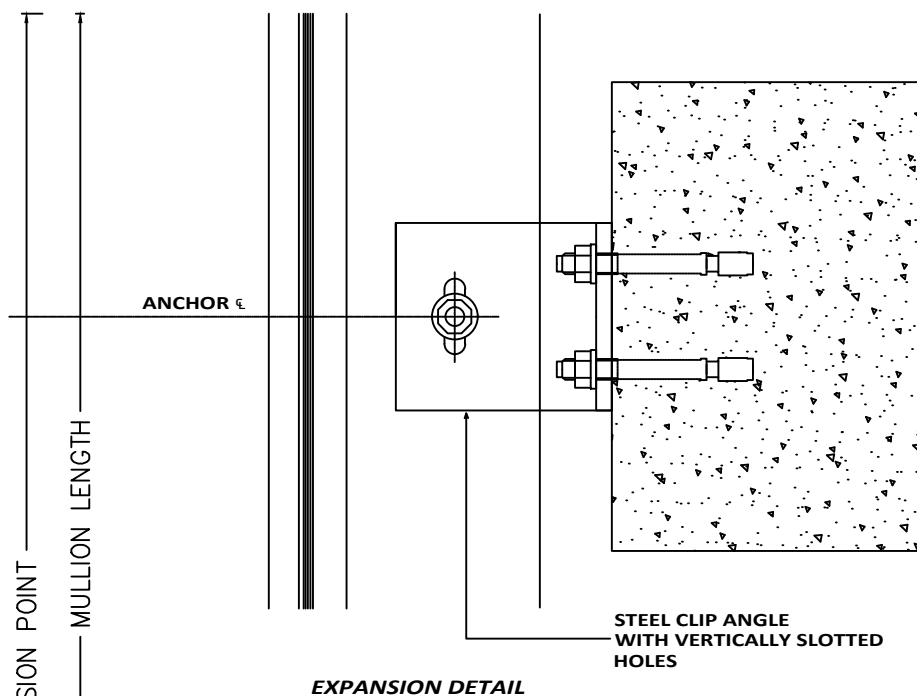


TYPICAL ANCHORING DETAILS



SECTION DETAILS

EXPANSION & SPLICE DETAILS

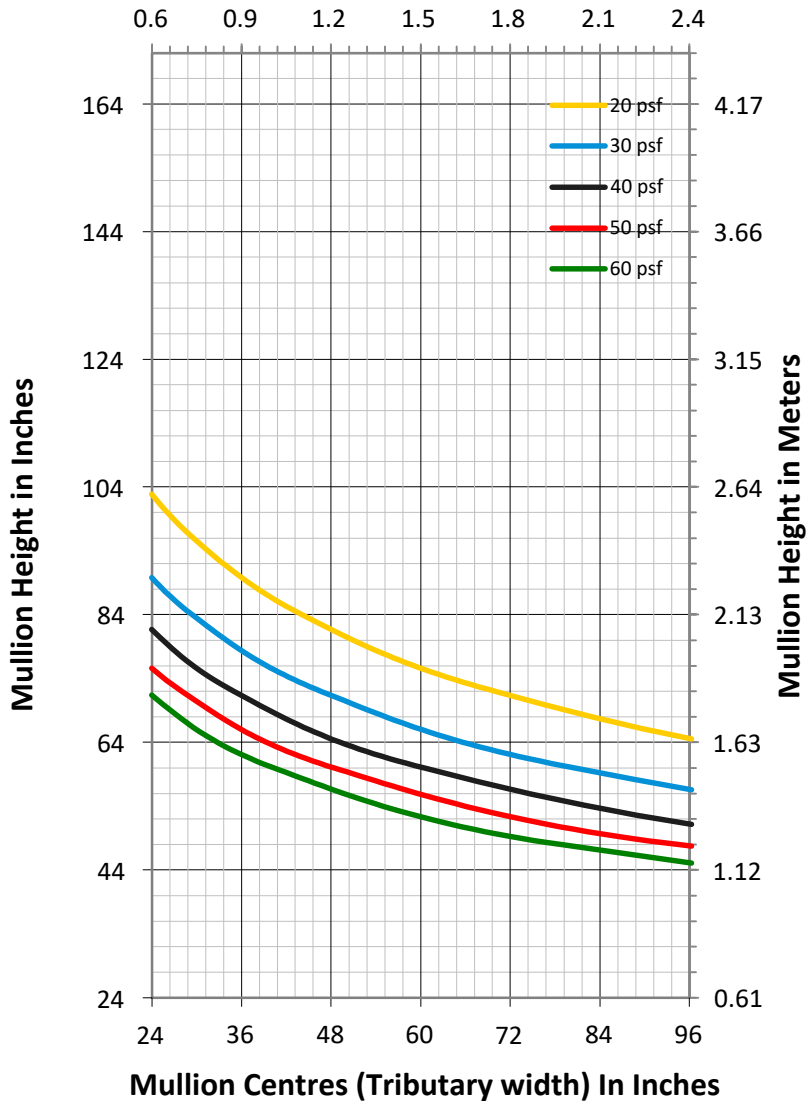


WIND LOAD CHART FOR 2" x 2" T/B MULLION - PART # 2402T

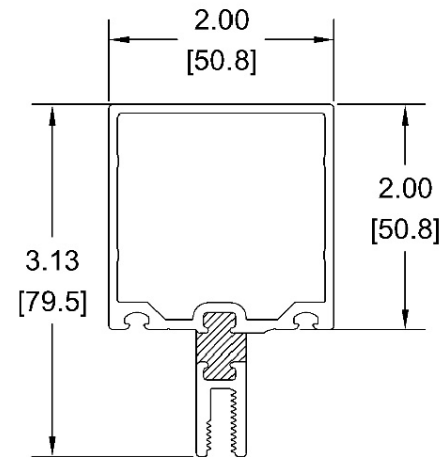
SPAN CHART

SPAN CHART IS FOR ESTIMATION ONLY.
DO NOT UTILIZE FOR DETAILED DESIGN.
CHART IS BASED ON DEFLECTION ANALYSIS
ONLY

Mullion Centres (Tributary width) In Meters



MULLION SECTION



SYSTEM PROPERTIES

Moment of Inertia, Section Modulus & Area

Moment of Inertia, I_{xx}	$I_{xx} = 0.83 \text{ in}^4$
Section Modulus, S_{xx}	$S_{xx} = 0.38 \text{ in}^3$
Total Area	$A = 0.92 \text{ in}^2$

Modulus of Elasticity

Aluminum	10,000,000 PSI
Steel	29,000,000 PSI

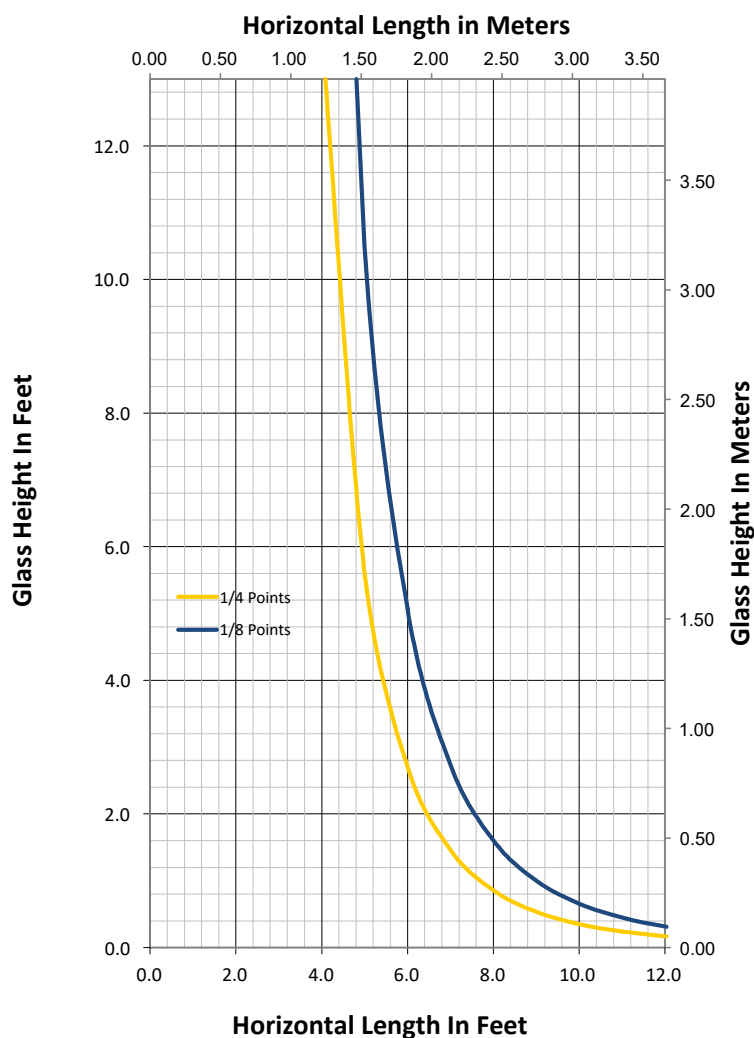
GENERAL NOTES

1. Deflection Limit: $L/175$ up to 13.5ft, $L/240 + 0.25"$ over 13.5ft
2. Assume horizontal members provide lateral support
3. Steel moment of inertia converted to polyester, vinyl or 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 $p_{net} = 40 \text{ psf}$, utilize 30 psf on this chart ($0.75 \times 40 = 30$). (Based on NBCC 2020).

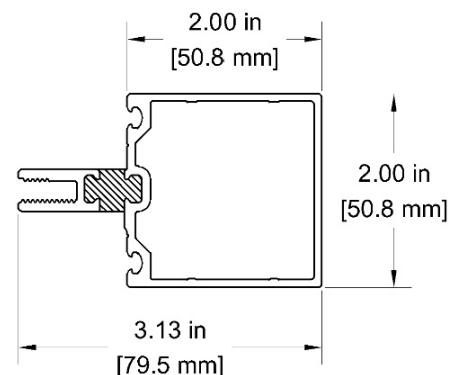
DEAD LOAD CHART FOR 2" x 2" T/B MULLION - PART # 2402T

SPAN CHART

SPAN CHART IS FOR ESTIMATION ONLY.
DO NOT UTILIZE FOR DETAILED DESIGN.
CHART IS BASED ON DEFLECTION ANALYSIS
ONLY



MULLION SECTION



SYSTEM PROPERTIES

Moment of Inertia, Section Modulus & Area

Moment of Inertia, I_{yy}	$I_{yy} = 0.42 \text{ in}^4$
Section Modulus, S_{yy}	$S_{yy} = 0.41 \text{ in}^3$
Total Area	$A = 0.92 \text{ in}^2$

Modulus of Elasticity

Aluminum	10,000,000 PSI
Steel	29,000,000 PSI

GENERAL NOTES

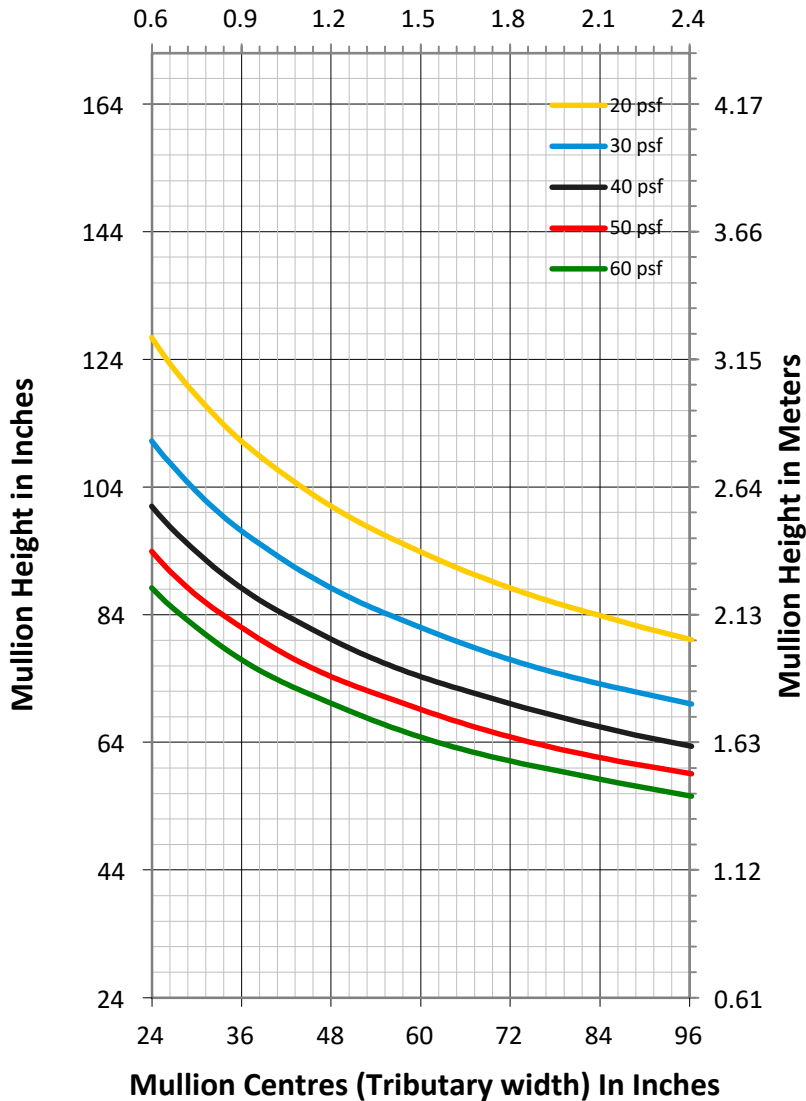
1. Deflection Limit: 0.125" (3.2mm).
2. Charts are calculated assuming a 1" overall sealed unit (6mm/13mm spacer/6mm)
3. Calculations are based on the position of the setting blocks being placed at 1/4 or 1/8 points.

WIND LOAD CHART FOR 2" x 2 3/4" T/B MULLION - PART # 2427T

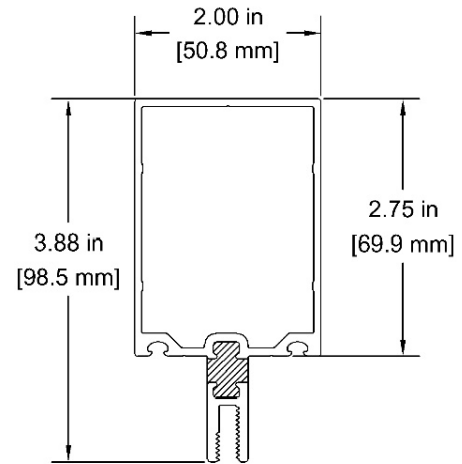
SPAN CHART

SPAN CHART IS FOR ESTIMATION ONLY.
DO NOT UTILIZE FOR DETAILED DESIGN.
CHART IS BASED ON DEFLECTION ANALYSIS
ONLY

Mullion Centres (Tributary width) In Meters



MULLION SECTION



SYSTEM PROPERTIES

Moment of Inertia, Section Modulus & Area

Moment of Inertia, Ixx	Ixx = 1.57 in ⁴
Section Modulus, Sxx	Sxx = 0.74 in ³
Total Area	A = 1.04 in ²

Modulus of Elasticity

Aluminum	10,000,000 PSI
Steel	29,000,000 PSI

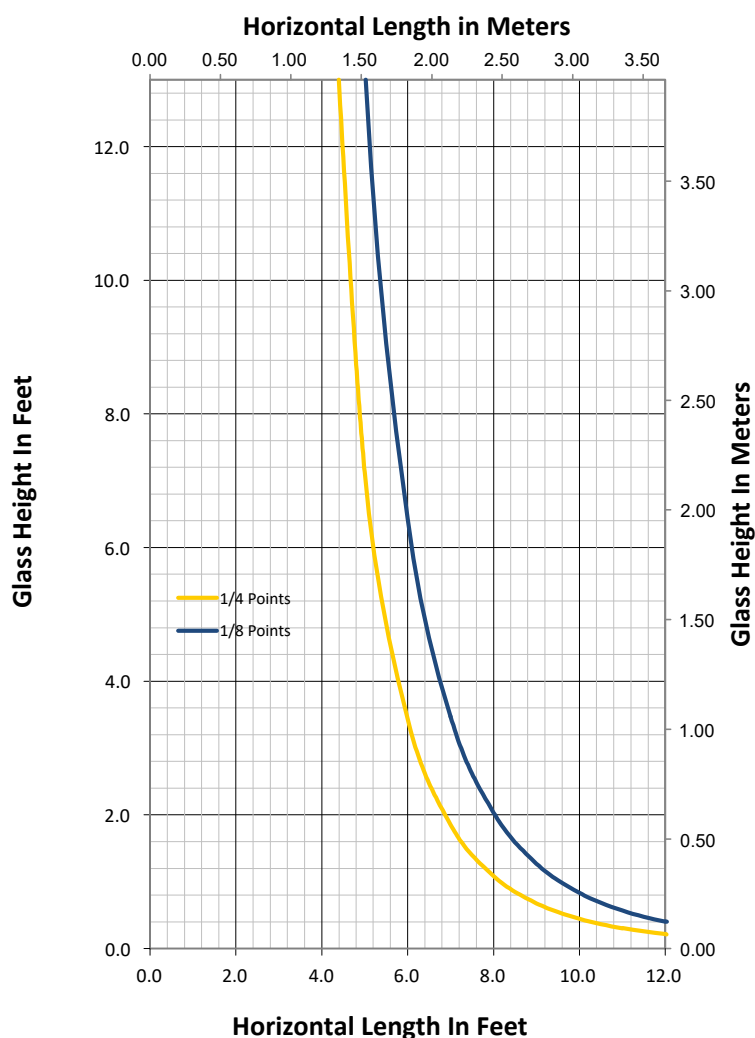
GENERAL NOTES

1. Deflection Limit: L/175 up to 13.5ft, L/240 + 0.25" over 13.5ft
2. Assume horizontal members provide lateral support
3. Steel moment of inertia converted to polyester, vinyl or 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 2020).

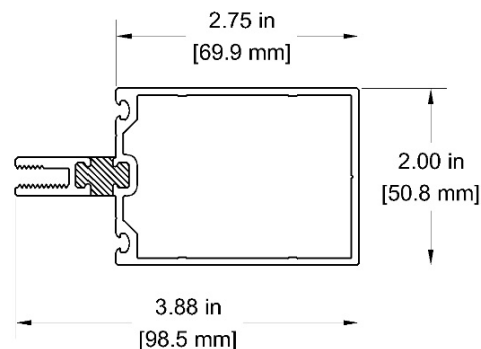
DEAD LOAD CHART FOR 2" x 2 3/4" T/B MULLION - PART # 2427T

SPAN CHART

SPAN CHART IS FOR ESTIMATION ONLY.
DO NOT UTILIZE FOR DETAILED DESIGN.
CHART IS BASED ON DEFLECTION ANALYSIS
ONLY



MULLION SECTION



SYSTEM PROPERTIES

Moment of Inertia, Section Modulus & Area

Moment of Inertia, I_{yy}	$I_{yy} = 0.53 \text{ in}^4$
Section Modulus, S_{yy}	$S_{yy} = 0.52 \text{ in}^3$
Total Area	$A = 1.04 \text{ in}^2$

Modulus of Elasticity

Aluminum	10,000,000 PSI
Steel	29,000,000 PSI

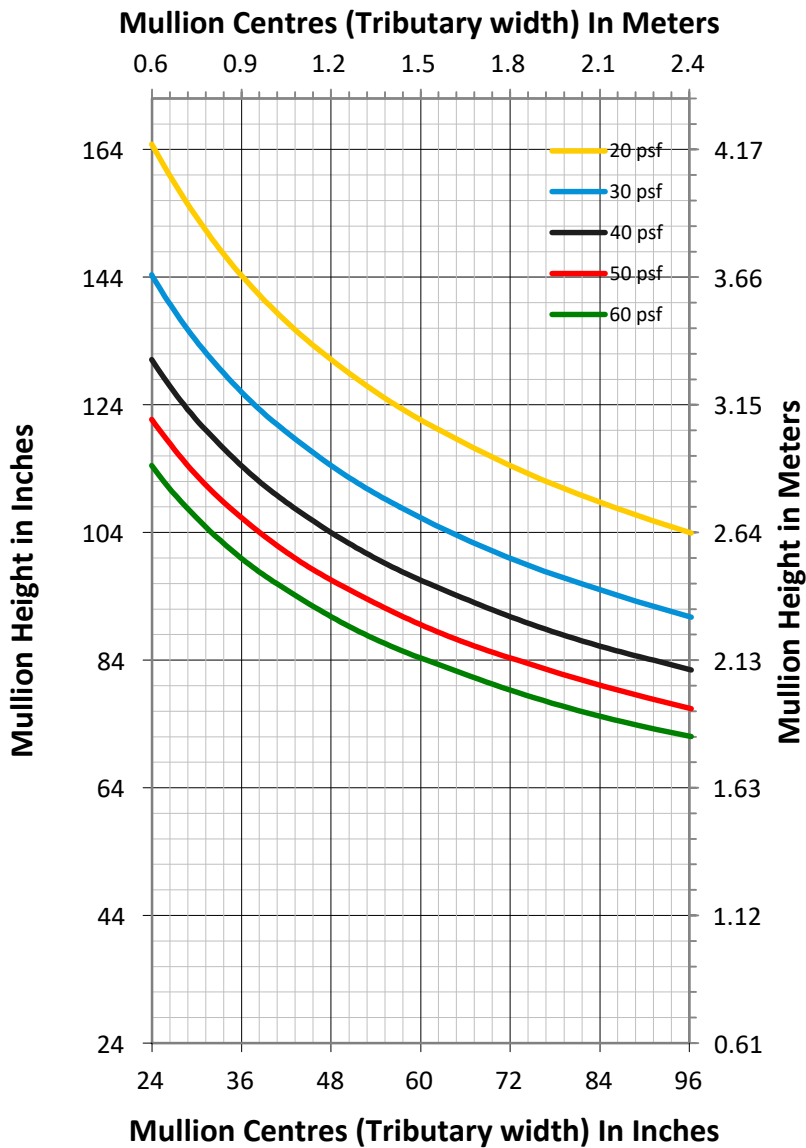
GENERAL NOTES

1. Deflection Limit: 0.125" (3.2mm).
2. Charts are calculated assuming a 1" overall sealed unit (6mm/13mm spacer/6mm)
3. Calculations are based on the position of the setting blocks being placed at 1/4 or 1/8 points.

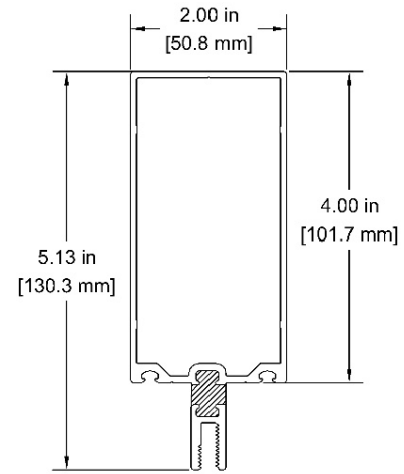
WIND LOAD CHART FOR 2" x 4" T/B MULLION - PART # 2404T

SPAN CHART

SPAN CHART IS FOR ESTIMATION ONLY.
DO NOT UTILIZE FOR DETAILED DESIGN.
CHART IS BASED ON DEFLECTION ANALYSIS
ONLY



MULLION SECTION



SYSTEM PROPERTIES

Moment of Inertia, Section Modulus & Area

Moment of Inertia, Ixx	Ixx = 3.42 in ⁴
Section Modulus, Sxx	Sxx = 1.08 in ³
Total Area	A = 1.24 in ²

Modulus of Elasticity

Aluminum	10,000,000 PSI
Steel	29,000,000 PSI

GENERAL NOTES

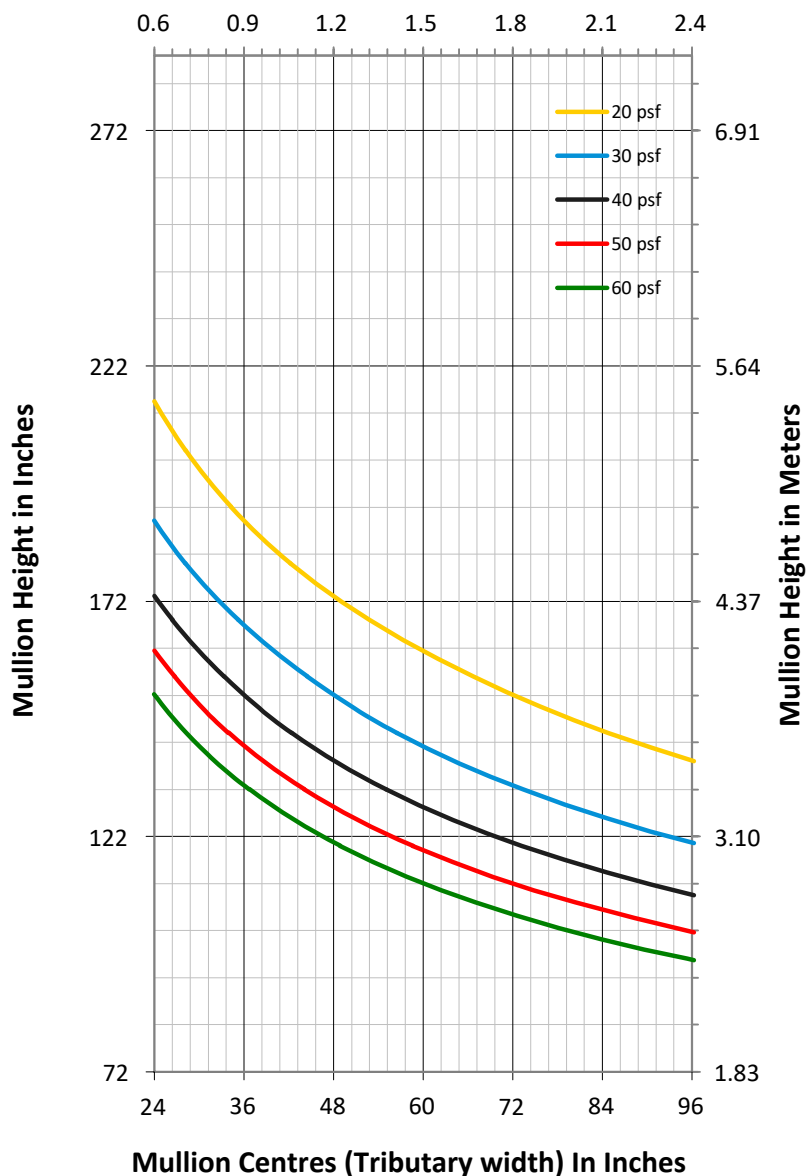
1. Deflection Limit: L/175 up to 13.5ft, L/240 + 0.25" over 13.5ft
2. Assume horizontal members provide lateral support
3. Steel moment of inertia converted to polyester, vinyl or aluminum equivalent
4. CANADIAN PROJECTS: Use SLS wind loads or modify the specified wind load by 0.75 before utilizing this chart. i.e. if project specifications require pnet = 40 psf, utilize 30 psf on this chart (0.75 x 40 = 30). (Based on NBCC 2020).

STEEL LOADED WIND LOAD CHART FOR 2" x 4" T/B MULLION - PART # 2404T

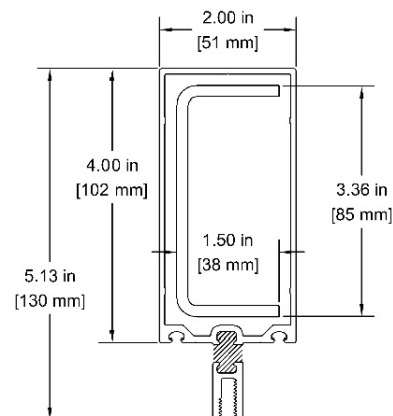
SPAN CHART

SPAN CHART IS FOR ESTIMATION ONLY.
DO NOT UTILIZE FOR DETAILED DESIGN.
CHART IS BASED ON DEFLECTION ANALYSIS
ONLY

Mullion Centres (Tributary width) In Meters



MULLION SECTION



SYSTEM PROPERTIES

Moment of Inertia, Section Modulus & Area

Moment of Inertia, Ixx	Ixx = 8.01 in ⁴
Section Modulus, Sxx	Sxx = 2.79 in ³
Total Area	A = 1.25 in ²

Modulus of Elasticity

Aluminum	10,000,000 PSI
Steel	29,000,000 PSI

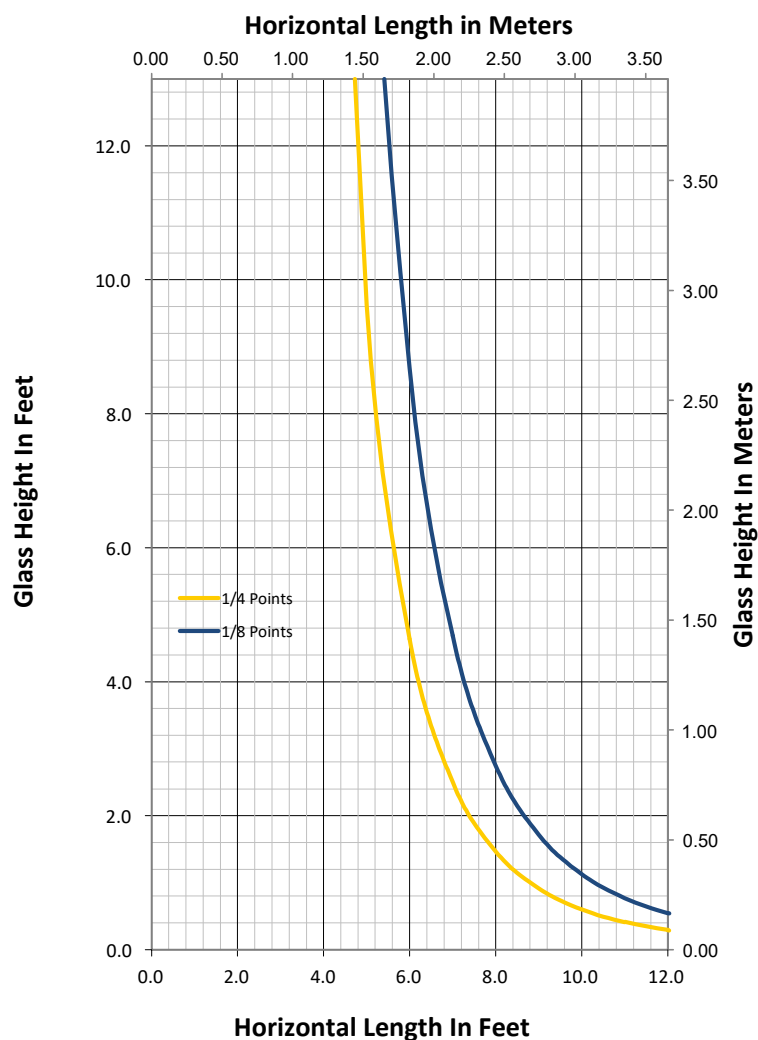
GENERAL NOTES

1. Deflection Limit: L/175 up to 13.5ft, L/240 + 0.25" over 13.5ft
2. Assume horizontal members provide lateral support
3. Steel moment of inertia converted to polyester, vinyl or 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 2020).

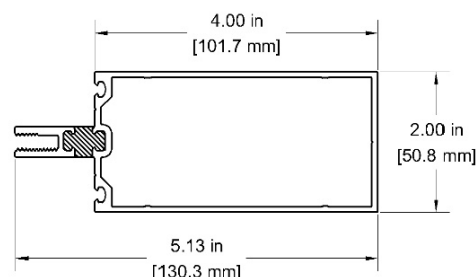
DEAD LOAD CHART FOR 2" x 4" T/B MULLION - PART # 2404T

SPAN CHART

SPAN CHART IS FOR ESTIMATION ONLY.
DO NOT UTILIZE FOR DETAILED DESIGN.
CHART IS BASED ON DEFLECTION ANALYSIS
ONLY



MULLION SECTION



SYSTEM PROPERTIES

Moment of Inertia, Section Modulus & Area

Moment of Inertia, I_{yy}	$I_{yy} = 0.71 \text{ in}^4$
Section Modulus, S_{yy}	$S_{yy} = 0.71 \text{ in}^3$
Total Area	$A = 1.24 \text{ in}^2$

Modulus of Elasticity

Aluminum	10,000,000 PSI
Steel	29,000,000 PSI

GENERAL NOTES

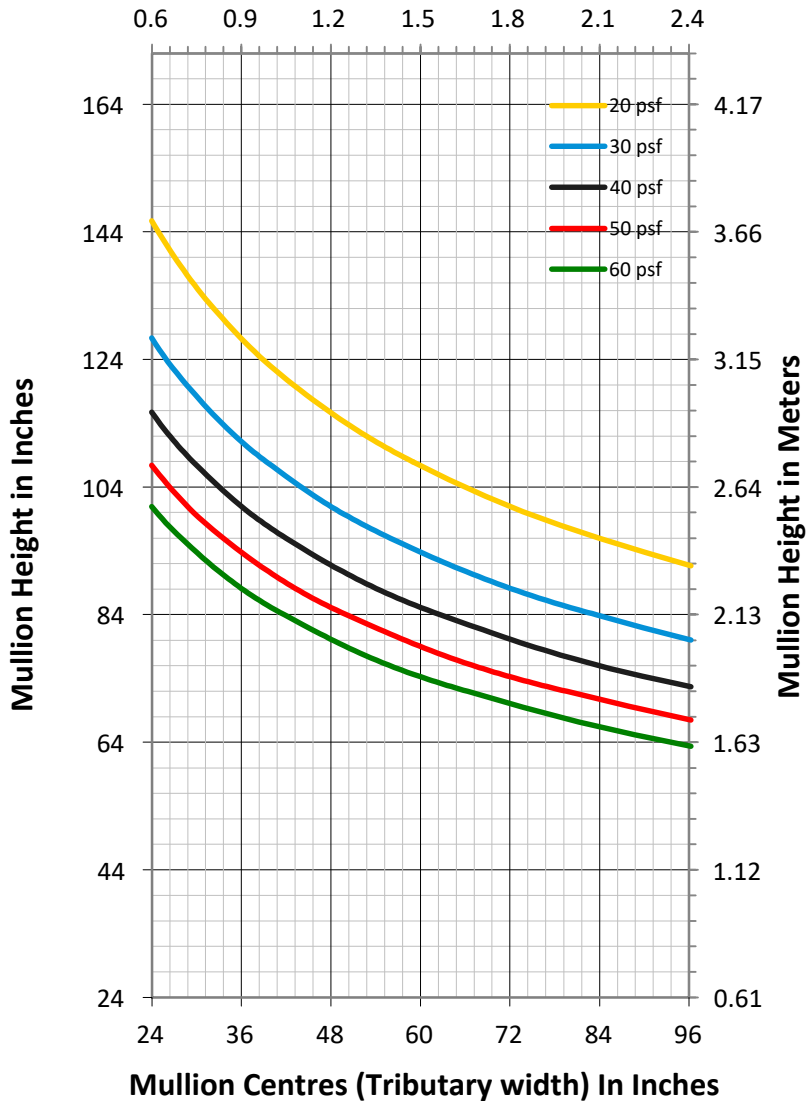
1. Deflection Limit: 0.125" (3.2mm).
2. Charts are calculated assuming a 1" overall sealed unit (6mm/13mm spacer/6mm)
3. Calculations are based on the position of the setting blocks being placed at 1/4 or 1/8 points.

WIND LOAD CHART FOR 2" x 4" SSG MULLION - PART # 2404SSG

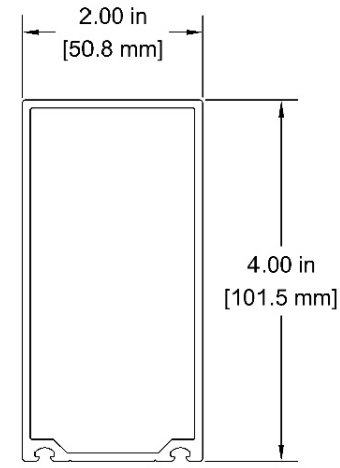
SPAN CHART

SPAN CHART IS FOR ESTIMATION ONLY.
DO NOT UTILIZE FOR DETAILED DESIGN.
CHART IS BASED ON DEFLECTION ANALYSIS
ONLY

Mullion Centres (Tributary width) In Meters



MULLION SECTION



SYSTEM PROPERTIES

Moment of Inertia, Section Modulus & Area

Moment of Inertia, Ixx	Ixx = 2.35 in ⁴
Section Modulus, Sxx	Sxx = 1.13 in ³
Total Area	A = 1.10 in ²

Modulus of Elasticity

Aluminum	10,000,000 PSI
Steel	29,000,000 PSI

GENERAL NOTES

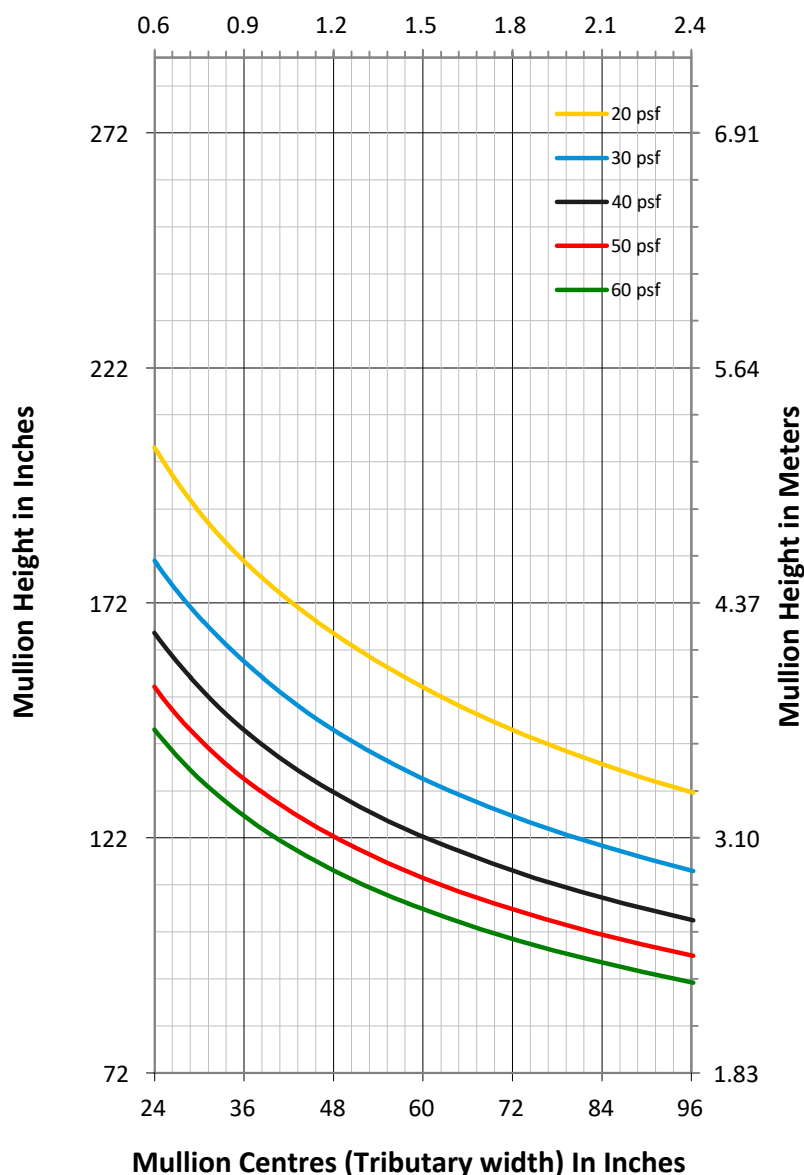
1. Deflection Limit: L/175 up to 13.5ft, L/240 + 0.25" over 13.5ft
2. Assume horizontal members provide lateral support
3. Steel moment of inertia converted to polyester, vinyl or aluminum equivalent
4. CANADIAN PROJECTS: Use SLS wind loads or modify the specified wind load by 0.75 before utilizing this chart. i.e. if project specifications require pnet = 40 psf, utilize 30 psf on this chart (0.75 x 40 = 30). (Based on NBCC 2020).

STEEL LOADED WIND LOAD CHART FOR 2" x 4" SSG MULLION - PART # 2404SSG

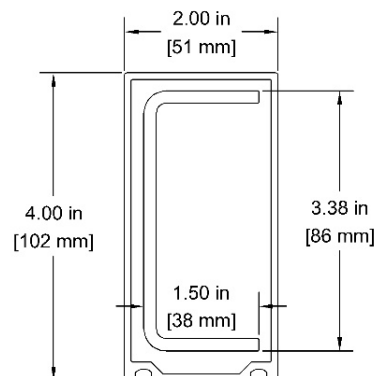
SPAN CHART

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ONLY

Mullion Centres (Tributary width) In Meters



MULLION SECTION



SYSTEM PROPERTIES

Moment of Inertia, Section Modulus & Area

Moment of Inertia, I_{xx}	$I_{xx} = 6.94 \text{ in}^4$
Section Modulus, S_{xx}	$S_{xx} = 4.34 \text{ in}^3$
Total Area	$A = 1.10 \text{ in}^2$

Modulus of Elasticity

Aluminum	10,000,000 PSI
Steel	29,000,000 PSI

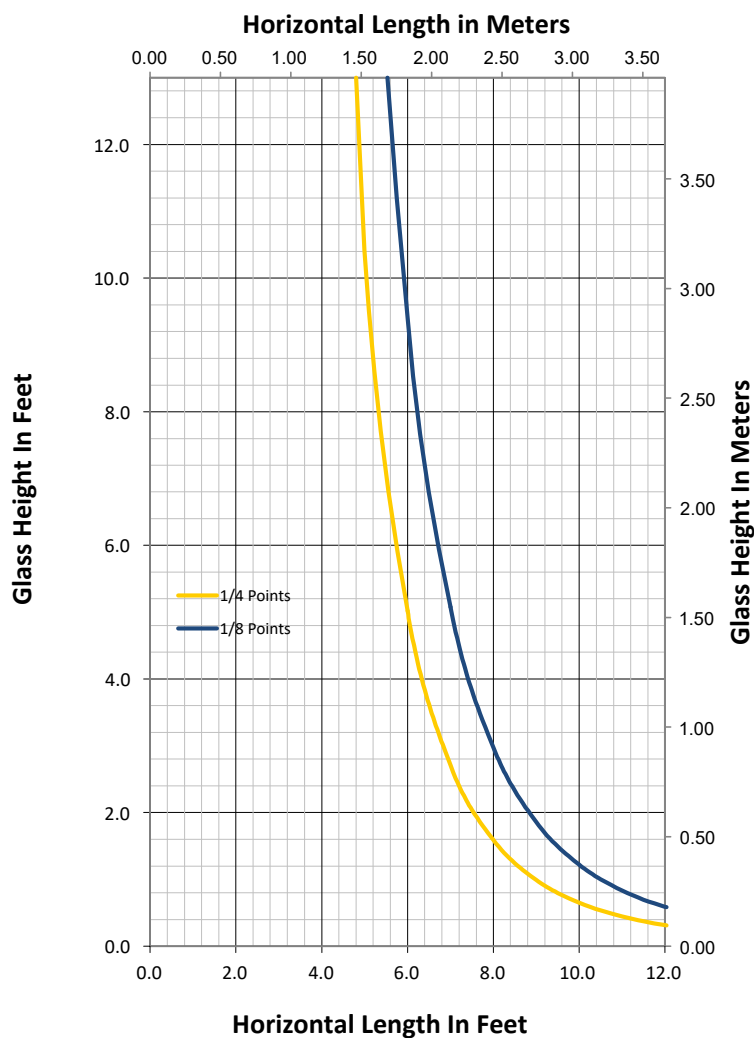
GENERAL NOTES

1. Deflection Limit: $L/175$ up to 13.5ft, $L/240 + 0.25"$ over 13.5ft
2. Assume horizontal members provide lateral support
3. Steel moment of inertia converted to polyester, vinyl or 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 $p_{net} = 40 \text{ psf}$, utilize 30 psf on this chart ($0.75 \times 40 = 30$). (Based on NBCC 2020).

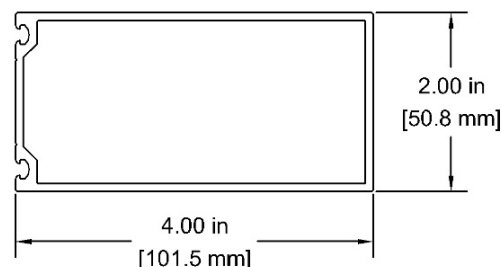
DEAD LOAD CHART FOR 2" x 4" SSG MULLION - PART # 2404SSG

SPAN CHART

SPAN CHART IS FOR ESTIMATION ONLY.
DO NOT UTILIZE FOR DETAILED DESIGN.
CHART IS BASED ON DEFLECTION ANALYSIS
ONLY



MULLION SECTION



SYSTEM PROPERTIES

Moment of Inertia, Section Modulus & Area

Moment of Inertia, I_{yy}	$I_{yy} = 0.77 \text{ in}^4$
Section Modulus, S_{yy}	$S_{yy} = 0.77 \text{ in}^3$
Total Area	$A = 1.10 \text{ in}^2$

Modulus of Elasticity

Aluminum	10,000,000 PSI
Steel	29,000,000 PSI

GENERAL NOTES

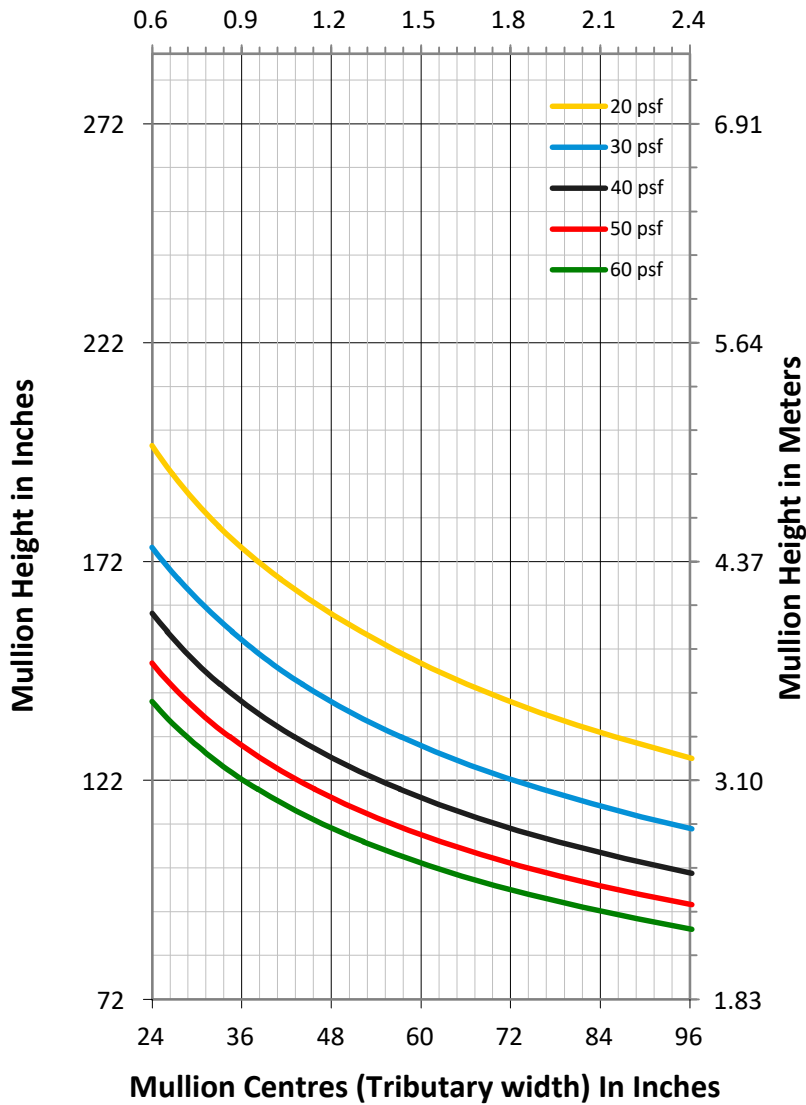
1. Deflection Limit: 0.125" (3.2mm).
2. Charts are calculated assuming a 1" overall sealed unit (6mm/13mm spacer/6mm)
3. Calculations are based on the position of the setting blocks being placed at 1/4 or 1/8 points.

WIND LOAD CHART FOR 2" x 5 1/4" T/B MULLION - PART # 2425ST

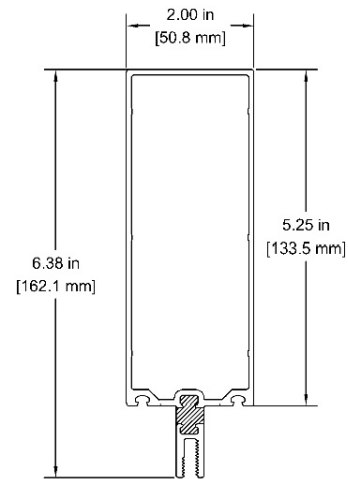
SPAN CHART

SPAN CHART IS FOR ESTIMATION ONLY.
DO NOT UTILIZE FOR DETAILED DESIGN.
CHART IS BASED ON DEFLECTION ANALYSIS
ONLY

Mullion Centres (Tributary width) In Meters



MULLION SECTION



SYSTEM PROPERTIES

Moment of Inertia, Section Modulus & Area

Moment of Inertia, Ixx	Ixx = 6.25 in ⁴
Section Modulus, Sxx	Sxx = 1.62 in ³
Total Area	A = 1.44 in ²

Modulus of Elasticity

Aluminum	10,000,000 PSI
Steel	29,000,000 PSI

GENERAL NOTES

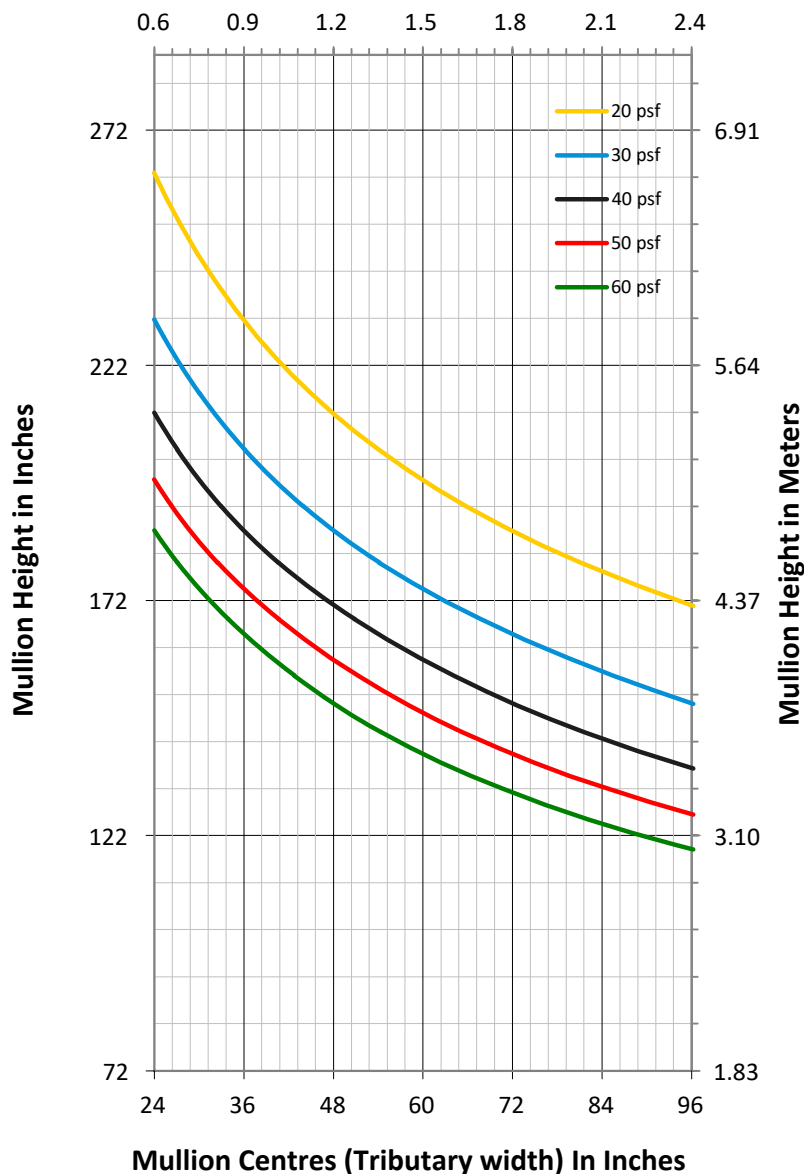
1. Deflection Limit: L/175 up to 13.5ft, L/240 + 0.25" over 13.5ft
2. Assume horizontal members provide lateral support
3. Steel moment of inertia converted to polyester, vinyl or aluminum equivalent
4. CANADIAN PROJECTS: Use SLS wind loads or modify the specified wind load by 0.75 before utilizing this chart. i.e. if project specifications require pnet = 40 psf, utilize 30 psf on this chart (0.75 x 40 = 30). (Based on NBCC 2020).

STEEL LOADED WIND LOAD CHART FOR 2" x 5 1/4" T/B MULLION - PART # 2425ST

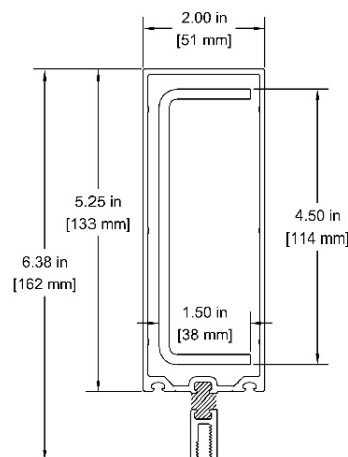
SPAN CHART

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CHART IS BASED ON DEFLECTION ANALYSIS
ONLY

Mullion Centres (Tributary width) In Meters



MULLION SECTION



SYSTEM PROPERTIES

Moment of Inertia, Section Modulus & Area

Moment of Inertia, I_{xx}	$I_{xx} = 15.41 \text{ in}^4$
Section Modulus, S_{xx}	$S_{xx} = 4.38 \text{ in}^3$
Total Area	$A = 1.45 \text{ in}^2$

Modulus of Elasticity

Aluminum	10,000,000 PSI
Steel	29,000,000 PSI

GENERAL NOTES

1. Deflection Limit: $L/175$ up to 13.5ft, $L/240 + 0.25"$ over 13.5ft
2. Assume horizontal members provide lateral support
3. Steel moment of inertia converted to polyester, vinyl or 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 $p_{net} = 40 \text{ psf}$, utilize 30 psf on this chart ($0.75 \times 40 = 30$). (Based on NBCC 2020).

DEAD LOAD CHART FOR 2" x 5 1/4" T/B MULLION - PART # 2425ST

SPAN CHART

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ONLY

MULLION SECTION



SYSTEM PROPERTIES

Moment of Inertia, Section Modulus & Area

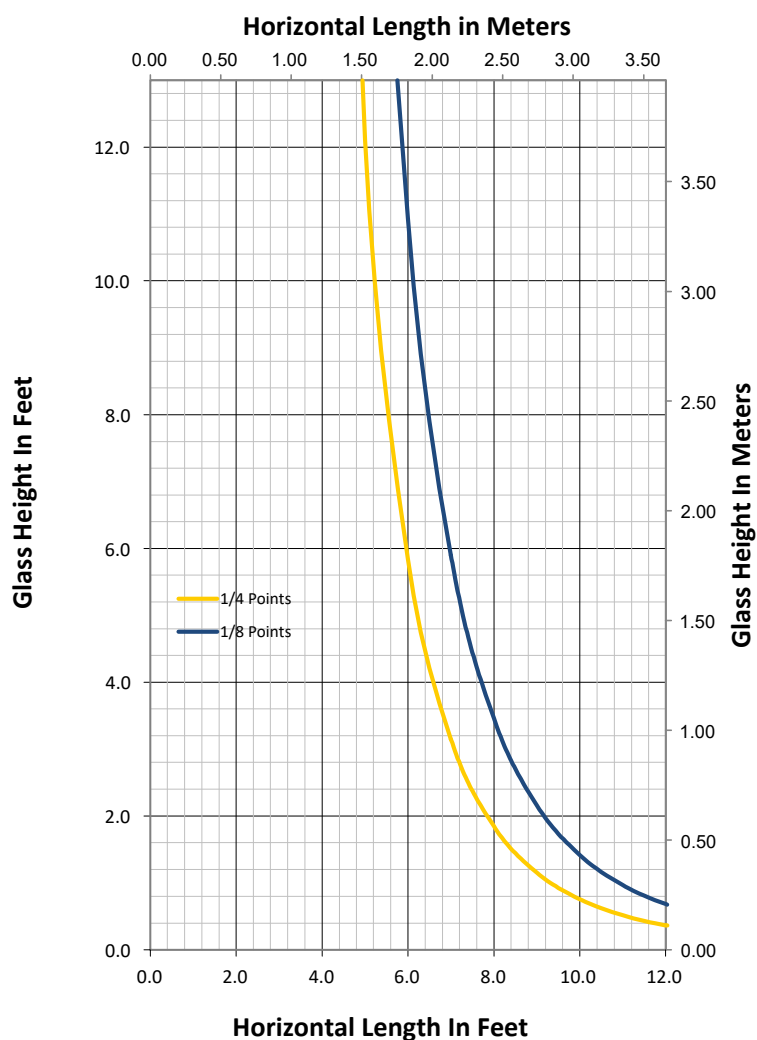
Moment of Inertia, I_{yy}	$I_{yy} = 0.90 \text{ in}^4$
Section Modulus, S_{yy}	$S_{yy} = 0.89 \text{ in}^3$
Total Area	$A = 1.44 \text{ in}^2$

Modulus of Elasticity

Aluminum	10,000,000 PSI
Steel	29,000,000 PSI

GENERAL NOTES

1. Deflection Limit: 0.125" (3.2mm).
2. Charts are calculated assuming a 1" overall sealed unit (6mm/13mm spacer/6mm)
3. Calculations are based on the position of the setting blocks being placed at 1/4 or 1/8 points.



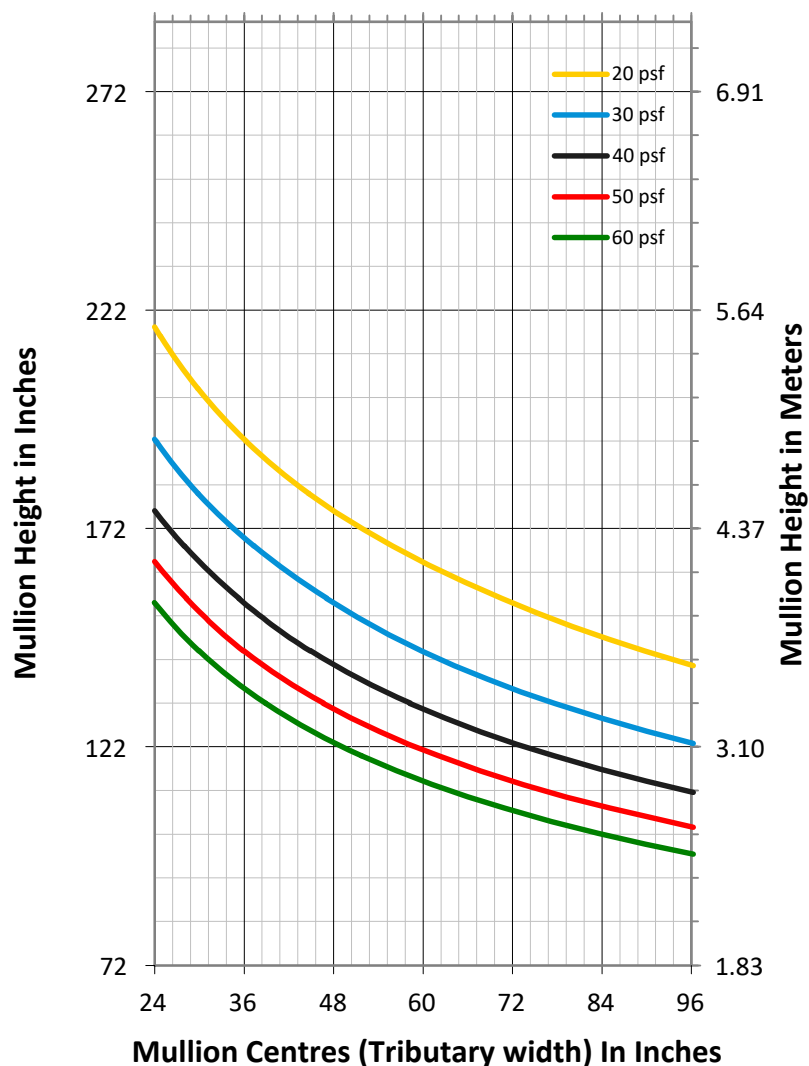
WIND LOAD CHART FOR 2" x 6" T/B MULLION - PART # 2426ST

SPAN CHART

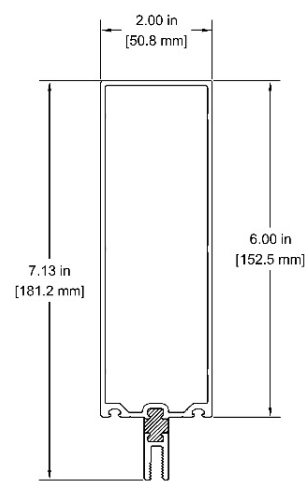
SPAN CHART IS FOR ESTIMATION ONLY.
DO NOT UTILIZE FOR DETAILED DESIGN.
CHART IS BASED ON DEFLECTION ANALYSIS
ONLY

Mullion Centres (Tributary width) In Meters

0.6 0.9 1.2 1.5 1.8 2.1 2.4



MULLION SECTION



SYSTEM PROPERTIES

Moment of Inertia, Section Modulus & Area

Moment of Inertia, Ixx	Ixx = 8.48 in ⁴
Section Modulus, Sxx	Sxx = 1.97 in ³
Total Area	A = 1.56 in ²

Modulus of Elasticity

Aluminum	10,000,000 PSI
Steel	29,000,000 PSI

GENERAL NOTES

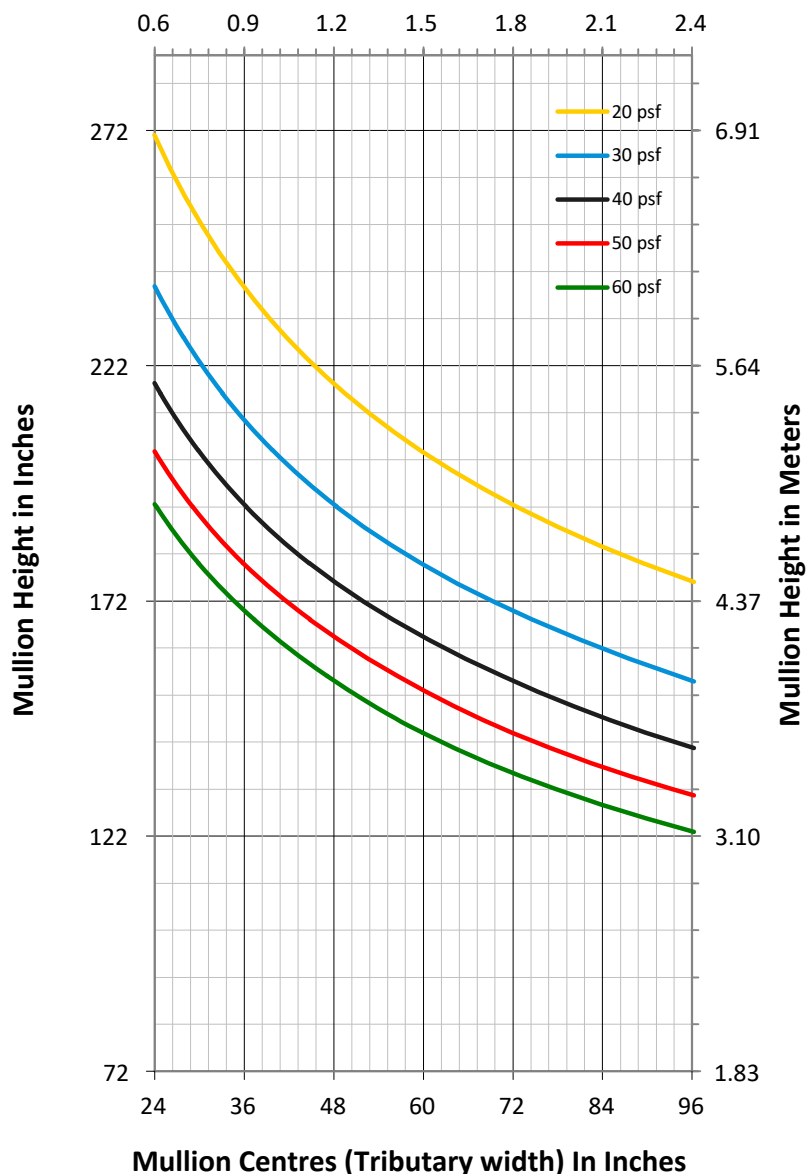
1. Deflection Limit: L/175 up to 13.5ft, L/240 + 0.25" over 13.5ft
2. Assume horizontal members provide lateral support
3. Steel moment of inertia converted to polyester, vinyl or aluminum equivalent
4. CANADIAN PROJECTS: Use SLS wind loads or modify the specified wind load by 0.75 before utilizing this chart. i.e. if project specifications require pnet = 40 psf, utilize 30 psf on this chart (0.75 x 40 = 30). (Based on NBCC 2020).

STEEL LOADED WIND LOAD CHART FOR 2" x 6" T/B MULLION - PART # 2426ST

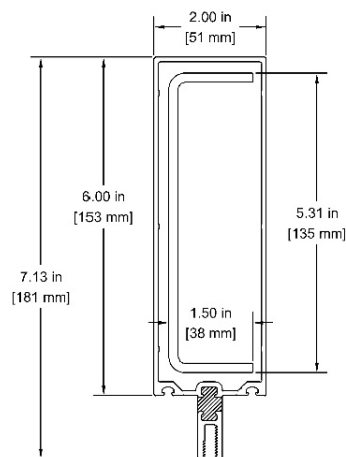
SPAN CHART

SPAN CHART IS FOR ESTIMATION ONLY.
DO NOT UTILIZE FOR DETAILED DESIGN.
CHART IS BASED ON DEFLECTION ANALYSIS
ONLY

Mullion Centres (Tributary width) In Meters



MULLION SECTION



SYSTEM PROPERTIES

Moment of Inertia, Section Modulus & Area

Moment of Inertia, I_{xx}	$I_{xx} = 16.97 \text{ in}^4$
Section Modulus, S_{xx}	$S_{xx} = 4.28 \text{ in}^3$
Total Area	$A = 1.56 \text{ in}^2$

Modulus of Elasticity

Aluminum	10,000,000 PSI
Steel	29,000,000 PSI

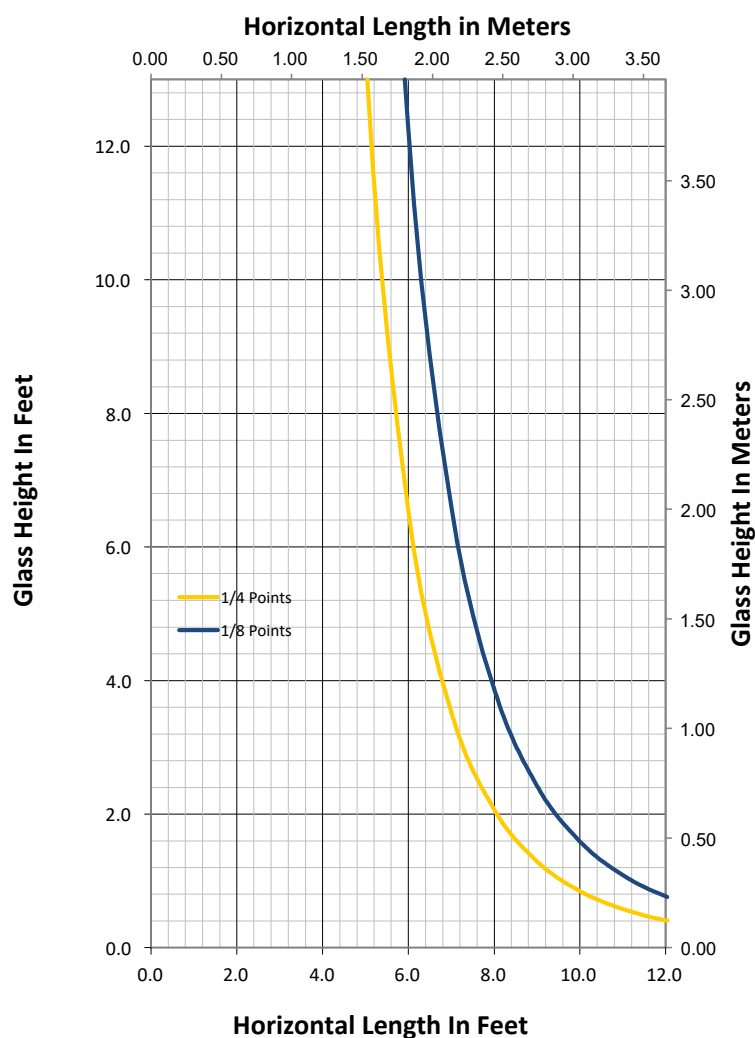
GENERAL NOTES

1. Deflection Limit: $L/175$ up to 13.5ft, $L/240 + 0.25"$ over 13.5ft
2. Assume horizontal members provide lateral support
3. Steel moment of inertia converted to polyester, vinyl or 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 $p_{net} = 40 \text{ psf}$, utilize 30 psf on this chart ($0.75 \times 40 = 30$). (Based on NBCC 2020).

DEAD LOAD CHART FOR 2" x 6" MULLION - PART # 2426ST

SPAN CHART

SPAN CHART IS FOR ESTIMATION ONLY.
DO NOT UTILIZE FOR DETAILED DESIGN.
CHART IS BASED ON DEFLECTION ANALYSIS
ONLY



MULLION SECTION



SYSTEM PROPERTIES

Moment of Inertia, Section Modulus & Area

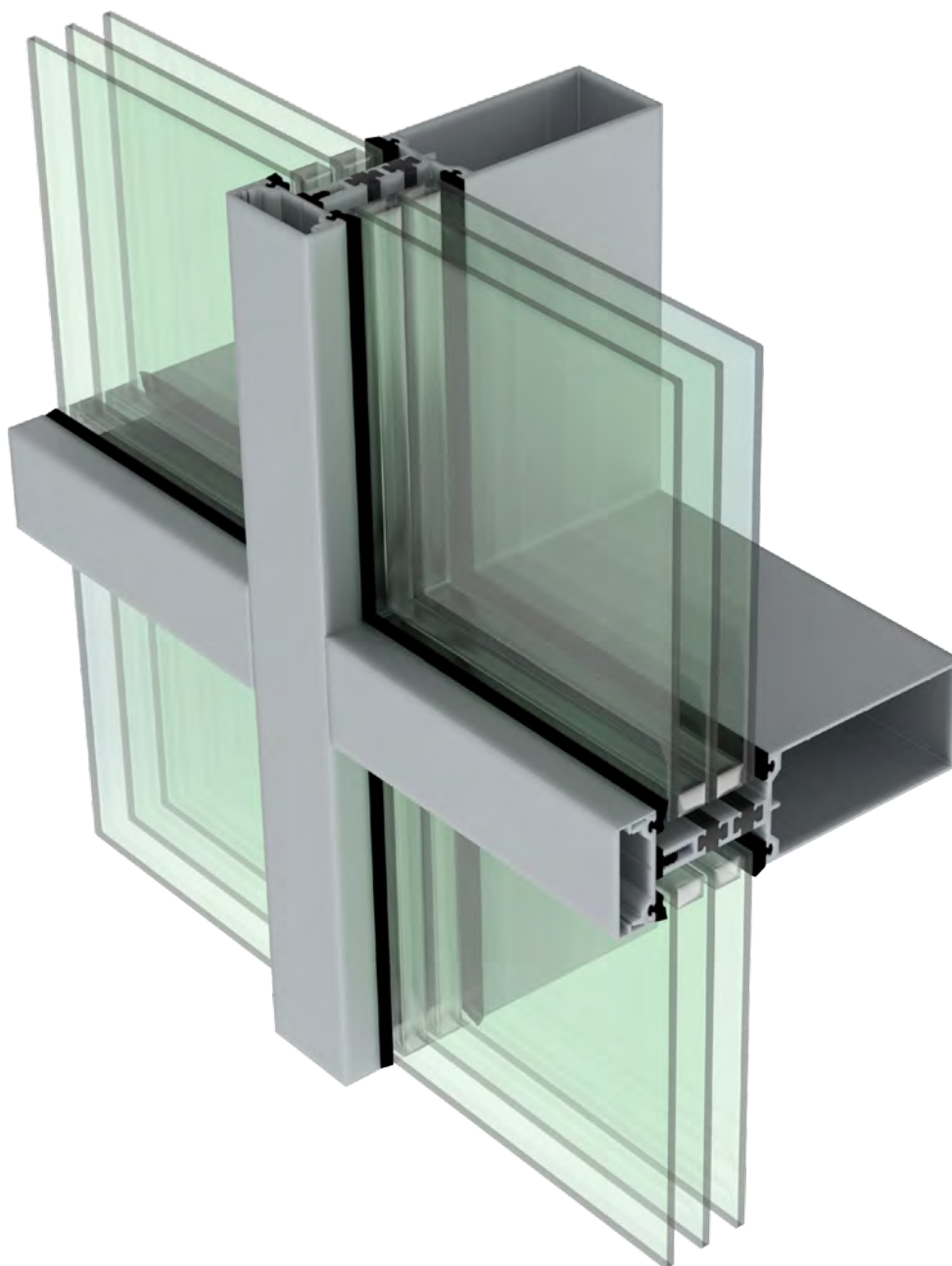
Moment of Inertia, I_{yy}	$I_{yy} = 1.01 \text{ in}^4$
Section Modulus, S_{yy}	$S_{yy} = 1.00 \text{ in}^3$
Total Area	$A = 1.56 \text{ in}^2$

Modulus of Elasticity

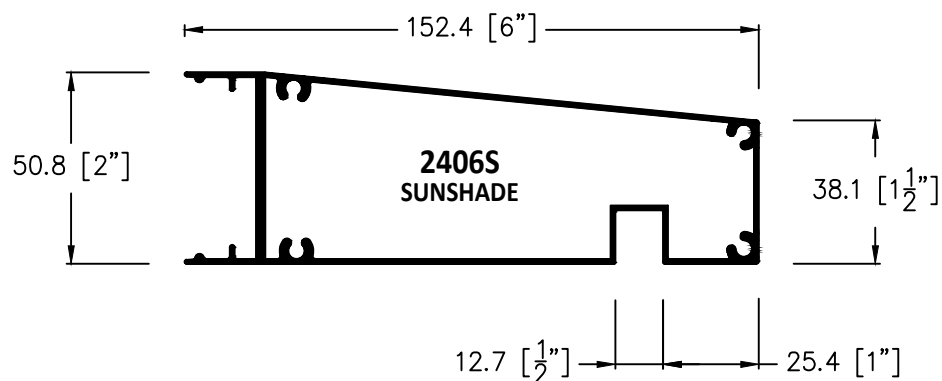
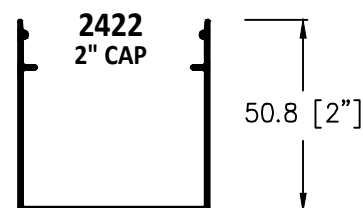
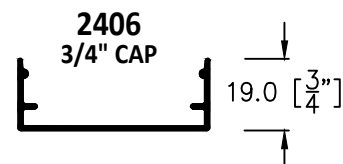
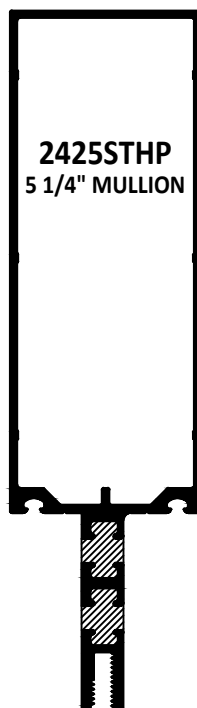
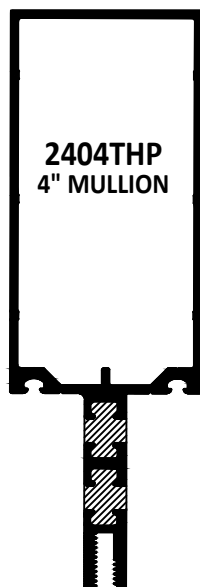
Aluminum	10,000,000 PSI
Steel	29,000,000 PSI

GENERAL NOTES

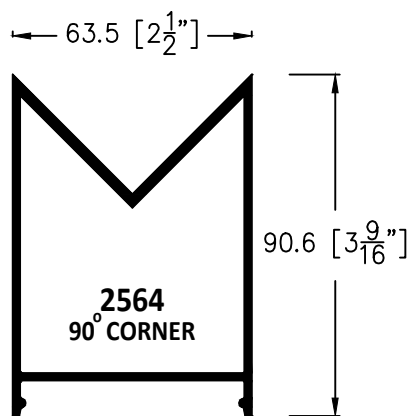
1. Deflection Limit: 0.125" (3.2mm).
2. Charts are calculated assuming a 1" overall sealed unit (6mm/13mm spacer/6mm)
3. Calculations are based on the position of the setting blocks being placed at 1/4 or 1/8 points.



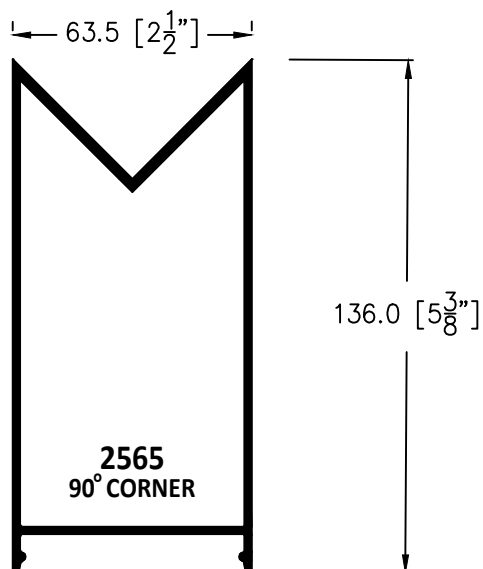
BACK SECTIONS & CAPS



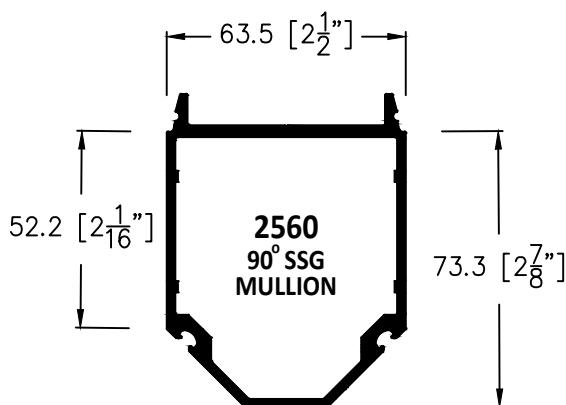
SSG & CORNERS



EXTENSION CAP FOR 4" BACK



EXTENSION CAP FOR 5 1/4" BACK



MISC. COMPONENTS



2410
THERMAL BREAK



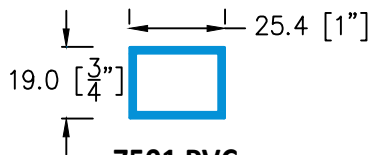
2415-3
CORNER BLOCK



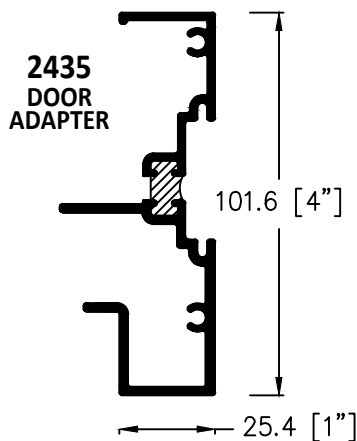
2460
SPONGE GASKET
(INTERIOR)



2450
DENSE GASKET
(EXTERIOR)



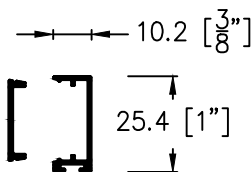
7501 PVC
ANTI-ROTATION



2435
DOOR
ADAPTER



2420
SPIGOT



2417/2418
SURFACE APPLIED
DOOR STOP



20120T
DOOR STOP
FOR 2" DOORS



2012T
DOOR STOP
FOR 1 3/4" DOORS



2430
BACK-PAN
ADAPTOR



5100
1" X 1" PERIMETER ANGLE

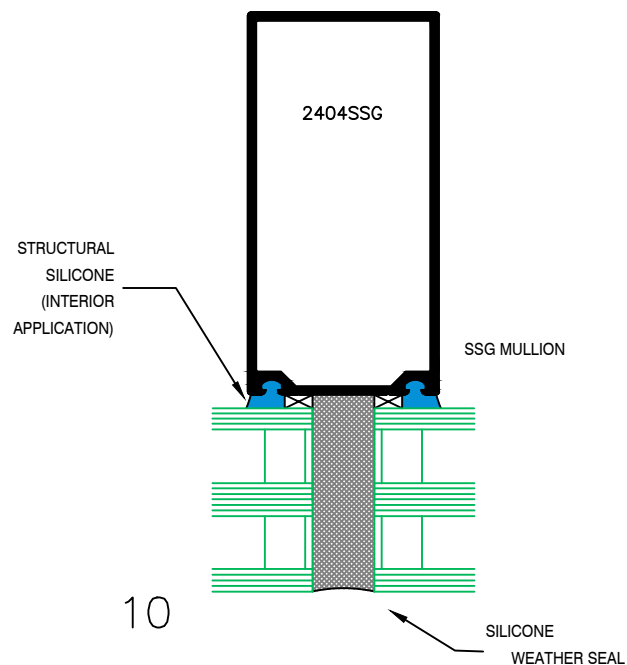
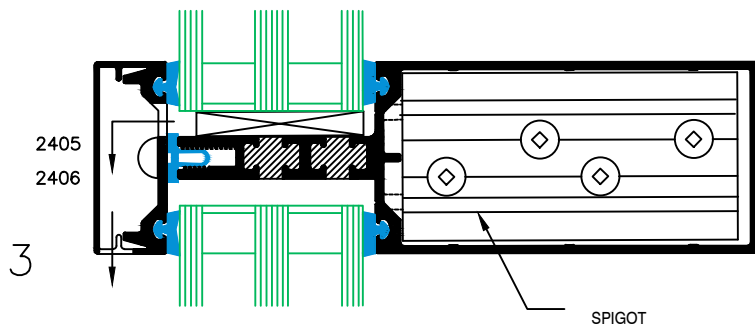
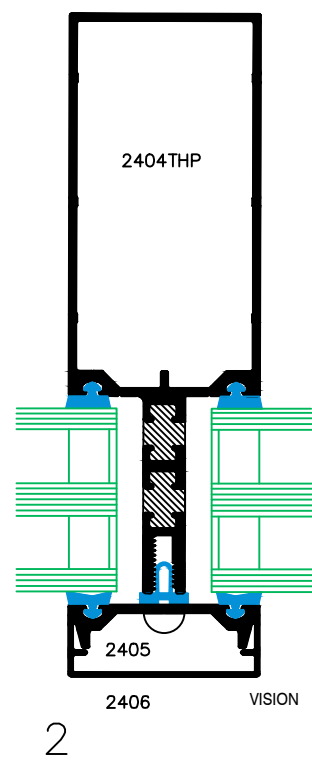
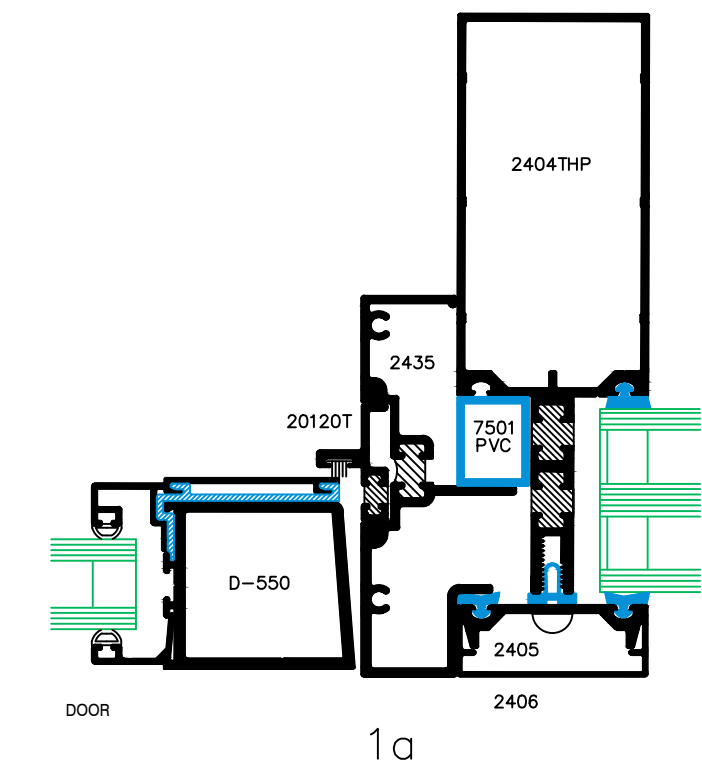


5102
1" X 2" PERIMETER ANGLE

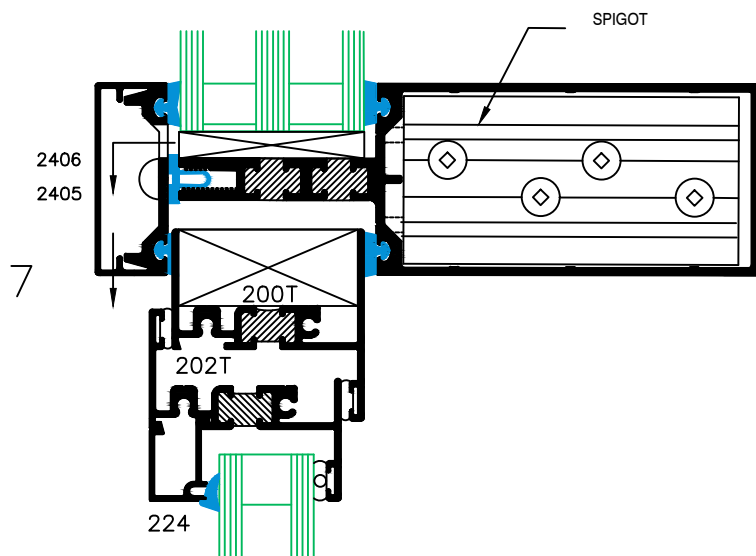


5103
1" X 3" PERIMETER ANGLE

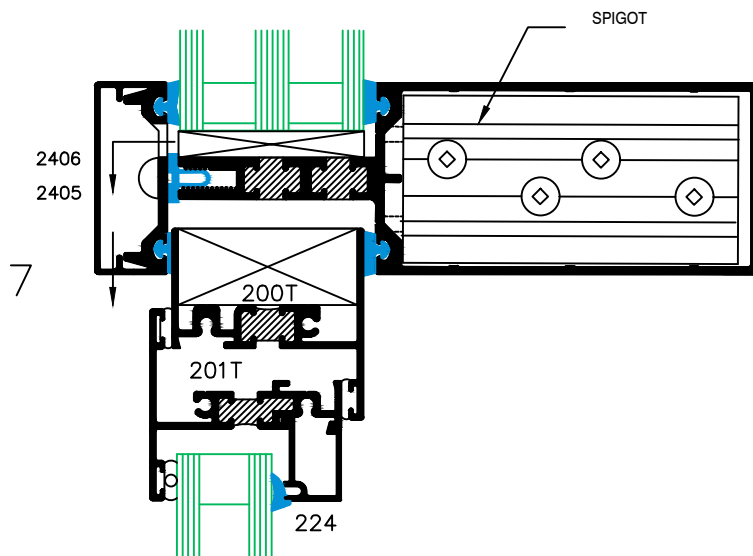
TYPICAL DETAILS



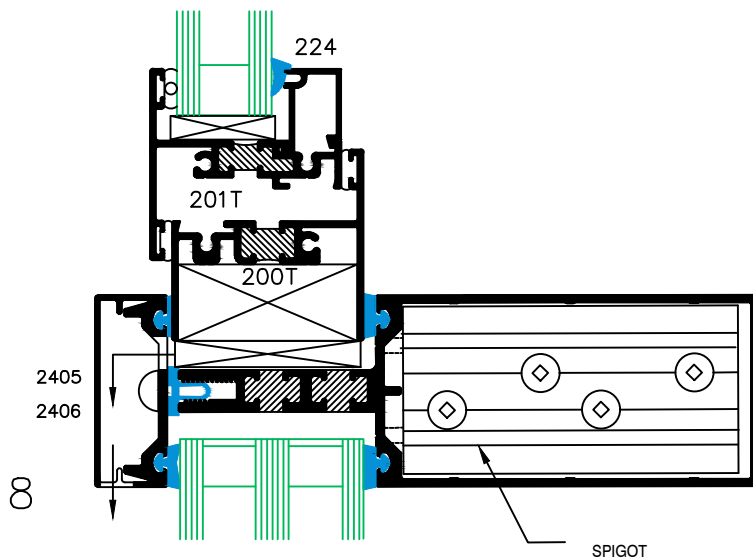
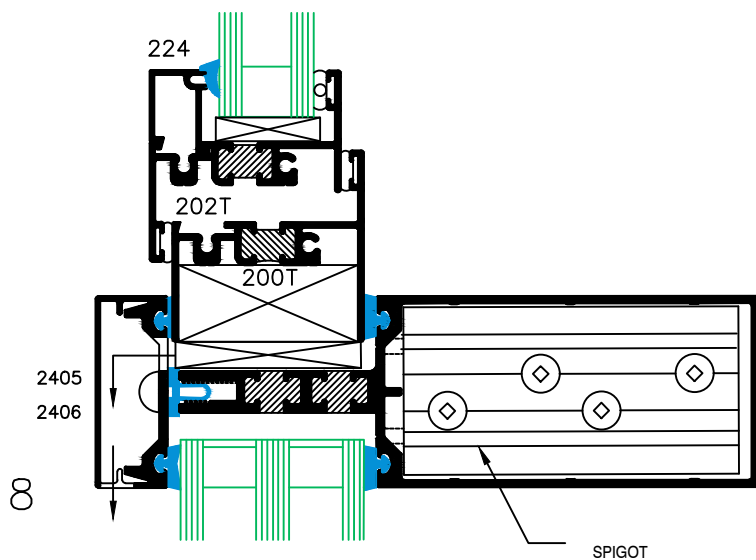
TYPICAL CURTAIN WALL VENT DETAILS



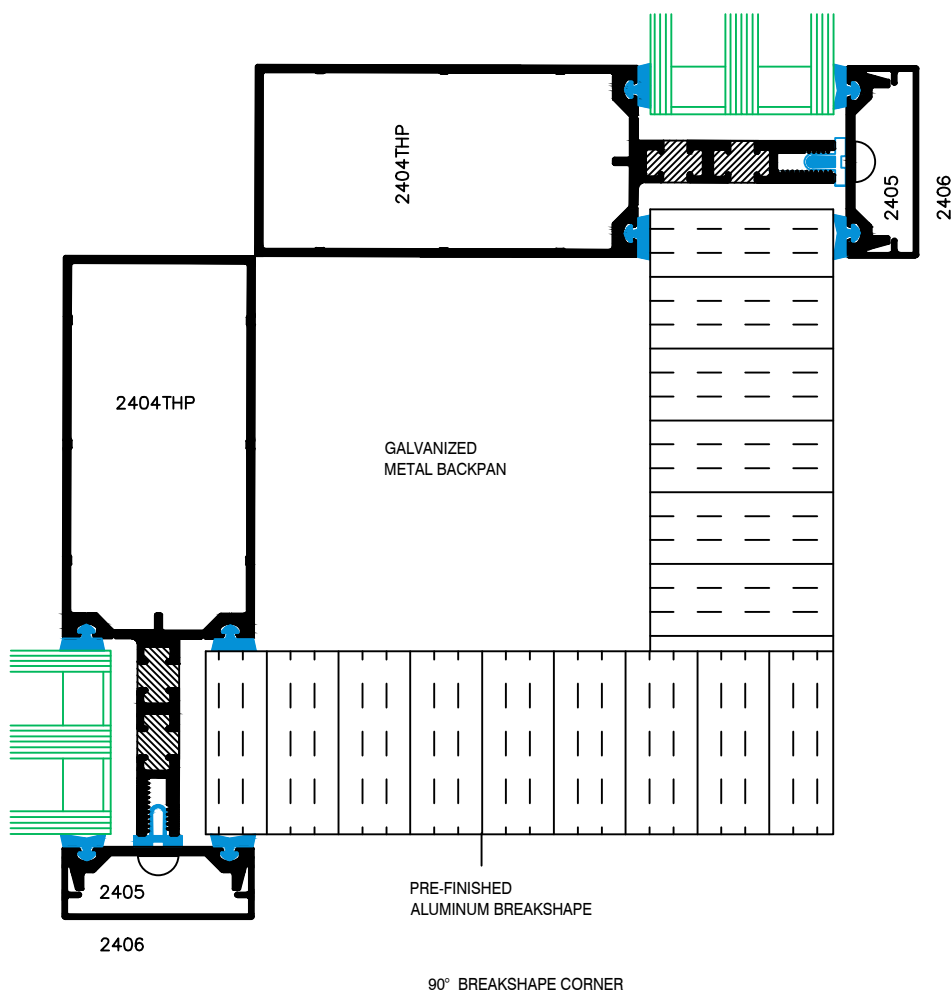
200T SERIES VENT
OPEN-OUT
OUTSIDE GLAZED



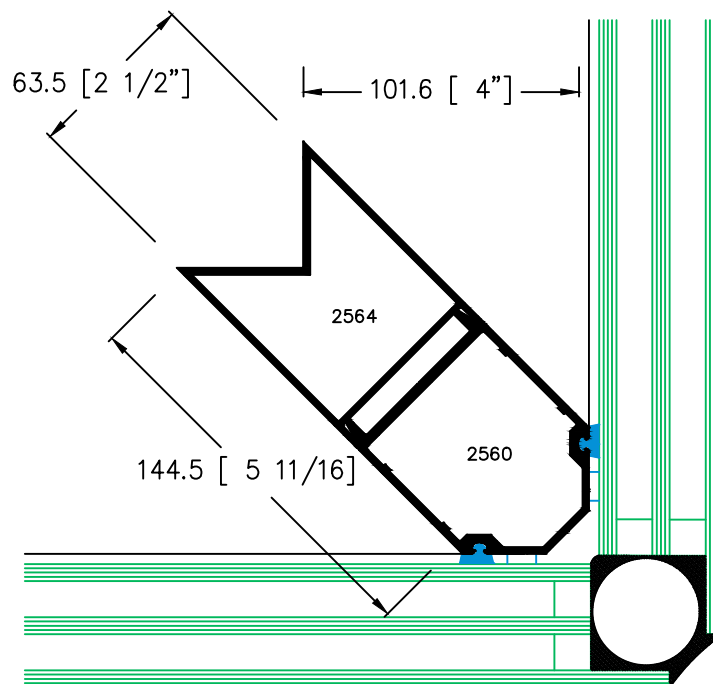
200T SERIES VENT
OPEN-OUT
INSIDE GLAZED



TYPICAL CAPTURED CORNER DETAILS

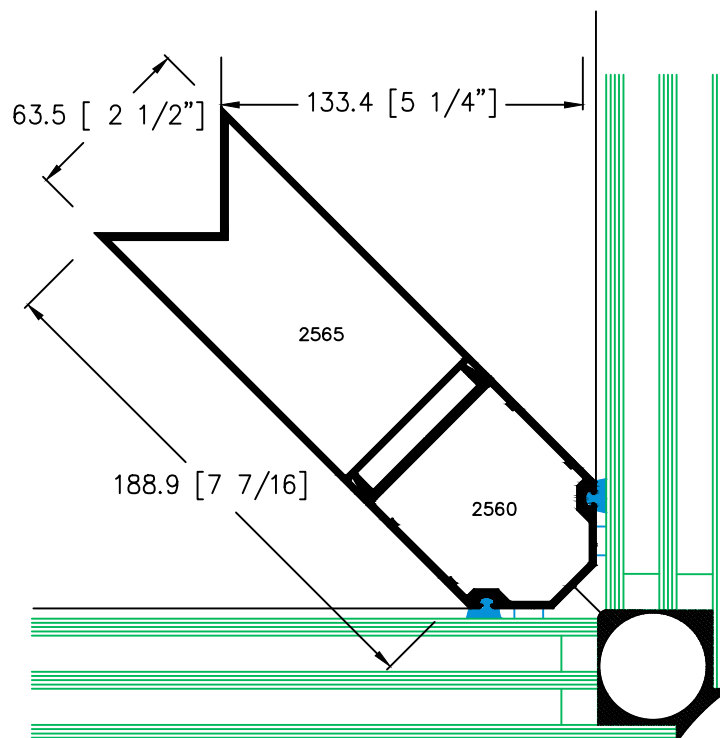


TYPICAL BUTT-JOINT CORNER DETAILS



90° BUTT-JOINT CORNER
AT 4" BACK MEMBER

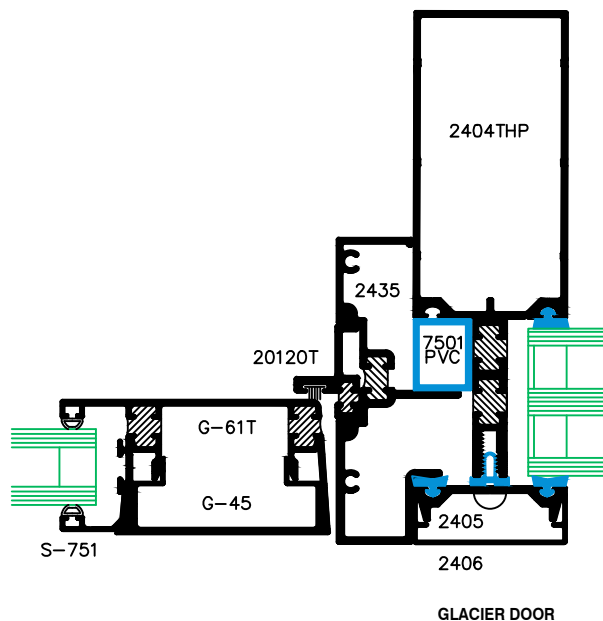
13



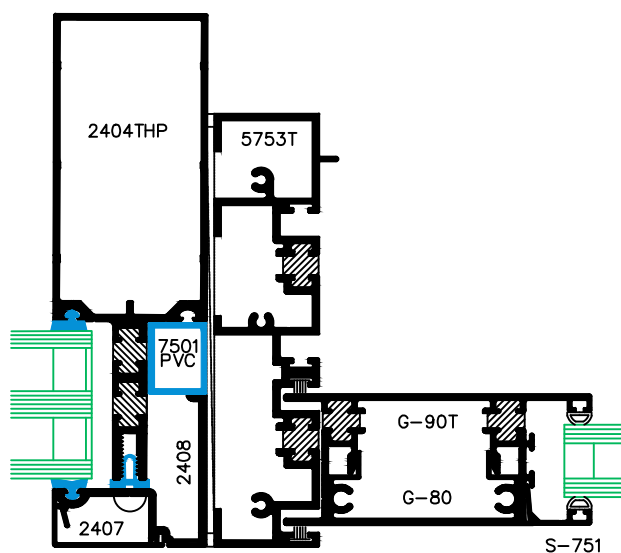
90° BUTT-JOINT CORNER
AT 5 1/4" BACK MEMBER

