

Architectural Binder Section cero by NanaWall

Minimal Framed Sliding Glass Wall



Interactive Table of Contents

PAGE
Introduction 2
Size and Performance Chart 6
Acoustical Performance Chart 7
Thermal Performance Chart
<u>cero III</u> 8
<u>cero II</u> 9
Configuration Examples10
Configuration Naming Convention
Section Details
<u>cero III</u>
Installation Details
Windload Charts 51
<u>cero II</u> <u>53</u>
Installation Details85
Windload Charts 89



cero by NanaWall—The Minimal Framed Large Panel Sliding Glass Wall

cero® is the minimal framed large panel sliding glass wall by NanaWall Systems. Simple in form yet engineered to perfection. Producing clean, uniform, and ultra-thin lines for maximum light filled spaces that connect the interior to the exterior.

The award-winning cero offers full floor-to-ceiling sliding glass panels with recessed top and bottom tracks. Produced through time-tested premium German engineering, cero allows for maximum transparency with the largest panes of glass and the most minimal frames offered by NanaWall.

cero is available in two options depending on thermal performance needs—triple glazed cero III and double glazed cero II.

FEATURES

Narrow Stiles and Rails—Symmetrical Picture Frame Effect

With cero, the panel's rail and stiles are uniform with a consistent 15/16" (34 mm) top to bottom, achieving a symmetrical and minimal design.

Uncompromised Roller System Equals Effortless Sliding

Engineered Features of the Roller System

- cero II panels with double insulated glass have 2 rollers per panel and cero III panels with triple insulated glass have 4 rollers per panel.
- The floor supported cero sliding panels are operated by rollers containing a pair of wheels with encapsulated and self-lubricating ball bearings.
- cero's stainless steel wheels slide effortlessly on a stainless steel track.
- Unique to cero is a Gothic arch wheel bearing design. With a 2-point contact of each wheel to the bottom track, the system glides with less friction.
- To maintain the sleek minimal look, each roller is concealed within the bottom panel profile.
- NanaWall Floor Supported Technology assures that the rollers run above the water table and the design allows for continued long term smooth operation.

- Double sided brushes, located in front of each roller, remove debris from the track to contribute to a smooth running system.
- cero has been tested to 40,000 opening and closing cycles.

Dry Glazed for Seal Durability

Panels are dry glazed providing 360° ventilation of the glass. Dry glazing provides air circulation to keep the pocket cavity dry and allows any potential water to fully weep out of the panels. Dry glazing with gaskets delivers a more aesthetic presentation between glass and frame.

cero is available in either triple glazed, cero III, or double glazed, cero II, options depending on thermal performance needs.

Soft Opening and Closing—No Metal to Metal Contact

The system interlock design of 4 layers of flexible gaskets allows for a soft closing of the panels. Transparent bumpers on the top and bottom vertical stile allow for a soft opening process.

Sophisticated Interlock Design Minimizes Panel Deflection Issues

cero's panel and interlock design is engineered to accommodate panel and glass deflection with a built-in tolerance of up to 1/4" (7 mm). This design also minimizes the concern of the metal vertical stiles touching the adjacent glass sliding panel during the opening and closing process.

Adjustable Height Floor Track for Long-Term Precision Operation

To compensate for potential future building movement, cero's Higher Weather Performance Sill offers height adjustability of up to 1/8" (3 mm).

Thermally Broken Floor Track for Clean Transition

cero's Higher Weather Performance Sill is fully recessed into the floor creating a clean uninterrupted transition from interior to exterior. When needed, an optional track insert is available to meet ADA requirements.



Shallower Flush Sill, Low Profile Saddle Sill, and Flush Saddle Hybrid Sill for Cero II

cero Il's Flush Sill option is available for sheltered or interior environments creating aesthetically seamless transitions between spaces. The minimal Flush Sill is fully recessed at a shallow 7/8" (23 mm) into the floor.

The Low Profile Saddle Sill is recessed at an even shallower 7/16" (11 mm) for surface mounted installations, while the Flush Saddle Hybrid Sill is designed to work with varying interior and exterior finish floor heights.

The Low Profile Saddle Sill and the Flush Saddle Hybrid Sill reduces sheeting rain from entering the interior.

Finished flooring inserts can be easily installed in between the tracks making these sills virtually disappear. Sill designs also make for easy cleaning and maintenance.

For commercial environments, such as retail, hotels, and auto dealerships, the Flush, Low Profile Saddle and Flush Saddle Hybrid sills all meet ADA requirements.

Panel Drainage for Higher Weather Performance Sill

Panel drainage is provided either from the face or the bottom edge of the panel. Track drainage provided by an engineered, cascading water management system. For installations requiring increased drainage due to exposure, a matching French drain system by others is available.

Multipoint Tamper-Resistant Locking System

With cero, security is provided with multipoint locking and a flat handle that is integrated into the 15/16" (34 mm) vertical profile stile to maintain the clean, minimal appearance. A full 1" (25 mm) throw securely locks the panel into a top and bottom adjustable locking receiver.

PERFORMANCE

General Performance Testing

cero is NFRC certified, rated, and labeled. Additionally, cero has been put through rigorous testing at certified and accredited independent laboratories for thermal, water, air infiltration, structural load, and forced entry.

Thermal Performance

For the highest levels of insulation and energy efficiency, cero's profiles are thermally broken with glass fiber reinforced polyamide. Furthermore, the thermal breaks are aligned in the same plane.

Thermal performance values vary depending on the glass, system, and configuration used in each individual application. U-Values as low as .29 and SHGC values as low as .19 are available to meet energy code requirements.

Acoustically Tested

cero II with the Higher Weather Performance Sill was tested with STC 47 glass and achieved a unit STC of 43 and an OITC of 34.

cero II with the Flush Sill was tested with:

- a) STC 38 glass and achieved a unit STC of 33 and an OITC of 29.
- b) STC 50 glass and achieved a unit STC of STC 43 and an OITC of 35.

cero III with the Higher Weather Performance Sill was tested with STC 50 glass and achieved a unit STC of 44 and an OITC of 35.