14

ALTERNATE DOOR DETAILS



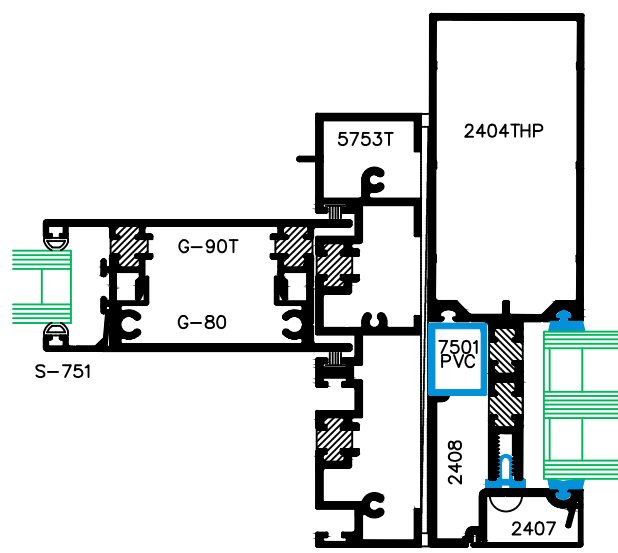
15a



1100T JAMB AT SLIDER

SLIDING DOORS

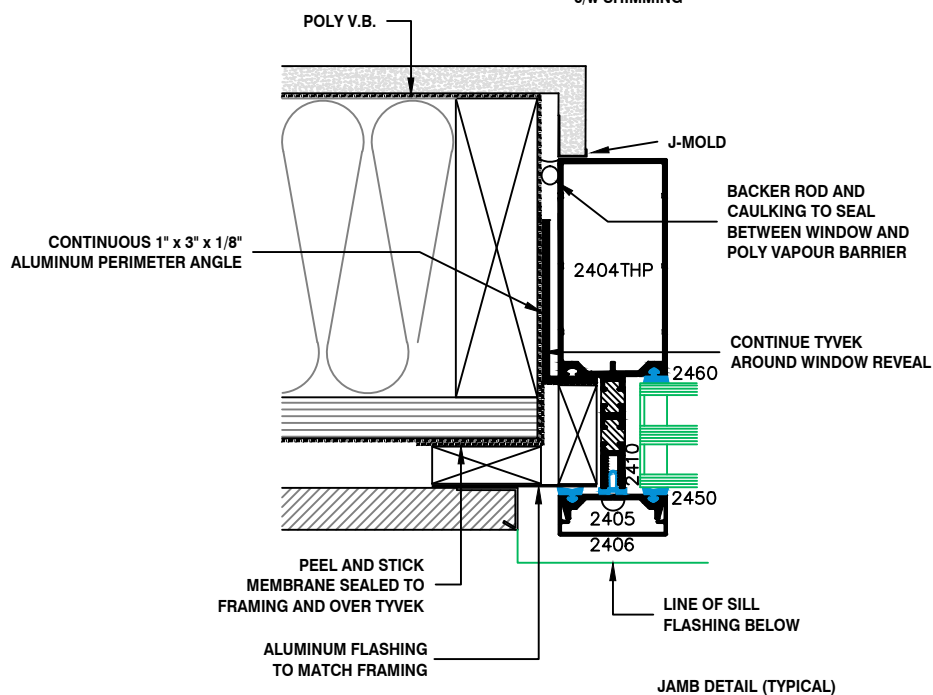
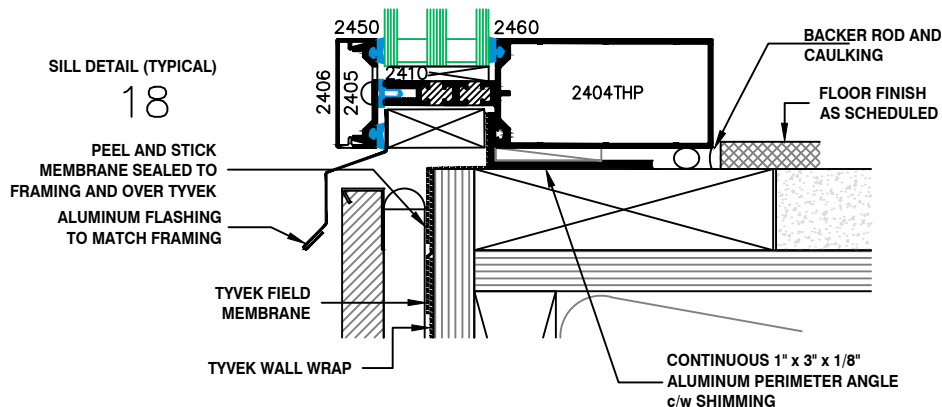
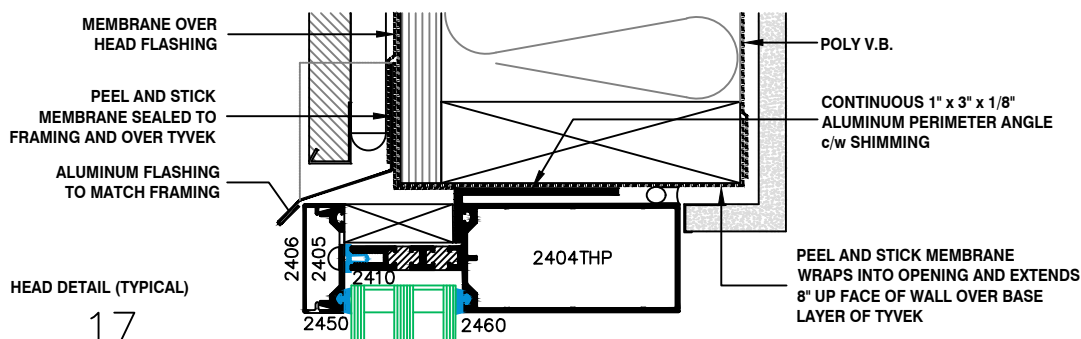
16



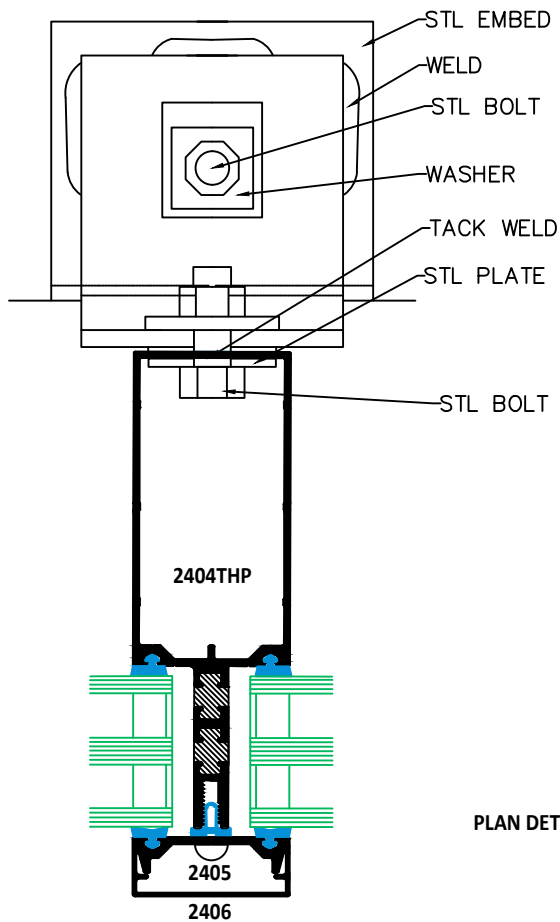
1100T JAMB AT FIXED PANEL

16a

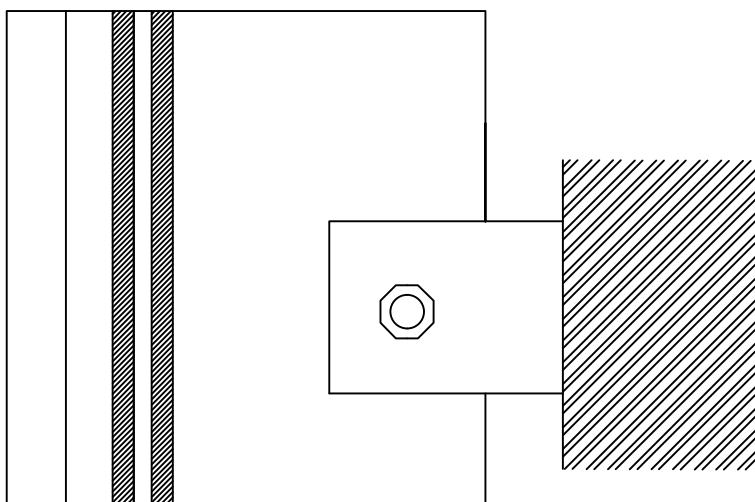
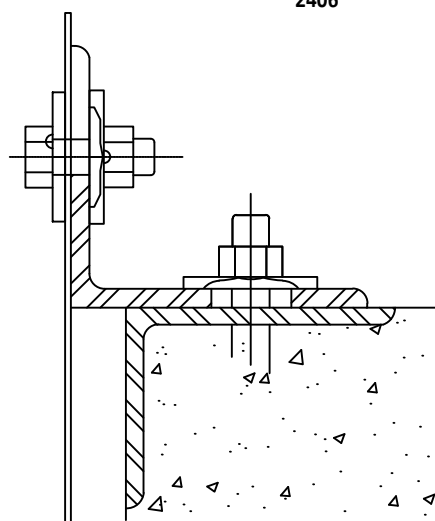
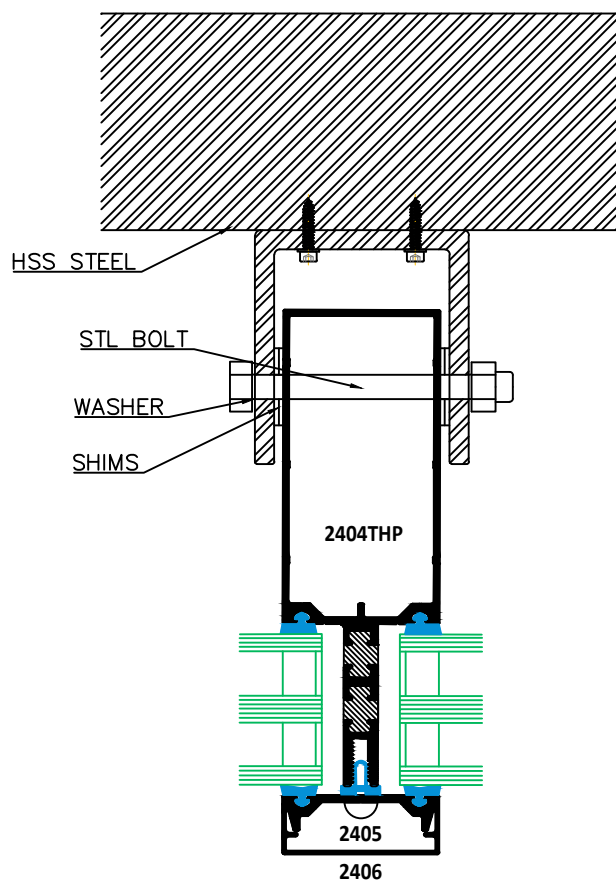
**INTERFACE DETAILS
(SUGGESTED ONLY)**



TYPICAL ANCHORING DETAILS

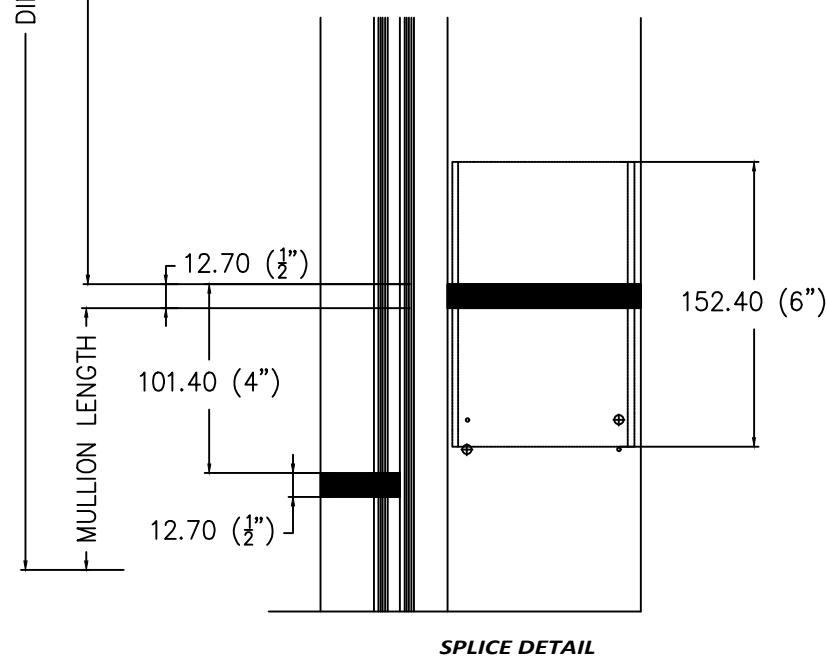
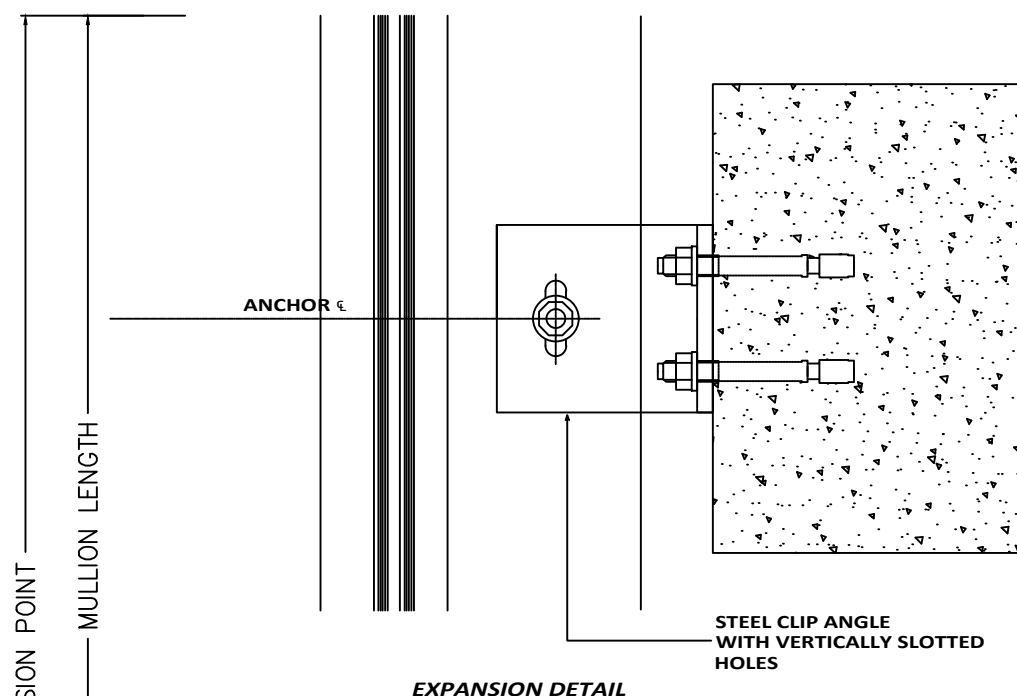


PLAN DETAILS



SECTION DETAILS

EXPANSION & SPLICE DETAILS

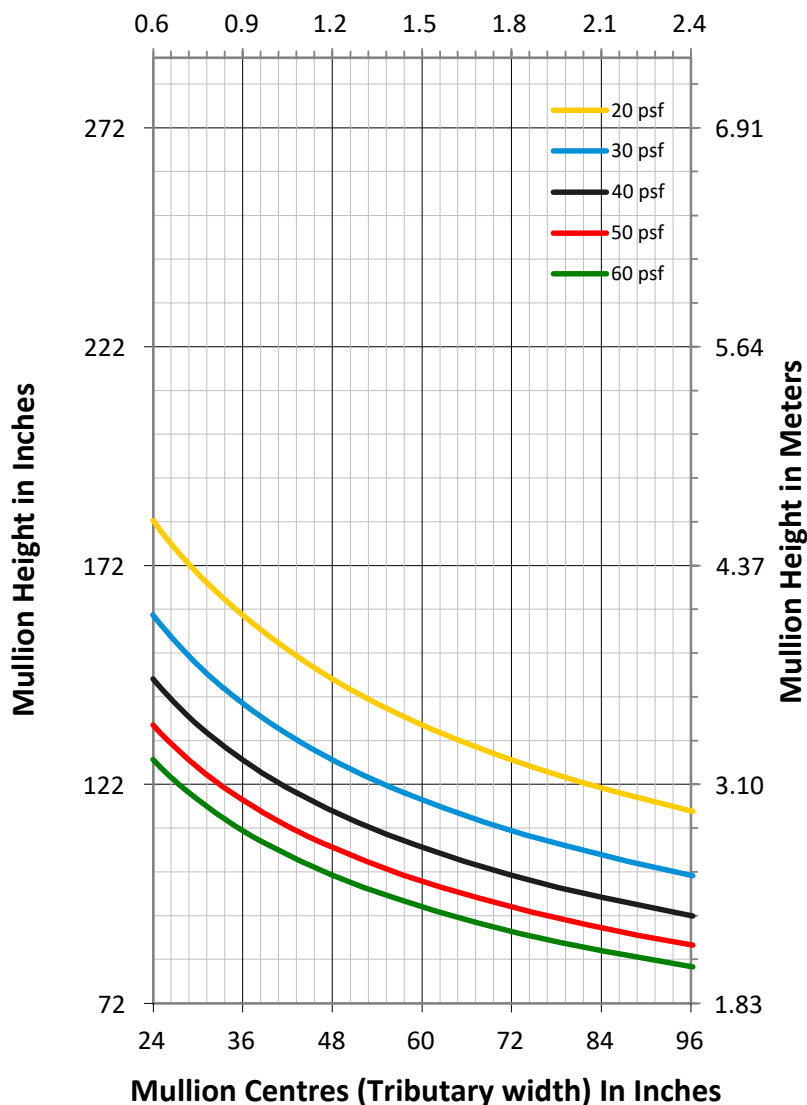


WIND LOAD CHART FOR 2" x 4" T/G MULLION - PART # 2404THP

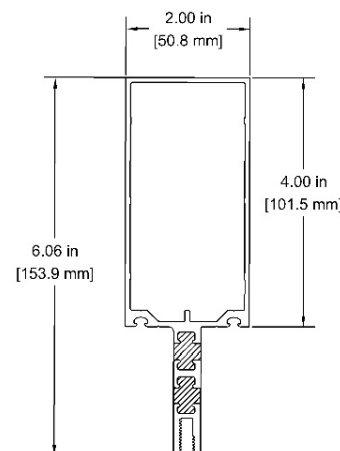
SPAN CHART

SPAN CHART IS FOR ESTIMATION ONLY.
DO NOT UTILIZE FOR DETAILED DESIGN.
CHART IS BASED ON DEFLECTION ANALYSIS
ONLY

Mullion Centres (Tributary width) In Meters



MULLION SECTION



SYSTEM PROPERTIES

Moment of Inertia, Section Modulus & Area

Moment of Inertia, Ixx	Ixx = 4.74 in ⁴
Section Modulus, Sxx	Sxx = 1.08 in ³
Total Area	A = 1.40 in ²

Modulus of Elasticity

Aluminum	10,000,000 PSI
Steel	29,000,000 PSI

GENERAL NOTES

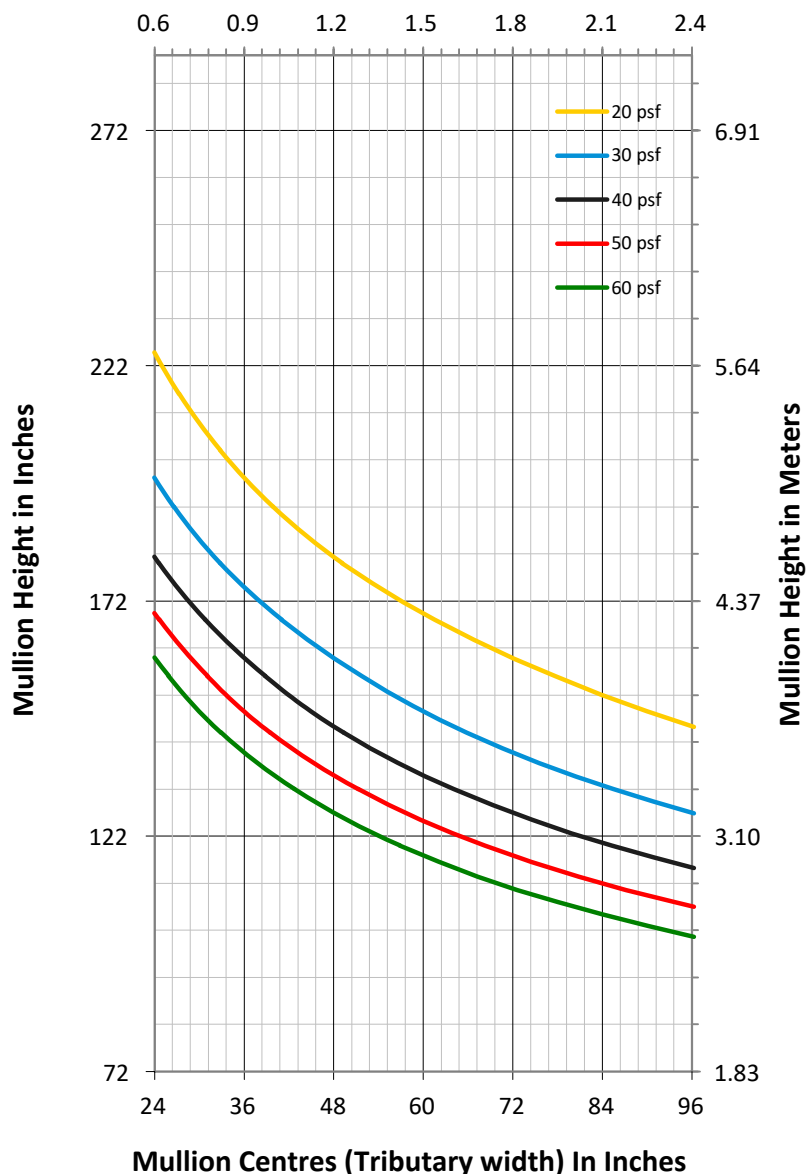
1. Deflection Limit: L/175 up to 13.5ft, L/240 + 0.25" over 13.5ft
2. Assume horizontal members provide lateral support
3. Steel moment of inertia converted to polyester, vinyl or aluminum equivalent
4. CANADIAN PROJECTS: Use SLS wind loads or modify the specified wind load by 0.75 before utilizing this chart. i.e. if project specifications require pnet = 40 psf, utilize 30 psf on this chart (0.75 x 40 = 30). (Based on NBCC 2020).

STEEL LOADED WIND LOAD CHART FOR 2" x 4" T/G MULLION - PART # 2404THP

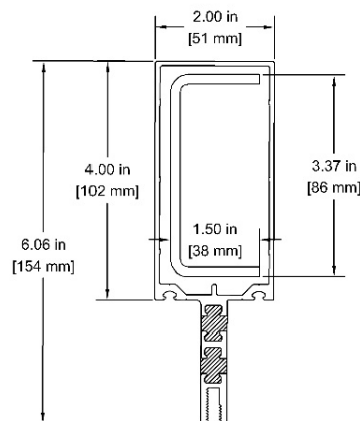
SPAN CHART

SPAN CHART IS FOR ESTIMATION ONLY.
DO NOT UTILIZE FOR DETAILED DESIGN.
CHART IS BASED ON DEFLECTION ANALYSIS
ONLY

Mullion Centres (Tributary width) In Meters



MULLION SECTION



SYSTEM PROPERTIES

Moment of Inertia, Section Modulus & Area

Moment of Inertia, I_{xx}	$I_{xx} = 9.33 \text{ in}^4$
Section Modulus, S_{xx}	$S_{xx} = 2.88 \text{ in}^3$
Total Area	$A = 1.40 \text{ in}^2$

Modulus of Elasticity

Aluminum	10,000,000 PSI
Steel	29,000,000 PSI

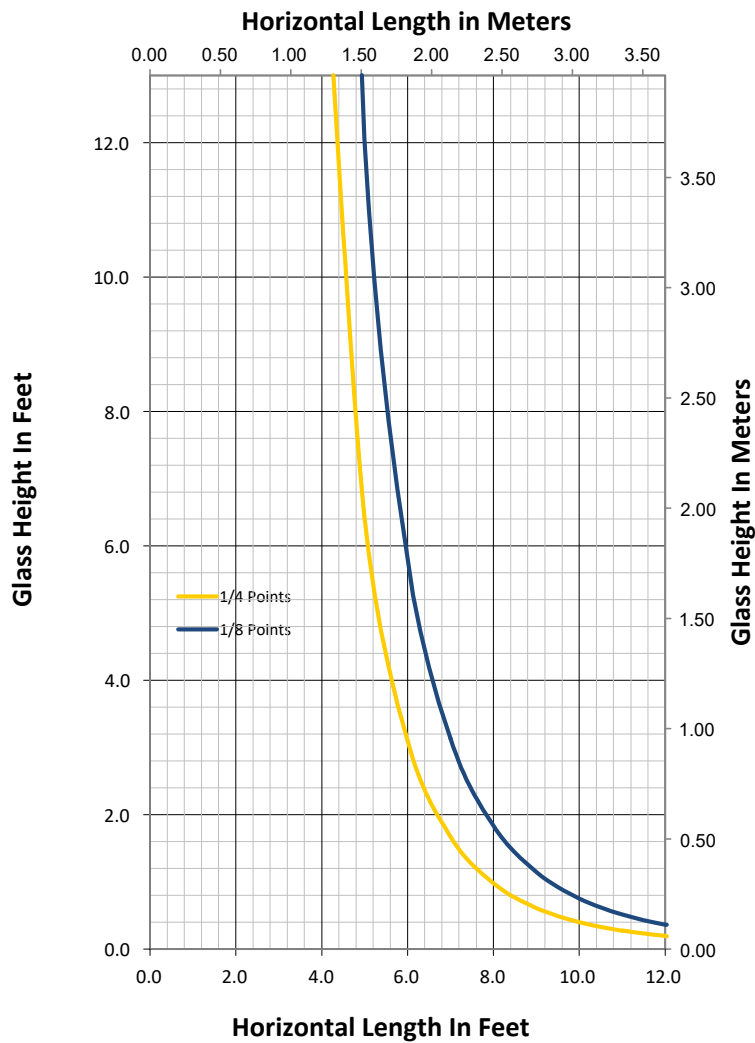
GENERAL NOTES

1. Deflection Limit: $L/175$ up to 13.5ft, $L/240 + 0.25"$ over 13.5ft
2. Assume horizontal members provide lateral support
3. Steel moment of inertia converted to polyester, vinyl or 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 $p_{net} = 40 \text{ psf}$, utilize 30 psf on this chart ($0.75 \times 40 = 30$). (Based on NBCC 2020).

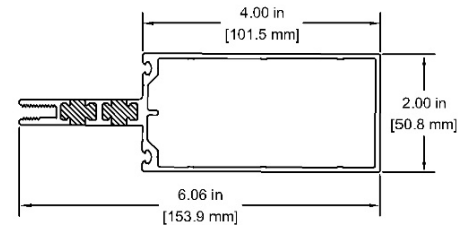
DEAD LOAD CHART FOR 2" x 4" T/G MULLION - PART # 2404THP

SPAN CHART

SPAN CHART IS FOR ESTIMATION ONLY.
DO NOT UTILIZE FOR DETAILED DESIGN.
CHART IS BASED ON DEFLECTION ANALYSIS
ONLY



MULLION SECTION



SYSTEM PROPERTIES

Moment of Inertia, Section Modulus & Area

Moment of Inertia, I_{yy}	$I_{yy} = 0.72 \text{ in}^4$
Section Modulus, S_{yy}	$S_{yy} = 0.71 \text{ in}^3$
Total Area	$A = 1.40 \text{ in}^2$

Modulus of Elasticity

Aluminum	10,000,000 PSI
Steel	29,000,000 PSI

GENERAL NOTES

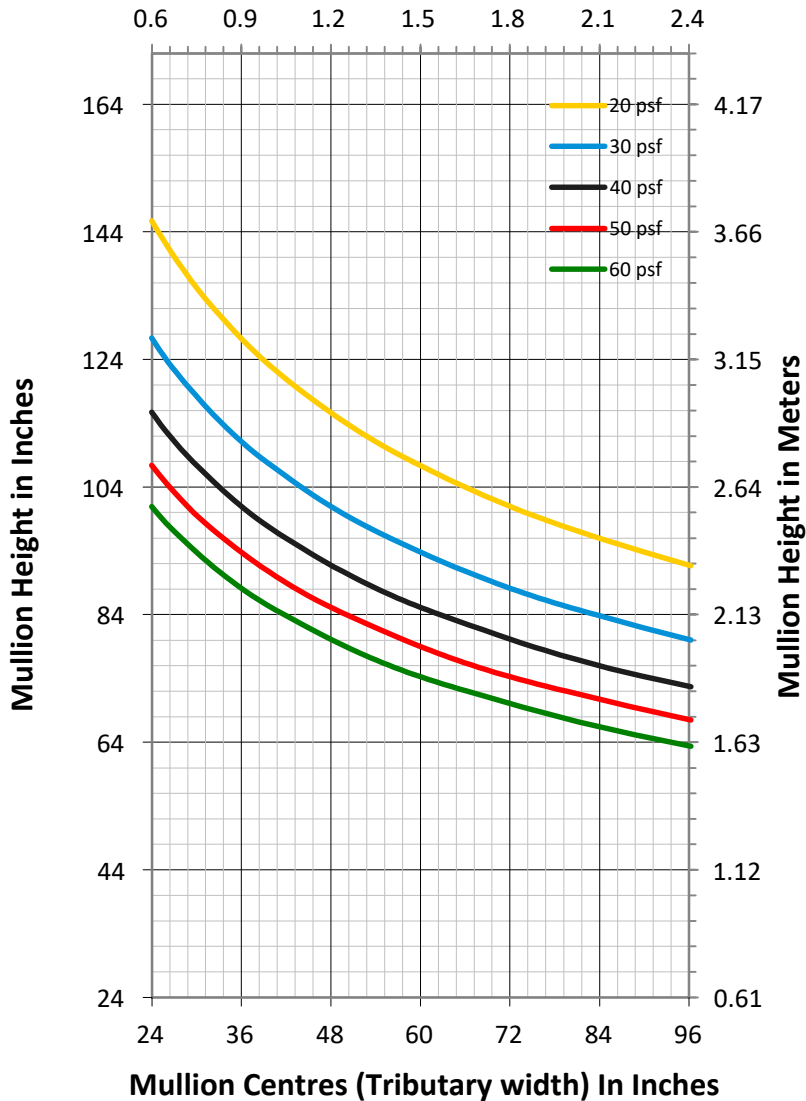
- Deflection Limit: 0.125" (3.2mm).
- Charts are calculated assuming a 1-15/16" overall sealed unit (6mm/18mm spacer/6mm/13mm spacer/6mm).
- Calculations are based on the position of the setting blocks being placed at 1/4 or 1/8 points.

WIND LOAD CHART FOR 2" x 4" SSG MULLION - PART # 2404SSG

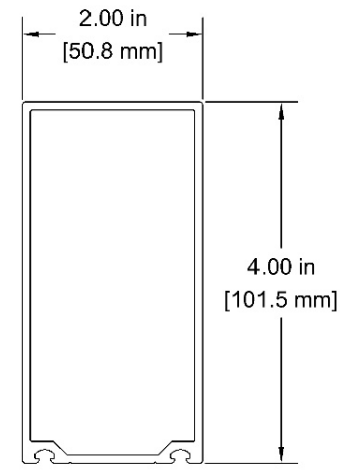
SPAN CHART

SPAN CHART IS FOR ESTIMATION ONLY.
DO NOT UTILIZE FOR DETAILED DESIGN.
CHART IS BASED ON DEFLECTION ANALYSIS
ONLY

Mullion Centres (Tributary width) In Meters



MULLION SECTION



SYSTEM PROPERTIES

Moment of Inertia, Section Modulus & Area

Moment of Inertia, I_{xx}	$I_{xx} = 2.35 \text{ in}^4$
Section Modulus, S_{xx}	$S_{xx} = 1.13 \text{ in}^3$
Total Area	$A = 1.10 \text{ in}^2$

Modulus of Elasticity

Aluminum	10,000,000 PSI
Steel	29,000,000 PSI

GENERAL NOTES

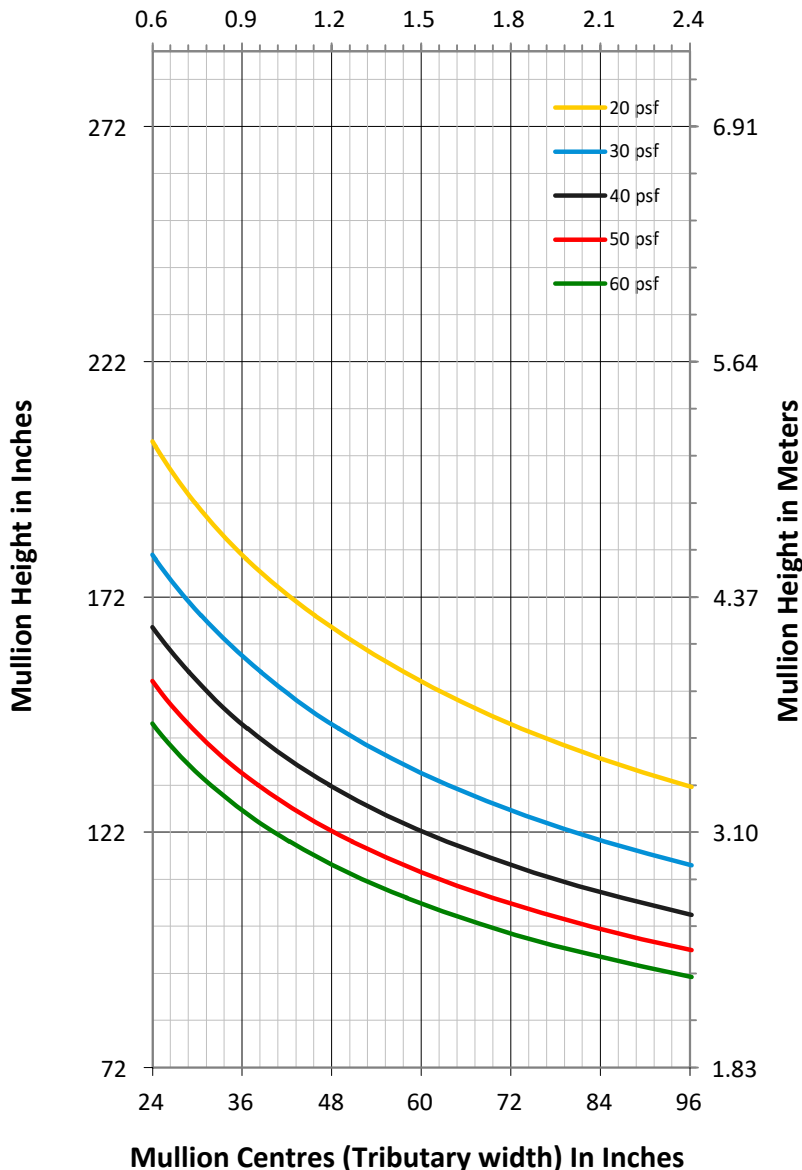
1. Deflection Limit: $L/175$ up to 13.5ft, $L/240 + 0.25"$ over 13.5ft
2. Assume horizontal members provide lateral support
3. Steel moment of inertia converted to polyester, vinyl or aluminum equivalent
4. CANADIAN PROJECTS: Use SLS wind loads or modify the specified wind load by 0.75 before utilizing this chart. i.e. if project specifications require $p_{net} = 40 \text{ psf}$, utilize 30 psf on this chart ($0.75 \times 40 = 30$). (Based on NBCC 2020).

STEEL LOADED WIND LOAD CHART FOR 2" x 4" T/G SSG MULLION - PART # 2404SSG

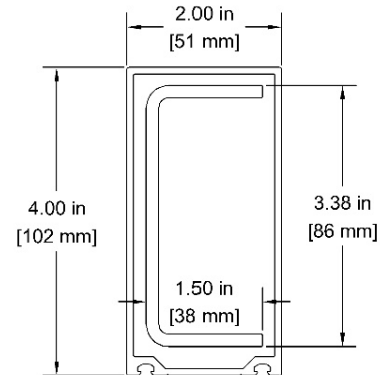
SPAN CHART

SPAN CHART IS FOR ESTIMATION ONLY.
DO NOT UTILIZE FOR DETAILED DESIGN.
CHART IS BASED ON DEFLECTION ANALYSIS
ONLY

Mullion Centres (Tributary width) In Meters



MULLION SECTION



SYSTEM PROPERTIES

Moment of Inertia, Section Modulus & Area

Moment of Inertia, Ixx	Ixx = 6.94 in ⁴
Section Modulus, Sxx	Sxx = 4.34 in ³
Total Area	A = 1.10 in ²

Modulus of Elasticity

Aluminum	10,000,000 PSI
Steel	29,000,000 PSI

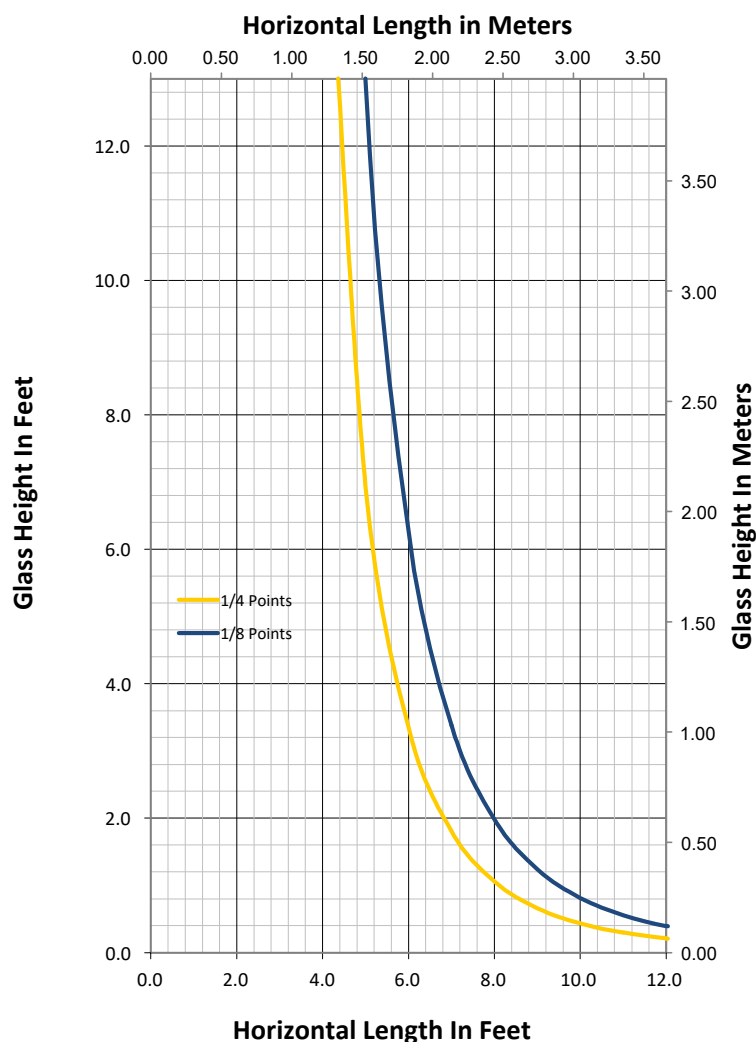
GENERAL NOTES

1. Deflection Limit: L/175 up to 13.5ft, L/240 + 0.25" over 13.5ft
2. Assume horizontal members provide lateral support
3. Steel moment of inertia converted to polyester, vinyl or 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 2020).

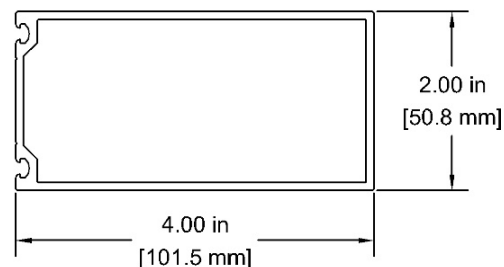
DEAD LOAD CHART FOR 2" x 4" T/G SSG MULLION - PART # 2404SSG

SPAN CHART

SPAN CHART IS FOR ESTIMATION ONLY.
DO NOT UTILIZE FOR DETAILED DESIGN.
CHART IS BASED ON DEFLECTION ANALYSIS
ONLY



MULLION SECTION



SYSTEM PROPERTIES

Moment of Inertia, Section Modulus & Area

Moment of Inertia, I_{yy}	$I_{yy} = 0.77 \text{ in}^4$
Section Modulus, S_{yy}	$S_{yy} = 0.77 \text{ in}^3$
Total Area	$A = 1.10 \text{ in}^2$

Modulus of Elasticity

Aluminum	10,000,000 PSI
Steel	29,000,000 PSI

GENERAL NOTES

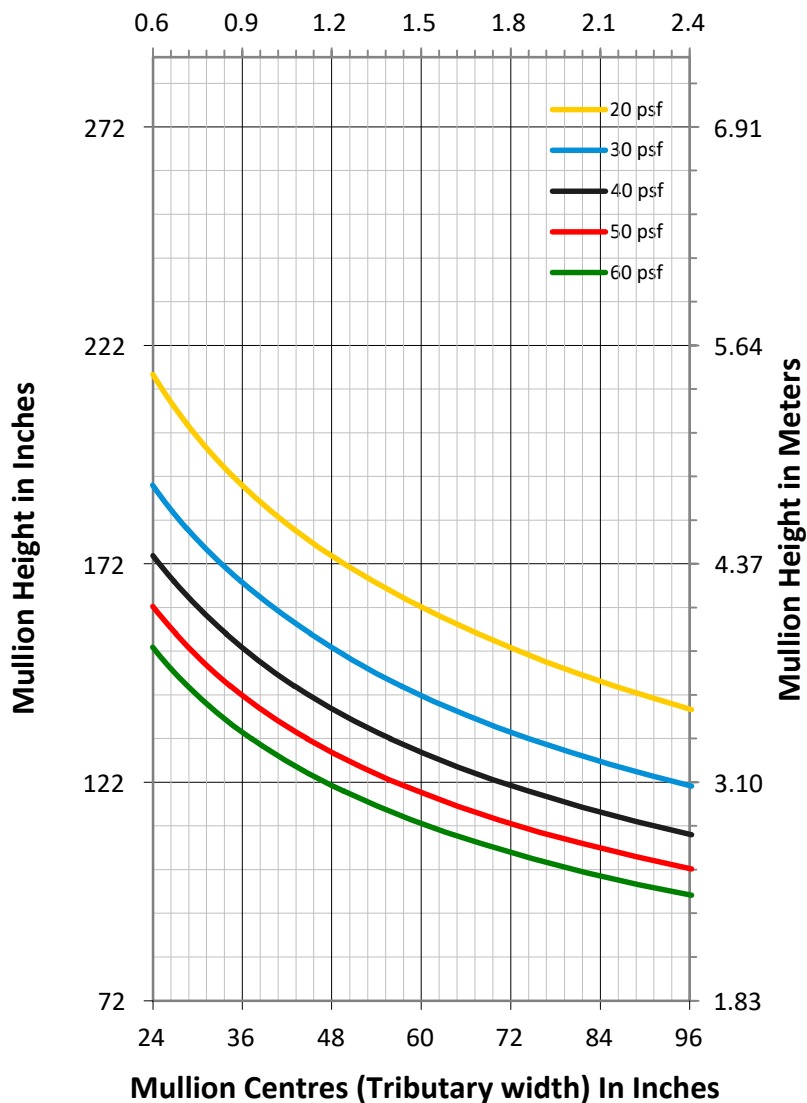
1. Deflection Limit: 0.125" (3.2mm).
2. Charts are calculated assuming a 1-15/16" overall sealed unit (6mm/18mm spacer/6mm/13mm spacer/6mm).
3. Calculations are based on the position of the setting blocks being placed at 1/4 or 1/8 points.

WIND LOAD CHART FOR 2" x 5 1/4" T/G MULLION - PART # 2425STHP

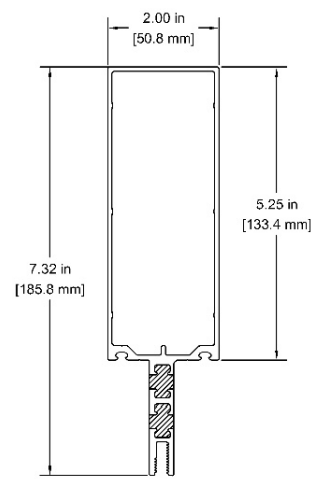
SPAN CHART

SPAN CHART IS FOR ESTIMATION ONLY.
DO NOT UTILIZE FOR DETAILED DESIGN.
CHART IS BASED ON DEFLECTION ANALYSIS
ONLY

Mullion Centres (Tributary width) In Meters



MULLION SECTION



SYSTEM PROPERTIES

Moment of Inertia, Section Modulus & Area

Moment of Inertia, Ixx	Ixx = 8.13 in ⁴
Section Modulus, Sxx	Sxx = 1.62 in ³
Total Area	A = 1.60 in ²

Modulus of Elasticity

Aluminum	10,000,000 PSI
Steel	29,000,000 PSI

GENERAL NOTES

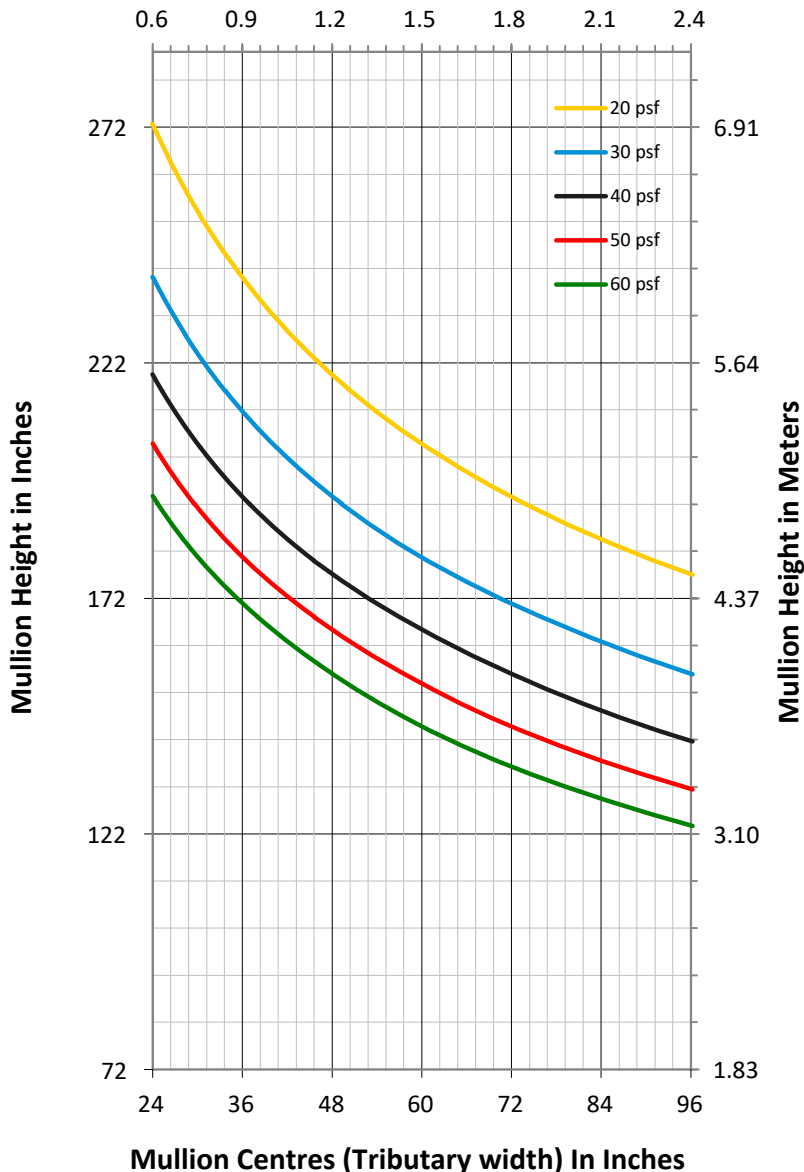
1. Deflection Limit: L/175 up to 13.5ft, L/240 + 0.25" over 13.5ft
2. Assume horizontal members provide lateral support
3. Steel moment of inertia converted to polyester, vinyl or aluminum equivalent
4. CANADIAN PROJECTS: Use SLS wind loads or modify the specified wind load by 0.75 before utilizing this chart. i.e. if project specifications require pnet = 40 psf, utilize 30 psf on this chart (0.75 x 40 = 30). (Based on NBCC 2020).

STEEL LOADED WIND LOAD CHART FOR 2" x 5 1/4" T/G MULLION - PART # 2425STHP

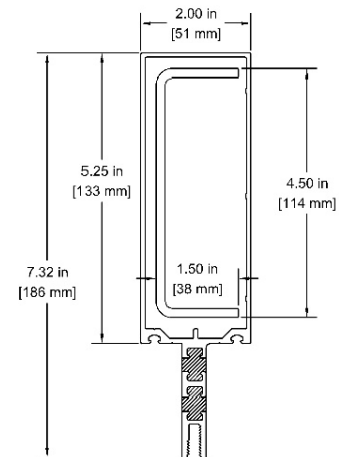
SPAN CHART

SPAN CHART IS FOR ESTIMATION ONLY.
DO NOT UTILIZE FOR DETAILED DESIGN.
CHART IS BASED ON DEFLECTION ANALYSIS
ONLY

Mullion Centres (Tributary width) In Meters



MULLION SECTION



SYSTEM PROPERTIES

Moment of Inertia, Section Modulus & Area

Moment of Inertia, Ixx	Ixx = 17.29 in ⁴
Section Modulus, Sxx	Sxx = 5.90 in ³
Total Area	A = 1.60 in ²

Modulus of Elasticity

Aluminum	10,000,000 PSI
Steel	29,000,000 PSI

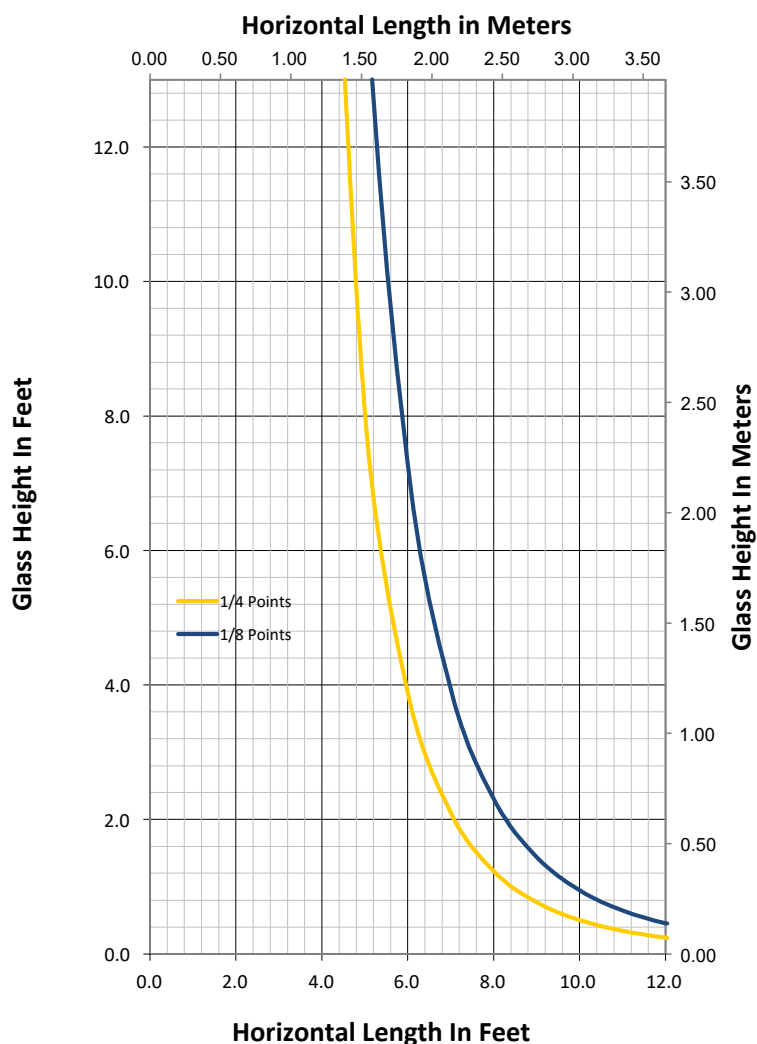
GENERAL NOTES

1. Deflection Limit: L/175 up to 13.5ft, L/240 + 0.25" over 13.5ft
2. Assume horizontal members provide lateral support
3. Steel moment of inertia converted to polyester, vinyl or 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 2020).

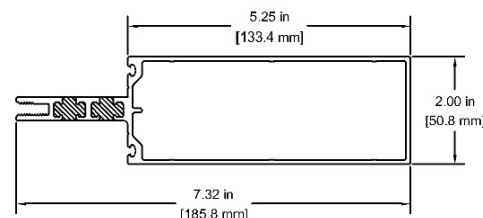
DEAD LOAD CHART FOR 2" x 5 1/4" T/G MULLION - PART # 2425STHP

SPAN CHART

SPAN CHART IS FOR ESTIMATION ONLY.
DO NOT UTILIZE FOR DETAILED DESIGN.
CHART IS BASED ON DEFLECTION ANALYSIS
ONLY



MULLION SECTION



SYSTEM PROPERTIES

Moment of Inertia, Section Modulus & Area

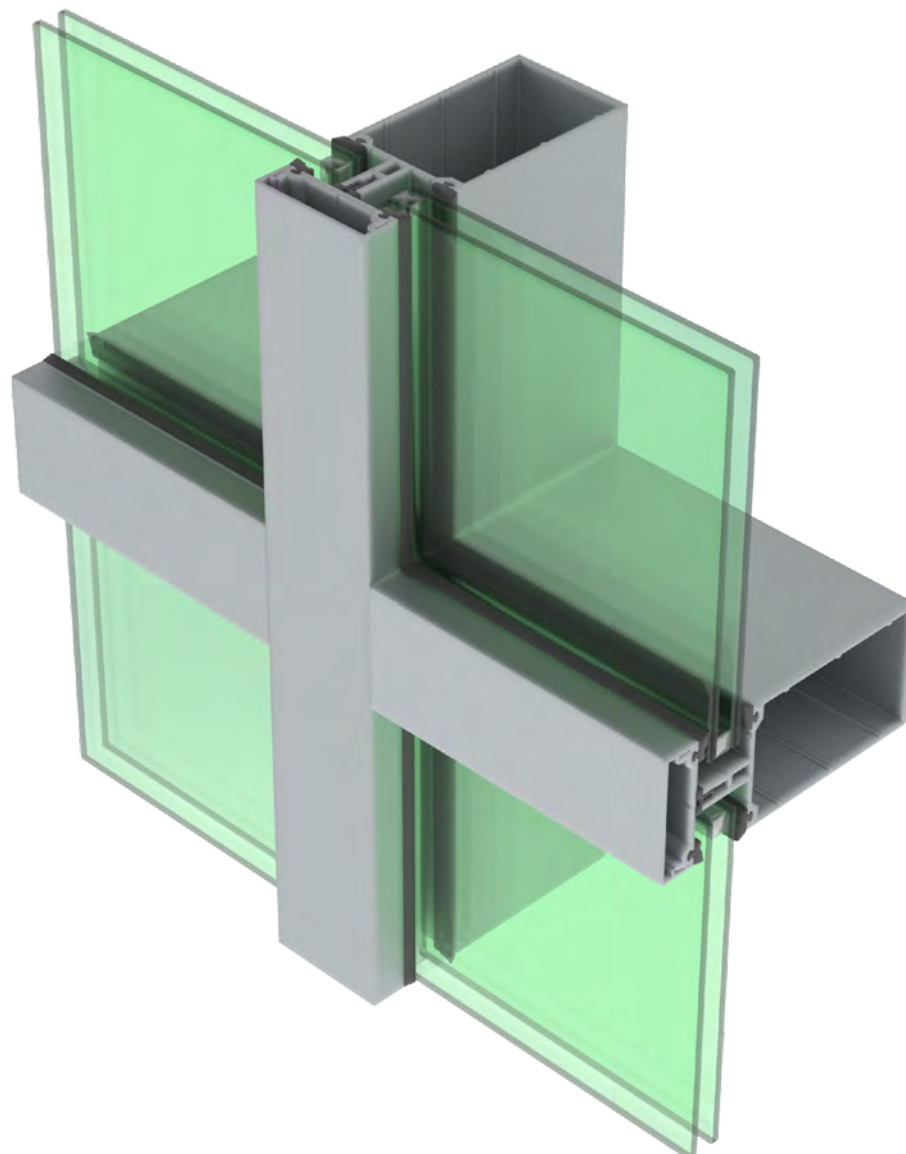
Moment of Inertia, I_{yy}	$I_{yy} = 0.90 \text{ in}^4$
Section Modulus, S_{yy}	$S_{yy} = 0.89 \text{ in}^3$
Total Area	$A = 1.60 \text{ in}^2$

Modulus of Elasticity

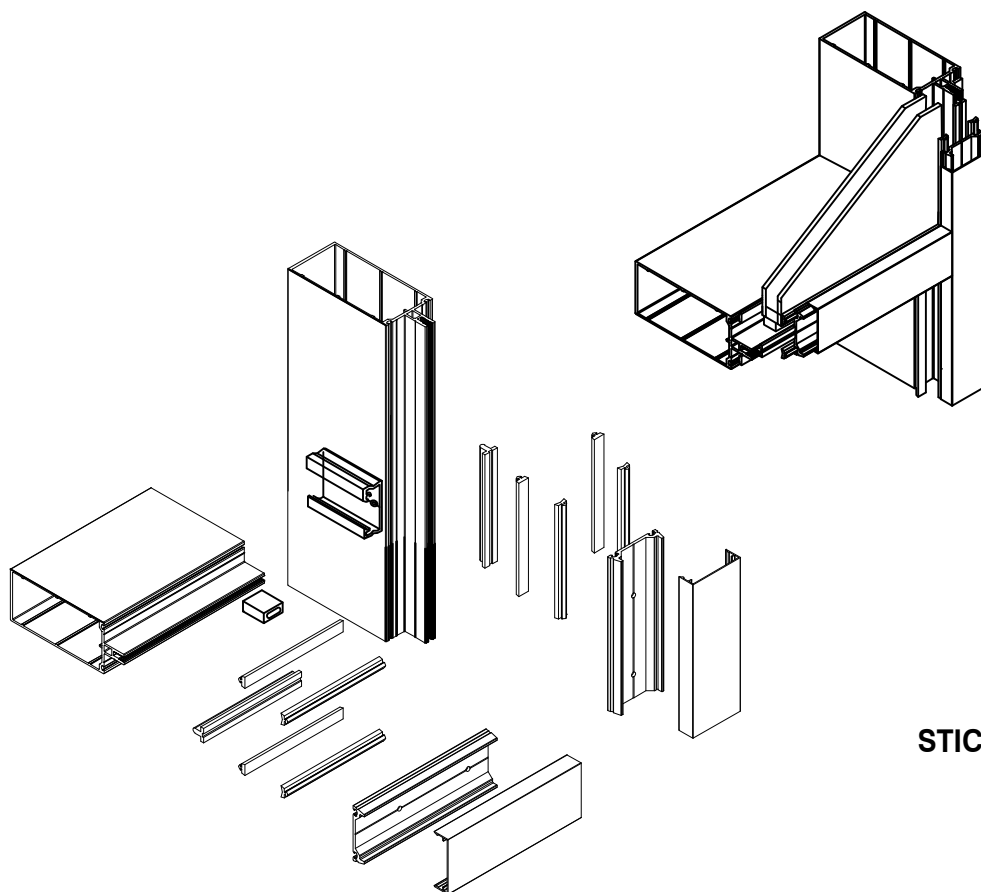
Aluminum	10,000,000 PSI
Steel	29,000,000 PSI

GENERAL NOTES

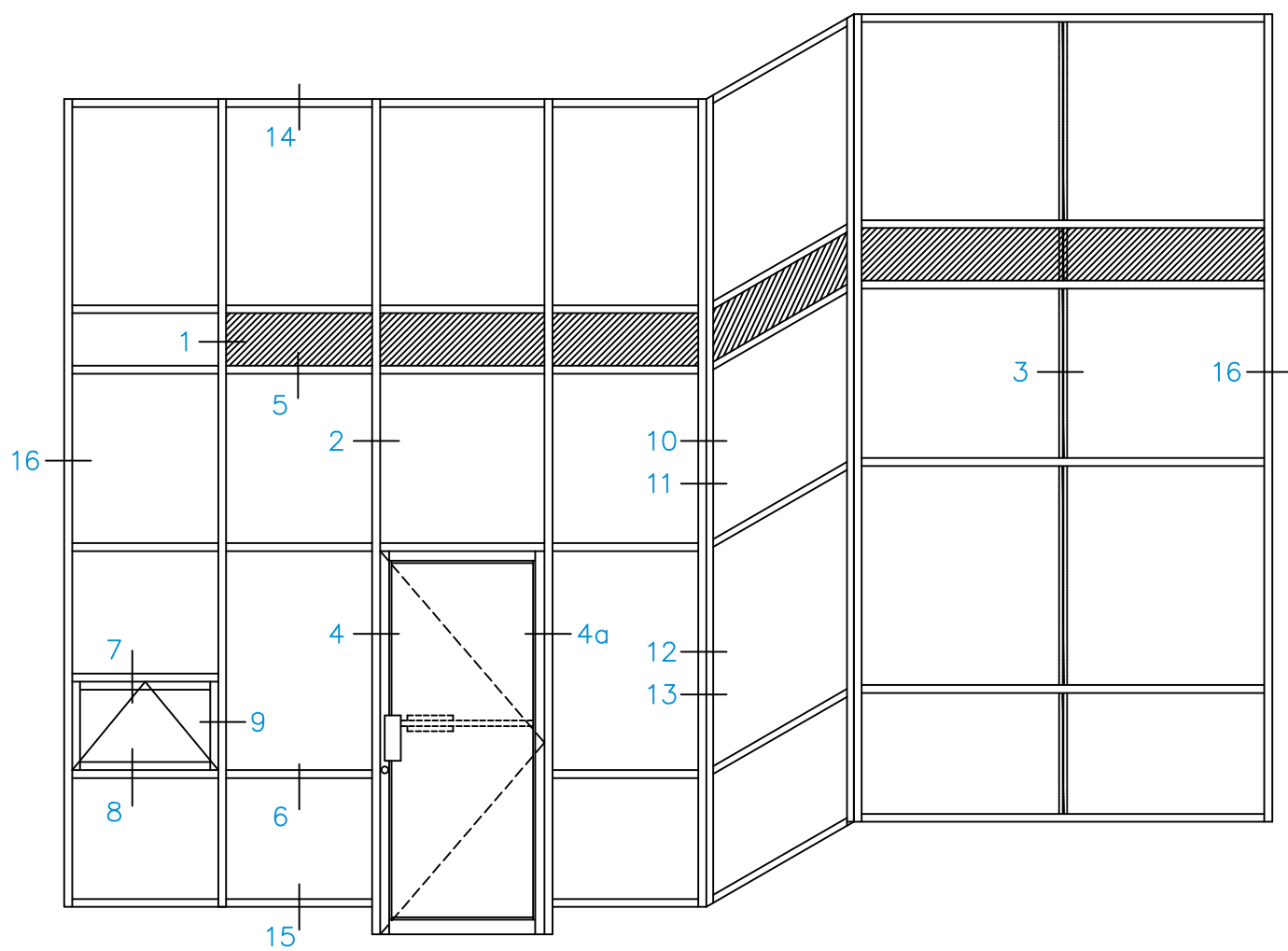
1. Deflection Limit: 0.125" (3.2mm).
2. Charts are calculated assuming a 1-15/16" overall sealed unit (6mm/18mm spacer/6mm/13mm spacer/6mm).
3. Calculations are based on the position of the setting blocks being placed at 1/4 or 1/8 points.



PICTORIAL (3D) PRESENTATION

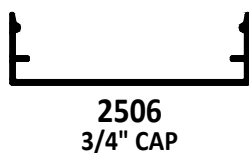
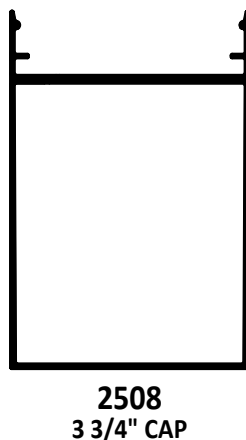
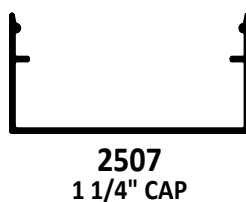
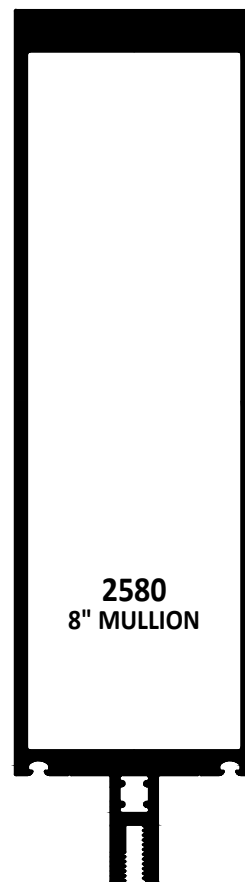
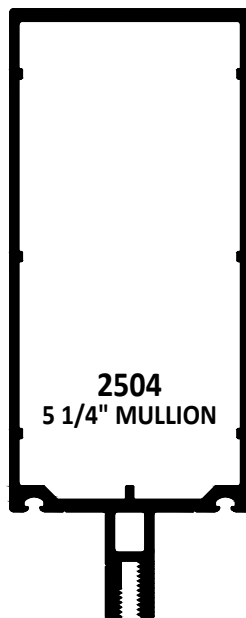
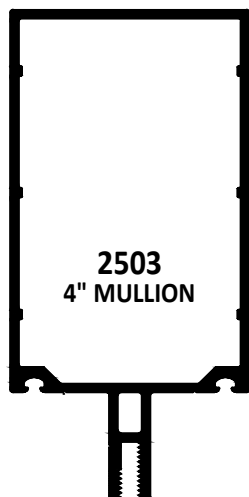


STICK SYSTEM FRAMING

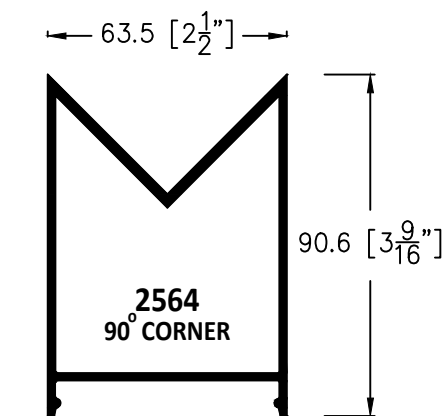
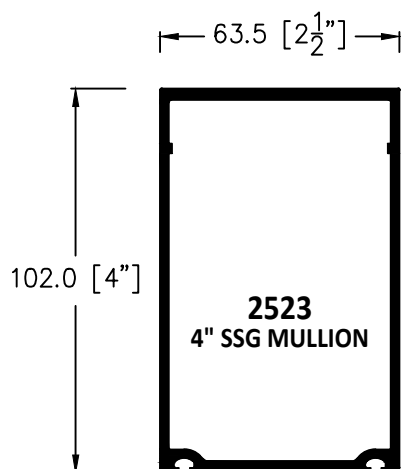


ELEVATION

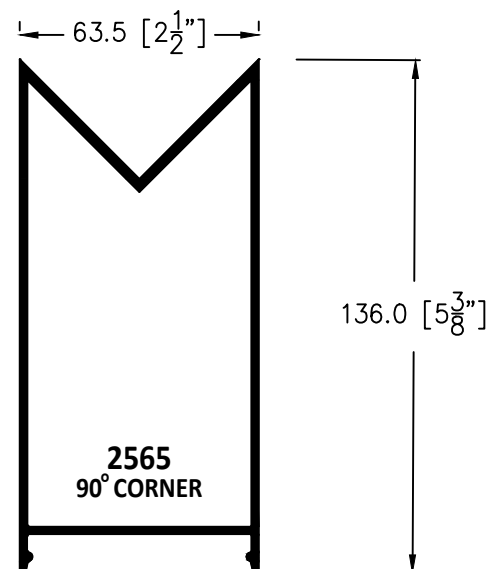
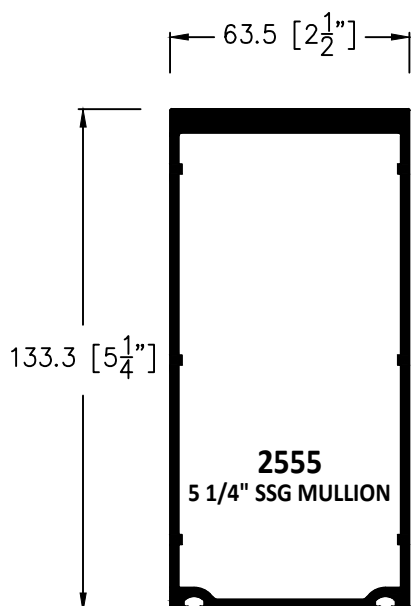
BACK SECTIONS



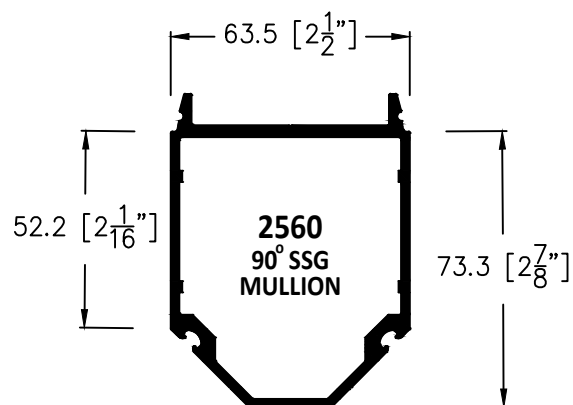
SSG COMPONENTS



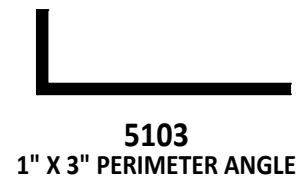
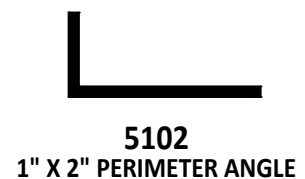
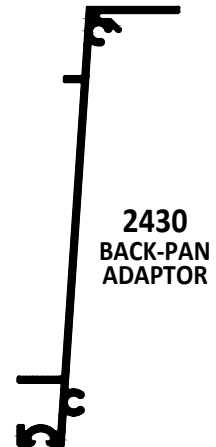
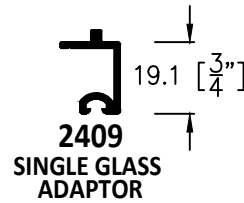
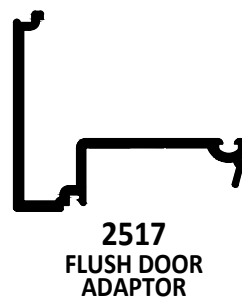
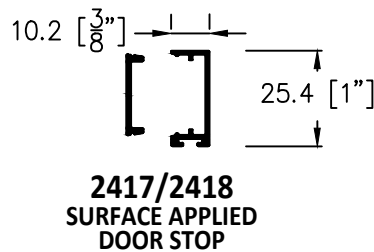
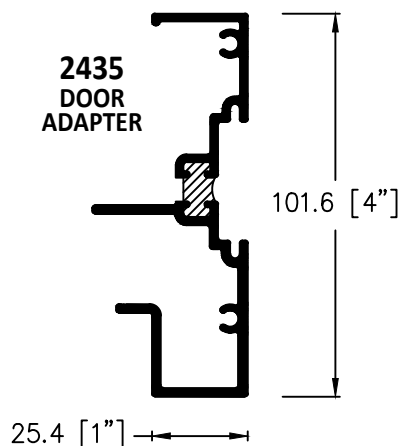
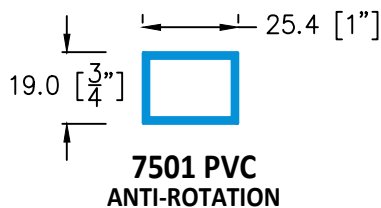
EXTENSION CAP FOR 4" BACK



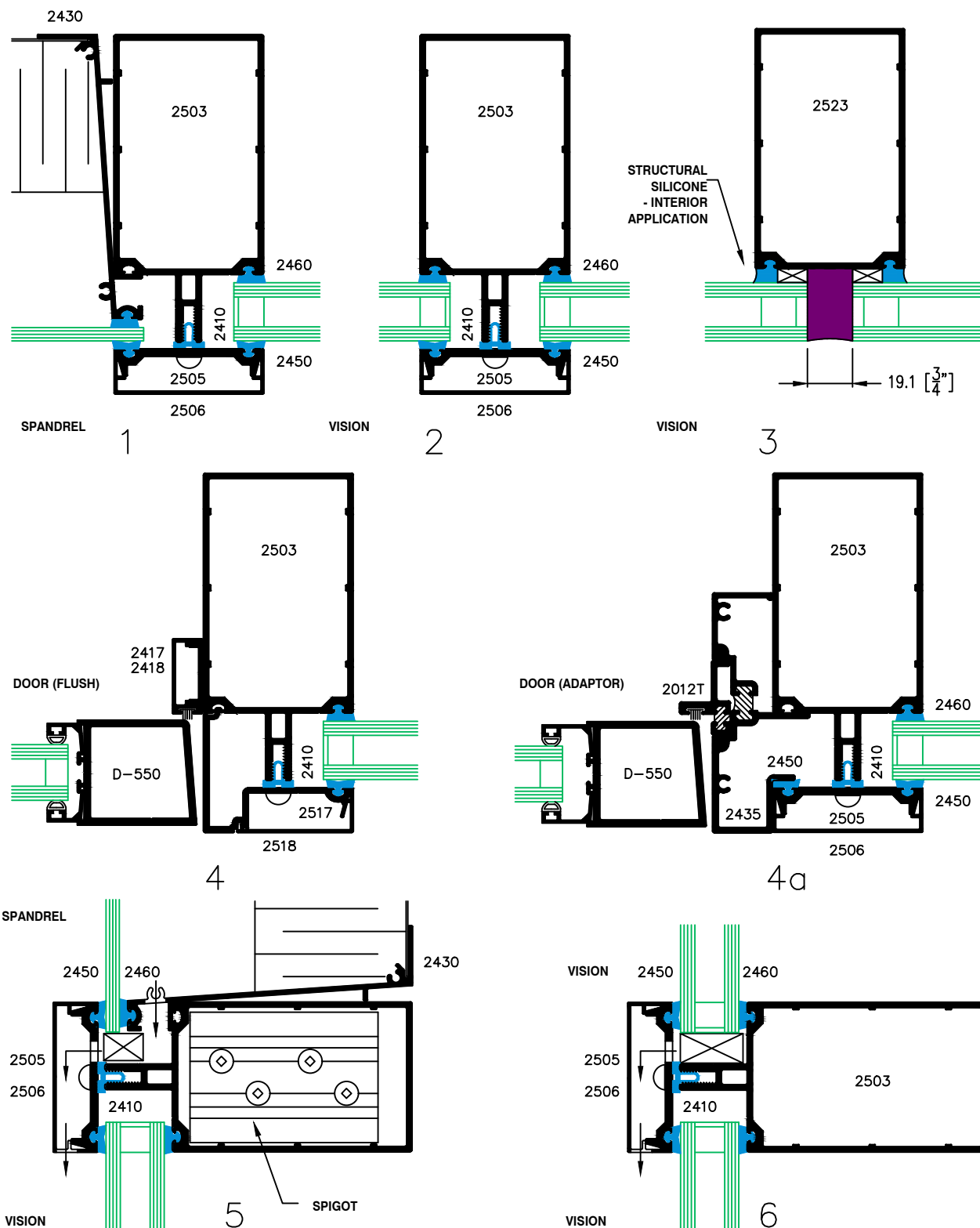
EXTENSION CAP FOR 5 1/4" BACK



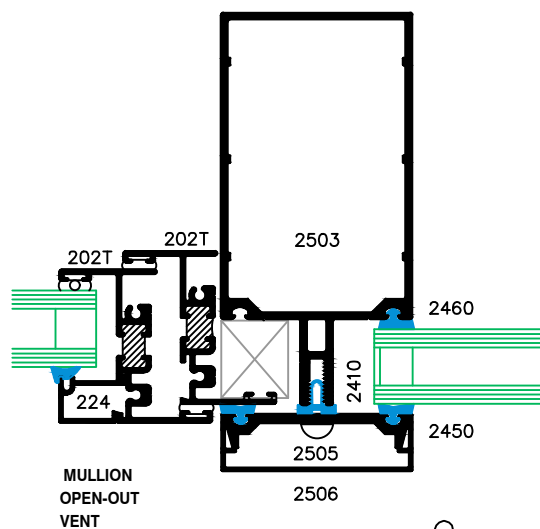
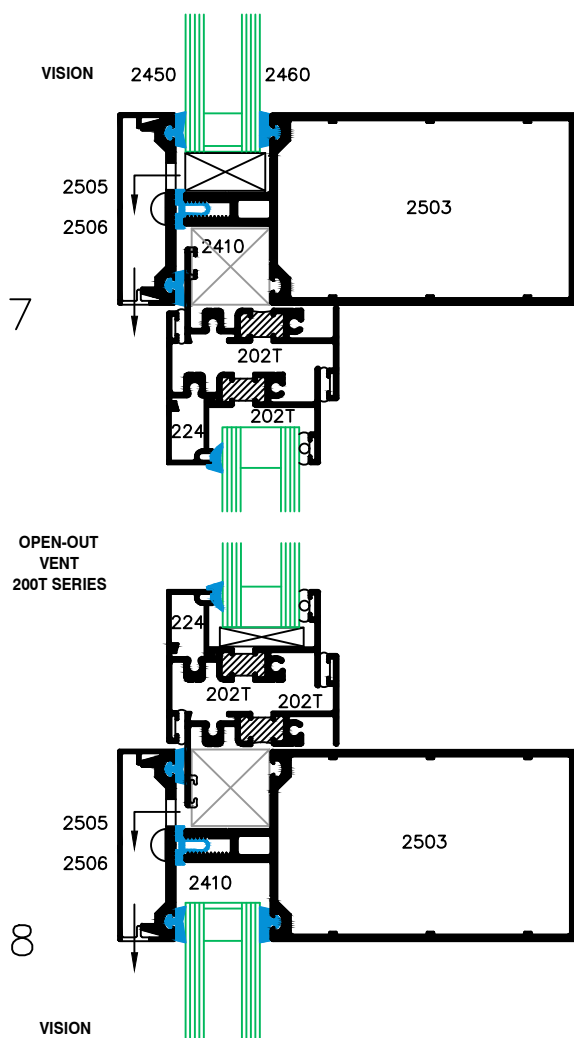
MISC. COMPONENTS



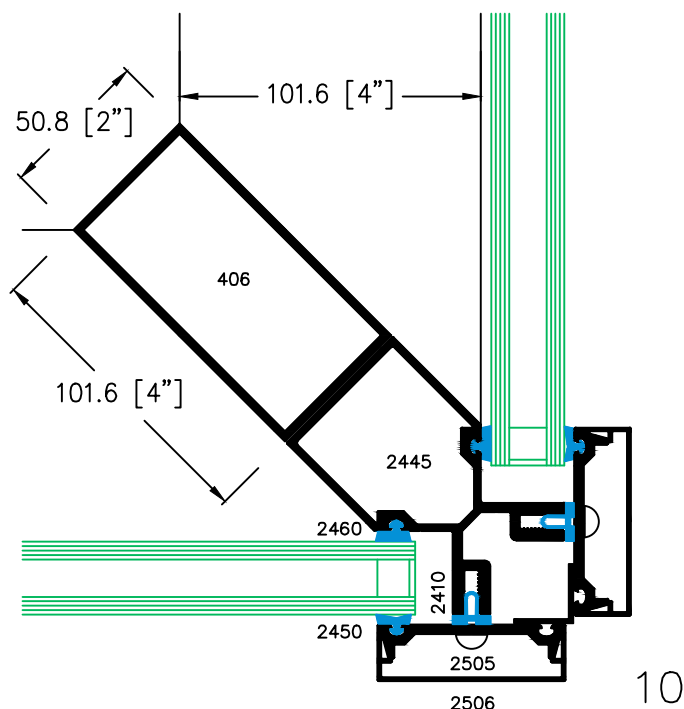
TYPICAL DETAILS



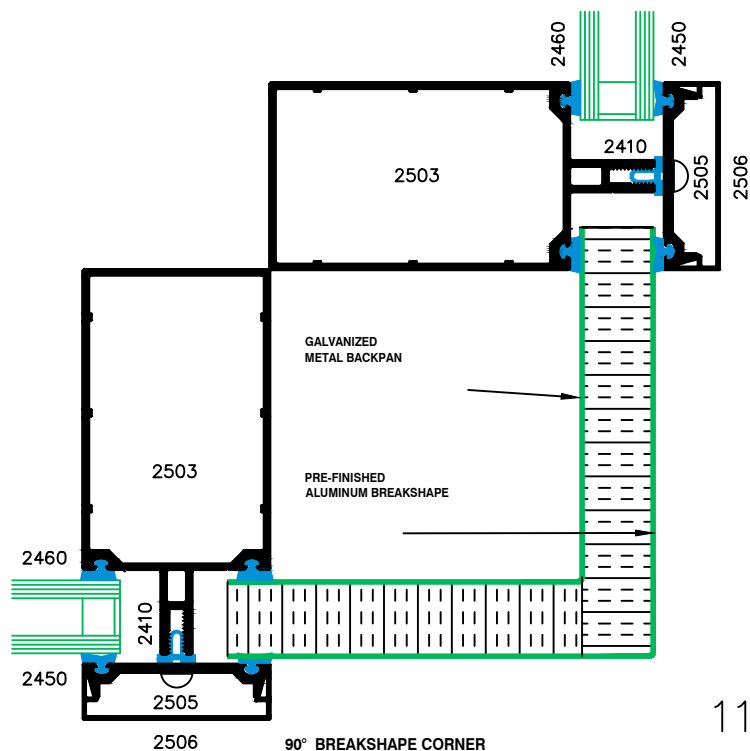
TYPICAL CURTAIN WALL VENT DETAILS



TYPICAL CAPTURED CORNER DETAILS

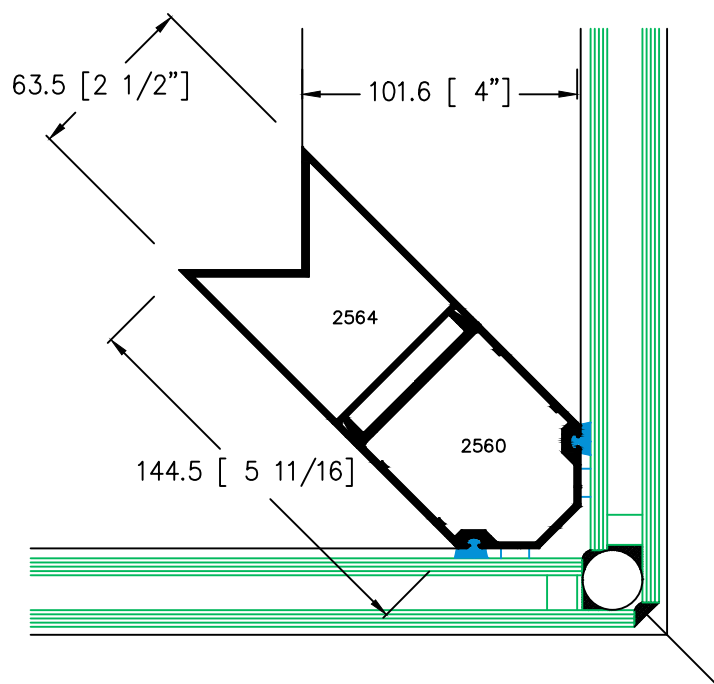


90° CAPTURED CORNER



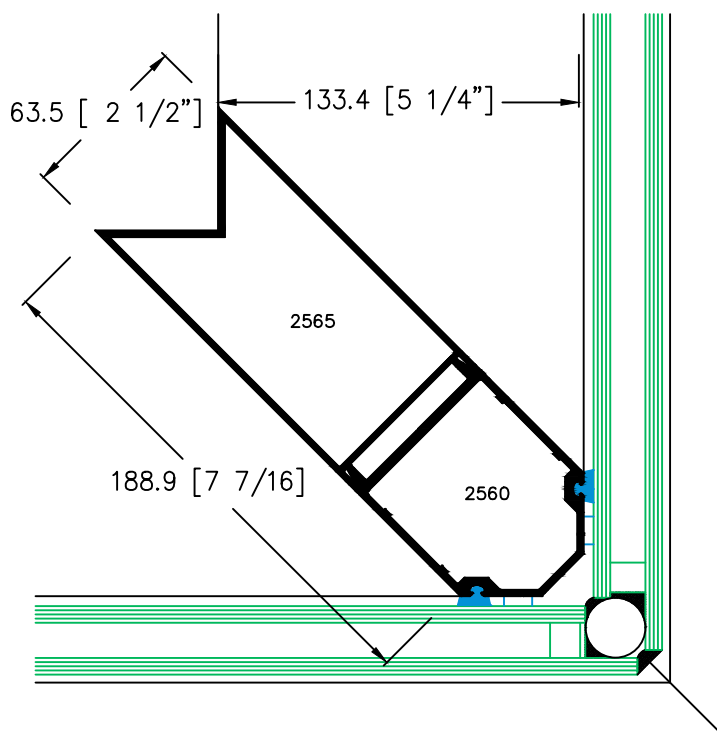
90° BREAKSHAPE CORNER

TYPICAL BUTT-JOINT CORNER DETAILS



90° BUTT-JOINT CORNER
AT 4" BACK MEMBER

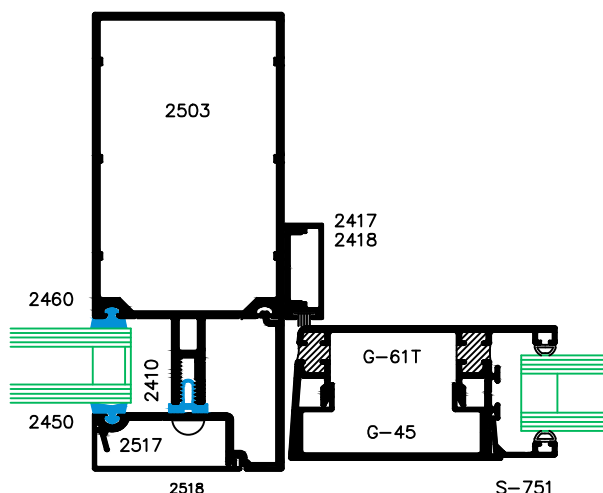
12



90° BUTT-JOINT CORNER
AT 5 1/4" BACK MEMBER

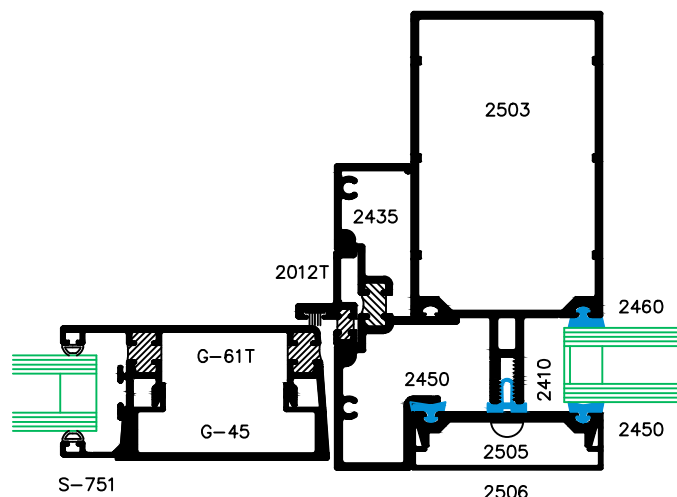
13

ALTERNATE DOOR DETAILS



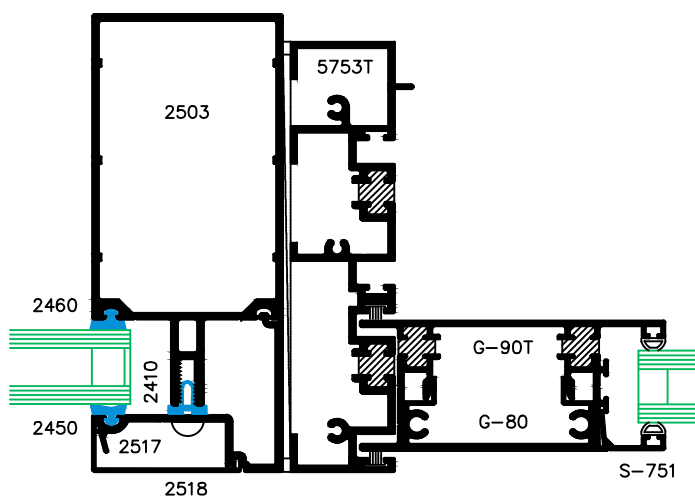
GLACIER DOOR

15



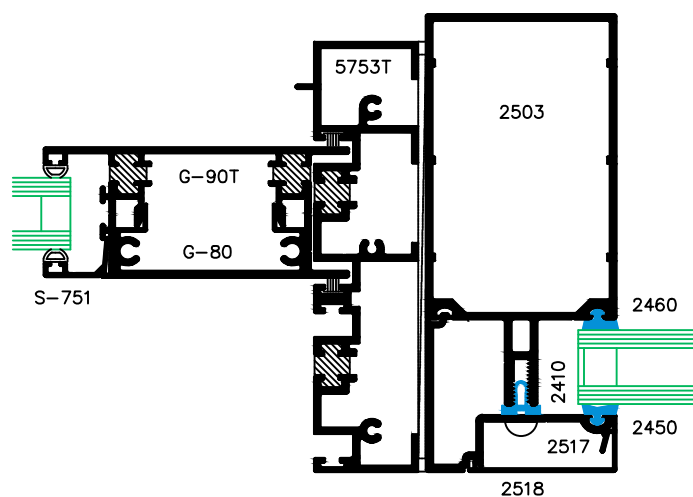
GLACIER DOOR

15a



1100T JAMB AT SLIDER

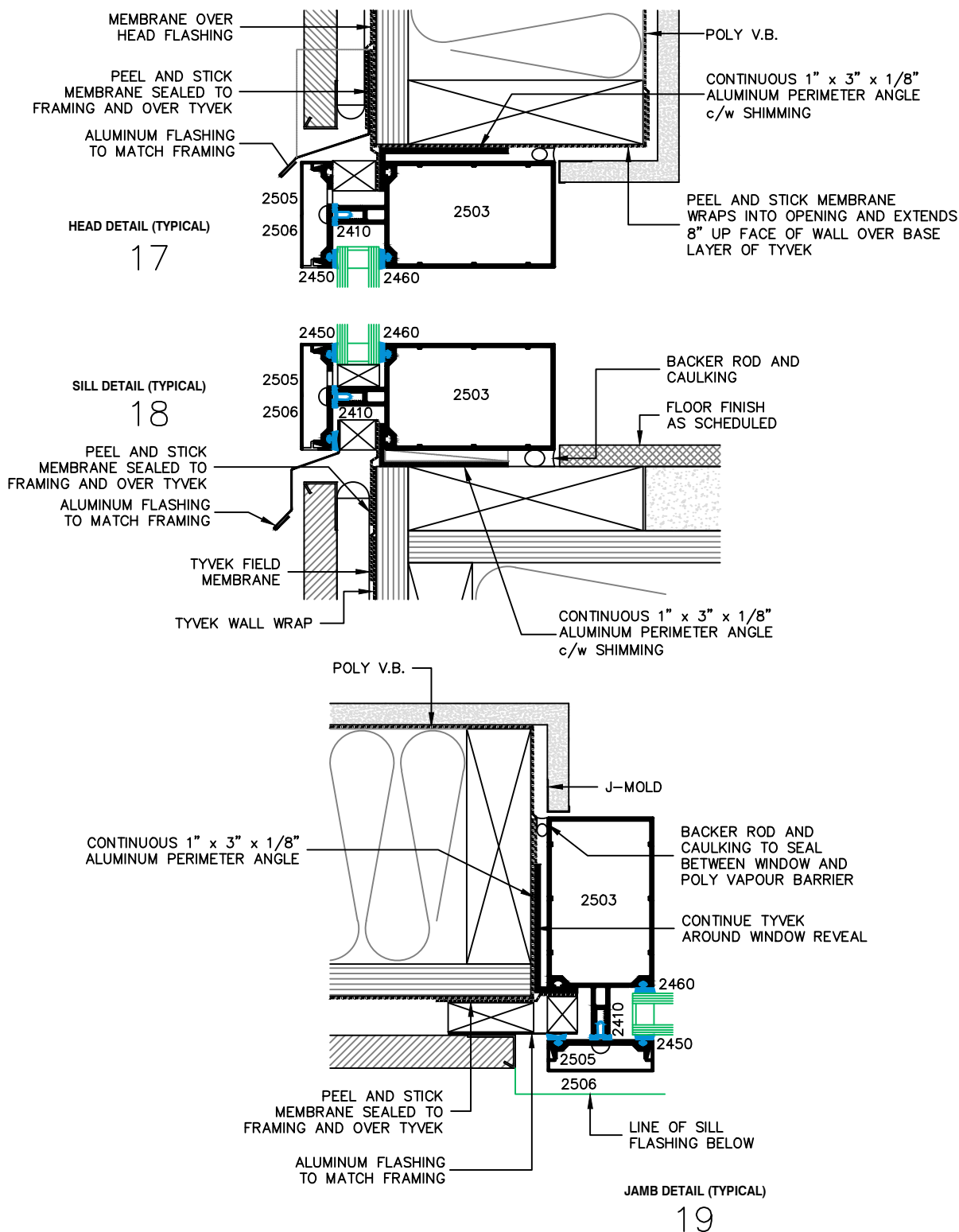
16



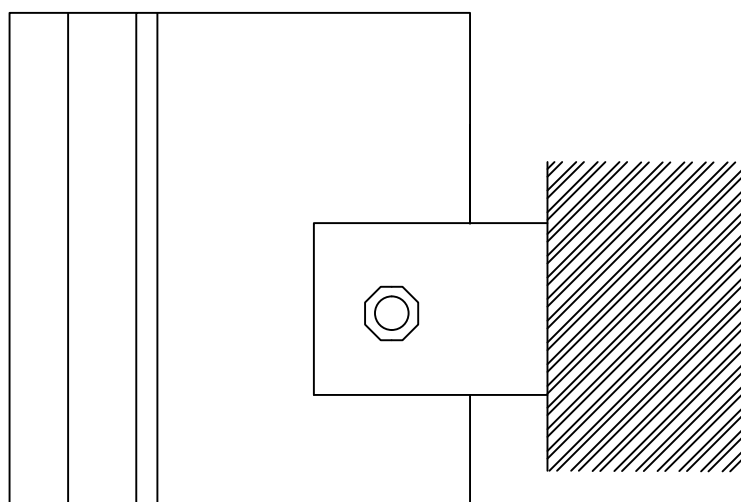
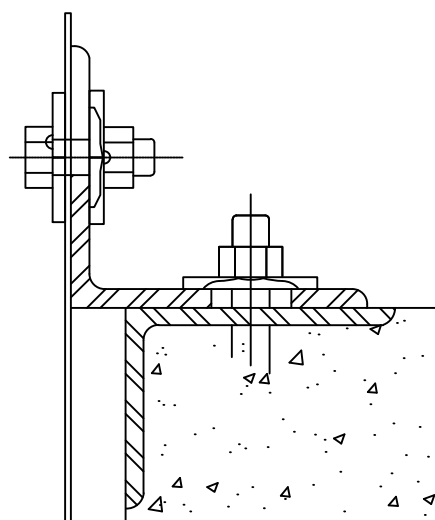
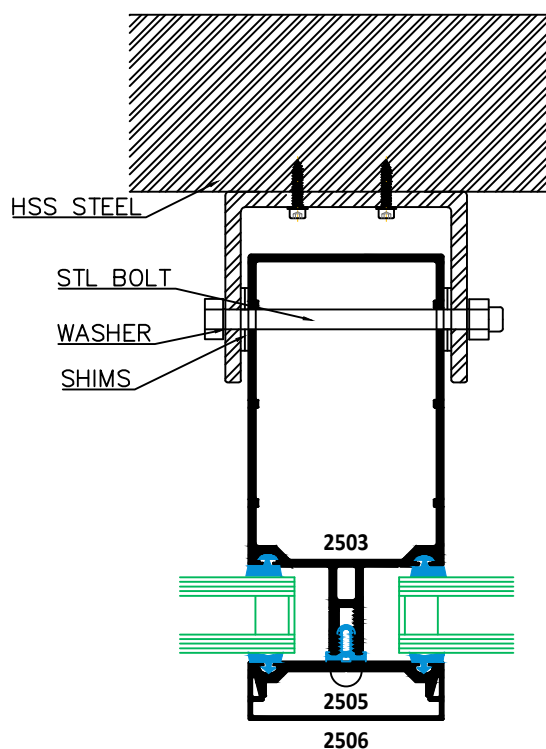
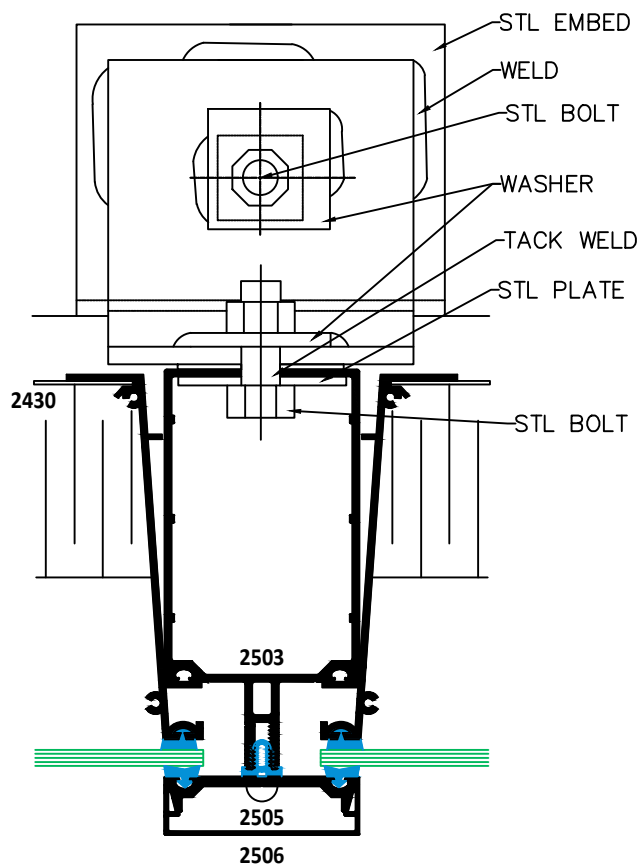
1100T JAMB AT FIXED PANEL

16a

INTERFACE DETAILS
(SUGGESTED ONLY)

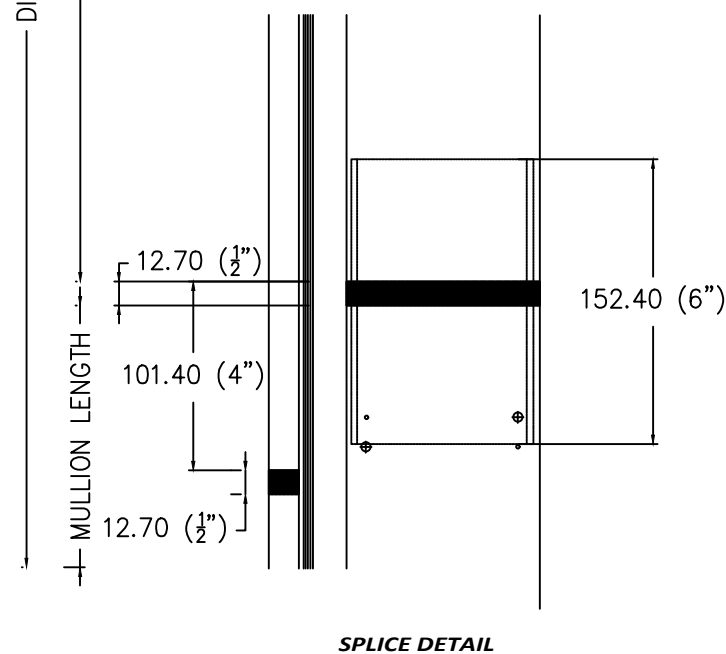
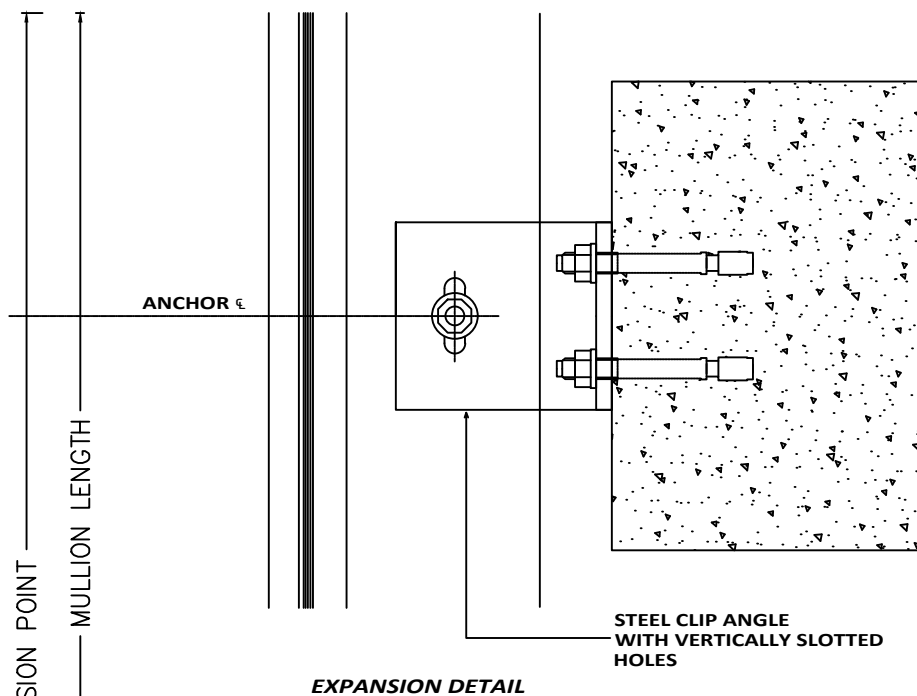


TYPICAL ANCHORING DETAILS



SECTION DETAILS

EXPANSION & SPLICE DETAILS

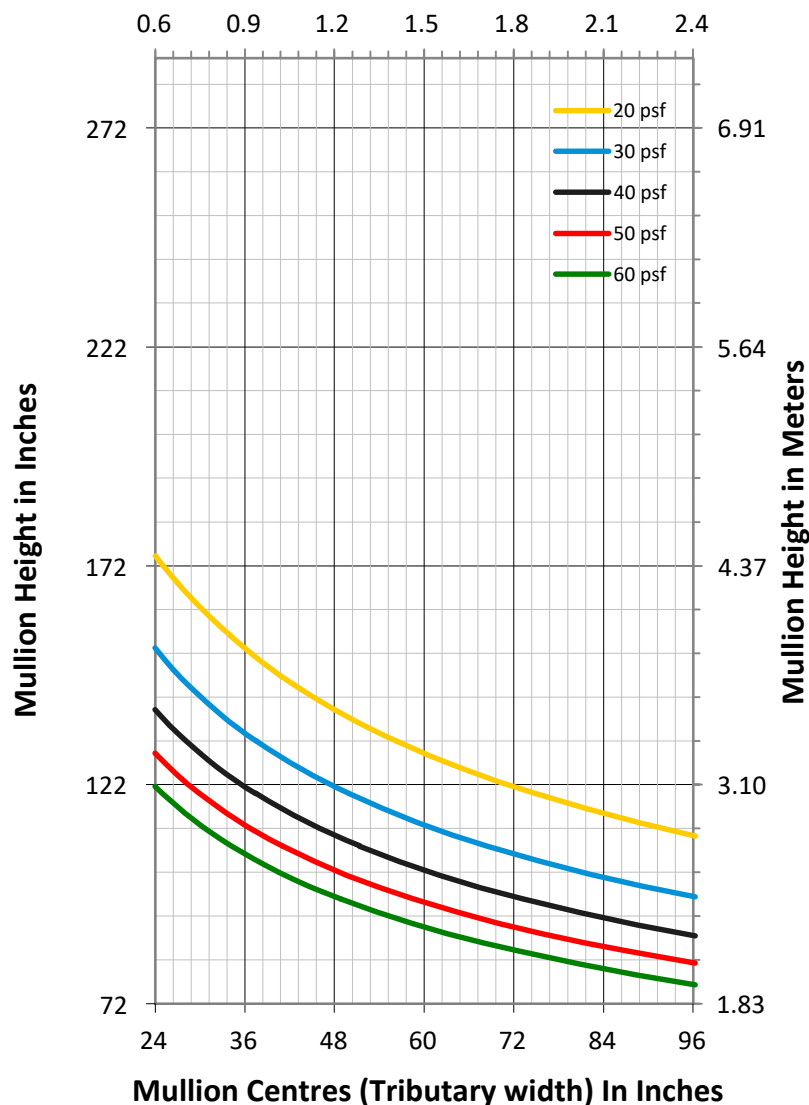


WIND LOAD CHART FOR 2 1/2" x 4" MULLION - PART # 2503

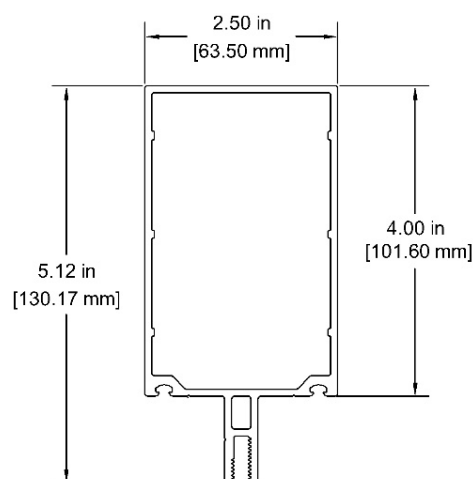
SPAN CHART

SPAN CHART IS FOR ESTIMATION ONLY.
DO NOT UTILIZE FOR DETAILED DESIGN.
CHART IS BASED ON DEFLECTION ANALYSIS
ONLY

Mullion Centres (Tributary width) In Meters



MULLION SECTION



SYSTEM PROPERTIES

Moment of Inertia, Section Modulus & Area

Moment of Inertia, Ixx	Ixx = 4.10 in ⁴
Section Modulus, Sxx	Sxx = 1.57 in ³
Total Area	A = 1.48 in ²

Modulus of Elasticity

Aluminum	10,000,000 PSI
Steel	29,000,000 PSI

GENERAL NOTES

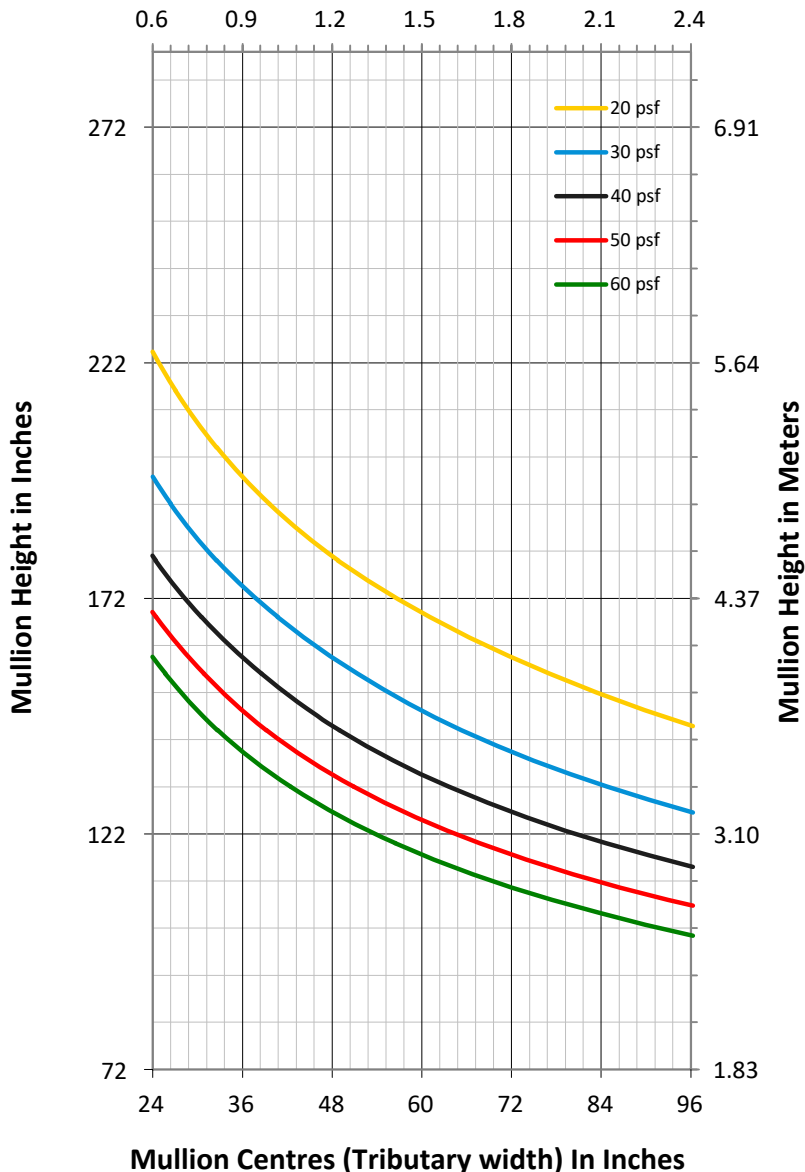
1. Deflection Limit: L/175 up to 13.5ft, L/240 + 0.25" over 13.5ft
2. Assume horizontal members provide lateral support
3. Steel moment of inertia converted to polyester, vinyl or aluminum equivalent
4. CANADIAN PROJECTS: Use SLS wind loads or modify the specified wind load by 0.75 before utilizing this chart. i.e. if project specifications require pnet = 40 psf, utilize 30 psf on this chart (0.75 x 40 = 30). (Based on NBCC 2020).

STEEL LOADED WIND LOAD CHART FOR 2 1/2" x 4" MULLION - PART # 2503

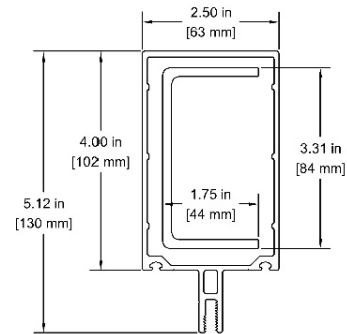
SPAN CHART

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CHART IS BASED ON DEFLECTION ANALYSIS
ONLY

Mullion Centres (Tributary width) In Meters



MULLION SECTION



SYSTEM PROPERTIES

Moment of Inertia, Section Modulus & Area

Moment of Inertia, Ixx	Ixx = 9.26 in ⁴
Section Modulus, Sxx	Sxx = 3.20 in ³
Total Area	A = 1.48 in ²

Modulus of Elasticity

Aluminum	10,000,000 PSI
Steel	29,000,000 PSI

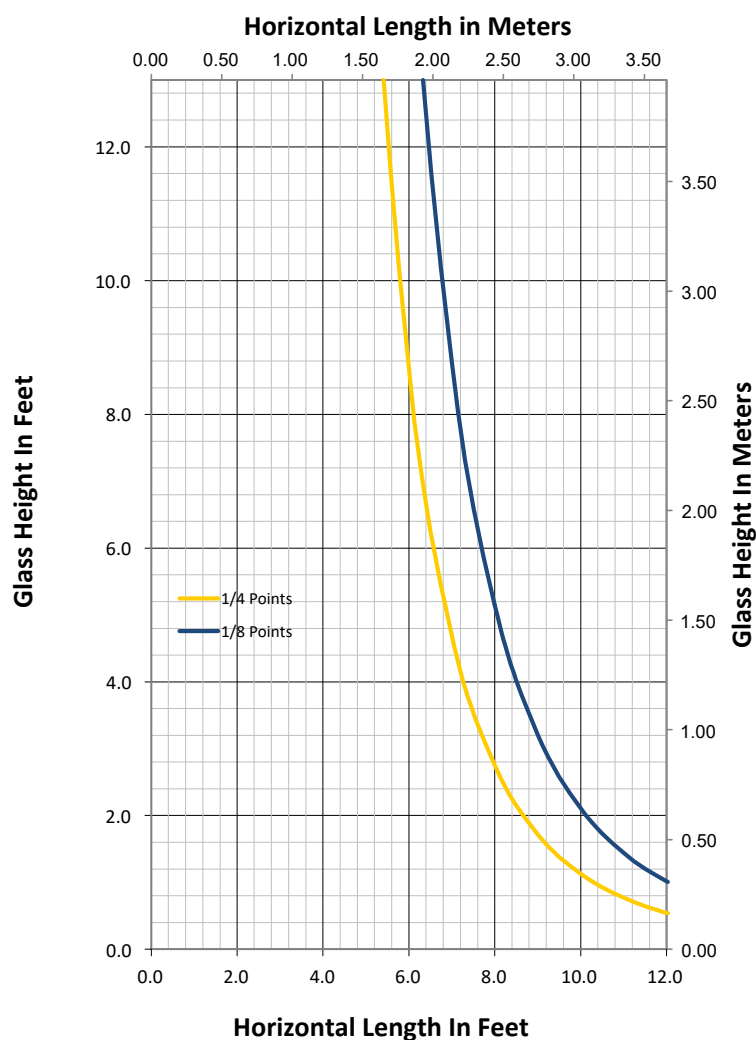
GENERAL NOTES

1. Deflection Limit: L/175 up to 13.5ft, L/240 + 0.25" over 13.5ft
2. Assume horizontal members provide lateral support
3. Steel moment of inertia converted to polyester, vinyl or 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 2020).

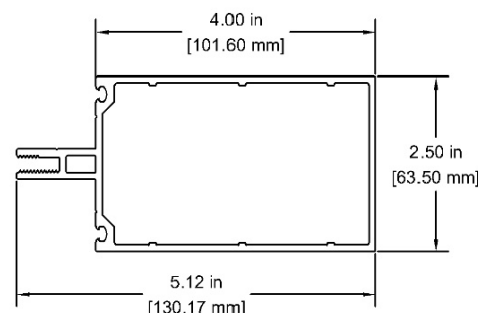
DEAD LOAD CHART FOR 2 1/2" x 4" MULLION - PART # 2503

SPAN CHART

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CHART IS BASED ON DEFLECTION ANALYSIS
ONLY



MULLION SECTION



SYSTEM PROPERTIES

Moment of Inertia, Section Modulus & Area

Moment of Inertia, I_{yy}	$I_{yy} = 1.34 \text{ in}^4$
Section Modulus, S_{yy}	$S_{yy} = 1.07 \text{ in}^3$
Total Area	$A = 1.48 \text{ in}^2$

Modulus of Elasticity

Aluminum	10,000,000 PSI
Steel	29,000,000 PSI

GENERAL NOTES

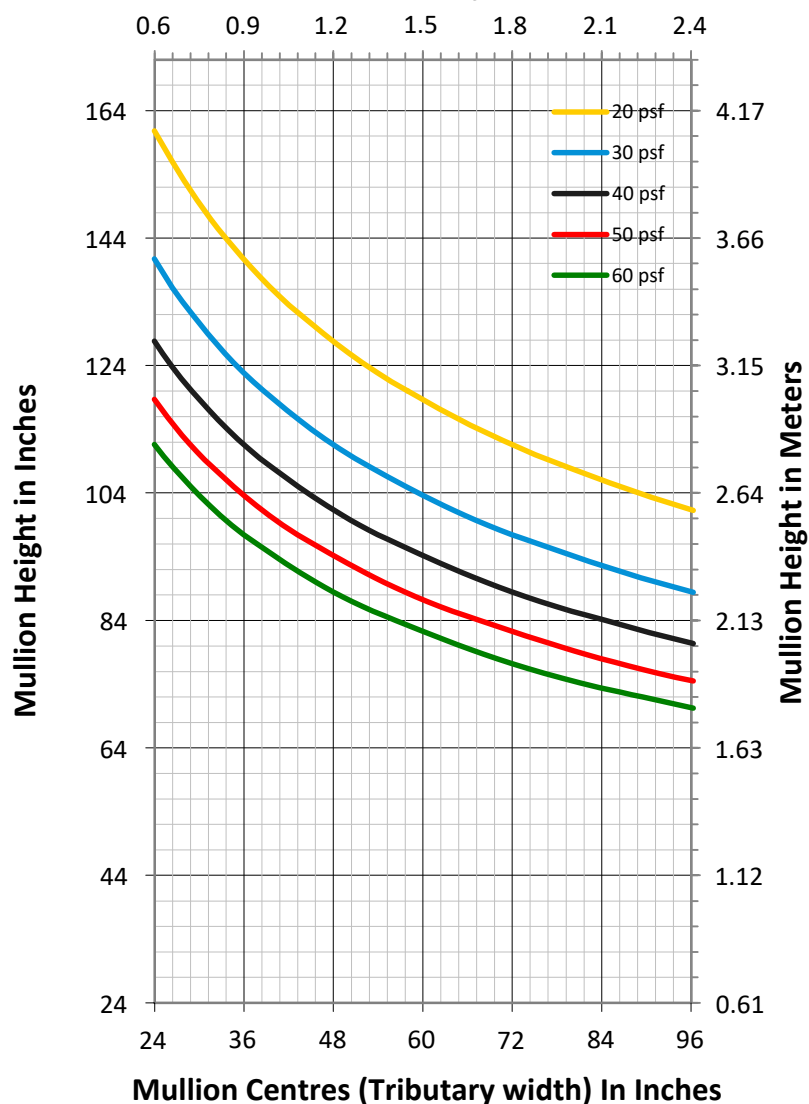
1. Deflection Limit: 0.125" (3.2mm).
2. Charts are calculated assuming a 1" overall sealed unit (6mm/13mm spacer/6mm)
3. Calculations are based on the position of the setting blocks being placed at 1/4 or 1/8 points.

WIND LOAD CHART FOR 2 1/2" x 4" SSG MULLION - PART # 2523

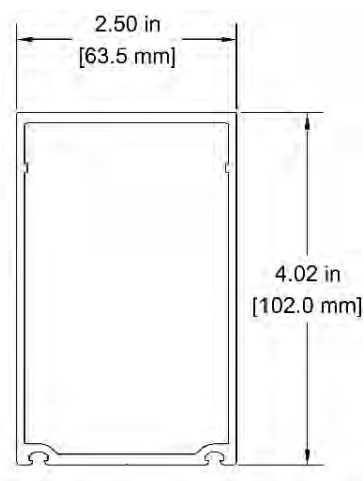
SPAN CHART

SPAN CHART IS FOR ESTIMATION ONLY.
DO NOT UTILIZE FOR DETAILED DESIGN.
CHART IS BASED ON DEFLECTION ANALYSIS
ONLY

Mullion Centres (Tributary width) In Meters



MULLION SECTION



SYSTEM PROPERTIES

Moment of Inertia, Section Modulus & Area

Moment of Inertia, Ixx	Ixx = 3.17 in ⁴
Section Modulus, Sxx	Sxx = 1.55 in ³
Total Area	A = 1.32 in ²

Modulus of Elasticity

Aluminum	10,000,000 PSI
Steel	29,000,000 PSI

GENERAL NOTES

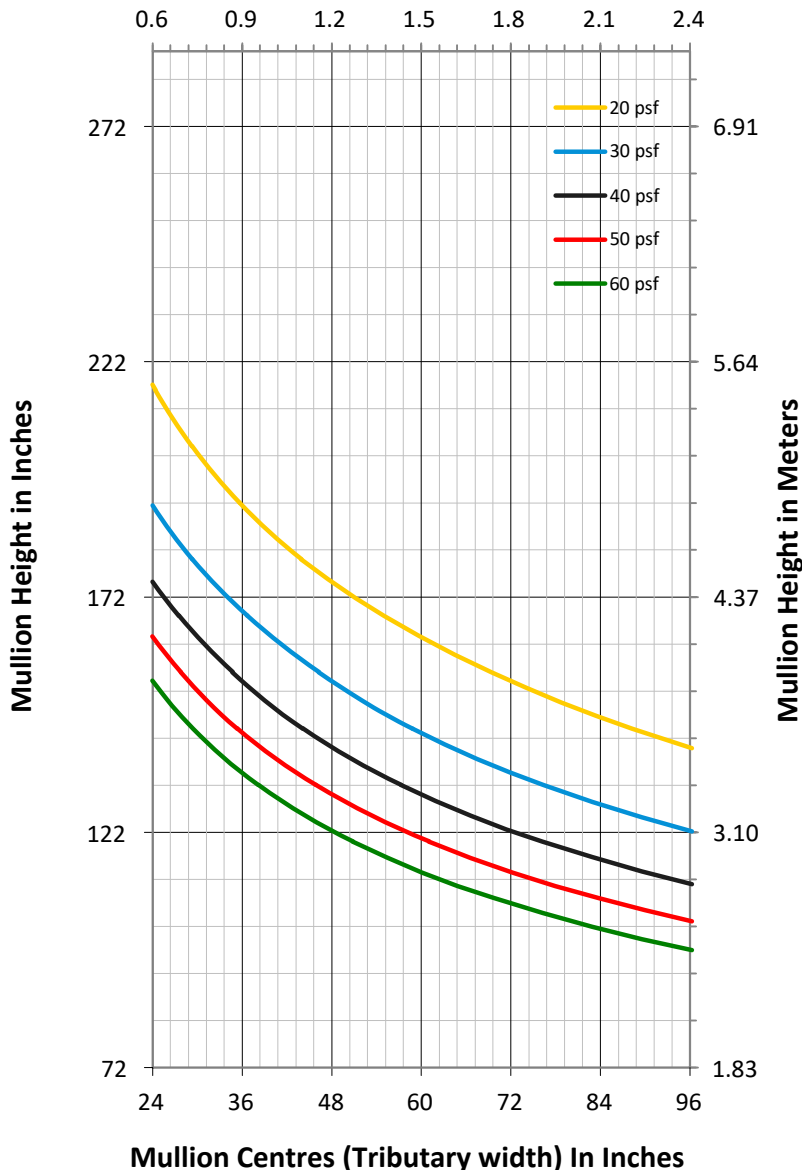
1. Deflection Limit: L/175 up to 13.5ft, L/240 + 0.25" over 13.5ft
2. Assume horizontal members provide lateral support
3. Steel moment of inertia converted to polyester, vinyl or aluminum equivalent
4. CANADIAN PROJECTS: Use SLS wind loads or modify the specified wind load by 0.75 before utilizing this chart. i.e. if project specifications require pnet = 40 psf, utilize 30 psf on this chart (0.75 x 40 = 30). (Based on NBCC 2020).

STEEL LOADED WIND LOAD CHART FOR 2 1/2" x 4" SSG MULLION - PART # 2523

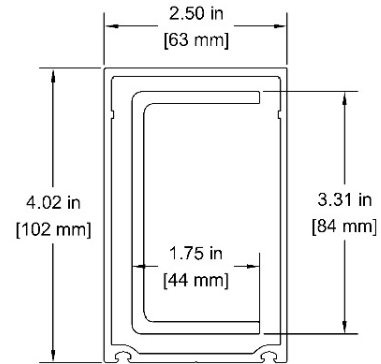
SPAN CHART

SPAN CHART IS FOR ESTIMATION ONLY.
DO NOT UTILIZE FOR DETAILED DESIGN.
CHART IS BASED ON DEFLECTION ANALYSIS
ONLY

Mullion Centres (Tributary width) In Meters



MULLION SECTION



SYSTEM PROPERTIES

Moment of Inertia, Section Modulus & Area

Moment of Inertia, I_{xx}	$I_{xx} = 8.34 \text{ in}^4$
Section Modulus, S_{xx}	$S_{xx} = 6.85 \text{ in}^3$
Total Area	$A = 1.32 \text{ in}^2$

Modulus of Elasticity

Aluminum	10,000,000 PSI
Steel	29,000,000 PSI

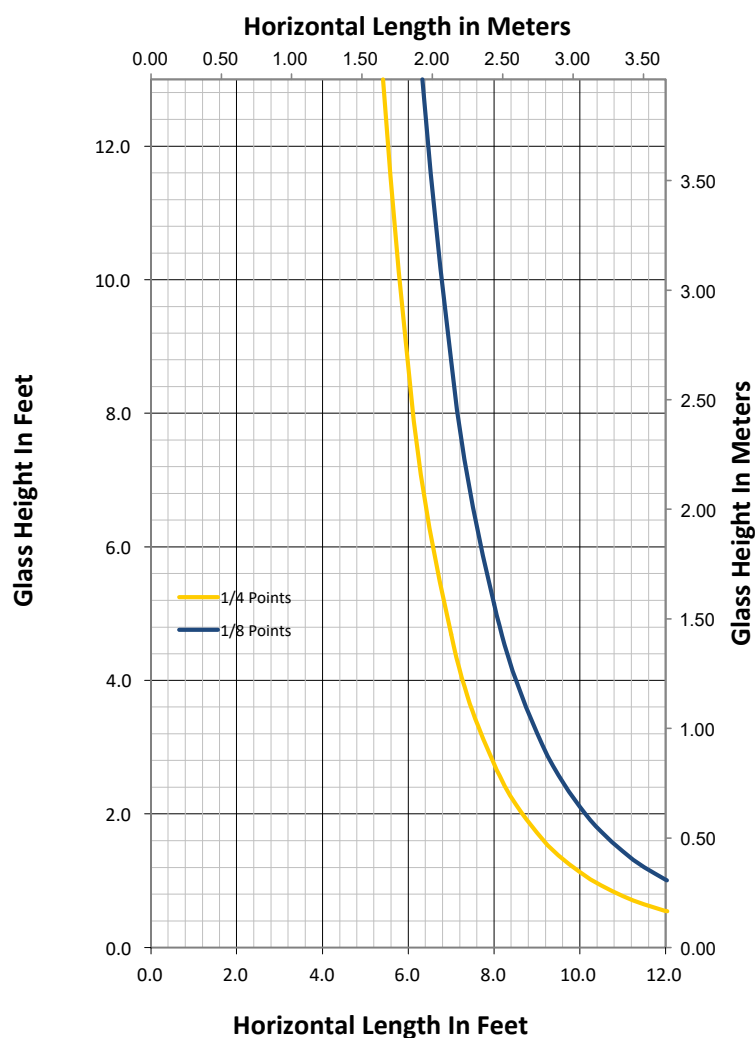
GENERAL NOTES

1. Deflection Limit: $L/175$ up to 13.5ft, $L/240 + 0.25"$ over 13.5ft
2. Assume horizontal members provide lateral support
3. Steel moment of inertia converted to polyester, vinyl or 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 $p_{net} = 40 \text{ psf}$, utilize 30 psf on this chart ($0.75 \times 40 = 30$). (Based on NBCC 2020).

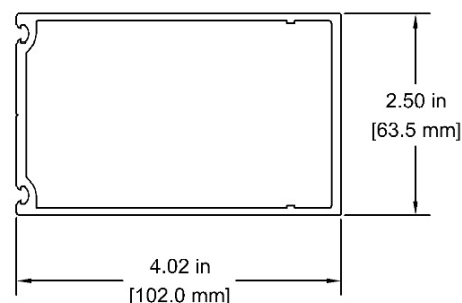
DEAD LOAD CHART FOR 2 1/2" x 4" SSG MULLION - PART # 2523

SPAN CHART

SPAN CHART IS FOR ESTIMATION ONLY.
DO NOT UTILIZE FOR DETAILED DESIGN.
CHART IS BASED ON DEFLECTION ANALYSIS
ONLY



MULLION SECTION



SYSTEM PROPERTIES

Moment of Inertia, Section Modulus & Area

Moment of Inertia, I_{yy}	$I_{yy} = 1.34 \text{ in}^4$
Section Modulus, S_{yy}	$S_{yy} = 1.07 \text{ in}^3$
Total Area	$A = 1.32 \text{ in}^2$

Modulus of Elasticity

Aluminum	10,000,000 PSI
Steel	29,000,000 PSI

GENERAL NOTES

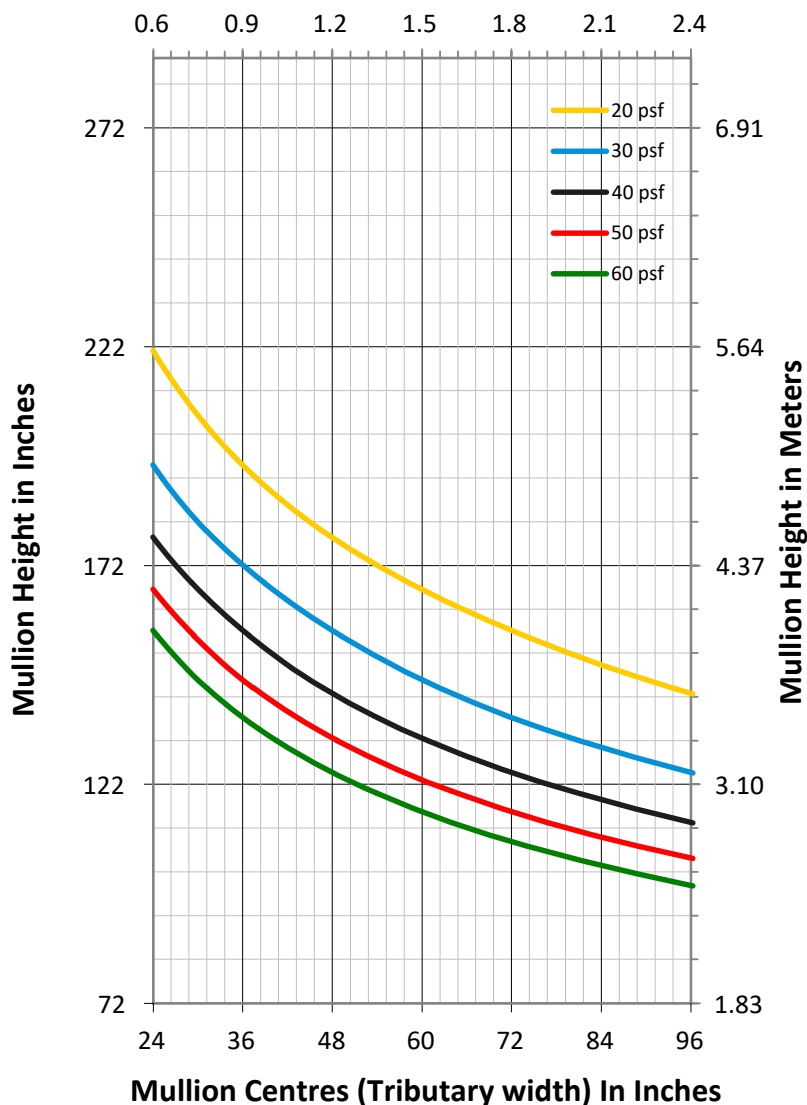
1. Deflection Limit: 0.125" (3.2mm).
2. Charts are calculated assuming a 1" overall sealed unit (6mm/13mm spacer/6mm)
3. Calculations are based on the position of the setting blocks being placed at 1/4 or 1/8 points.

WIND LOAD CHART FOR 2 1/2" x 5 1/4" MULLION - PART # 2504

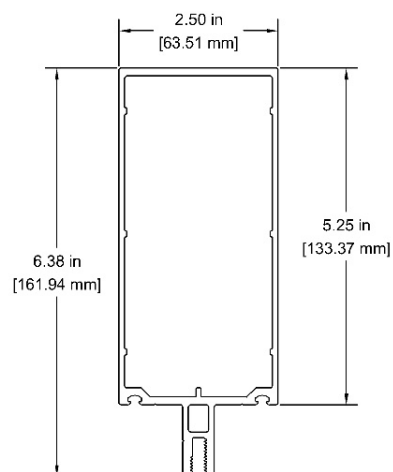
SPAN CHART

SPAN CHART IS FOR ESTIMATION ONLY.
DO NOT UTILIZE FOR DETAILED DESIGN.
CHART IS BASED ON DEFLECTION ANALYSIS
ONLY

Mullion Centres (Tributary width) In Meters



MULLION SECTION



SYSTEM PROPERTIES

Moment of Inertia, Section Modulus & Area

Moment of Inertia, Ixx	Ixx = 8.85 in ⁴
Section Modulus, Sxx	Sxx = 2.77 in ³
Total Area	A = 1.90 in ²

Modulus of Elasticity

Aluminum	10,000,000 PSI
Steel	29,000,000 PSI

GENERAL NOTES

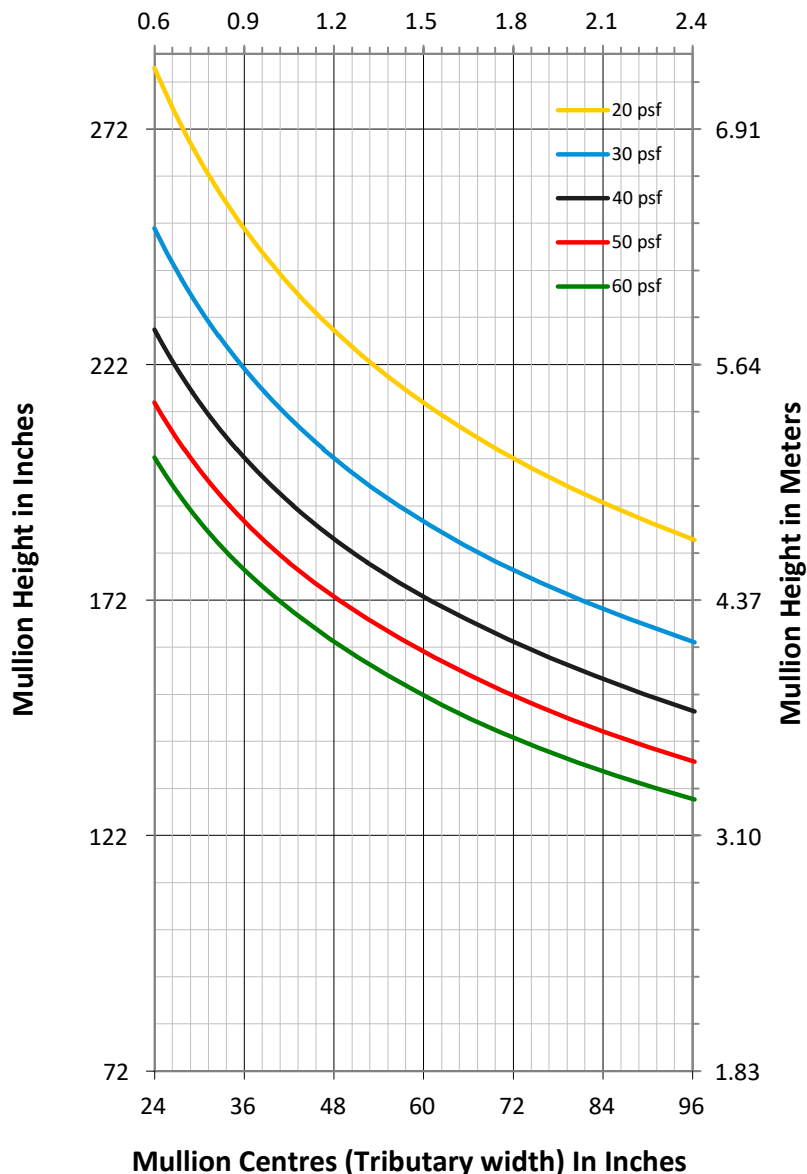
1. Deflection Limit: L/175 up to 13.5ft, L/240 + 0.25" over 13.5ft
2. Assume horizontal members provide lateral support
3. Steel moment of inertia converted to polyester, vinyl or aluminum equivalent
4. CANADIAN PROJECTS: Use SLS wind loads or modify the specified wind load by 0.75 before utilizing this chart. i.e. if project specifications require pnet = 40 psf, utilize 30 psf on this chart (0.75 x 40 = 30). (Based on NBCC 2020).

STEEL LOADED WIND LOAD CHART FOR 2 1/2" x 5 1/4" MULLION - PART # 2504

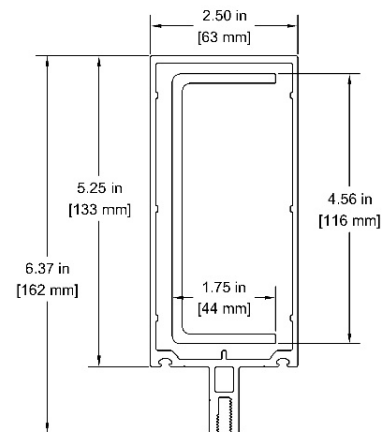
SPAN CHART

SPAN CHART IS FOR ESTIMATION ONLY.
DO NOT UTILIZE FOR DETAILED DESIGN.
CHART IS BASED ON DEFLECTION ANALYSIS
ONLY

Mullion Centres (Tributary width) In Meters



MULLION SECTION



SYSTEM PROPERTIES

Moment of Inertia, Section Modulus & Area

Moment of Inertia, I_{xx}	$I_{xx} = 19.89 \text{ in}^4$
Section Modulus, S_{xx}	$S_{xx} = 5.69 \text{ in}^3$
Total Area	$A = 1.90 \text{ in}^2$

Modulus of Elasticity

Aluminum	10,000,000 PSI
Steel	29,000,000 PSI

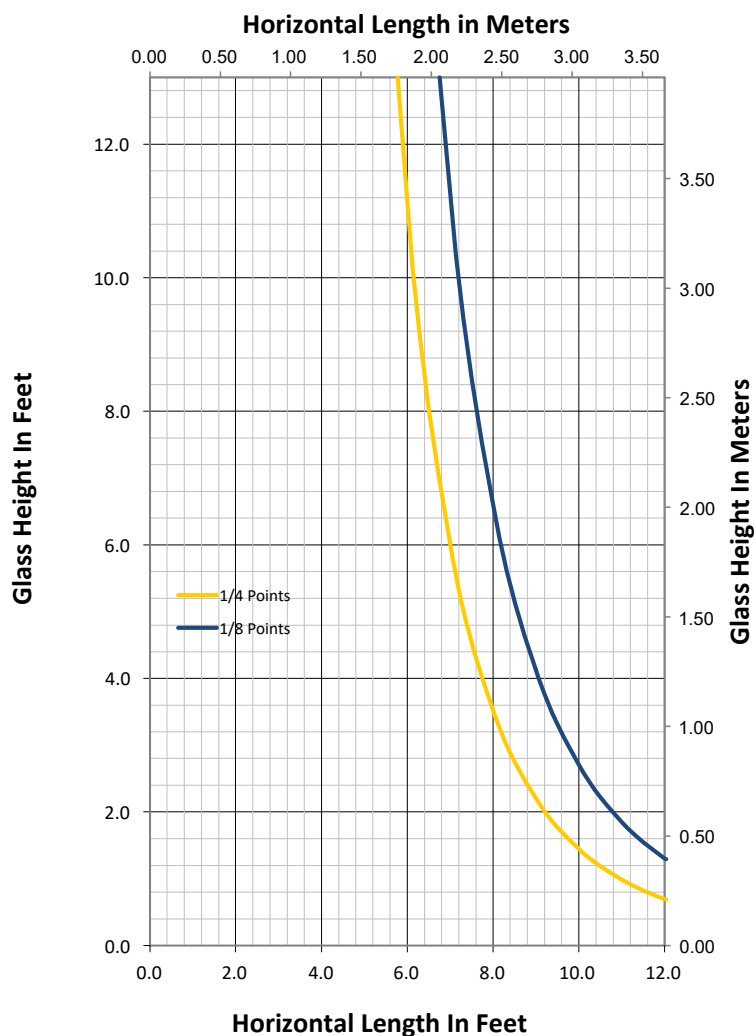
GENERAL NOTES

1. Deflection Limit: $L/175$ up to 13.5ft, $L/240 + 0.25"$ over 13.5ft
2. Assume horizontal members provide lateral support
3. Steel moment of inertia converted to polyester, vinyl or 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 $p_{net} = 40 \text{ psf}$, utilize 30 psf on this chart ($0.75 \times 40 = 30$). (Based on NBCC 2020).

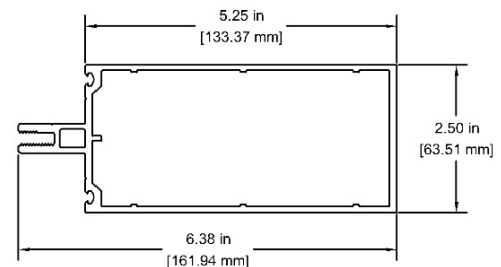
DEAD LOAD CHART FOR 2 1/2" x 5 1/4" MULLION - PART # 2504

SPAN CHART

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DO NOT UTILIZE FOR DETAILED DESIGN.
CHART IS BASED ON DEFLECTION ANALYSIS
ONLY



MULLION SECTION



SYSTEM PROPERTIES

Moment of Inertia, Section Modulus & Area

Moment of Inertia, I_{yy}	$I_{yy} = 1.72 \text{ in}^4$
Section Modulus, S_{yy}	$S_{yy} = 1.37 \text{ in}^3$
Total Area	$A = 1.90 \text{ in}^2$

Modulus of Elasticity

Aluminum	10,000,000 PSI
Steel	29,000,000 PSI

GENERAL NOTES

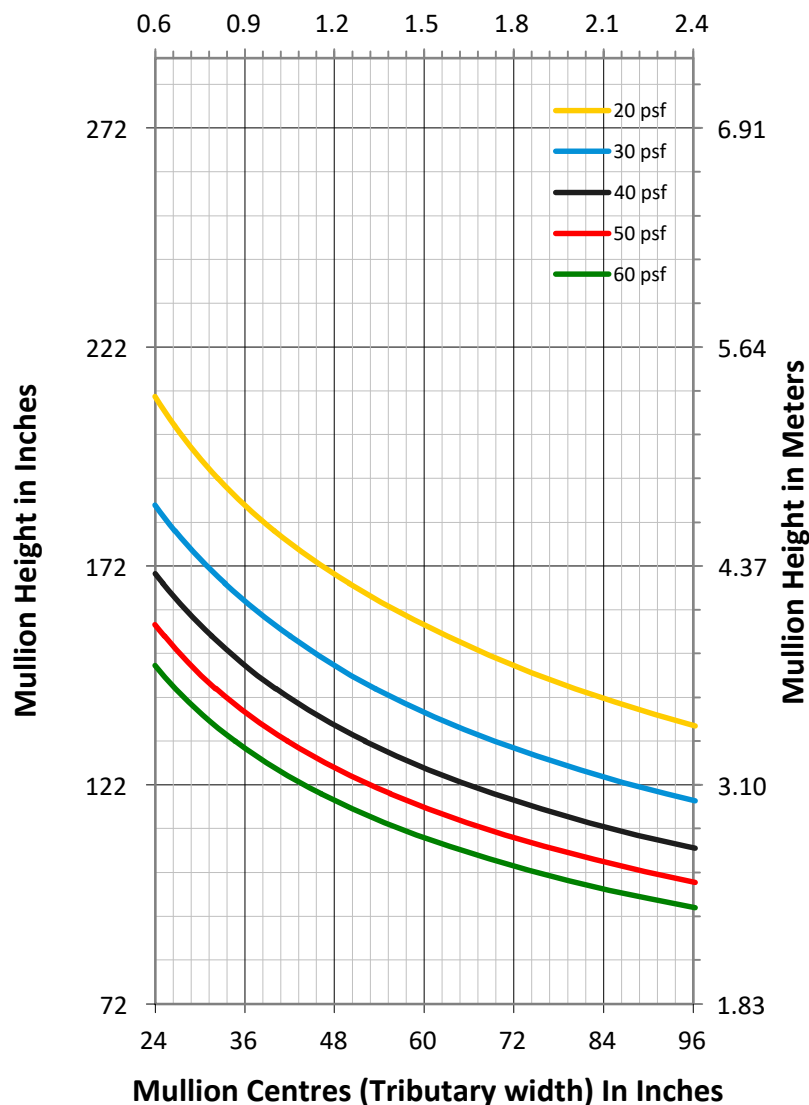
1. Deflection Limit: 0.125" (3.2mm).
2. Charts are calculated assuming a 1" overall sealed unit (6mm/13mm spacer/6mm)
3. Calculations are based on the position of the setting blocks being placed at 1/4 or 1/8 points.

WIND LOAD CHART FOR 2 1/2" x 5 1/4" SSG MULLION - PART # 2555

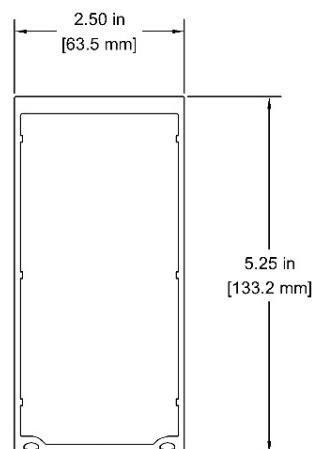
SPAN CHART

SPAN CHART IS FOR ESTIMATION ONLY.
DO NOT UTILIZE FOR DETAILED DESIGN.
CHART IS BASED ON DEFLECTION ANALYSIS
ONLY

Mullion Centres (Tributary width) In Meters



MULLION SECTION



SYSTEM PROPERTIES

Moment of Inertia, Section Modulus & Area

Moment of Inertia, Ixx	Ixx = 7.58 in ⁴
Section Modulus, Sxx	Sxx = 2.55 in ³
Total Area	A = 1.85 in ²

Modulus of Elasticity

Aluminum	10,000,000 PSI
Steel	29,000,000 PSI

GENERAL NOTES

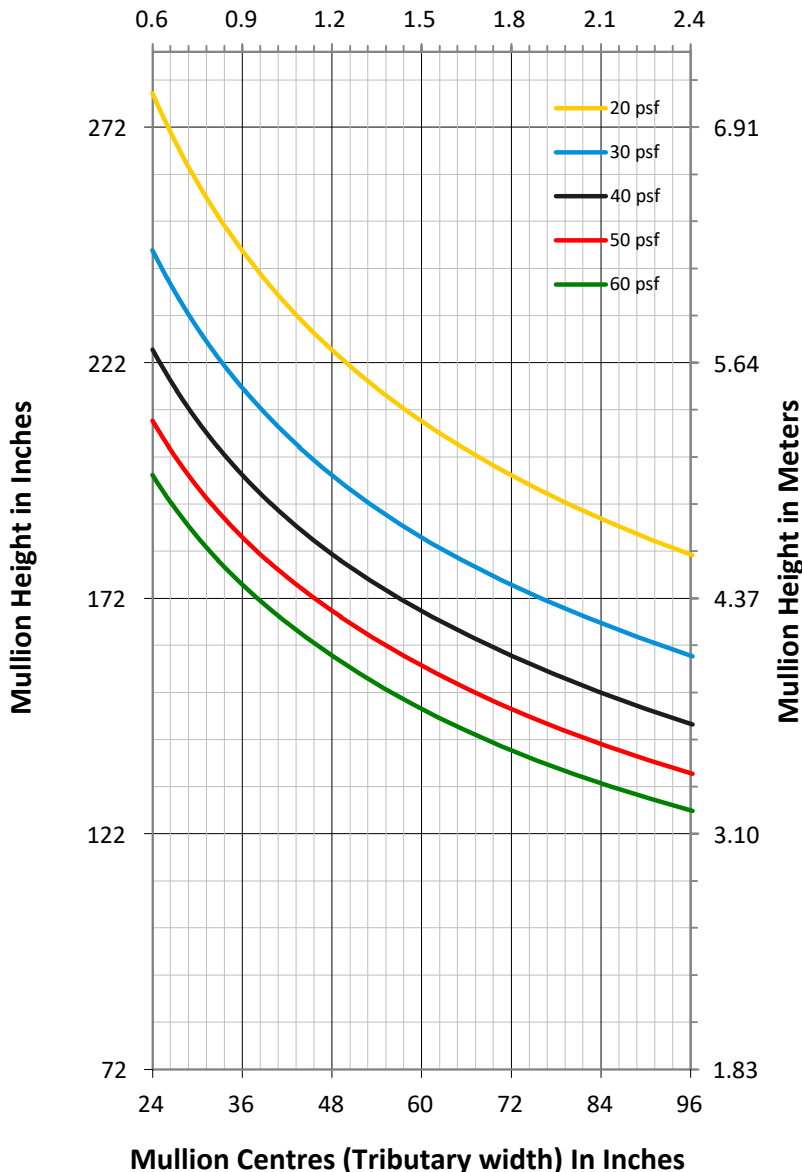
1. Deflection Limit: L/175 up to 13.5ft, L/240 + 0.25" over 13.5ft
2. Assume horizontal members provide lateral support
3. Steel moment of inertia converted to polyester, vinyl or aluminum equivalent
4. CANADIAN PROJECTS: Use SLS wind loads or modify the specified wind load by 0.75 before utilizing this chart. i.e. if project specifications require pnet = 40 psf, utilize 30 psf on this chart (0.75 x 40 = 30). (Based on NBCC 2020).

STEEL LOADED WIND LOAD CHART FOR 2 1/2" x 5 1/4" SSG MULLION - PART # 2555

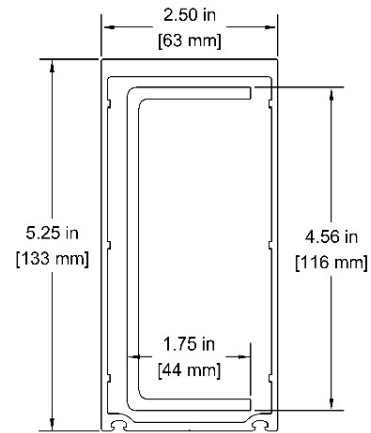
SPAN CHART

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ONLY

Mullion Centres (Tributary width) In Meters



MULLION SECTION



SYSTEM PROPERTIES

Moment of Inertia, Section Modulus & Area

Moment of Inertia, Ixx	Ixx = 18.64 in ⁴
Section Modulus, Sxx	Sxx = 16.92 in ³
Total Area	A = 1.85 in ²

Modulus of Elasticity

Aluminum	10,000,000 PSI
Steel	29,000,000 PSI

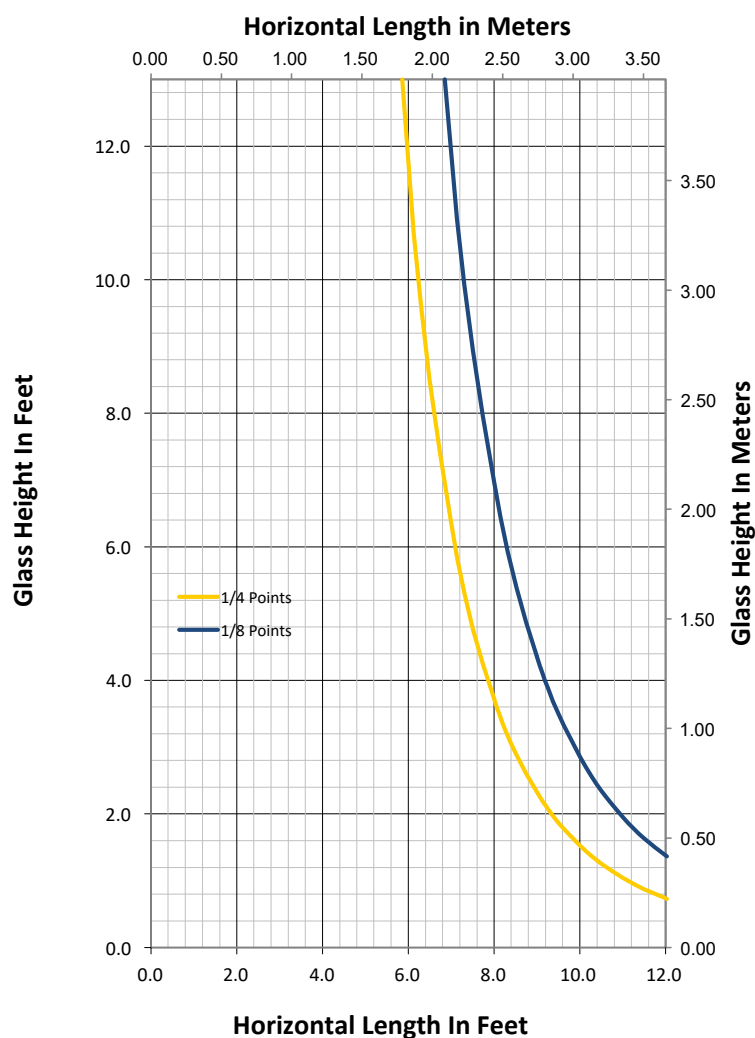
GENERAL NOTES

1. Deflection Limit: L/175 up to 13.5ft, L/240 + 0.25" over 13.5ft
2. Assume horizontal members provide lateral support
3. Steel moment of inertia converted to polyester, vinyl or 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 2020).

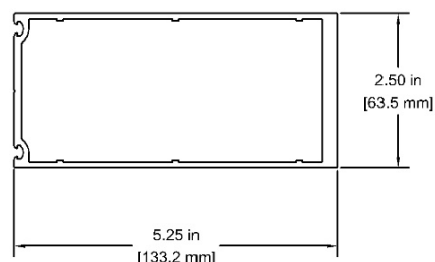
DEAD LOAD CHART FOR 2 1/2" x 5 1/4" SSG MULLION - PART # 2555

SPAN CHART

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ONLY



MULLION SECTION



SYSTEM PROPERTIES

Moment of Inertia, Section Modulus & Area

Moment of Inertia, I_{yy}	$I_{yy} = 1.81 \text{ in}^4$
Section Modulus, S_{yy}	$S_{yy} = 1.45 \text{ in}^3$
Total Area	$A = 1.85 \text{ in}^2$

Modulus of Elasticity

Aluminum	10,000,000 PSI
Steel	29,000,000 PSI

GENERAL NOTES

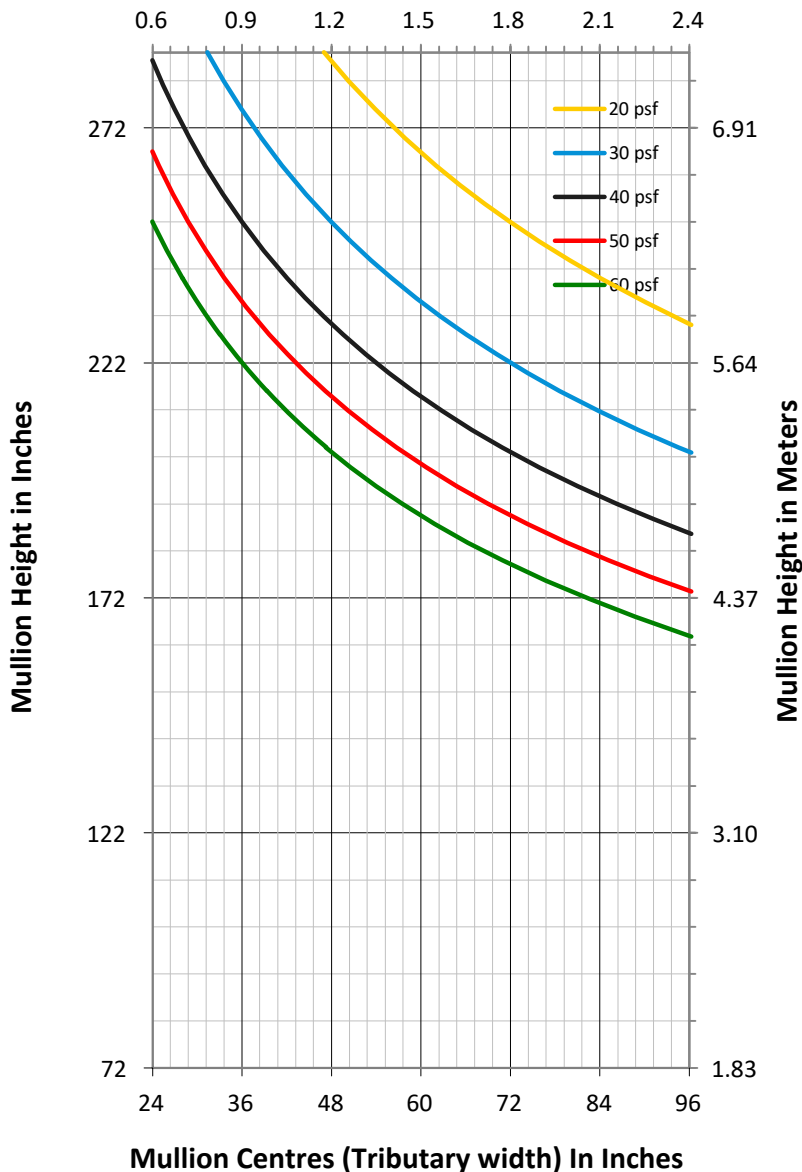
1. Deflection Limit: 0.125" (3.2mm).
2. Charts are calculated assuming a 1" overall sealed unit (6mm/13mm spacer/6mm)
3. Calculations are based on the position of the setting blocks being placed at 1/4 or 1/8 points.

WIND LOAD CHART FOR 2 1/2" x 8" MULLION - PART # 2580

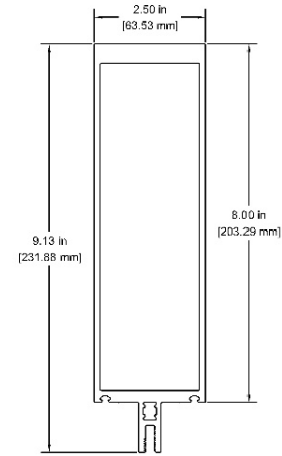
SPAN CHART

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ONLY

Mullion Centres (Tributary width) In Meters



MULLION SECTION



SYSTEM PROPERTIES

Moment of Inertia, Section Modulus & Area

Moment of Inertia, Ixx	Ixx = 40.37 in ⁴
Section Modulus, Sxx	Sxx = 7.84 in ³
Total Area	A = 3.96 in ²

Modulus of Elasticity

Aluminum	10,000,000 PSI
Steel	29,000,000 PSI

GENERAL NOTES

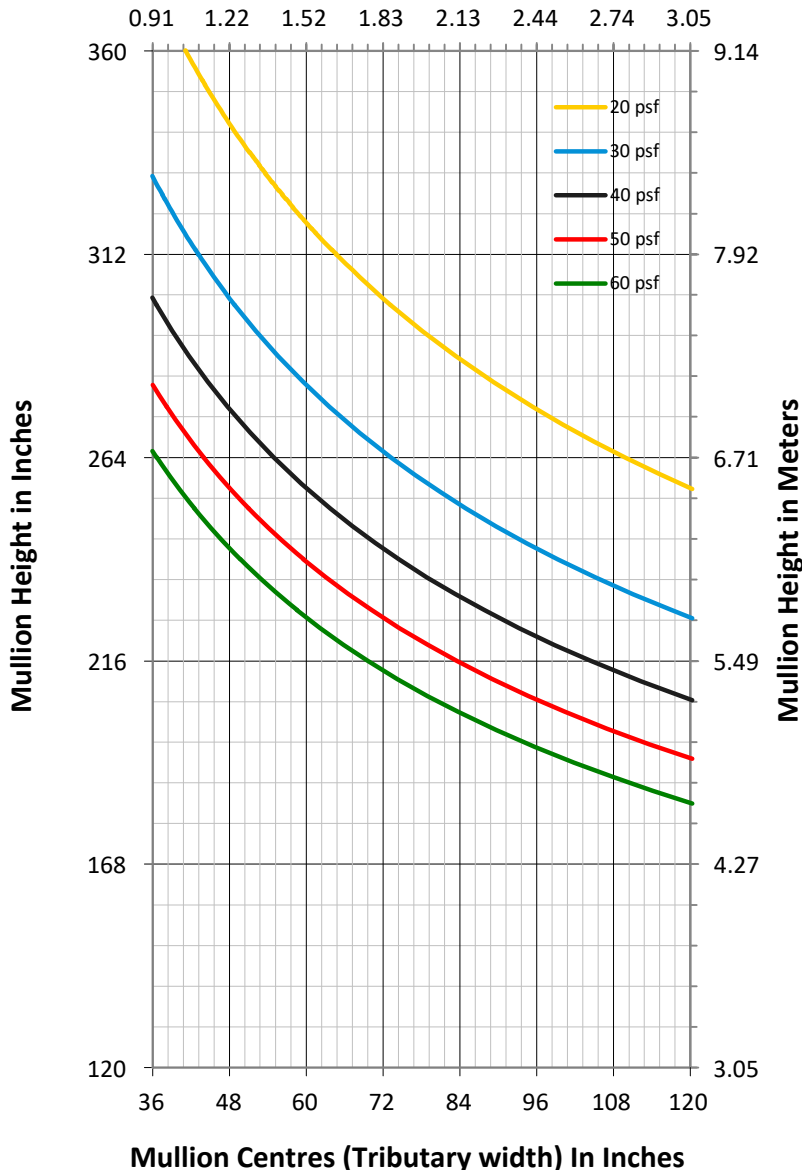
1. Deflection Limit: L/175 up to 13.5ft, L/240 + 0.25" over 13.5ft
2. Assume horizontal members provide lateral support
3. Steel moment of inertia converted to polyester, vinyl or aluminum equivalent
4. CANADIAN PROJECTS: Use SLS wind loads or modify the specified wind load by 0.75 before utilizing this chart. i.e. if project specifications require pnet = 40 psf, utilize 30 psf on this chart (0.75 x 40 = 30). (Based on NBCC 2020).

STEEL LOADED WIND LOAD CHART FOR 2 1/2" x 8" MULLION - PART # 2580

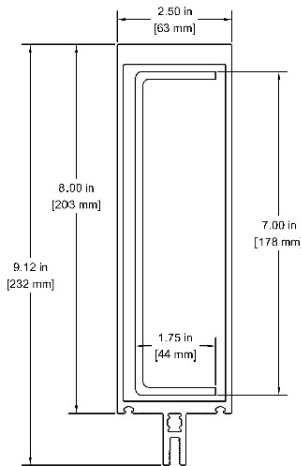
SPAN CHART

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CHART IS BASED ON DEFLECTION ANALYSIS
ONLY

Mullion Centres (Tributary width) In Meters



MULLION SECTION



SYSTEM PROPERTIES

Moment of Inertia, Section Modulus & Area

Moment of Inertia, Ixx	Ixx = 71.48 in ⁴
Section Modulus, Sxx	Sxx = 14.07 in ³
Total Area	A = 3.96 in ²

Modulus of Elasticity

Aluminum	10,000,000 PSI
Steel	29,000,000 PSI

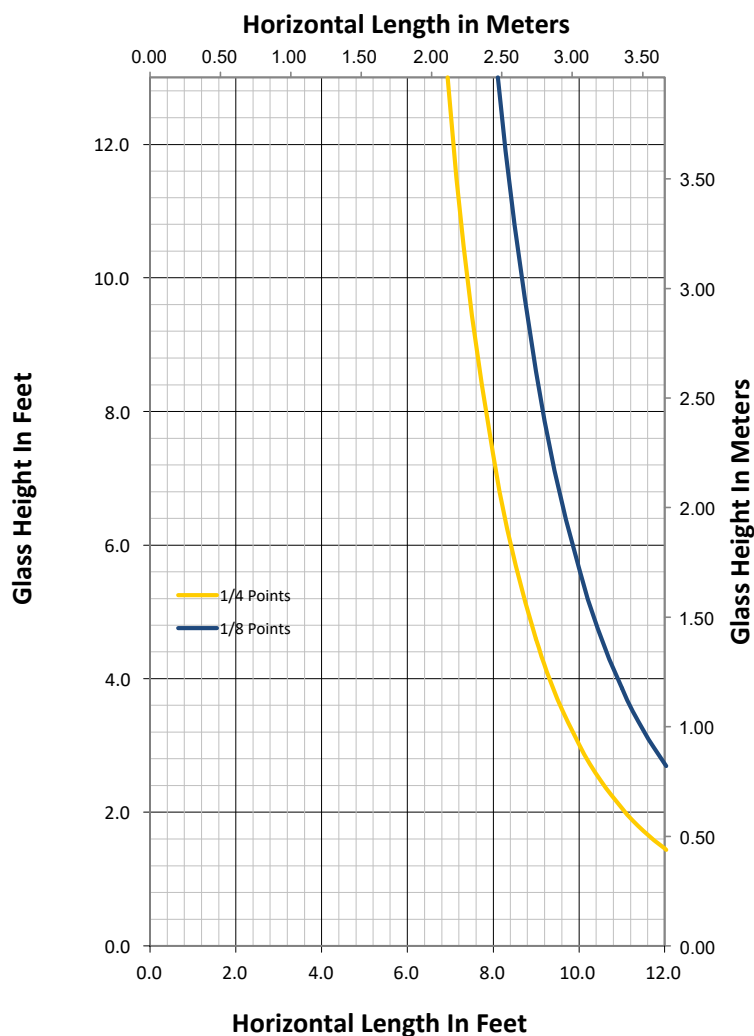
GENERAL NOTES

1. Deflection Limit: L/175 up to 13.5ft, L/240 + 0.25" over 13.5ft
2. Assume horizontal members provide lateral support
3. Steel moment of inertia converted to polyester, vinyl or 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 2020).

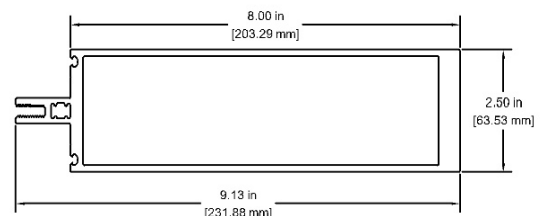
DEAD LOAD CHART FOR 2 1/2" x 8" MULLION - PART # 2580

SPAN CHART

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DO NOT UTILIZE FOR DETAILED DESIGN.
CHART IS BASED ON DEFLECTION ANALYSIS
ONLY



MULLION SECTION



SYSTEM PROPERTIES

Moment of Inertia, Section Modulus & Area

Moment of Inertia, I_{yy}	$I_{yy} = 3.58 \text{ in}^4$
Section Modulus, S_{yy}	$S_{yy} = 2.86 \text{ in}^3$
Total Area	$A = 3.96 \text{ in}^2$

Modulus of Elasticity

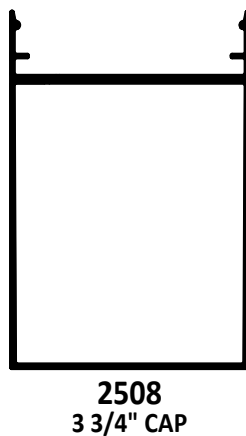
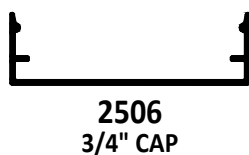
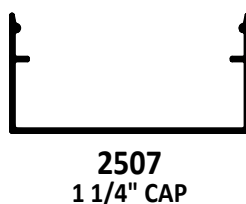
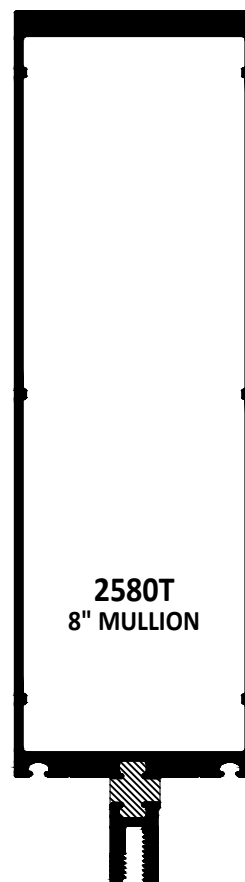
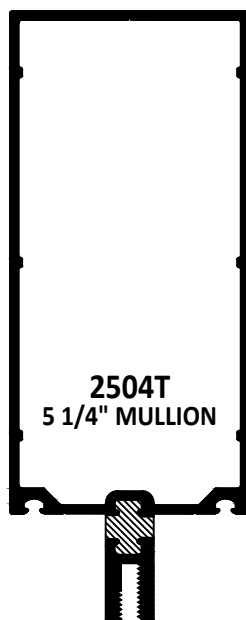
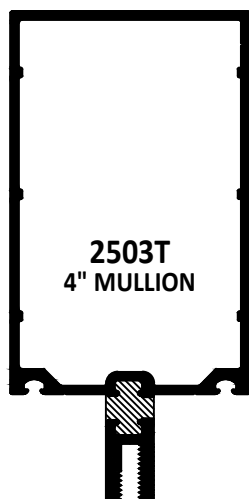
Aluminum	10,000,000 PSI
Steel	29,000,000 PSI

GENERAL NOTES

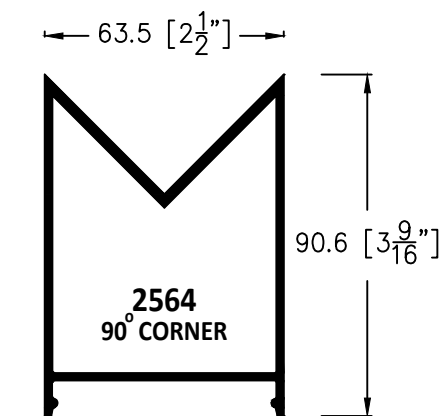
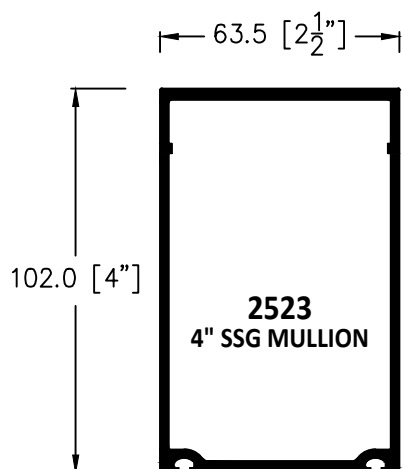
1. Deflection Limit: 0.125" (3.2mm).
2. Charts are calculated assuming a 1" overall sealed unit (6mm/13mm spacer/6mm)
3. Calculations are based on the position of the setting blocks being placed at 1/4 or 1/8 points.



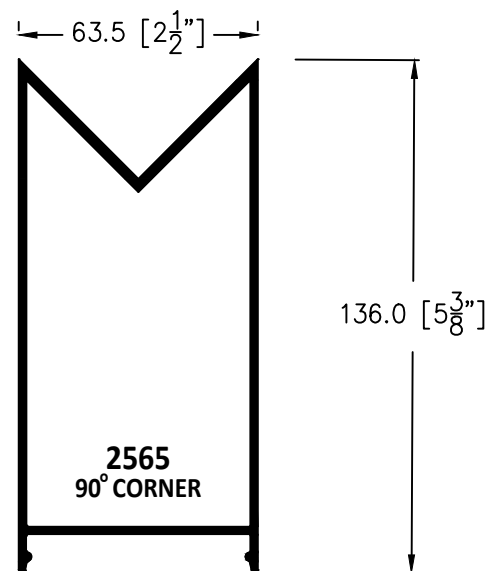
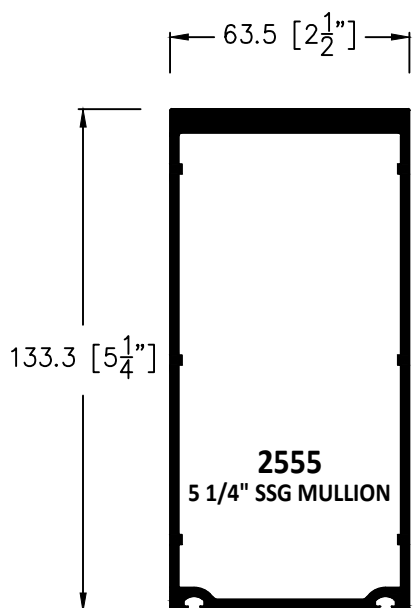
BACK SECTIONS



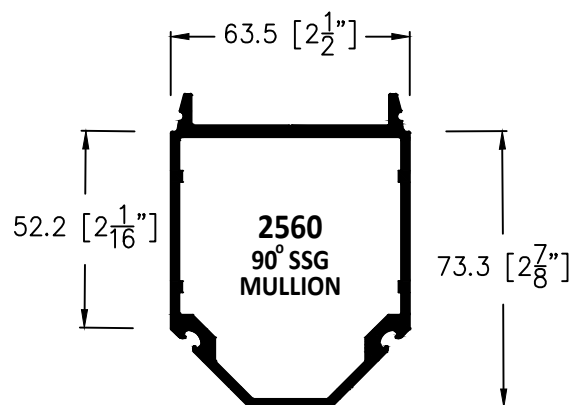
SSG COMPONENTS



EXTENSION CAP FOR 4" BACK



EXTENSION CAP FOR 5 1/4" BACK



MISC. COMPONENTS



2410
THERMAL BREAK



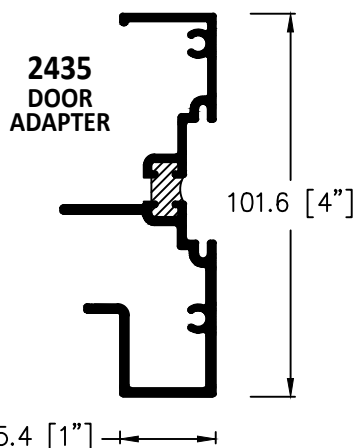
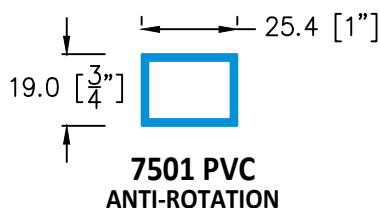
2515
CORNER BLOCK



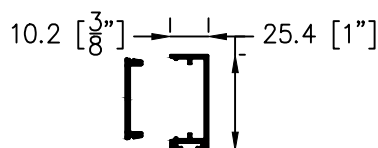
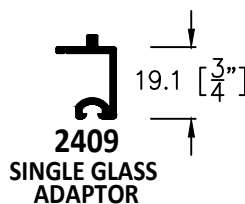
2460
SPONGE GASKET
(INTERIOR)



2450
DENSE GASKET
(EXTERIOR)



2520
SPIGOT



2417/2418
SURFACE APPLIED
DOOR STOP



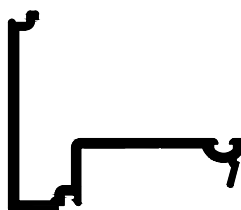
2430
BACK-PAN
ADAPTOR



20120T
DOOR STOP
FOR 2" DOORS



2012T
DOOR STOP
FOR 1 3/4" DOORS



2517
FLUSH DOOR
ADAPTOR



2518
FLUSH DOOR
ADAPTOR CAP

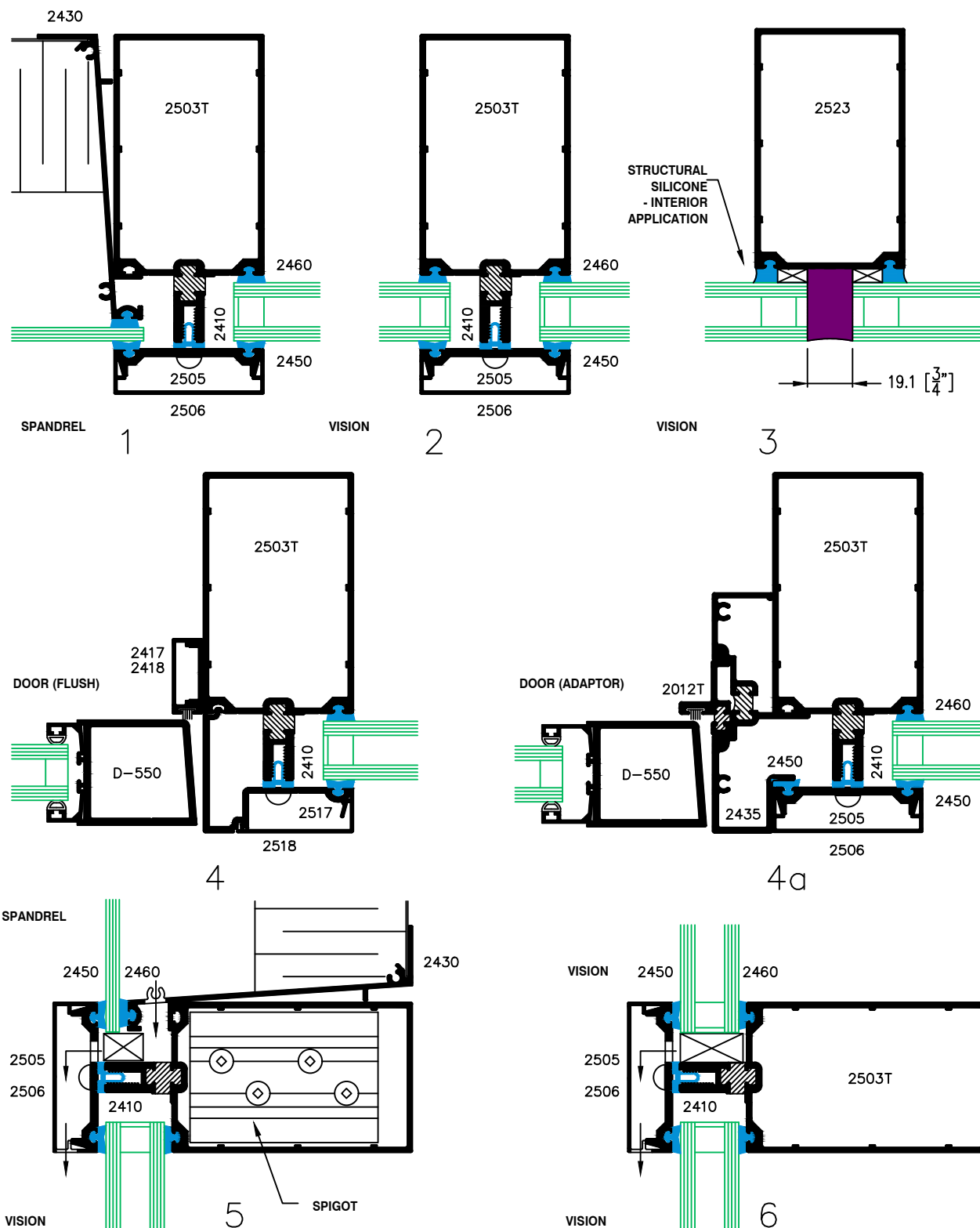


5102
1" X 2" PERIMETER ANGLE

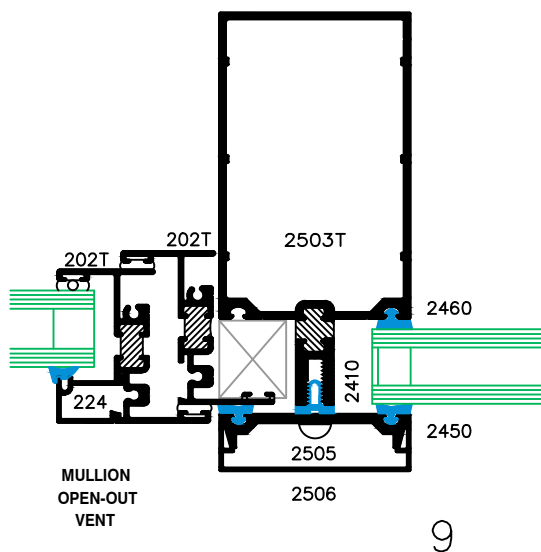
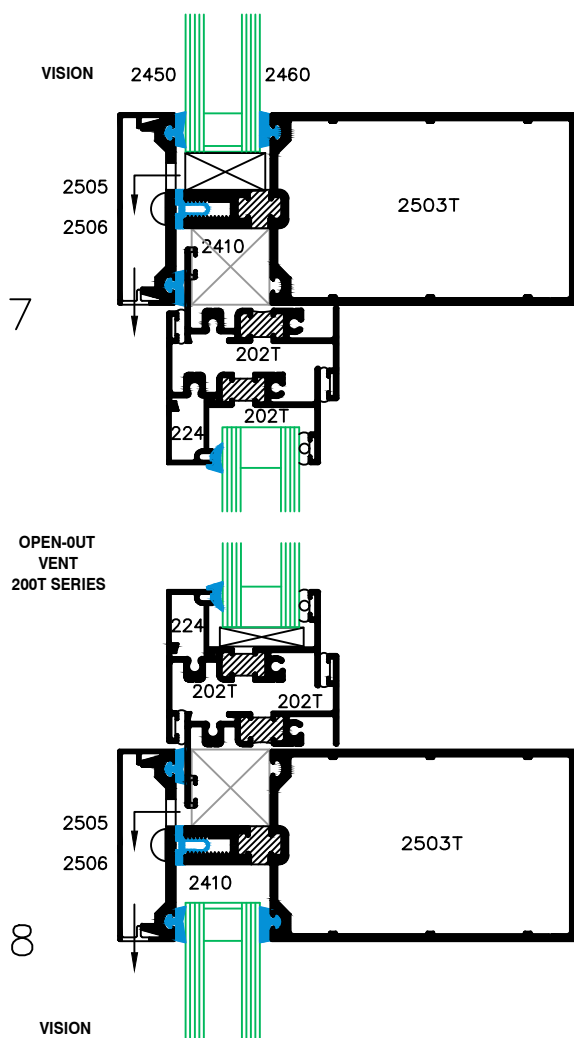


5103
1" X 3" PERIMETER ANGLE

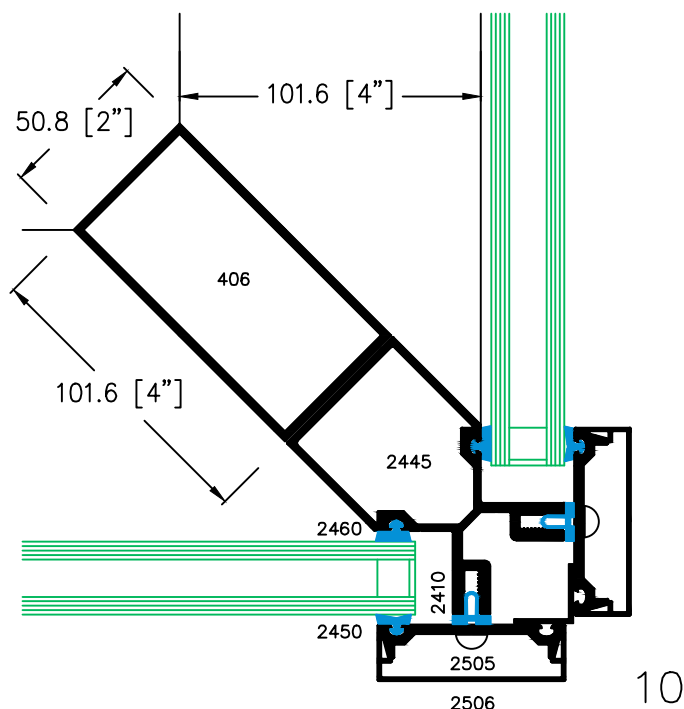
TYPICAL DETAILS



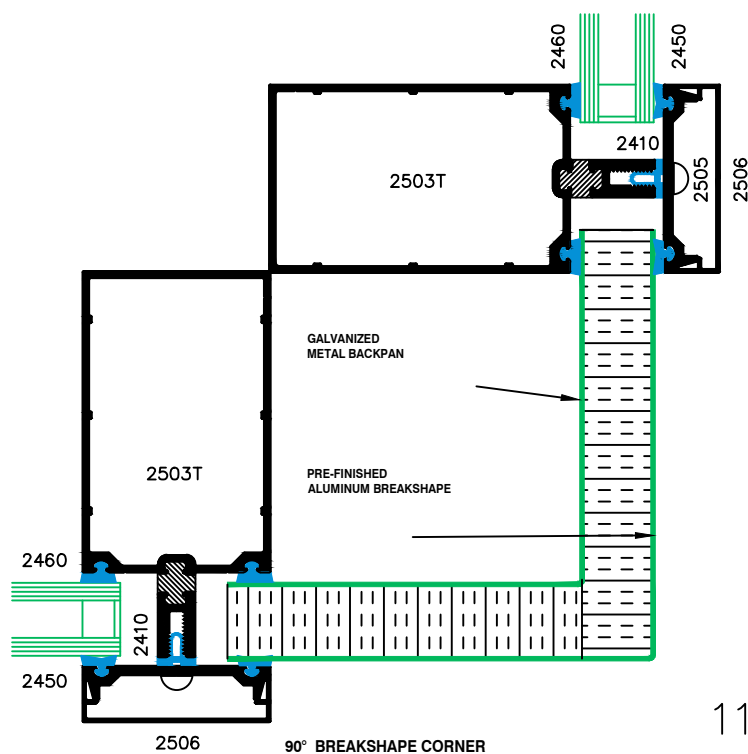
TYPICAL DETAILS



TYPICAL CAPTURED CORNER DETAILS

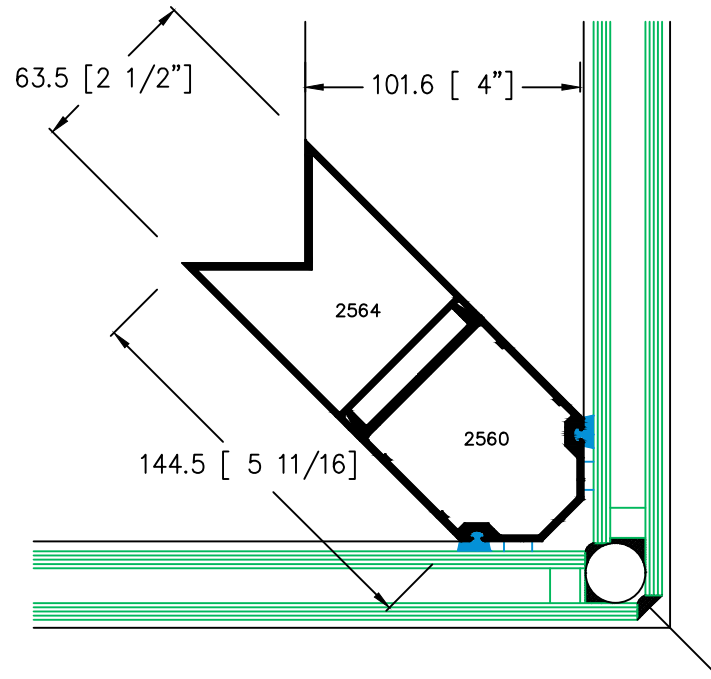


90° CAPTURED CORNER



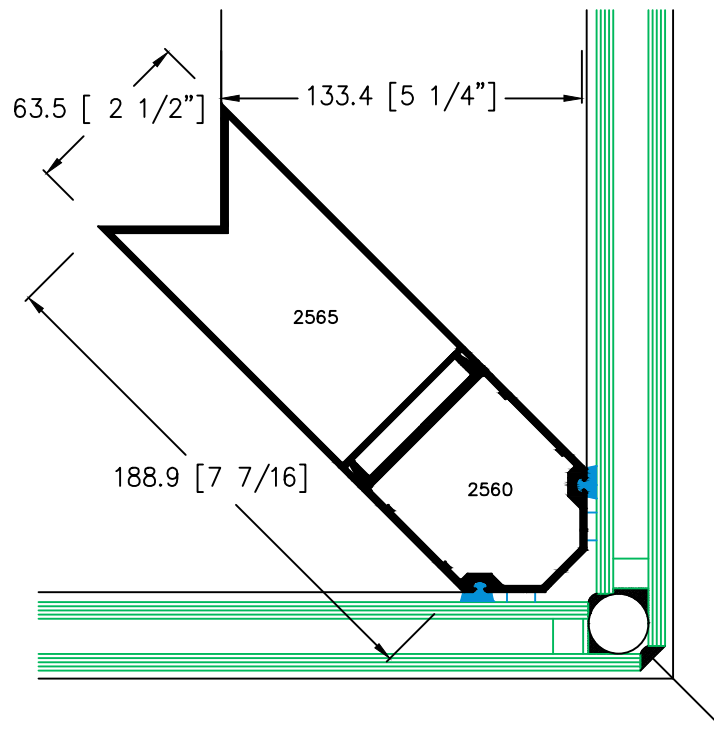
90° BREAKSHAPE CORNER

TYPICAL BUTT-JOINT CORNER DETAILS



90° BUTT-JOINT CORNER
AT 4" BACK MEMBER

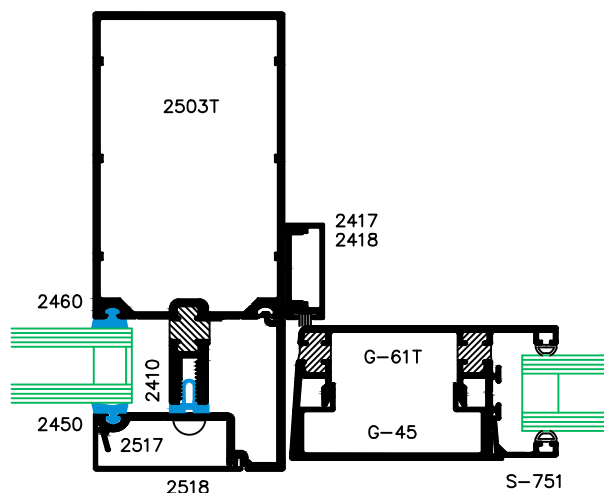
12



90° BUTT-JOINT CORNER
AT 5 1/4" BACK MEMBER

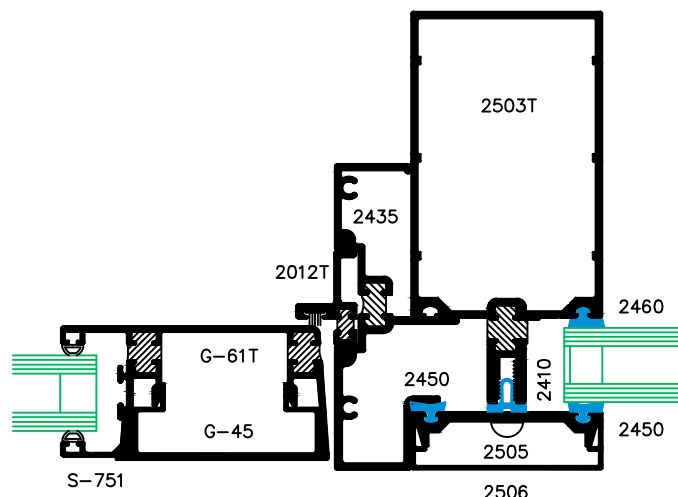
13

ALTERNATE DOOR DETAILS



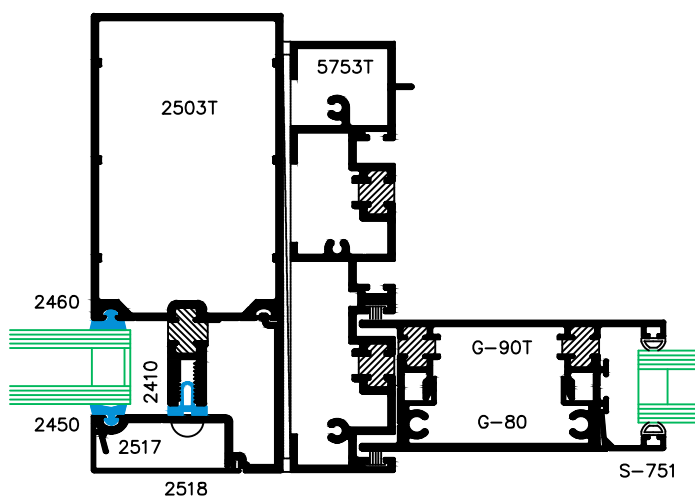
GLACIER DOOR

15



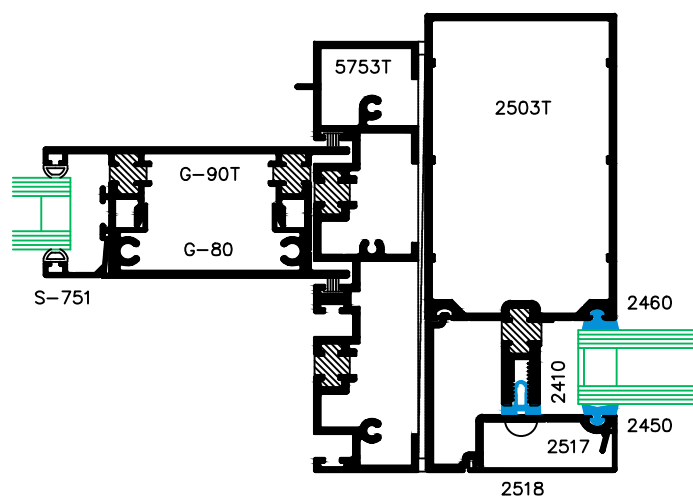
SWING DOORS

15a



1100T JAMB AT SLIDER

16

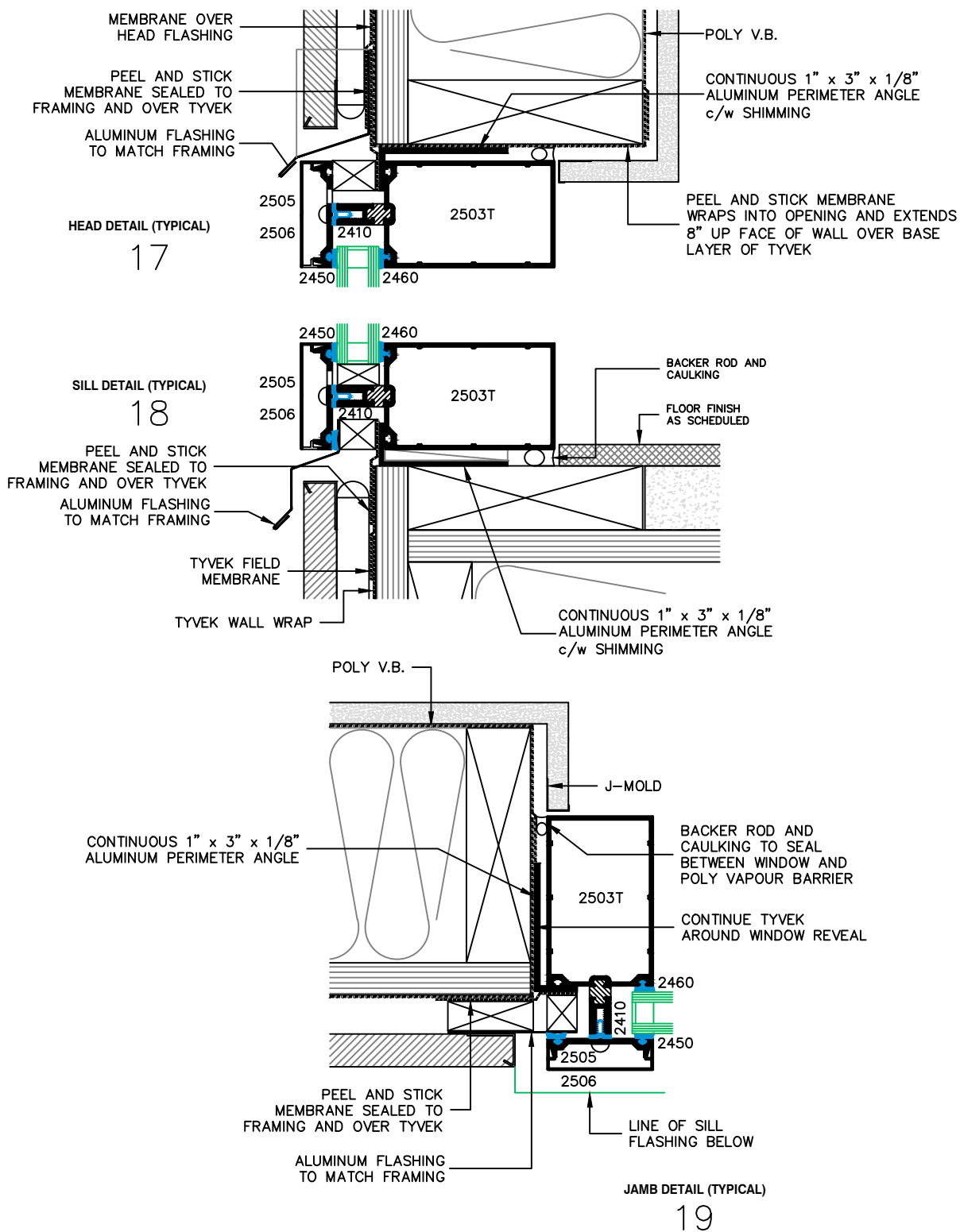


SLIDING DOORS

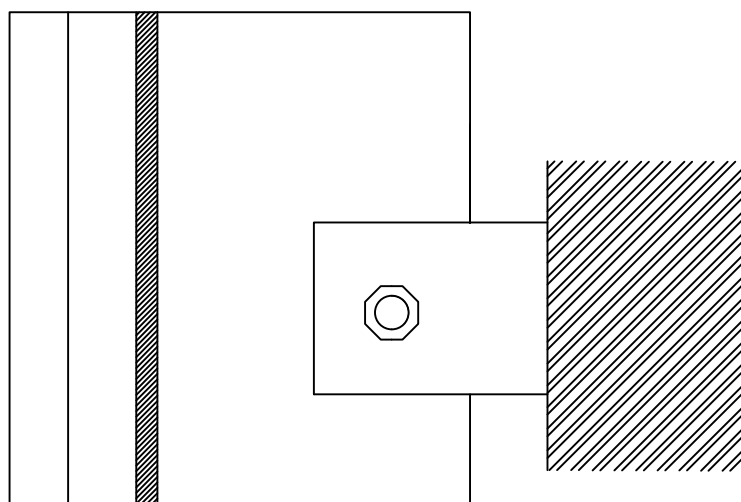
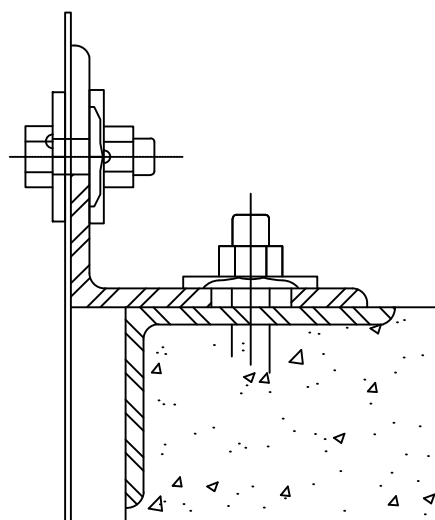
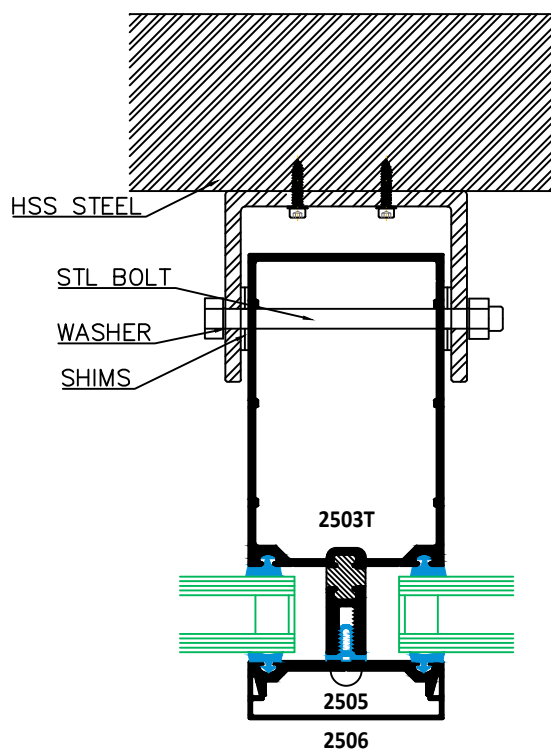
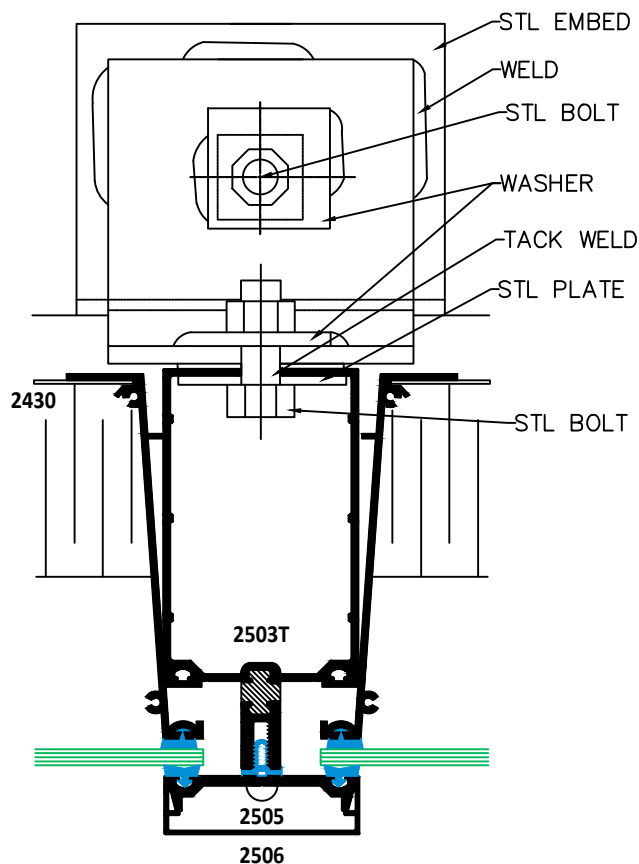
16a

1100T JAMB AT FIXED PANEL

INTERFACE DETAILS (SUGGESTED ONLY)

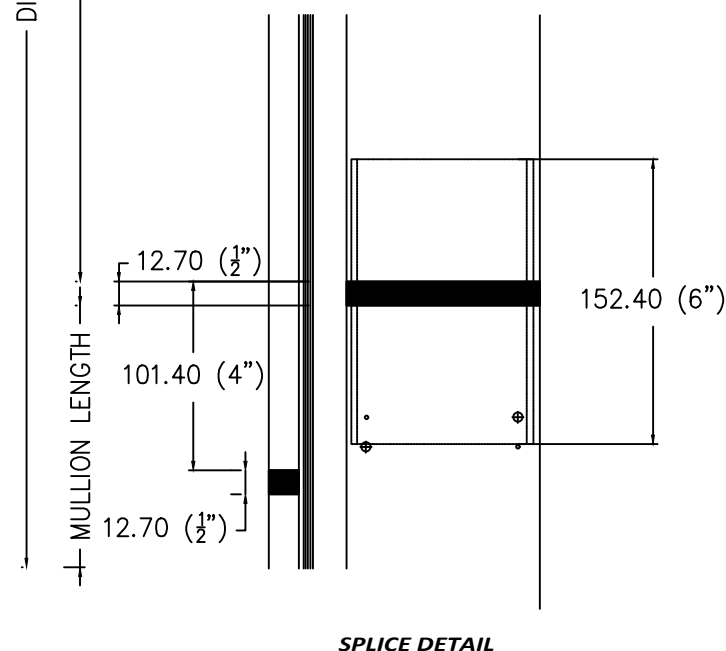
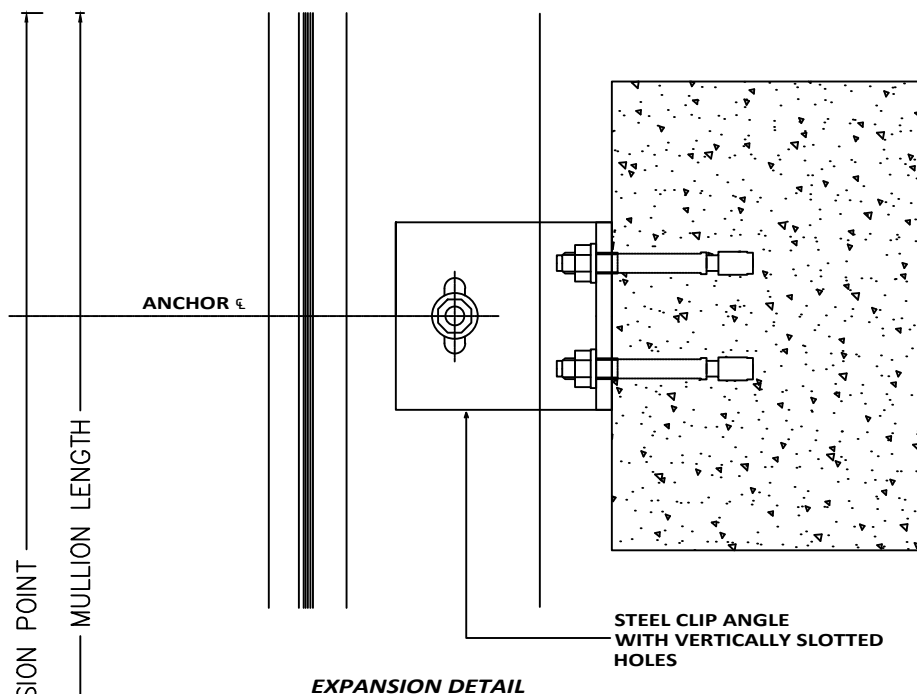


TYPICAL ANCHORING DETAILS



SECTION DETAILS

EXPANSION & SPLICE DETAILS

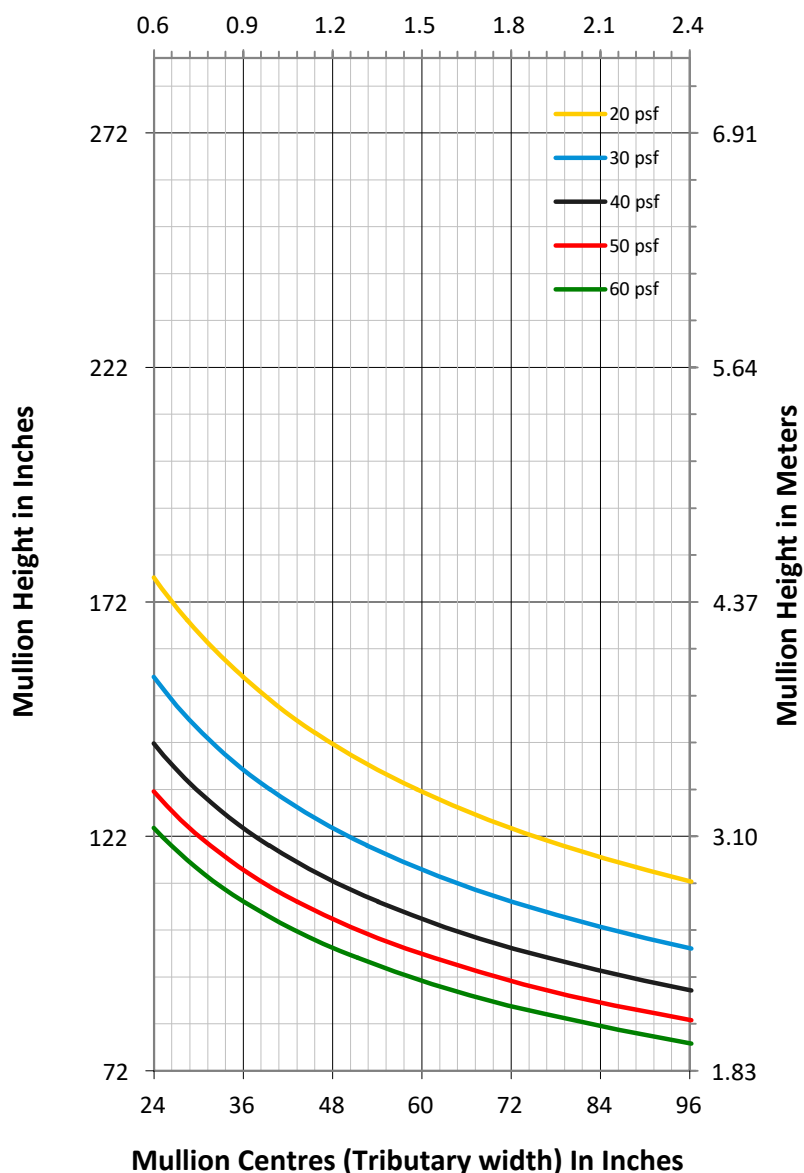


WIND LOAD CHART FOR 2 1/2" x 4" T/B MULLION - PART # 2503T

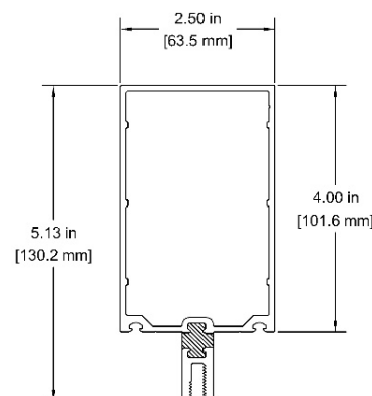
SPAN CHART

SPAN CHART IS FOR ESTIMATION ONLY.
DO NOT UTILIZE FOR DETAILED DESIGN.
CHART IS BASED ON DEFLECTION ANALYSIS
ONLY

Mullion Centres (Tributary width) In Meters



MULLION SECTION



SYSTEM PROPERTIES

Moment of Inertia, Section Modulus & Area

Moment of Inertia, Ixx	Ixx = 4.32 in ⁴
Section Modulus, Sxx	Sxx = 1.35 in ³
Total Area	A = 1.53 in ²

Modulus of Elasticity

Aluminum	10,000,000 PSI
Steel	29,000,000 PSI

GENERAL NOTES

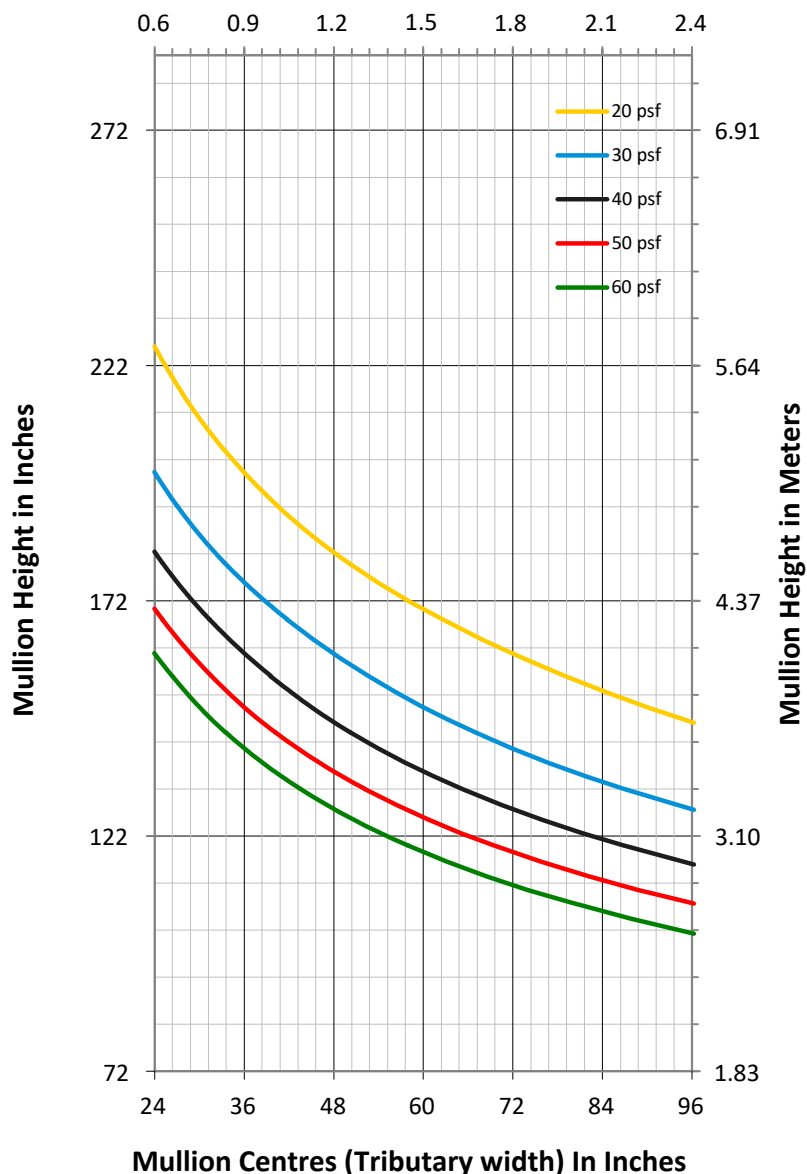
1. Deflection Limit: L/175 up to 13.5ft, L/240 + 0.25" over 13.5ft
2. Assume horizontal members provide lateral support
3. Steel moment of inertia converted to polyester, vinyl or aluminum equivalent
4. CANADIAN PROJECTS: Use SLS wind loads or modify the specified wind load by 0.75 before utilizing this chart. i.e. if project specifications require pnet = 40 psf, utilize 30 psf on this chart (0.75 x 40 = 30). (Based on NBCC 2020).