Florida Product Approval (non-impact)

cero II is Florida statewide approved for standard units with product approval number FL38028.1 and reinforced units with product approval number FL38028.2.

cero III is Florida statewide approved for standard and reinforced units with product approval number FL35024.1.

Details can be viewed at www.floridabuilding.org



OPTIONS

Panel Sizes

cero II panels are available in sizes up to 7' 4 1/2" (W) \times 13' 1" (H) (2250 mm x 4000 mm), cero III panels are available in sizes up to 9' 10" (W) \times 14' 9" (H) (3000 mm \times 4500 mm). Please note that additional freight charges may apply for larger panel sizes. Contact NanaWall for sizing questions.

Configuration Options

cero is available in numerous configurations with combinations of sliding and fixed panels. Systems are available with up to 3 tracks and 6 panels with pocketed and open corner configurations possible. Please see www.nanawall.com/products/cero/options for configuration animation options. Contact NanaWall for 4 or more track options.

Glazing Area Options

Standard to cero is reduced iron, heat soaked tempered glass with a VLT of 90%. Other glazing choices include low iron and laminated glass. All glazing has an option of argon filled double or triple insulated low-E. Contact NanaWall for additional specialty glass alternatives.

Handles

NanaWall stainless steel flat handles complement the clean minimal lines of cero. With two handle designs to choose from, a minimalistic cero stainless steel handle or the NanaWall flat handle which matches the handles used in our product portfolio. The NanaWall flat handle is available in brushed satin, black titanium, and anti-viral/anti-microbial copper-nickel finish.

Aluminum Finish Options

cero is available in 50 standard colors with over 200 colors available in powder coat and anodized finishes. Custom matched colors, steel-effect DB colors, and simulated wood effects are also available.

Higher Security

For those with higher security concerns, the system is able to meet the optional European security standards of either RC2 or RC3. European standards are more stringent than that of US forced entry testing.

The quality of a window in terms of burglary resistance is largely determined by the interaction of window profiles, glazing, and hardware. With the 15 minute forced entry test for RC2, a locked cero passed security breach attempts using basic tools such as screwdrivers, pliers, vise grips, and wedges on the system. RC3 is a 20 minutes test in which a crowbar is added to the basic tools in the attempt to open the closed and locked cero system.

Motorization

With cero's optional automation accessory by others, the large panels can be operated and securely locked with a simple touch of a button or through the use of a cell phone app. The automation feature provides effortless and quiet operation. Key pads can be located on the interior and/or exterior for convenience and peace of mind. Please contact NanaWall for details.

Electronic Security Option

cero is able to be fitted with an electronic security option by others.

Matching Fixed Glass Panels

To meet various design intents, matching fixed glass panels are available to complement the cero system.

RECOMMENDATION

Condensation may occur when system is installed in cold climates or in a facility with high indoor humidity. If condensation could be an issue for your application, NanaWall recommends taking appropriate measures during the design and construction phase to reduce or eliminate the possibility of condensation. There are many third party sources discussing the nature of condensation and ways to reduce or eliminate condensation, including publications by AAMA, WDMA, and Efficient Windows Collaborative. Contact NanaWall for more information.









SIZE AND PERFORMANCE CHART | CERO BY NANAWALL

	CETO - CE certified, ISO 14001, ISO 9001		
Maximum Panel Size (Sliding or Fixed)	7' 4 1/2" (W) x 13' 1" (H) (2250 mm x 4000 mm) for cero II 9' 10" (W) x 14' 9" (H) (3000 mm x 4500 mm) for cero III		
Maximum Panel Weight	1,300 lbs. (600 kg) for cero II or 2,200 lbs. (1,000 kg) for cero III		
Insulated Glass Thickness	1 3/16"- 1 7/16" (30 - 36 mm) for Double Glazed cero II 1 7/8"- 2 1/8" (48 - 54 mm) for Triple Glazed cero III		
Daylight / Proportion of Glass	98%		
Running Mechanism	Floor Supported Technology		
Thermally Broken Higher Weather Performance Sill	ADA Wheelchair Compliant with Optional Insert		
Flush Sill / Saddle Sill / Flush Saddle Hybrid Sill	ADA Wheelchair Compliant		
Visible Profile Width	1 5/16" (34 mm) All the Way Around with Recessed Frame		

System Testing	Double Glazed— cero II with Higher Weather Performance Sill	Double Glazed— cero II with Flush / Saddle / Hybrid Sill	Triple Glazed— cero III with Higher Weather Performance Sill		
Static Water Penetration (ASTM E-547 and E-331) ①③④	12 psf (600 Pa) 8 psf (400 Pa) [®]	6 psf (300 Pa) 4 psf (200 Pa) [®] (Tested with U-channel on the inside)	12 psf (600 Pa) 8 psf (400 Pa) [®]		
Dynamic Water Penetration (AAMA 501) ^{①③}	12 psf (600 Pa)		12 psf (600 Pa)		
Air Infiltration Exfiltration @ 1.57 psf (ASTM E-283) **\text{0.9}	0.09 cfm/ft² 0.08 cfm/ft² A3	0.16 cfm/ft ² 0.13 cfm/ft ² A2	0.05 cfm/ft ² 0.04 cfm/ft ² A3		
AAMA/WDMA/CSA 101/I.S.2/A440-08 and -11	Standard Unit: Class CW-PG35-SD 23' 3" x 10' 3" (7100 mm x 3130 mm)	ass CW-PG35-SD '' 3" x 10' 3" (7100 mm x			
	Reinforced Unit: Class CW-PG60-SD 23' 3" x 10' 3" (7100 mm x 3130 mm)		Reinforced Unit: Class CW-PG75-SD 23' 1" x 10' 2" (7047 mm x 3122 mm)		
	DESIGN PRESSURE				
Structural Load Deflection (ASTM E-330) (10.01)(1) See design windload charts for other sizes: cero II pages 89 - 91 and cero III pages 51 - 52 Note that the structural test pressures were 50% higher than the design pressures	Standard Unit: +/- 35 psf (1680 Pa) Pass L/175 Requirement	Standard Unit: +/- 35 psf (1680 Pa) Pass L/175 Requirement	Standard Unit: +/- 40 psf (1920 Pa) Pass L/175 Requirement		
	Reinforced Unit: + 65 psf (3120 Pa) - 60 psf (2880 Pa) Pass L/175 Requirement		Reinforced Unit: + 80 psf (3840 Pa) - 73 psf (3500 Pa) Pass L/175 Requirement		
Florida Product Approval (non-impact)	Standard Unit: FL38028.1		Standard Unit: FL35024.1		
	Reinforced Unit: FL38028.2		Reinforced Unit: FL35024.1		
Forced Entry (ASTM F-842) ^{①③④}	Pass with optional RC2	Pass	Pass with optional RC2 or RC3		
Cycle Testing (per DIN 1191/12400)	40,000	40,000	40,000		
Acoustical Performance (ASTM E-90 and E-1332) ^⑤	Tested with: STC 47 glass achieved STC (Rw) 43 and OITC 34	Tested with: STC 50 glass achieved unit STC (Rw) 43 and OITC 34 STC 38 glass achieved unit STC (Rw) 33 and OITC 29	Tested with: STC 50 glass achieved STC (Rw) 44 and OITC 35		