STEEL LOADED WIND LOAD CHART FOR 2 1/2" x 4" T/B MULLION - PART # 2503T

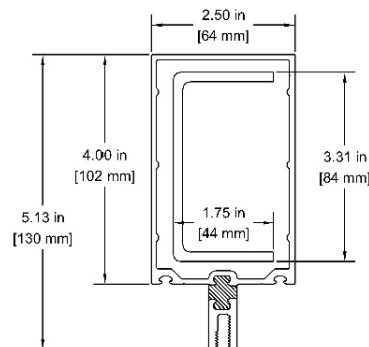
SPAN CHART

SPAN CHART IS FOR ESTIMATION ONLY.
DO NOT UTILIZE FOR DETAILED DESIGN.
CHART IS BASED ON DEFLECTION ANALYSIS
ONLY

Mullion Centres (Tributary width) In Meters



MULLION SECTION



SYSTEM PROPERTIES

Moment of Inertia, Section Modulus & Area

Moment of Inertia, Ixx	Ixx = 9.49 in ⁴
Section Modulus, Sxx	Sxx = 3.33 in ³
Total Area	A = 1.53 in ²

Modulus of Elasticity

Aluminum	10,000,000 PSI
Steel	29,000,000 PSI

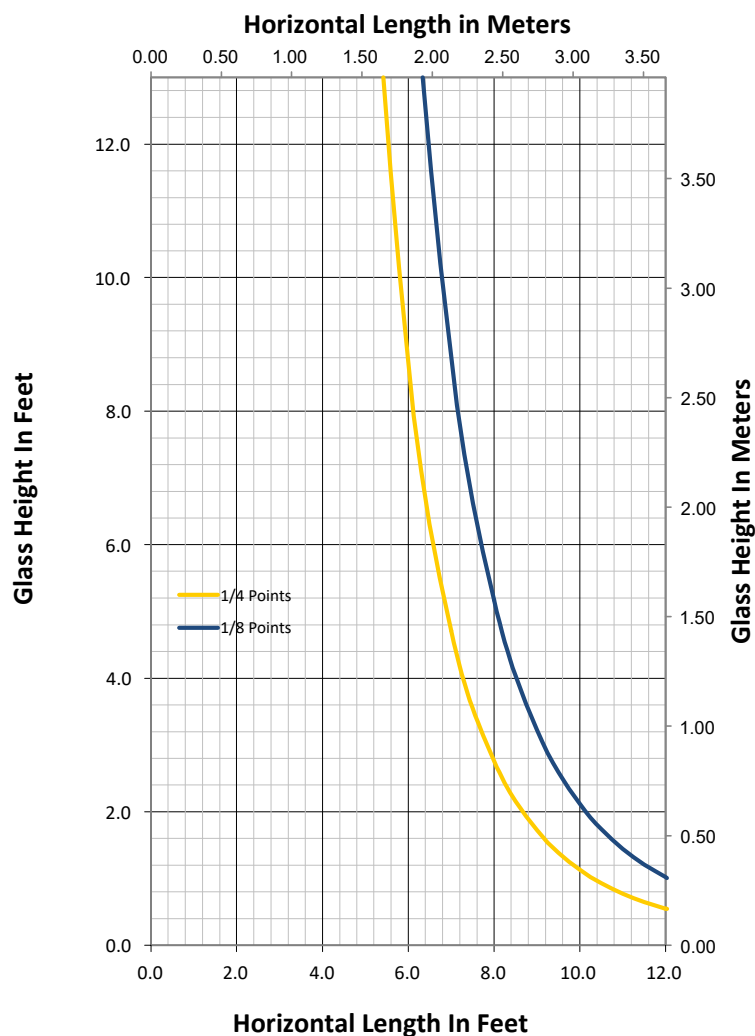
GENERAL NOTES

1. Deflection Limit: L/175 up to 13.5ft, L/240 + 0.25" over 13.5ft
2. Assume horizontal members provide lateral support
3. Steel moment of inertia converted to polyester, vinyl or 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 2020).

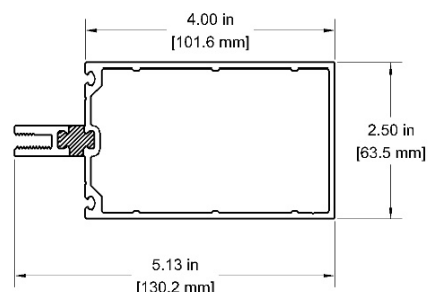
DEAD LOAD CHART FOR 2 1/2" x 4" T/B MULLION - PART # 2503T

SPAN CHART

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ONLY



MULLION SECTION



SYSTEM PROPERTIES

Moment of Inertia, Section Modulus & Area

Moment of Inertia, I_{yy}	$I_{yy} = 1.34 \text{ in}^4$
Section Modulus, S_{yy}	$S_{yy} = 1.08 \text{ in}^3$
Total Area	$A = 1.53 \text{ in}^2$

Modulus of Elasticity

Aluminum	10,000,000 PSI
Steel	29,000,000 PSI

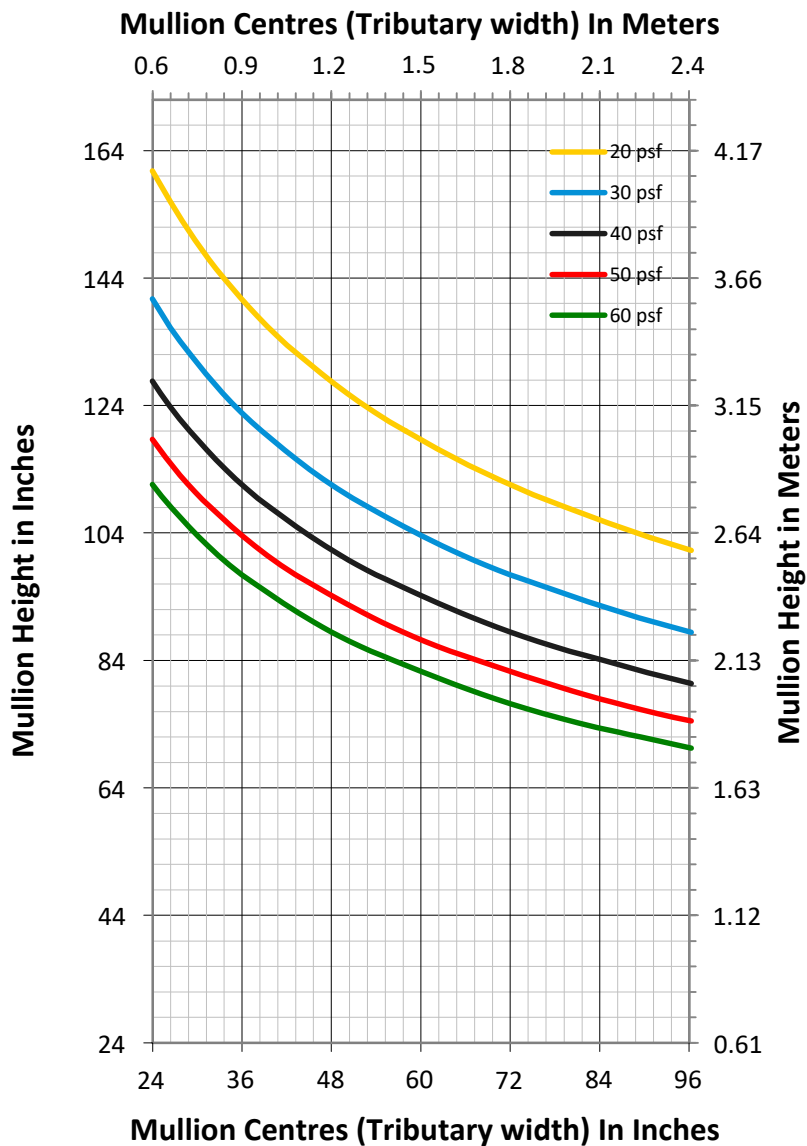
GENERAL NOTES

1. Deflection Limit: 0.125" (3.2mm).
2. Charts are calculated assuming a 1" overall sealed unit (6mm/13mm spacer/6mm)
3. Calculations are based on the position of the setting blocks being placed at 1/4 or 1/8 points.

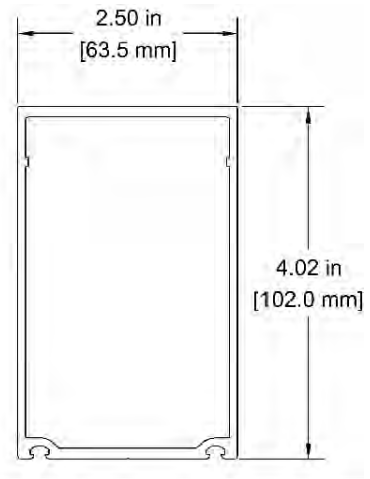
WIND LOAD CHART FOR 2 1/2" x 4" SSG MULLION - PART # 2523

SPAN CHART

SPAN CHART IS FOR ESTIMATION ONLY.
DO NOT UTILIZE FOR DETAILED DESIGN.
CHART IS BASED ON DEFLECTION ANALYSIS
ONLY



MULLION SECTION



SYSTEM PROPERTIES

Moment of Inertia, Section Modulus & Area

Moment of Inertia, Ixx	Ixx = 3.17 in ⁴
Section Modulus, Sxx	Sxx = 1.55 in ³
Total Area	A = 1.32 in ²

Modulus of Elasticity

Aluminum	10,000,000 PSI
Steel	29,000,000 PSI

GENERAL NOTES

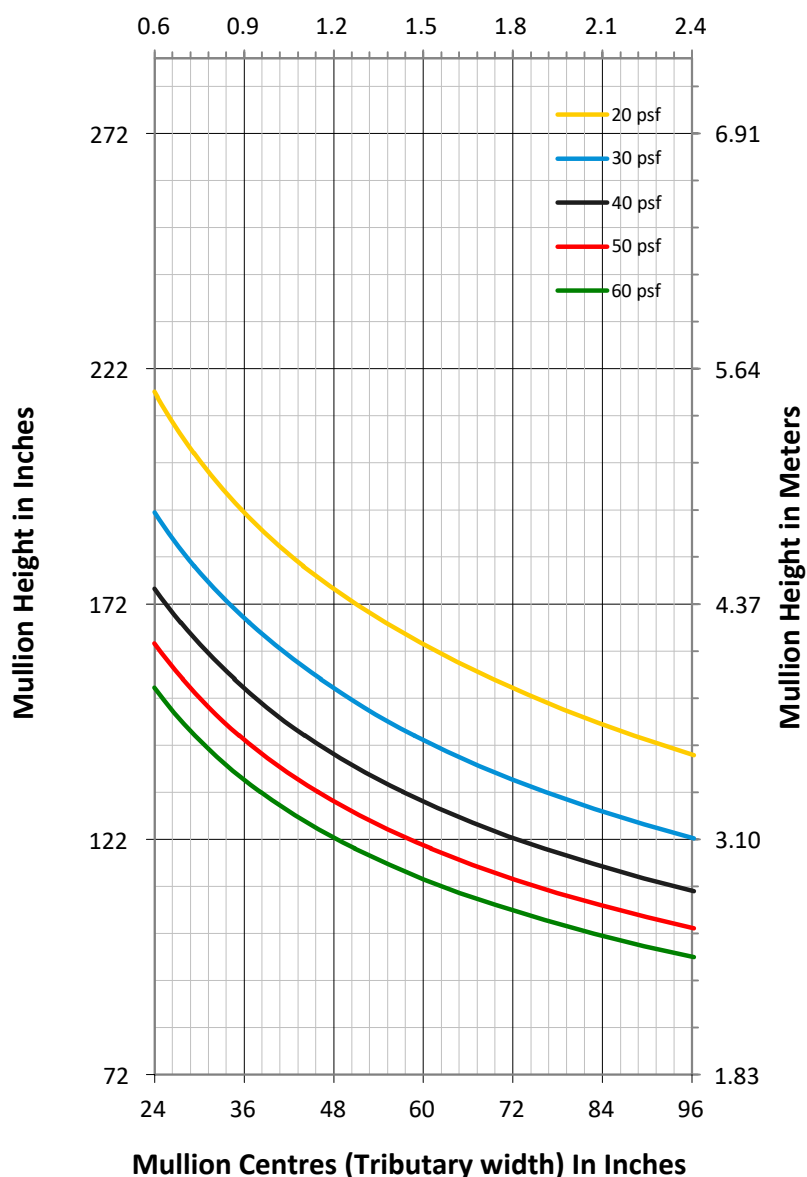
1. Deflection Limit: L/175 up to 13.5ft, L/240 + 0.25" over 13.5ft
2. Assume horizontal members provide lateral support
3. Steel moment of inertia converted to polyester, vinyl or aluminum equivalent
4. CANADIAN PROJECTS: Use SLS wind loads or modify the specified wind load by 0.75 before utilizing this chart. i.e. if project specifications require pnet = 40 psf, utilize 30 psf on this chart (0.75 x 40 = 30). (Based on NBCC 2020).

STEEL LOADED WIND LOAD CHART FOR 2 1/2" x 4" SSG MULLION - PART # 2523

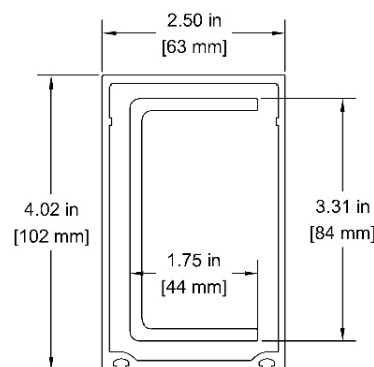
SPAN CHART

SPAN CHART IS FOR ESTIMATION ONLY.
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CHART IS BASED ON DEFLECTION ANALYSIS
ONLY

Mullion Centres (Tributary width) In Meters



MULLION SECTION



SYSTEM PROPERTIES

Moment of Inertia, Section Modulus & Area

Moment of Inertia, I_{xx}	$I_{xx} = 8.34 \text{ in}^4$
Section Modulus, S_{xx}	$S_{xx} = 6.85 \text{ in}^3$
Total Area	$A = 1.32 \text{ in}^2$

Modulus of Elasticity

Aluminum	10,000,000 PSI
Steel	29,000,000 PSI

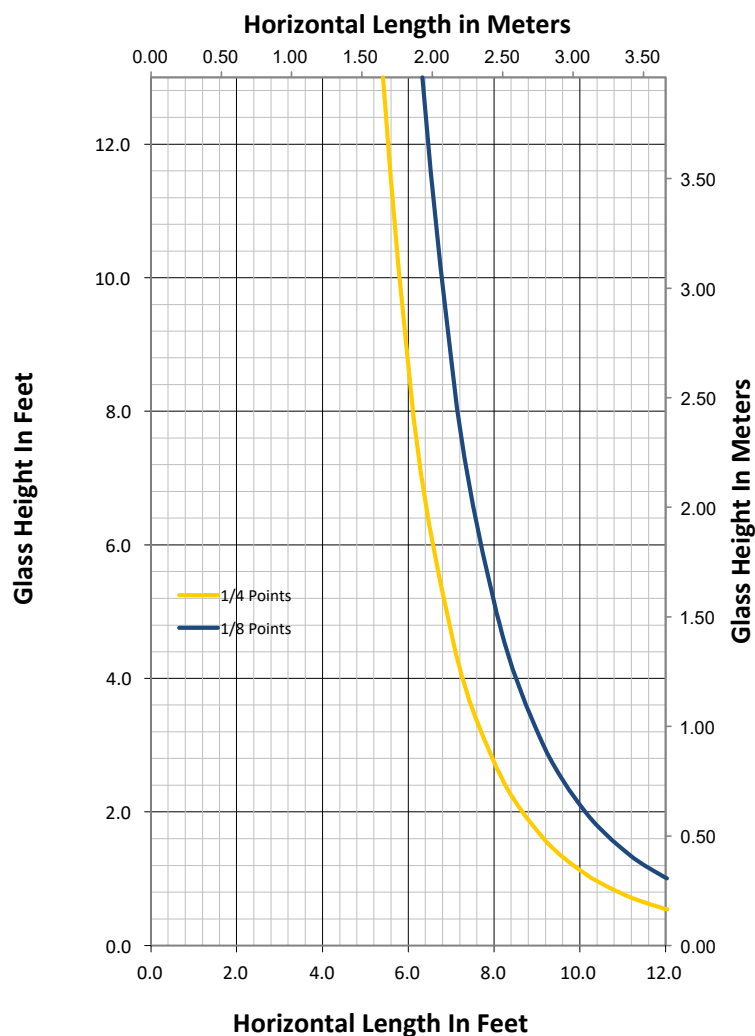
GENERAL NOTES

1. Deflection Limit: $L/175$ up to 13.5ft, $L/240 + 0.25"$ over 13.5ft
2. Assume horizontal members provide lateral support
3. Steel moment of inertia converted to polyester, vinyl or 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 $p_{net} = 40 \text{ psf}$, utilize 30 psf on this chart ($0.75 \times 40 = 30$). (Based on NBCC 2020).

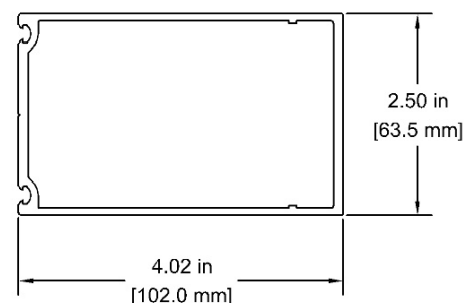
DEAD LOAD CHART FOR 2 1/2" x 4" SSG MULLION - PART # 2523

SPAN CHART

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DO NOT UTILIZE FOR DETAILED DESIGN.
CHART IS BASED ON DEFLECTION ANALYSIS
ONLY



MULLION SECTION



SYSTEM PROPERTIES

Moment of Inertia, Section Modulus & Area

Moment of Inertia, I_{yy}	$I_{yy} = 1.34 \text{ in}^4$
Section Modulus, S_{yy}	$S_{yy} = 1.07 \text{ in}^3$
Total Area	$A = 1.32 \text{ in}^2$

Modulus of Elasticity

Aluminum	10,000,000 PSI
Steel	29,000,000 PSI

GENERAL NOTES

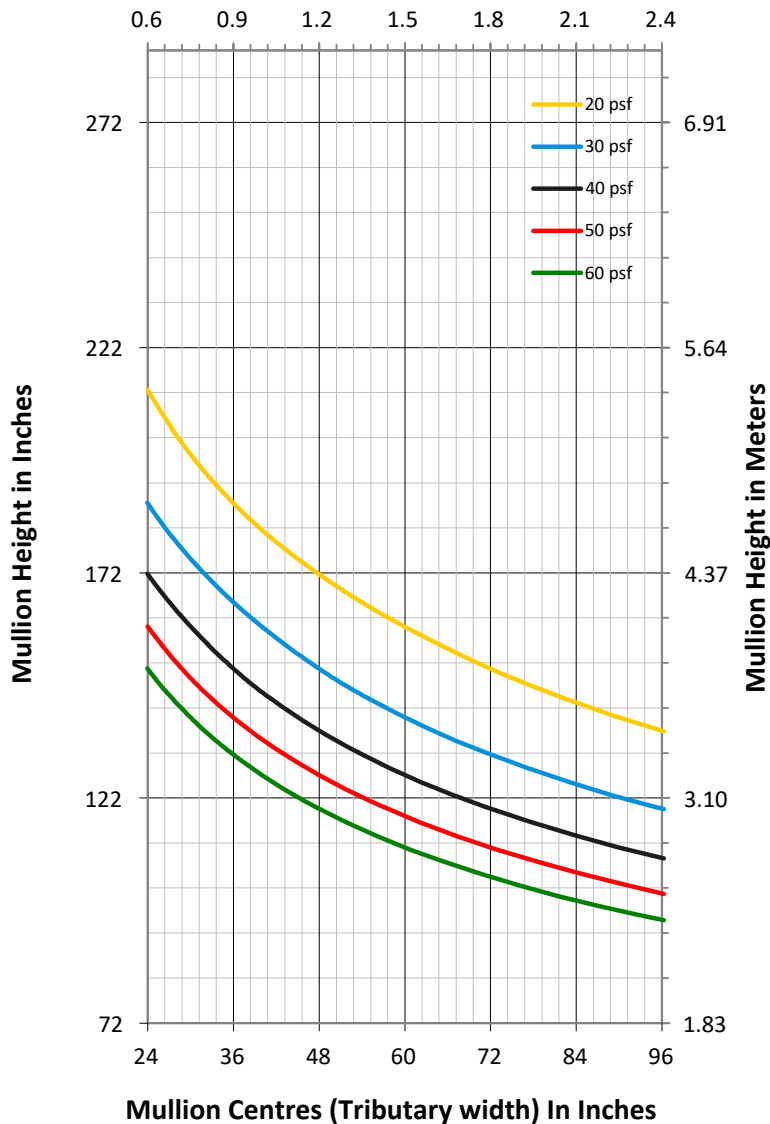
1. Deflection Limit: 0.125" (3.2mm).
2. Charts are calculated assuming a 1" overall sealed unit (6mm/13mm spacer/6mm)
3. Calculations are based on the position of the setting blocks being placed at 1/4 or 1/8 points.

WIND LOAD CHART FOR 2 1/2" x 5 1/4" MULLION - PART # 2504T

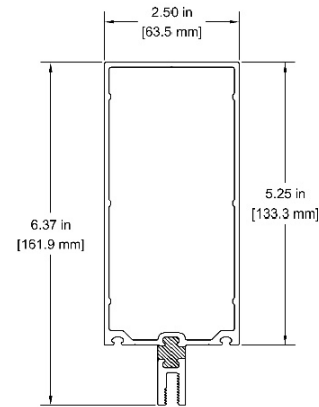
SPAN CHART

SPAN CHART IS FOR ESTIMATION ONLY.
DO NOT UTILIZE FOR DETAILED DESIGN.
CHART IS BASED ON DEFLECTION ANALYSIS
ONLY

Mullion Centres (Tributary width) In Meters



MULLION SECTION



SYSTEM PROPERTIES

Moment of Inertia, Section Modulus & Area

Moment of Inertia, Ixx	Ixx = 7.80 in ⁴
Section Modulus, Sxx	Sxx = 2.00 in ³
Total Area	A = 1.76 in ²

Modulus of Elasticity

Aluminum	10,000,000 PSI
Steel	29,000,000 PSI

GENERAL NOTES

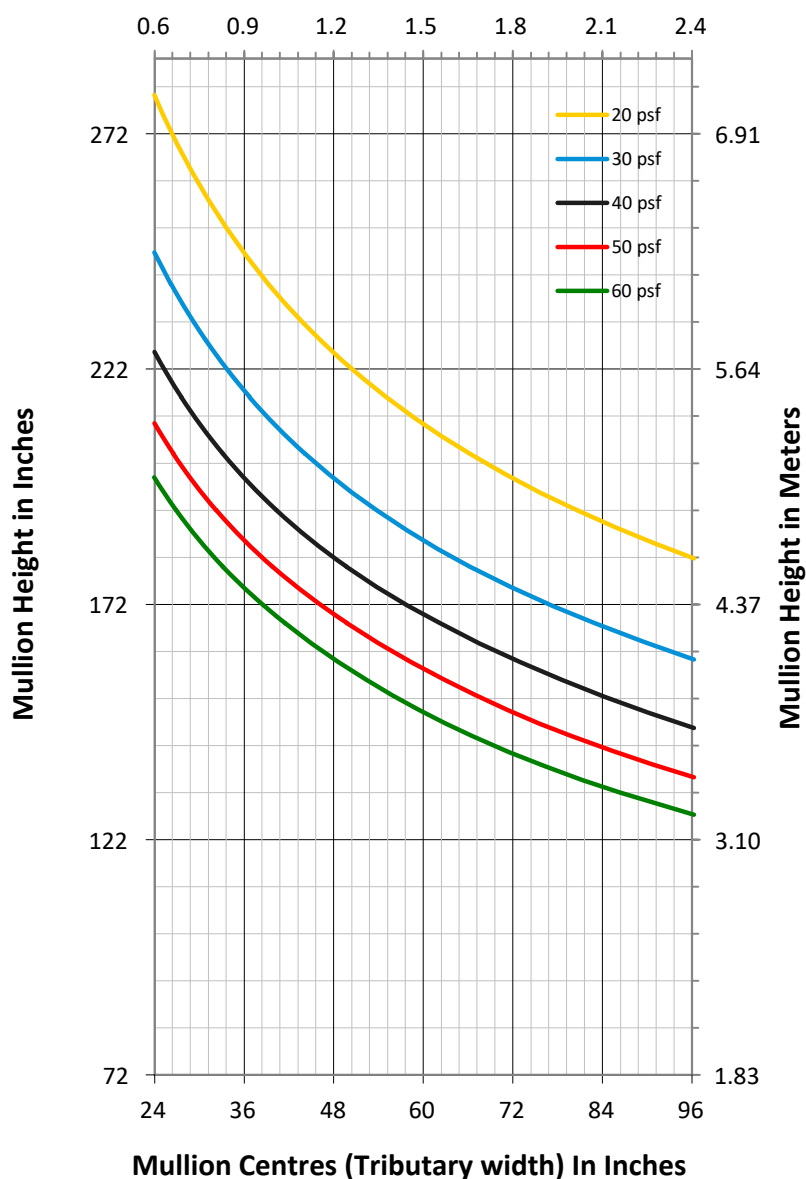
1. Deflection Limit: L/175 up to 13.5ft, L/240 + 0.25" over 13.5ft
2. Assume horizontal members provide lateral support
3. Steel moment of inertia converted to polyester, vinyl or aluminum equivalent
4. CANADIAN PROJECTS: Use SLS wind loads or modify the specified wind load by 0.75 before utilizing this chart. i.e. if project specifications require pnet = 40 psf, utilize 30 psf on this chart (0.75 x 40 = 30). (Based on NBCC 2020).

STEEL LOADED WIND LOAD CHART FOR 2 1/2" x 5 1/4" T/B MULLION - PART # 2504T

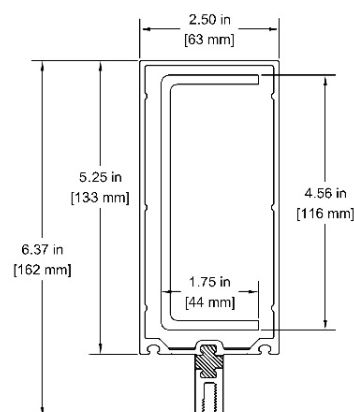
SPAN CHART

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ONLY

Mullion Centres (Tributary width) In Meters



MULLION SECTION



SYSTEM PROPERTIES

Moment of Inertia, Section Modulus & Area

Moment of Inertia, I_{xx}	$I_{xx} = 18.86 \text{ in}^4$
Section Modulus, S_{xx}	$S_{xx} = 5.44 \text{ in}^3$
Total Area	$A = 1.76 \text{ in}^2$

Modulus of Elasticity

Aluminum	10,000,000 PSI
Steel	29,000,000 PSI

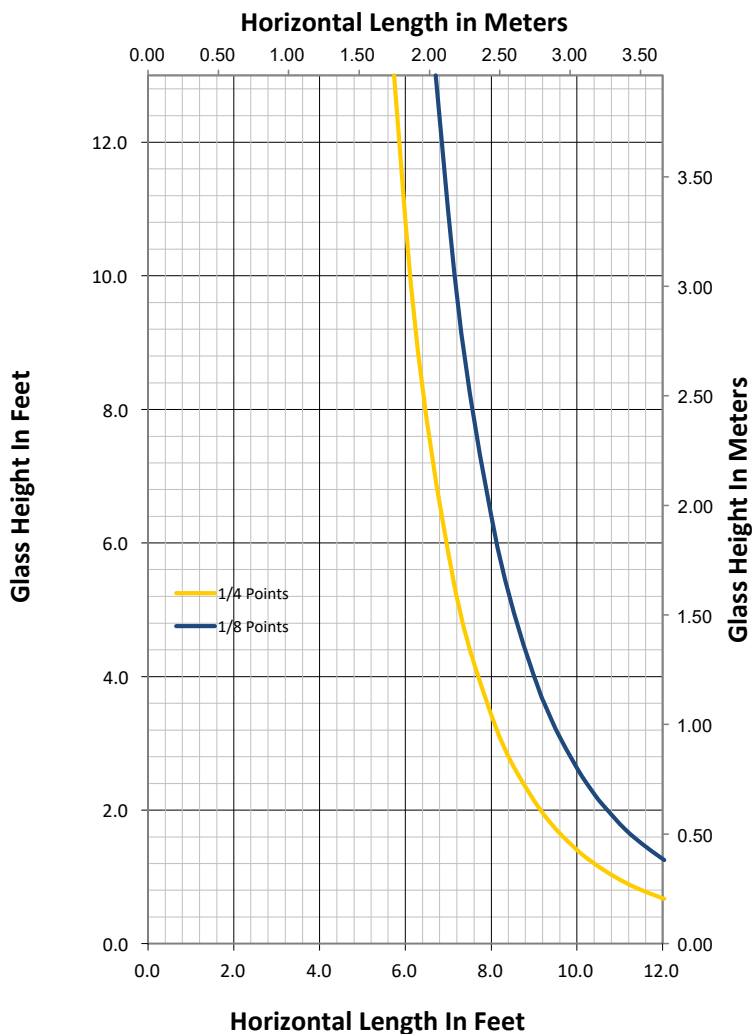
GENERAL NOTES

1. Deflection Limit: $L/175$ up to 13.5ft, $L/240 + 0.25"$ over 13.5ft
2. Assume horizontal members provide lateral support
3. Steel moment of inertia converted to polyester, vinyl or 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 $p_{net} = 40 \text{ psf}$, utilize 30 psf on this chart ($0.75 \times 40 = 30$). (Based on NBCC 2020).

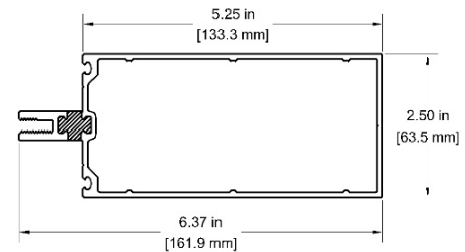
DEAD LOAD CHART FOR 2 1/2" x 5 1/4" T/B MULLION - PART # 2504T

SPAN CHART

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ONLY



MULLION SECTION



SYSTEM PROPERTIES

Moment of Inertia, Section Modulus & Area

Moment of Inertia, I_{yy}	$I_{yy} = 1.67 \text{ in}^4$
Section Modulus, S_{yy}	$S_{yy} = 1.33 \text{ in}^3$
Total Area	$A = 1.76 \text{ in}^2$

Modulus of Elasticity

Aluminum	10,000,000 PSI
Steel	29,000,000 PSI

GENERAL NOTES

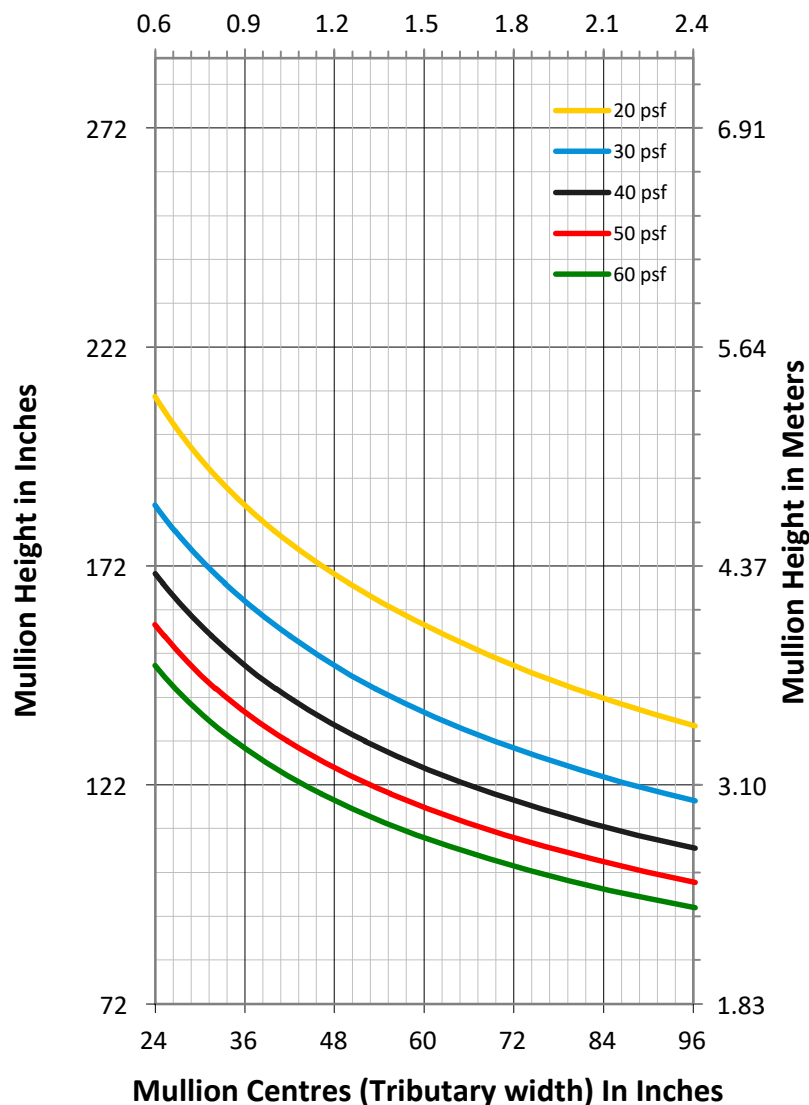
1. Deflection Limit: 0.125" (3.2mm).
2. Charts are calculated assuming a 1" overall sealed unit (6mm/13mm spacer/6mm)
3. Calculations are based on the position of the setting blocks being placed at 1/4 or 1/8 points.

WIND LOAD CHART FOR 2 1/2" x 5 1/4" SSG MULLION - PART # 2555

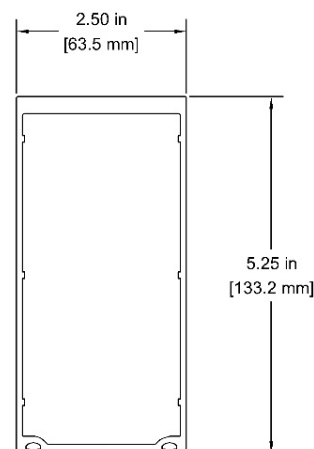
SPAN CHART

SPAN CHART IS FOR ESTIMATION ONLY.
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CHART IS BASED ON DEFLECTION ANALYSIS
ONLY

Mullion Centres (Tributary width) In Meters



MULLION SECTION



SYSTEM PROPERTIES

Moment of Inertia, Section Modulus & Area

Moment of Inertia, Ixx	Ixx = 7.58 in ⁴
Section Modulus, Sxx	Sxx = 2.55 in ³
Total Area	A = 1.85 in ²

Modulus of Elasticity

Aluminum	10,000,000 PSI
Steel	29,000,000 PSI

GENERAL NOTES

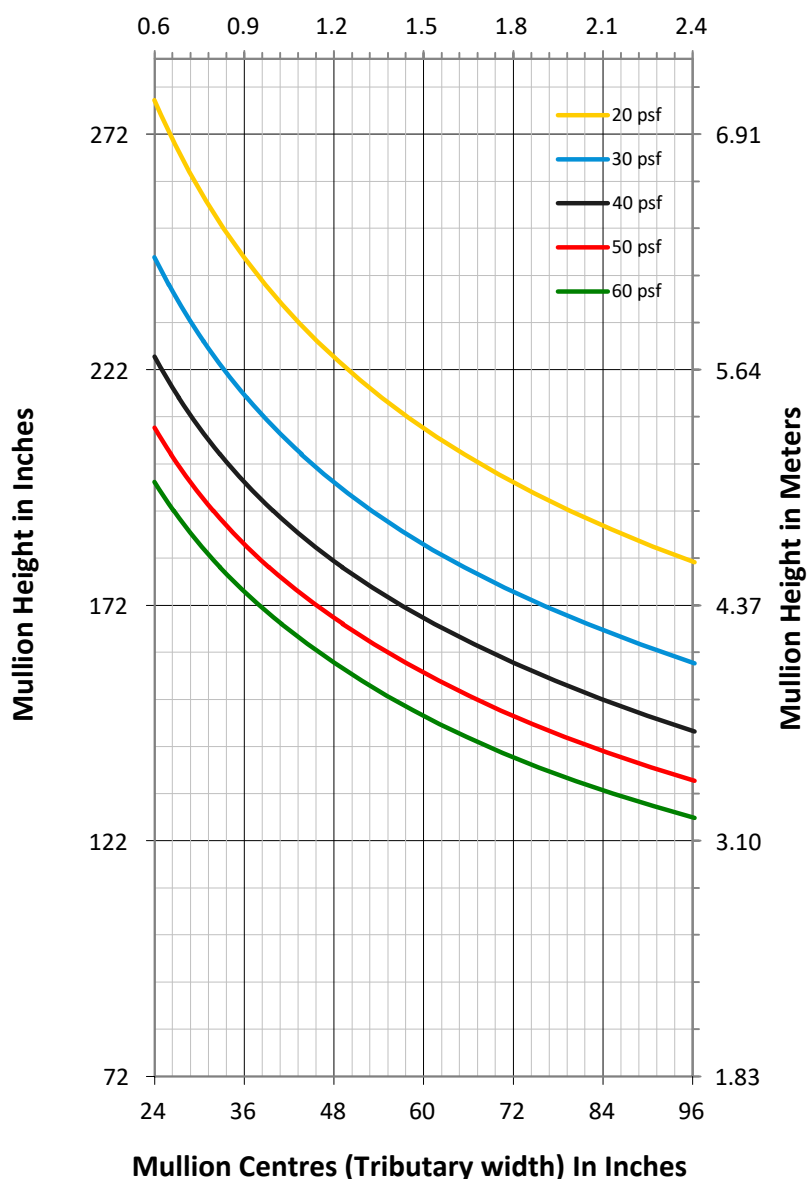
1. Deflection Limit: L/175 up to 13.5ft, L/240 + 0.25" over 13.5ft
2. Assume horizontal members provide lateral support
3. Steel moment of inertia converted to polyester, vinyl or aluminum equivalent
4. CANADIAN PROJECTS: Use SLS wind loads or modify the specified wind load by 0.75 before utilizing this chart. i.e. if project specifications require pnet = 40 psf, utilize 30 psf on this chart (0.75 x 40 = 30). (Based on NBCC 2020).

STEEL LOADED WIND LOAD CHART FOR 2 1/2" x 5 1/4" SSG MULLION - PART # 2555

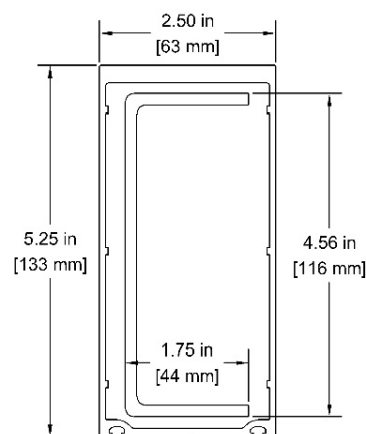
SPAN CHART

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ONLY

Mullion Centres (Tributary width) In Meters



MULLION SECTION



SYSTEM PROPERTIES

Moment of Inertia, Section Modulus & Area

Moment of Inertia, Ixx	Ixx = 18.64 in ⁴
Section Modulus, Sxx	Sxx = 16.92 in ³
Total Area	A = 1.85 in ²

Modulus of Elasticity

Aluminum	10,000,000 PSI
Steel	29,000,000 PSI

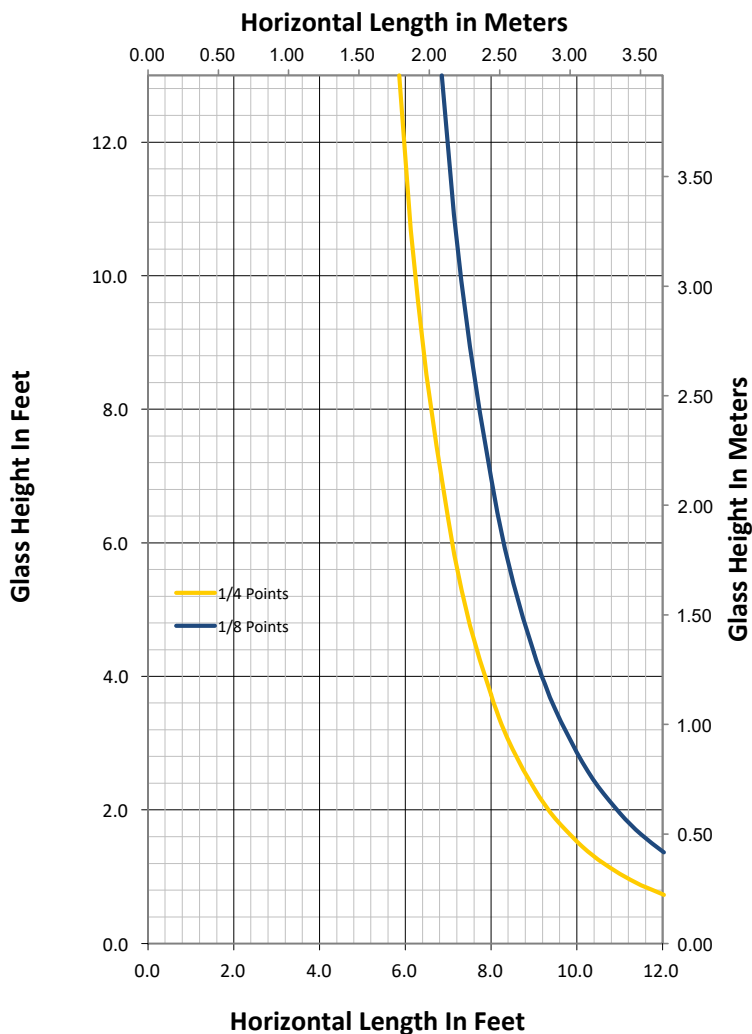
GENERAL NOTES

1. Deflection Limit: L/175 up to 13.5ft, L/240 + 0.25" over 13.5ft
2. Assume horizontal members provide lateral support
3. Steel moment of inertia converted to polyester, vinyl or 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 2020).

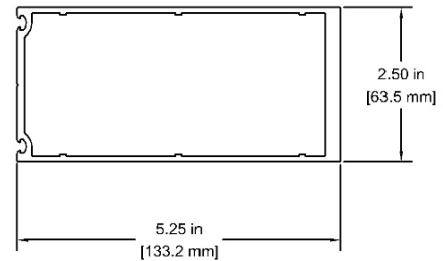
DEAD LOAD CHART FOR 2 1/2" x 5 1/4" SSG MULLION - PART # 2555

SPAN CHART

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ONLY



MULLION SECTION



SYSTEM PROPERTIES

Moment of Inertia, Section Modulus & Area

Moment of Inertia, I_{yy}	$I_{yy} = 1.81 \text{ in}^4$
Section Modulus, S_{yy}	$S_{yy} = 1.45 \text{ in}^3$
Total Area	$A = 1.85 \text{ in}^2$

Modulus of Elasticity

Aluminum	10,000,000 PSI
Steel	29,000,000 PSI

GENERAL NOTES

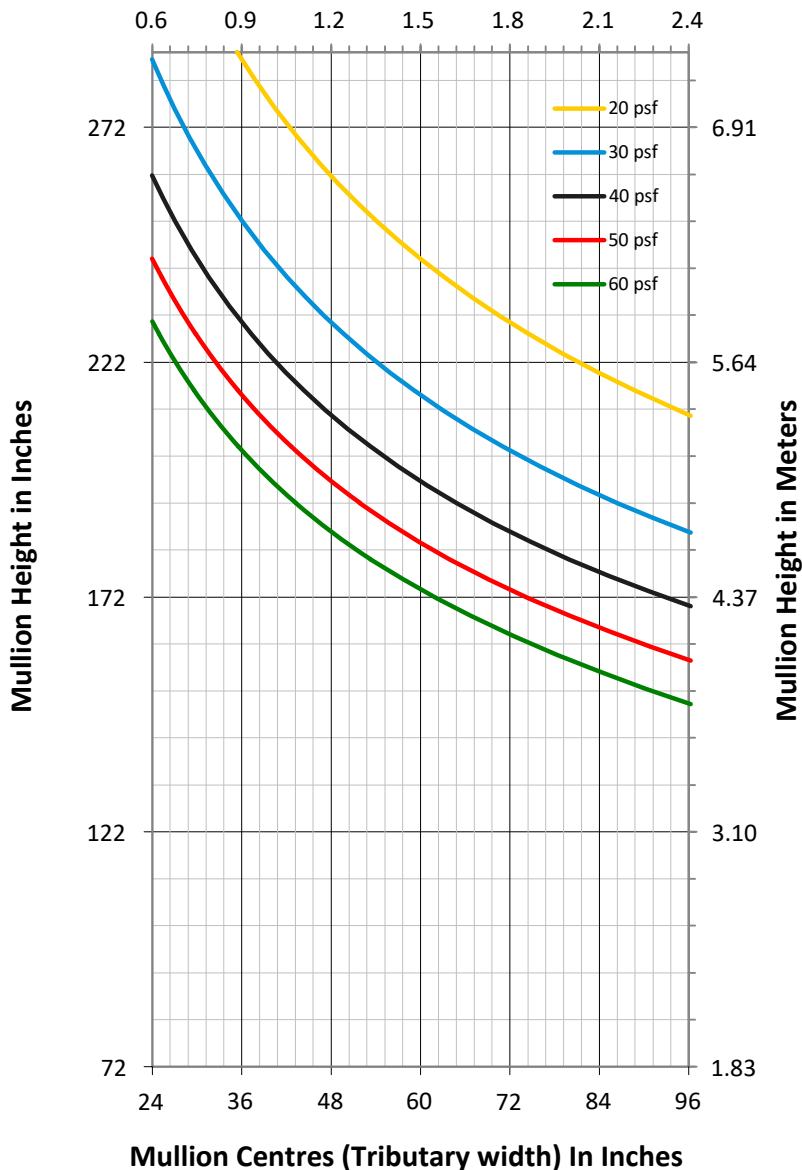
1. Deflection Limit: 0.125" (3.2mm).
2. Charts are calculated assuming a 1" overall sealed unit (6mm/13mm spacer/6mm)
3. Calculations are based on the position of the setting blocks being placed at 1/4 or 1/8 points.

WIND LOAD CHART FOR 2 1/2" x 8" T/B MULLION - PART # 2580T

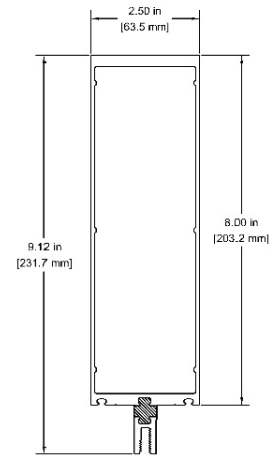
SPAN CHART

SPAN CHART IS FOR ESTIMATION ONLY.
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CHART IS BASED ON DEFLECTION ANALYSIS
ONLY

Mullion Centres (Tributary width) In Meters



MULLION SECTION



SYSTEM PROPERTIES

Moment of Inertia, Section Modulus & Area

Moment of Inertia, I_{xx}	$I_{xx} = 30.35 \text{ in}^4$
Section Modulus, S_{xx}	$S_{xx} = 5.98 \text{ in}^3$
Total Area	$A = 2.87 \text{ in}^2$

Modulus of Elasticity

Aluminum	10,000,000 PSI
Steel	29,000,000 PSI

GENERAL NOTES

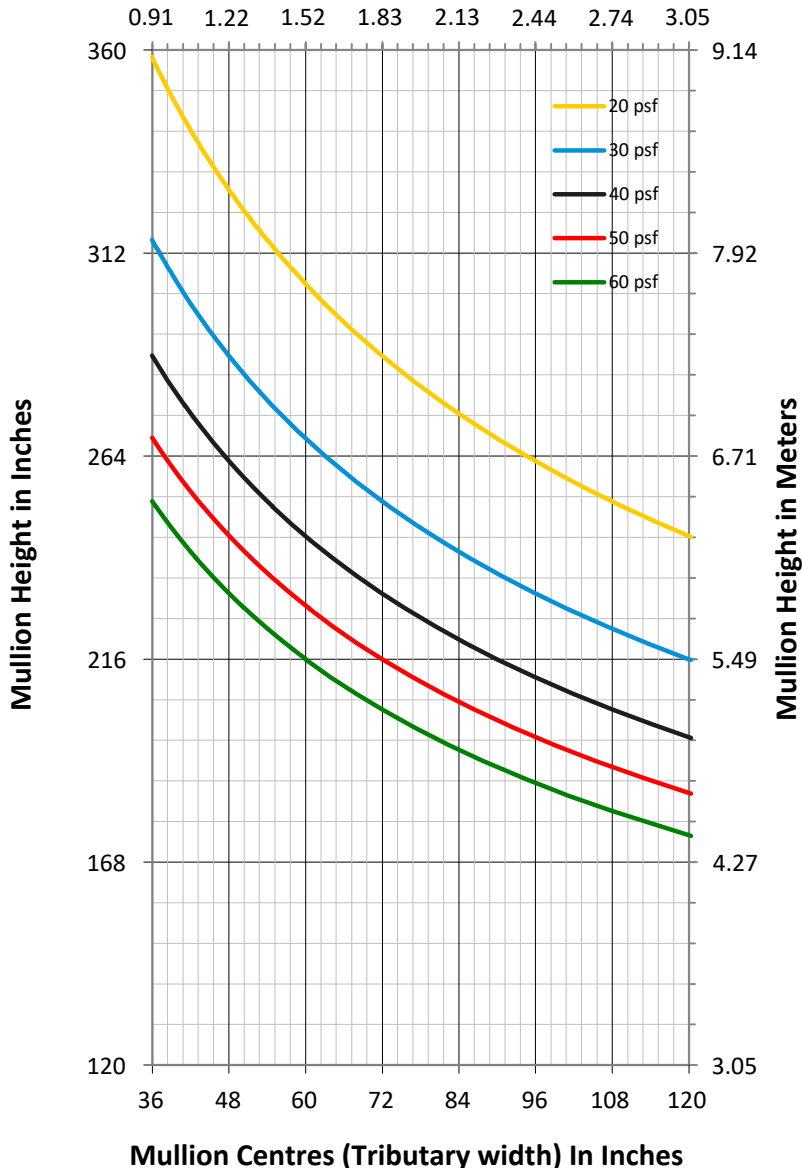
1. Deflection Limit: $L/175$ up to 13.5ft, $L/240 + 0.25"$ over 13.5ft
2. Assume horizontal members provide lateral support
3. Steel moment of inertia converted to polyester, vinyl or aluminum equivalent
4. CANADIAN PROJECTS: Use SLS wind loads or modify the specified wind load by 0.75 before utilizing this chart. i.e. if project specifications require $p_{net} = 40 \text{ psf}$, utilize 30 psf on this chart ($0.75 \times 40 = 30$). (Based on NBCC 2020).

STEEL LOADED WIND LOAD CHART FOR 2 1/2" x 8" T/B MULLION - PART # 2580T

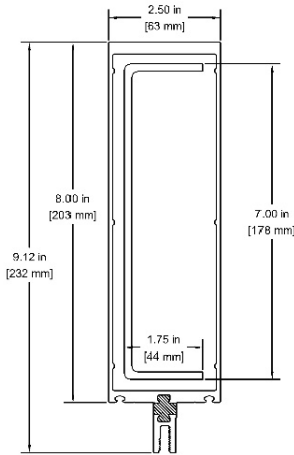
SPAN CHART

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ONLY

Mullion Centres (Tributary width) In Meters



MULLION SECTION



SYSTEM PROPERTIES

Moment of Inertia, Section Modulus & Area

Moment of Inertia, I_{xx}	$I_{xx} = 61.57 \text{ in}^4$
Section Modulus, S_{xx}	$S_{xx} = 12.30 \text{ in}^3$
Total Area	$A = 2.87 \text{ in}^2$

Modulus of Elasticity

Aluminum	10,000,000 PSI
Steel	29,000,000 PSI

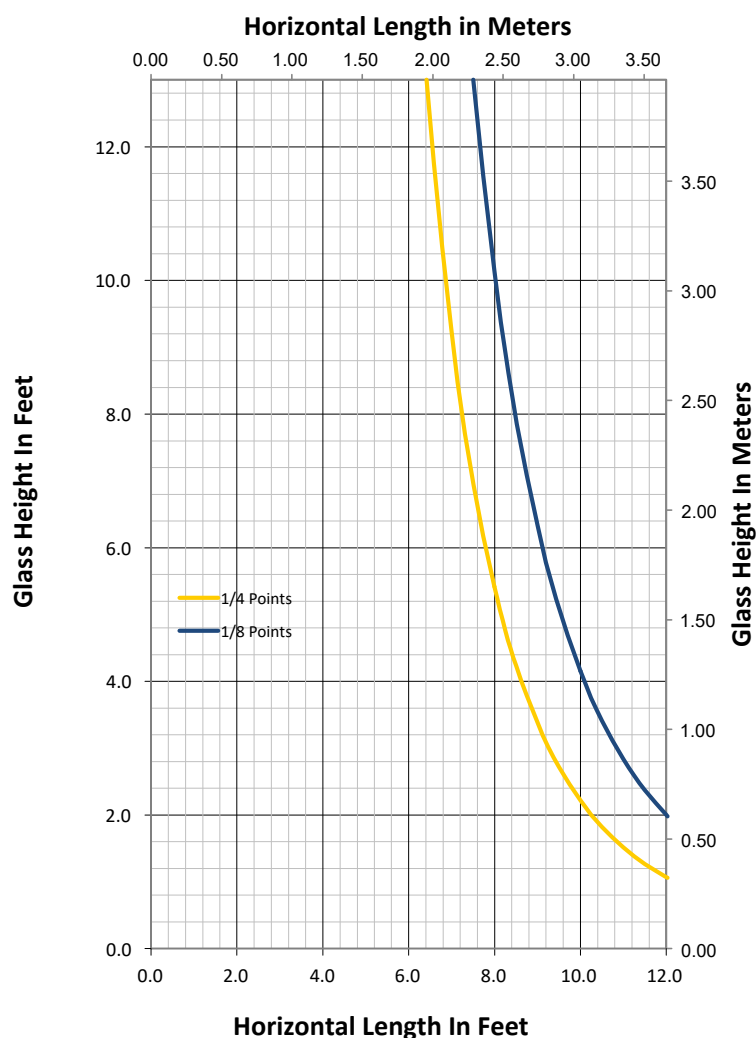
GENERAL NOTES

1. Deflection Limit: $L/175$ up to 13.5ft, $L/240 + 0.25"$ over 13.5ft
2. Assume horizontal members provide lateral support
3. Steel moment of inertia converted to polyester, vinyl or 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 $p_{net} = 40 \text{ psf}$, utilize 30 psf on this chart ($0.75 \times 40 = 30$). (Based on NBCC 2020).

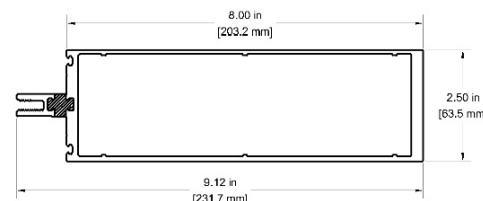
DEAD LOAD CHART FOR 2 1/2" x 8" T/B MULLION - PART # 2580T

SPAN CHART

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ONLY



MULLION SECTION



SYSTEM PROPERTIES

Moment of Inertia, Section Modulus & Area

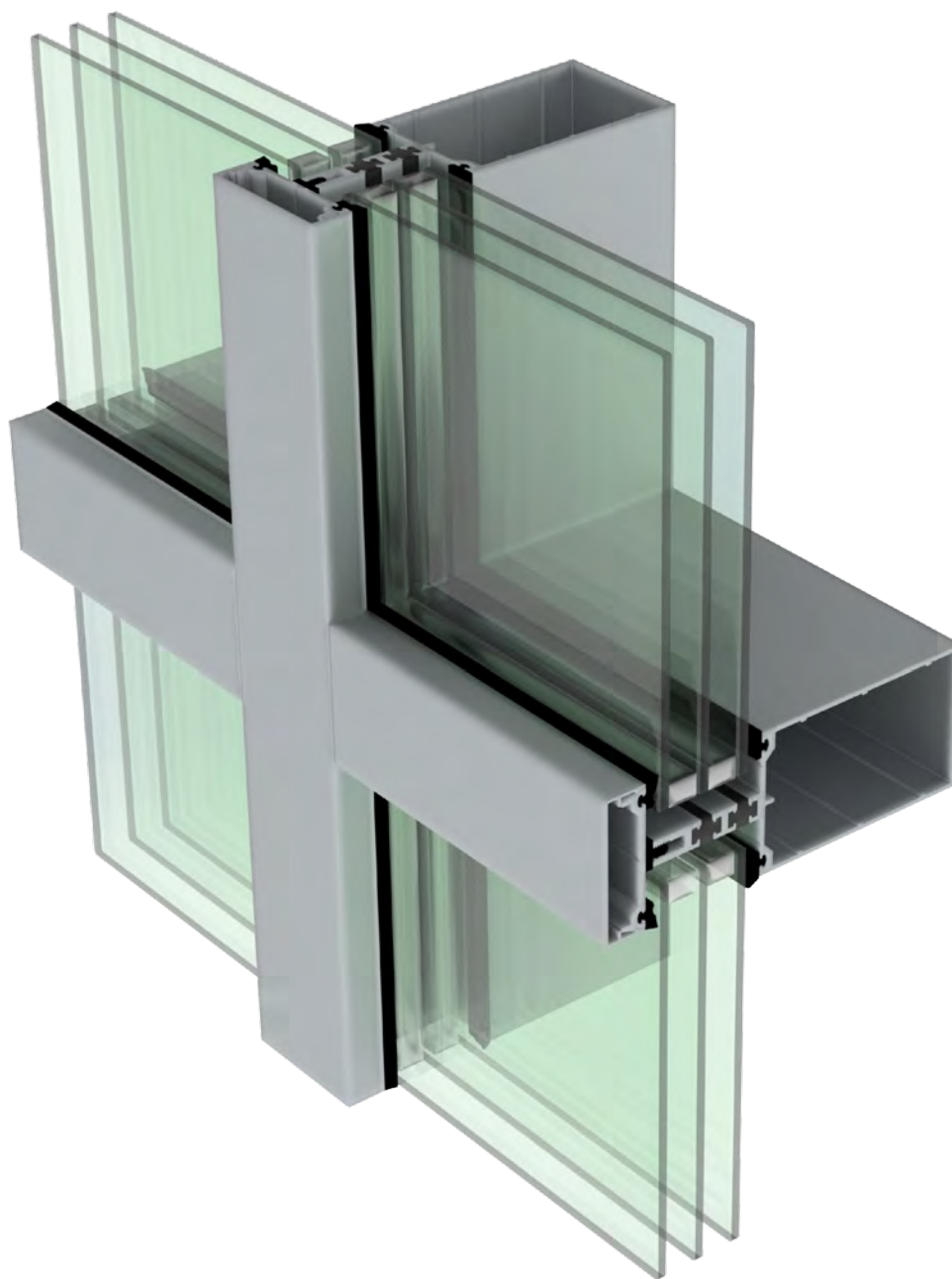
Moment of Inertia, I_{yy}	$I_{yy} = 2.64 \text{ in}^4$
Section Modulus, S_{yy}	$S_{yy} = 2.10 \text{ in}^3$
Total Area	$A = 2.87 \text{ in}^2$

Modulus of Elasticity

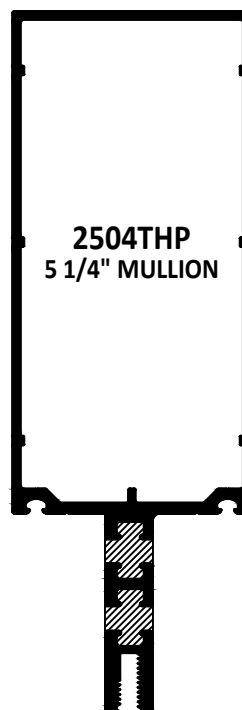
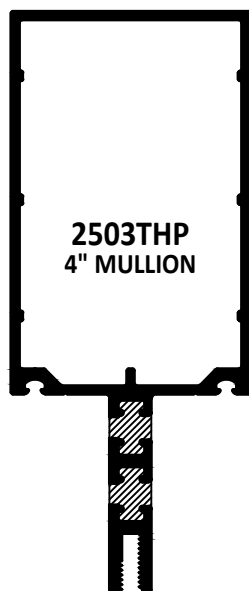
Aluminum	10,000,000 PSI
Steel	29,000,000 PSI

GENERAL NOTES

1. Deflection Limit: 0.125" (3.2mm).
2. Charts are calculated assuming a 1" overall sealed unit (6mm/13mm spacer/6mm)
3. Calculations are based on the position of the setting blocks being placed at 1/4 or 1/8 points.



BACK SECTIONS



2505
PRESSURE PLATE



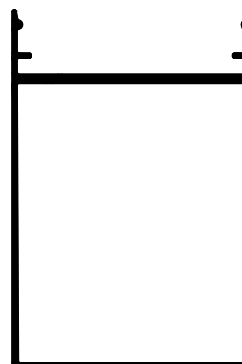
2505F
FIBRE GLASS PRESSURE PLATE



2506
3/4" CAP

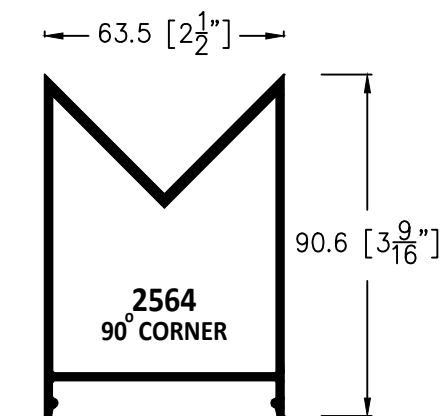
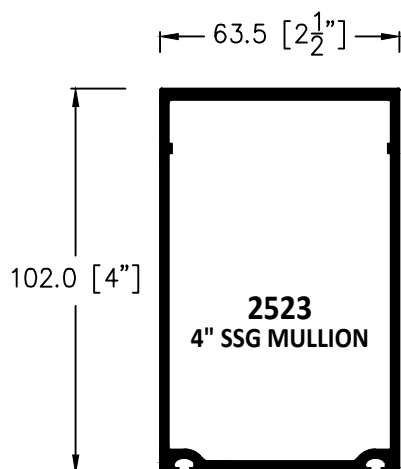


2507
1 1/4" CAP

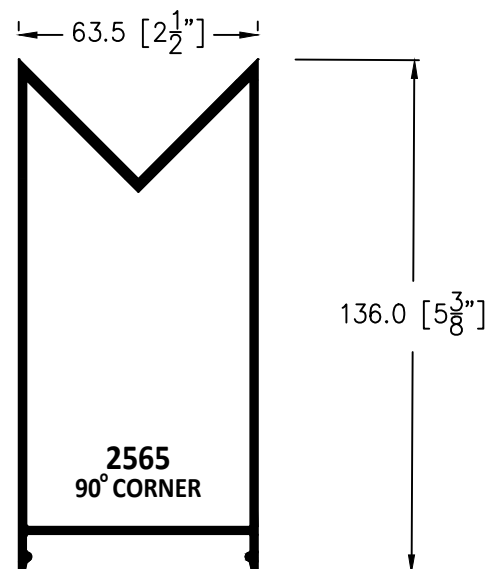
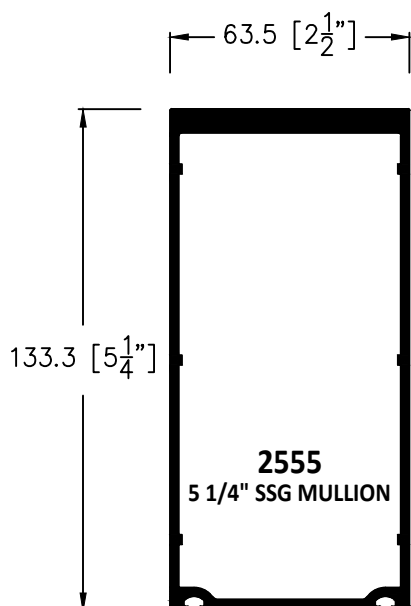


2508
3 3/4" CAP

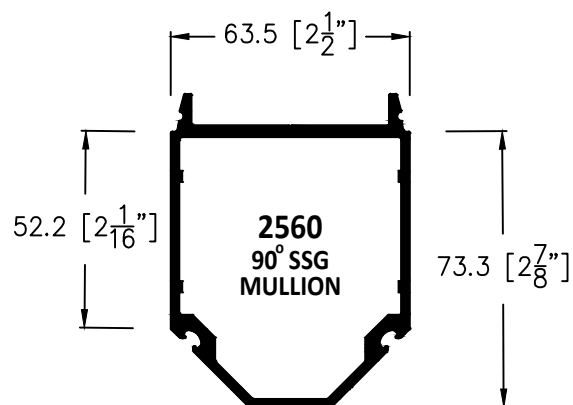
SSG COMPONENTS



EXTENSION CAP FOR 4" BACK



EXTENSION CAP FOR 5 1/4" BACK



MISC. COMPONENTS



2410
THERMAL BREAK



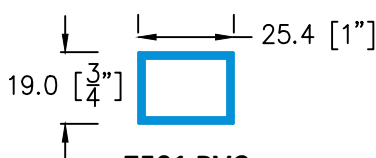
2515-3
CORNER BLOCK



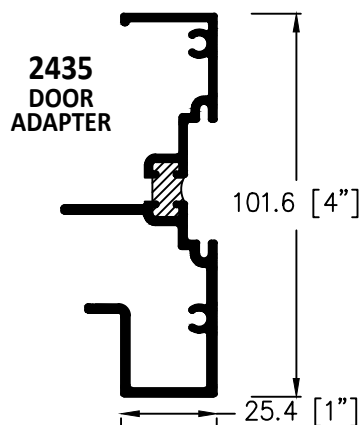
2460
SPONGE GASKET
(INTERIOR)



2450
DENSE GASKET
(EXTERIOR)



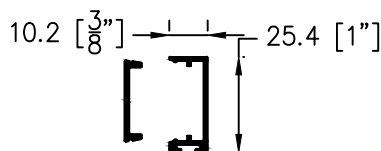
7501 PVC
ANTI-ROTATION



2435
DOOR
ADAPTER



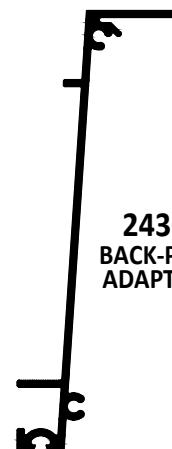
2520
SPIGOT



2417/2418
SURFACE APPLIED
DOOR STOP



20120T
DOOR STOP
FOR 2" DOORS



2430
BACK-PAN
ADAPTOR



2012T
DOOR STOP
FOR 1 3/4" DOORS

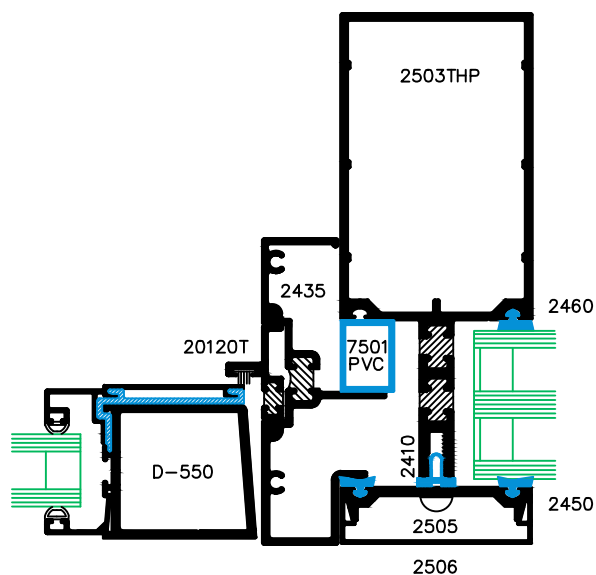


5102
1" X 2" PERIMETER ANGLE

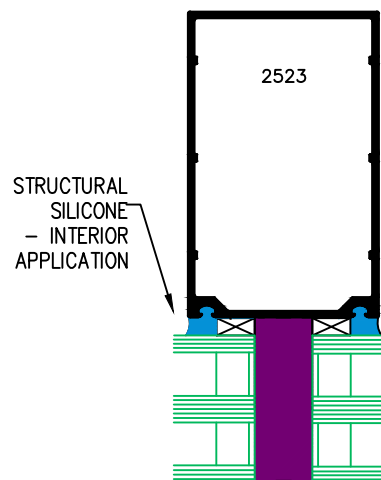


5103
1" X 3" PERIMETER ANGLE

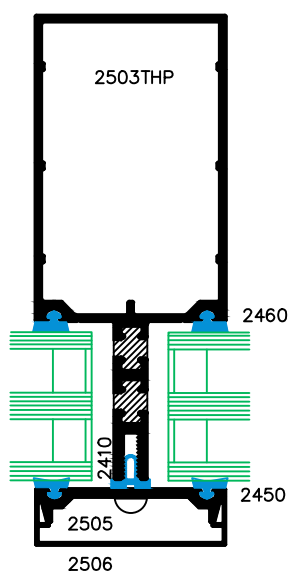
TYPICAL DETAILS



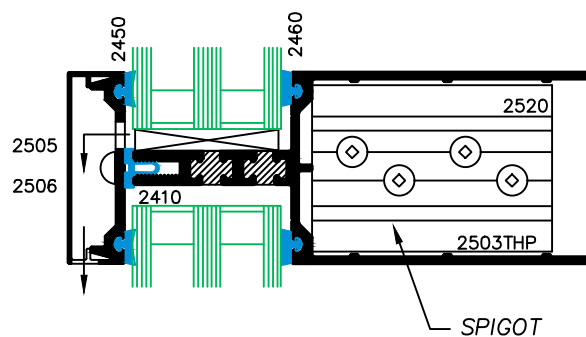
4a



3

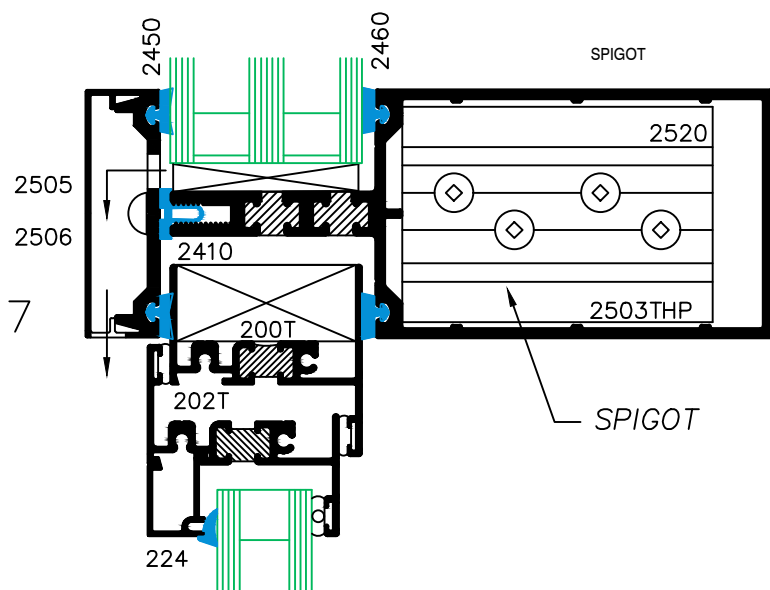


2

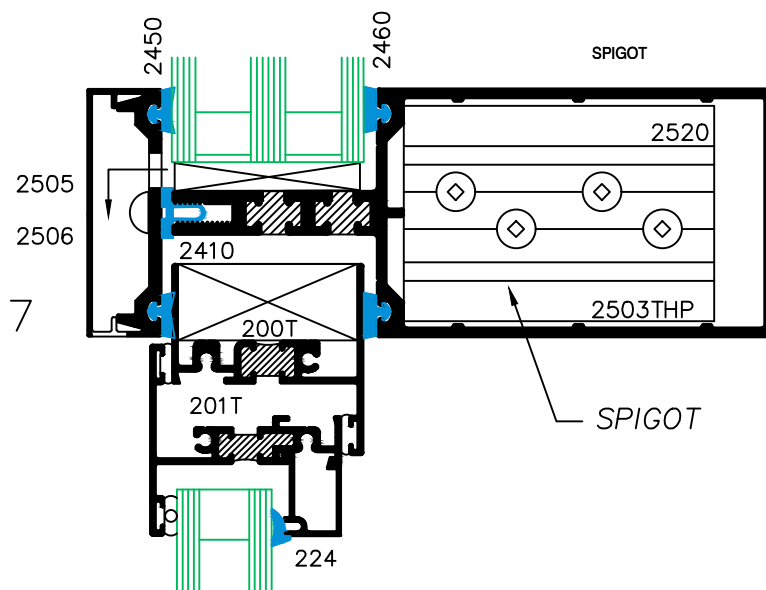


6

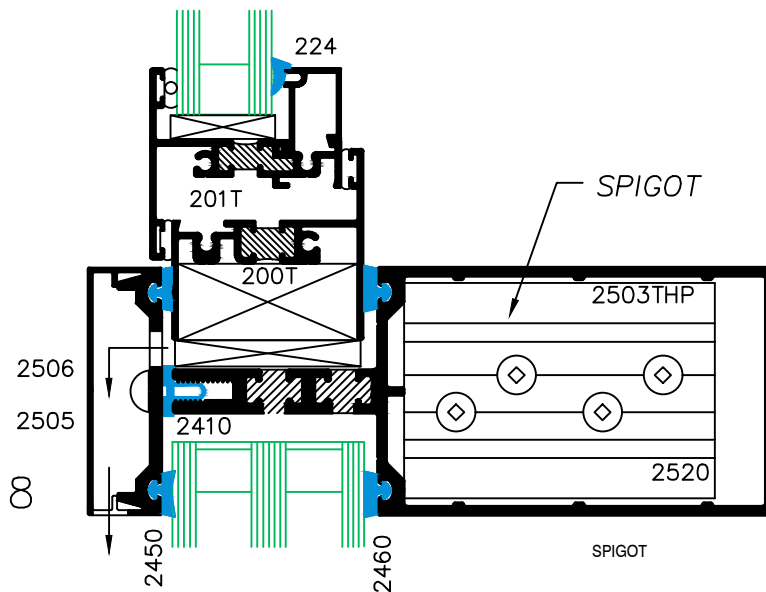
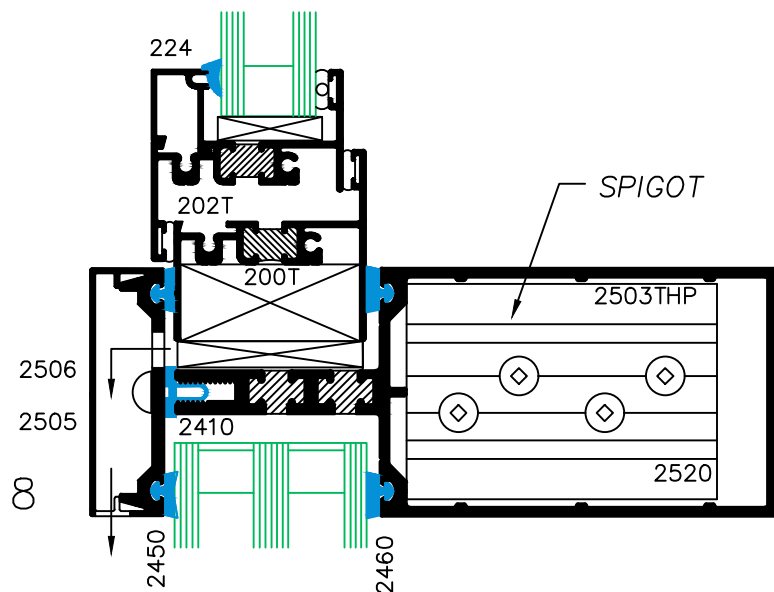
TYPICAL CURTAIN WALL VENT DETAILS



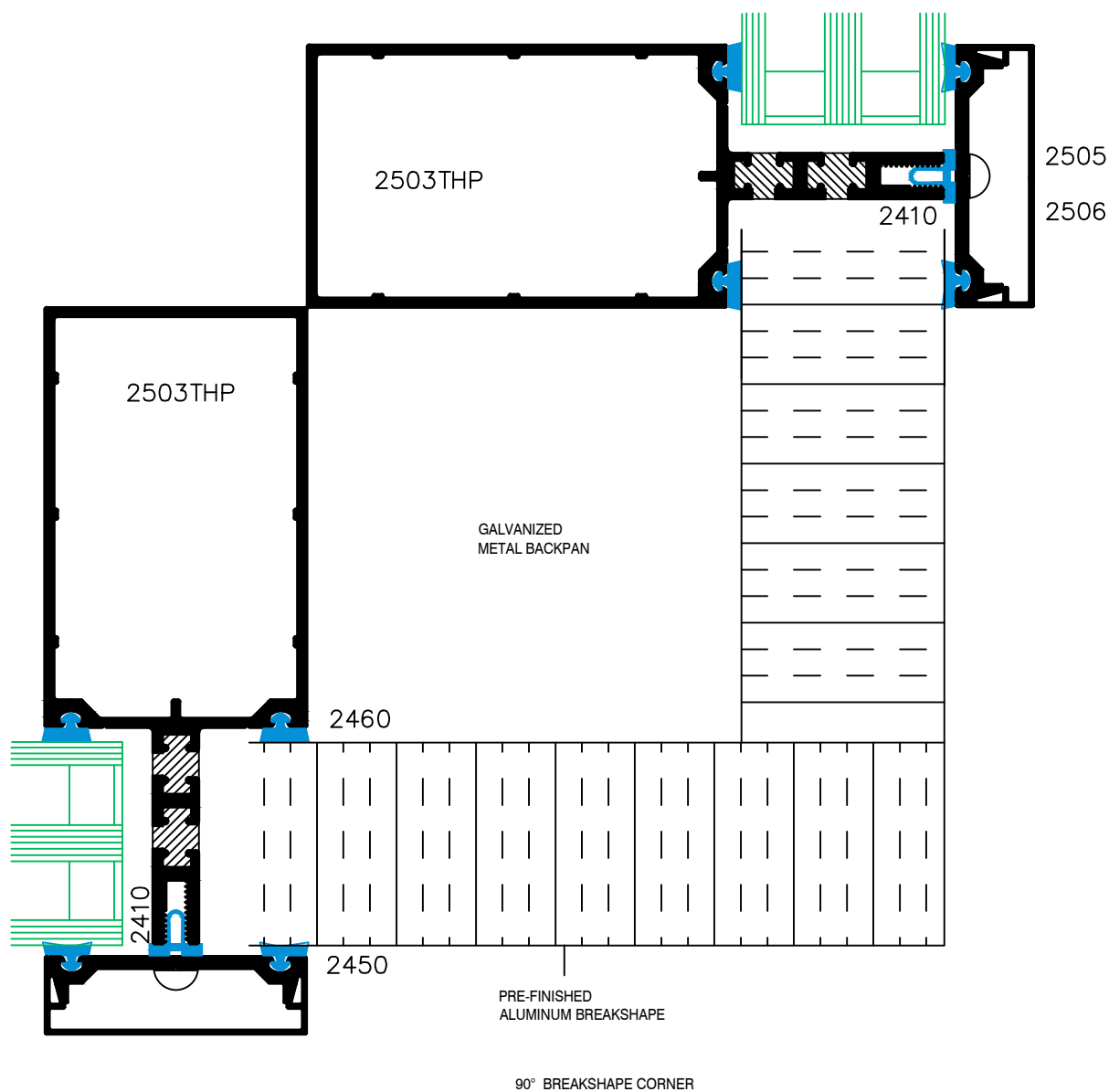
200T SERIES VENT
OPEN-OUT
OUTSIDE GLAZED



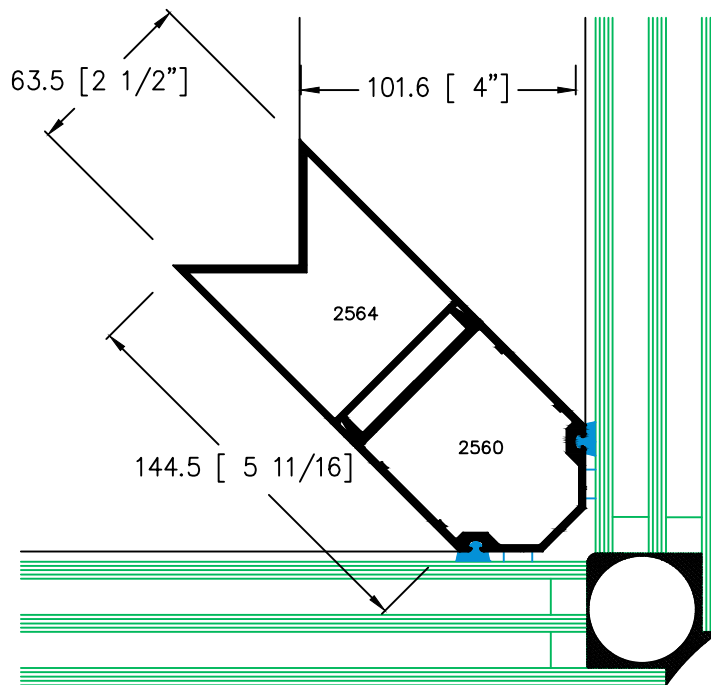
200T SERIES VENT
OPEN-OUT
INSIDE GLAZED



TYPICAL CAPTURED CORNER DETAILS

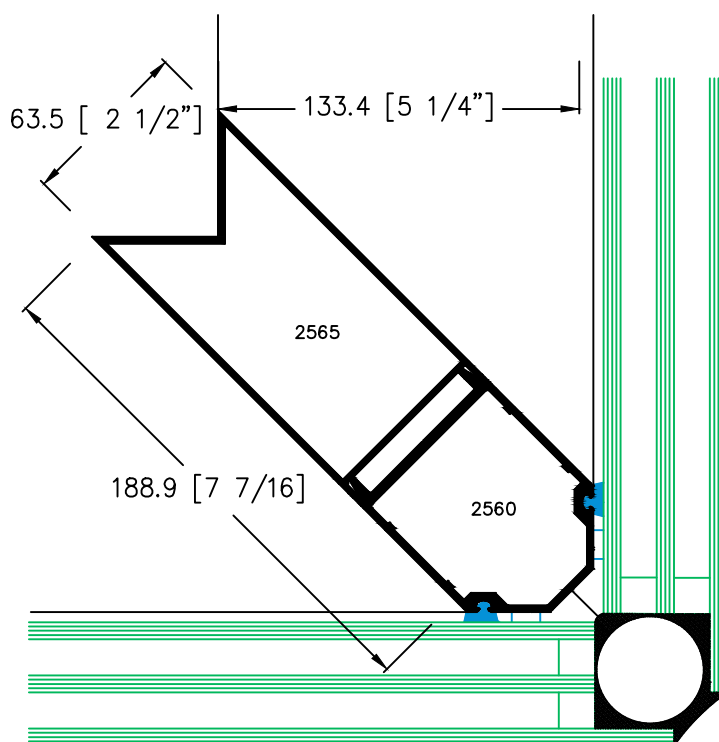


TYPICAL BUTT-JOINT CORNER DETAILS



90° BUTT-JOINT CORNER
AT 4° BACK MEMBER

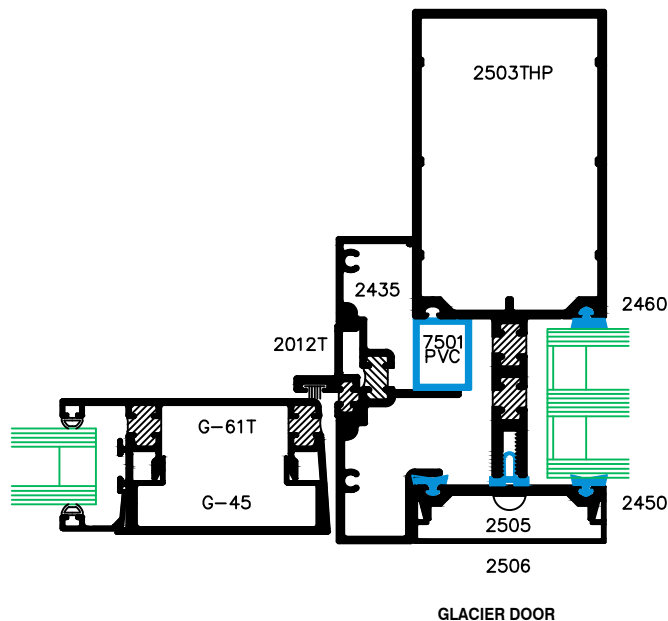
13



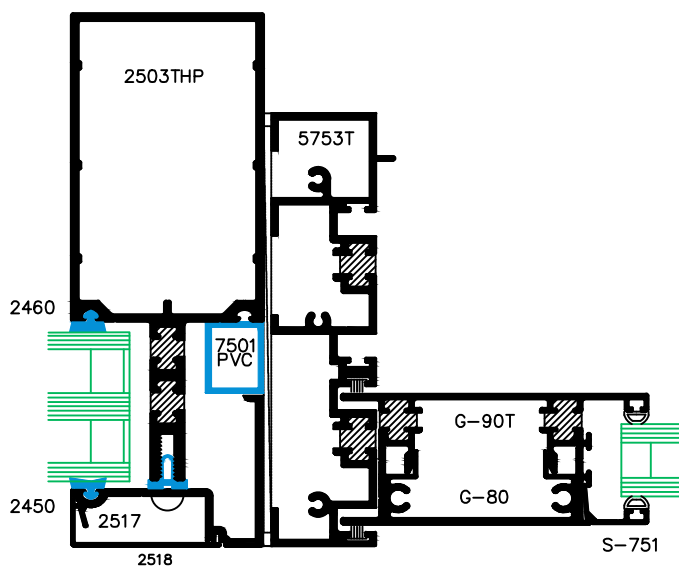
90° BUTT-JOINT CORNER
AT 5 1/4° BACK MEMBER

14

ALTERNATE DOOR DETAILS



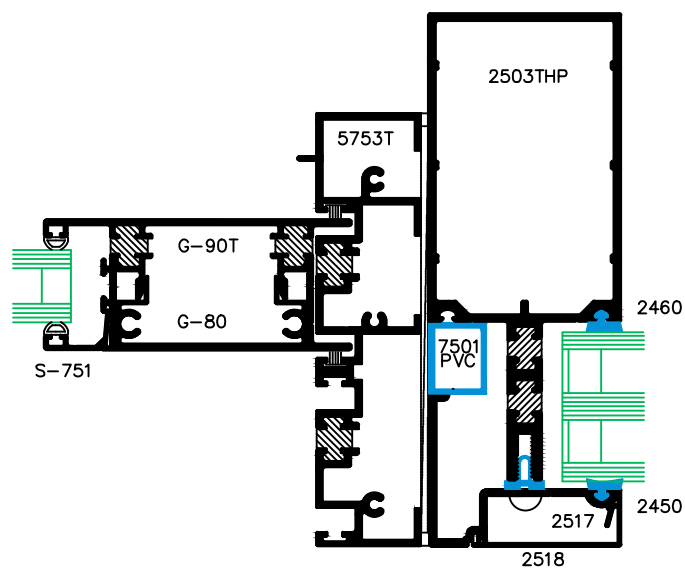
15a



1100T JAMB AT SLIDER

SLIDING DOORS

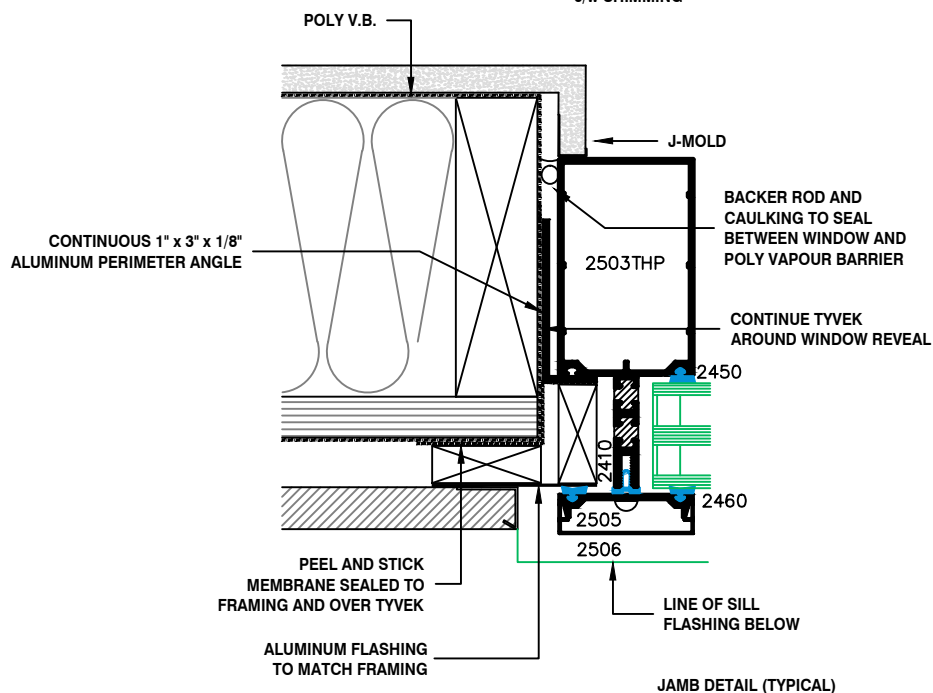
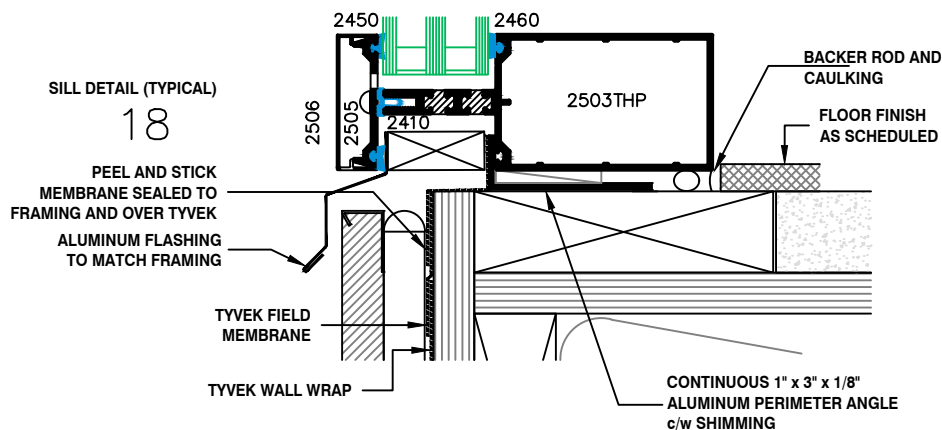
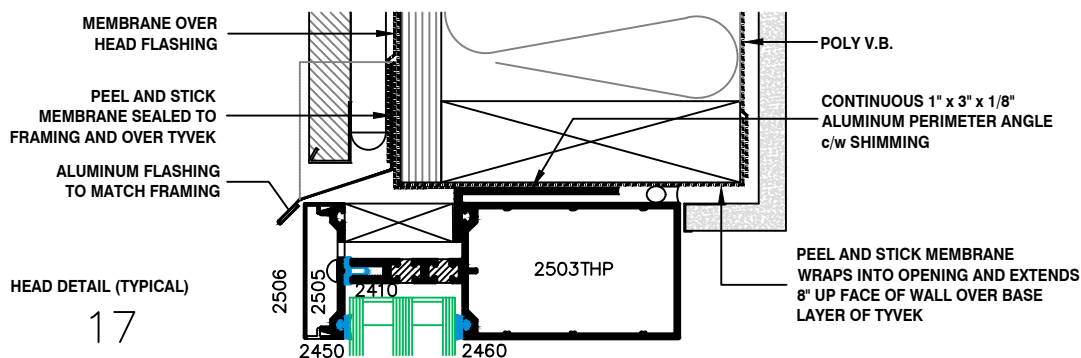
16



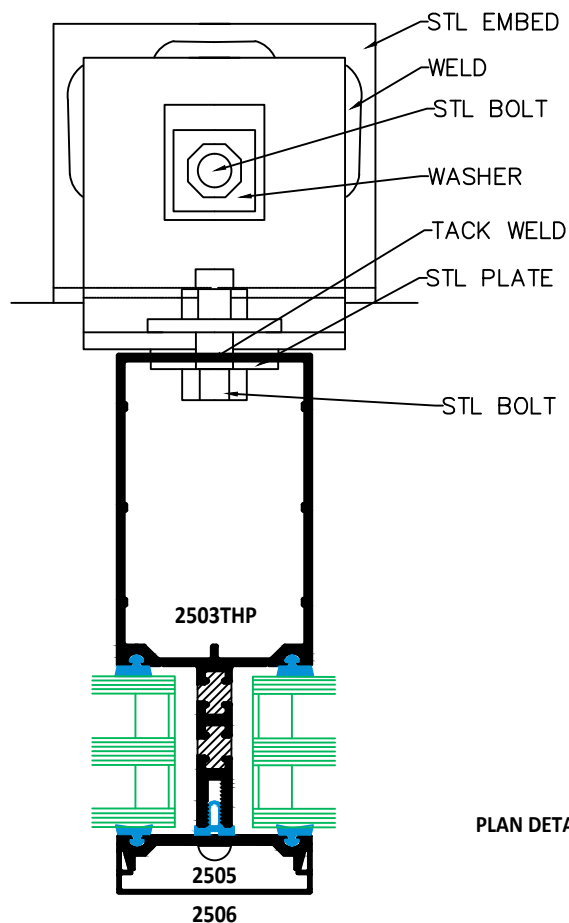
1100T JAMB AT FIXED PANEL

16a

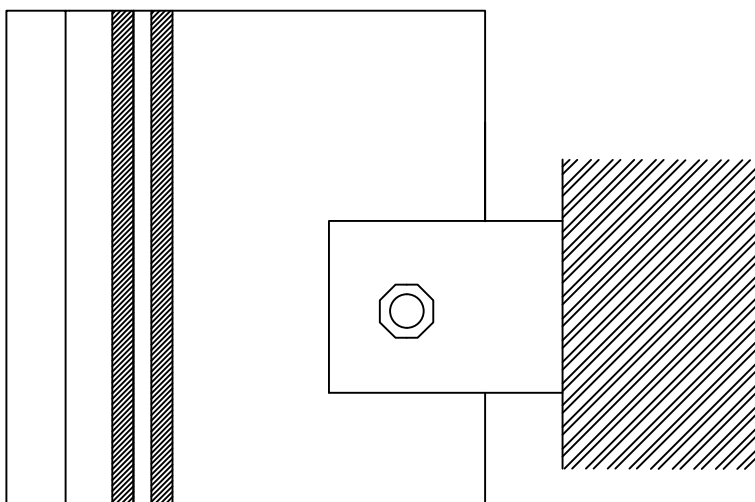
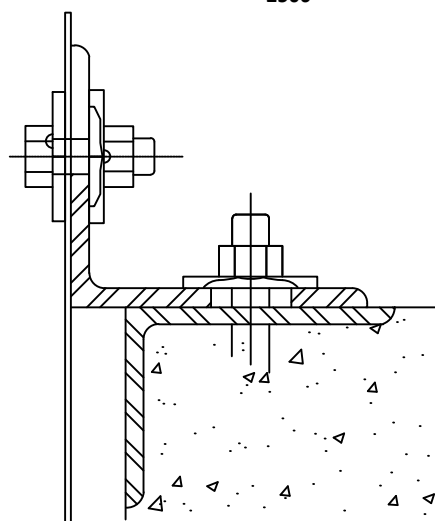
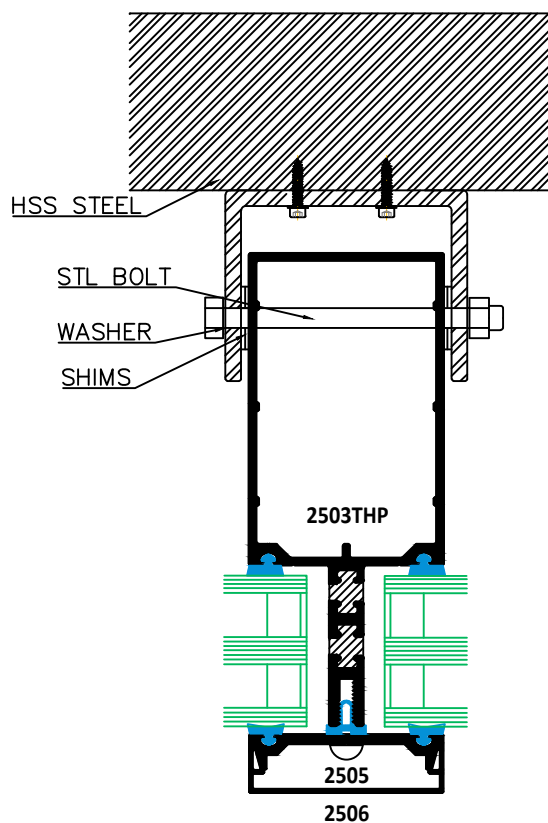
INTERFACE DETAILS
(SUGGESTED ONLY)



TYPICAL ANCHORING DETAILS



PLAN DETAILS



SECTION DETAILS

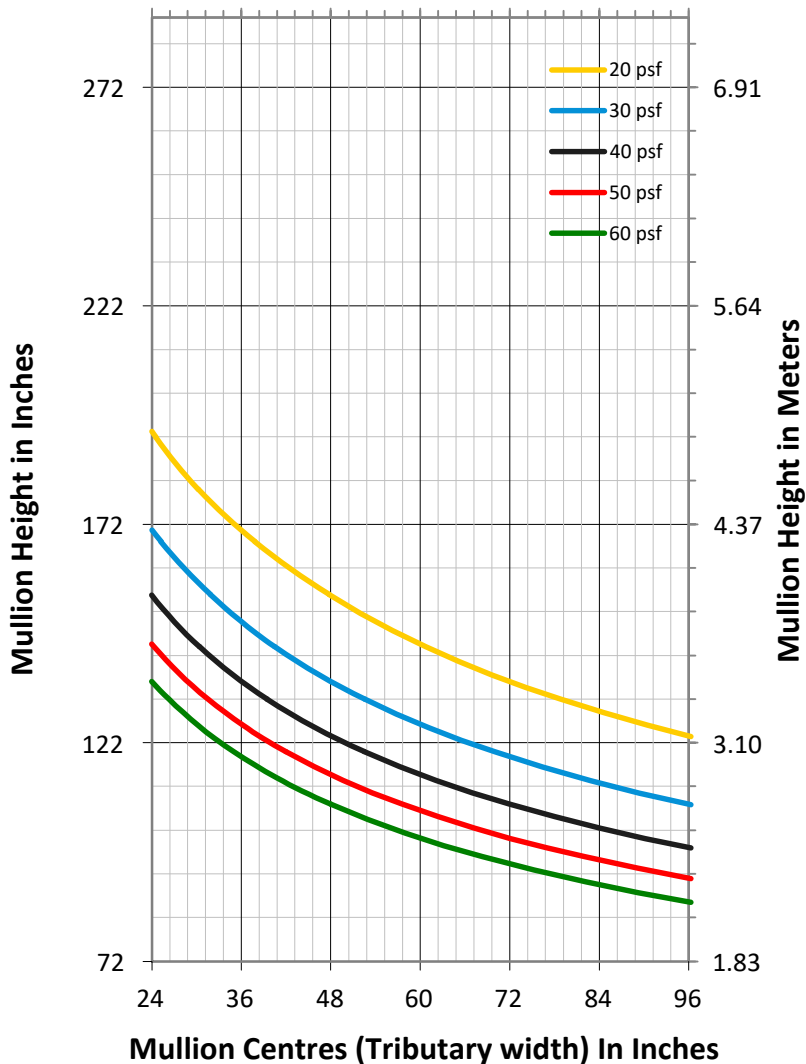
WIND LOAD CHART FOR 2 1/2" x 4" T/G MULLION - PART # 2503THP

SPAN CHART

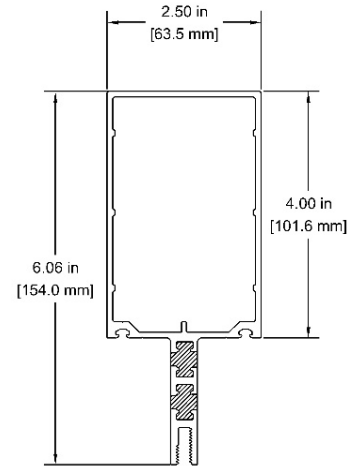
SPAN CHART IS FOR ESTIMATION ONLY.
DO NOT UTILIZE FOR DETAILED DESIGN.
CHART IS BASED ON DEFLECTION ANALYSIS
ONLY

Mullion Centres (Tributary width) In Meters

0.6 0.9 1.2 1.5 1.8 2.1 2.4



MULLION SECTION



SYSTEM PROPERTIES

Moment of Inertia, Section Modulus & Area

Moment of Inertia, Ixx	Ixx = 5.74 in ⁴
Section Modulus, Sxx	Sxx = 1.39 in ³
Total Area	A = 1.66 in ²

Modulus of Elasticity

Aluminum	10,000,000 PSI
Steel	29,000,000 PSI

GENERAL NOTES

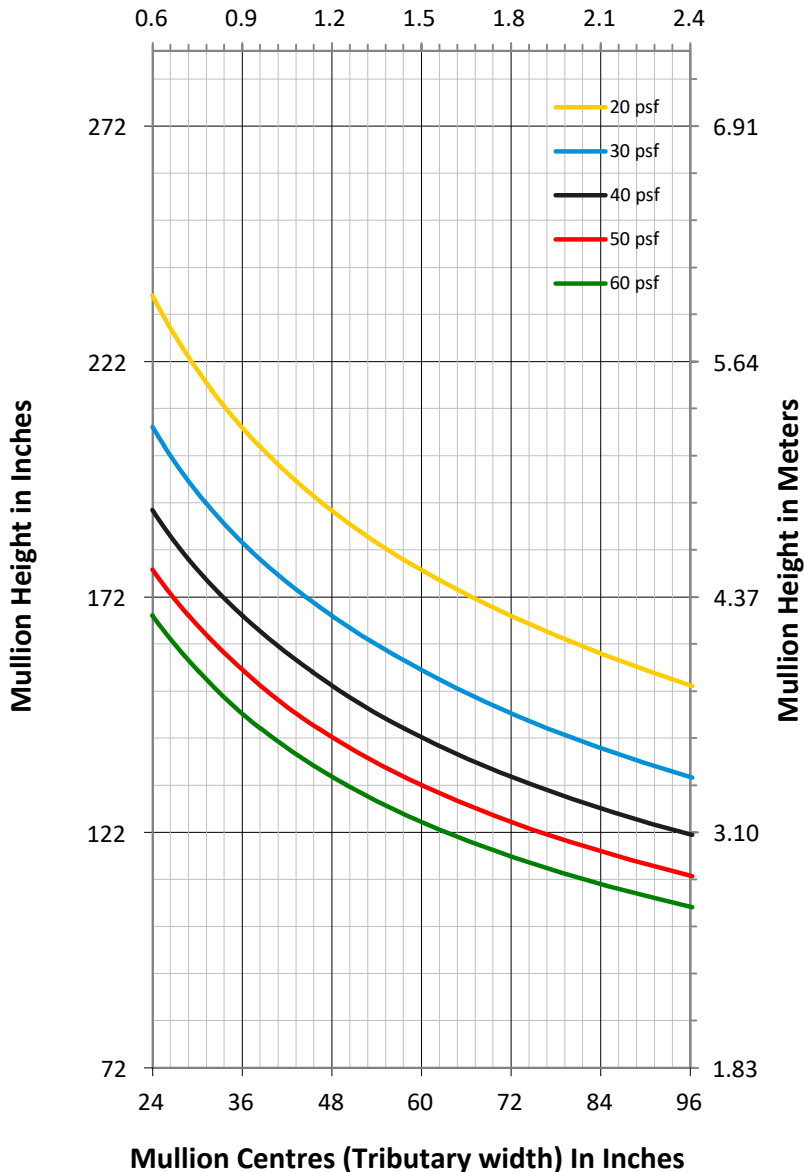
1. Deflection Limit: L/175 up to 13.5ft, L/240 + 0.25" over 13.5ft
2. Assume horizontal members provide lateral support
3. Steel moment of inertia converted to polyester, vinyl or aluminum equivalent
4. CANADIAN PROJECTS: Use SLS wind loads or modify the specified wind load by 0.75 before utilizing this chart. i.e. if project specifications require pnet = 40 psf, utilize 30 psf on this chart (0.75 x 40 = 30). (Based on NBCC 2020).

STEEL LOADED WIND LOAD CHART FOR 2 1/2" x 4" T/G MULLION - PART # 2503THP

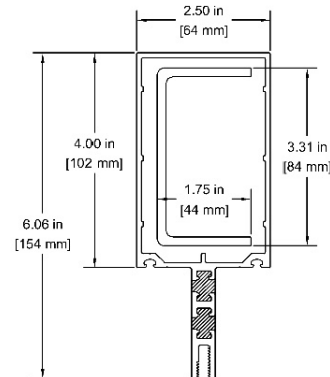
SPAN CHART

SPAN CHART IS FOR ESTIMATION ONLY.
DO NOT UTILIZE FOR DETAILED DESIGN.
CHART IS BASED ON DEFLECTION ANALYSIS
ONLY

Mullion Centres (Tributary width) In Meters



MULLION SECTION



SYSTEM PROPERTIES

Moment of Inertia, Section Modulus & Area

Moment of Inertia, I_{xx}	$I_{xx} = 10.91 \text{ in}^4$
Section Modulus, S_{xx}	$S_{xx} = 3.74 \text{ in}^3$
Total Area	$A = 1.66 \text{ in}^2$

Modulus of Elasticity

Aluminum	10,000,000 PSI
Steel	29,000,000 PSI

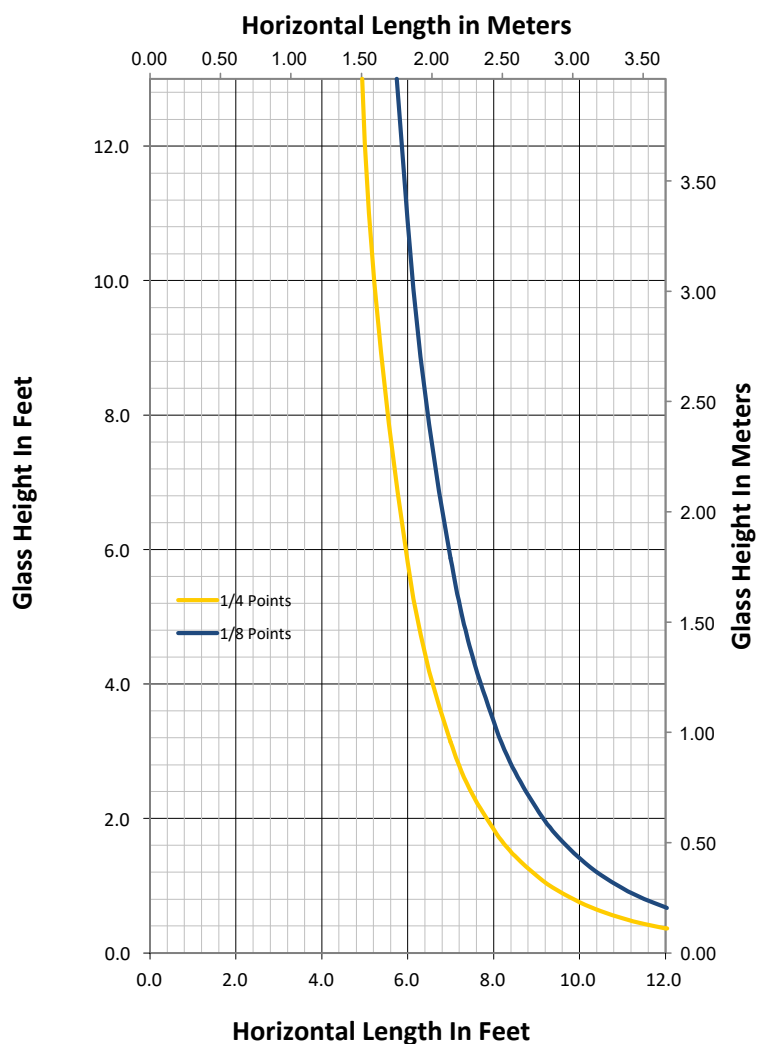
GENERAL NOTES

1. Deflection Limit: $L/175$ up to 13.5ft, $L/240 + 0.25"$ over 13.5ft
2. Assume horizontal members provide lateral support
3. Steel moment of inertia converted to polyester, vinyl or 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 $p_{net} = 40 \text{ psf}$, utilize 30 psf on this chart ($0.75 \times 40 = 30$). (Based on NBCC 2020).

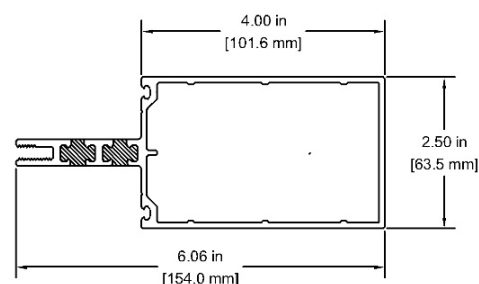
DEAD LOAD CHART FOR 2 1/2" x 4" T/G MULLION - PART # 2503THP

SPAN CHART

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DO NOT UTILIZE FOR DETAILED DESIGN.
CHART IS BASED ON DEFLECTION ANALYSIS
ONLY



MULLION SECTION



SYSTEM PROPERTIES

Moment of Inertia, Section Modulus & Area

Moment of Inertia, I_{yy}	$I_{yy} = 1.34 \text{ in}^4$
Section Modulus, S_{yy}	$S_{yy} = 1.07 \text{ in}^3$
Total Area	$A = 1.66 \text{ in}^2$

Modulus of Elasticity

Aluminum	10,000,000 PSI
Steel	29,000,000 PSI

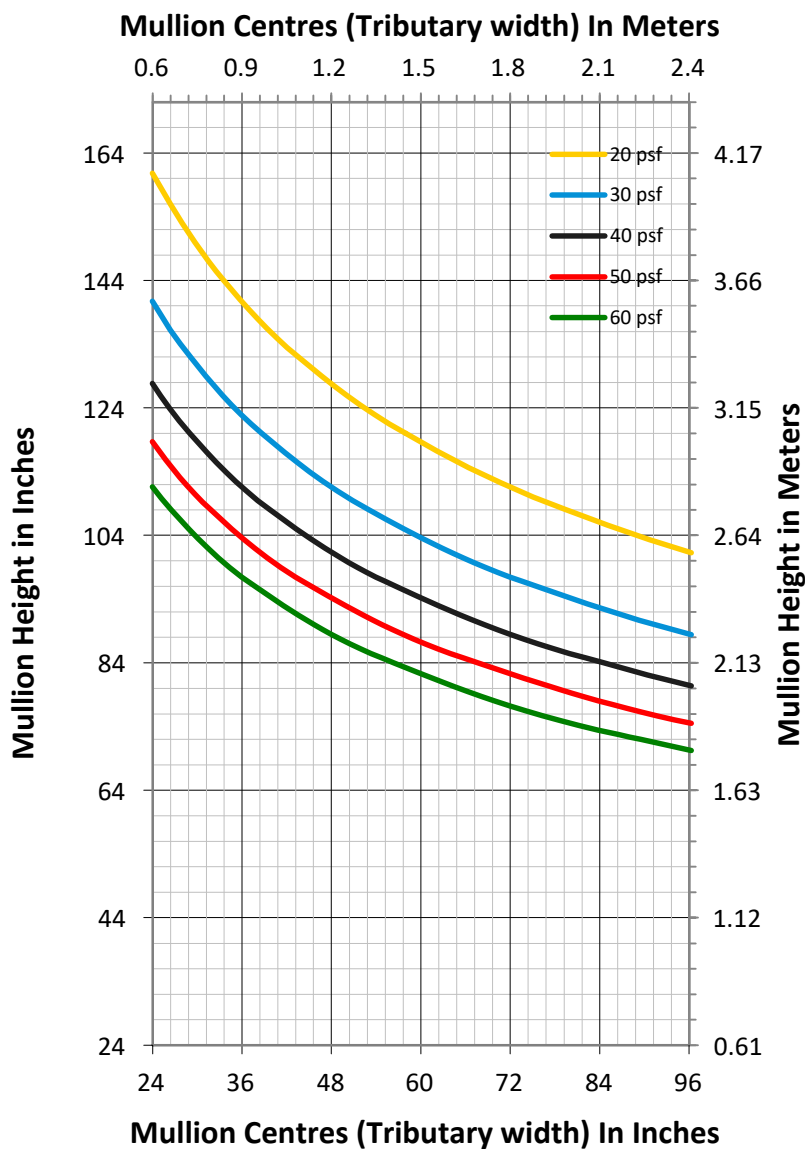
GENERAL NOTES

1. Deflection Limit: 0.125" (3.2mm).
2. Charts are calculated assuming a 1-15/16" overall sealed unit (6mm/18mm spacer/6mm/13mm spacer/6mm).
3. Calculations are based on the position of the setting blocks being placed at 1/4 or 1/8 points.

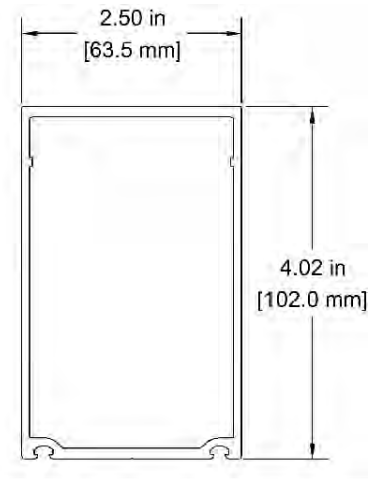
WIND LOAD CHART FOR 2 1/2" x 4" T/G SSG MULLION - PART # 2523

SPAN CHART

SPAN CHART IS FOR ESTIMATION ONLY.
DO NOT UTILIZE FOR DETAILED DESIGN.
CHART IS BASED ON DEFLECTION ANALYSIS
ONLY



MULLION SECTION



SYSTEM PROPERTIES

Moment of Inertia, Section Modulus & Area

Moment of Inertia, Ixx	Ixx = 3.17 in ⁴
Section Modulus, Sxx	Sxx = 1.55 in ³
Total Area	A = 1.32 in ²

Modulus of Elasticity

Aluminum	10,000,000 PSI
Steel	29,000,000 PSI

GENERAL NOTES

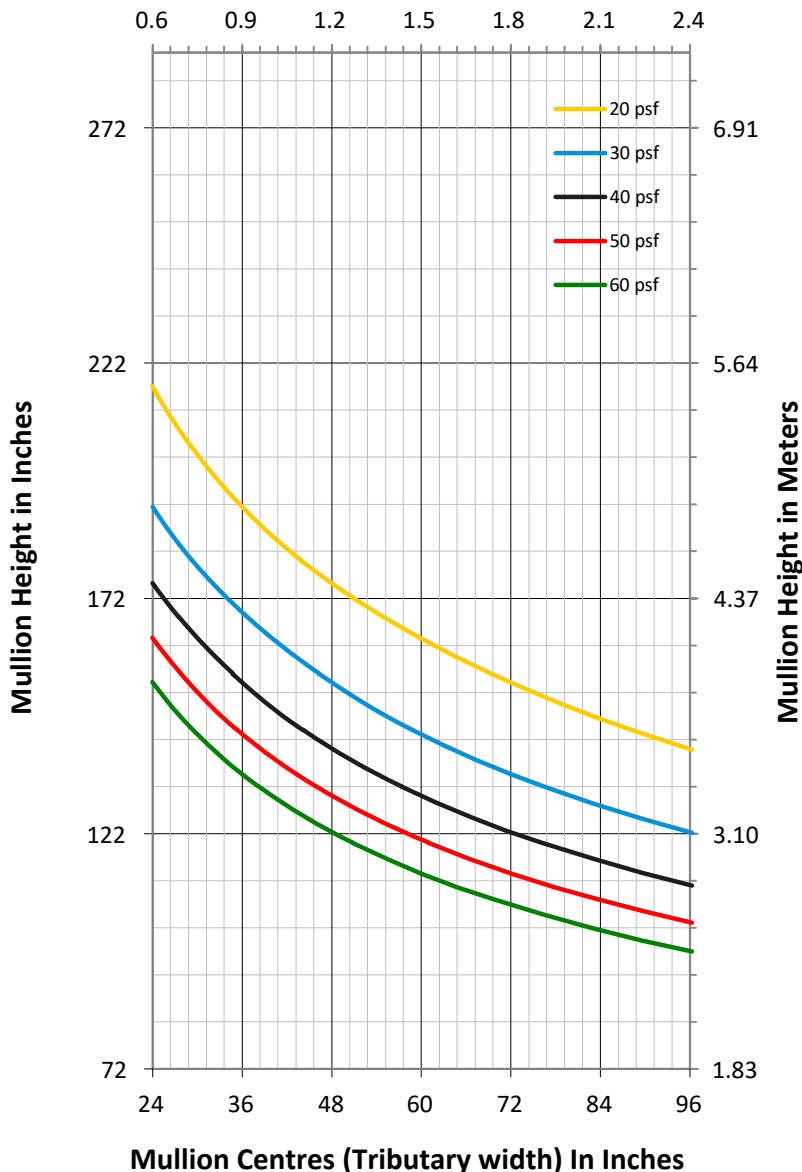
1. Deflection Limit: L/175 up to 13.5ft, L/240 + 0.25" over 13.5ft
2. Assume horizontal members provide lateral support
3. Steel moment of inertia converted to polyester, vinyl or aluminum equivalent
4. CANADIAN PROJECTS: Use SLS wind loads or modify the specified wind load by 0.75 before utilizing this chart. i.e. if project specifications require pnet = 40 psf, utilize 30 psf on this chart (0.75 x 40 = 30). (Based on NBCC 2020).

STEEL LOADED WIND LOAD CHART FOR 2 1/2" x 4" T/G SSG MULLION - PART # 2523

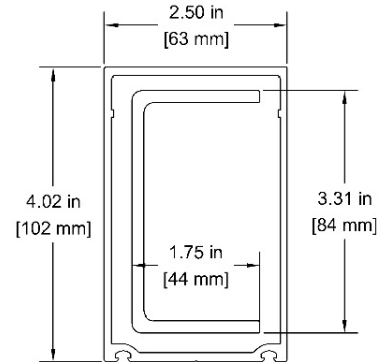
SPAN CHART

SPAN CHART IS FOR ESTIMATION ONLY.
DO NOT UTILIZE FOR DETAILED DESIGN.
CHART IS BASED ON DEFLECTION ANALYSIS
ONLY

Mullion Centres (Tributary width) In Meters



MULLION SECTION



SYSTEM PROPERTIES

Moment of Inertia, Section Modulus & Area

Moment of Inertia, Ixx	Ixx = 8.34 in ⁴
Section Modulus, Sxx	Sxx = 6.85 in ³
Total Area	A = 1.32 in ²

Modulus of Elasticity

Aluminum	10,000,000 PSI
Steel	29,000,000 PSI

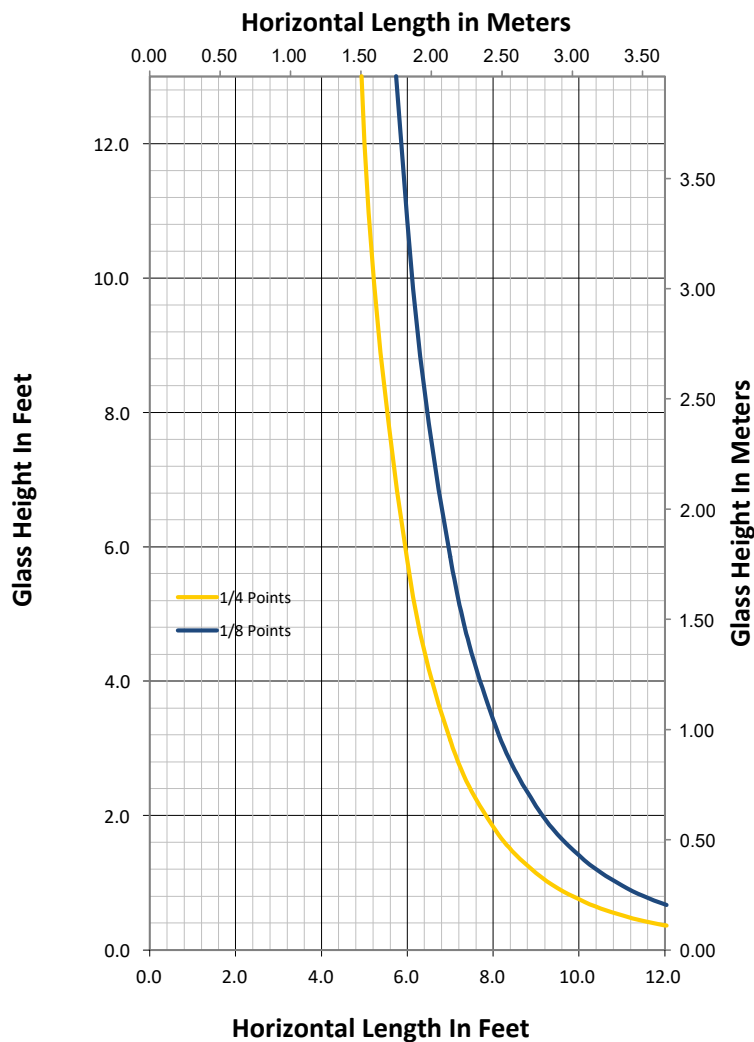
GENERAL NOTES

1. Deflection Limit: L/175 up to 13.5ft, L/240 + 0.25" over 13.5ft
2. Assume horizontal members provide lateral support
3. Steel moment of inertia converted to polyester, vinyl or 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 2020).

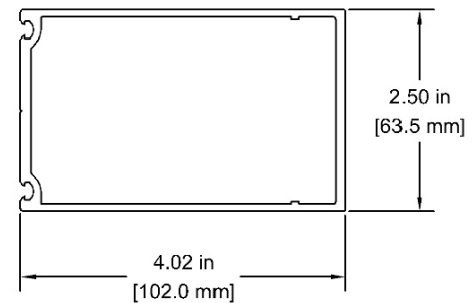
DEAD LOAD CHART FOR 2 1/2" x 4" T/G SSG MULLION - PART #2523

SPAN CHART

SPAN CHART IS FOR ESTIMATION ONLY.
DO NOT UTILIZE FOR DETAILED DESIGN.
CHART IS BASED ON DEFLECTION ANALYSIS
ONLY



MULLION SECTION



SYSTEM PROPERTIES

Moment of Inertia, Section Modulus & Area

Moment of Inertia, I_{yy}	$I_{yy} = 1.34 \text{ in}^4$
Section Modulus, S_{yy}	$S_{yy} = 1.07 \text{ in}^3$
Total Area	$A = 1.32 \text{ in}^2$

Modulus of Elasticity

Aluminum	10,000,000 PSI
Steel	29,000,000 PSI

GENERAL NOTES

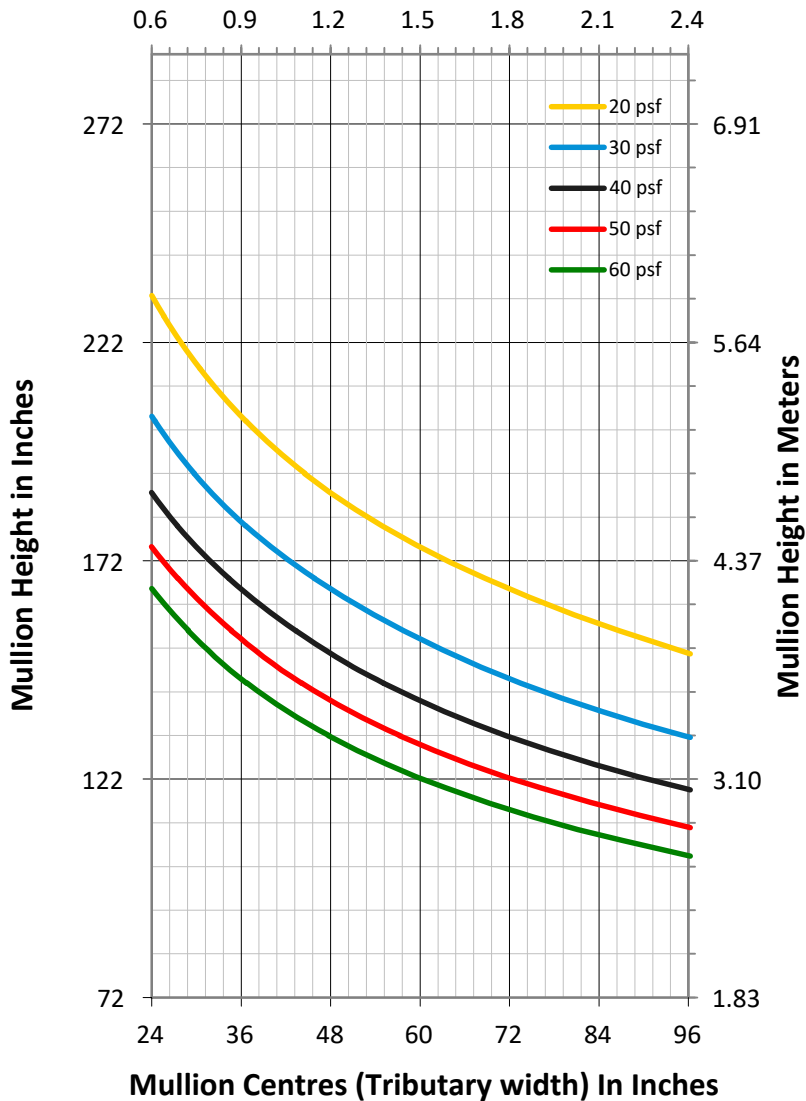
1. Deflection Limit: 0.125" (3.2mm).
2. Charts are calculated assuming a 1-15/16" overall sealed unit (6mm/18mm spacer/6mm/13mm spacer/6mm).
3. Calculations are based on the position of the setting blocks being placed at 1/4 or 1/8 points.

WIND LOAD CHART FOR 2 1/2" x 5 1/4" T/G MULLION - PART # 2504THP

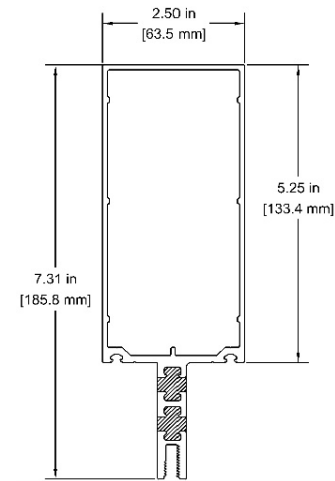
SPAN CHART

SPAN CHART IS FOR ESTIMATION ONLY.
DO NOT UTILIZE FOR DETAILED DESIGN.
CHART IS BASED ON DEFLECTION ANALYSIS
ONLY

Mullion Centres (Tributary width) In Meters



MULLION SECTION



SYSTEM PROPERTIES

Moment of Inertia, Section Modulus & Area

Moment of Inertia, Ixx	Ixx = 10.42 in ⁴
Section Modulus, Sxx	Sxx = 2.11 in ³
Total Area	A = 1.60 in ²

Modulus of Elasticity

Aluminum	10,000,000 PSI
Steel	29,000,000 PSI

GENERAL NOTES

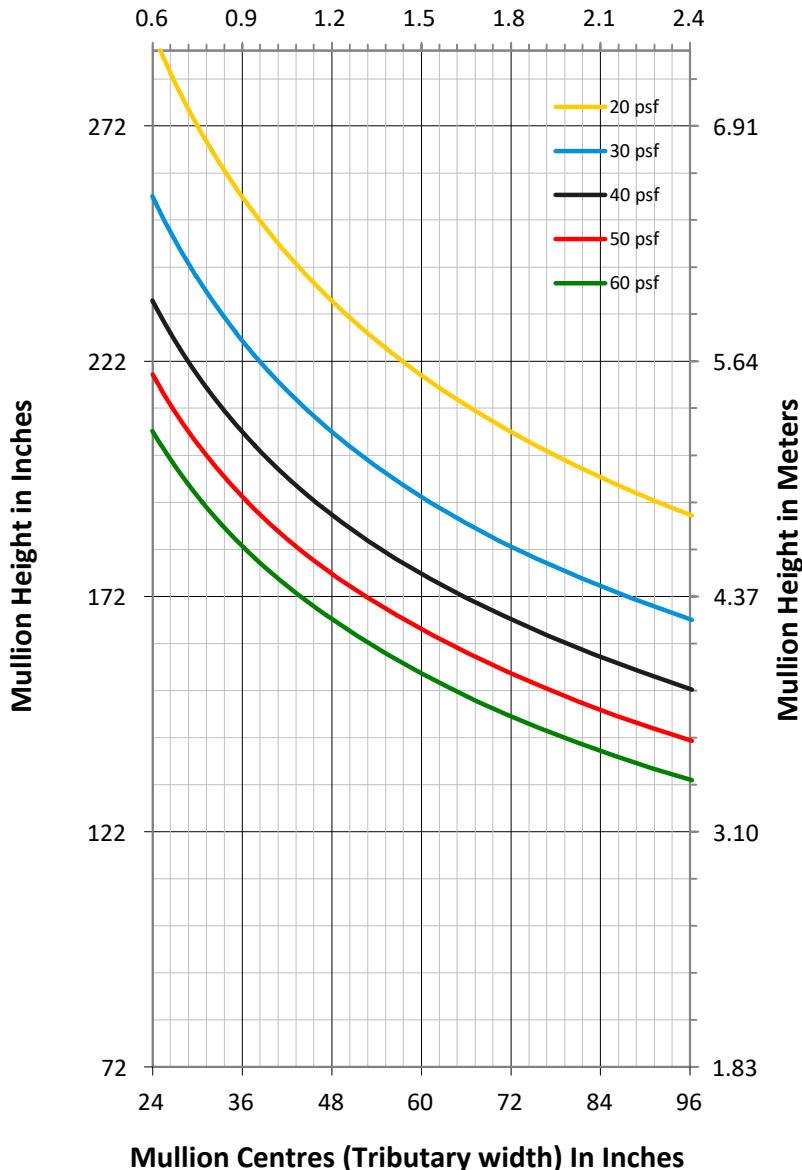
1. Deflection Limit: L/175 up to 13.5ft, L/240 + 0.25" over 13.5ft
2. Assume horizontal members provide lateral support
3. Steel moment of inertia converted to polyester, vinyl or aluminum equivalent
4. CANADIAN PROJECTS: Use SLS wind loads or modify the specified wind load by 0.75 before utilizing this chart. i.e. if project specifications require pnet = 40 psf, utilize 30 psf on this chart (0.75 x 40 = 30). (Based on NBCC 2020).

STEEL LOADED WIND LOAD CHART FOR 2 1/2" x 5 1/4" T/G MULLION - PART # 2504THP

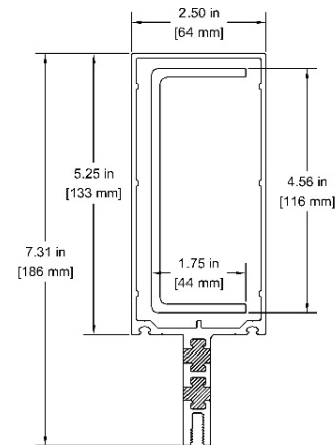
SPAN CHART

SPAN CHART IS FOR ESTIMATION ONLY.
DO NOT UTILIZE FOR DETAILED DESIGN.
CHART IS BASED ON DEFLECTION ANALYSIS
ONLY

Mullion Centres (Tributary width) In Meters



MULLION SECTION



SYSTEM PROPERTIES

Moment of Inertia, Section Modulus & Area

Moment of Inertia, Ixx	Ixx = 21.48 in ⁴
Section Modulus, Sxx	Sxx = 11.45 in ³
Total Area	A = 1.99 in ²

Modulus of Elasticity

Aluminum	10,000,000 PSI
Steel	29,000,000 PSI

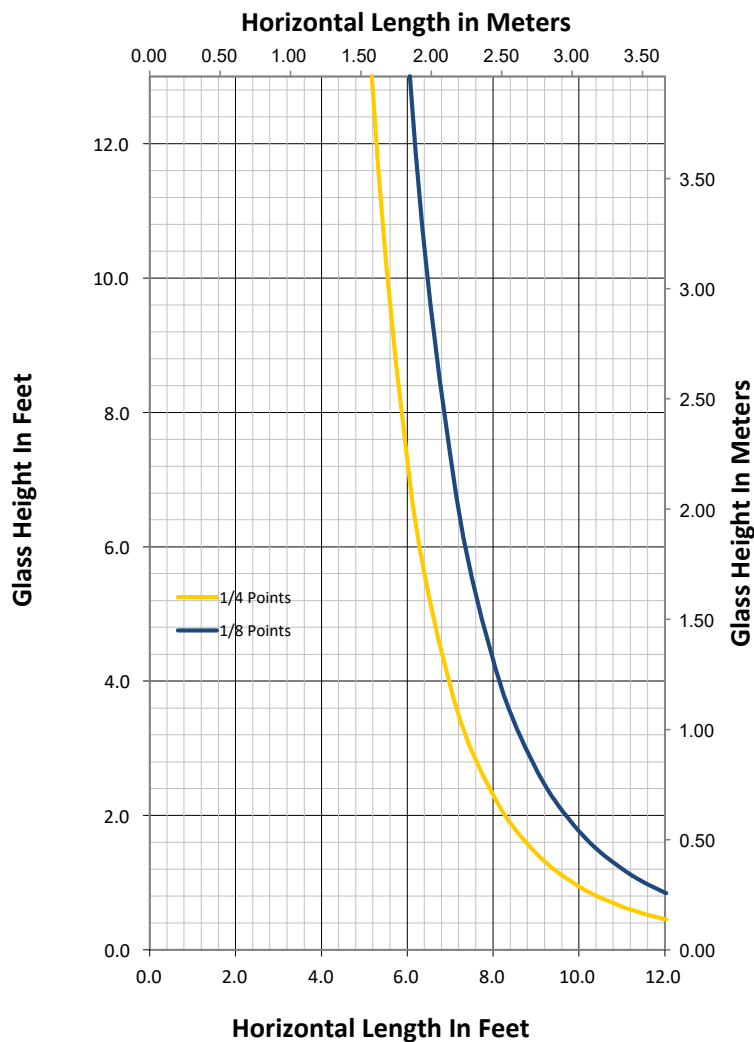
GENERAL NOTES

1. Deflection Limit: L/175 up to 13.5ft, L/240 + 0.25" over 13.5ft
2. Assume horizontal members provide lateral support
3. Steel moment of inertia converted to polyester, vinyl or 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 2020).

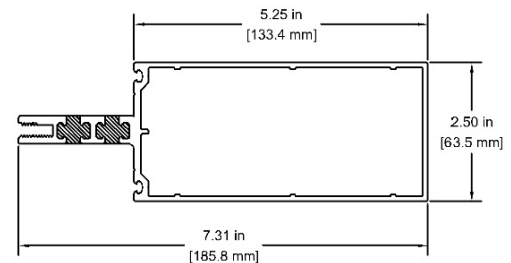
DEAD LOAD CHART FOR 2 1/2" x 5 1/4" T/G MULLION - PART # 2504THP

SPAN CHART

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CHART IS BASED ON DEFLECTION ANALYSIS
ONLY



MULLION SECTION



SYSTEM PROPERTIES

Moment of Inertia, Section Modulus & Area

Moment of Inertia, I _{yy}	I _{yy} = 1.69 in ⁴
Section Modulus, S _{yy}	S _{yy} = 1.34 in ³
Total Area	A = 1.99 in ²

Modulus of Elasticity

Aluminum	10,000,000 PSI
Steel	29,000,000 PSI

GENERAL NOTES

1. Deflection Limit: 0.125" (3.2mm).
2. Charts are calculated assuming a 1-15/16" overall sealed unit (6mm/18mm spacer/6mm/13mm spacer/6mm).
3. Calculations are based on the position of the setting blocks being placed at 1/4 or 1/8 points.

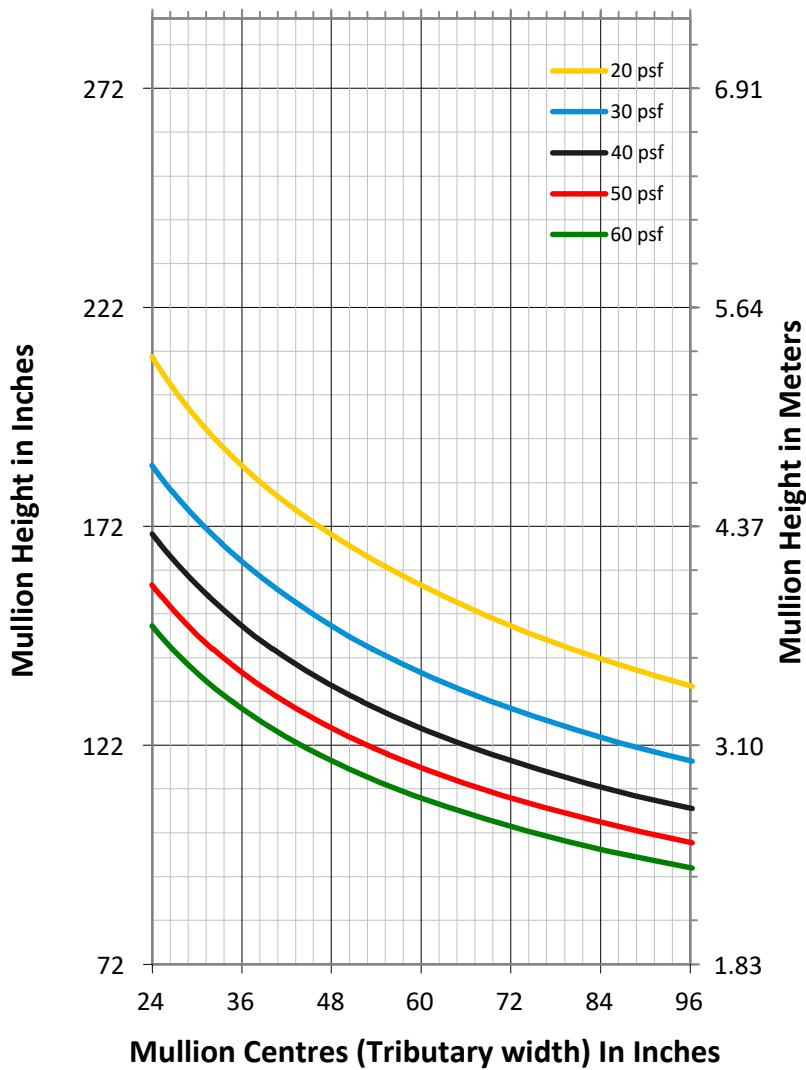
WIND LOAD CHART FOR 2 1/2" x 5 1/4" T/G SSG MULLION - PART # 2555

SPAN CHART

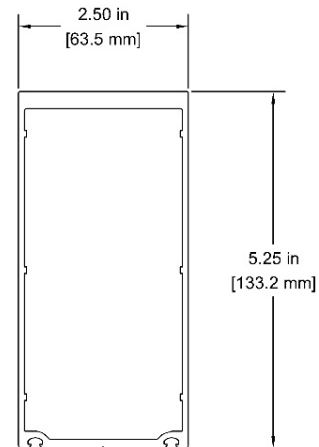
SPAN CHART IS FOR ESTIMATION ONLY.
DO NOT UTILIZE FOR DETAILED DESIGN.
CHART IS BASED ON DEFLECTION ANALYSIS
ONLY

Mullion Centres (Tributary width) In Meters

0.6 0.9 1.2 1.5 1.8 2.1 2.4



MULLION SECTION



SYSTEM PROPERTIES

Moment of Inertia, Section Modulus & Area

Moment of Inertia, Ixx	Ixx = 7.58 in ⁴
Section Modulus, Sxx	Sxx = 2.55 in ³
Total Area	A = 1.85 in ²

Modulus of Elasticity

Aluminum	10,000,000 PSI
Steel	29,000,000 PSI

GENERAL NOTES

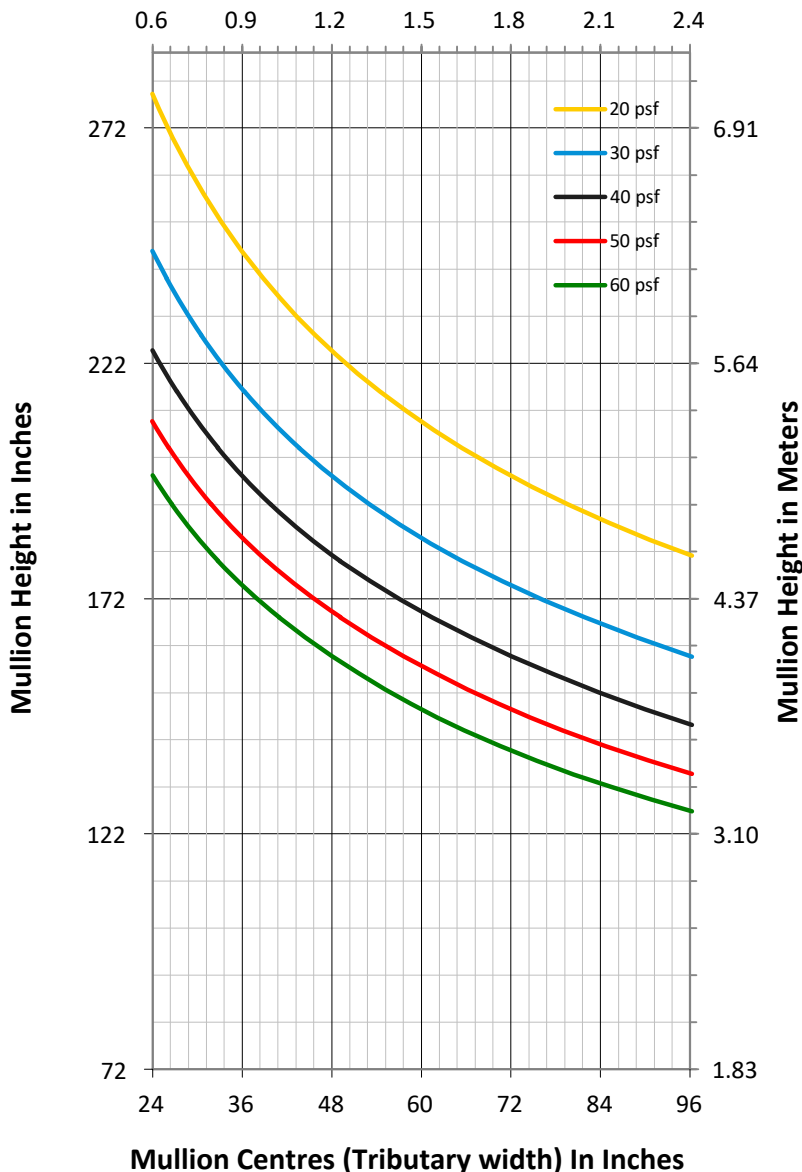
1. Deflection Limit: L/175 up to 13.5ft, L/240 + 0.25" over 13.5ft
2. Assume horizontal members provide lateral support
3. Steel moment of inertia converted to polyester, vinyl or aluminum equivalent
4. CANADIAN PROJECTS: Use SLS wind loads or modify the specified wind load by 0.75 before utilizing this chart. i.e. if project specifications require pnet = 40 psf, utilize 30 psf on this chart (0.75 x 40 = 30). (Based on NBCC 2020).

STEEL LOADED WIND LOAD CHART FOR 2 1/2" x 5 1/4" T/G SSG MULLION - PART # 2555

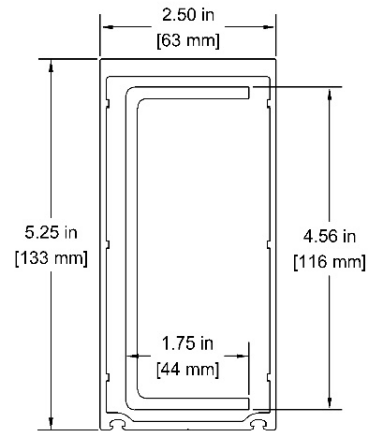
SPAN CHART

SPAN CHART IS FOR ESTIMATION ONLY.
DO NOT UTILIZE FOR DETAILED DESIGN.
CHART IS BASED ON DEFLECTION ANALYSIS
ONLY

Mullion Centres (Tributary width) In Meters



MULLION SECTION



SYSTEM PROPERTIES

Moment of Inertia, Section Modulus & Area

Moment of Inertia, Ixx	Ixx = 18.64 in ⁴
Section Modulus, Sxx	Sxx = 16.92 in ³
Total Area	A = 1.85 in ²

Modulus of Elasticity

Aluminum	10,000,000 PSI
Steel	29,000,000 PSI

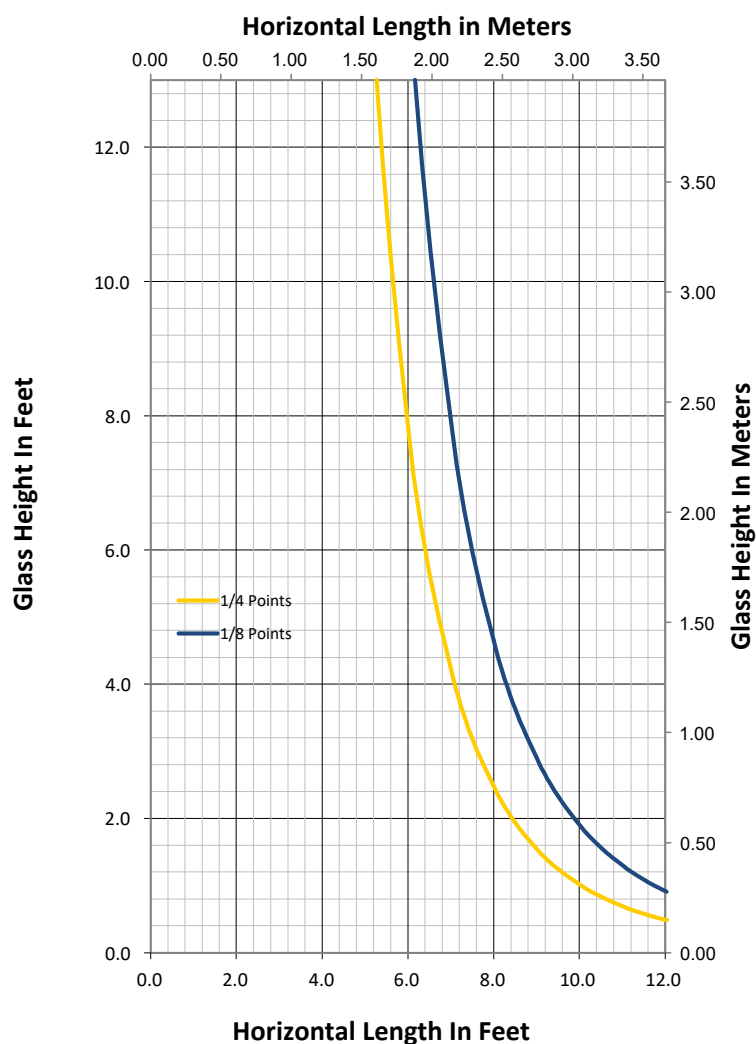
GENERAL NOTES

1. Deflection Limit: L/175 up to 13.5ft, L/240 + 0.25" over 13.5ft
2. Assume horizontal members provide lateral support
3. Steel moment of inertia converted to polyester, vinyl or 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 2020).

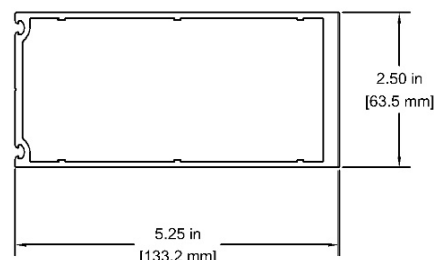
DEAD LOAD CHART FOR 2 1/2" x 5 1/4" T/G SSG MULLION - PART # 2555

SPAN CHART

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CHART IS BASED ON DEFLECTION ANALYSIS
ONLY



MULLION SECTION



SYSTEM PROPERTIES

Moment of Inertia, Section Modulus & Area

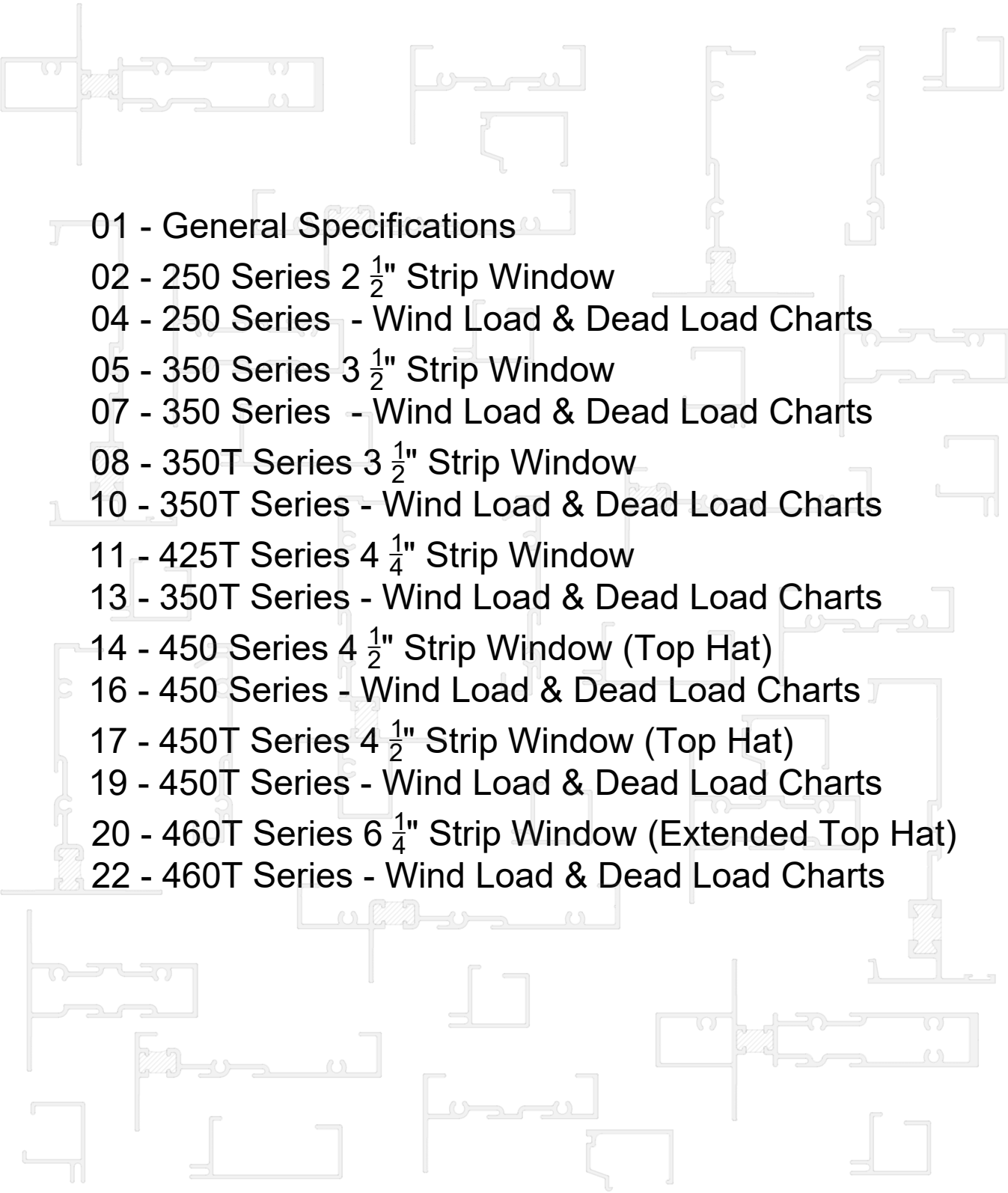
Moment of Inertia, I_{yy}	$I_{yy} = 1.81 \text{ in}^4$
Section Modulus, S_{yy}	$S_{yy} = 1.45 \text{ in}^3$
Total Area	$A = 1.85 \text{ in}^2$

Modulus of Elasticity

Aluminum	10,000,000 PSI
Steel	29,000,000 PSI

GENERAL NOTES

1. Deflection Limit: 0.125" (3.2mm).
2. Charts are calculated assuming a 1-15/16" overall sealed unit (6mm/18mm spacer/6mm/13mm spacer/6mm).
3. Calculations are based on the position of the setting blocks being placed at 1/4 or 1/8 points.

- 
- 01 - General Specifications
 - 02 - 250 Series 2 $\frac{1}{2}$ " Strip Window
 - 04 - 250 Series - Wind Load & Dead Load Charts
 - 05 - 350 Series 3 $\frac{1}{2}$ " Strip Window
 - 07 - 350 Series - Wind Load & Dead Load Charts
 - 08 - 350T Series 3 $\frac{1}{2}$ " Strip Window
 - 10 - 350T Series - Wind Load & Dead Load Charts
 - 11 - 425T Series 4 $\frac{1}{4}$ " Strip Window
 - 13 - 350T Series - Wind Load & Dead Load Charts
 - 14 - 450 Series 4 $\frac{1}{2}$ " Strip Window (Top Hat)
 - 16 - 450 Series - Wind Load & Dead Load Charts
 - 17 - 450T Series 4 $\frac{1}{2}$ " Strip Window (Top Hat)
 - 19 - 450T Series - Wind Load & Dead Load Charts
 - 20 - 460T Series 6 $\frac{1}{4}$ " Strip Window (Extended Top Hat)
 - 22 - 460T Series - Wind Load & Dead Load Charts

Part 1 - GENERAL

Scope - The fixed window framing system shall be _____ Series as manufactured by METRO ALUMINUM Products Ltd. Supply and install aluminum framing, as described on the architectural drawings and as specified herein.

Work Not Included - See: Specifier's lists of excluded items; Items furnished but not installed and/or Items installed but not furnished.

Related Work Specified Elsewhere - See: Specifier's lists and related Sections.

Design & Performance Requirements - Framing shall fully comply with applicable standard specifications as typically referenced to the following performance requirements criteria: Air Tightness, Water Tightness, Wind (and other applicable) Load Resistance, Temperature Index and Energy Performance – an others as described in CAN/CSA-A440-M90 - Windows - (Specifier's selection)

Submittals - Shop Drawings & Samples - Submit all documentation and samples for review by Consultant at one time, prior to fabrication of curtain wall products.

Quality Assurance - Provide all necessary information to show that all involved products meet or exceed the requirements of these specifications.

Delivery, Storage and Handling - Deliver, store, handle, protect and schedule materials and products so as to avoid any damage. Follow recommendations of AAMA CW-10 "Care and Handling of Architectural Aluminum from Shop to Site" and others as applicable.

Part 2 - PRODUCTS

Materials - All materials to meet the applicable minimum design and specifications requirements. Any defects impairing strength, durability or appearance are not acceptable. Extruded aluminum shall be AA 6063 T6 alloy and temper - $F_y = 110 \text{ MPa}$ (16 KSI) minimum. Sufficient strength and size assembly and anchoring shall be made of corrosion-resistant and compatible material such as cadmium or zinc plated carbon steel or stainless steel.

Separate incompatible materials and prevent galvanic action (electrolytic corrosion). Structurally adequate anchoring metal brackets shall be anticorrosive painted. Conventional wet-dry, inside glazing method shall be applicable. Gasketing to utilize: standard exterior glazing butyl tape completed with hard extruded shim and interior dense gasket extruded from Neoprene, EPDM or other equal material, as required. Gasket profile shall be designed and sized to uniformly fit tight and properly seal glass-metal interfacing. Acceptable gasket compression range to be 0.7 to 1.7 kN/m (4 – 10 lbs/in). Glass setting to be compatible with glass unit seals and/or other parts involved as required.

System Description - Framing System shall be 250, 350, 350T, 425T, 450, 450T, 650T - non-thermally broken/uninsulated (thermally broken/insulated - T), for single glass (sealed insulating glass units) METRO Series - Specifier selection - as manufactured by METRO ALUMINUM Products Ltd. Reference dimensions of extruded profiles shall be (Specifier's selection):

250 – 2.5" (63.5 mm) – Single & Double Stop – NTB
350 – 3.5" (88.9 mm) – Single & Double Stop – NTB
350T – 3.5" (88.9 mm) – Double Stop – TB
425T Tophat – 4.5" (114.3 mm) – Double Stop – TB
450 Tophat – 4.5" (114.3 mm) – Double Stop – NTB

450T Tophat – 4.5" (114.3 mm) – Double Stop – TB
650T Tophat – 6.25" (158.8 mm) – Double Stop – TB.
Where applicable, thermal break shall be polyurethane poured-in resin type.

Glass perimeter retention, as for wet-dry glazing method, shall be achieved by exterior glazing tape and interior glazing stop profile c/w inorganic rubber gasket. Glass hard bite to be 12.7 mm (0.5") minimum.

Whenever substitute/alternative products are considered, supporting data to be submitted ten (10) days prior to bid date to allow for valid comparison. Approval of alternates to be confirmed in advance of bid closing by addendum only.

Fabrication - Extruded profiles shall be accurately fabricated and assembled and sealed to provide air/water tight fit hairline joints only. Fastening shall allow for permanent true and square set of frame elements. Assembly shall utilize concealed screws only. Properly sealed frame assembly interfacing joints shall result in uninterrupted continuity of air barrier and compartmentization. Reference glazing system type to be one of the following (Specifier's selection):

Prime Seal – Exterior glazing shimmed tape and interior extruded rubber gasket,

Vented Cavity – As the above, plus heel bead with 4" returns at inner light, and weep holes as required,

Rain-Screen – As the above, plus heel bead at full perimeter at inner light, and weep holes as required.

Sill and head flashing shall be designed and fabricated to suit site conditions as required. Frame assemblies shall be free of warp. No exposed fasteners are permitted.

Finish - All exposed surfaces shall be finished as specified. The finish, as per AAM designation, shall be (Specifier's selection):

Standard clear anodizing to AA - M12C22A31

Standard perma bronze to AA - M12C22A44

Standard black anodizing to AA - M10C21A44

Duracron acrylic enamel to AA - M12C4XR1X

Custom paint qualities and colors - Specifier's selection.

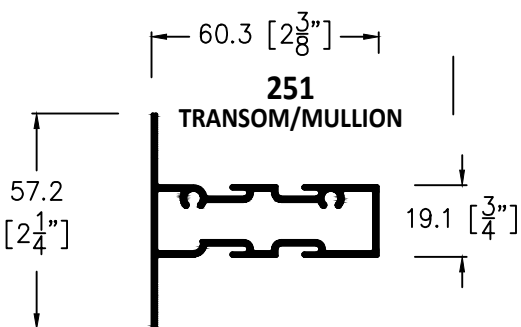
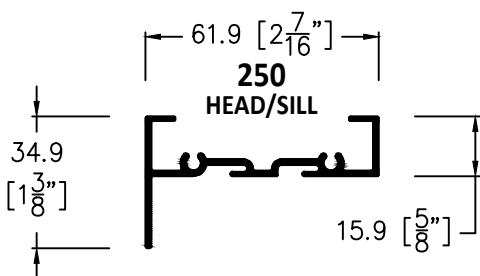
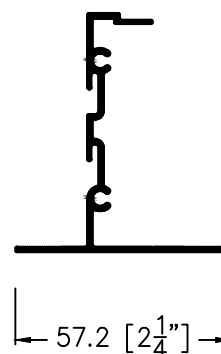
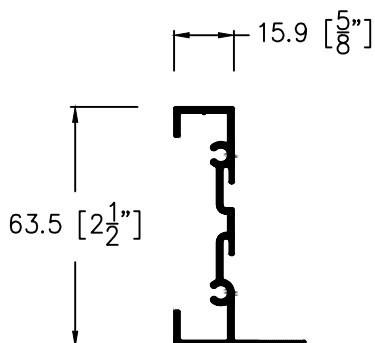
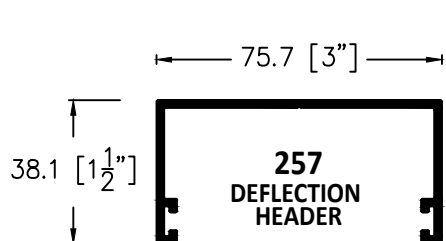
Part 3 - EXECUTION

Installation – Anchoring shall suit perimeter conditions of rough openings and seals as required. Prefabricated/preglazed framing to be installed at prepared openings, at correct locations as shown on drawings, set level, plumb, square and aligned with other work in accordance with manufacturer's instructions, approved shop and erection drawings. Perimeter joints to be sealed/caulked as specified and detailed to ensure weathertight assembly.

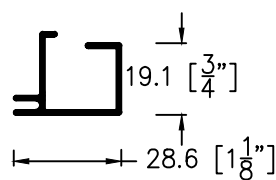
Protection and Cleaning - Work to be protected from damage during and after installation. Consult with manufacturer and installer to determine appropriate protective measures. The General Contractor shall be responsible for protection during construction and for final cleaning. After installation, aluminum work and glass to be cleaned according to instructions/manuals provided by product manufacturers and glaziers. Use appropriate cleaning materials and methods. Do not scratch or damage glass or finishes.



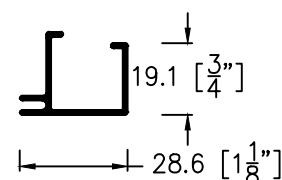
COMPONENTS

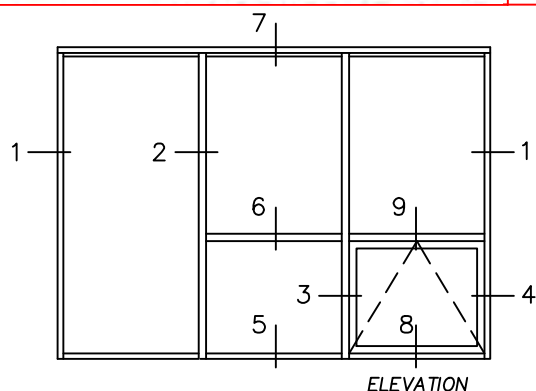


**254
SINGLE GLAZING STOP**

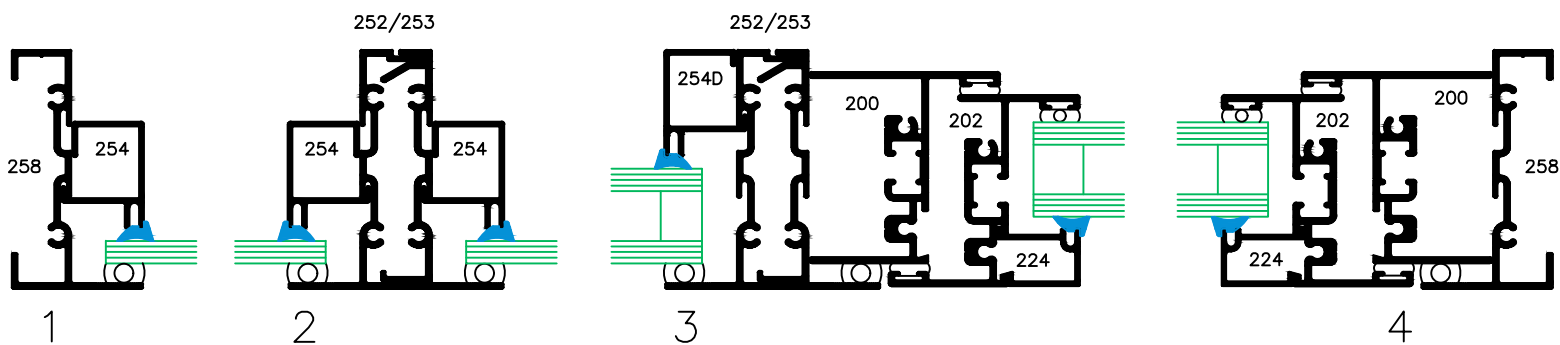
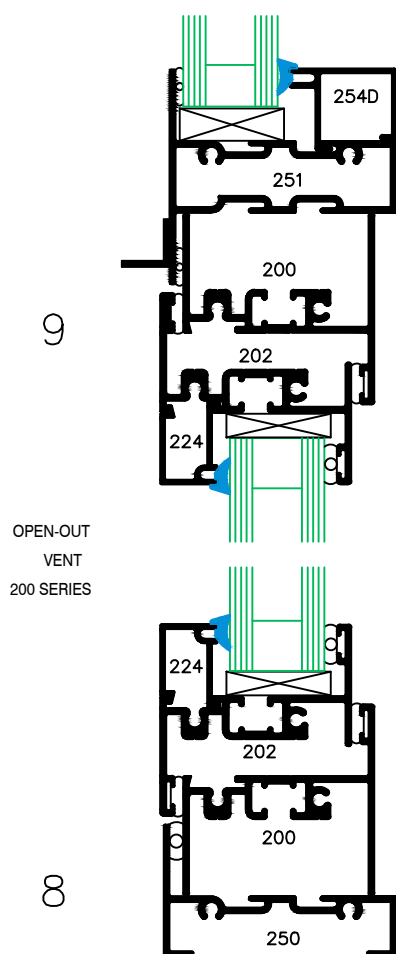
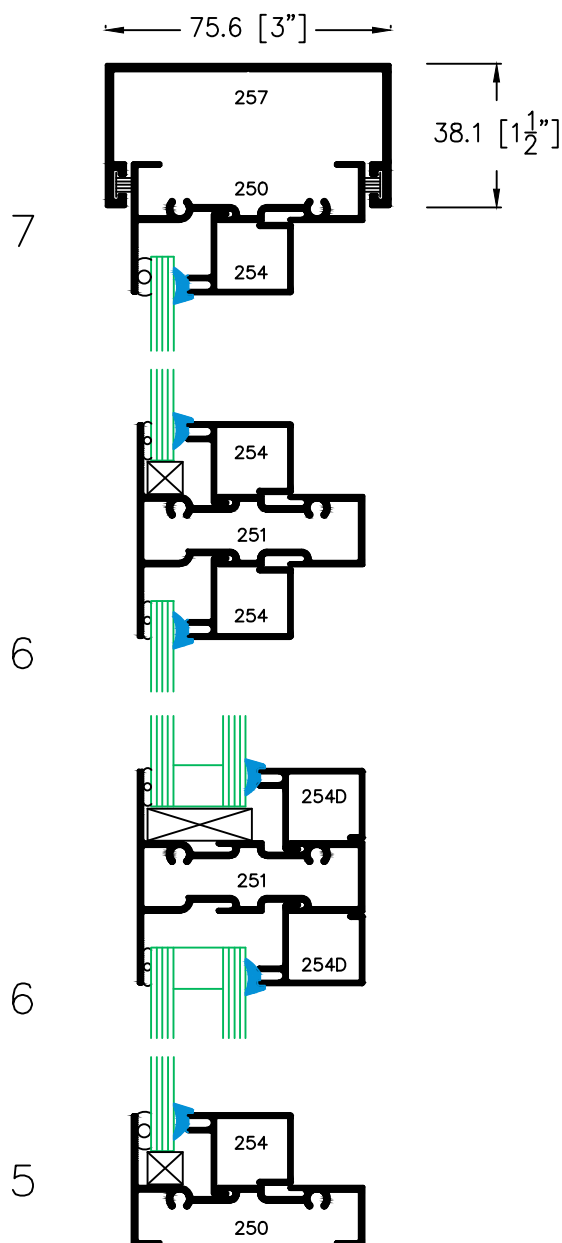


**254D
DOUBLE GLAZING STOP**





DETAILS

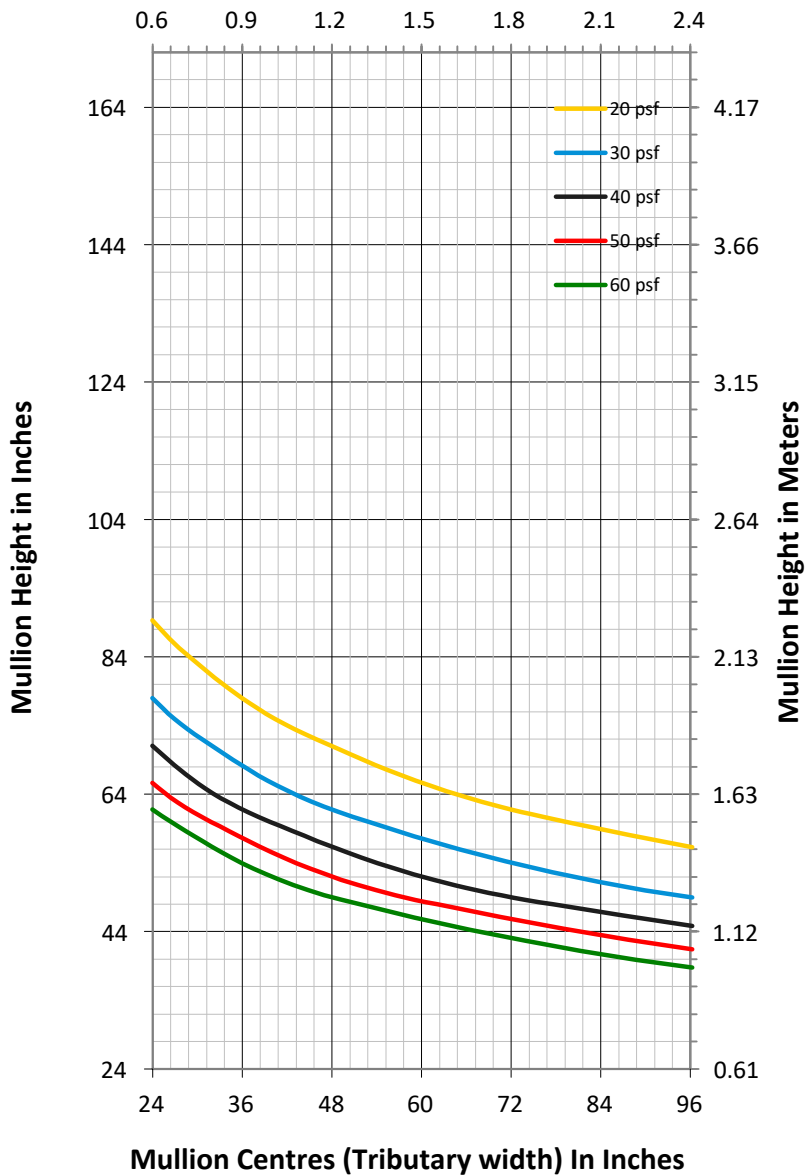


WIND LOAD CHART FOR 250 SERIES - PART # 252/253

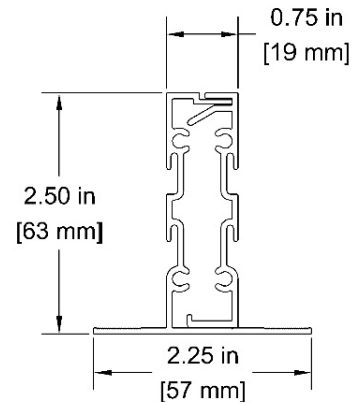
SPAN CHART

SPAN CHART IS FOR ESTIMATION ONLY.
DO NOT UTILIZE FOR DETAILED DESIGN.
CHART IS BASED ON DEFLECTION ANALYSIS
ONLY

Mullion Centres (Tributary width) In Meters



MULLION SECTION



SYSTEM PROPERTIES

Moment of Inertia, Section Modulus & Area

Moment of Inertia, I_{xx}	$I_{xx} = 0.54 \text{ in}^4$
Section Modulus, S_{xx}	$S_{xx} = 0.48 \text{ in}^3$
Total Area	$A = 0.69 \text{ in}^2$

Modulus of Elasticity

Aluminum	10,000,000 PSI
Steel	29,000,000 PSI

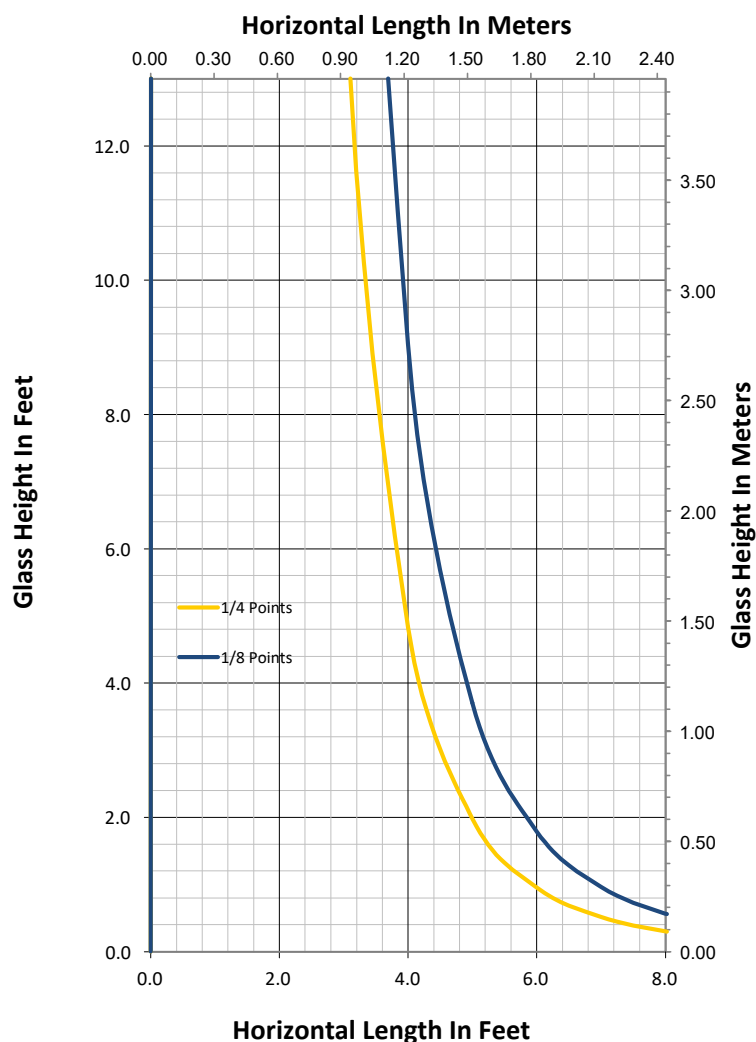
GENERAL NOTES

1. Deflection Limit: $L/175$ up to 13.5ft, $L/240 + 0.25"$ over 13.5ft
2. Assume horizontal members provide lateral support
3. Steel moment of inertia converted to polyester, vinyl or 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 $p_{net} = 40 \text{ psf}$, utilize 30 psf on this chart ($0.75 \times 40 = 30$). (Based on NBCC 2020).

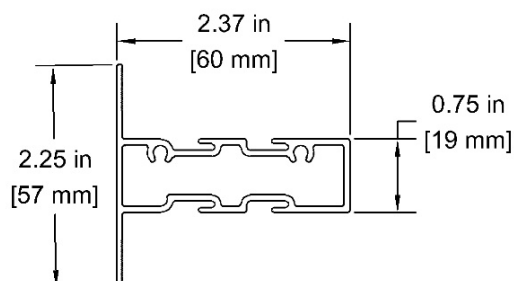
DEAD LOAD CHART FOR 250 SERIES - PART # 251

SPAN CHART

SPAN CHART IS FOR ESTIMATION ONLY.
DO NOT UTILIZE FOR DETAILED DESIGN.
CHART IS BASED ON DEFLECTION ANALYSIS
ONLY



MULLION SECTION



SYSTEM PROPERTIES

Moment of Inertia, Section Modulus & Area

Moment of Inertia, I_{yy}	$I_{yy} = 0.15 \text{ in}^4$
Section Modulus, S_{yy}	$S_{yy} = 0.13 \text{ in}^3$
Total Area	$A = 2.82 \text{ in}^2$

Modulus of Elasticity

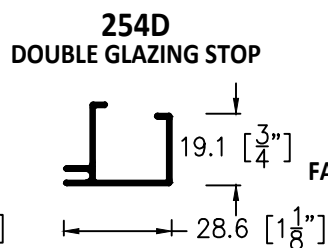
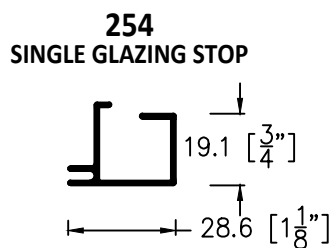
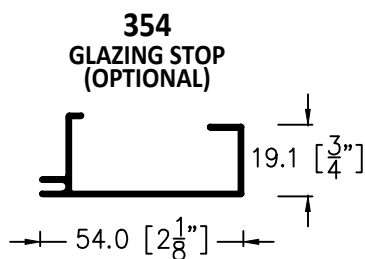
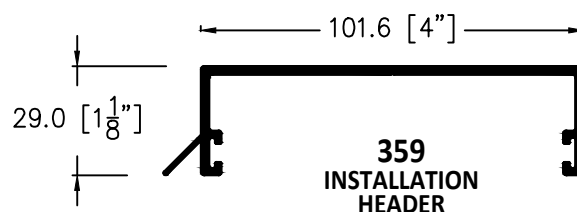
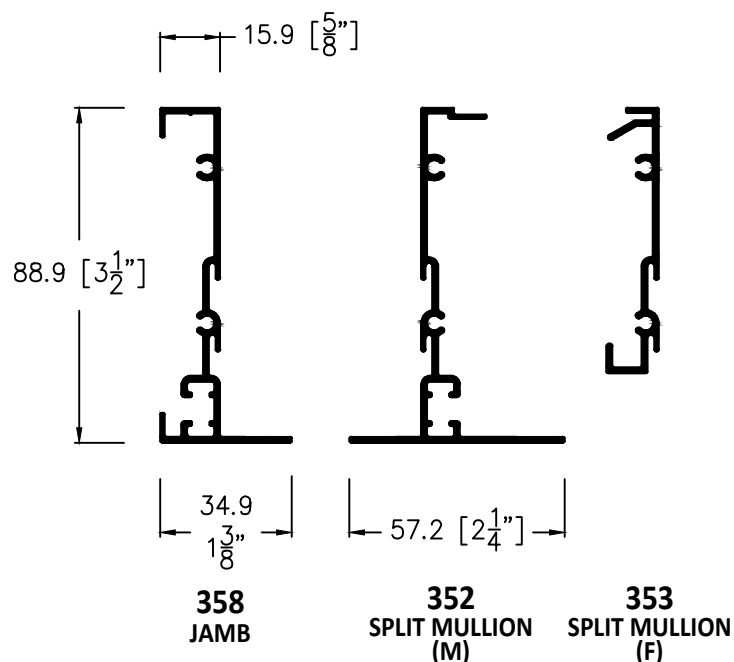
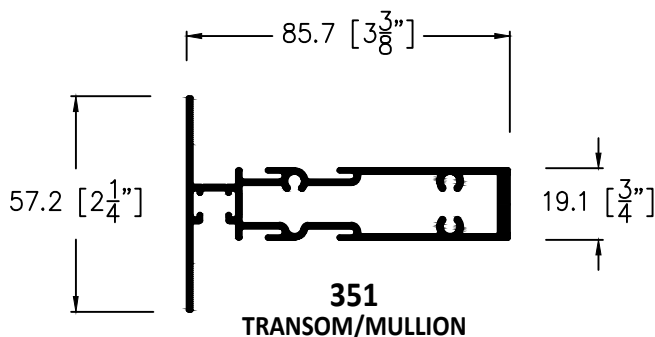
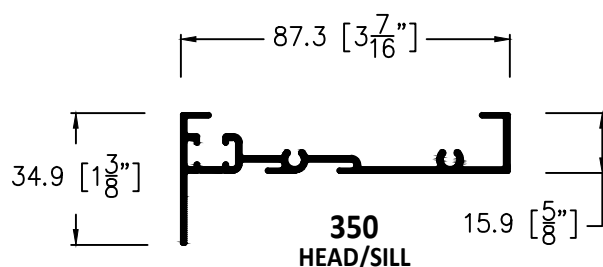
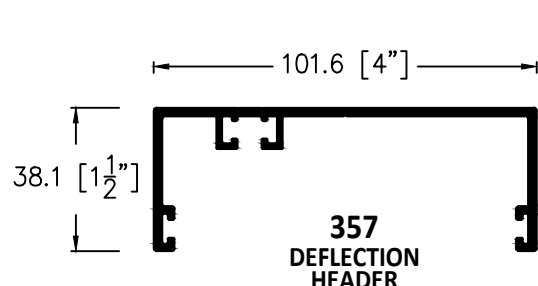
Aluminum	10,000,000 PSI
Steel	29,000,000 PSI

GENERAL NOTES

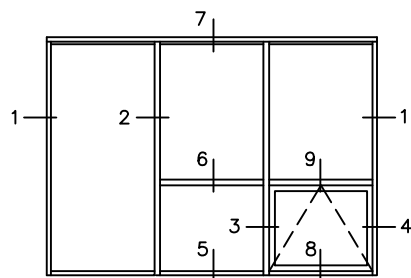
1. Deflection Limit: 0.125" (3.2mm).
2. Charts are calculated assuming a 1" overall sealed unit (6mm/13mm spacer/6mm)
3. Calculations are based on the position of the setting blocks being placed at 1/4 or 1/8 points.



COMPONENTS

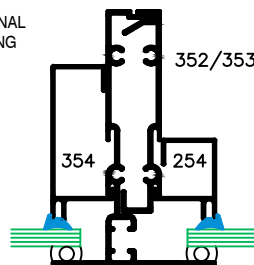


DETAILS

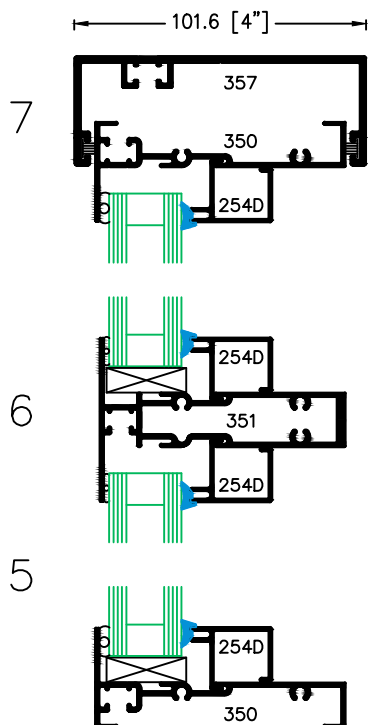
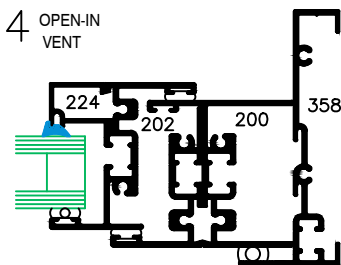


ELEVATION

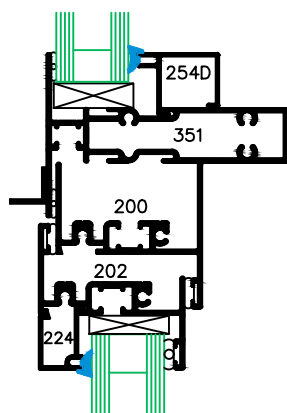
2 OPTIONAL
GLAZING



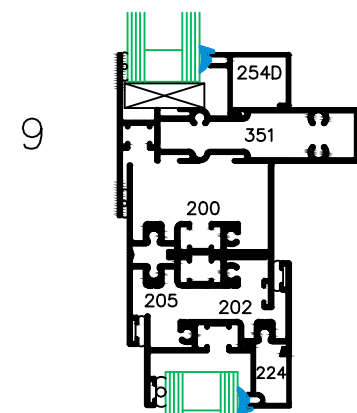
4 OPEN-IN
VENT



9

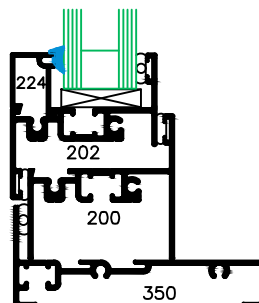


9



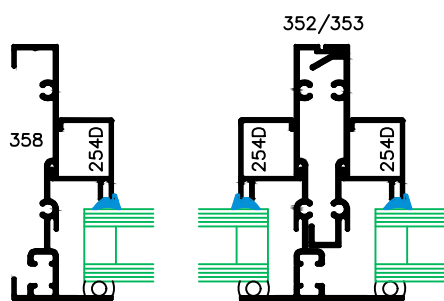
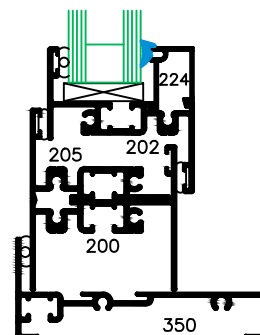
OPEN-OUT
VENT
200 SERIES

8

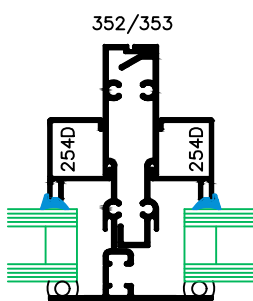


8

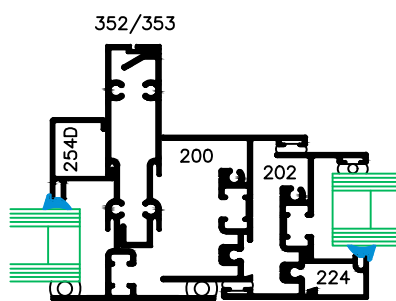
OPEN-IN
VENT
200 SERIES



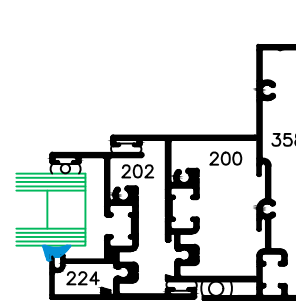
1



2



3



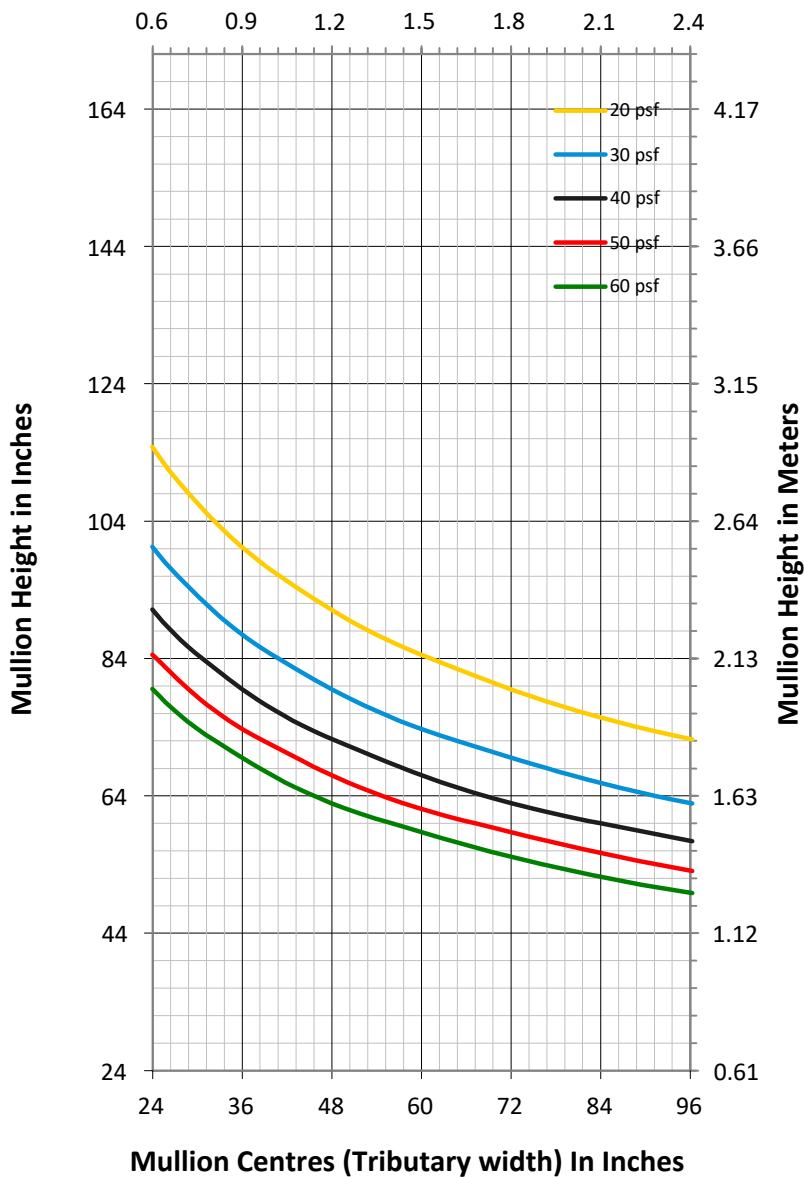
4

WIND LOAD CHART FOR 350 SERIES - PART # 352/353

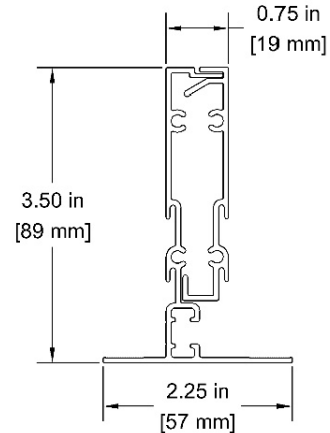
SPAN CHART

SPAN CHART IS FOR ESTIMATION ONLY.
DO NOT UTILIZE FOR DETAILED DESIGN.
CHART IS BASED ON DEFLECTION ANALYSIS
ONLY

Mullion Centres (Tributary width) In Meters



MULLION SECTION



SYSTEM PROPERTIES

Moment of Inertia, Section Modulus & Area

Moment of Inertia, Ixx	Ixx = 1.15 in ⁴
Section Modulus, Sxx	Sxx = 0.61 in ³
Total Area	A = 0.82 in ²

Modulus of Elasticity

Aluminum	10,000,000 PSI
Steel	29,000,000 PSI

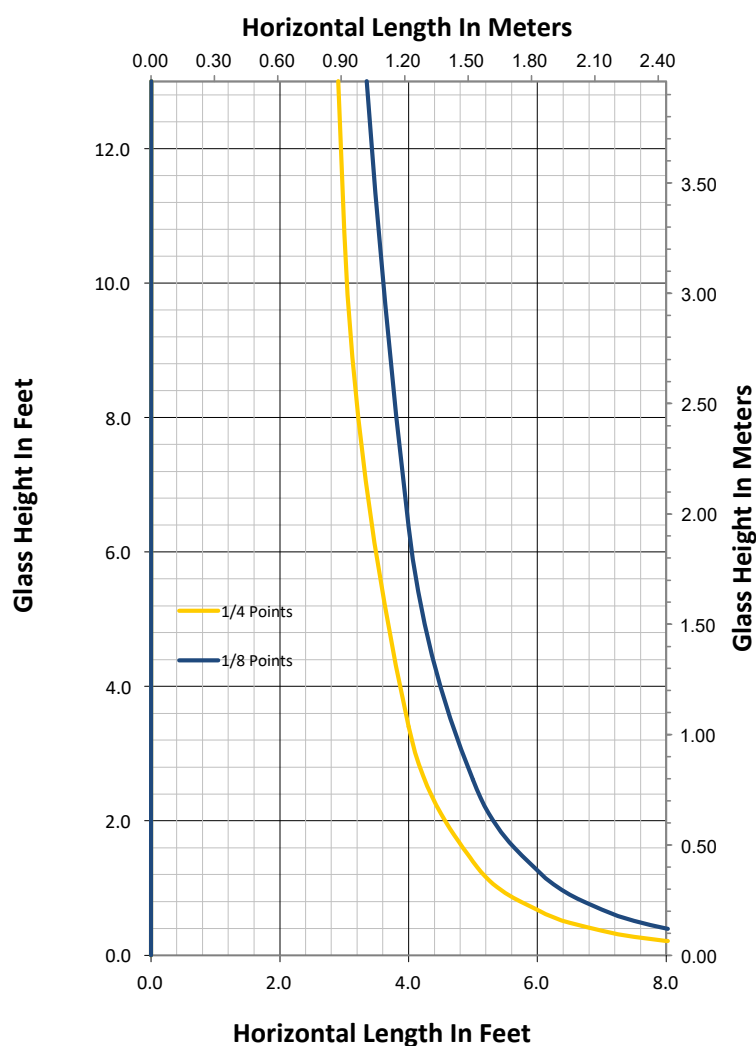
GENERAL NOTES

1. Deflection Limit: L/175 up to 13.5ft, L/240 + 0.25" over 13.5ft
2. Assume horizontal members provide lateral support
3. Steel moment of inertia converted to polyester, vinyl or 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 2020).