① Excerpts of results of four panel unit size 22 4* W x 9*10* H (6800 mm x 3000 mm) with varying cross sections by Architectural Testing Inc., Fresno, CA an AAMA accredited and certified independent testing laboratory in March 2017.



② For Canada tested to NAFS-2011 and CSA A440-11.

③ Excerpts of results of four panel unit size 22 4° W x 9′ 10° H (6800 mm x 3000 mm) with varying cross sections by Architectural Testing Inc., Fresno, CA an AAMA accredited and certified independent testing laboratory in May 2018.

① Excerpts of results of two panel unit size 14' W x 10' H (4267 mm x 3048 mm) with varying cross sections by Architectural Testing Inc., Fresno, CA an AAMA accredited and certified independent testing laboratory in May 2018.

⑤ Excerpts of results of two panel unit size 11' 6" W x 8' 2" H (3500 mm x 2500 mm) with varying cross sections by SG Bauakustik, Muelheim an der Ruhr, an EN DIN ISO accredited and certified independent testing laboratory in August 2016.

[®] Excerpts of results of two panel unit size 14' W x 10' H (4267 mm x 3048 mm) with varying cross sections by Architectural Testing Inc., Lake Forest, CA an AAMA accredited and certified independent testing laboratory in May 2018.

Acoustical Performance cero II

TYPE OF TEST	RESULTS
Acoustical Performance ^①	STC (Rw) 33 achieved with STC 38 glass (1 3/8" [36 mm] double IGU, 10 mm tempered + 10 mm tempered)
	STC (Rw) 43 achieved with STC 50 glass (1 3/8" [36 mm] double IGU, 12 mm laminated + 12 mm laminated)

① Excerpts of results of two panel unit size 14' W x 10' H (4267 mm x 3048 mm) with varying cross-sections by Architectural Testing Inc., Lake Forest, CA an AAMA accredited and certified independent testing laboratory in May 2018.

Check www.NanaWall.com for the latest updates.

Acoustical Performance Interpolation with Other Glazing Options

		FLUSH SILL				
TYPE OF GLASS	GLASS ONLY STC	COMPLETE SYSTEM STC (Rw)	MAXIMUM UNIT HEIGHT POSSIBLE			
1 3/8" (36 mm) 10 mm tempered + 10 mm tempered	38	33	13' 1" (4000 mm)			
13/8" (36 mm) 8 mm laminated + 8 mm laminated	44	38	13' 1" (4000 mm)			
1 3/8" (36 mm) 12 mm laminated + 12 mm laminated	50	43	13' 1" (4000 mm)			
Contact NanaWall for other glass types.						



Thermal Performance cero III



Rated, certified, and labeled in accordance with NFRC 100 + 200

Thermal Performance

		cero III with Higher Weather Performance Sill					
TYPE OF GLASS (1 LITE)	CENTER OF GLASS U-FACTOR	UNIT U-FACTOR	shgc ^①	VT ^②	2015 ENERGY STAR		
Triple IG Low E x 2 (argon filled)	.12	.29	.25	.47	*		
Triple IG Low E x 2 (air filled)	.15	.31	.25	.47	-		
Triple IG Higher SHGC Low E x 2 (argon filled)	.12	.29	.44	.64	*		
Triple IG Higher SHGC Low E x 2 (air filled)	.15	.32	.44	.64	-		
Triple IG Lower SHGC Low E x 2 (argon filled)	.12	.29	.19	.25	*		
Triple IG Lower SHGC Low E x 2 (air filled)	.15	.31	.19	.25	-		
NOTES							

① SHGC = Solar Heat Gain Coefficient ② VT = Visible Transmittance

* 2015 Energy Star Qualification Criteria: U-Factor for doors in all climate zones ≤.30, SHGC ≤.25 in South/South Central zones and ≤.40 in North/North Central zones. (For guidance only. NanaWall is not a participant of the Energy Star program.)

Shown above are thermal values for select glass options only. Thermal values for many other glass options are available. These may be able to meet specific requirements, such as Energy Star values for other zones, CA Title 24 prescriptive values, other state and local energy codes, etc. Thermal values for glass with other Low E coatings are available. Please contact NanaWall for more information.



Thermal Performance cero II



Rated, certified, and labeled in accordance with NFRC 100 + 200

Thermal Perform	rmonoo								
THEITIAI PEHO	cero II with Higher Weather Performance Sill				cero II with Flush / Saddle / Hybrid Sill				
TYPE OF GLASS (1 LITE)	CENTER OF GLASS U-FACTOR	UNIT U-FACTOR	shgc ^①	VT ^②	2015 ENERGY STAR	UNIT U-FACTOR	shgc ^①	VT ²	2015 ENERGY STAR
Double IG Low E (argon filled)	.25	.41	.29	.60	_	.42	.29	.59	-
Double IG Low E (air filled)	.30	.45	.30	.60	-	.46	.30	.60	-
Double IG Higher SHGC Low E (argon filled)	.25	.42	.53	.69	-	.43	.52	.60	-
Double IG Higher SHGC Low E (air filled)	.29	.46	.53	.69	-	.47	.52	.60	-
Double IG Lower SHGC Low E (argon filled)	.25	.42	.22	.43	-	.42	.22	.43	_
Double IG Lower SHGC Low E (air filled)	.30	.45	.23	.43	_	.46	.23	.43	-

NOTES

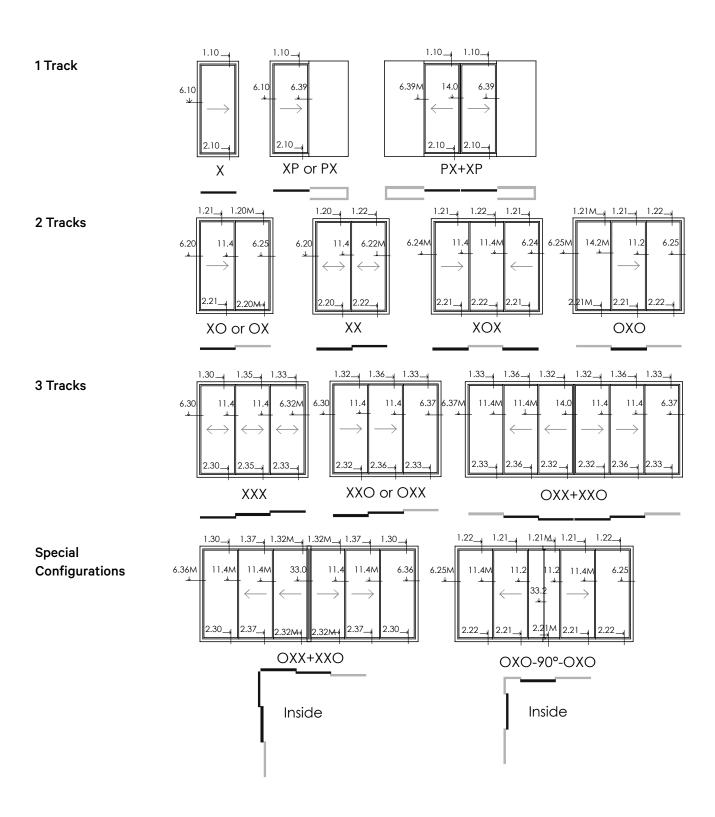
① SHGC = Solar Heat Gain Coefficient ② VT = Visible Transmittance

Shown above are thermal values for select glass options only. Thermal values for many other glass options are available.

These may be able to meet specific requirements, such as Energy Star values for other zones, CA Title 24 prescriptive values, other state and local energy codes, etc. Thermal values for glass with other Low E coatings are available.

Please contact NanaWall for more information.





Contact NanaWall for 4 or more track configurations.



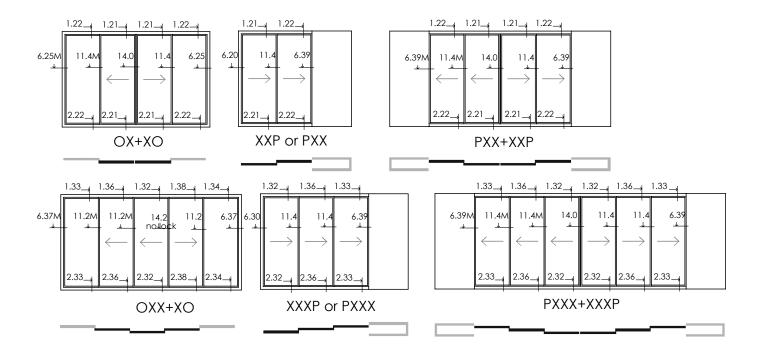
M Mirrored

O Fixed

X Sliding

P Pocket

Please Note Regarding Horizontal Cross Section Details 6, 11, 14, 33: Depths can be less depending on wind load and operation. See corresponding cross section details.

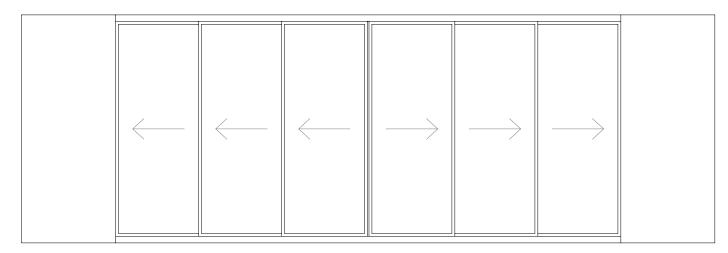


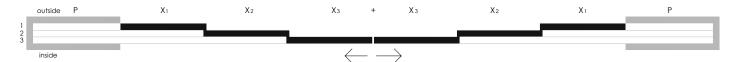
Contact NanaWall for 4 or more track configurations.



Below shows the cero by NanaWall naming convention. Depending on the configuration, number of panels and tracks, a number (1, 2, 3) is assigned to indicate which track the panel (X for sliding, O for fixed) is on. The (+) symbol indicates a split in the system—opening left and right. For systems with pockets, the pocket is either on the inside or the outside depending on the configuration.