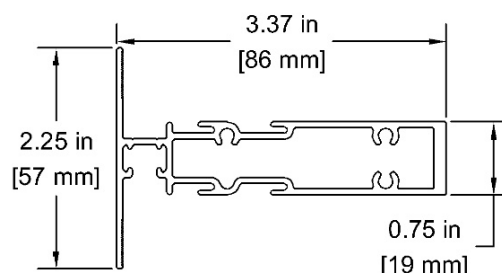
DEAD LOAD CHART FOR 350 SERIES - PART # 351

SPAN CHART

SPAN CHART IS FOR ESTIMATION ONLY.
DO NOT UTILIZE FOR DETAILED DESIGN.
CHART IS BASED ON DEFLECTION ANALYSIS
ONLY



MULLION SECTION



SYSTEM PROPERTIES

Moment of Inertia, Section Modulus & Area

Moment of Inertia, I_{yy}	$I_{yy} = 0.10 \text{ in}^4$
Section Modulus, S_{yy}	$S_{yy} = 0.09 \text{ in}^3$
Total Area	$A = 0.78 \text{ in}^2$

Modulus of Elasticity

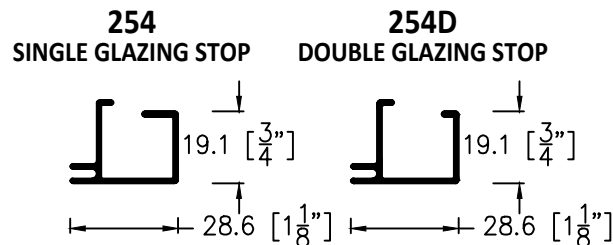
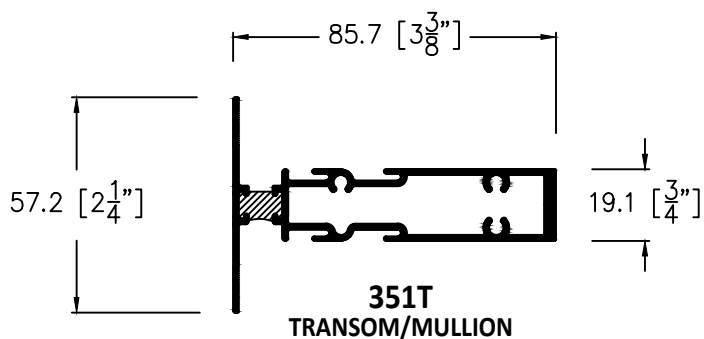
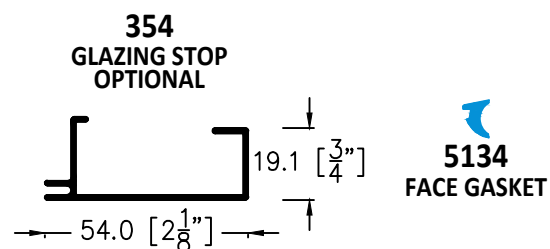
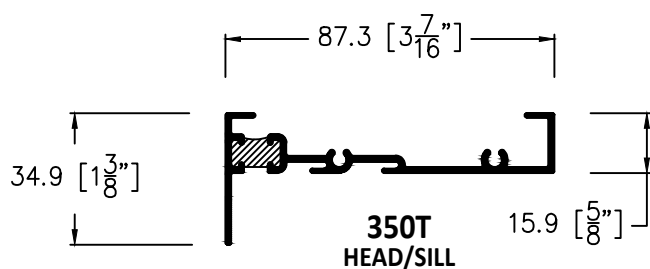
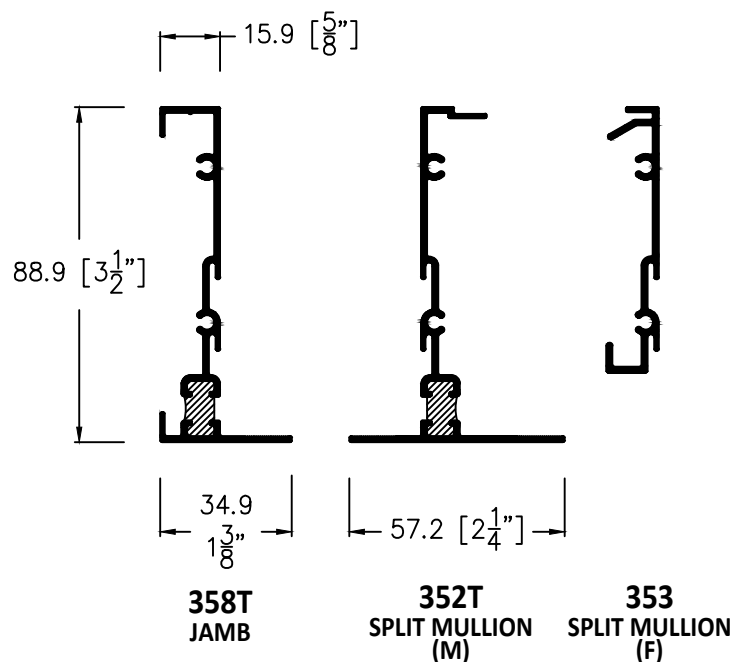
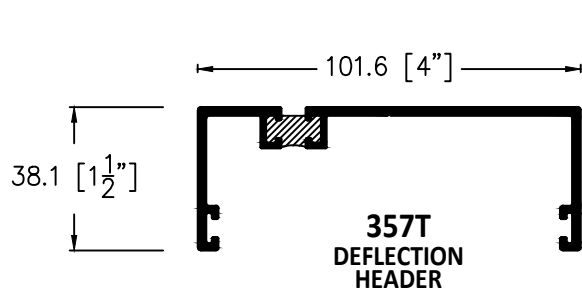
Aluminum	10,000,000 PSI
Steel	29,000,000 PSI

GENERAL NOTES

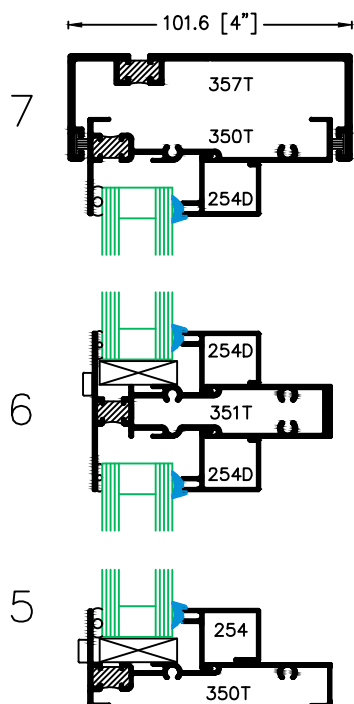
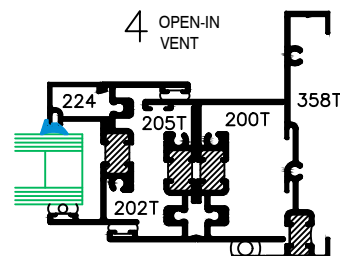
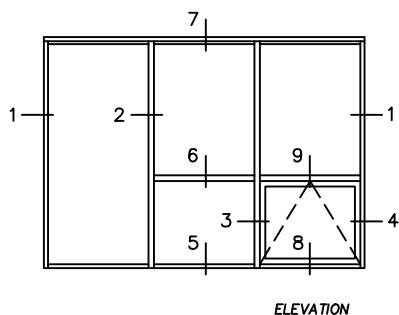
1. Deflection Limit: 0.125" (3.2mm).
2. Charts are calculated assuming a 1" overall sealed unit (6mm/13mm spacer/6mm)
3. Calculations are based on the position of the setting blocks being placed at 1/4 or 1/8 points.



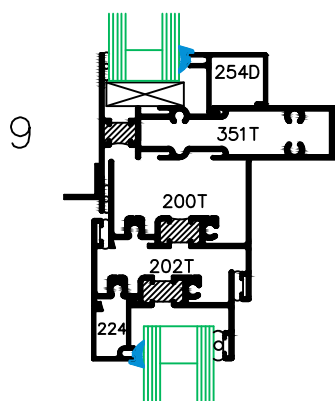
COMPONENTS



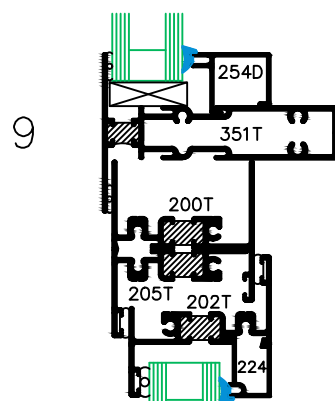
DETAILS



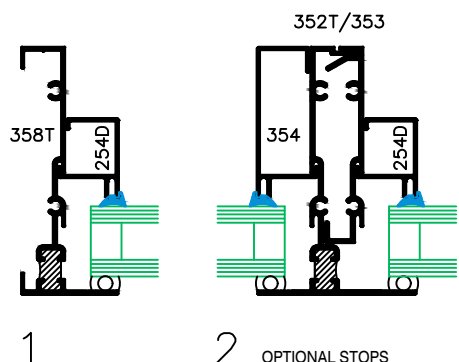
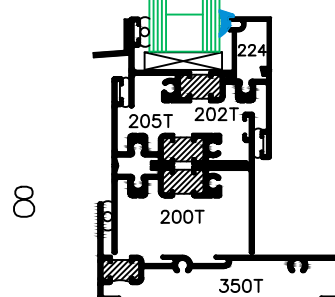
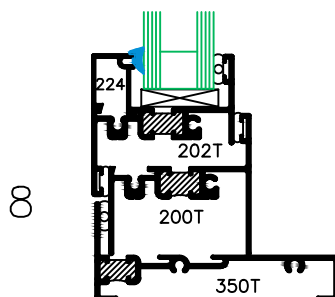
RAIN SCREEN APPLICATION



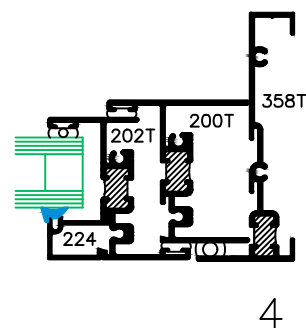
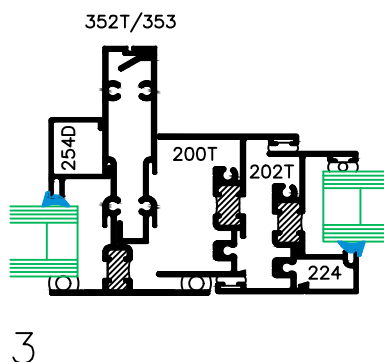
OPEN-OUT VENT
200T SERIES



OPEN-IN VENT
200T SERIES



2 OPTIONAL STOPS

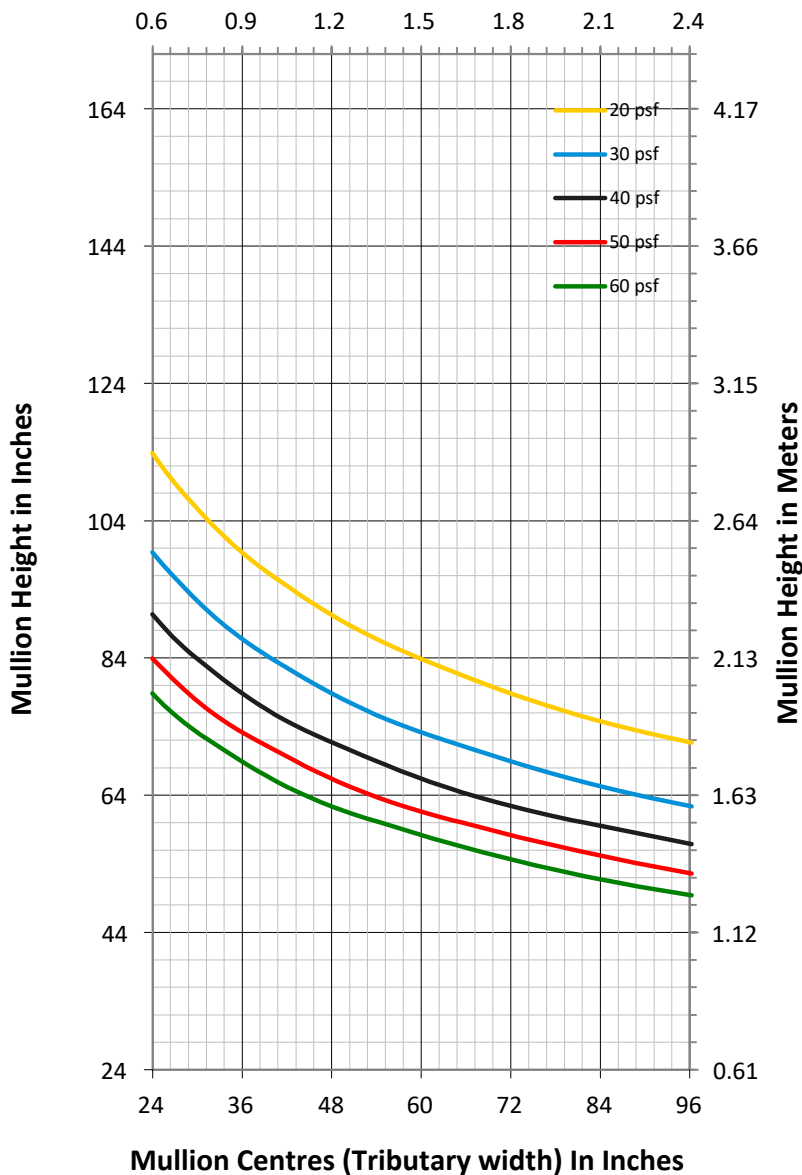


WIND LOAD CHART FOR 350T SERIES - PART # 352T/353

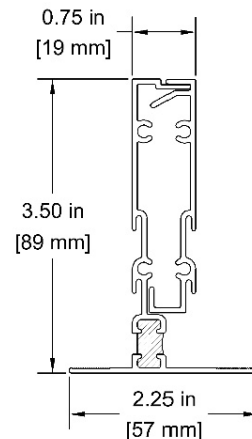
SPAN CHART

SPAN CHART IS FOR ESTIMATION ONLY.
DO NOT UTILIZE FOR DETAILED DESIGN.
CHART IS BASED ON DEFLECTION ANALYSIS
ONLY

Mullion Centres (Tributary width) In Meters



MULLION SECTION



SYSTEM PROPERTIES

Moment of Inertia, Section Modulus & Area

Moment of Inertia, I_{xx}	$I_{xx} = 1.12 \text{ in}^4$
Section Modulus, S_{xx}	$S_{xx} = 0.39 \text{ in}^3$
Total Area	$A = 0.80 \text{ in}^2$

Modulus of Elasticity

Aluminum	10,000,000 PSI
Steel	29,000,000 PSI

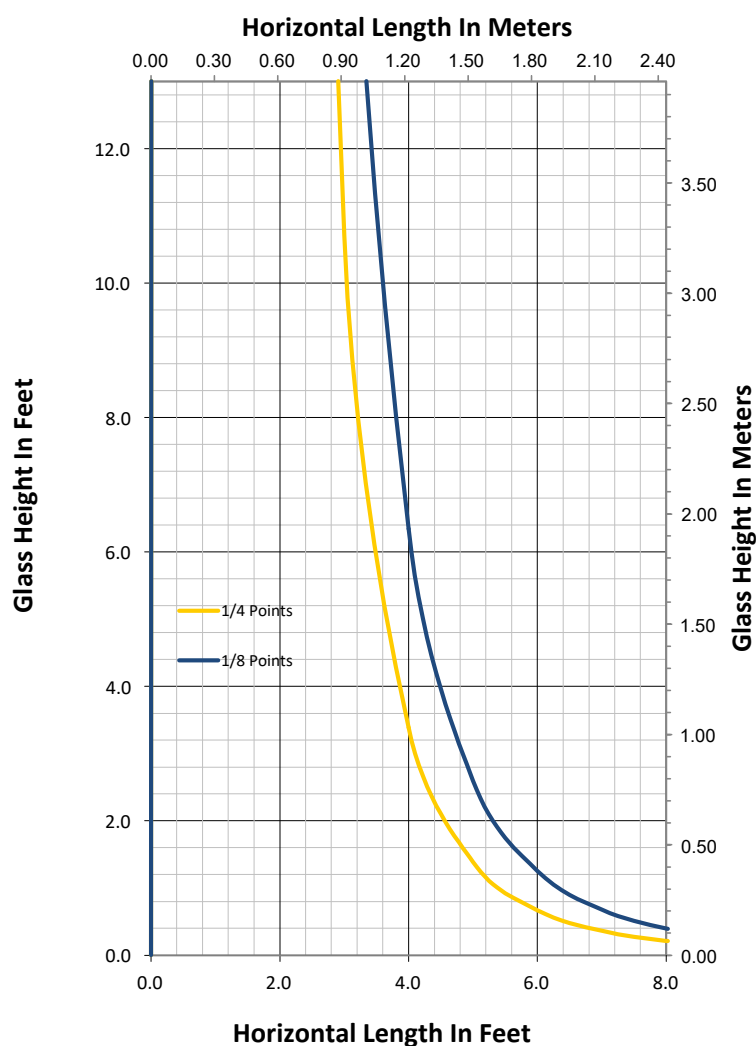
GENERAL NOTES

1. Deflection Limit: $L/175$ up to 13.5ft, $L/240 + 0.25"$ over 13.5ft
2. Assume horizontal members provide lateral support
3. Steel moment of inertia converted to polyester, vinyl or 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 $p_{net} = 40 \text{ psf}$, utilize 30 psf on this chart ($0.75 \times 40 = 30$). (Based on NBCC 2020).

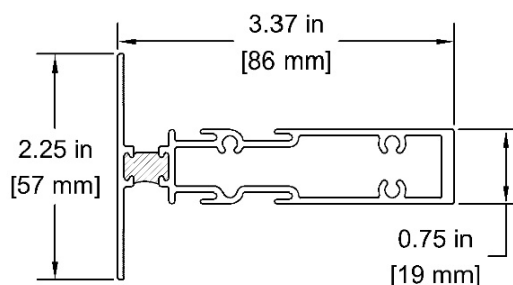
DEAD LOAD CHART FOR 350T SERIES - PART # 351T

SPAN CHART

SPAN CHART IS FOR ESTIMATION ONLY.
DO NOT UTILIZE FOR DETAILED DESIGN.
CHART IS BASED ON DEFLECTION ANALYSIS
ONLY



MULLION SECTION



SYSTEM PROPERTIES

Moment of Inertia, Section Modulus & Area

Moment of Inertia, I_{yy}	$I_{yy} = 0.10 \text{ in}^4$
Section Modulus, S_{yy}	$S_{yy} = 0.13 \text{ in}^3$
Total Area	$A = 0.76 \text{ in}^2$

Modulus of Elasticity

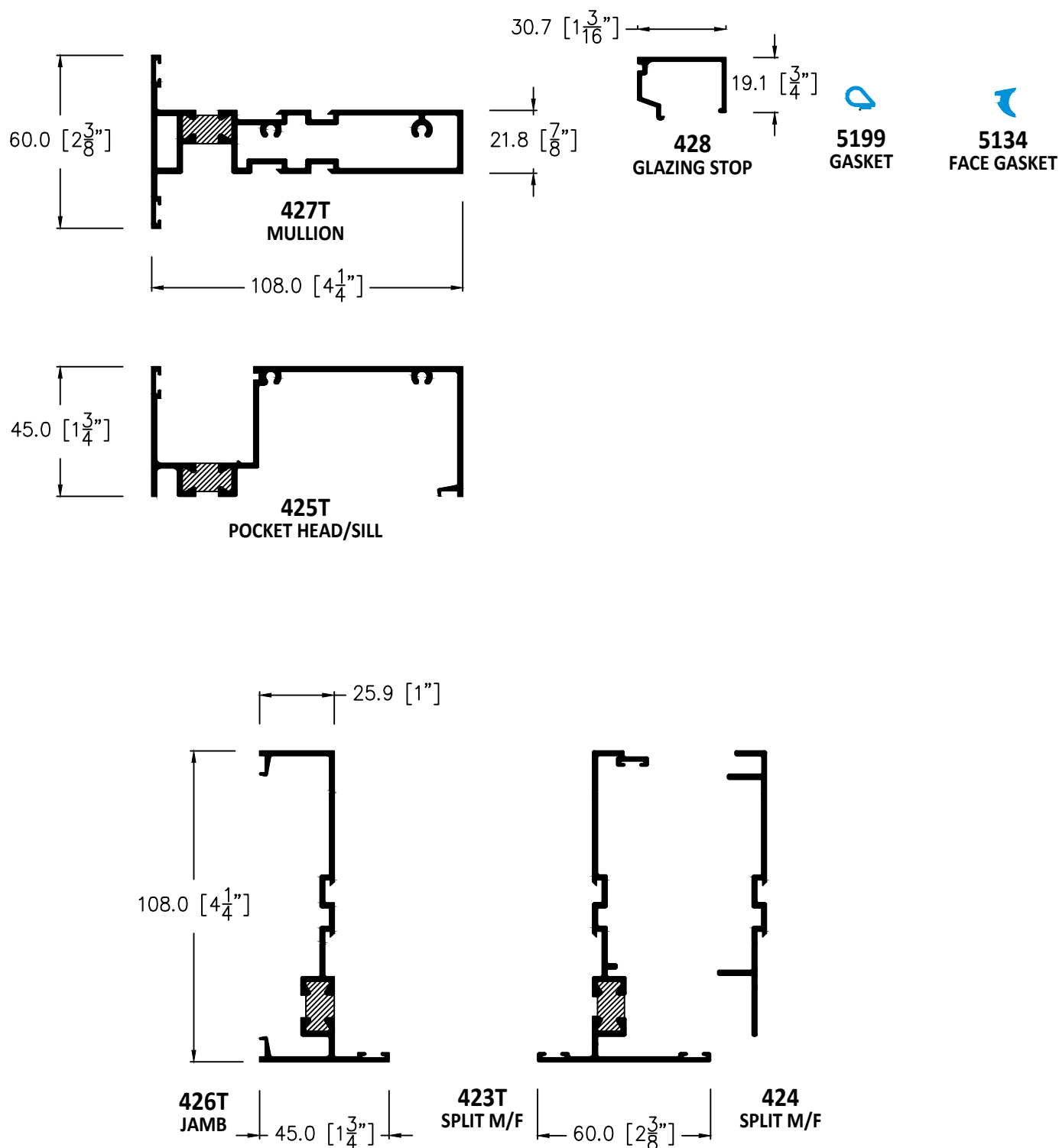
Aluminum	10,000,000 PSI
Steel	29,000,000 PSI

GENERAL NOTES

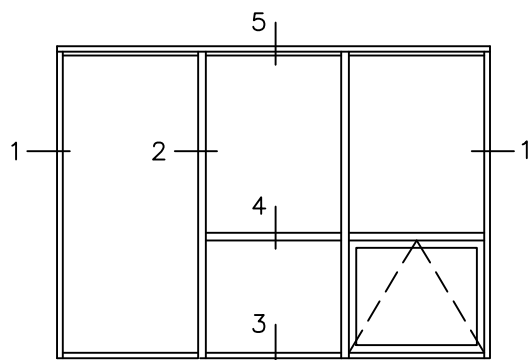
1. Deflection Limit: 0.125" (3.2mm).
2. Charts are calculated assuming a 1" overall sealed unit (6mm/13mm spacer/6mm)
3. Calculations are based on the position of the setting blocks being placed at 1/4 or 1/8 points.



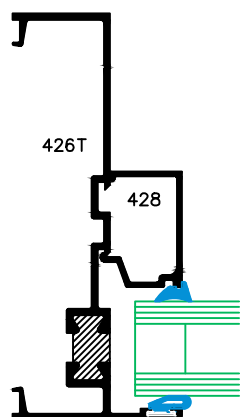
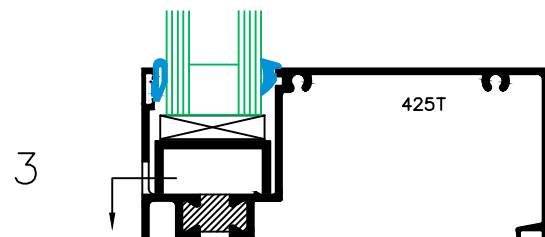
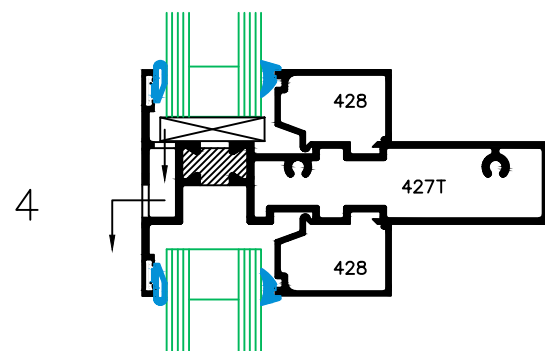
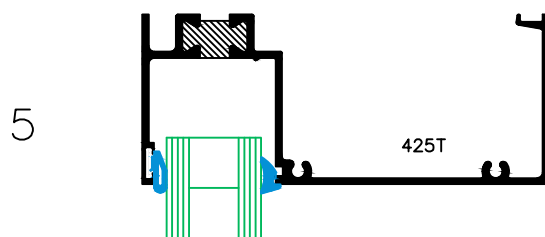
COMPONENTS



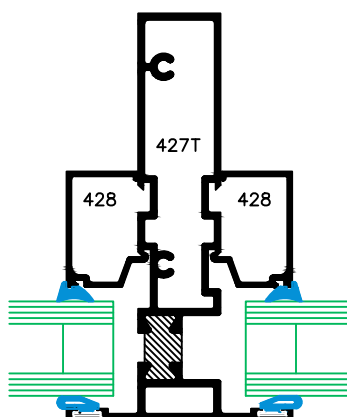
DETAILS



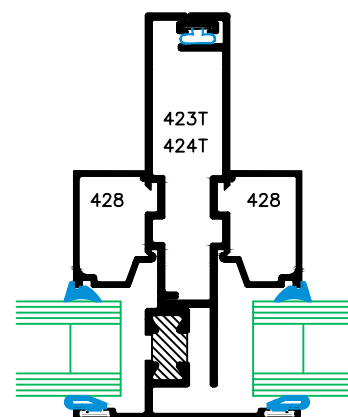
ELEVATION



1



2



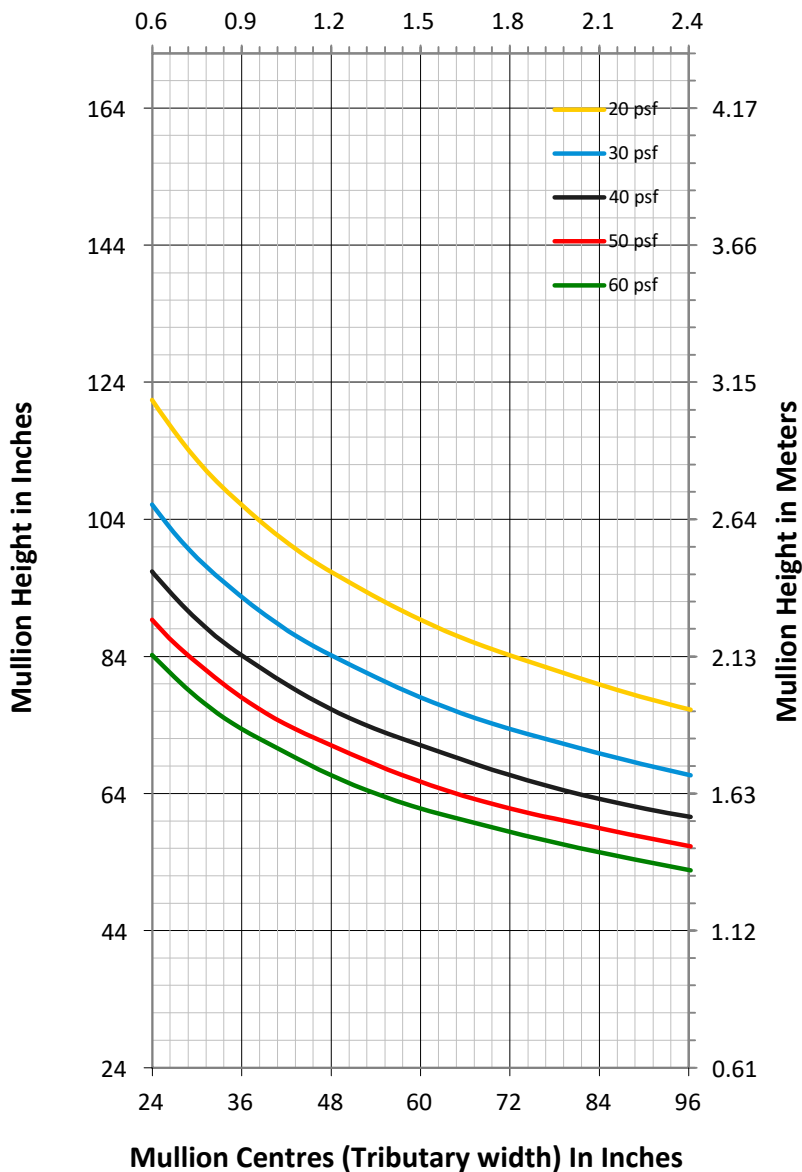
2

WIND LOAD CHART FOR 425T SERIES - PART # 423T/424

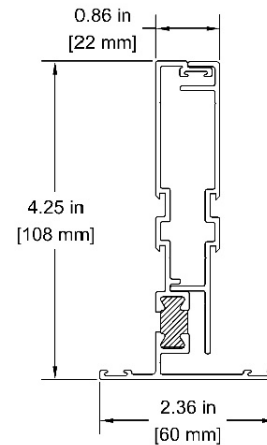
SPAN CHART

SPAN CHART IS FOR ESTIMATION ONLY.
DO NOT UTILIZE FOR DETAILED DESIGN.
CHART IS BASED ON DEFLECTION ANALYSIS
ONLY

Mullion Centres (Tributary width) In Meters



MULLION SECTION



SYSTEM PROPERTIES

Moment of Inertia, Section Modulus & Area

Moment of Inertia, Ixx	Ixx = 1.36 in ⁴
Section Modulus, Sxx	Sxx = 0.29 in ³
Total Area	A = 0.62 in ²

Modulus of Elasticity

Aluminum	10,000,000 PSI
Steel	29,000,000 PSI

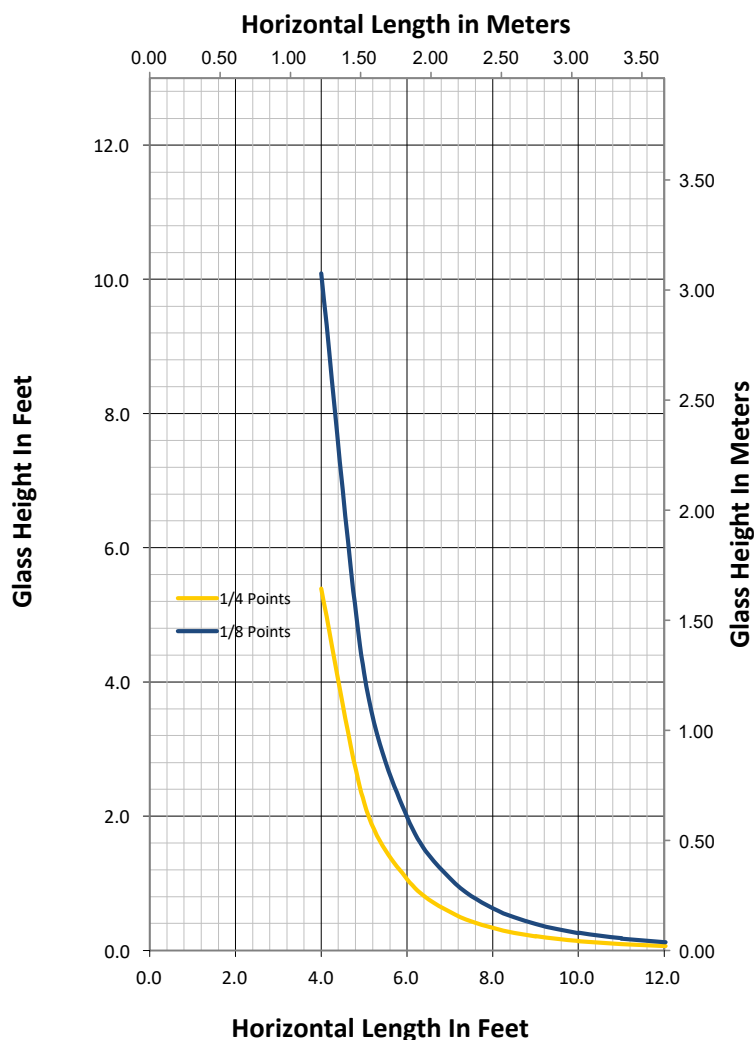
GENERAL NOTES

1. Deflection Limit: L/175 up to 13.5ft, L/240 + 0.25" over 13.5ft
2. Assume horizontal members provide lateral support
3. Steel moment of inertia converted to polyester, vinyl or 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 2020).

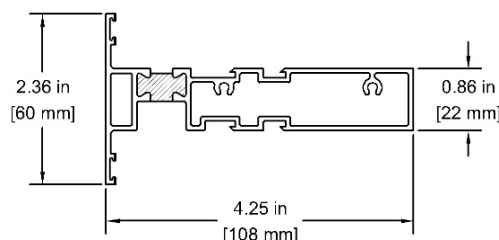
DEAD LOAD CHART FOR 425T SERIES - PART # 427T

SPAN CHART

SPAN CHART IS FOR ESTIMATION ONLY.
DO NOT UTILIZE FOR DETAILED DESIGN.
CHART IS BASED ON DEFLECTION ANALYSIS
ONLY



MULLION SECTION



SYSTEM PROPERTIES

Moment of Inertia, Section Modulus & Area

Moment of Inertia, I_{yy}	$I_{yy} = 0.16 \text{ in}^4$
Section Modulus, S_{yy}	$S_{yy} = 0.14 \text{ in}^3$
Total Area	$A = 0.95 \text{ in}^2$

Modulus of Elasticity

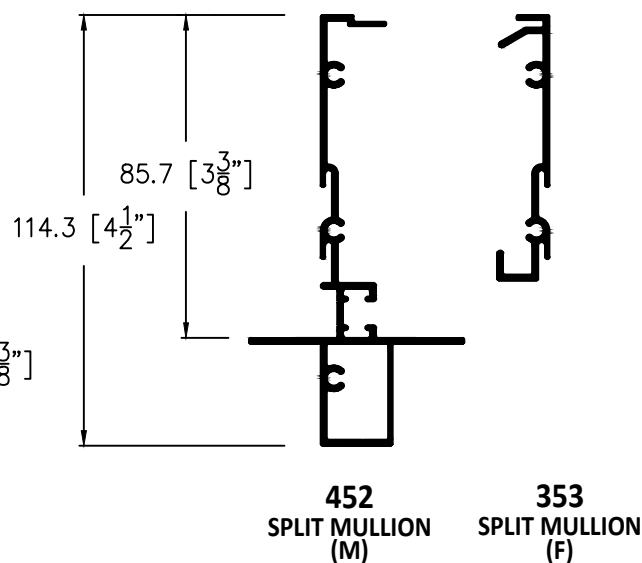
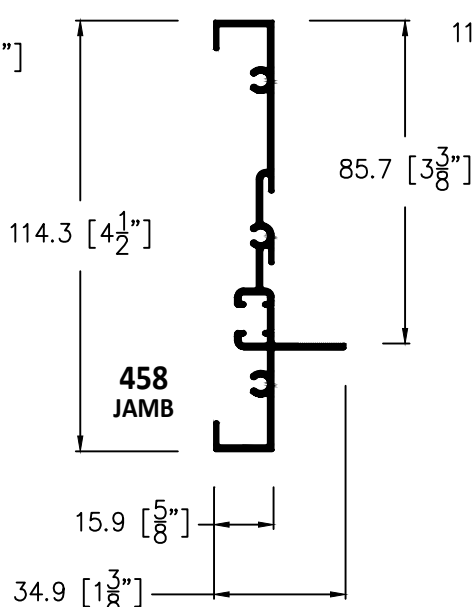
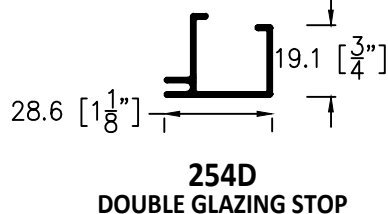
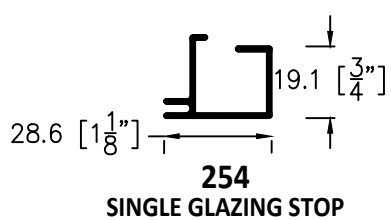
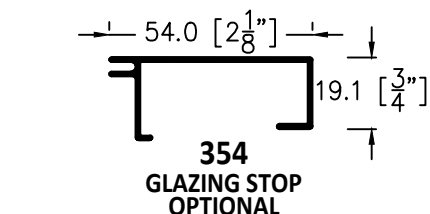
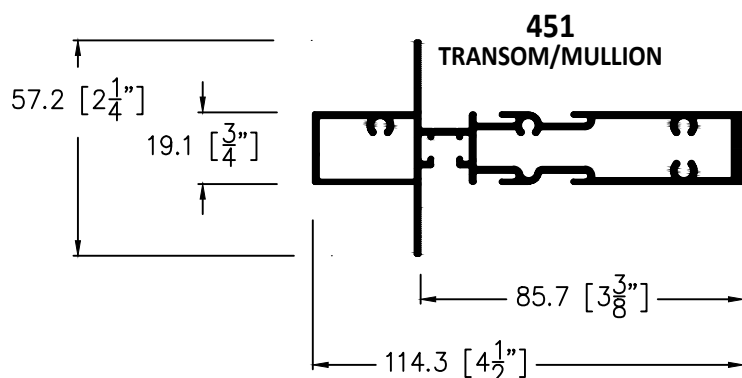
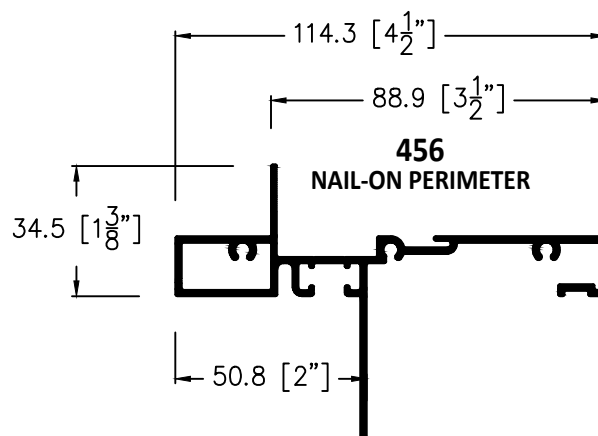
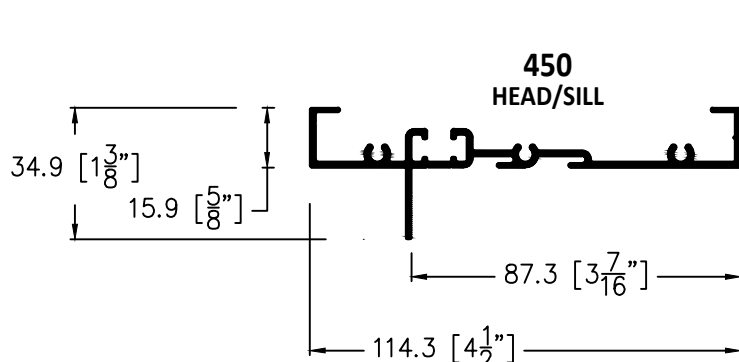
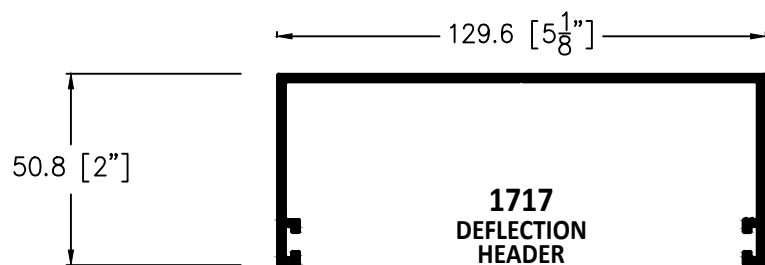
Aluminum	10,000,000 PSI
Steel	29,000,000 PSI

GENERAL NOTES

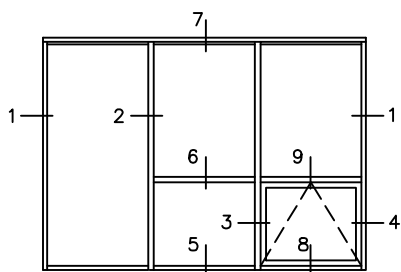
1. Deflection Limit: 0.125" (3.2mm).
2. Charts are calculated assuming a 1" overall sealed unit (6mm/13mm spacer/6mm).
3. Calculations are based on the position of the setting blocks being placed at 1/4 or 1/8 points.



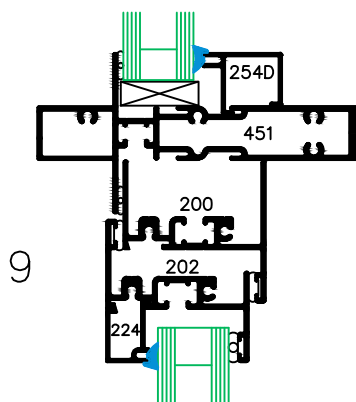
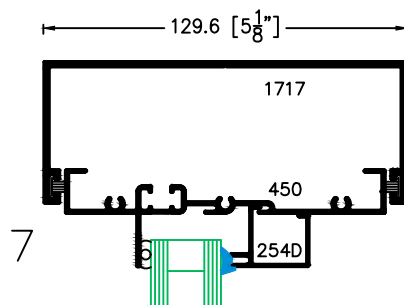
COMPONENTS



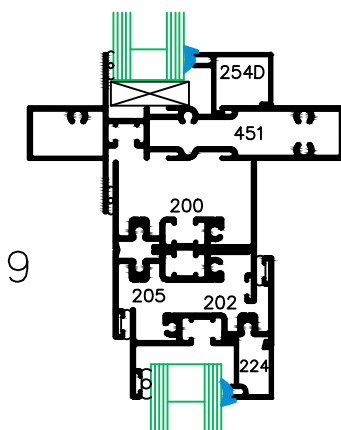
DETAILS



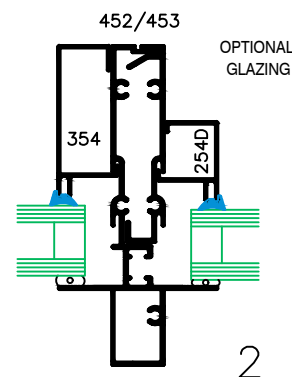
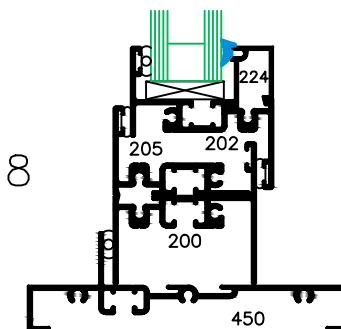
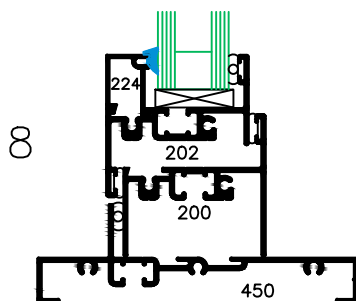
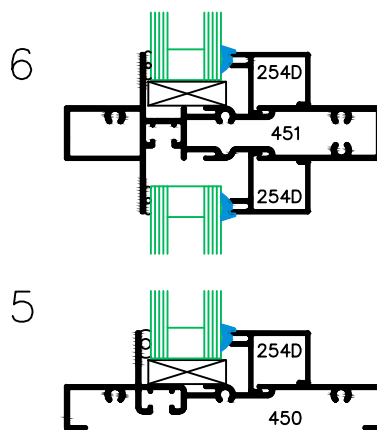
ELEVATION



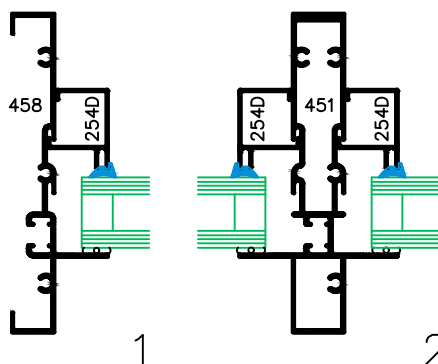
OPEN-OUT
VENT
200 SERIES



OPEN-IN
VENT
200 SERIES

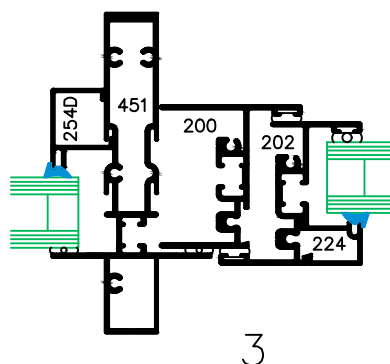


OPTIONAL
GLAZING

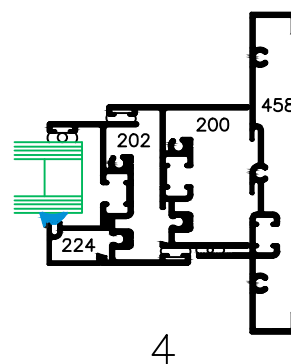


1

2



3



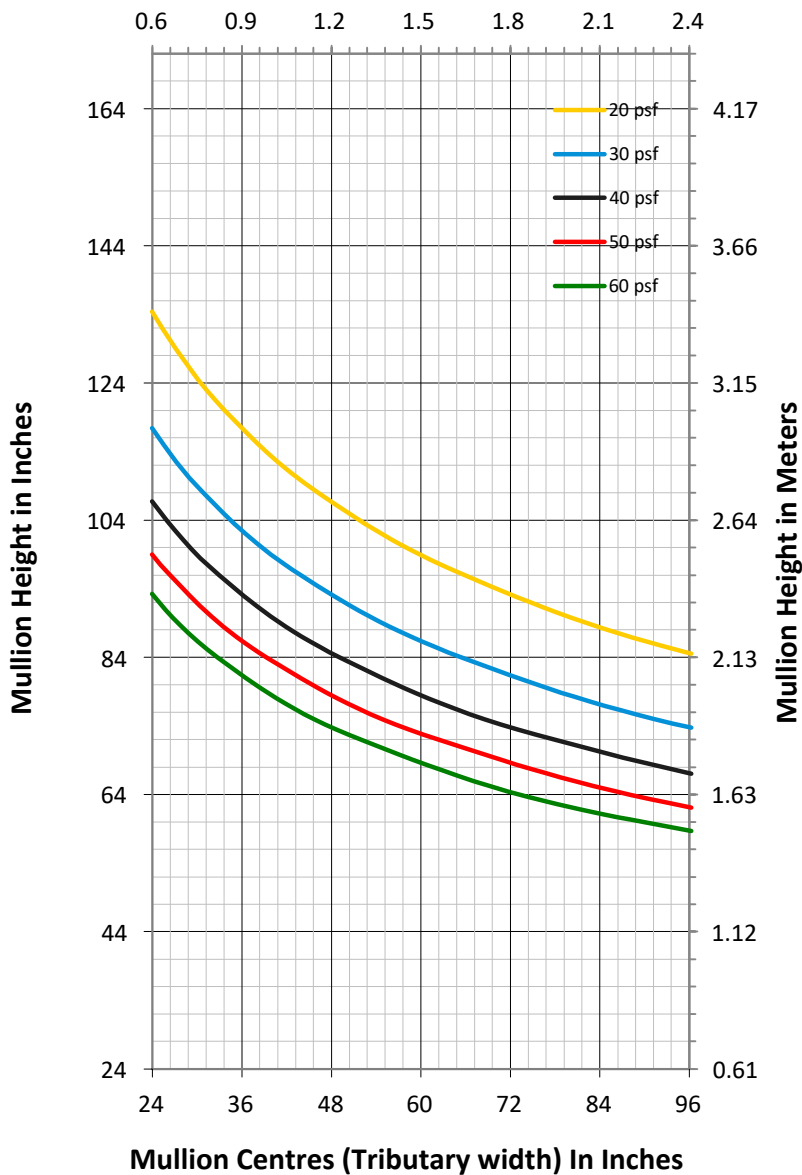
4

WIND LOAD CHART FOR 450 SERIES - PART # 452/353

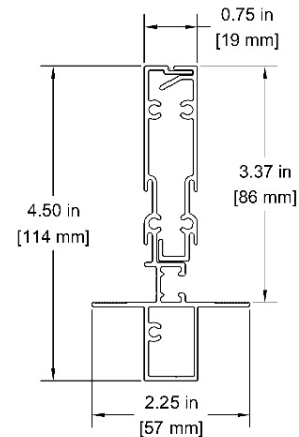
SPAN CHART

SPAN CHART IS FOR ESTIMATION ONLY.
DO NOT UTILIZE FOR DETAILED DESIGN.
CHART IS BASED ON DEFLECTION ANALYSIS
ONLY

Mullion Centres (Tributary width) In Meters



MULLION SECTION



SYSTEM PROPERTIES

Moment of Inertia, Section Modulus & Area

Moment of Inertia, Ixx	Ixx = 1.84 in4
Section Modulus, Sxx	Sxx = 0.82 in3
Total Area	A = 1.00 in2

Modulus of Elasticity

Aluminum	10,000,000 PSI
Steel	29,000,000 PSI

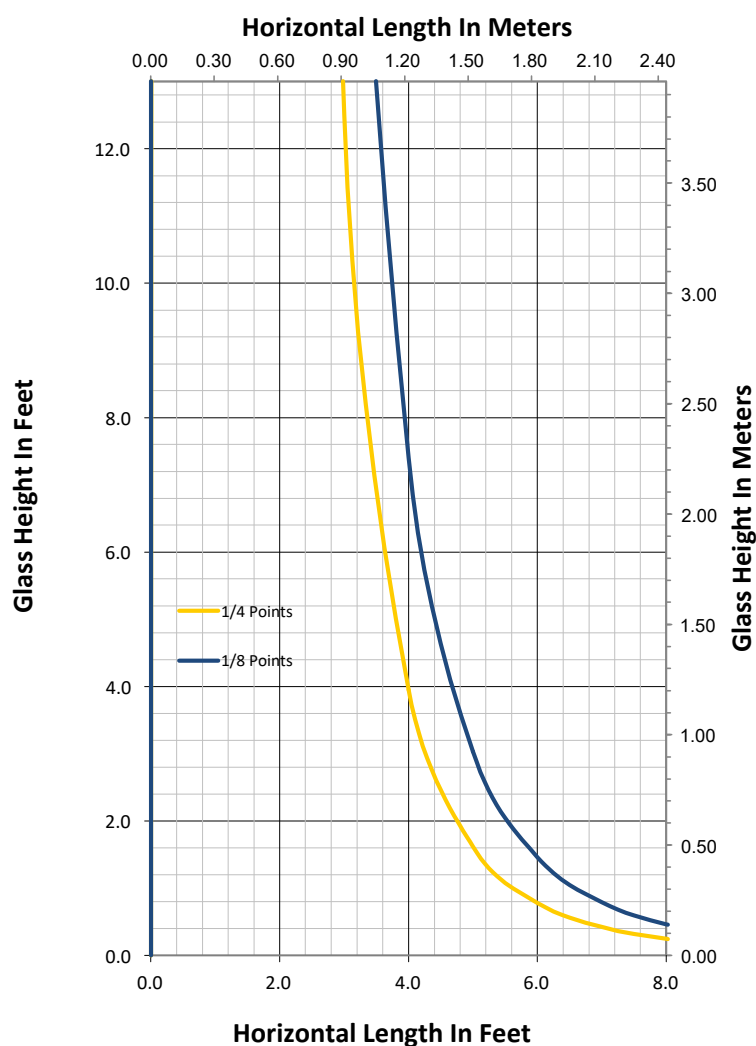
GENERAL NOTES

1. Deflection Limit: L/175 up to 13.5ft, L/240 + 0.25" over 13.5ft
2. Assume horizontal members provide lateral support
3. Steel moment of inertia converted to polyester, vinyl or 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 2020).

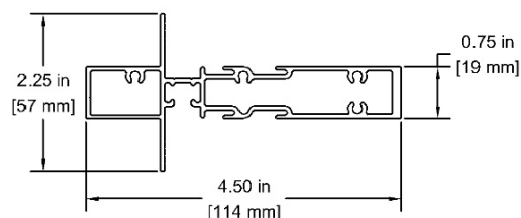
DEAD LOAD CHART FOR 450 SERIES - PART # 451

SPAN CHART

SPAN CHART IS FOR ESTIMATION ONLY.
DO NOT UTILIZE FOR DETAILED DESIGN.
CHART IS BASED ON DEFLECTION ANALYSIS
ONLY



MULLION SECTION



SYSTEM PROPERTIES

Moment of Inertia, Section Modulus & Area

Moment of Inertia, I_{yy}	$I_{yy} = 0.12 \text{ in}^4$
Section Modulus, S_{yy}	$S_{yy} = 0.11 \text{ in}^3$
Total Area	$A = 0.96 \text{ in}^2$

Modulus of Elasticity

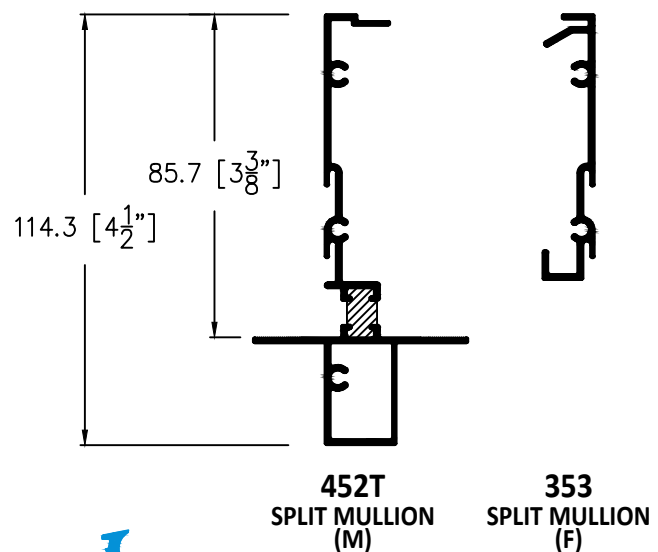
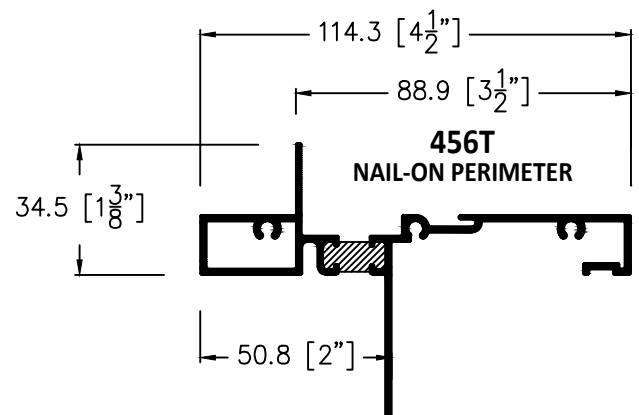
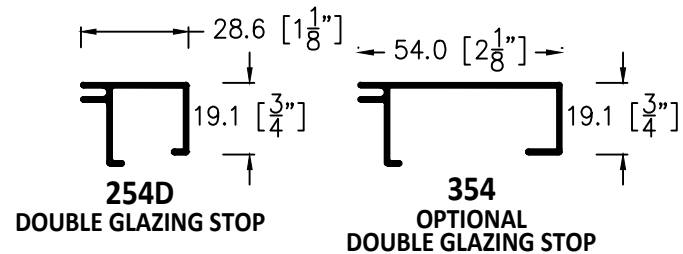
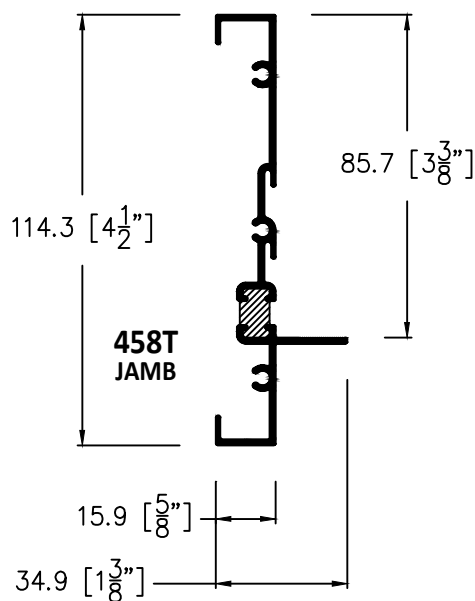
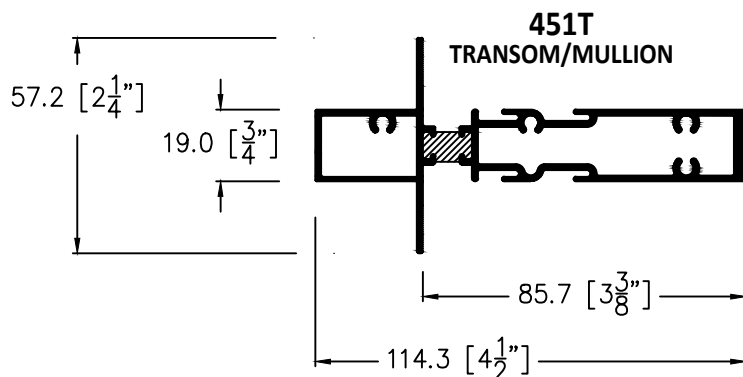
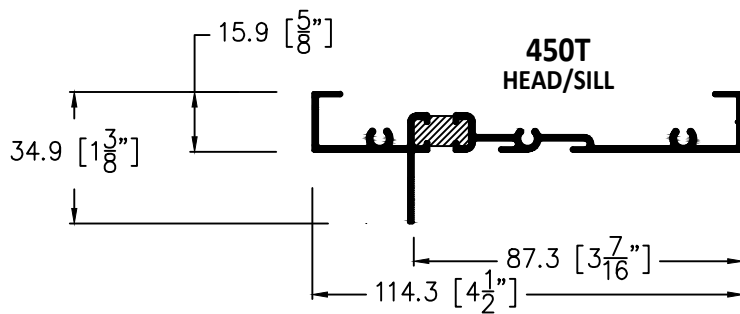
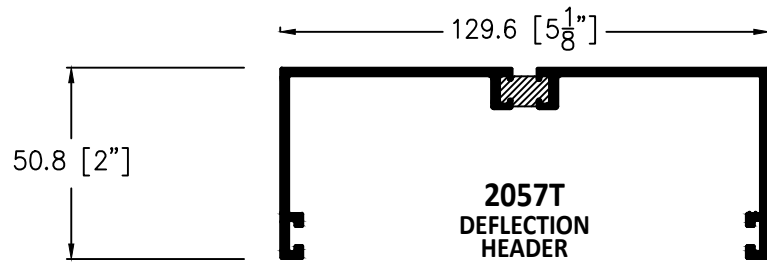
Aluminum	10,000,000 PSI
Steel	29,000,000 PSI

GENERAL NOTES

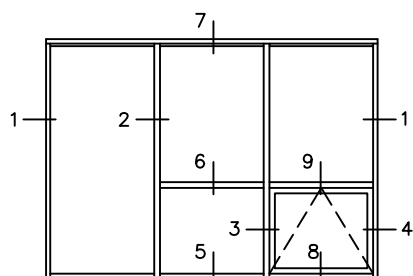
1. Deflection Limit: 0.125" (3.2mm).
2. Charts are calculated assuming a 1" overall sealed unit (6mm/13mm spacer/6mm)
3. Calculations are based on the position of the setting blocks being placed at 1/4 or 1/8 points.



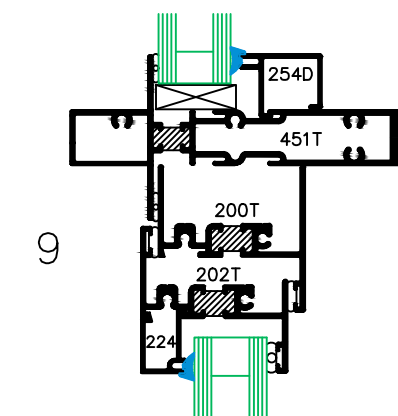
COMPONENTS



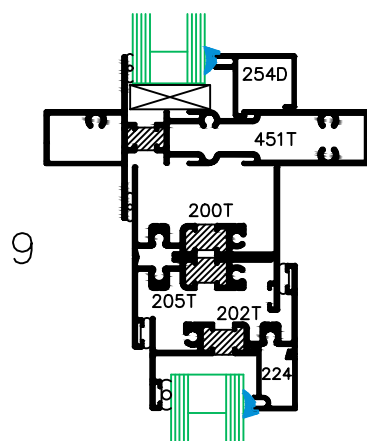
DETAILS



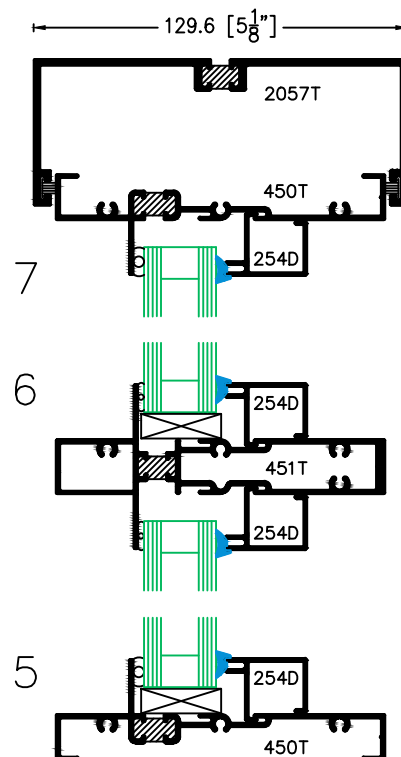
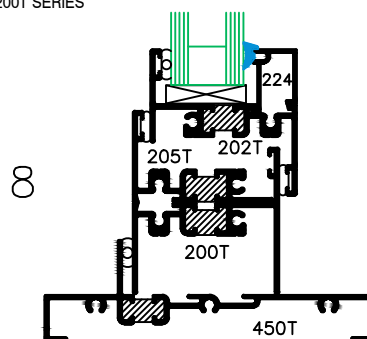
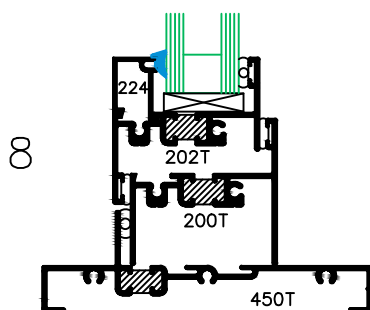
ELEVATION



OPEN-OUT
VENT
200T SERIES

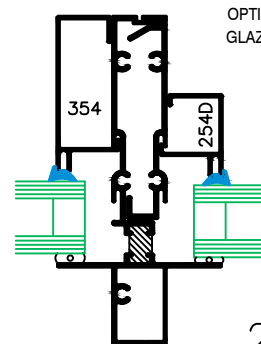


OPEN-IN
VENT
200T SERIES

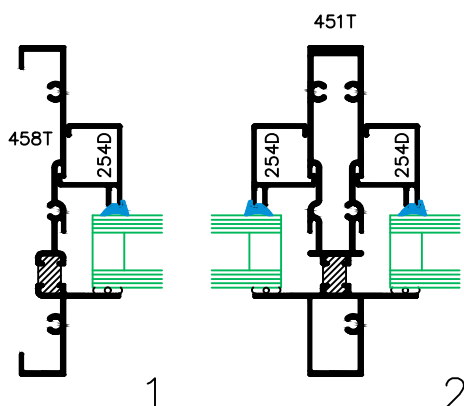


452T/453

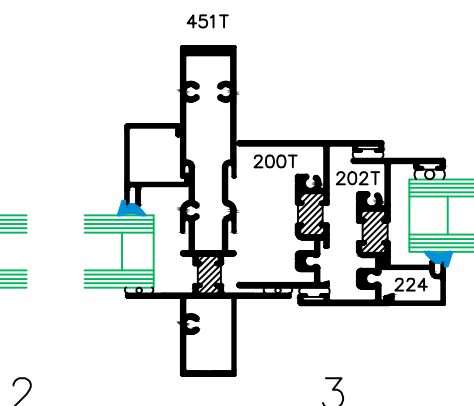
OPTIONAL
GLAZING



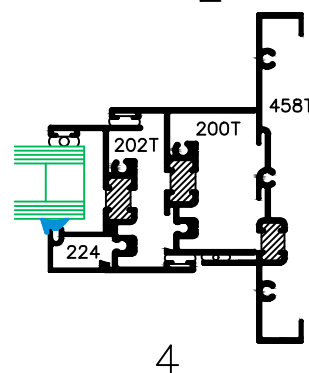
2



1



2



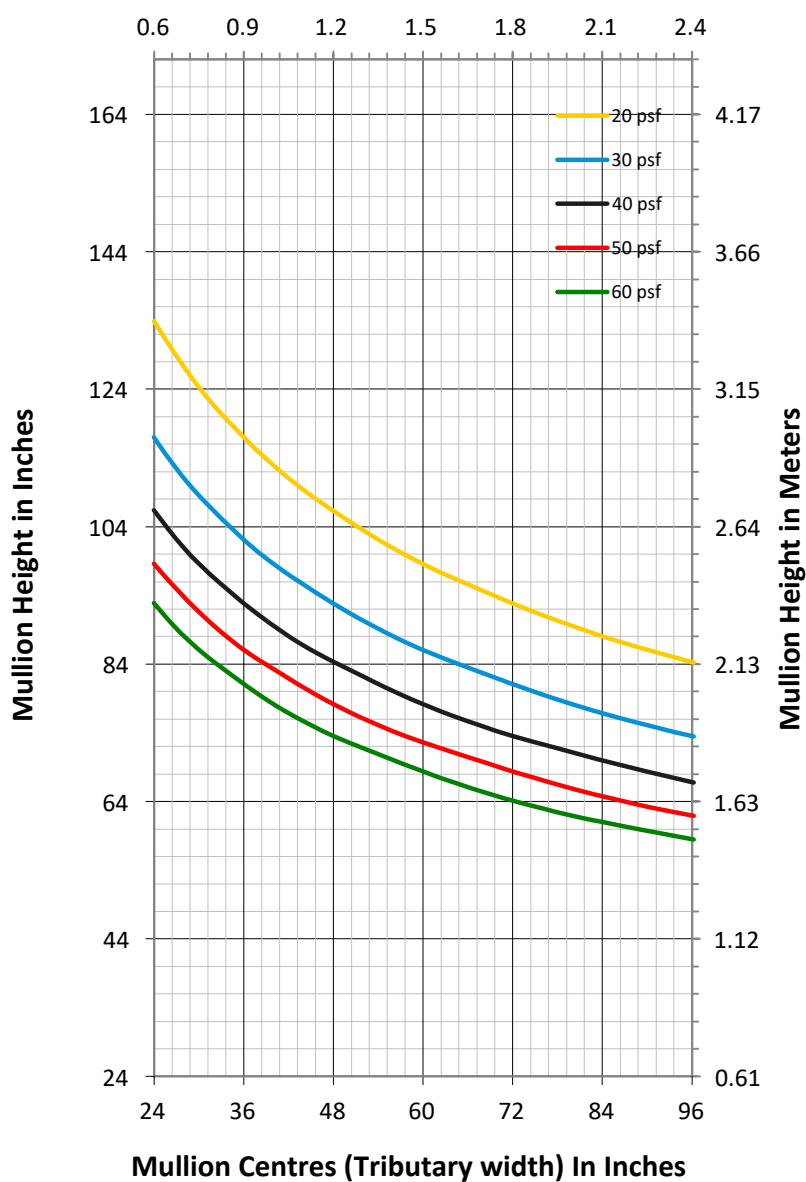
4

WIND LOAD CHART FOR 450T SERIES - PART # 451T

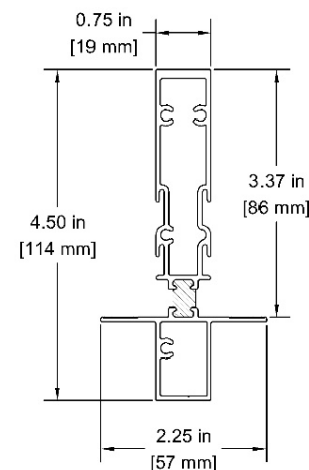
SPAN CHART

**SPAN CHART IS FOR ESTIMATION ONLY.
DO NOT UTILIZE FOR DETAILED DESIGN.
CHART IS BASED ON DEFLECTION ANALYSIS
ONLY**

Mullion Centres (Tributary width) In Meters



MULLION SECTION



SYSTEM PROPERTIES

Moment of Inertia, Section Modulus & Area

Moment of Inertia, I _{xx}	I _{xx} = 1.82 in ⁴
Section Modulus, S _{xx}	S _{xx} = 0.37 in ³
Total Area	A = 0.95 in ²

Modulus of Elasticity

Aluminum	10,000,000 PSI
Steel	29,000,000 PSI

GENERAL NOTES

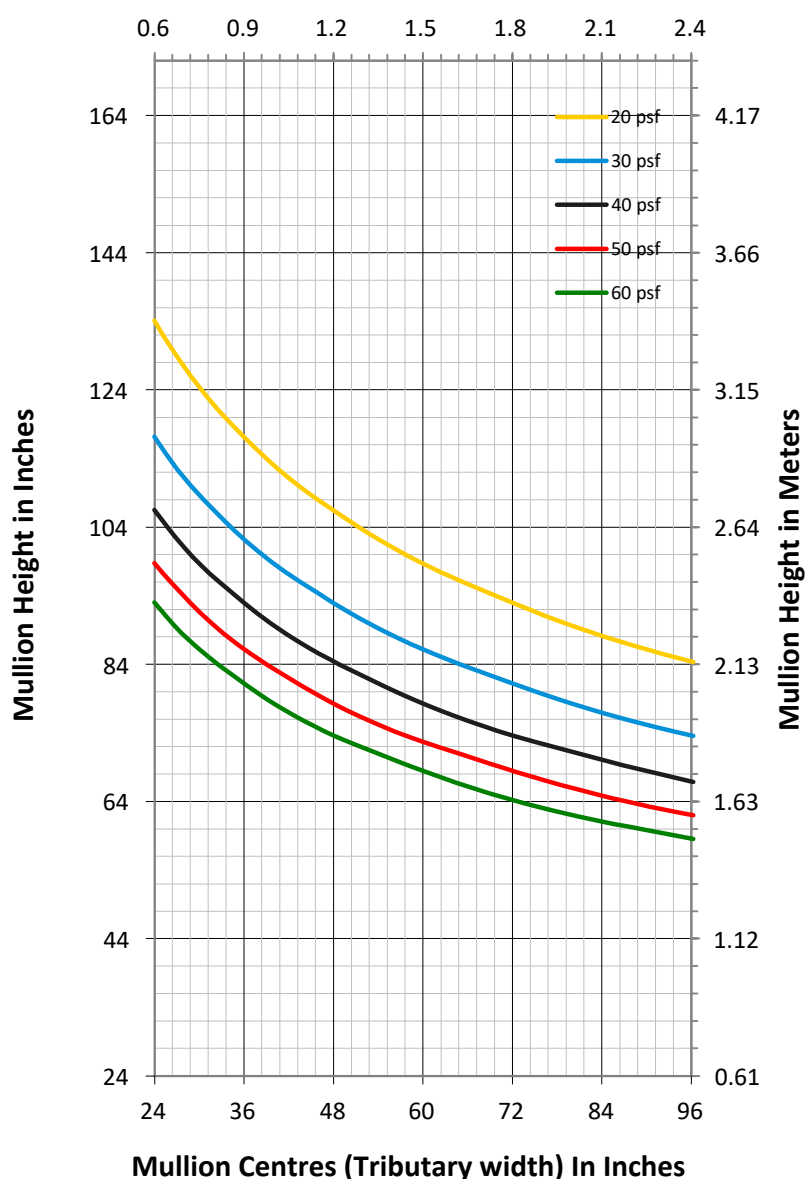
1. Deflection Limit: L/175 up to 13.5ft, L/240 + 0.25" over 13.5ft
2. Assume horizontal members provide lateral support
3. Steel moment of inertia converted to polyester, vinyl or aluminum equivalent
4. CANADIAN PROJECTS: Use SLS wind loads or modify the specified wind load by 0.75 before utilizing this chart. i.e. if project specifications require p_{net} = 40 psf, utilize 30 psf on this chart (0.75 x 40 = 30). (Based on NBCC 2020).

WIND LOAD CHART FOR 450T - PART # 452T/353

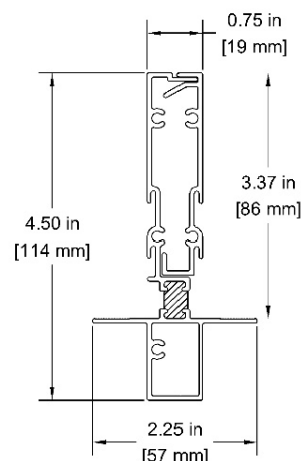
SPAN CHART

**SPAN CHART IS FOR ESTIMATION ONLY.
DO NOT UTILIZE FOR DETAILED DESIGN.
CHART IS BASED ON DEFLECTION ANALYSIS
ONLY**

Mullion Centres (Tributary width) In Meters



MULLION SECTION



SYSTEM PROPERTIES

Moment of Inertia, Section Modulus & Area

Moment of Inertia, Ixx	Ixx = 1.83 in ⁴
Section Modulus, Sxx	Sxx = 0.41 in ³
Total Area	A = 2.22 in ²

Modulus of Elasticity

Aluminum	10,000,000 PSI
Steel	29,000,000 PSI

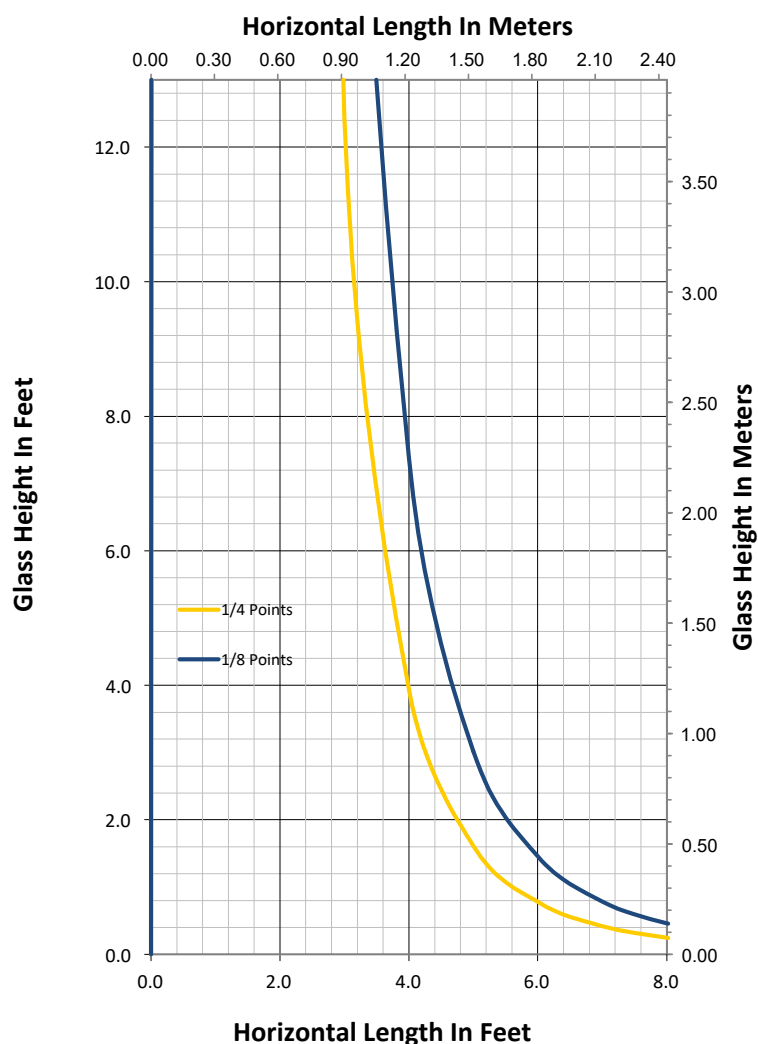
GENERAL NOTES

1. Deflection Limit: L/175 up to 13.5ft, L/240 + 0.25" over 13.5ft
2. Assume horizontal members provide lateral support
3. Steel moment of inertia converted to polyester, vinyl or 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 2020).

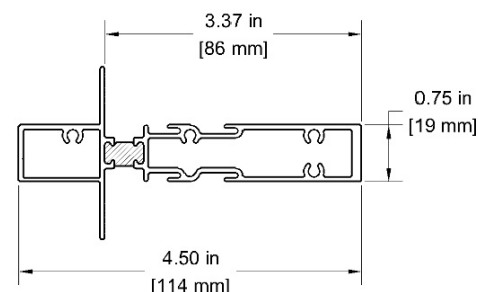
DEAD LOAD CHART FOR 450T SERIES - PART # 451T

SPAN CHART

SPAN CHART IS FOR ESTIMATION ONLY.
DO NOT UTILIZE FOR DETAILED DESIGN.
CHART IS BASED ON DEFLECTION ANALYSIS
ONLY



MULLION SECTION



SYSTEM PROPERTIES

Moment of Inertia, Section Modulus & Area

Moment of Inertia, Iyy	Iyy = 0.12 in4
Section Modulus, Syy	Syy = 0.13 in3
Total Area	A = 0.95 in2

Modulus of Elasticity

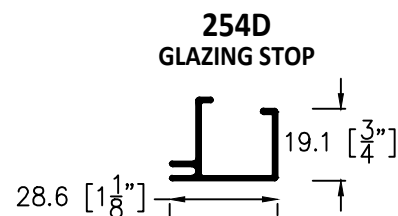
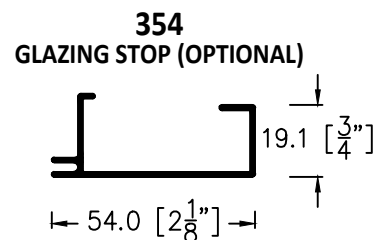
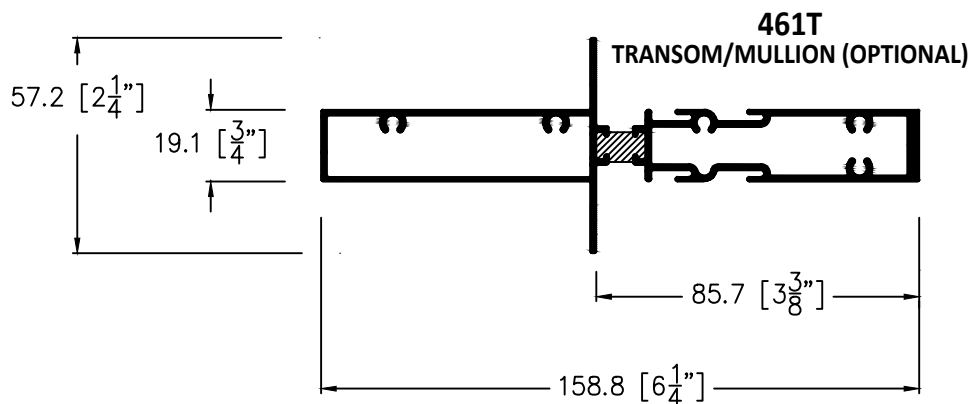
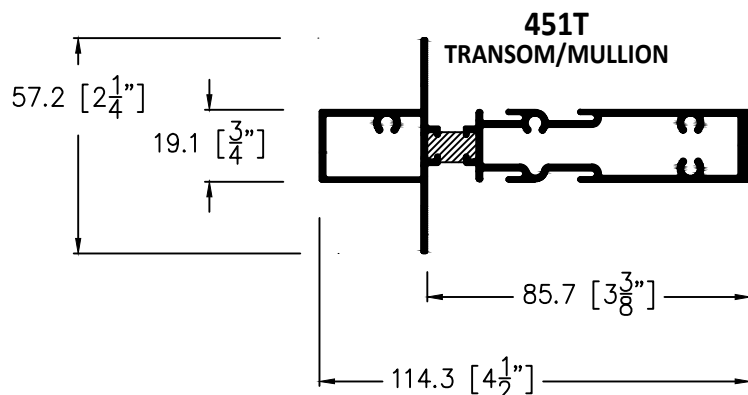
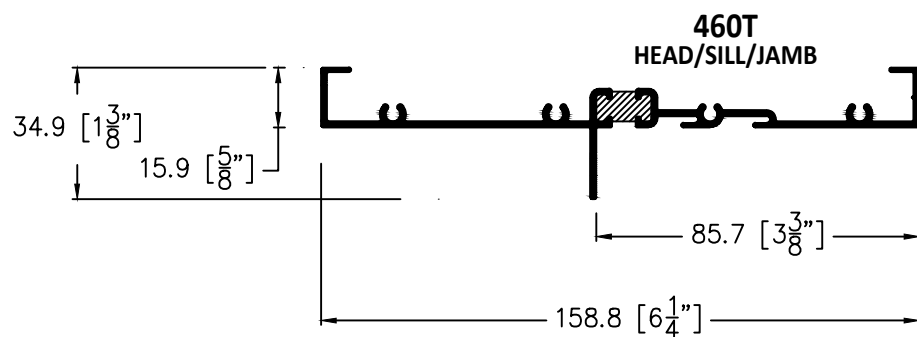
Aluminum	10,000,000 PSI
Steel	29,000,000 PSI

GENERAL NOTES

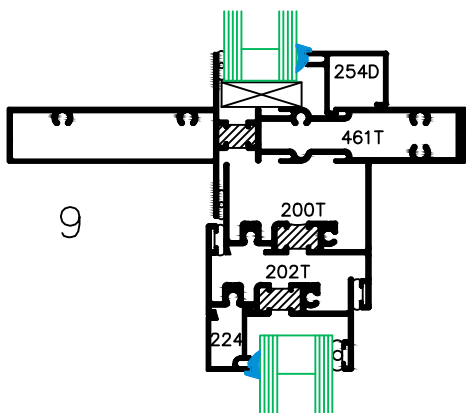
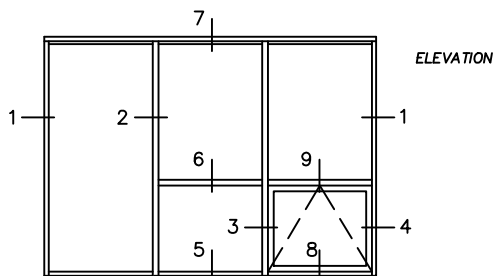
1. Deflection Limit: 0.125" (3.2mm).
2. Charts are calculated assuming a 1" overall sealed unit (6mm/13mm spacer/6mm)
3. Calculations are based on the position of the setting blocks being placed at 1/4 or 1/8 points.



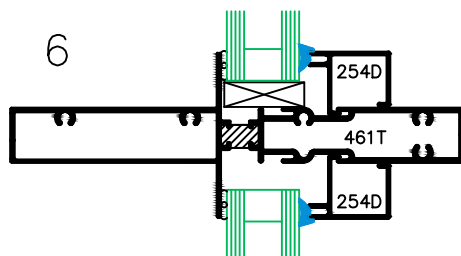
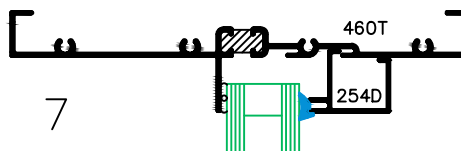
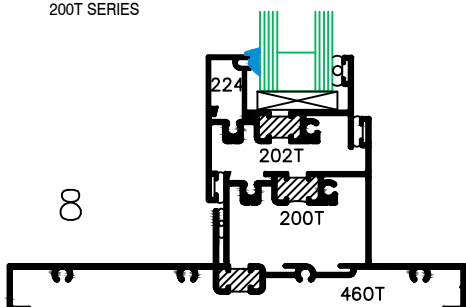
COMPONENTS



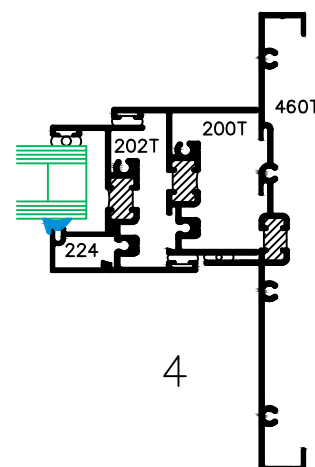
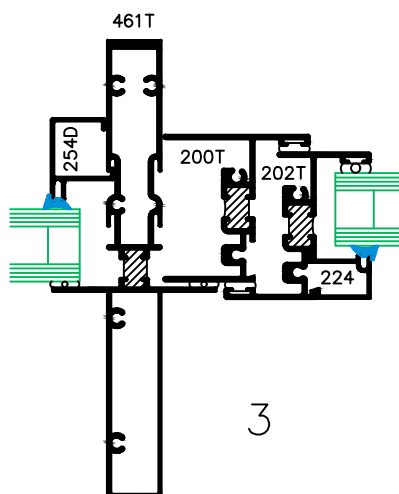
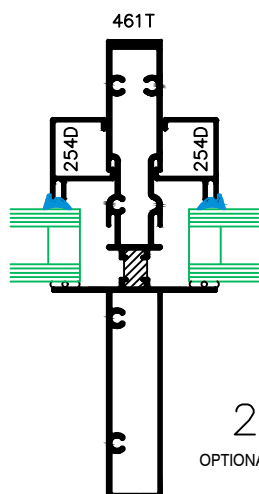
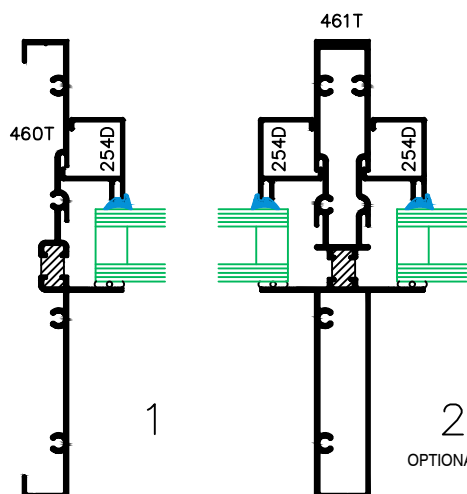
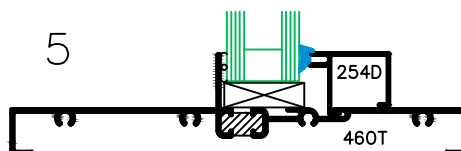
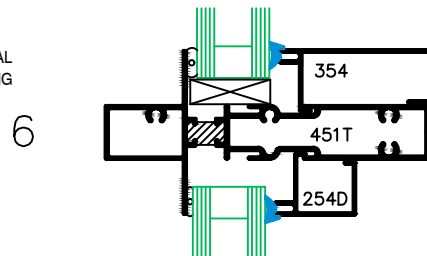
DETAILS



OPEN-OUT
VENT
200T SERIES



OPTIONAL
GLAZING

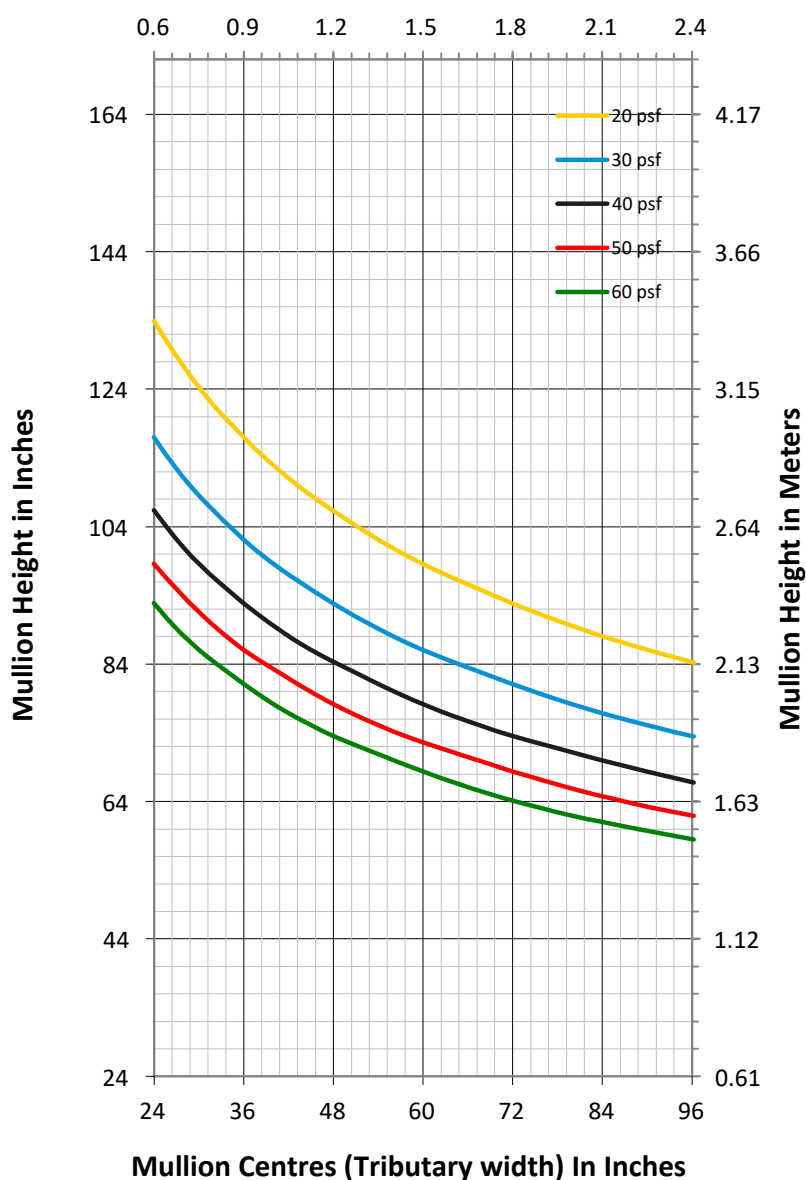


WIND LOAD CHART FOR 460T SERIES - PART # 451T

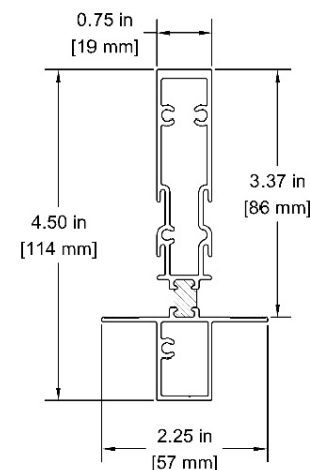
SPAN CHART

**SPAN CHART IS FOR ESTIMATION ONLY.
DO NOT UTILIZE FOR DETAILED DESIGN.
CHART IS BASED ON DEFLECTION ANALYSIS
ONLY**

Mullion Centres (Tributary width) In Meters



MULLION SECTION



SYSTEM PROPERTIES

Moment of Inertia, Section Modulus & Area

Moment of Inertia, Ixx	Ixx = 1.82 in ⁴
Section Modulus, Sxx	Sxx = 0.37 in ³
Total Area	A = 0.95 in ²

Modulus of Elasticity

Aluminum	10,000,000 PSI
Steel	29,000,000 PSI

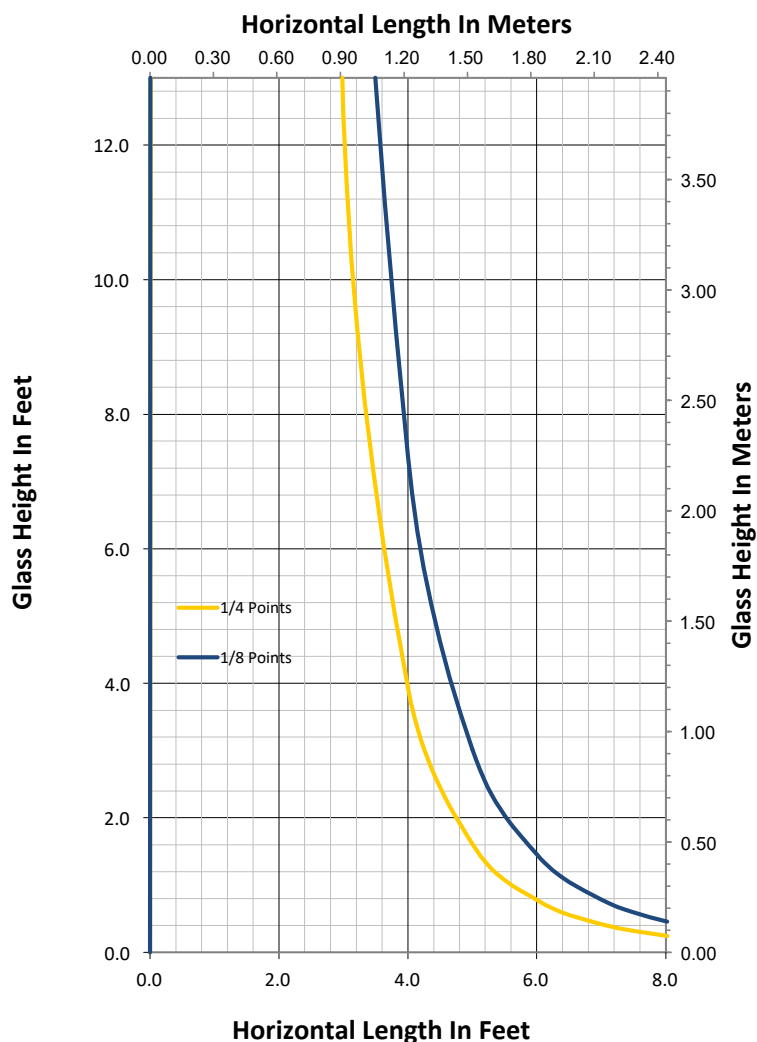
GENERAL NOTES

1. Deflection Limit: L/175 up to 13.5ft, L/240 + 0.25" over 13.5ft
2. Assume horizontal members provide lateral support
3. Steel moment of inertia converted to polyester, vinyl or 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 2020).

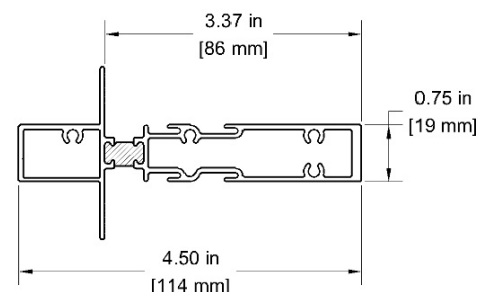
DEAD LOAD CHART FOR 460T SERIES - PART # 451T

SPAN CHART

SPAN CHART IS FOR ESTIMATION ONLY.
DO NOT UTILIZE FOR DETAILED DESIGN.
CHART IS BASED ON DEFLECTION ANALYSIS
ONLY



MULLION SECTION



SYSTEM PROPERTIES

Moment of Inertia, Section Modulus & Area

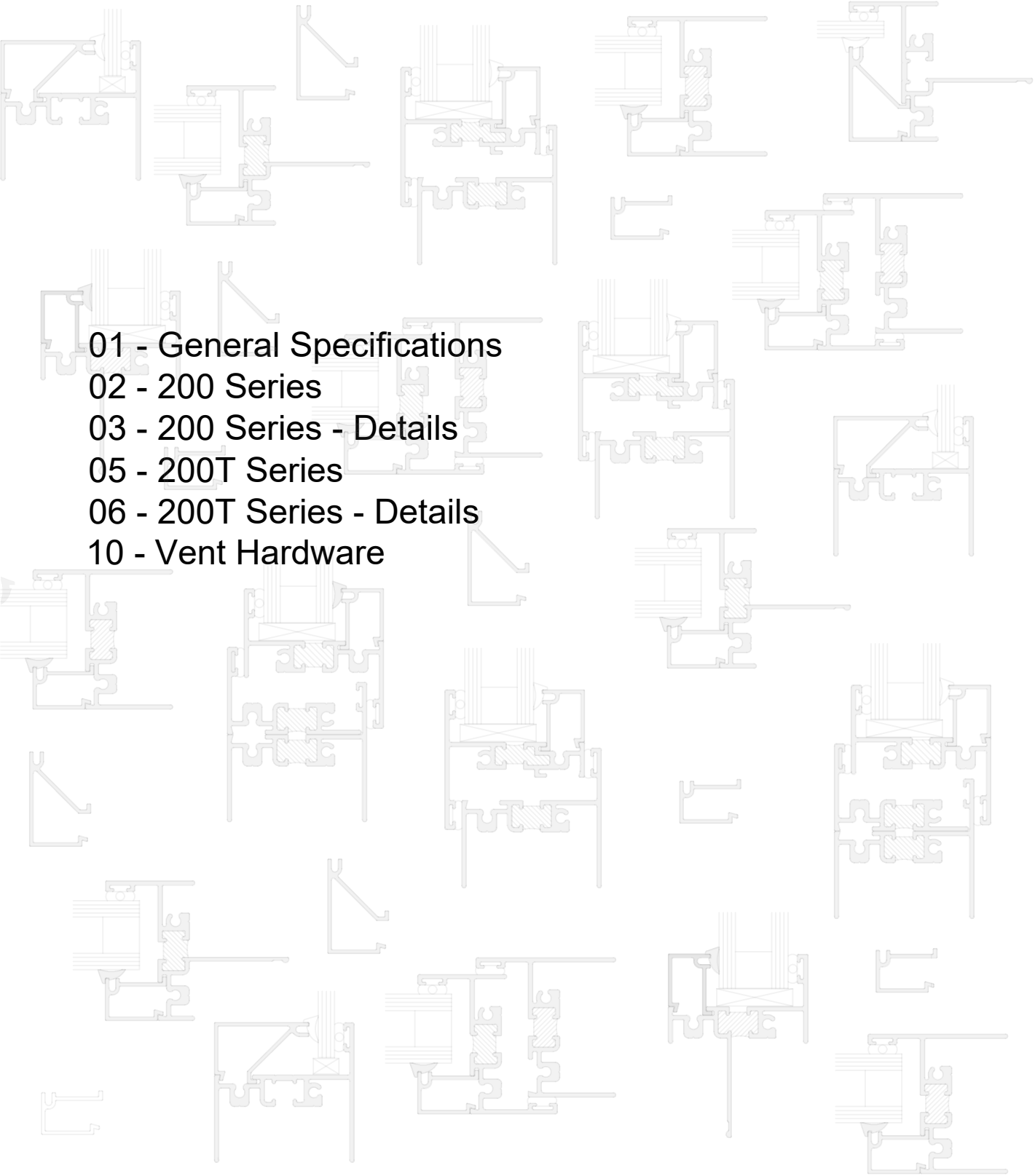
Moment of Inertia, I _{yy}	I _{yy} = 0.12 in ⁴
Section Modulus, S _{yy}	S _{yy} = 0.13 in ³
Total Area	A = 0.95 in ²

Modulus of Elasticity

Aluminum	10,000,000 PSI
Steel	29,000,000 PSI

GENERAL NOTES

1. Deflection Limit: 0.125" (3.2mm).
2. Charts are calculated assuming a 1" overall sealed unit (6mm/13mm spacer/6mm)
3. Calculations are based on the position of the setting blocks being placed at 1/4 or 1/8 points.

- 
- 01 - General Specifications
02 - 200 Series
03 - 200 Series - Details
05 - 200T Series
06 - 200T Series - Details
10 - Vent Hardware

Part 1 - GENERAL

Scope - The vent window system shall be _____ series as manufactured by METRO ALUMINUM Products Ltd. Supply and install aluminum framing, as described on the architectural drawings and as specified herein.