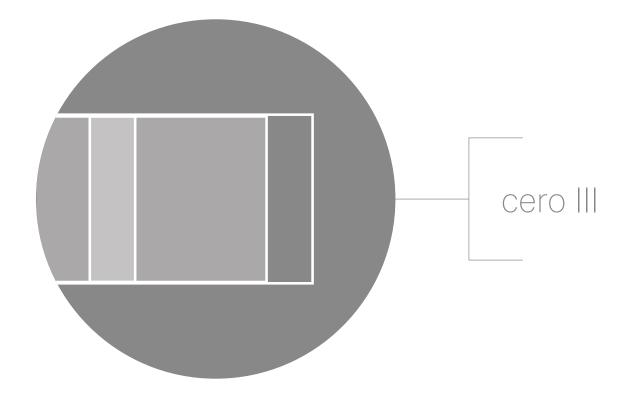
Example Configuration





 $PX_1X_2X_3 + X_3X_2X_1P$

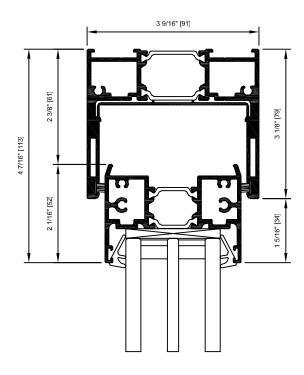






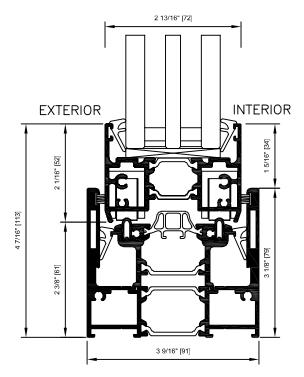
1 Track Configurations Details



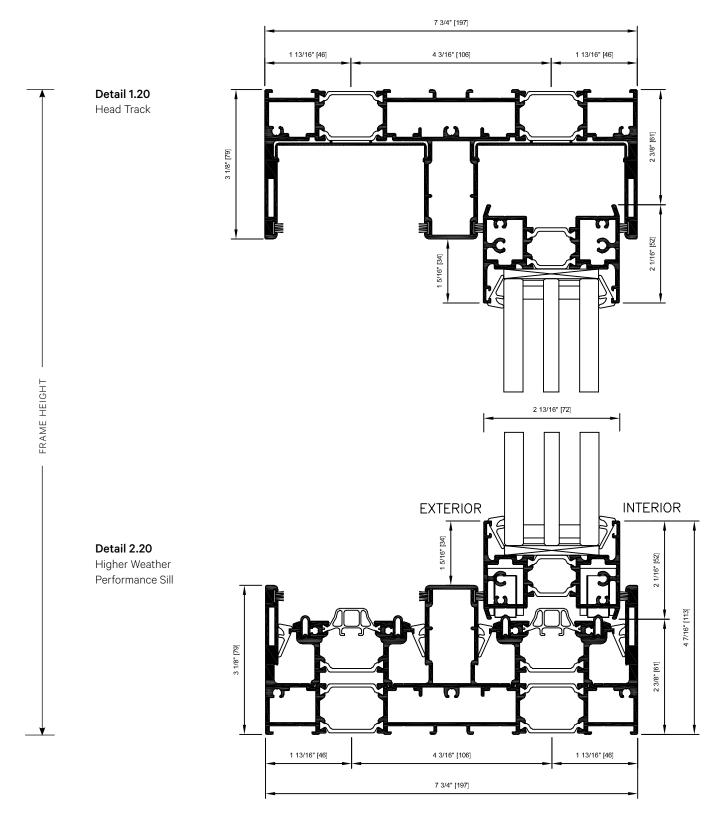


Detail 2.10Higher Weather
Performance Sill

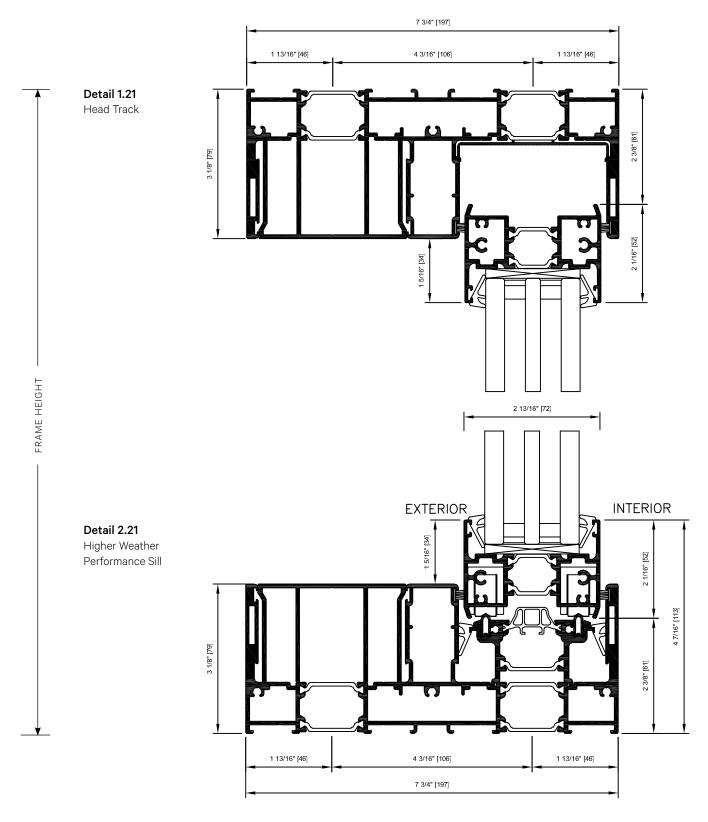
FRAME HEIGHT