Work Not Included - See: Specifier's lists of excluded items; Items furnished but not installed and/or Items installed but not furnished.

Related Work Specified Elsewhere - See: Specifier's lists and related Sections.

Design & Performance Requirements - Window fixed and operable assemblies shall fully comply with the applicable standard specifications as described in Section 10 - Test requirements of CAN/CSA-A440-M90 - Windows. (Specifier's selection).

Submittals - Shop Drawings & Samples - Submit all documentation and samples for review by Consultant at one time, prior to fabrication of curtain wall products.

Quality Assurance - Provide all necessary information to show that all involved products meet or exceed the requirements of these specifications.

Delivery, Storage and Handling - Deliver, store, handle, protect and schedule materials and products so as to avoid any damage. Follow recommendations of AAMA CW-10 "Care and Handling of Architectural Aluminum from Shop to Site" and others as applicable.

Part 2 - PRODUCTS

Materials - All materials to meet the applicable minimum design and specifications requirements. Any defects impairing strength, durability or appearance are not acceptable. Extruded aluminum shall be AA 6063 T6 alloy and temper - $F_y = 110 \text{ MPa}$ (16 KSI) minimum. Sufficient strength and size assembly and anchoring shall be made of corrosion-resistant and compatible material such as cadmium or zinc plated carbon steel or stainless steel. Separate incompatible materials and prevent galvanic action (electrolytic corrosion). Structurally adequate anchoring metal brackets shall be anticorrosive painted. Conventional wet-dry/dry-wet/dry-dry, inside/outside glazing method shall be applicable (Specifier's selection). Gasketing to utilize: standard glazing butyl tape completed with hard extruded shim and interior dense gasket extruded from Neoprene, EPDM or other equal material, as required. Gasket profile shall be designed and sized to uniformly fit tight and properly seal glass-metal interfacing. Acceptable gasket compression range to be 0.7 to 1.7 kN/m (4 - 10 lbs/in). Glass setting to be compatible with glass unit seals and/or other parts involved as required.

System Description - Framing System shall be 200, 200T - non-thermally broken/uninsulated (thermally broken/insulated - T), for single glass (sealed insulating glass units) METRO Series - Specifier selection - as manufactured by METRO ALUMINUM Products Ltd. and compatible with 250, 350 and 450 Series window systems, and 2400/2500 curtain wall systems.

Where applicable, thermal break shall be polyurethane poured-in resin type.

Glass perimeter retention, for specified glazing methods, shall be achieved by glazing shimmed tape/inorganic rubber gasket and glazing stop profile c/w inorganic rubber gasket. Glass hard bite to be 12.7 mm (0.5") minimum. Whenever substitute/alternative products are considered, supporting data to be submitted ten (10) days prior to bid date to allow for valid comparison. Approval of alternates to be confirmed in advance of bid closing by addendum only.

Hardware - Operable vents should be manufactured as Top-Hung-Open-Out (THOO), Side-Hung-Open-Out (SHOO), Top-Hung-Open-In (THOI), Side-Hung-Open-In (SHOI) - Specifier's selection. Friction arms, aluminum hinges, cam handles, understay arms, or others as required and/or applicable - Specifier's selection.

Fabrication - Extruded profiles for fixed frame and operable vent shall be accurately fabricated and assembled and sealed to provide air/water tight fit hairline joints only. Fastening shall allow for permanent true and square set of frame elements. Assembly shall utilize concealed screws only. Properly sealed frame assembly interfacing mitre and butt joints shall result in uninterrupted continuity of air barrier and compartmentization. Frame assemblies shall be free of warp. No exposed fasteners are permitted. Selected operable vent hardware to be compatible with window framing. Sill and head flashing shall be designed and fabricated to suit site conditions as required.

Finish - All exposed surfaces shall be finished as specified. The finish, as per AAM designation, shall be (Specifier's selection):

Standard clear anodizing to AA - M12C22A31
Standard perma bronze to AA - M12C22A44
Standard black anodizing to AA - M10C21A44
Duracron acrylic enamel to AA - M12C4XR1X
Custom paint qualities and colors - Specifier's selection.

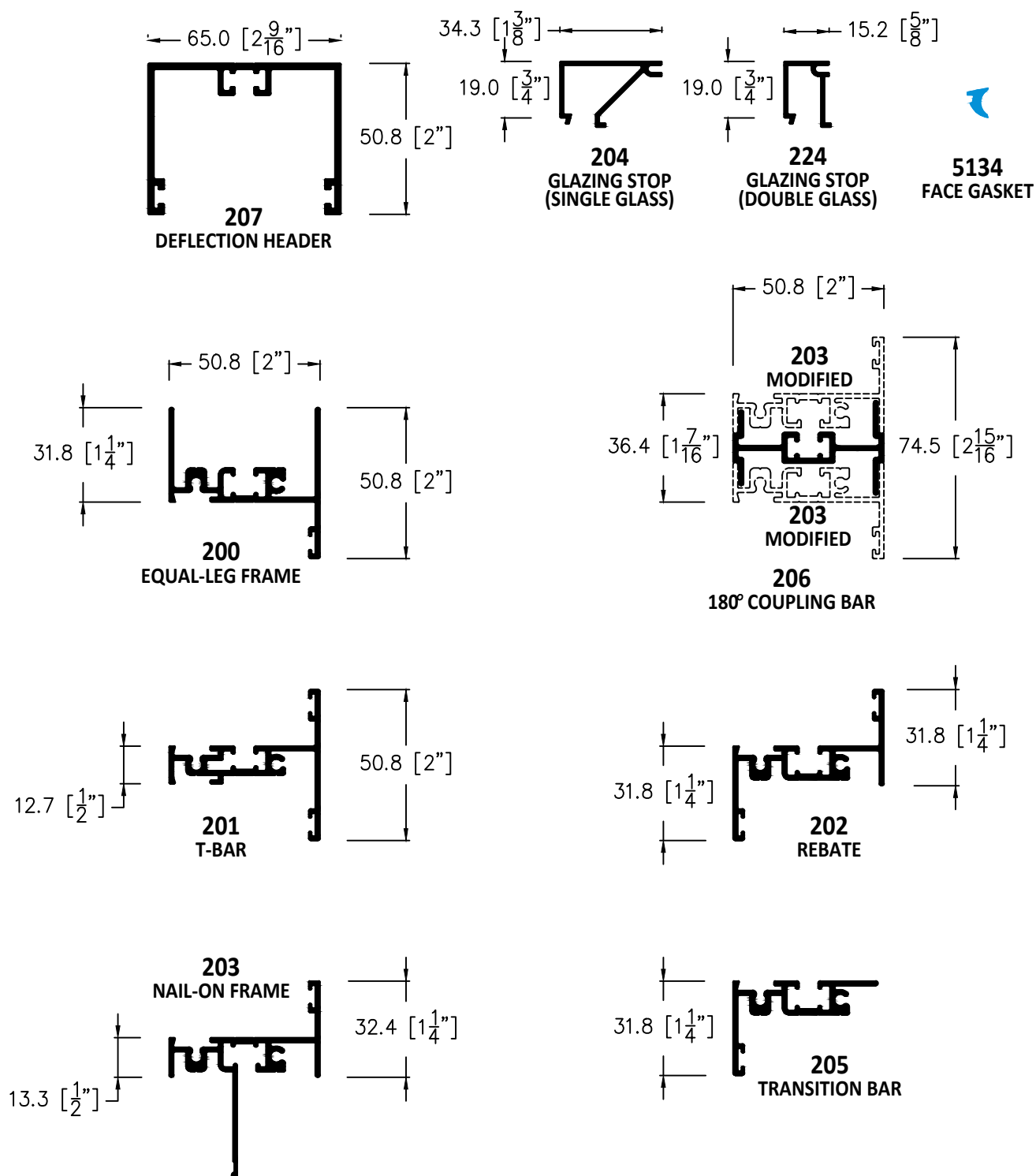
Part 3 - EXECUTION

Installation - Anchoring shall suit perimeter conditions of rough openings and seals as required. Prefabricated/preglazed framing to be installed at prepared openings, at correct locations as shown on drawings, set level, plumb, square and aligned with other work in accordance with manufacturer's instructions, approved shop and erection drawings. Perimeter joints to be sealed/caulked as specified and detailed to ensure weathertight assembly.

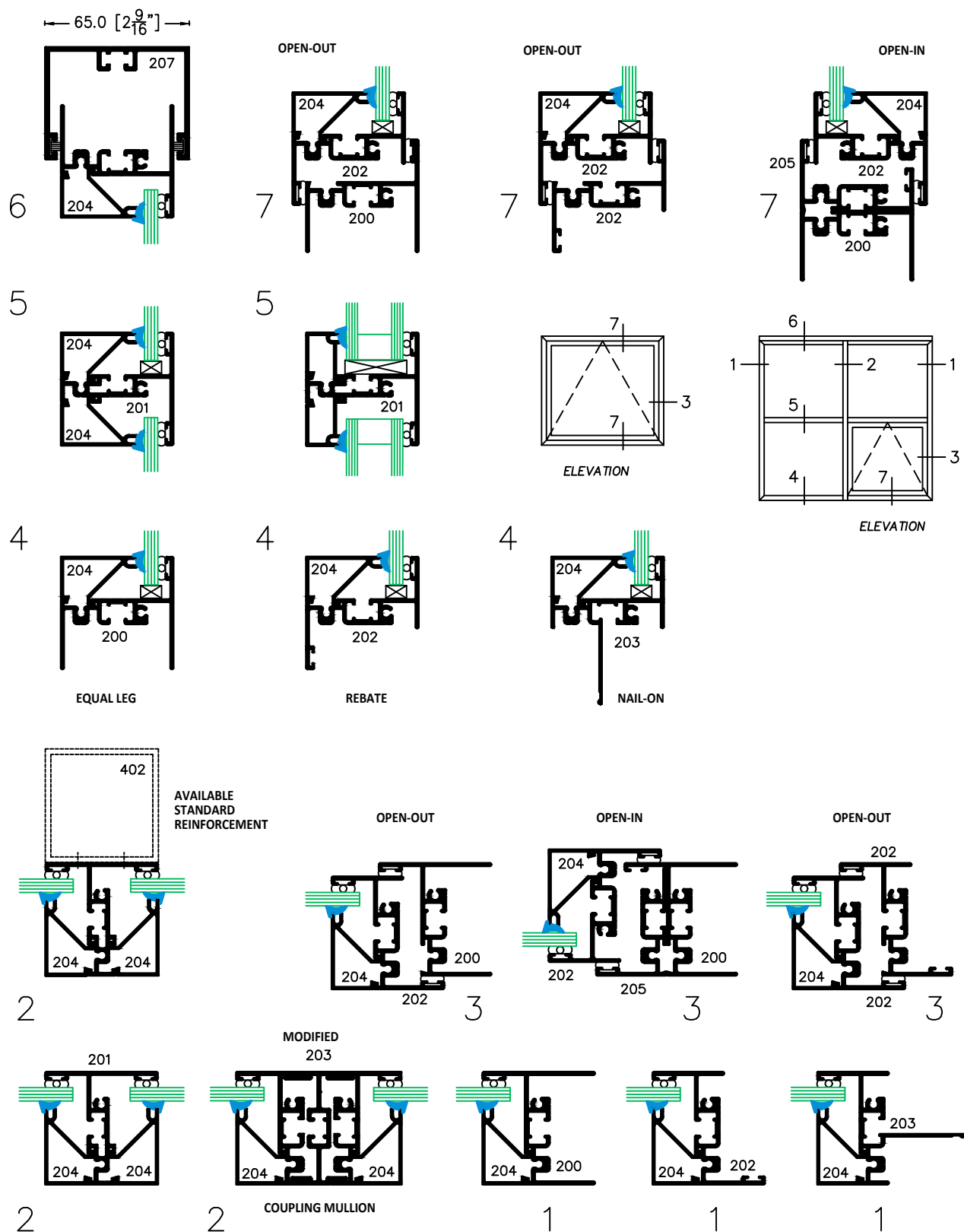
Protection and Cleaning - Work to be protected from damage during and after installation. Consult with manufacturer and installer to determine appropriate protective measures. The General Contractor shall be responsible for protection during construction and for final cleaning. After installation, aluminum work and glass to be cleaned according to instructions/manuals provided by product manufacturers and glaziers. Use appropriate cleaning materials and methods. Do not scratch or damage glass or finishes.



COMPONENTS

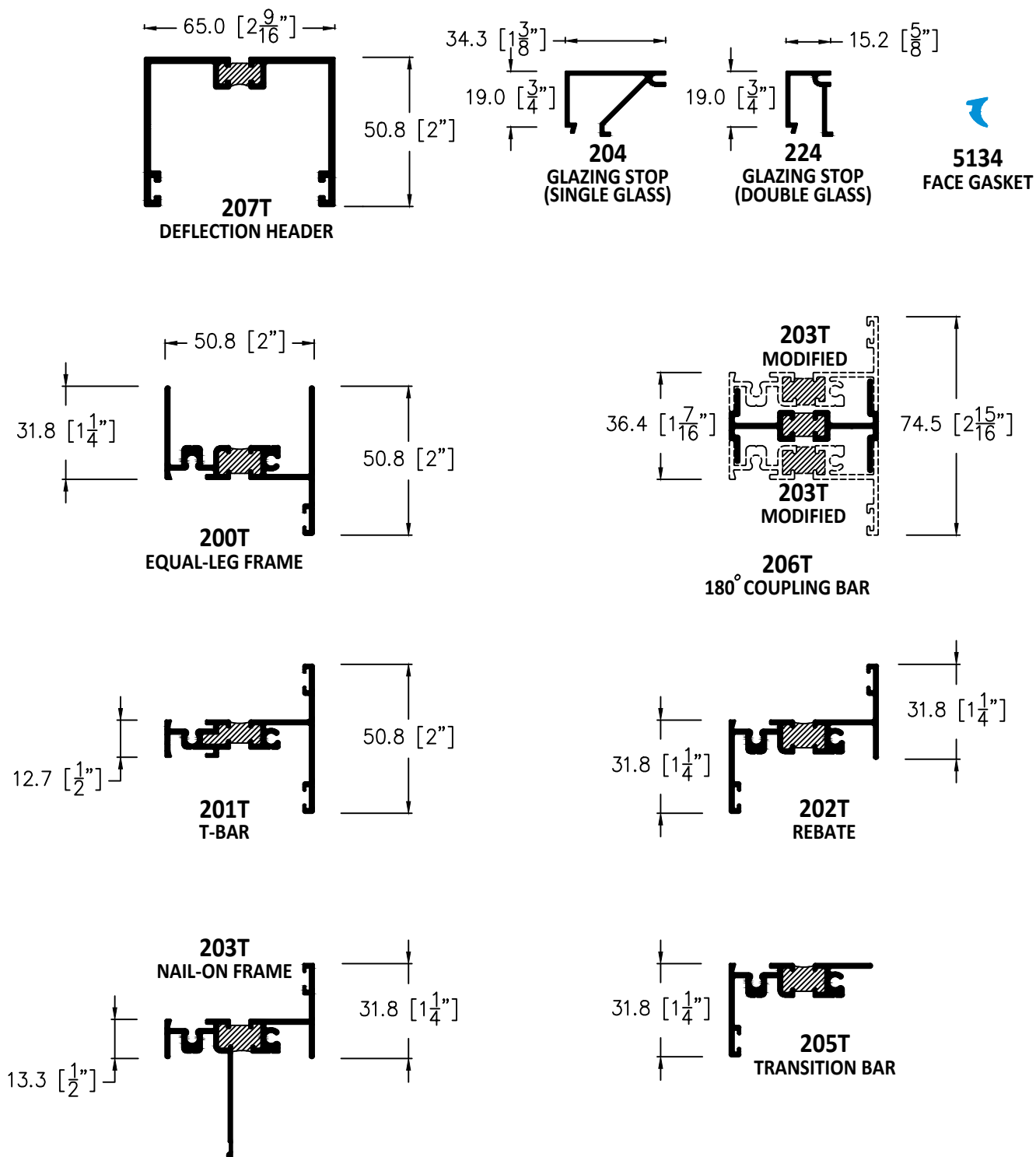


DETAILS

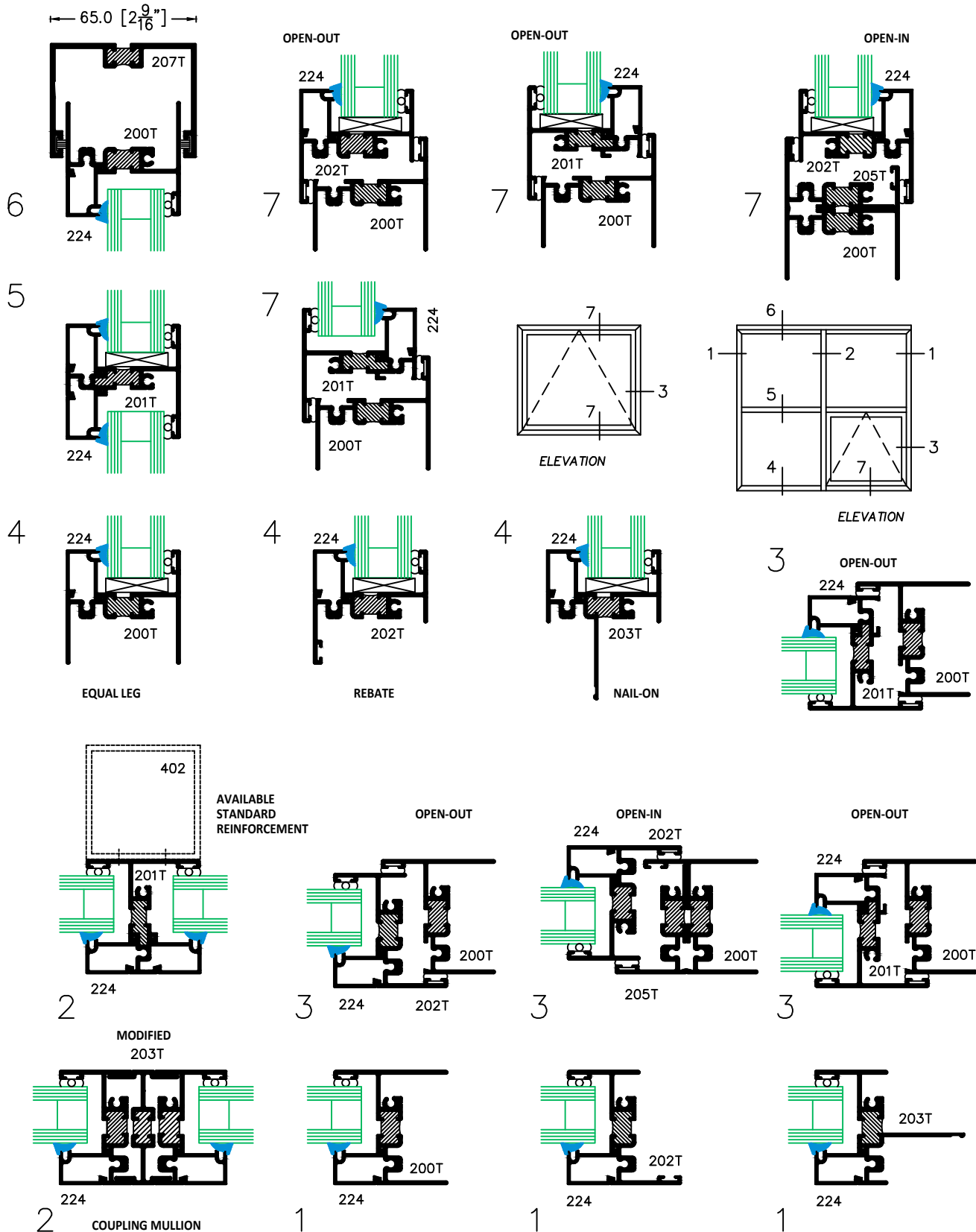




COMPONENTS



DETAILS





VFH-08/10/12/16/20/24
4 BAR FRICTION HINGE



VEH-10/12/16
EGRESS FRICTION HINGE



VBH-02
VENT BUTT HINGE



VBH-02 BP
VENT BUTT HINGE BLACK



VT-100/101/104
STANDARD CAM HANDLES AND STRIKE



VT-102/103/104
RING CAM HANDLE AND STRIKE



VT-200/201
INSWING CAM HANDLE



VT-202/203/204
INSWING RING CAM HANDLE AND STRIKE



VT-220
POLE EYE



VT-206/221
INSWING TRANSOM CATCH & POLE HOOK



VT-341
SASH FRICTION ADJUSTER



VT-351
UNDER SCREEN PUSH BAR



VT-300
DUAL ARM ROTO OPERATOR



VT-301
PIVOT ROTO TRACK PAIR



VT-310/311
SINGLE ARM ROTO OPERATOR



VT-312
SINGLE ARM ROTO ARM TRACK



VT-302
ROTO CRANK HANDLE



VT-302F
FOLDING ROTO CRANK HANDLE



VT-302T
ROTO T-CRANK HANDLE



VT-320/321
CASEMENT LOCK HANDLE & STRIKE



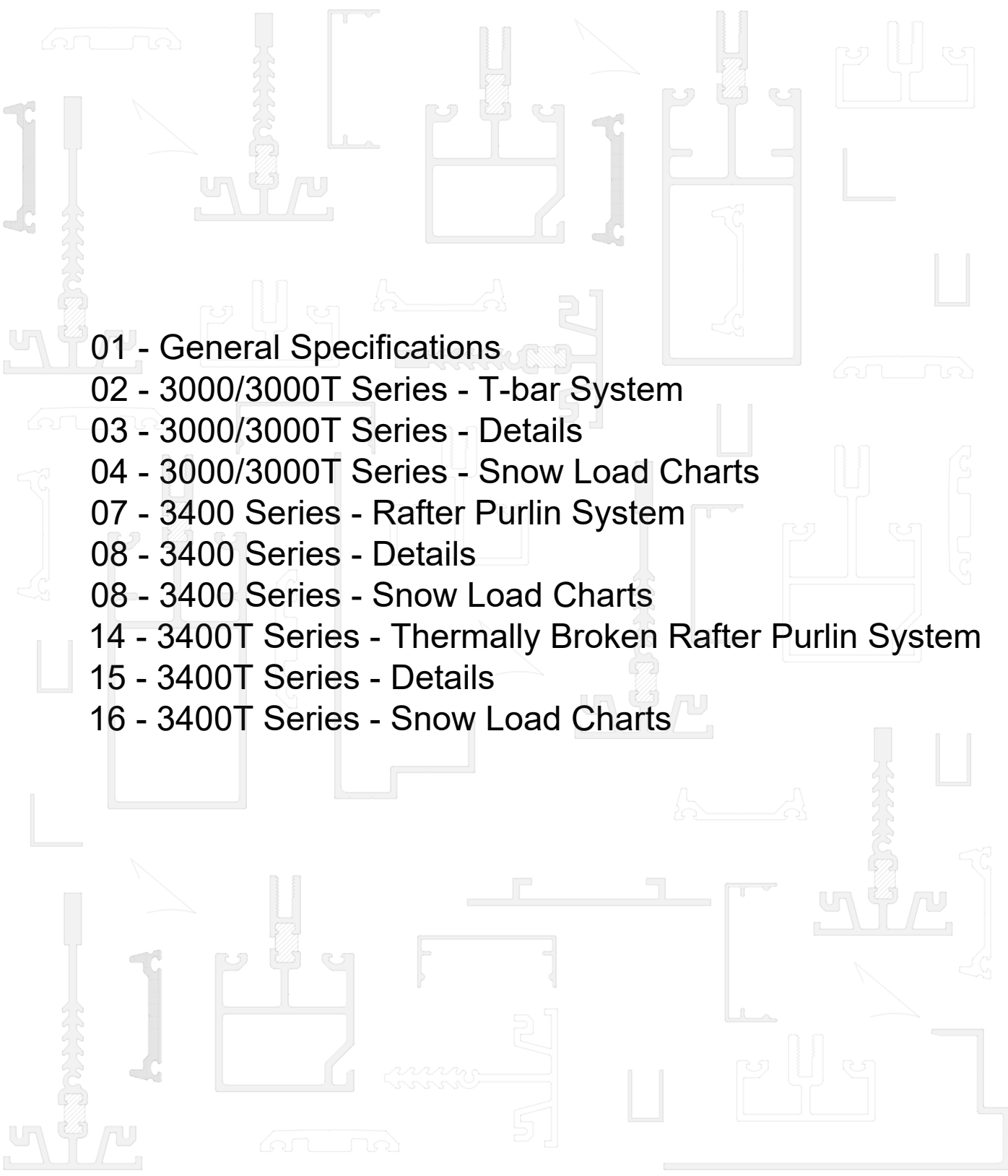
SCL/CLR
SMALL SCREEN CLIP



SCLSO/CLR
STANDOFF SCREEN CLIP



SOCOR
STANDOFF SCREEN CORNER

- 
- 01 - General Specifications
 - 02 - 3000/3000T Series - T-bar System
 - 03 - 3000/3000T Series - Details
 - 04 - 3000/3000T Series - Snow Load Charts
 - 07 - 3400 Series - Rafter Purlin System
 - 08 - 3400 Series - Details
 - 08 - 3400 Series - Snow Load Charts
 - 14 - 3400T Series - Thermally Broken Rafter Purlin System
 - 15 - 3400T Series - Details
 - 16 - 3400T Series - Snow Load Charts

Part 1 - GENERAL

Scope - The skylight framing system shall be _____ Series as manufactured by METRO ALUMINUM Products Ltd. Supply and install aluminum framing, as described on the architectural drawings and as specified herein.

Work Not Included - See: Specifier's lists of excluded items; Items furnished but not installed and/or Items installed but not furnished.

Related Work Specified Elsewhere - See: Specifier's lists and related Sections.

Design & Performance Requirements - Framing to fully comply with the applicable standard specifications as typically referenced to the following performance requirements criteria: Air Tightness, Water Tightness, Wind and Snow (and other applicable) Load Resistance, Temperature Index and Energy Performance. (Specifier's selection)

Submittals - Shop Drawings & Samples - Submit all documentation and samples for review by Consultant at one time, prior to fabrication of curtain wall products.

Quality Assurance - Provide all necessary information to show that all involved products meet or exceed the requirements of these specifications.

Delivery, Storage and Handling - Deliver, store, handle, protect and schedule materials and products so as to avoid any damage. Follow recommendations of AAMA CW-10 "Care and Handling of Architectural Aluminum from Shop to Site" and others as applicable.

Part 2 - PRODUCTS

Materials - All materials to meet the applicable minimum design and specifications requirements. Any defects impairing strength, durability or appearance are not acceptable. Extruded aluminum shall be AA 6063 T6 alloy and temper - $F_y = 110 \text{ MPa}$ (16 KSI) minimum. Sufficient strength and size assembly fasteners and anchoring bolts shall be made of corrosion-resistant and compatible material such as cadmium or zinc plated carbon steel or stainless steel. Separate incompatible materials and prevent galvanic action (electrolytic corrosion). Structurally adequate anchoring metal brackets shall be anticorrosive painted. Glass-to-metal contact is not acceptable.

3000/3000T Series - Glazing shall utilize standard interior extruded PVC gaskets and exterior rolled aluminum glazing beads as required for conventional dry-dry, outside glazing method with 2-side supported glass.

3400/3400T Series - Glazing shall utilize standard gaskets, dense interior and sponge exterior, shall be extruded from Neoprene, EPDM, or other equal material as required for conventional dry-dry, outside glazing method with 4-side supported glass. Gasket profiles shall be designed and sized to uniformly fit tight and properly seal glass-metal interfacing. Acceptable gasket compression range to be 0.7 to 1.7 kN/m (4 - 10 lbs/in).

Glass setting to be compatible with glass unit seals and/or other parts involved as required.

System Description - Framing Systems (Specifier's selection)

Reference face width dimension of extruded profiles shall be 2" (50.8 mm).

3000/3000T METRO Series - as manufactured by METRO ALUMINUM Products Ltd. - Conventional T-bar uninsulated (thermally broken/insulated) with internal drainage system and continuous anchor sill shoe for single glass and sealed insulating glass units, allowing for full integration with the rainscreen part of building envelope. Glass retention, as for dry-dry glazing method, shall be achieved by exterior glazing bead (retainer) profile. Glass hard bite to be 9.5 mm (0.375") minimum.

3400/3400T METRO Series - as manufactured by METRO ALUMINUM Products Ltd. - Thermally broken/insulated, tubular with internal drainage system for sealed insulating glass units or single glass, utilizing Rainscreen Principle and allowing for full integration with the building envelope. Purlins to be equipped with condensation gutters as required. Glass retention, as for dry-dry glazing method, shall be achieved by 4-side pressure plate (retainer) profile and inorganic rubber gasket. Glass hard bite to be 12.7 mm (0.5") minimum.

Whenever substitute/alternative products are considered, supporting data to be submitted ten (10) days prior to bid date to allow for valid comparison. Approval of alternates to be confirmed in advance of bid closing by addendum only.

Fabrication - Extruded profiles shall be accurately fabricated and assembled and sealed to provide air/water tight fit hairline joints only. Fastening shall allow for permanent true and square set of frame elements. Assembly shall utilize concealed screws only. Properly sealed frame assembly joints to result in continuity of air barrier on the system's inside side. Frame assemblies shall be free of warp. Uniformly compressed glazing gaskets shall secure glass in place. No exposed fasteners are permitted.

Finish - All exposed surfaces shall be finished as specified. The finish, as per AAM designation, shall be (Specifier's selection):

Standard clear anodizing to AA - M12C22A31

Standard perma bronze to AA - M12C22A44

Standard black anodizing to AA - M10C21A44

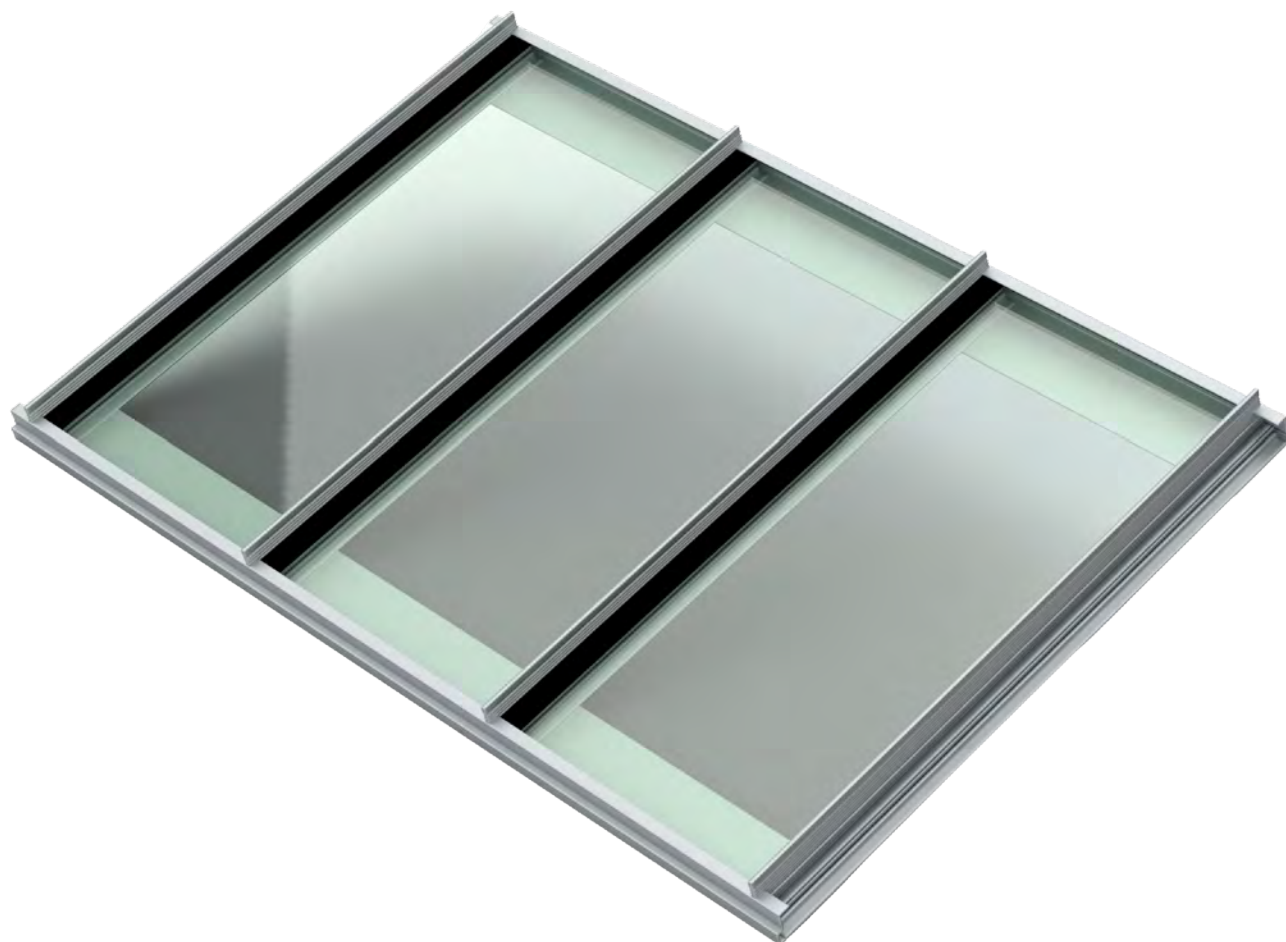
Duracron acrylic enamel to AA - M12C4XR1X

Custom paint qualities and colors - Specifier's selection.

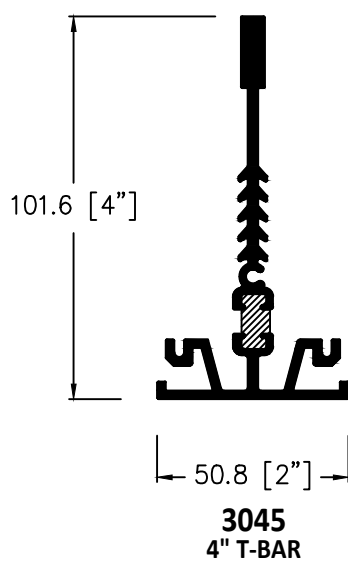
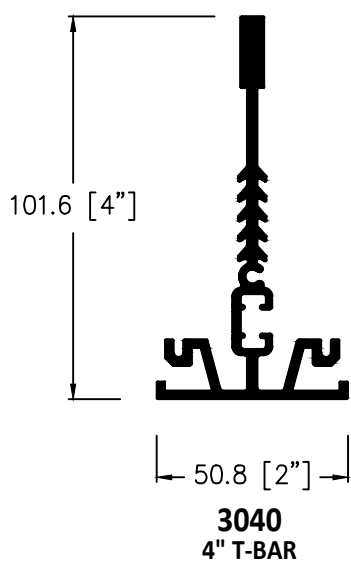
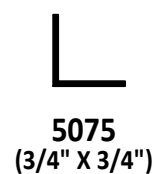
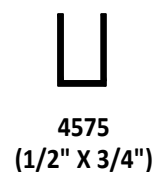
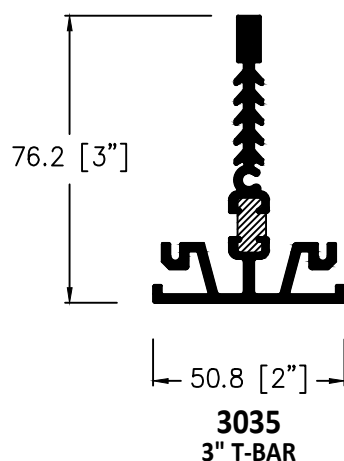
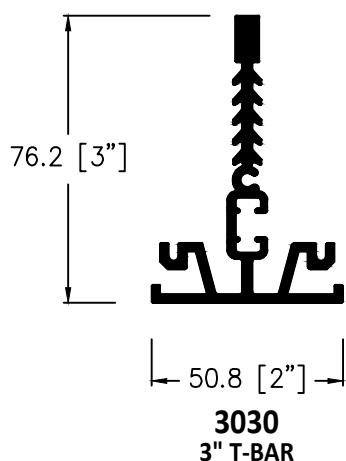
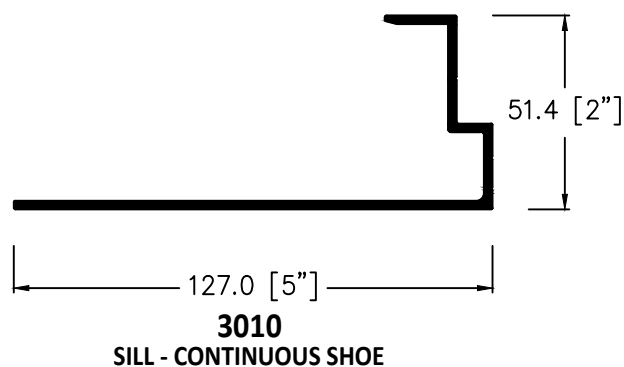
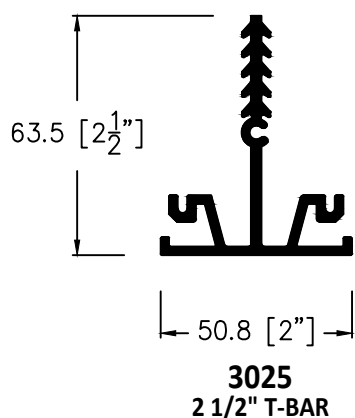
Part 3 - EXECUTION

Installation - Steel embeds and anchoring brackets to be placed and ready as required. Anchoring shall suit perimeter conditions of rough openings and seals as required. Prefabricated framing to be installed at prepared structure, at correct locations as shown on drawings, set with required reference to level, plumb, square and aligned with other work in accordance with manufacturer's instructions, approved shop and erection drawings. Perimeter joints to be sealed/caulked as specified and detailed to ensure weathertight assembly.

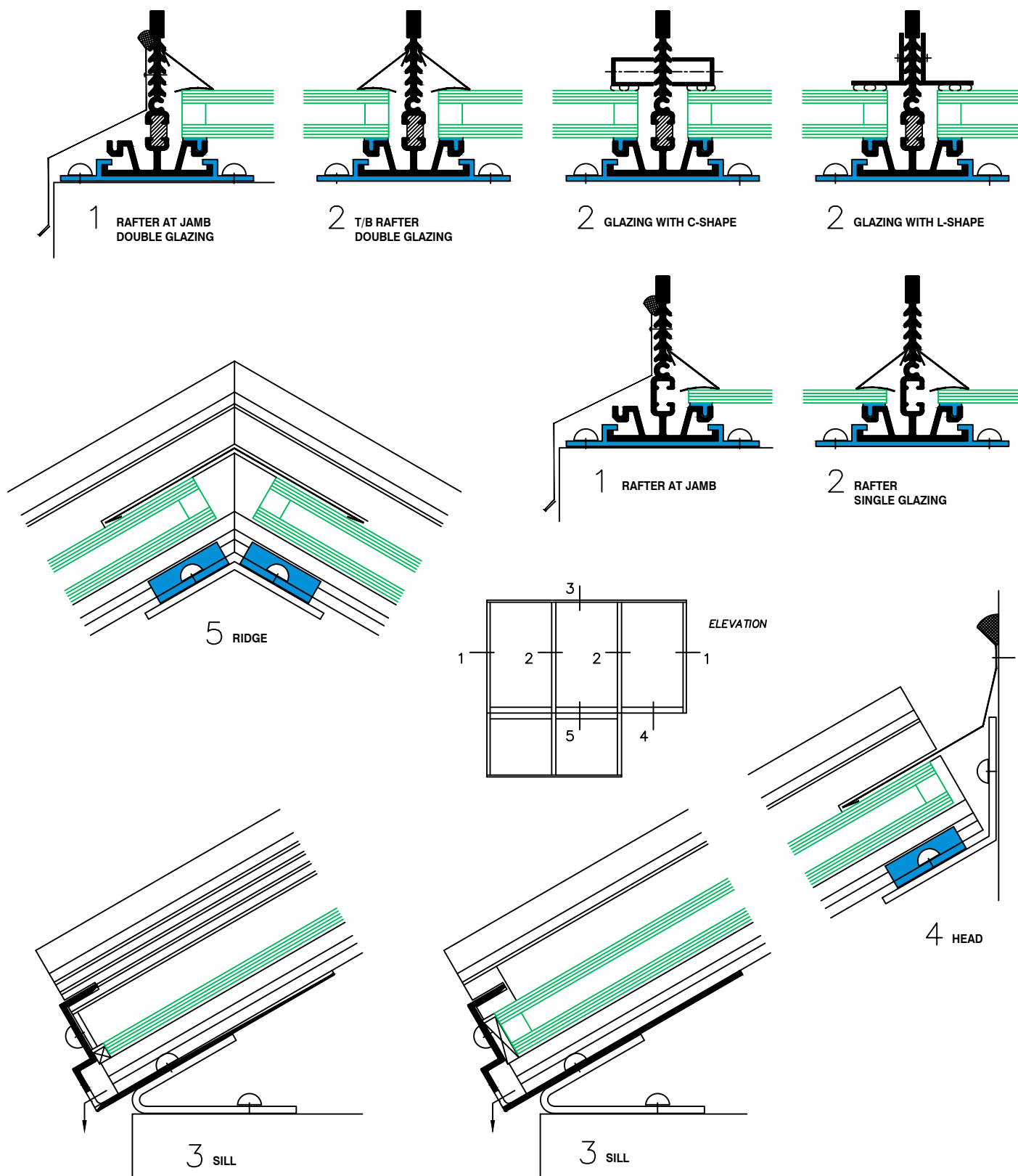
Protection and Cleaning - Work to be protected from damage during and after installation. Consult with manufacturer and installer to determine appropriate protective measures. The General Contractor shall be responsible for protection during construction and for final cleaning. After installation, aluminum work and glass to be cleaned according to instructions/manuals provided by product manufacturers and glaziers. Use appropriate cleaning materials and methods. Do not scratch or damage glass or finishes.



COMPONENTS

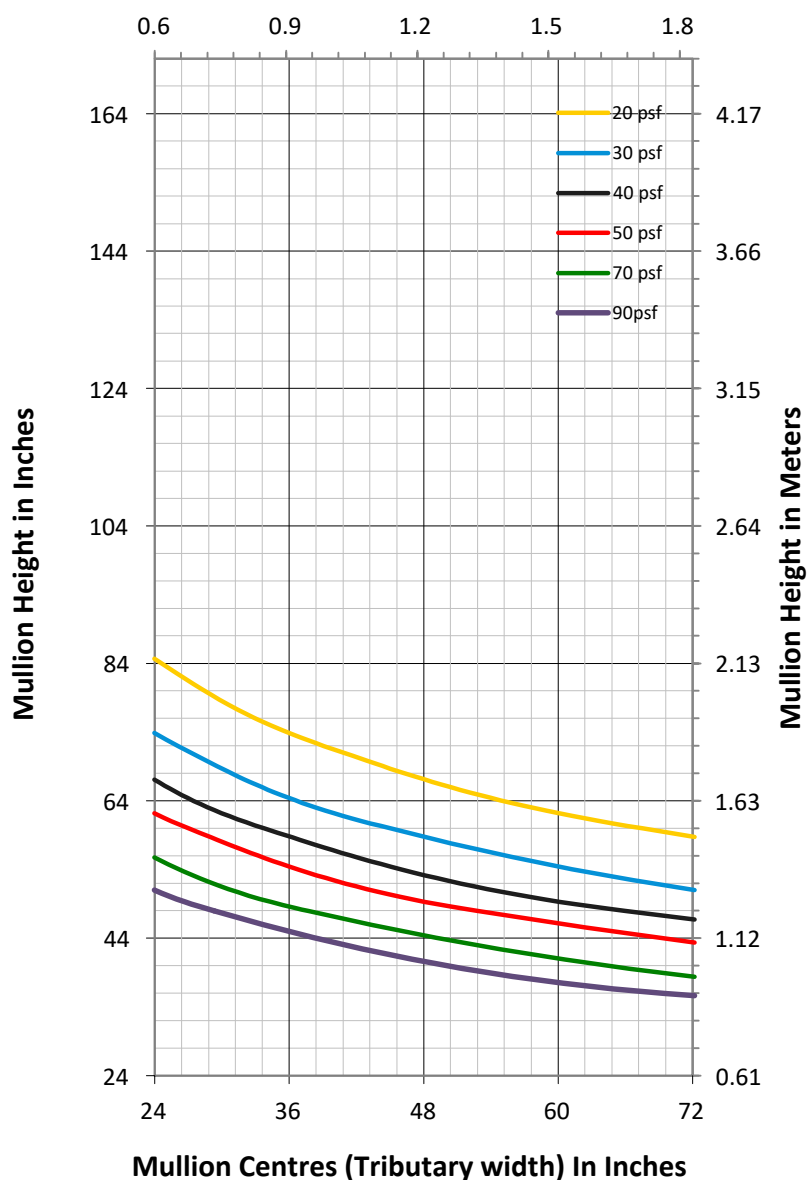
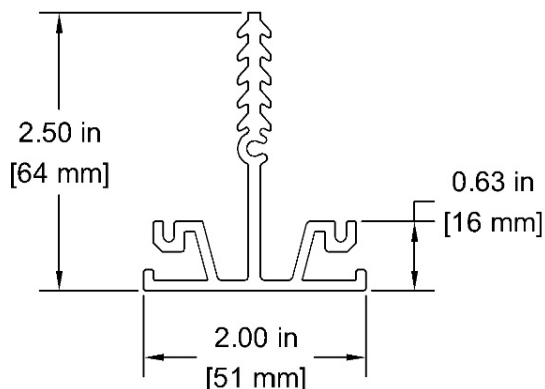


DETAILS



WIND LOAD CHART FOR 3000 SERIES - PART # 3025
SPAN CHART

**SPAN CHART IS FOR ESTIMATION ONLY.
DO NOT UTILIZE FOR DETAILED DESIGN.
CHART IS BASED ON DEFLECTION ANALYSIS
ONLY**

Mullion Centres (Tributary width) In Meters

MULLION SECTION

SYSTEM PROPERTIES
Moment of Inertia, Section Modulus & Area

Moment of Inertia, Ixx	Ixx = 0.46 in ⁴
Section Modulus, Sxx	Sxx = 0.27 in ³
Total Area	A = 0.79 in ²

Modulus of Elasticity

Aluminum	10,000,000 PSI
Steel	29,000,000 PSI

GENERAL NOTES

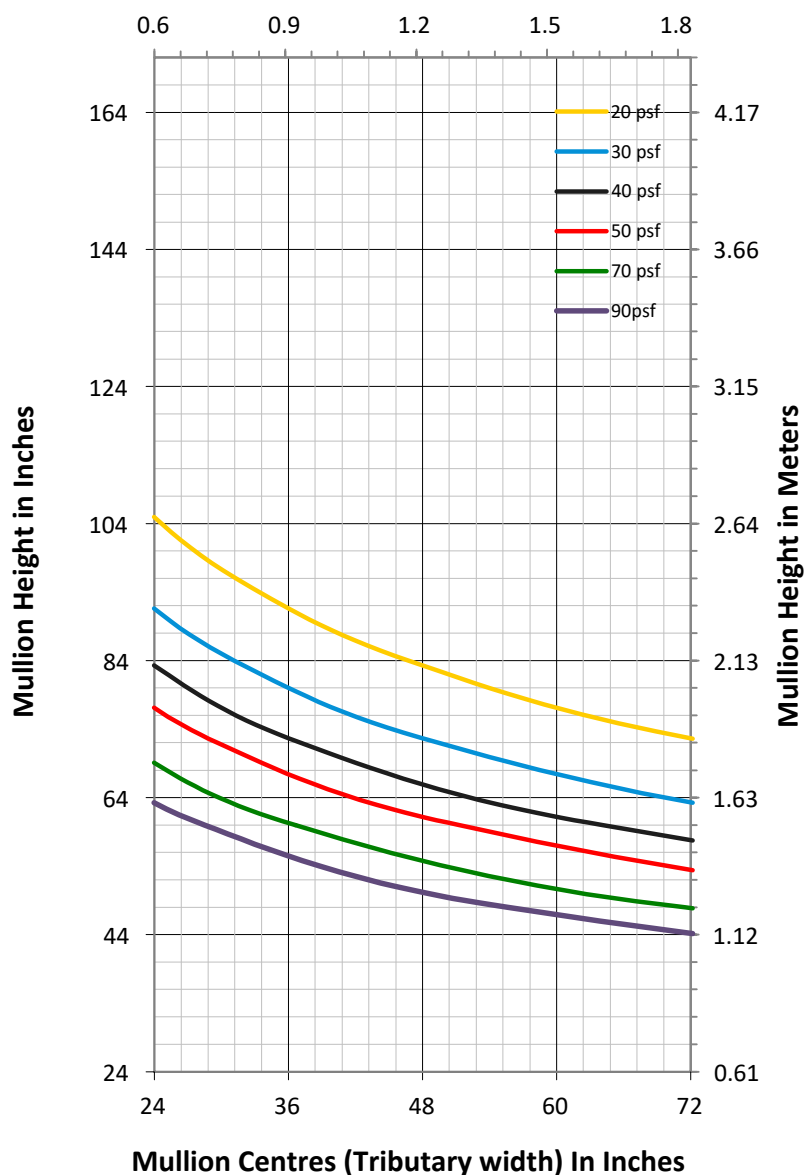
1. Deflection Limit: L/175 up to 13.5ft, L/240 + 0.25" over 13.5ft
2. Assume horizontal members provide lateral support
3. Steel moment of inertia converted to polyester, vinyl or aluminum equivalent
4. The design pressure (psf) shall be determined using the controlling load combination of dead, wind, live, and snow loads as applicable.

WIND LOAD CHART FOR 3000 SERIES - PART # 3030

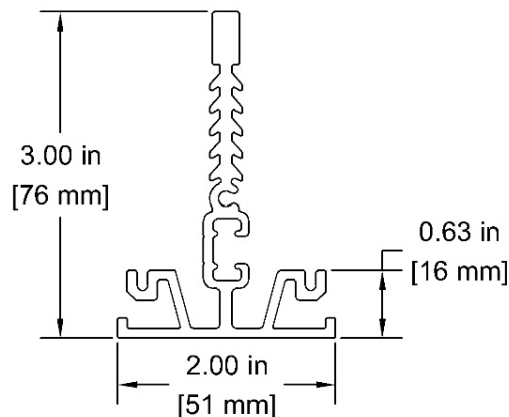
SPAN CHART

SPAN CHART IS FOR ESTIMATION ONLY.
DO NOT UTILIZE FOR DETAILED DESIGN.
CHART IS BASED ON DEFLECTION ANALYSIS
ONLY

Mullion Centres (Tributary width) In Meters



MULLION SECTION



SYSTEM PROPERTIES

Moment of Inertia, Section Modulus & Area

Moment of Inertia, I_{xx}	$I_{xx} = 0.88 \text{ in}^4$
Section Modulus, S_{xx}	$S_{xx} = 0.87 \text{ in}^3$
Total Area	$A = 0.97 \text{ in}^2$

Modulus of Elasticity

Aluminum	10,000,000 PSI
Steel	29,000,000 PSI

GENERAL NOTES

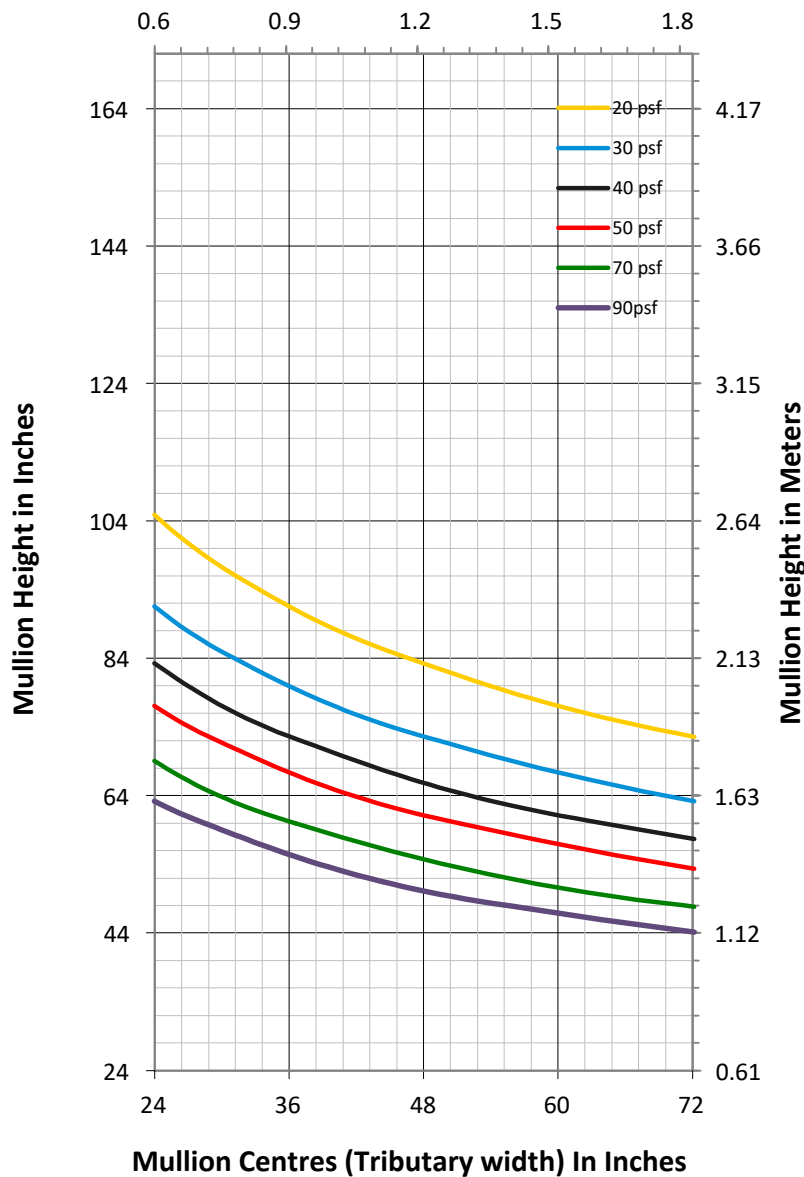
1. Deflection Limit: $L/175$ up to 13.5ft, $L/240 + 0.25"$ over 13.5ft
2. Assume horizontal members provide lateral support
3. Steel moment of inertia converted to polyester, vinyl or aluminum equivalent
4. The design pressure (psf) shall be determined using the controlling load combination of dead, wind, live, and snow loads as applicable.

WIND LOAD CHART FOR 3000T SERIES - PART # 3035

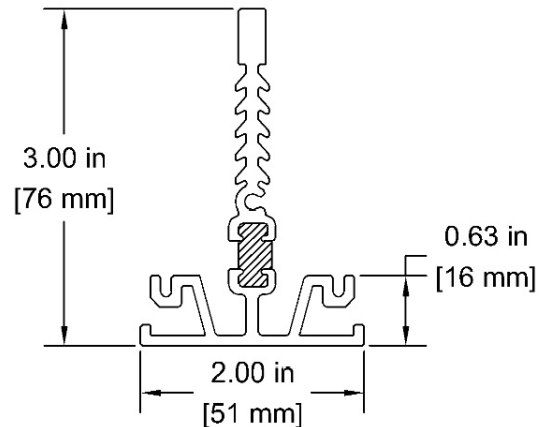
SPAN CHART

SPAN CHART IS FOR ESTIMATION ONLY.
DO NOT UTILIZE FOR DETAILED DESIGN.
CHART IS BASED ON DEFLECTION ANALYSIS
ONLY

Mullion Centres (Tributary width) In Meters



MULLION SECTION



SYSTEM PROPERTIES

Moment of Inertia, Section Modulus & Area

Moment of Inertia, I_{xx}	$I_{xx} = 0.88 \text{ in}^4$
Section Modulus, S_{xx}	$S_{xx} = 0.87 \text{ in}^3$
Total Area	$A = 0.95 \text{ in}^2$

Modulus of Elasticity

Aluminum	10,000,000 PSI
Steel	29,000,000 PSI

GENERAL NOTES

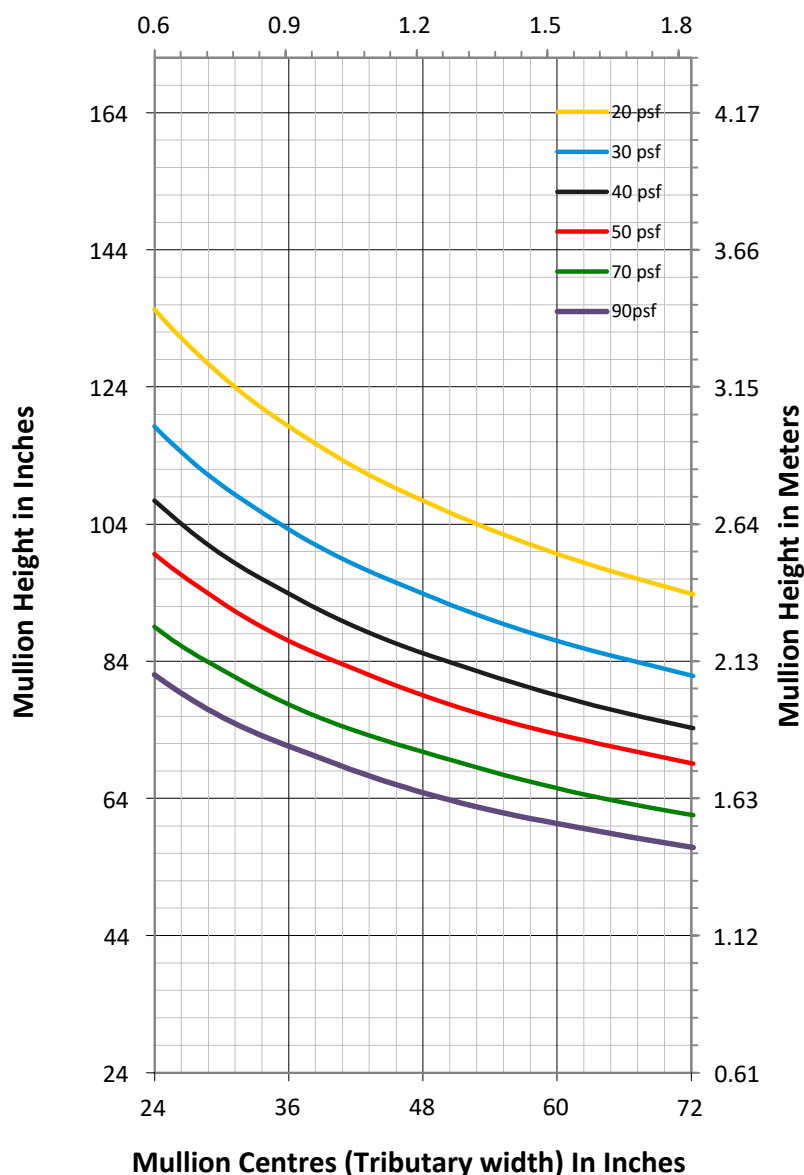
1. Deflection Limit: $L/175$ up to 13.5ft, $L/240 + 0.25"$ over 13.5ft
2. Assume horizontal members provide lateral support
3. Steel moment of inertia converted to polyester, vinyl or aluminum equivalent
4. The design pressure (psf) shall be determined using the controlling load combination of dead, wind, live, and snow loads as applicable.

WIND LOAD CHART FOR 3000 SERIES - PART # 3040

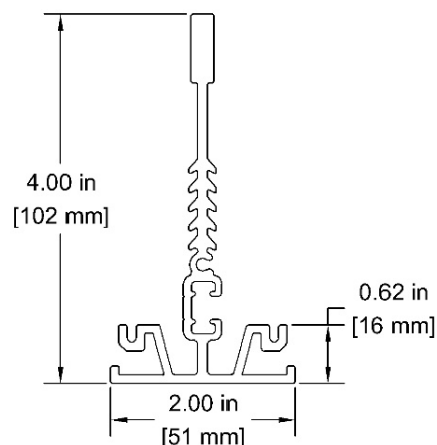
SPAN CHART

SPAN CHART IS FOR ESTIMATION ONLY.
DO NOT UTILIZE FOR DETAILED DESIGN.
CHART IS BASED ON DEFLECTION ANALYSIS
ONLY

Mullion Centres (Tributary width) In Meters



MULLION SECTION



SYSTEM PROPERTIES

Moment of Inertia, Section Modulus & Area

Moment of Inertia, I_{xx}	$I_{xx} = 1.88 \text{ in}^4$
Section Modulus, S_{xx}	$S_{xx} = 0.73 \text{ in}^3$
Total Area	$A = 1.11 \text{ in}^2$

Modulus of Elasticity

Aluminum	10,000,000 PSI
Steel	29,000,000 PSI

GENERAL NOTES

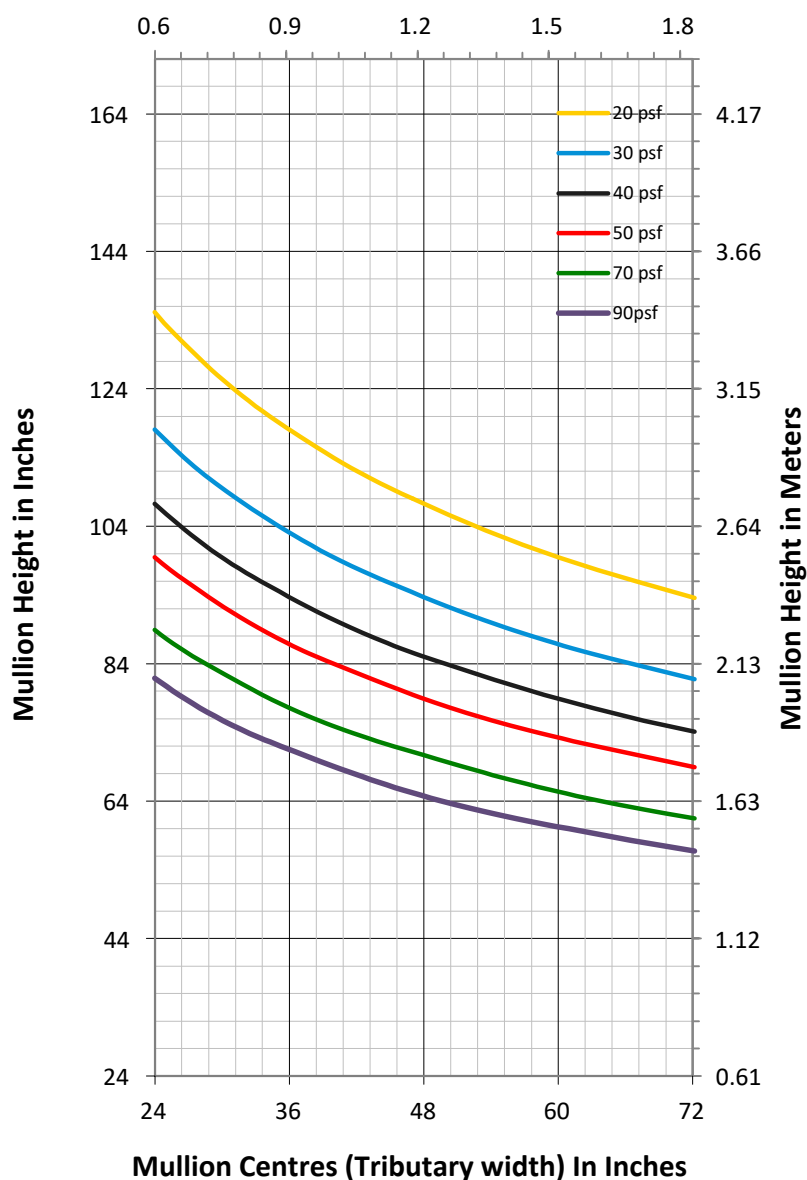
1. Deflection Limit: $L/175$ up to 13.5ft, $L/240 + 0.25"$ over 13.5ft
2. Assume horizontal members provide lateral support
3. Steel moment of inertia converted to polyester, vinyl or aluminum equivalent
4. The design pressure (psf) shall be determined using the controlling load combination of dead, wind, live, and snow loads as applicable.

WIND LOAD CHART FOR 3000T SERIES - PART # 3045

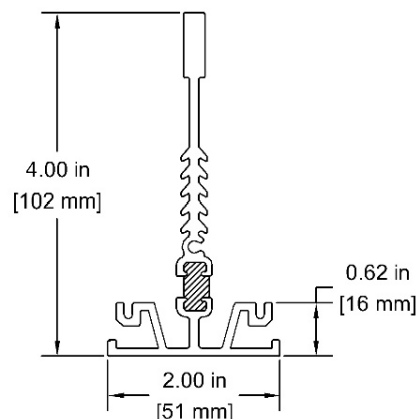
SPAN CHART

SPAN CHART IS FOR ESTIMATION ONLY.
DO NOT UTILIZE FOR DETAILED DESIGN.
CHART IS BASED ON DEFLECTION ANALYSIS
ONLY

Mullion Centres (Tributary width) In Meters



MULLION SECTION



SYSTEM PROPERTIES

Moment of Inertia, Section Modulus & Area

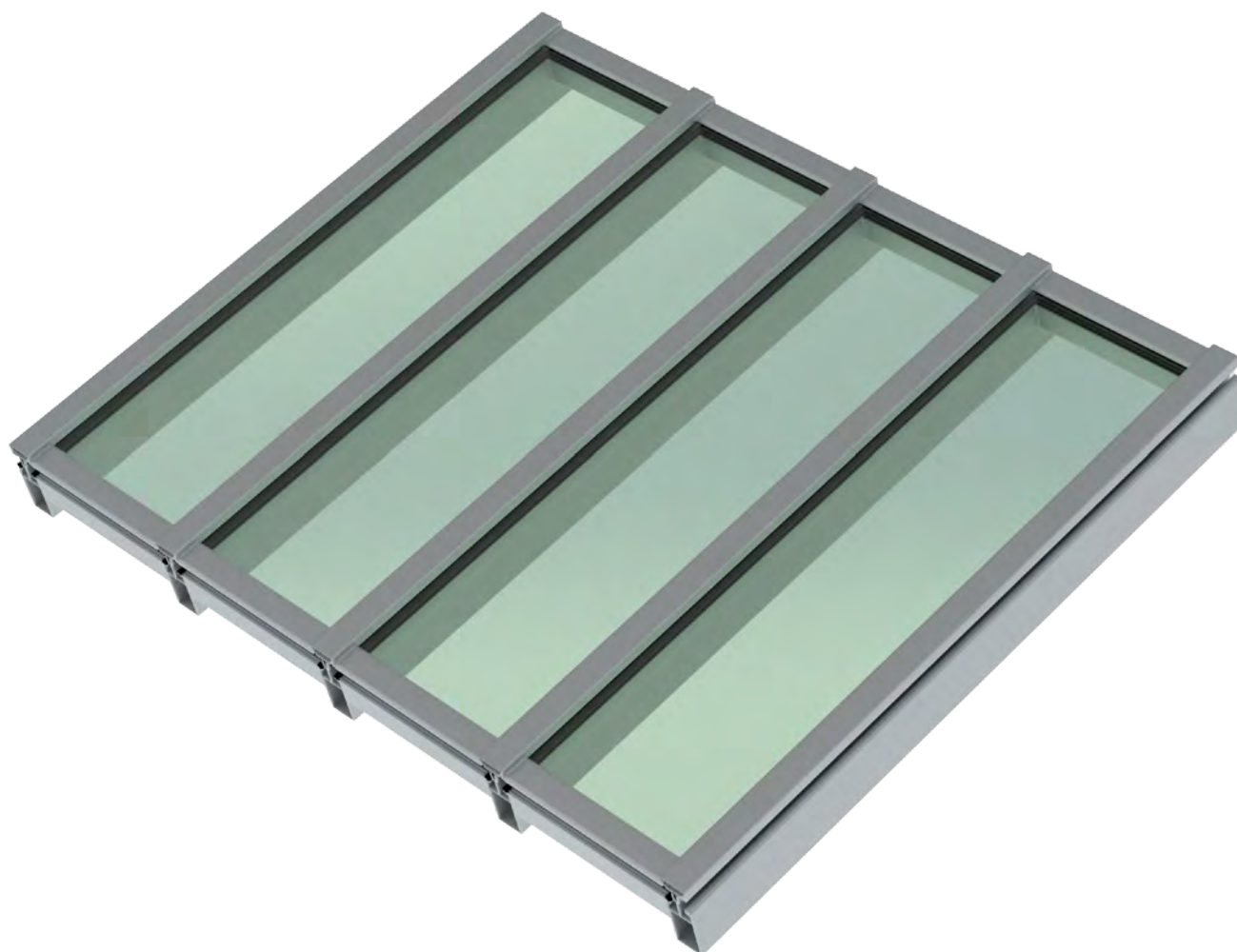
Moment of Inertia, Ixx	Ixx = 1.87 in ⁴
Section Modulus, Sxx	Sxx = 0.73 in ³
Total Area	A = 1.09 in ²

Modulus of Elasticity

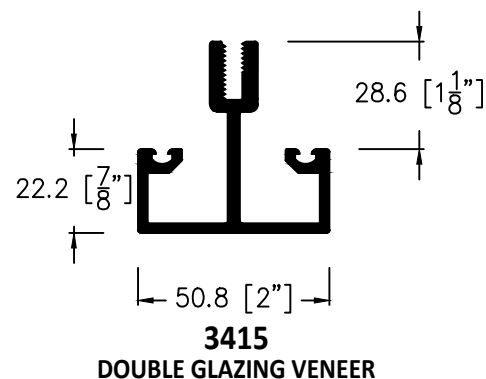
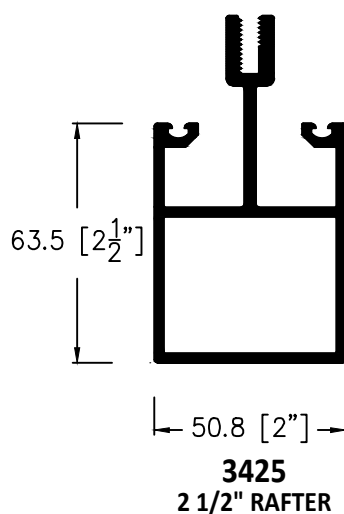
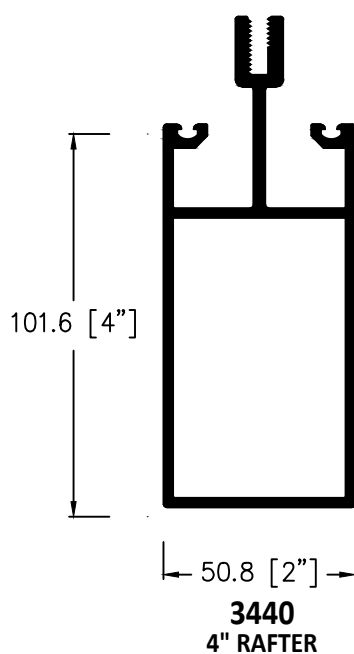
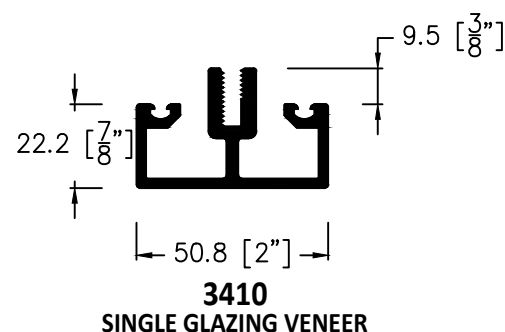
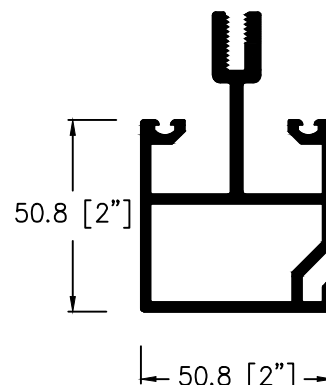
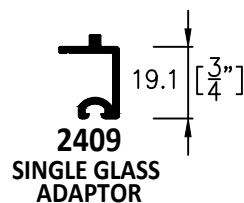
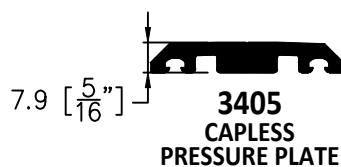
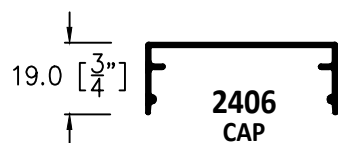
Aluminum	10,000,000 PSI
Steel	29,000,000 PSI

GENERAL NOTES

1. Deflection Limit: L/175 up to 13.5ft, L/240 + 0.25" over 13.5ft
2. Assume horizontal members provide lateral support
3. Steel moment of inertia converted to polyester, vinyl or aluminum equivalent
4. The design pressure (psf) shall be determined using the controlling load combination of dead, wind, live, and snow loads as applicable.

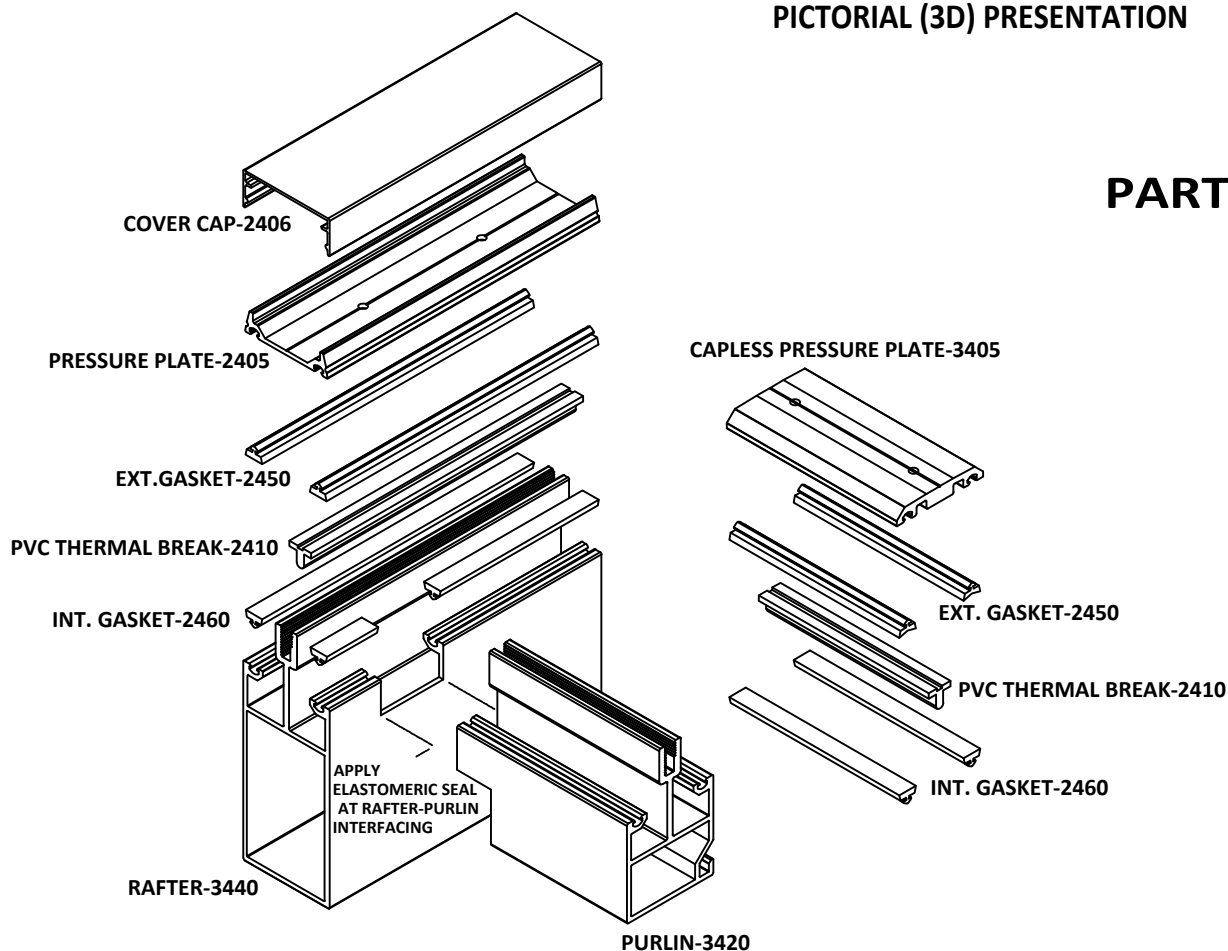


COMPONENTS

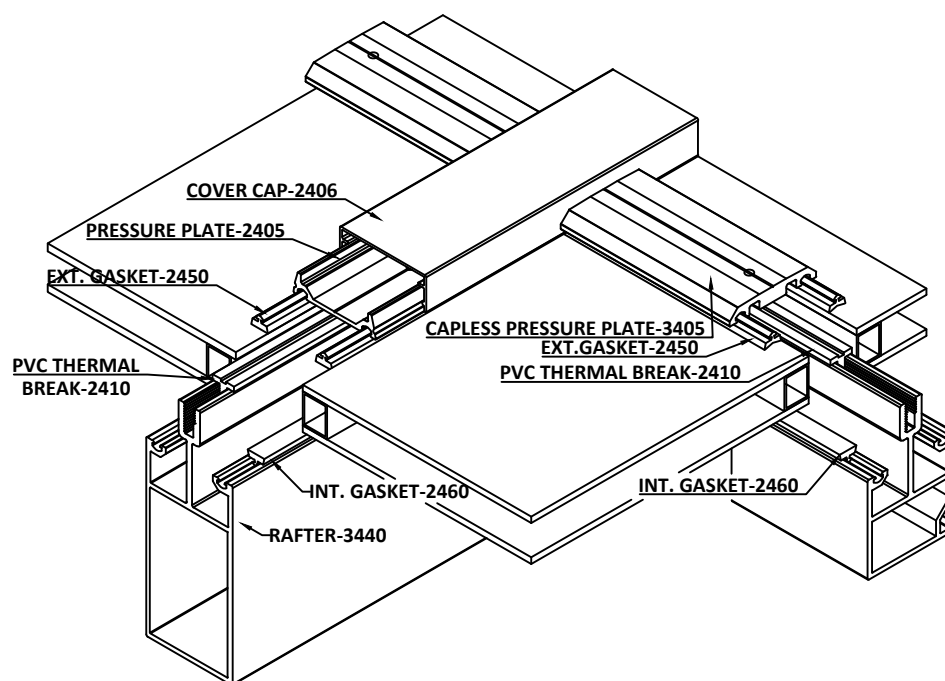


PICTORIAL (3D) PRESENTATION

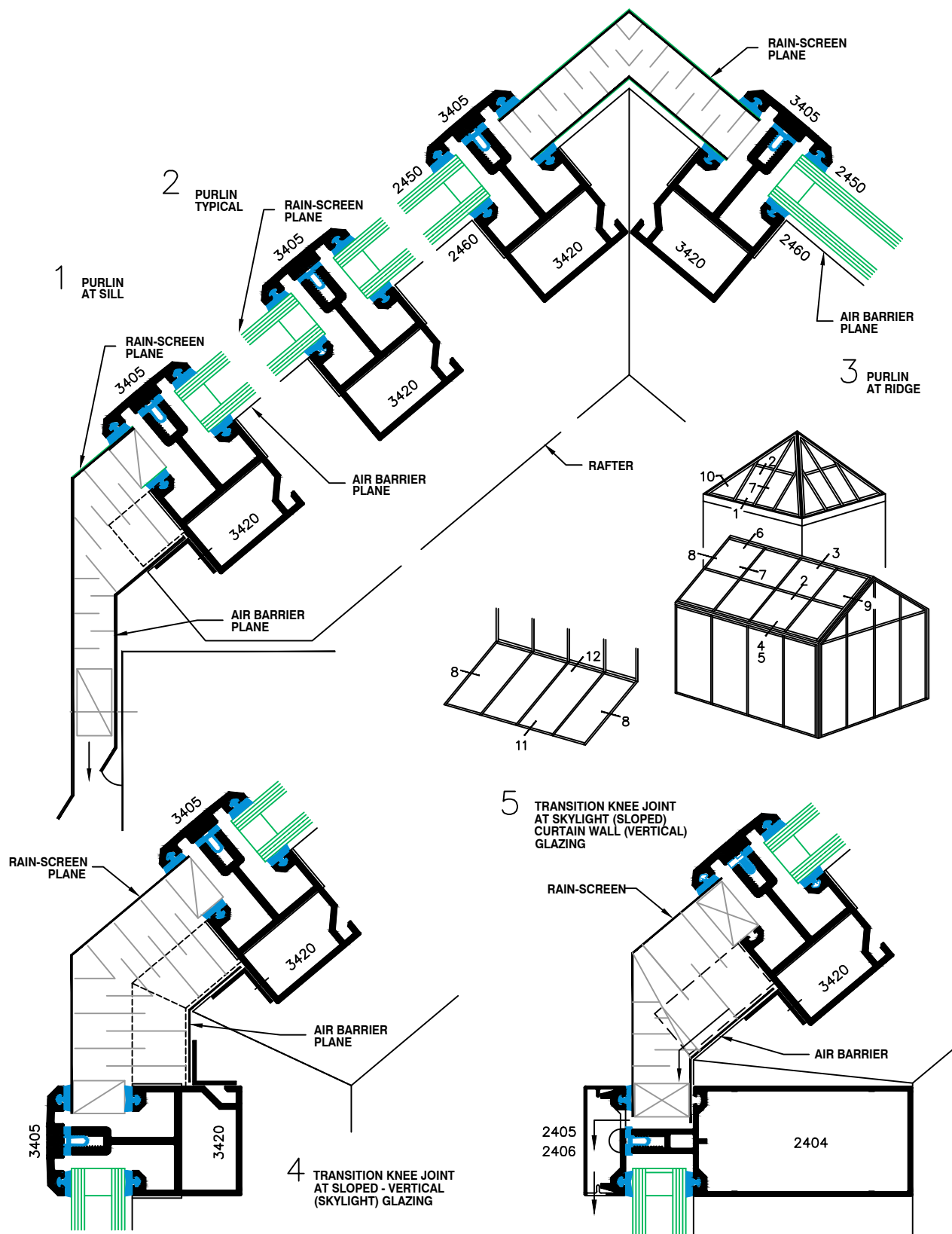
PARTS



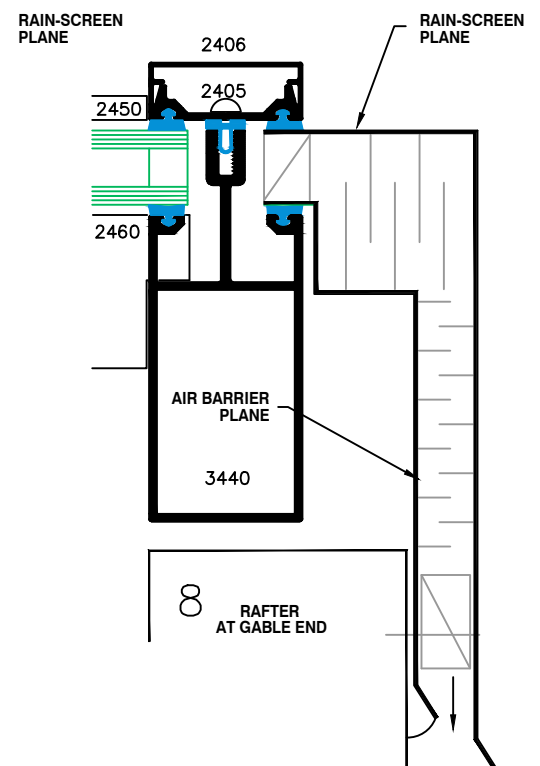
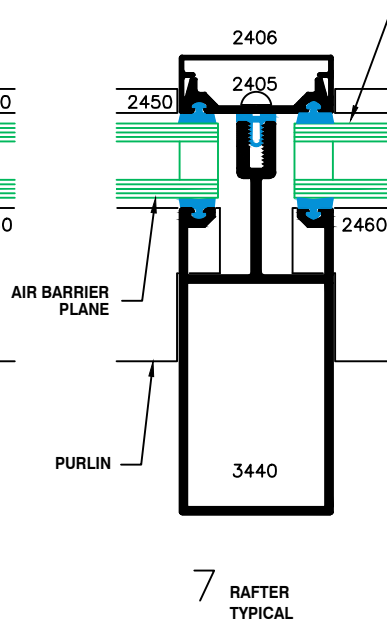
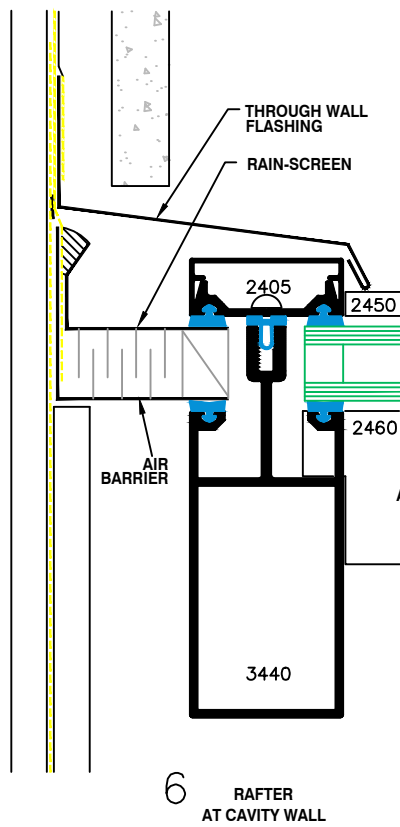
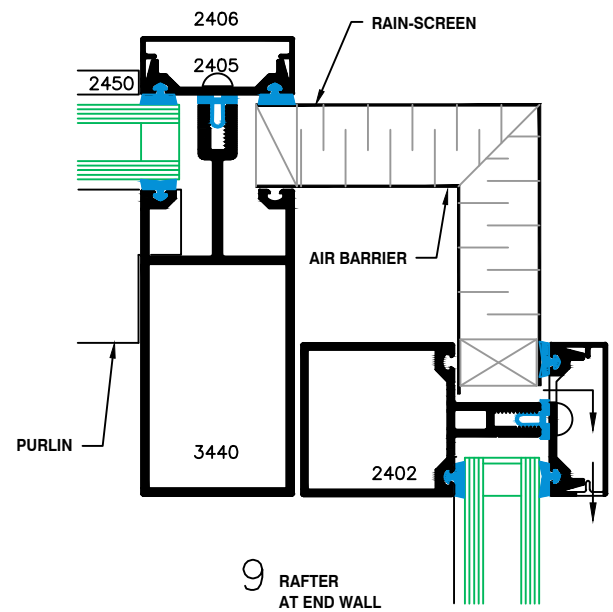
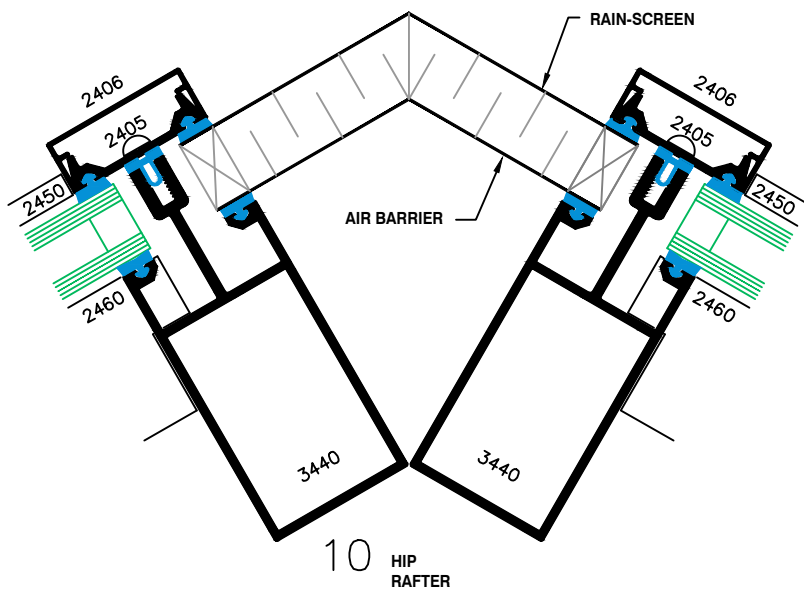
ASSEMBLY



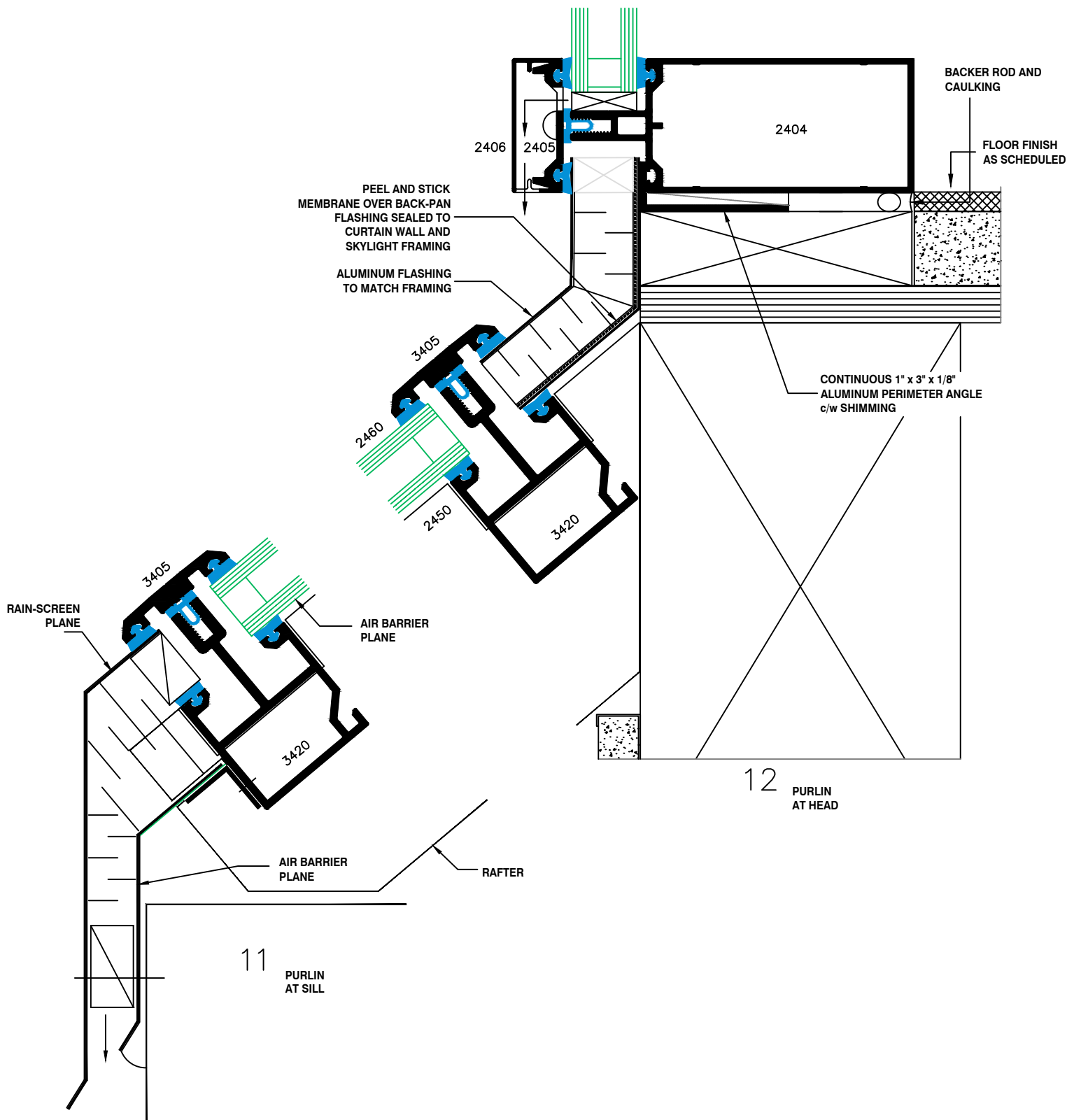
DETAILS



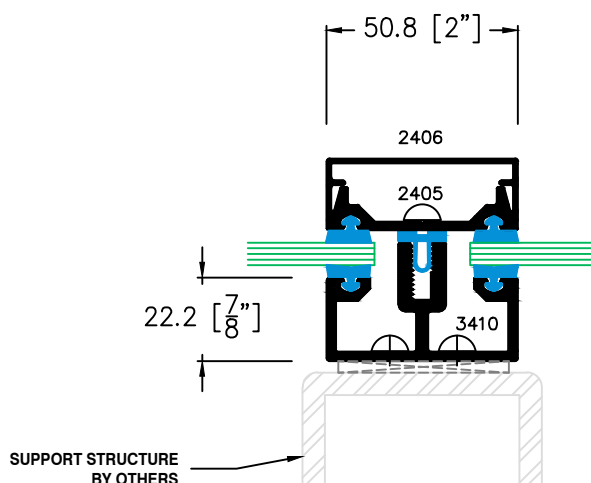
DETAILS



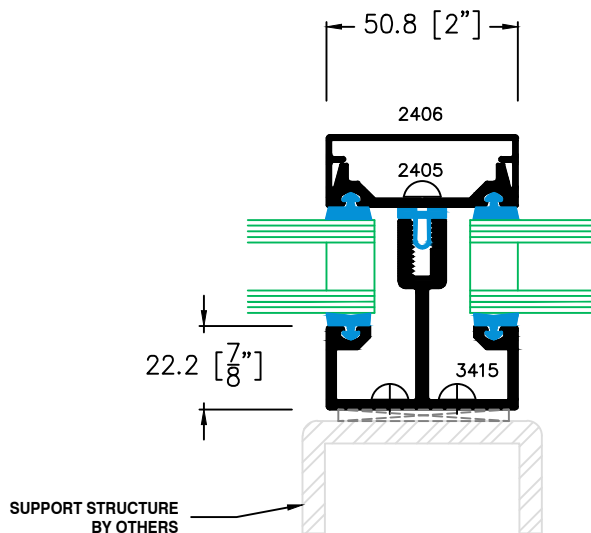
SUGGESTED INTERFACE DETAILS



DETAILS



13 SINGLE GLAZING VENEER



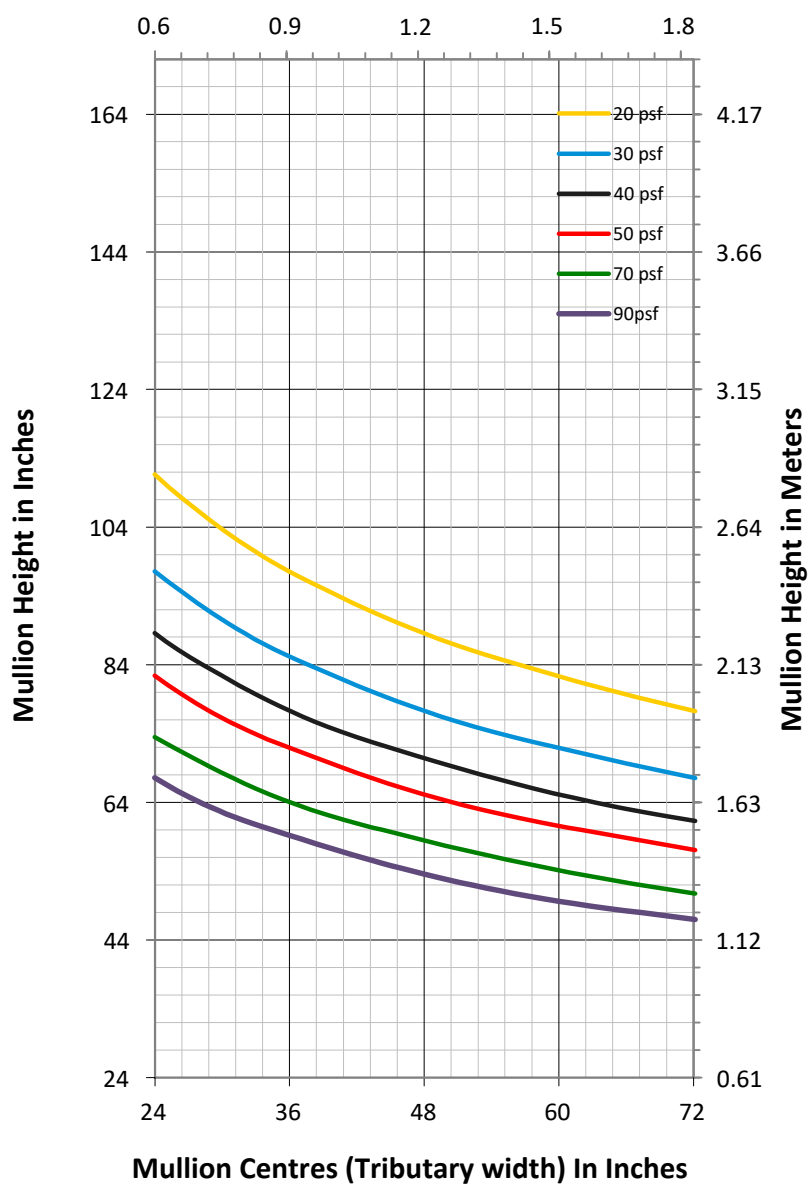
14 DOUBLE GLAZING VENEER

WIND LOAD CHART FOR 3400 SERIES - PART # 3420

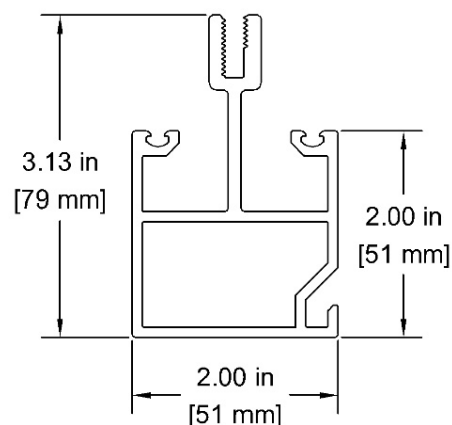
SPAN CHART

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CHART IS BASED ON DEFLECTION ANALYSIS
ONLY

Mullion Centres (Tributary width) In Meters



MULLION SECTION



SYSTEM PROPERTIES

Moment of Inertia, Section Modulus & Area

Moment of Inertia, Ixx	Ixx = 1.06 in ⁴
Section Modulus, Sxx	Sxx = 0.60 in ³
Total Area	A = 1.28 in ²

Modulus of Elasticity

Aluminum	10,000,000 PSI
Steel	29,000,000 PSI

GENERAL NOTES

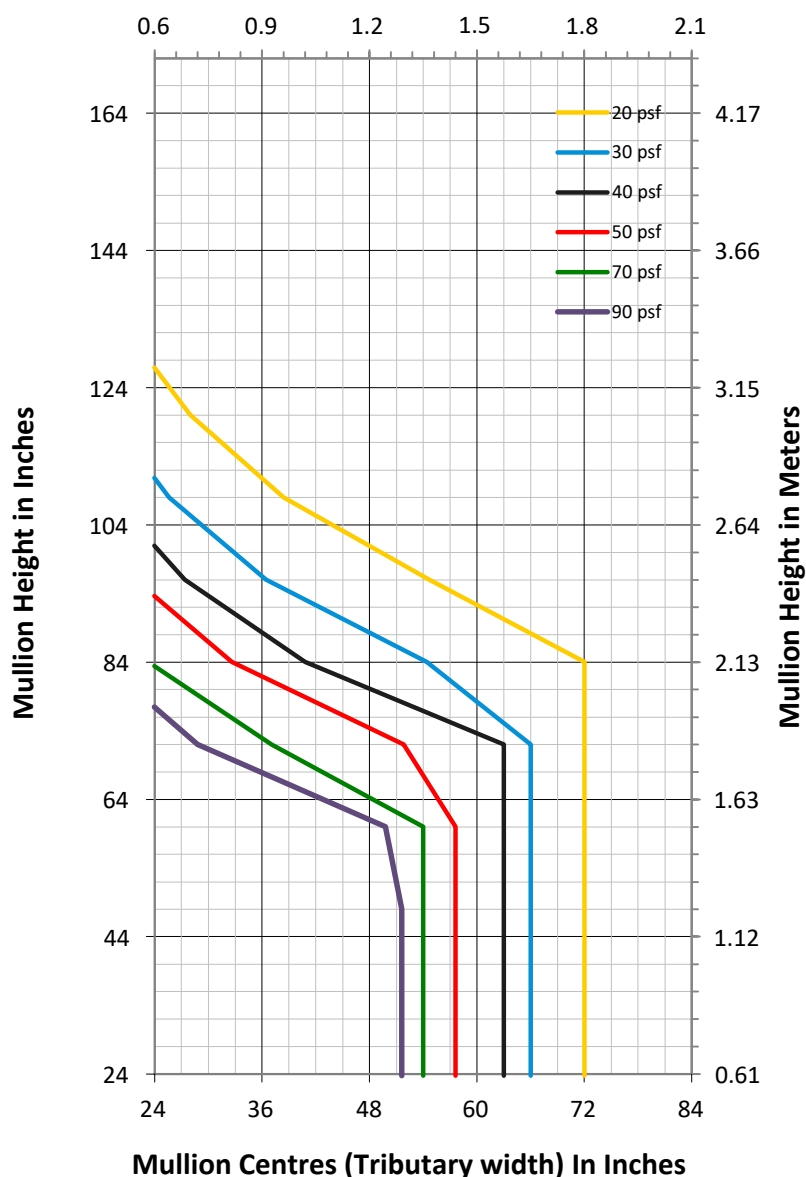
1. Deflection Limit: L/175 up to 13.5ft, L/240 + 0.25" over 13.5ft
2. Assume horizontal members provide lateral support
3. Steel moment of inertia converted to polyester, vinyl or aluminum equivalent
4. The design pressure (psf) shall be determined using the controlling load combination of dead, wind, live, and snow loads as applicable.