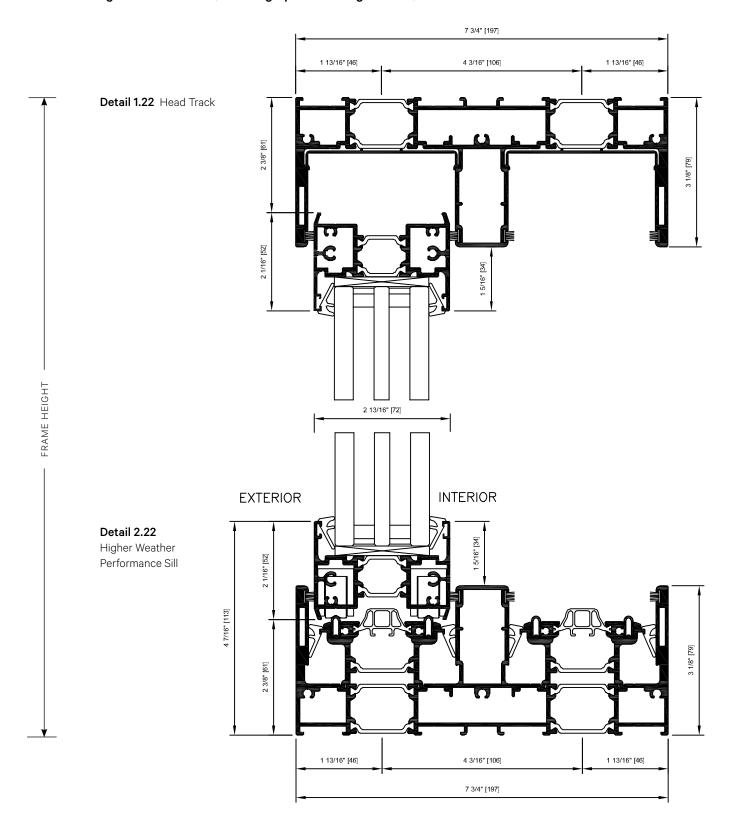




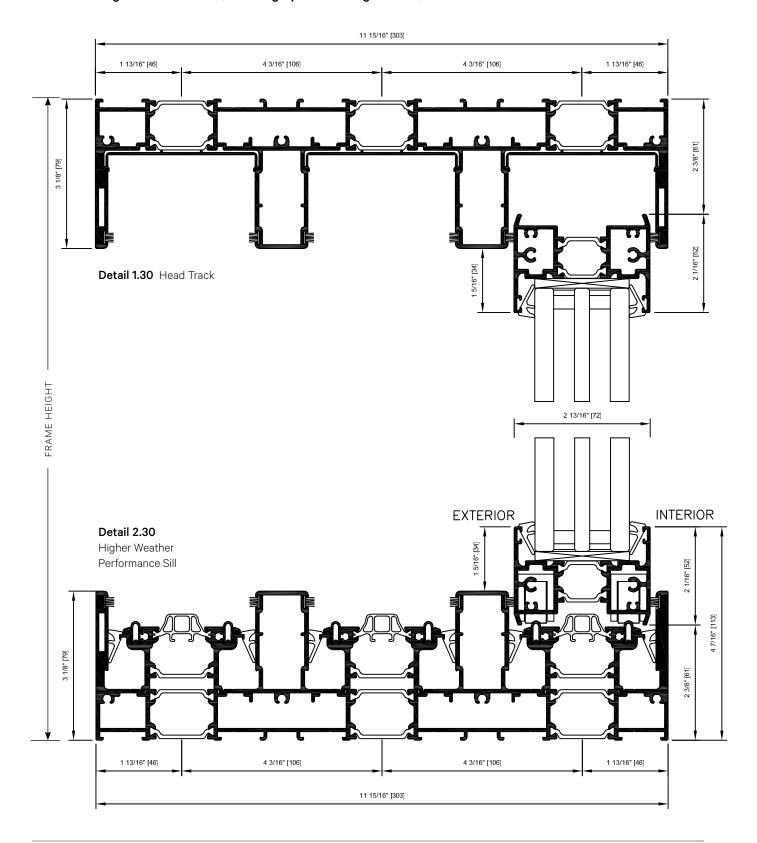




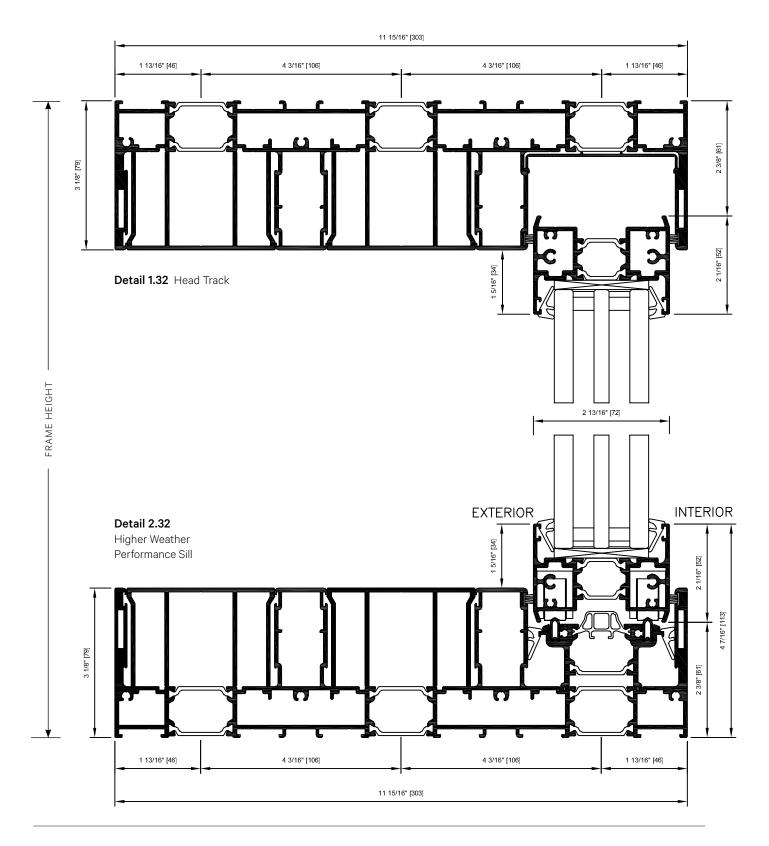




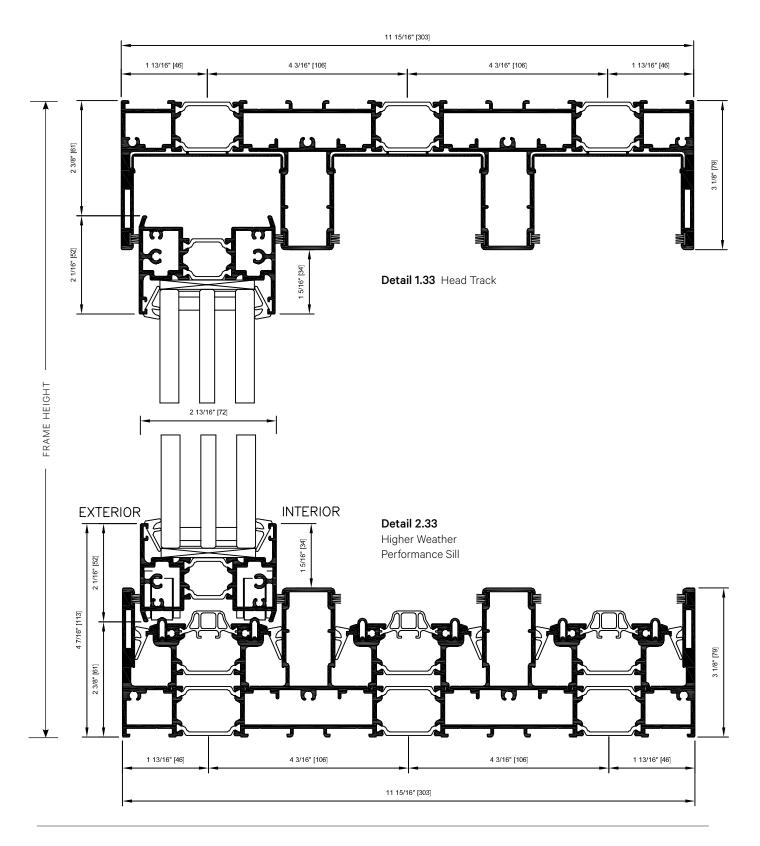




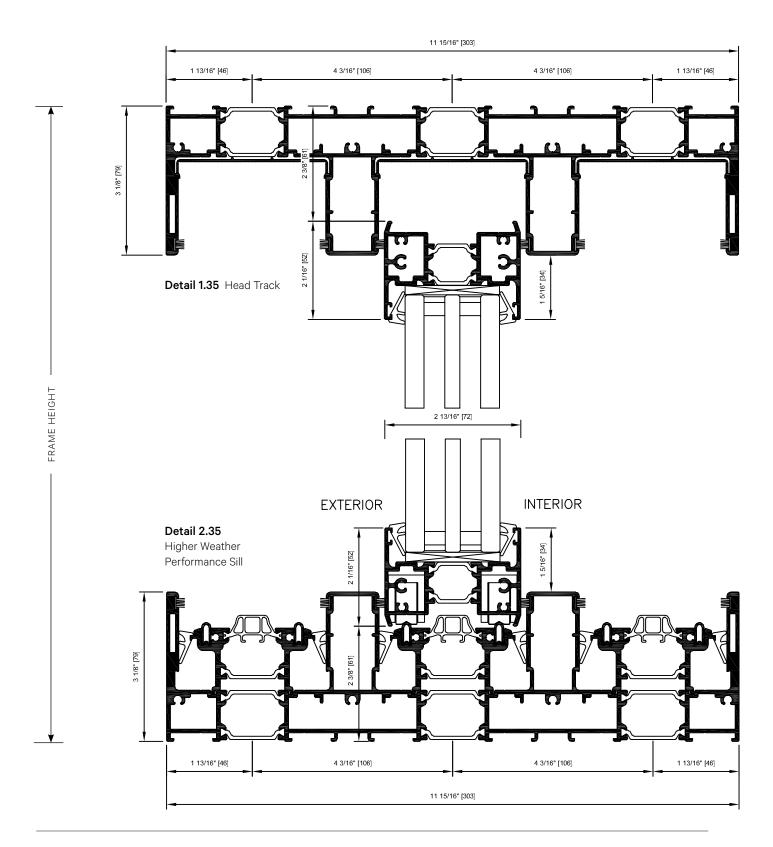