WIND LOAD CHART FOR 3400 SERIES - PART # 3425

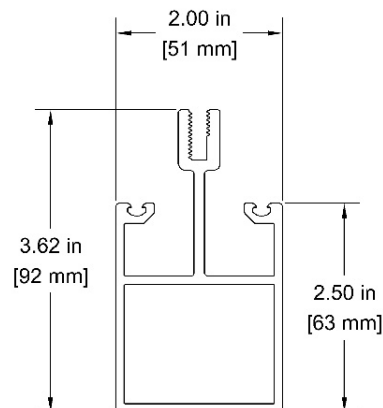
SPAN CHART

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ONLY

Mullion Centres (Tributary width) In Meters



MULLION SECTION



SYSTEM PROPERTIES

Moment of Inertia, Section Modulus & Area

Moment of Inertia, Ixx	Ixx = 1.53 in ⁴
Section Modulus, Sxx	Sxx = 0.79 in ³
Total Area	A = 1.36 in ²

Modulus of Elasticity

Aluminum	10,000,000 PSI
Steel	29,000,000 PSI

GENERAL NOTES

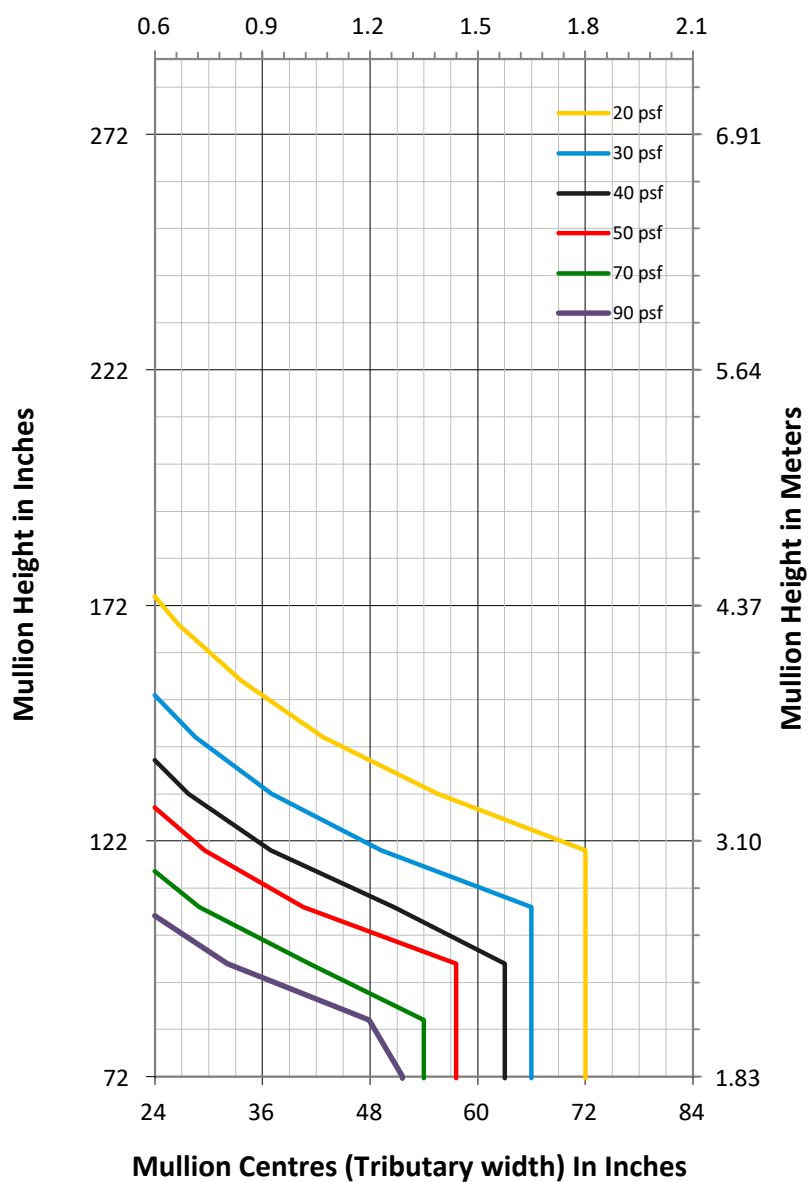
1. Deflection Limit: L/175 up to 13.5ft, L/240 + 0.25" over 13.5ft
2. Assume horizontal members provide lateral support
3. Steel moment of inertia converted to polyester, vinyl or aluminum equivalent
4. The design pressure (psf) shall be determined using the controlling load combination of dead, wind, live, and snow loads as applicable.

WIND LOAD CHART FOR 3400 SERIES - PART # 3440

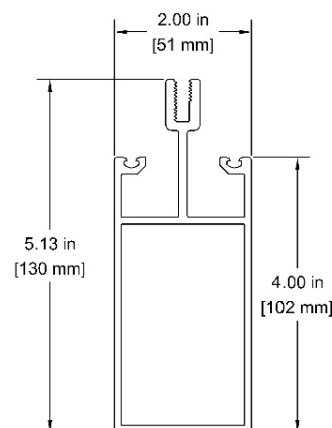
SPAN CHART

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CHART IS BASED ON DEFLECTION ANALYSIS
ONLY

Mullion Centres (Tributary width) In Meters



MULLION SECTION



SYSTEM PROPERTIES

Moment of Inertia, Section Modulus & Area

Moment of Inertia, Ixx	Ixx = 4.04 in ⁴
Section Modulus, Sxx	Sxx = 1.57 in ³
Total Area	A = 1.66 in ²

Modulus of Elasticity

Aluminum	10,000,000 PSI
Steel	29,000,000 PSI

GENERAL NOTES

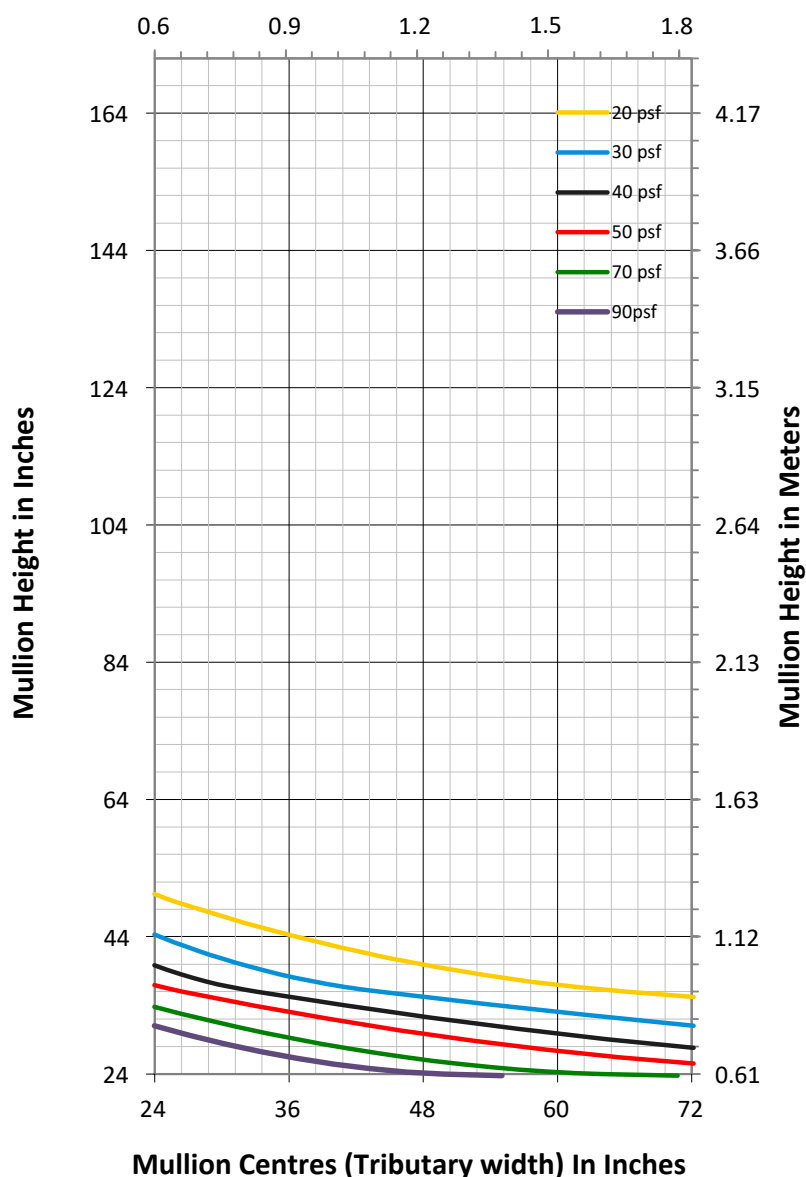
1. Deflection Limit: L/175 up to 13.5ft, L/240 + 0.25" over 13.5ft
2. Assume horizontal members provide lateral support
3. Steel moment of inertia converted to polyester, vinyl or aluminum equivalent
4. The design pressure (psf) shall be determined using the controlling load combination of dead, wind, live, and snow loads as applicable.

WIND LOAD CHART FOR 3400 SERIES - PART # 3410

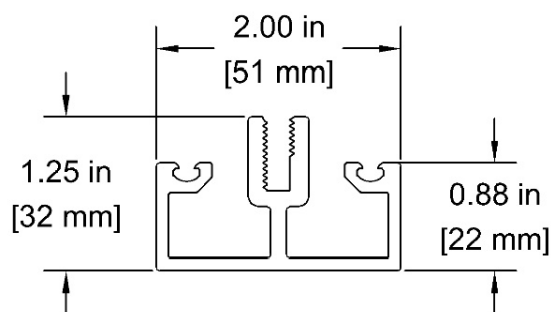
SPAN CHART

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CHART IS BASED ON DEFLECTION ANALYSIS
ONLY

Mullion Centres (Tributary width) In Meters



MULLION SECTION



SYSTEM PROPERTIES

Moment of Inertia, Section Modulus & Area

Moment of Inertia, I_{xx}	$I_{xx} = 0.10 \text{ in}^4$
Section Modulus, S_{xx}	$S_{xx} = 0.13 \text{ in}^3$
Total Area	$A = 0.75 \text{ in}^2$

Modulus of Elasticity

Aluminum	10,000,000 PSI
Steel	29,000,000 PSI

GENERAL NOTES

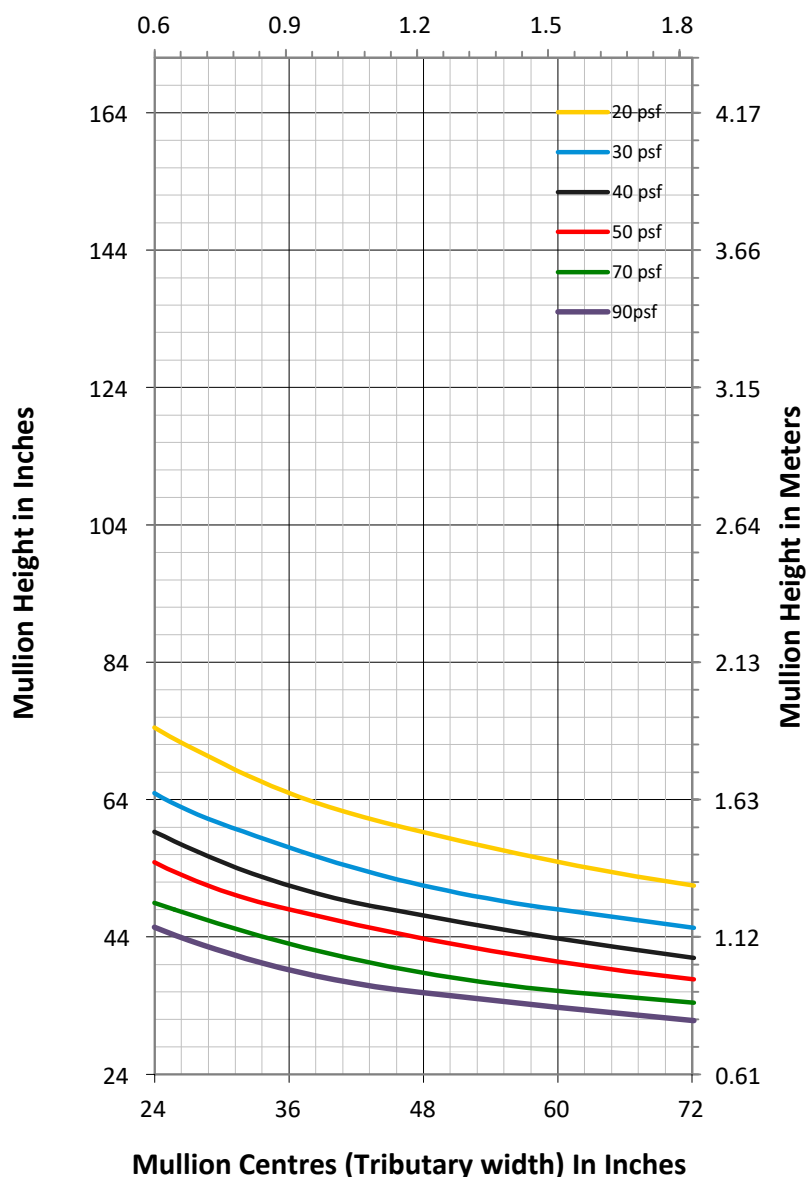
1. Deflection Limit: $L/175$ up to 13.5ft, $L/240 + 0.25"$ over 13.5ft
2. Assume horizontal members provide lateral support
3. Steel moment of inertia converted to polyester, vinyl or aluminum equivalent
4. The design pressure (psf) shall be determined using the controlling load combination of dead, wind, live, and snow loads as applicable.

WIND LOAD CHART FOR 3400 SERIES - PART # 3415

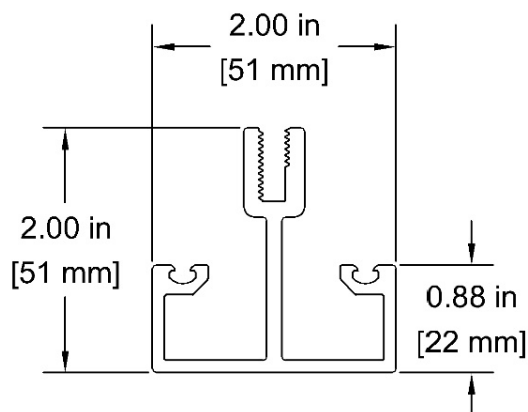
SPAN CHART

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CHART IS BASED ON DEFLECTION ANALYSIS
ONLY

Mullion Centres (Tributary width) In Meters



MULLION SECTION



SYSTEM PROPERTIES

Moment of Inertia, Section Modulus & Area

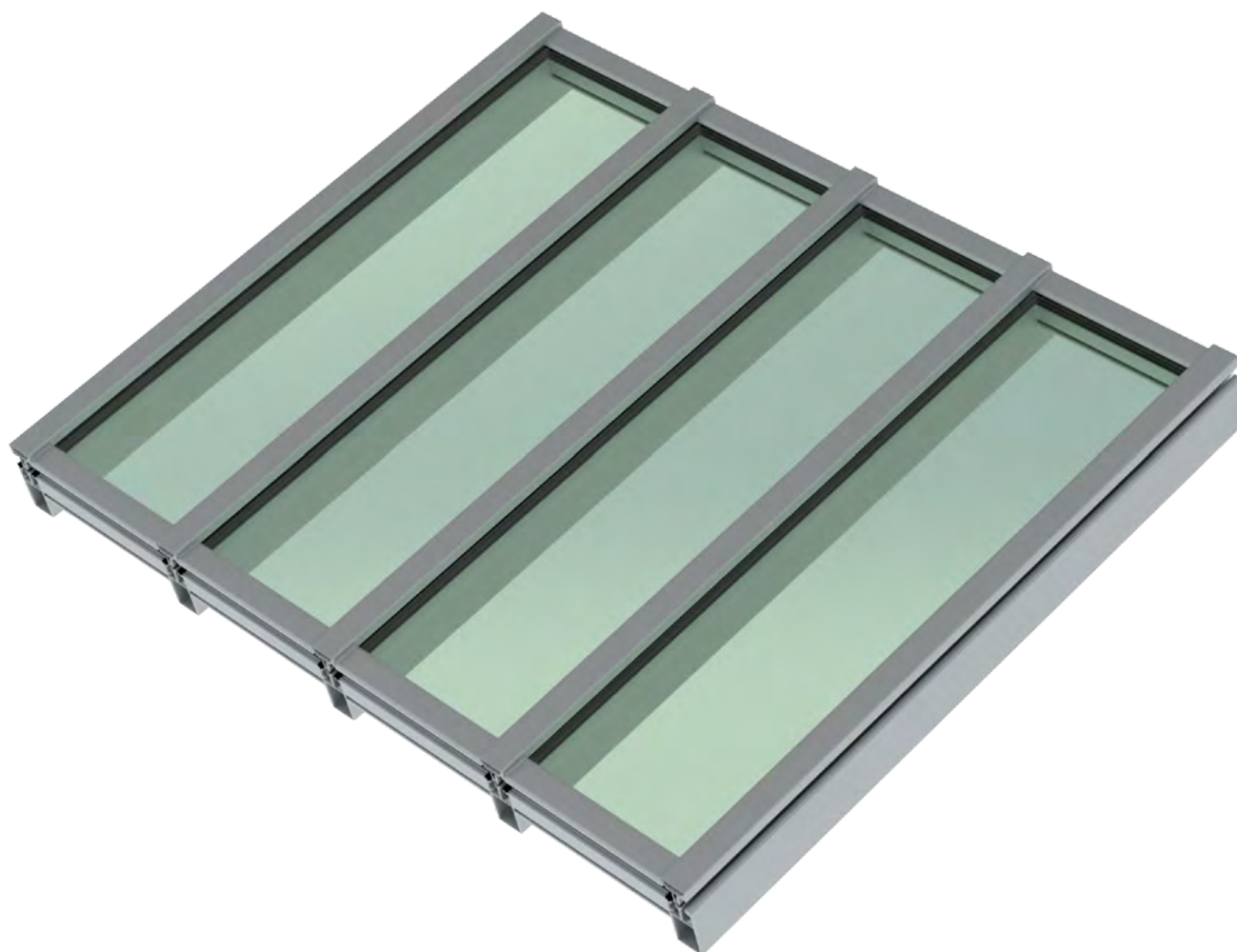
Moment of Inertia, I_{xx}	$I_{xx} = 0.32 \text{ in}^4$
Section Modulus, S_{xx}	$S_{xx} = 0.26 \text{ in}^3$
Total Area	$A = 0.84 \text{ in}^2$

Modulus of Elasticity

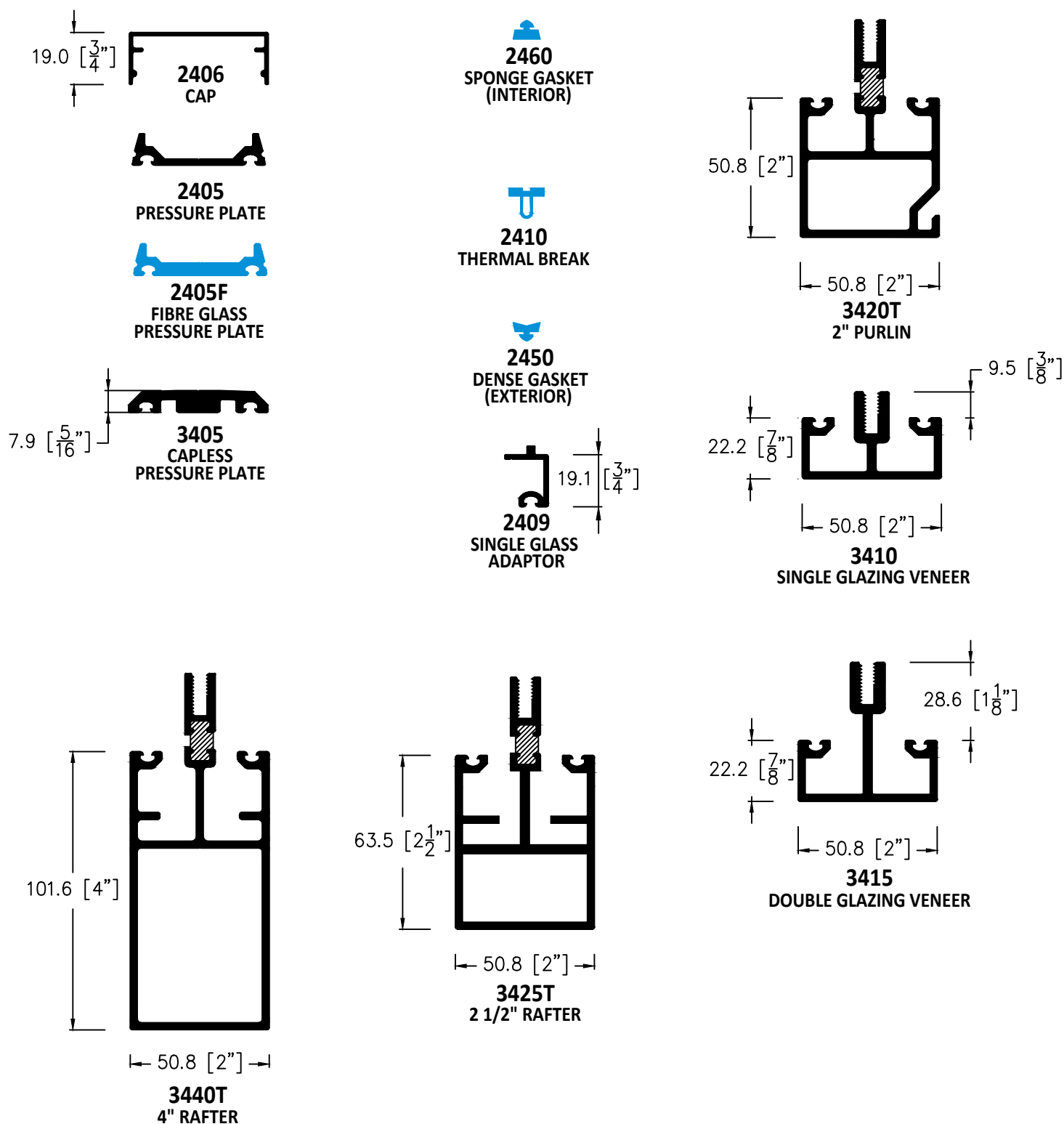
Aluminum	10,000,000 PSI
Steel	29,000,000 PSI

GENERAL NOTES

1. Deflection Limit: $L/175$ up to 13.5ft, $L/240 + 0.25"$ over 13.5ft
2. Assume horizontal members provide lateral support
3. Steel moment of inertia converted to polyester, vinyl or aluminum equivalent
4. The design pressure (psf) shall be determined using the controlling load combination of dead, wind, live, and snow loads as applicable.

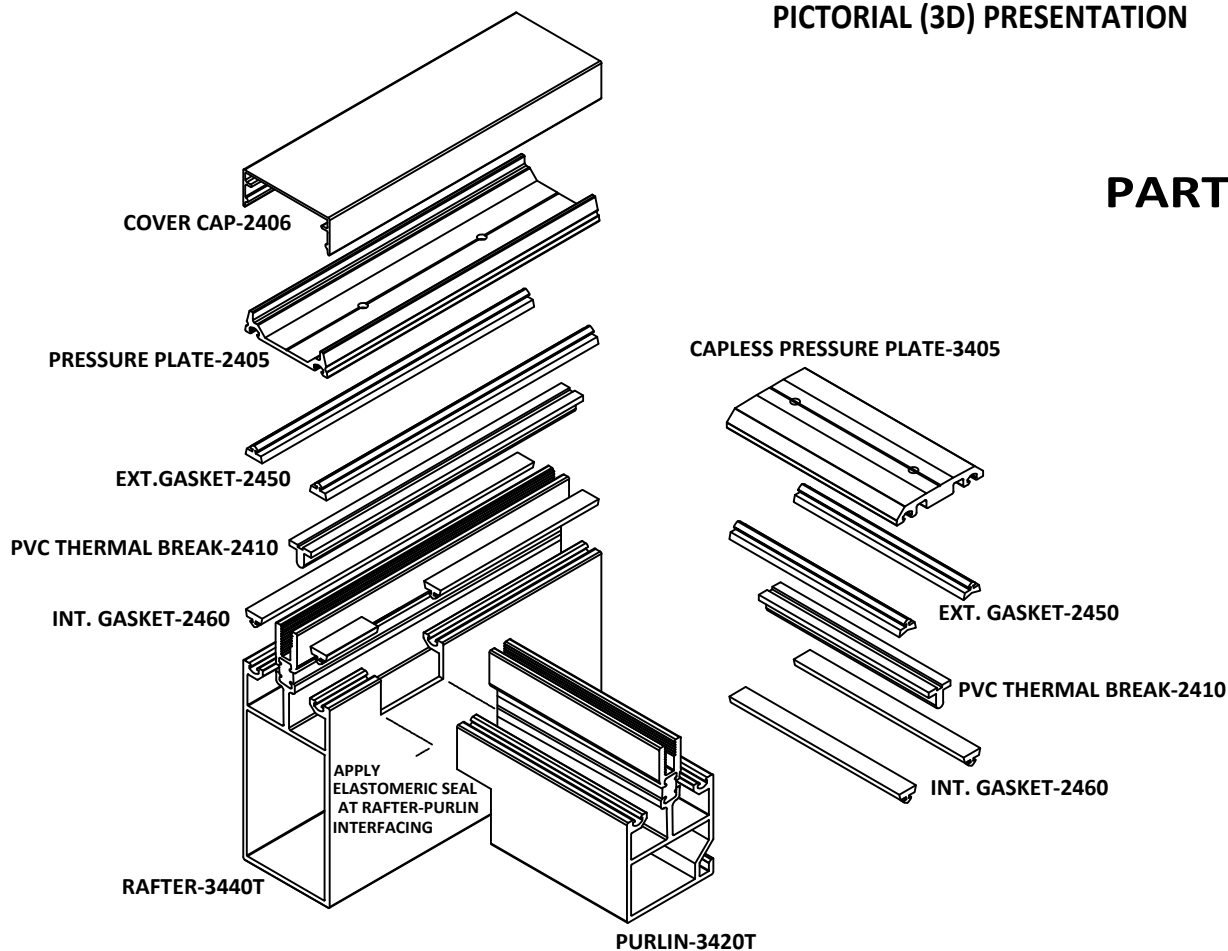


COMPONENTS

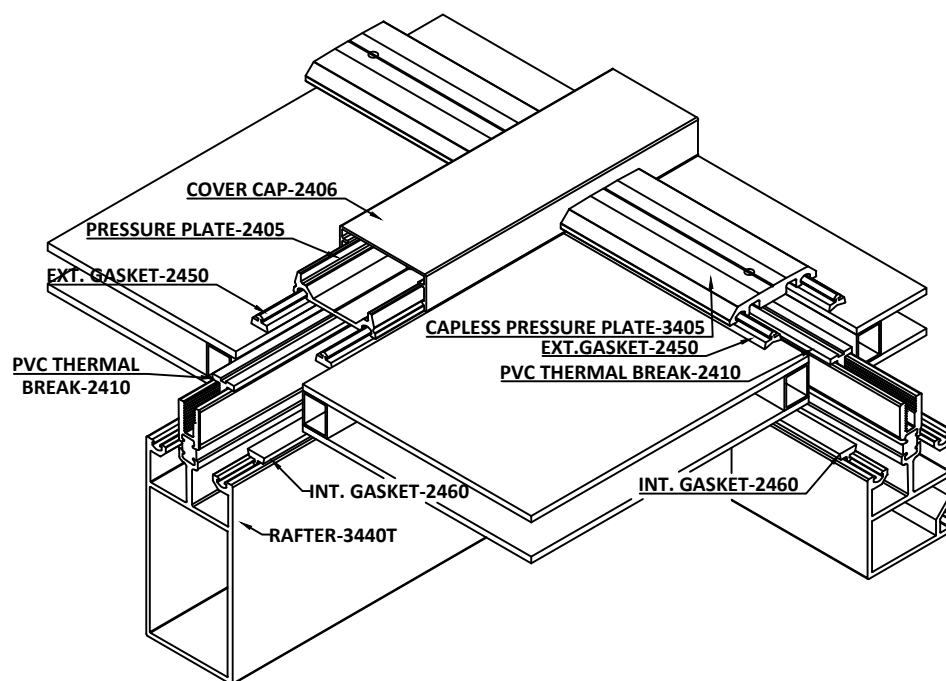


PICTORIAL (3D) PRESENTATION

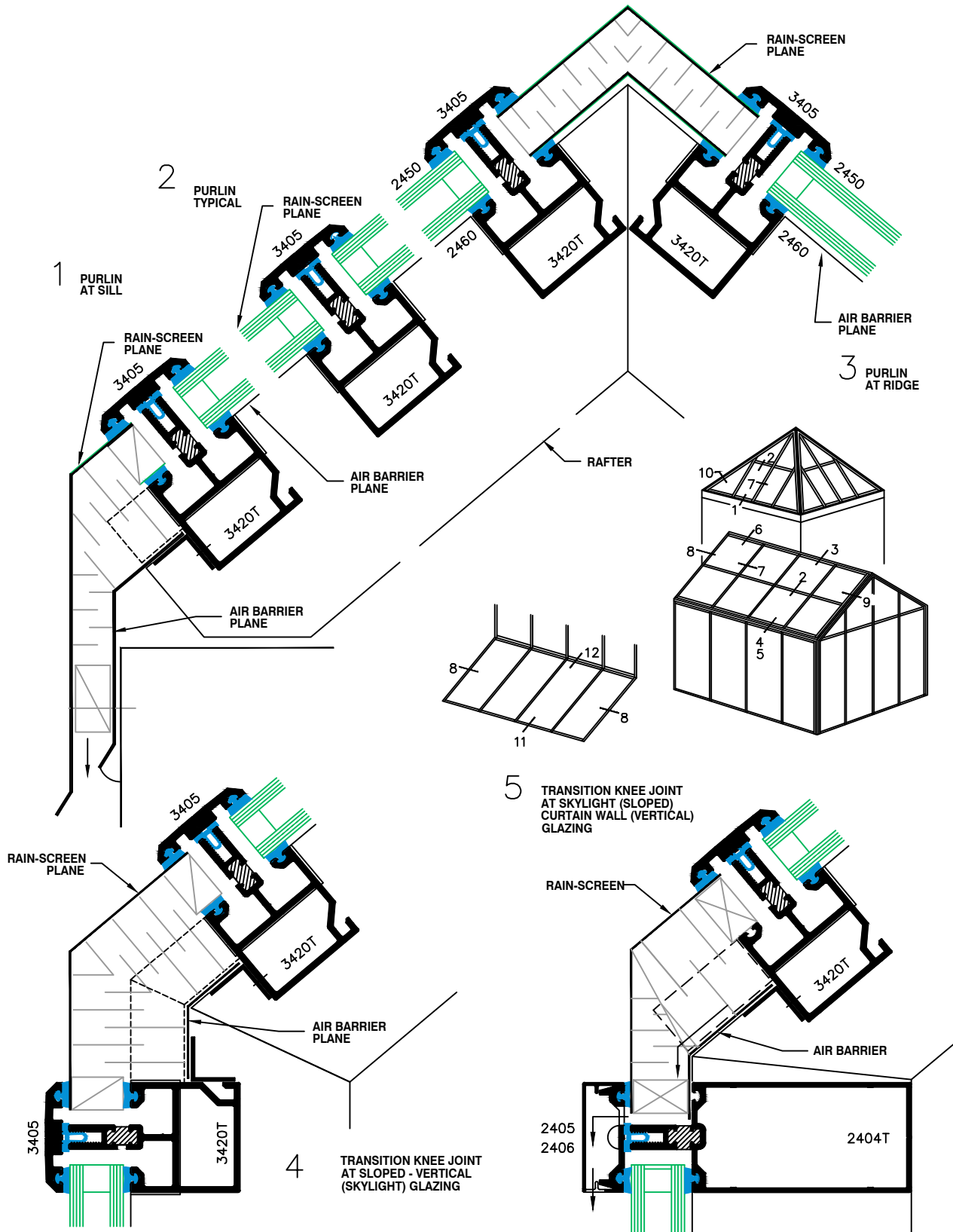
PARTS



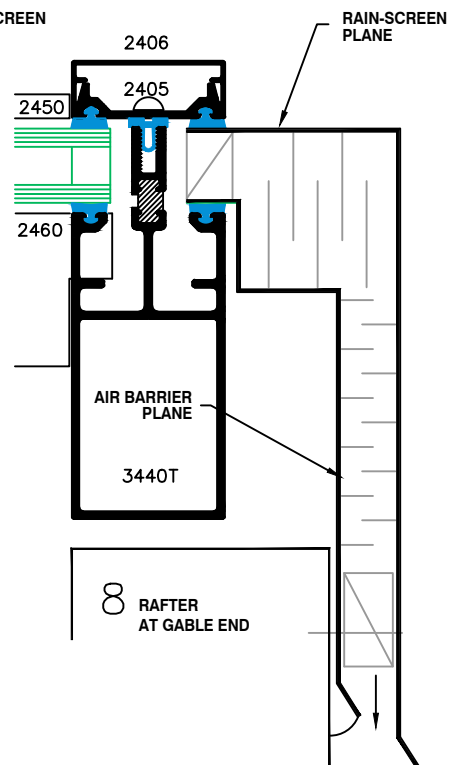
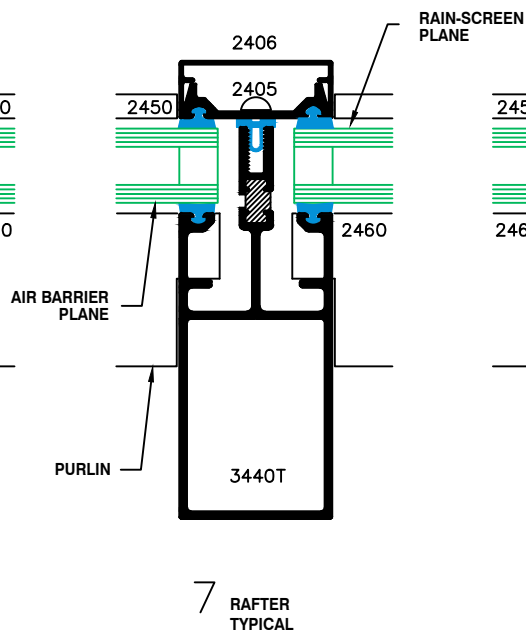
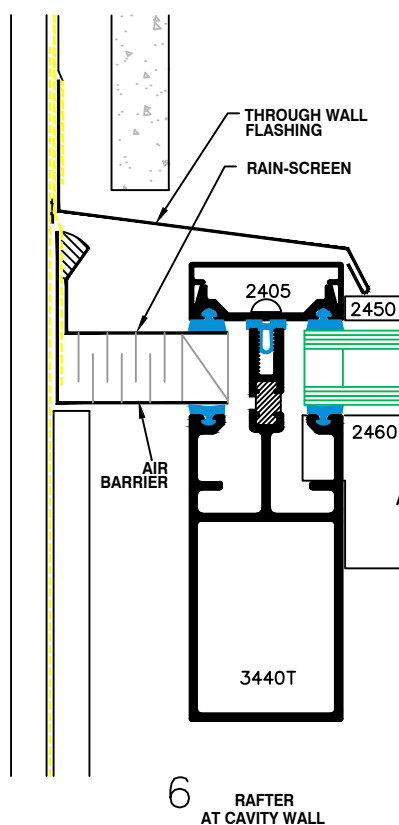
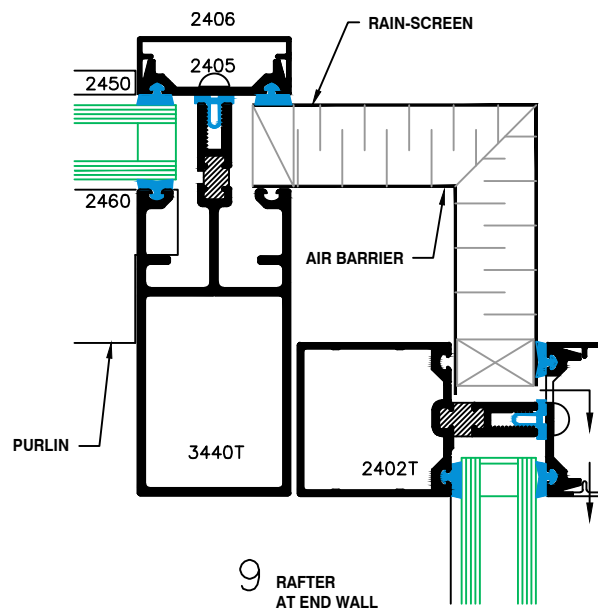
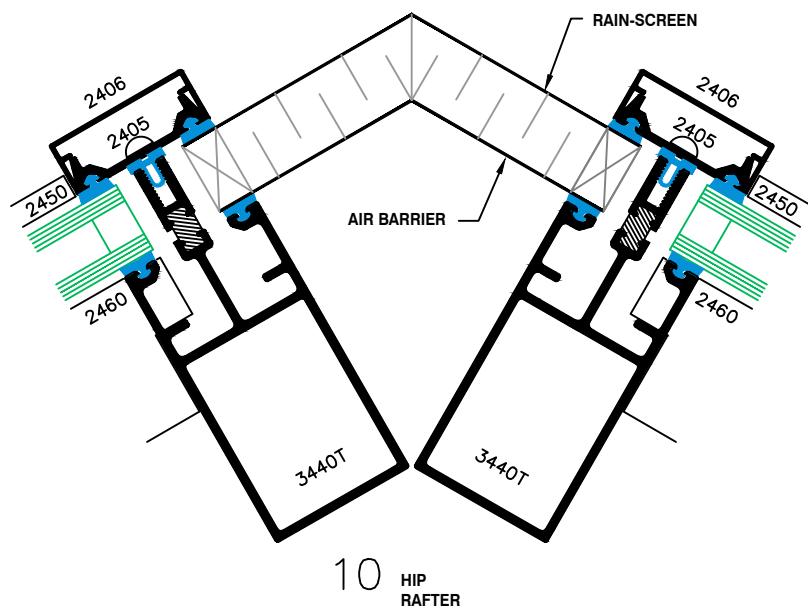
ASSEMBLY



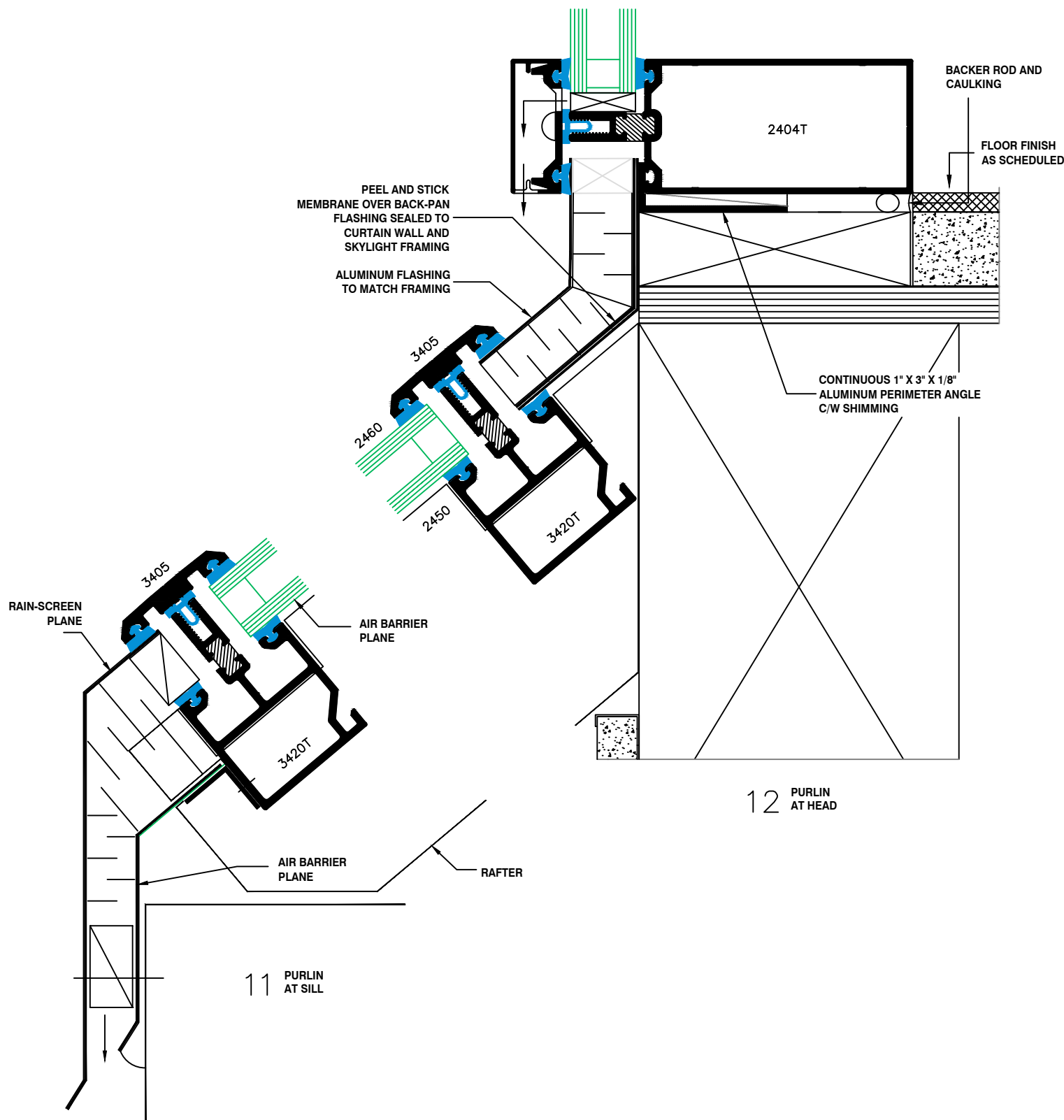
DETAILS



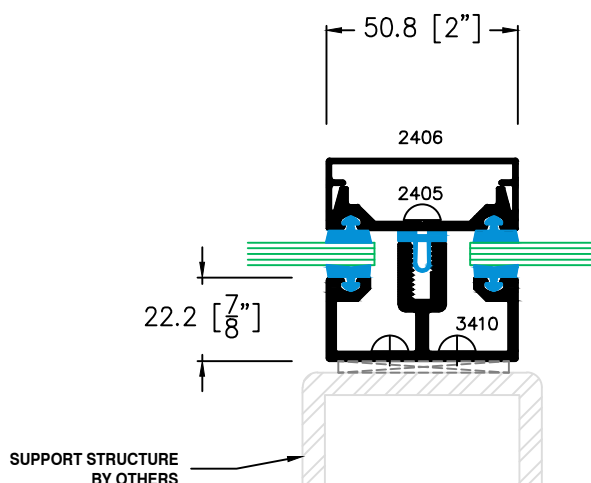
DETAILS



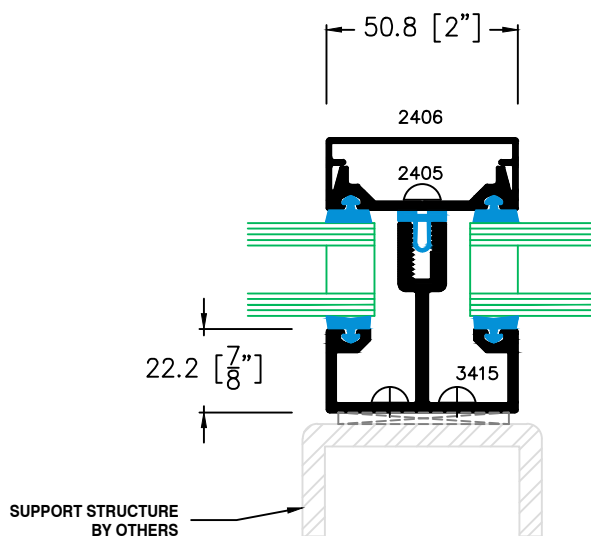
SUGGESTED INTERFACE DETAILS



DETAILS



13 SINGLE GLAZING VENEER



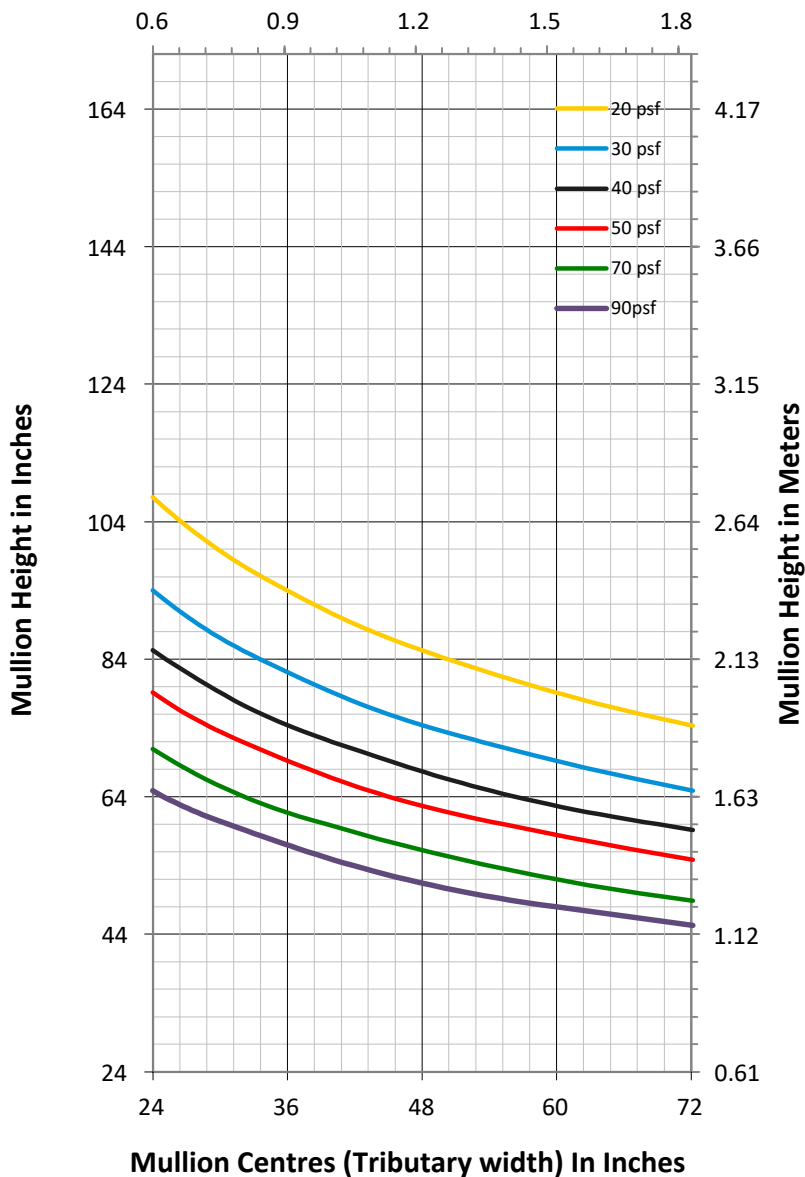
14 DOUBLE GLAZING VENEER

WIND LOAD CHART FOR 3400T SERIES - PART # 3420T

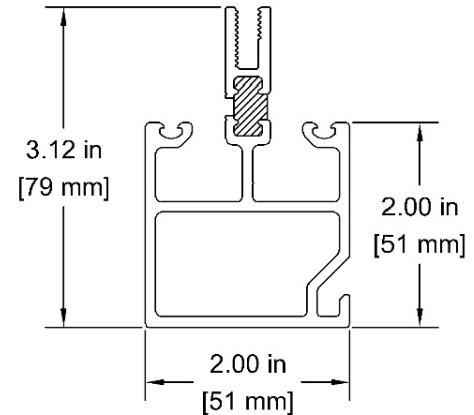
SPAN CHART

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CHART IS BASED ON DEFLECTION ANALYSIS
ONLY

Mullion Centres (Tributary width) In Meters



MULLION SECTION



SYSTEM PROPERTIES

Moment of Inertia, Section Modulus & Area

Moment of Inertia, Ixx	Ixx = 0.95 in ⁴
Section Modulus, Sxx	Sxx = 0.52 in ³
Total Area	A = 1.23 in ²

Modulus of Elasticity

Aluminum	10,000,000 PSI
Steel	29,000,000 PSI

GENERAL NOTES

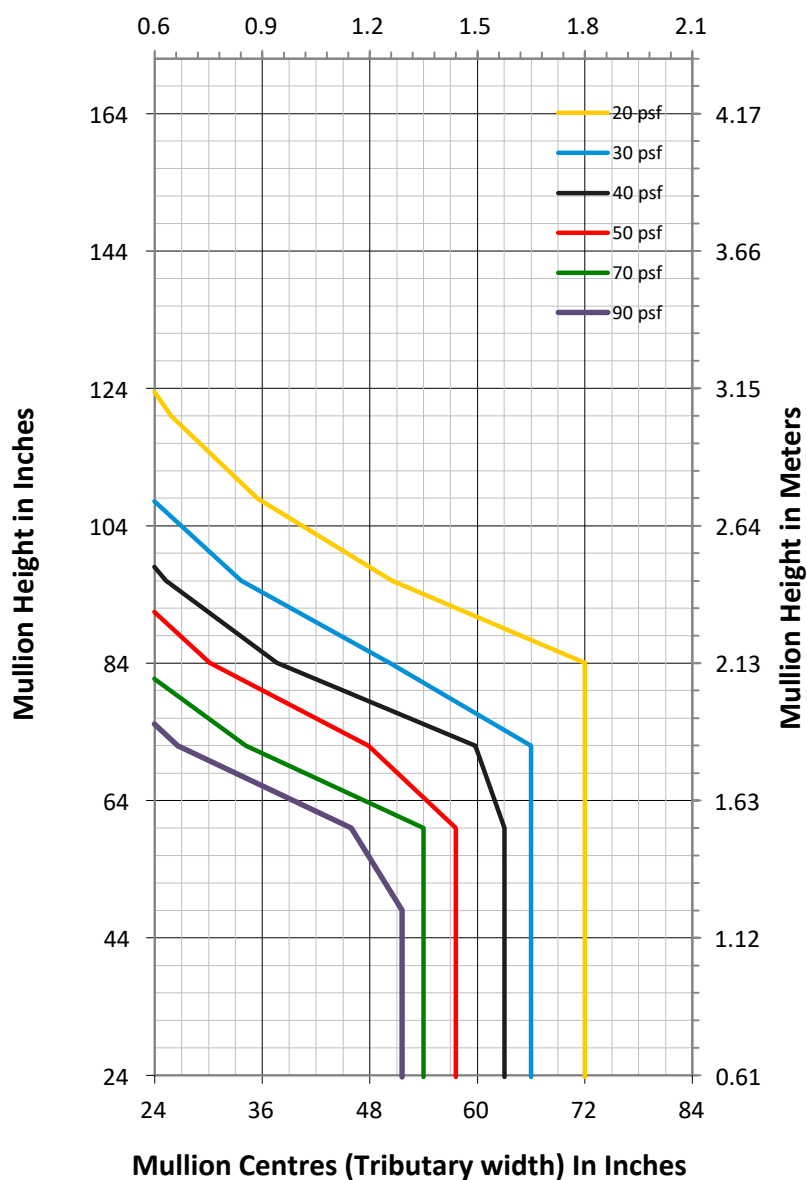
1. Deflection Limit: L/175 up to 13.5ft, L/240 + 0.25" over 13.5ft
2. Assume horizontal members provide lateral support
3. Steel moment of inertia converted to polyester, vinyl or aluminum equivalent
4. The design pressure (psf) shall be determined using the controlling load combination of dead, wind, live, and snow loads as applicable.

WIND LOAD CHART FOR 3400T SERIES - PART # 3425T

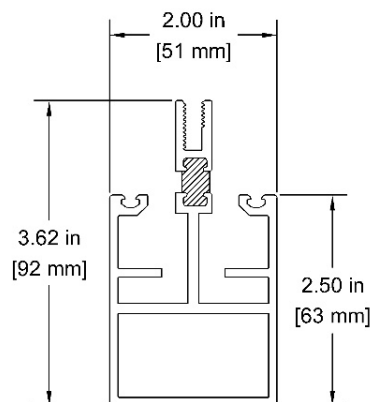
SPAN CHART

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Mullion Centres (Tributary width) In Meters



MULLION SECTION



SYSTEM PROPERTIES

Moment of Inertia, Section Modulus & Area

Moment of Inertia, Ixx	Ixx = 1.41 in ⁴
Section Modulus, Sxx	Sxx = 0.61 in ³
Total Area	A = 1.51 in ²

Modulus of Elasticity

Aluminum	10,000,000 PSI
Steel	29,000,000 PSI

GENERAL NOTES

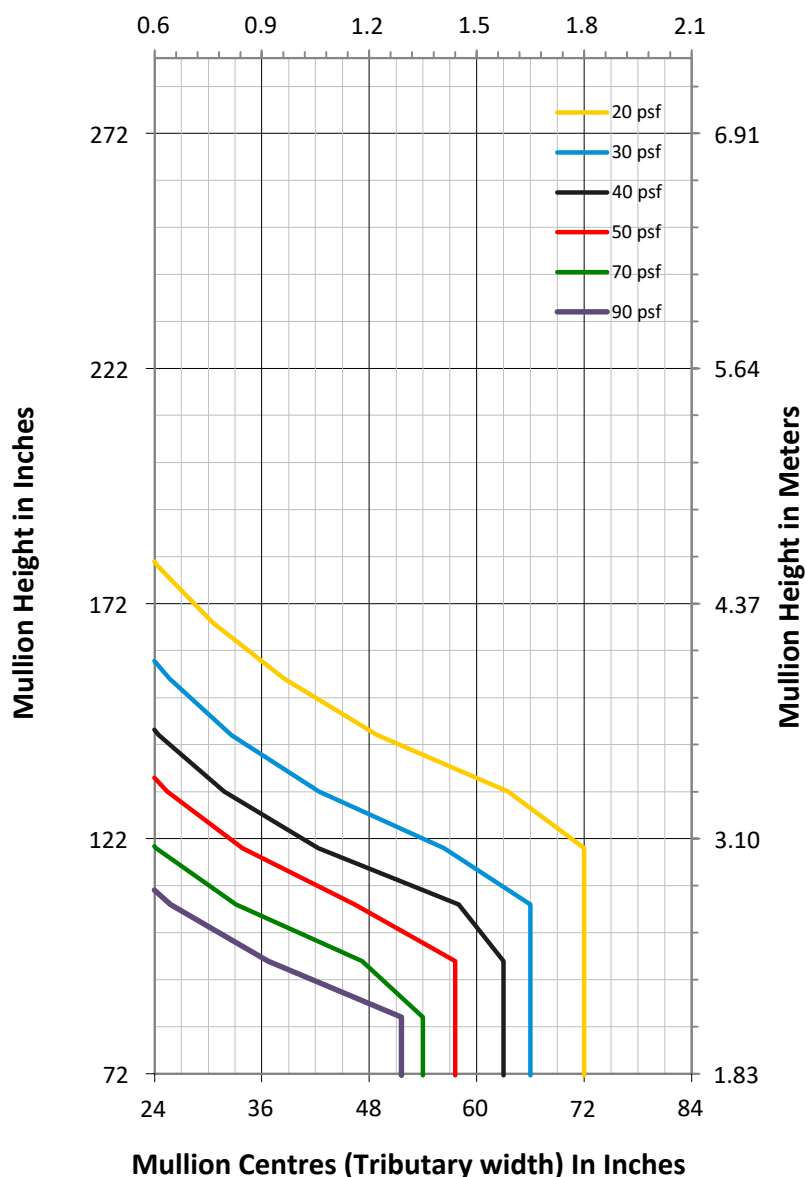
1. Deflection Limit: L/175 up to 13.5ft, L/240 + 0.25" over 13.5ft
2. Assume horizontal members provide lateral support
3. Steel moment of inertia converted to polyester, vinyl or aluminum equivalent
4. The design pressure (psf) shall be determined using the controlling load combination of dead, wind, live, and snow loads as applicable.

WIND LOAD CHART FOR 3400T SERIES - PART # 3440T

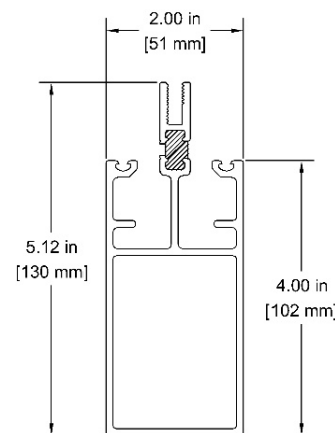
SPAN CHART

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CHART IS BASED ON DEFLECTION ANALYSIS
ONLY

Mullion Centres (Tributary width) In Meters



MULLION SECTION



SYSTEM PROPERTIES

Moment of Inertia, Section Modulus & Area

Moment of Inertia, Ixx	Ixx = 4.62 in ⁴
Section Modulus, Sxx	Sxx = 1.20 in ³
Total Area	A = 1.92 in ²

Modulus of Elasticity

Aluminum	10,000,000 PSI
Steel	29,000,000 PSI

GENERAL NOTES

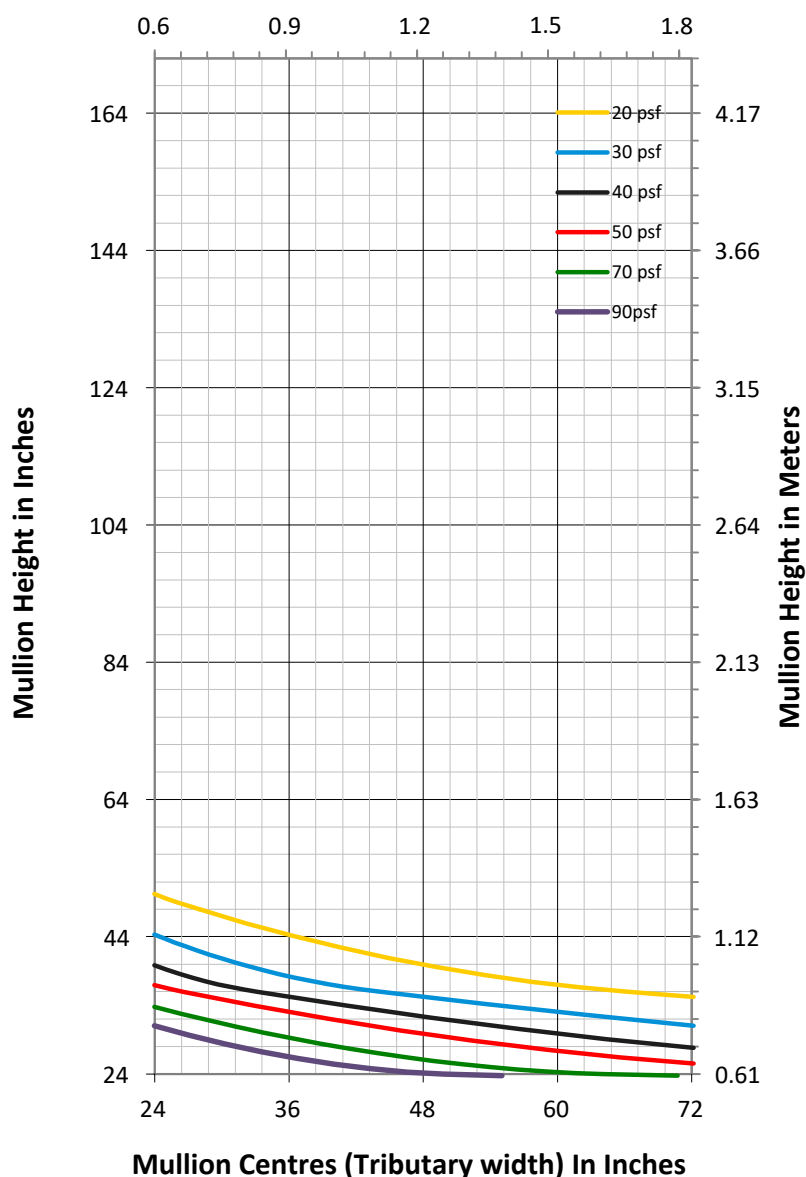
1. Deflection Limit: L/175 up to 13.5ft, L/240 + 0.25" over 13.5ft
2. Assume horizontal members provide lateral support
3. Steel moment of inertia converted to polyester, vinyl or aluminum equivalent
4. The design pressure (psf) shall be determined using the controlling load combination of dead, wind, live, and snow loads as applicable.

WIND LOAD CHART FOR 3400T SERIES - PART # 3410

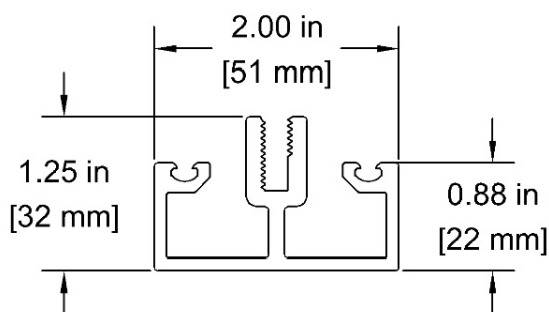
SPAN CHART

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CHART IS BASED ON DEFLECTION ANALYSIS
ONLY

Mullion Centres (Tributary width) In Meters



MULLION SECTION



SYSTEM PROPERTIES

Moment of Inertia, Section Modulus & Area

Moment of Inertia, I_{xx}	$I_{xx} = 0.10 \text{ in}^4$
Section Modulus, S_{xx}	$S_{xx} = 0.13 \text{ in}^3$
Total Area	$A = 0.75 \text{ in}^2$

Modulus of Elasticity

Aluminum	10,000,000 PSI
Steel	29,000,000 PSI

GENERAL NOTES

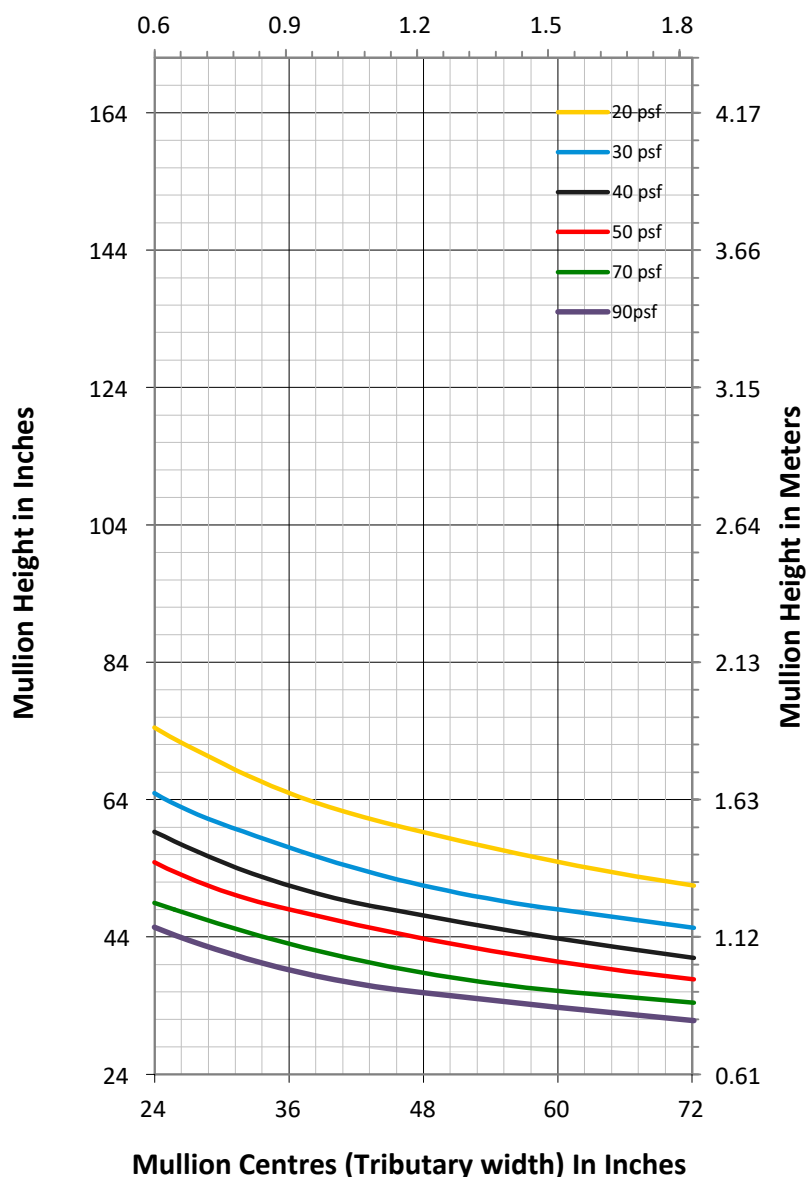
1. Deflection Limit: $L/175$ up to 13.5ft, $L/240 + 0.25"$ over 13.5ft
2. Assume horizontal members provide lateral support
3. Steel moment of inertia converted to polyester, vinyl or aluminum equivalent
4. The design pressure (psf) shall be determined using the controlling load combination of dead, wind, live, and snow loads as applicable.

WIND LOAD CHART FOR 3400T SERIES - PART # 3415

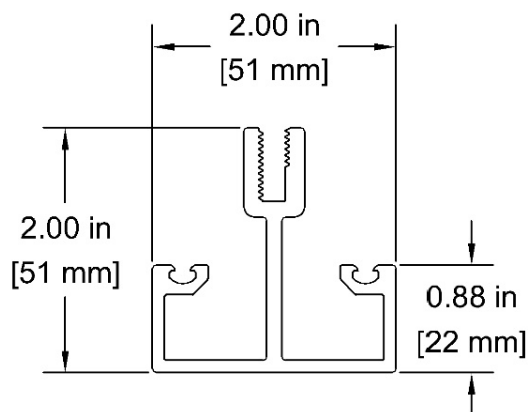
SPAN CHART

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ONLY

Mullion Centres (Tributary width) In Meters



MULLION SECTION



SYSTEM PROPERTIES

Moment of Inertia, Section Modulus & Area

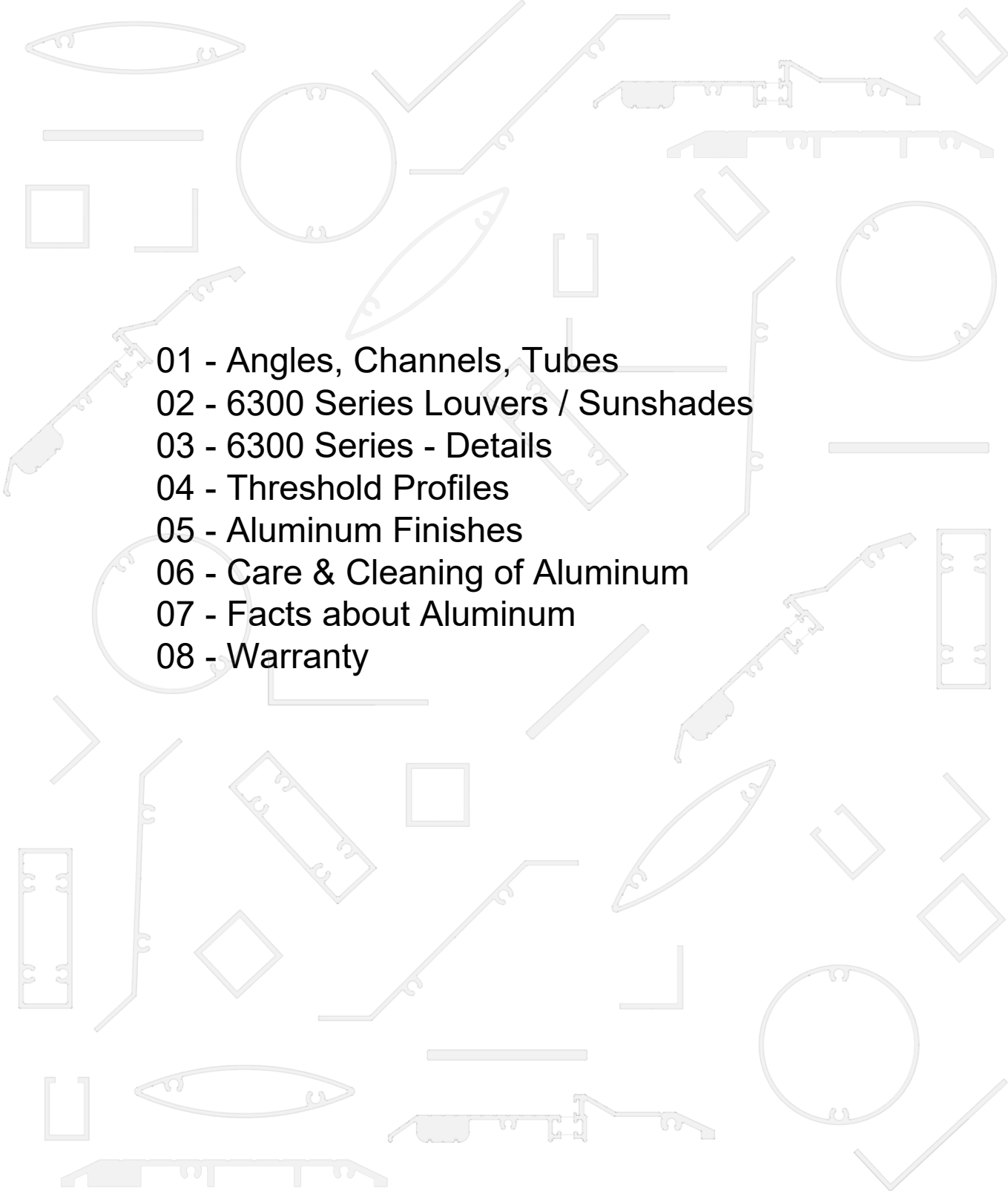
Moment of Inertia, I_{xx}	$I_{xx} = 0.32 \text{ in}^4$
Section Modulus, S_{xx}	$S_{xx} = 0.26 \text{ in}^3$
Total Area	$A = 0.84 \text{ in}^2$

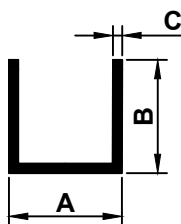
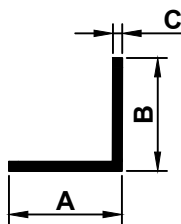
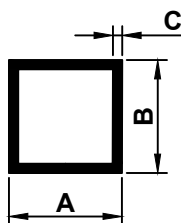
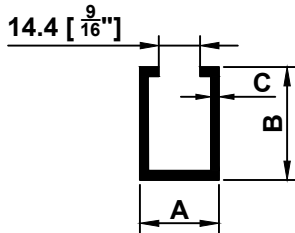
Modulus of Elasticity

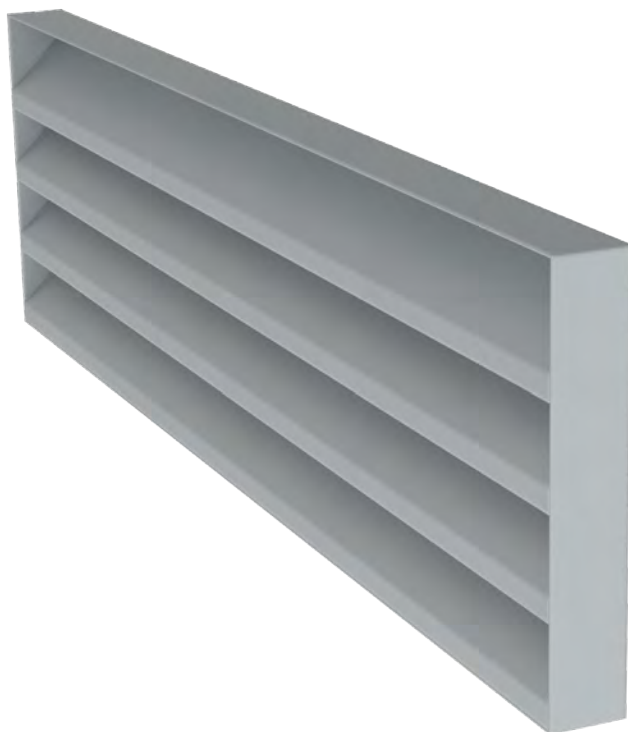
Aluminum	10,000,000 PSI
Steel	29,000,000 PSI

GENERAL NOTES

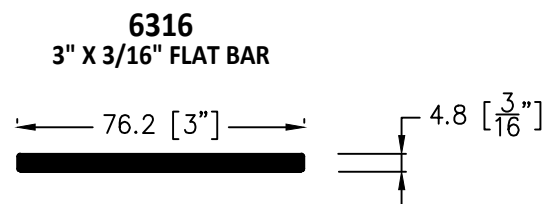
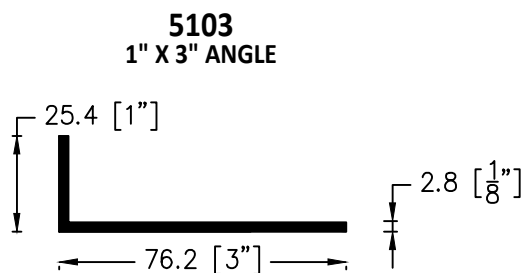
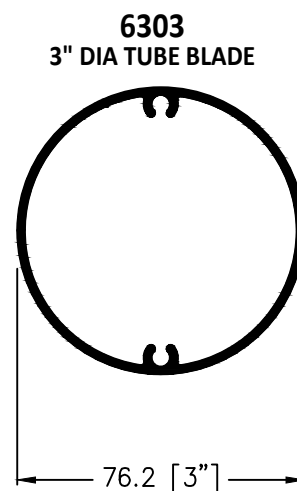
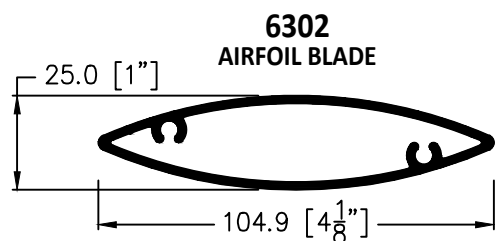
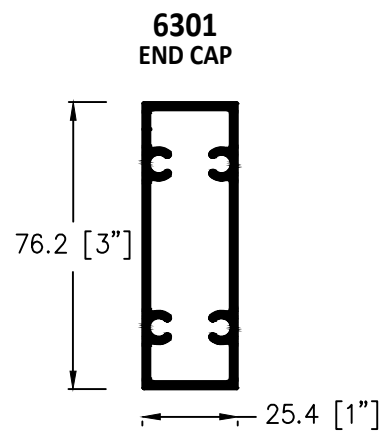
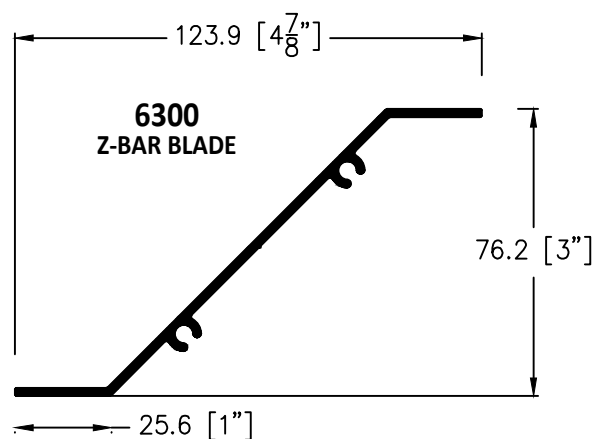
1. Deflection Limit: $L/175$ up to 13.5ft, $L/240 + 0.25"$ over 13.5ft
2. Assume horizontal members provide lateral support
3. Steel moment of inertia converted to polyester, vinyl or aluminum equivalent
4. The design pressure (psf) shall be determined using the controlling load combination of dead, wind, live, and snow loads as applicable.

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- 01 - Angles, Channels, Tubes
 - 02 - 6300 Series Louvers / Sunshades
 - 03 - 6300 Series - Details
 - 04 - Threshold Profiles
 - 05 - Aluminum Finishes
 - 06 - Care & Cleaning of Aluminum
 - 07 - Facts about Aluminum
 - 08 - Warranty

PROFILES	PART NUMBER	A	B	C
CHANNEL 	4050	12.7 0.5"	12.7 0.5"	1.5 0.06"
	4575	12.7 0.5"	19.05 0.75"	1.5 0.06"
	4075	19.05 0.75"	19.05 0.75"	1.5 0.06"
	4100	25.4 1.0"	25.4 1.0"	3.05 0.12"
	4150	38.1 1.5"	25.4 1.0"	3.05 0.12"
	4751	19.05 0.75"	25.4 1.0"	1.5 0.06"
ANGLE 	5075	19.05 0.75"	19.05 0.75"	1.5 0.06"
	5100	25.4 1.0"	25.4 1.0"	2.29 0.09"
	5102	25.4 1.0"	50.8 2.0"	3.17 0.125"
	5103	25.4 1.0"	76.2 3.0"	3.17 0.125"
TUBE 	401	44.45 1.75"	44.45 1.75"	2.29 0.09"
	402	50.8 2.0"	50.8 2.0"	2.54 0.10"
	403	63.5 2.5"	63.5 2.5"	2.41 0.095"
	405	44.45 1.75"	114.3 4.5"	2.54 0.10"
	406	50.8 2.0"	101.6 4.0"	2.41 0.095"
	407	50.8 2.0"	152.4 6.0"	2.29 0.09"
SPECIAL GLAZING CHANNELS 	4200	25.4 1.0"	25.4 1.0"	2.0 0.08"
	4201	25.4 1.0"	57.15 2.25"	2.0 0.08"



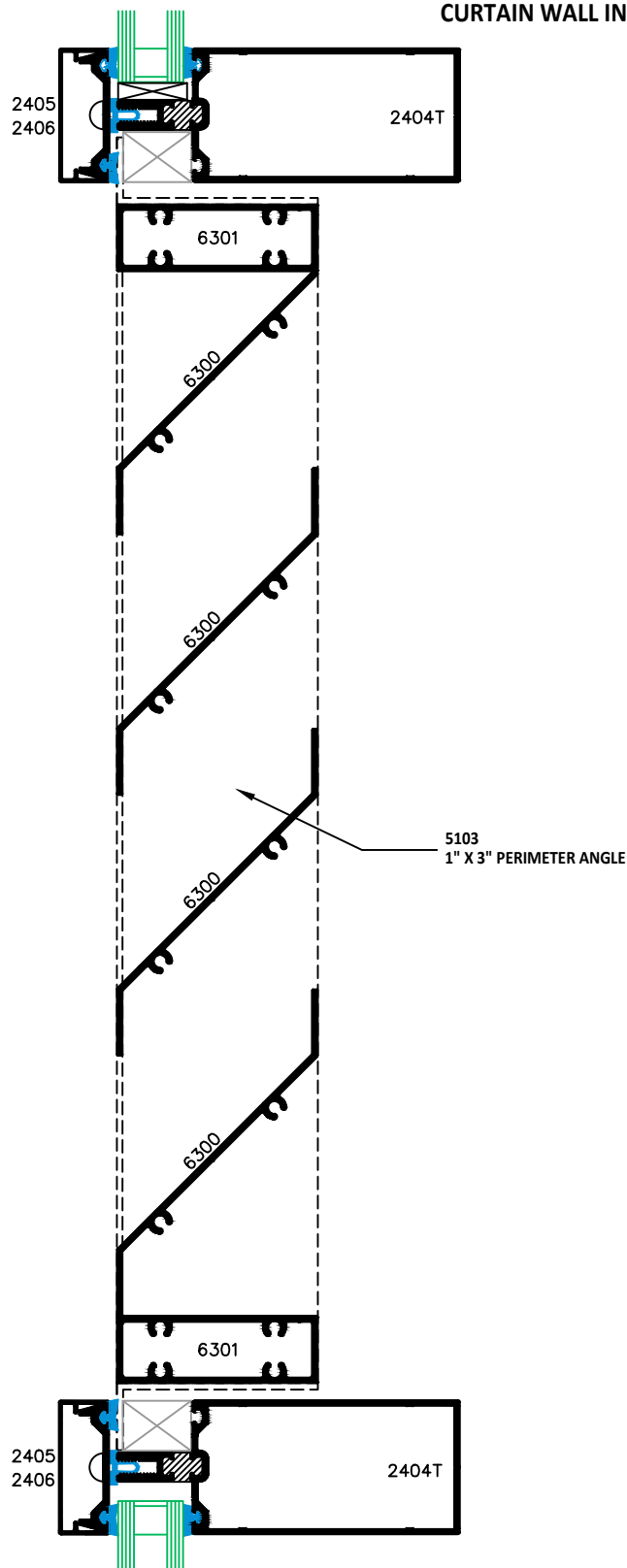
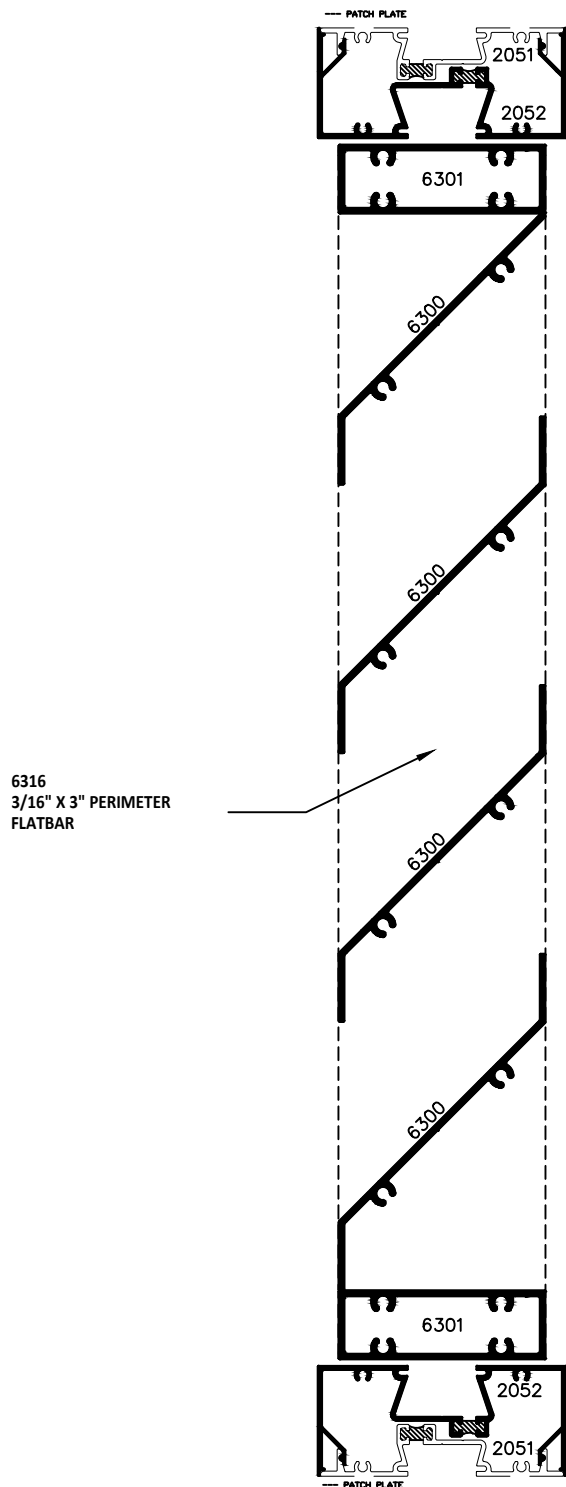
COMPONENTS



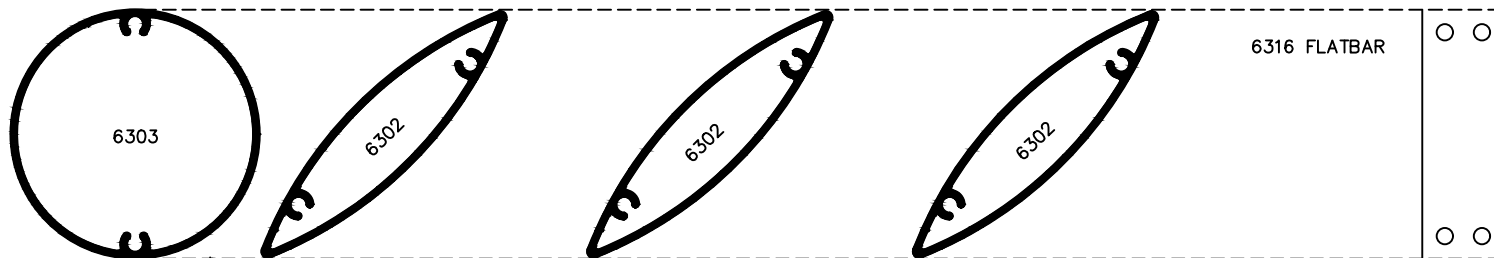
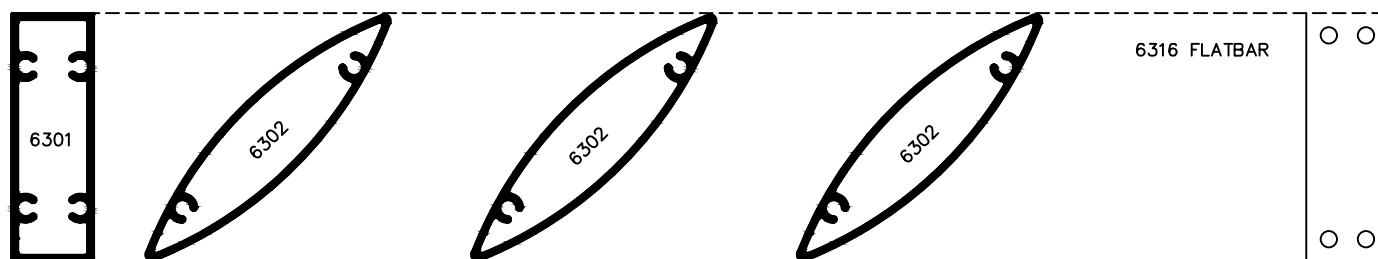
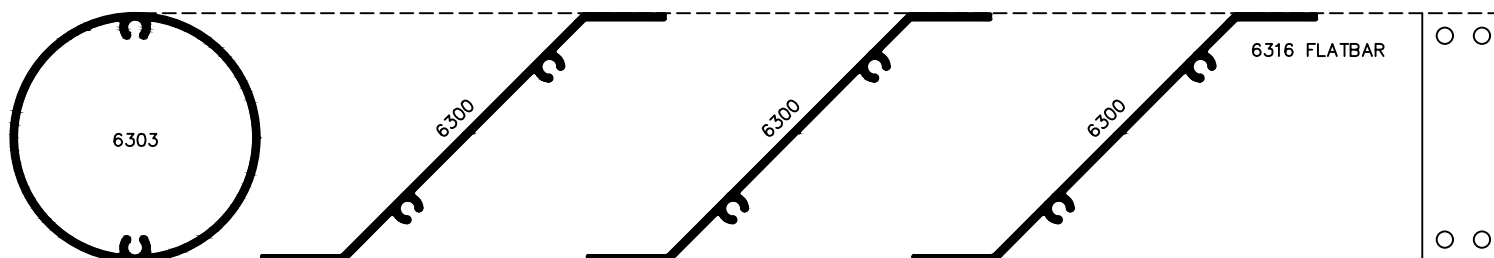
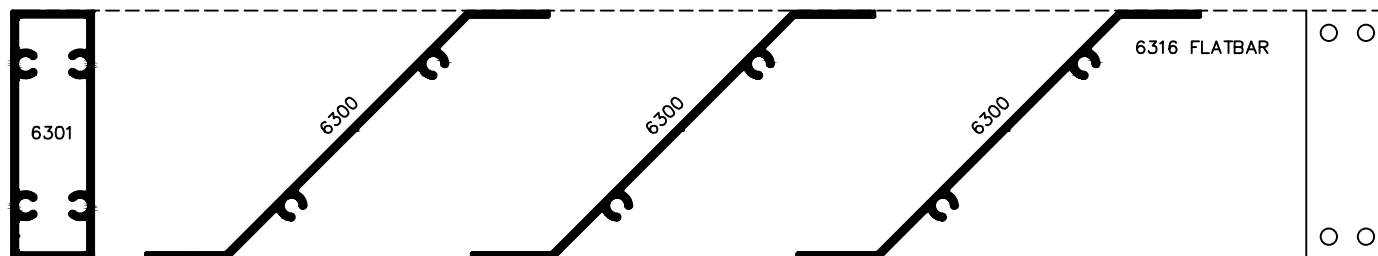
LOUVER DETAILS

CURTAIN WALL INSTALL

STOREFRONT / ROUGH OPENING INSTALL



SUNSHADE DETAILS



6" THRESHOLDS FOR
4 1/2" SYSTEM

1506



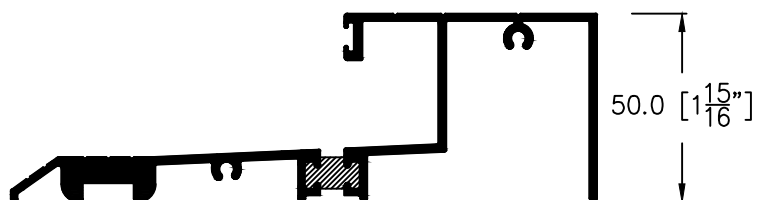
2106 BEVELLED



2106T SQUARE



2107T SQUARE

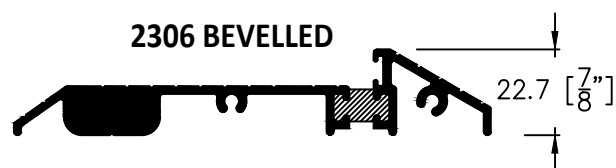


5" THRESHOLDS FOR
3 1/4" SYSTEM

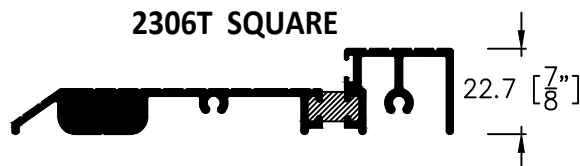
1306



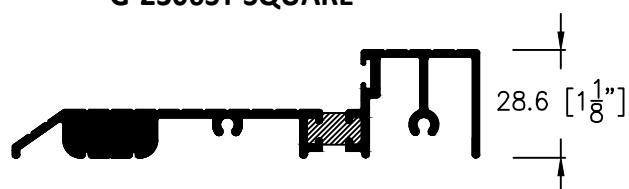
2306 BEVELLED



2306T SQUARE

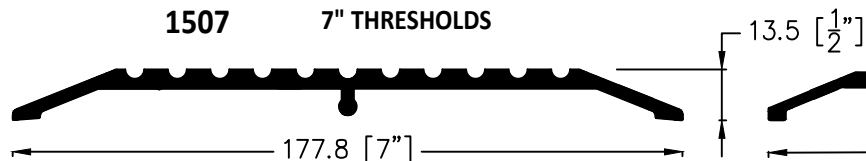


G-2306ST SQUARE



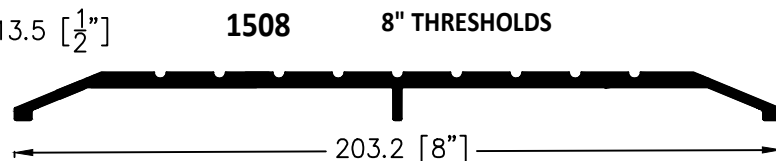
1507

7" THRESHOLDS



1508

8" THRESHOLDS



NUMERICAL LISTING OF DESIGNATIONS

MECHANICAL FINISHES (M)

AS FABRICATED

M10 - UNSPECIFIED
M11 - AS FABRICATED
M12 - NONSPECULAR AS FABRICATED
M1X - OTHER (TO BE SPECIFIED)

BUFFED

M20 - UNSPECIFIED
M21 - SMOOTH SPECULAR
M22 - SPECULAR
M2X - OTHER (TO BE SPECIFIED)

DIRECTIONAL TEXTURED

M30 - UNSPECIFIED
M31 - FINE SATIN
M32 - MEDIUM SATIN
M33 - COARSE SATIN
M34 - HAND RUBBER
M35 - BRUSHED
M3X - OTHER (TO BE SPECIFIED)

NONDIRECTIONAL TEXTURED

M40 - UNSPECIFIED
M41 - FINE MATTE
M42 - MEDIUM MATTE
M43 - ENDE MATTE
M44 - COARSE MATTE
M45 - FINE SHOT BLAST
M46 - MEDIUM SHOT BLAST
M47 - COARSE SHOT BLAST
M4X - OTHER (TO BE SPECIFIED)

CHEMICAL FINISHES (C)*

NONETCHED CLEANED

C10 - UNSPECIFIED
C11 - DEGREASED
C12 - INHIBITED CHEMICAL CLEANED
C1X - OTHER (TO BE SPECIFIED)

ETCHED

C20 - UNSPECIFIED
C21 - FINE MATTE
C22 - MEDIUM MATTE
C23 - COARSE MATTE
C2X - OTHER (TO BE SPECIFIED)

BRIGHTENED

C30 - UNSPECIFIED
C31 - HIGHLY SPECULAR ALUMINUM
C32 - DIFFUSE BRIGHT
C3X - OTHER (TO BE SPECIFIED)

CHEMICAL CONVERSION COATINGS

C40 - UNSPECIFIED
C41 - ACID CHROMATE FLOURIDE
C42 - ACID CHROMATE-NO FLUORIDE- PHOSPHATE
C43 - ALKALINE CHROMATE
C4X - OTHER (TO BE SPECIFIED)

COATING, (A, R, V, E, L)

ANODIC COATINGS (A)

GENERAL

A10 - UNSPECIFIED
A11 - PREPARATION FOR OTHER APPLIED COATINGS
A12 - CHROMIC ACID ANODIC COATINGS
A13 - HARD, WEAR AND ABRASION RESISTANT COATINGS
A1X - OTHER (TO BE SPECIFIED)

PROTECTIVE AND DECORATIVE (COATINGS LESS THAN 0.4 MIL THICK)

A21 - CLEAR
A22 - INTEGRAL COLOUR
A23 - IMPREGNATED COLOUR
A24 - ELECTROLYTICALLY DEPOSITED COLOUR
A2X - OTHER (TO BE SPECIFIED)

ARCHITECTURAL CLASS 11** (0.4 - 0.7 MIL COATINGS)

A31 - CLEAR
A32 - INTEGRAL COLOUR
A33 - IMPREGNATED COLOUR
A34 - ELECTROLYTICALLY DEPOSITED COLOUR
A3X - OTHER (TO BE SPECIFIED)

ARCHITECTURAL CLASS 1** (0.7 MIL AND THICKER ANODIC COATINGS)

A41 - CLEAR
A42 - INTEGRAL COLOUR
A43 - IMPREGNATED COLOUR
A44 - ELECTROLYTICALLY DEPOSITED COLOUR
A4X - OTHER (TO BE SPECIFIED)

**ALUMINUM ASSOCIATION STANDARDS FOR ANODIZED ARCHITECTURAL ALUMINUM

RESINOUS AND OTHER ORGANIC COATINGS (R) ***

R10 - UNSPECIFIED
R1X - OTHER (TO BE SPECIFIED)

VITREOUS COATINGS (PORCELAIN AND CERAMIC TYPES) (V) ***

V10 - UNSPECIFIED
V1X - OTHER (TO BE SPECIFIED)

ELECTROPLATED AND OTHER METAL COATINGS (E) ***

E10 - UNSPECIFIED
E1X - OTHER (TO BE SPECIFIED)

LAMINATED COATINGS (L) ***

(INCLUDES VENEERS, PLASTIC COATINGS AND FILMS BONDED TO ALUMINUM)

L10 - UNSPECIFIED
L1X - OTHER (TO BE SPECIFIED)

*** THESE DESIGNATIONS MAY BE USED UNTIL MORE COMPLETE SERIES OF DESIGNATIONS ARE DEVELOPED FOR THESE COATINGS

GENERAL INFORMATION

CLEANING AND MAINTENANCE OF ALUMINUM

Cleaning procedures should be initiated as soon as is practical after installation to remove construction and accumulated environmental dirt. Cleaning should start at the top of the building and proceed to grade in a continuous drop. For light soiling the simplest procedure is to flush the surface with water, using a moderate pressure. Progressively stronger cleaning methods may be required depending on the severity of the contamination. A small area should be tested first to check the suitability of the method and/or materials used. The aluminum finish can be damaged by abuse or harsh chemicals. Care must be taken to ensure that no cleaning methods cause any damage to adjacent materials and sealants. Also, care must be taken to ensure that materials used to clean other building elements will not damage the aluminum finish.

PROTECTION OF ALUMINUM

Aluminum should be protected during and after installation from contact with concrete, plaster or other alkaline substances. All trades involved should be careful when around aluminum and must share in the responsibility to see that the aluminum finish is not damaged. Aluminum can be protected by covering it with plastic film or paper, or by applying a strippable plastic coating. Any contamination of the aluminum by construction materials should be cleaned immediately to prevent damage to the finish.

ISOLATION COATINGS

When aluminum is in direct contact with steel or certain other metals in the presence of an electrolyte, galvanic corrosion of the aluminum can occur in the vicinity of the contact area. To prevent this corrosion, an isolation coating should be applied to the ferrous material, to serve as an electrical insulator between the two metals. Also, where raw aluminum is in contact with concrete, plaster or other alkaline substance a coating should be applied to the aluminum to protect it from attack. The most frequent coating specified and used for these purposes is bituminous paint. It is a low cost asphalt or coal tar derivative with excellent water resistance and good resistance to salts, oxides and alkalis.

THE FACTS ABOUT ALUMINUM WINDOWS

FACT #1

Unmatched Strength and Stability in Any Climate

Pound for pound, aluminum is one of the strongest and most reliable materials available for window frames. It stands up exceptionally well to the extreme temperature swings common in northern climates. Unlike other materials that expand, contract, warp, or crack with seasonal changes, aluminum retains its shape and strength year after year.

Its structural rigidity makes aluminum windows more resistant to deformation caused by building movement and climate stress. In fact, aluminum expands and contracts 2.6 times less than vinyl and doesn't swell or shrink like wood. This means a better long-term fit within the window opening, improved weather sealing, and greater energy efficiency. Simply put, your windows will last longer—and so will your investment.

FACT #2

Industry-Leading Energy Efficiency

Aluminum is an ideal material for building high-performance, energy-efficient windows. It's easy to work with, highly machinable, and allows for precise fabrication, ensuring parts fit tightly and securely. Today's aluminum window frames can incorporate advanced thermal barriers, durable seals, and precision glazing systems that help maintain comfort and reduce energy costs.

Unlike some materials that degrade over time due to sun, moisture, or temperature changes, aluminum maintains its structural integrity in all climates. Combined with modern glazing options—such as Low-E coatings and gas-filled insulating glass—aluminum windows can deliver year-round energy savings.

FACT #3

More Design Flexibility for Modern Homes

Aluminum's strength-to-weight ratio makes it a favorite among designers and architects. Its rigidity allows for slimmer frames and larger glass areas, bringing in more natural light and offering a cleaner, more contemporary aesthetic.

It can be fabricated into a wide range of profiles and window styles, all engineered for smooth operation and a snug fit. Aluminum is also compatible with a wide selection of durable, low-maintenance finishes, available in a variety of standard and custom colors. Because it doesn't absorb moisture, aluminum won't rust, rot, swell, crack, or warp—ensuring it stays beautiful for decades.

FACT #4

A Strong Future Built on a Proven Material

Aluminum has been used in building and construction since the 1870s, and its potential continues to grow. As one of Earth's most abundant elements, it's not only sustainable but also one of the most recyclable and energy-efficient materials to produce.

Organizations like the Aluminum Extruders Council (AEC) are driving innovation in aluminum manufacturing, working closely with builders, fabricators, and consumers to expand its use and efficiency. Their mission: to promote the benefits of aluminum and ensure it remains a vital material for tomorrow's buildings. With its unmatched strength, versatility, and sustainability, aluminum is here to stay.

WARRANTY

METRO ALUMINUM PRODUCTS LTD. warrants that their products shall be free from defects in workmanship and materials to generally accepted industry standards for a period of one year from the date of shipment provided that they have been installed and maintained in accordance with METRO ALUMINUM PRODUCTS LTD. installation instructions and recommendations. This warranty is limited to defects appearing within one year from the date of shipment and provided that written notification defining defects is received by METRO ALUMINUM PRODUCTS LTD. within that one year period. This warranty is limited to the repair or replacement of defective materials or the repayment by METRO ALUMINUM PRODUCTS LTD. of the original purchase price paid for the defective material: METRO ALUMINUM PRODUCTS LTD. reserves the right to select any of the above options.