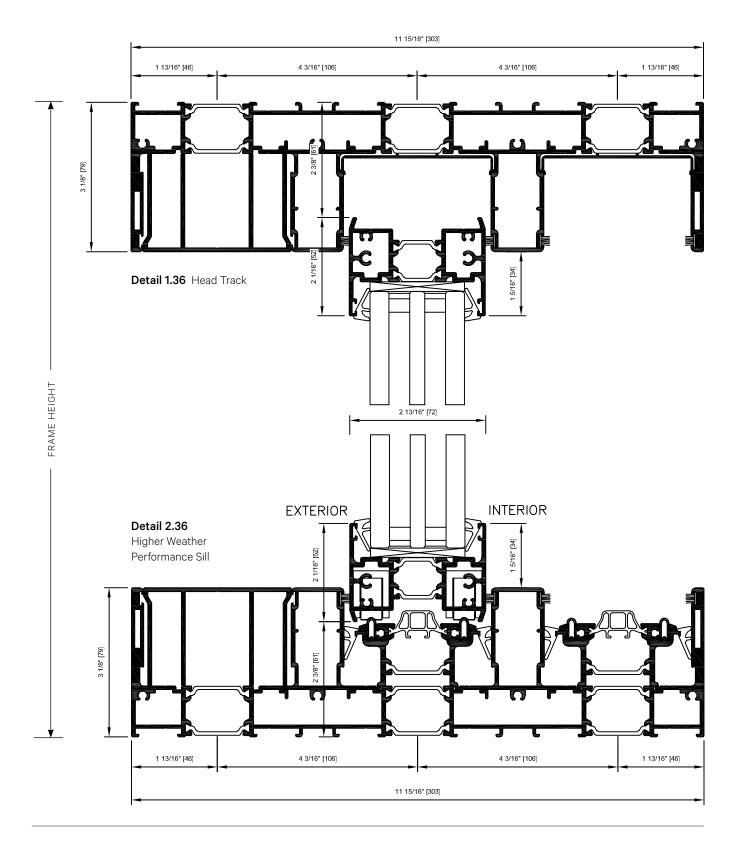




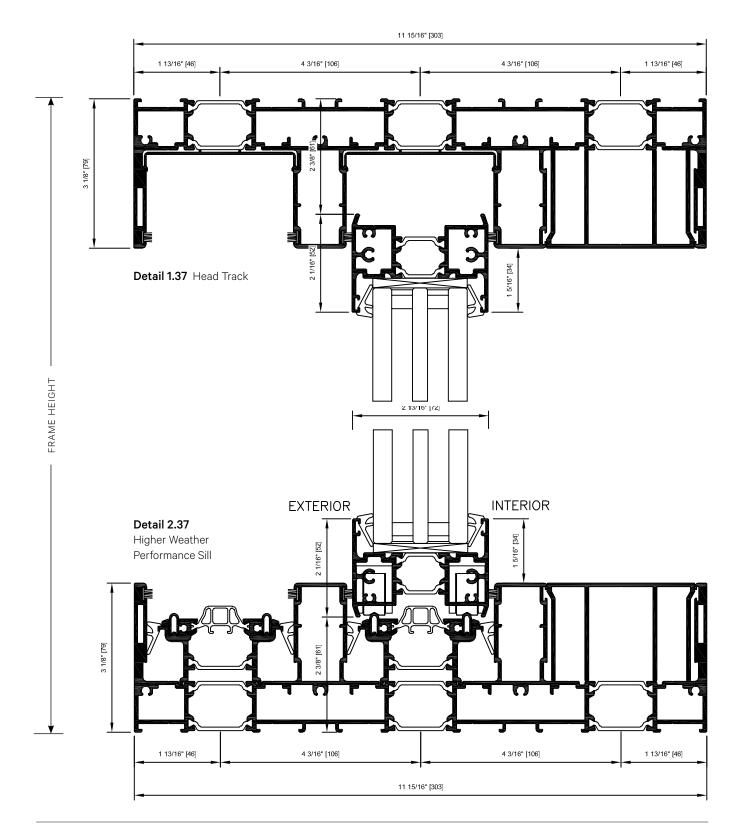




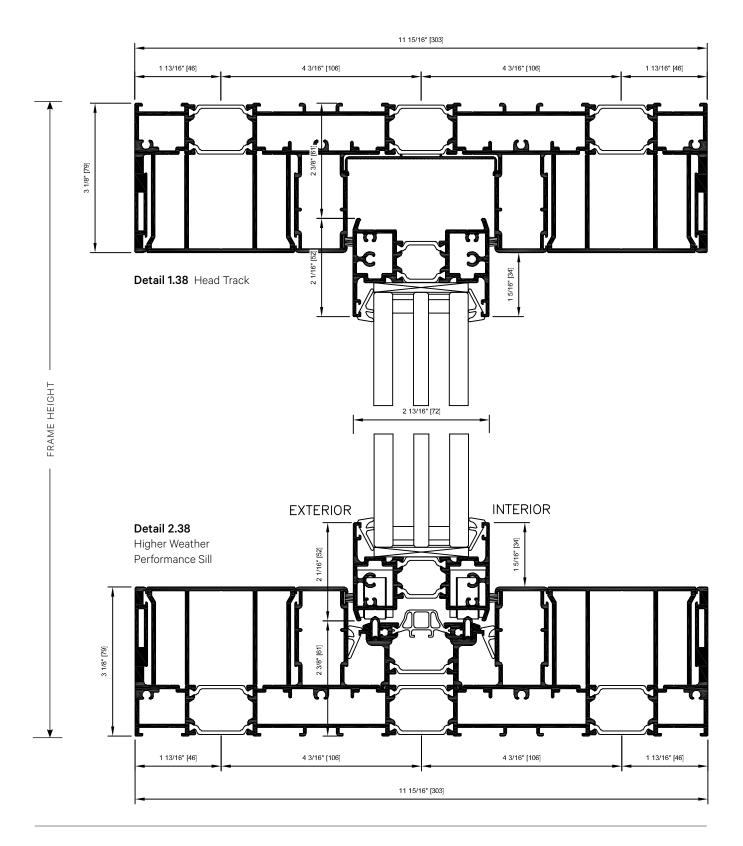




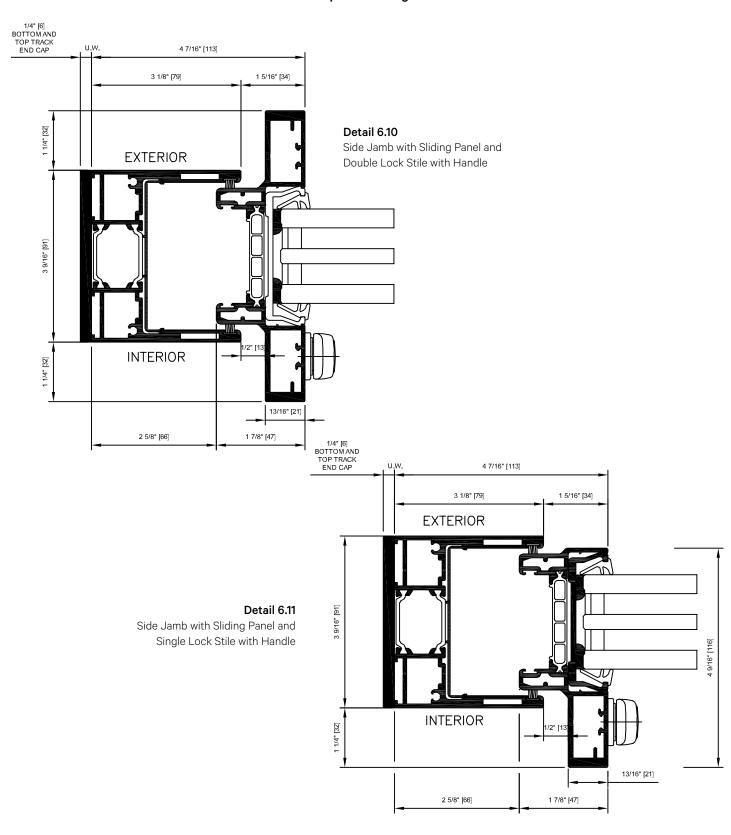




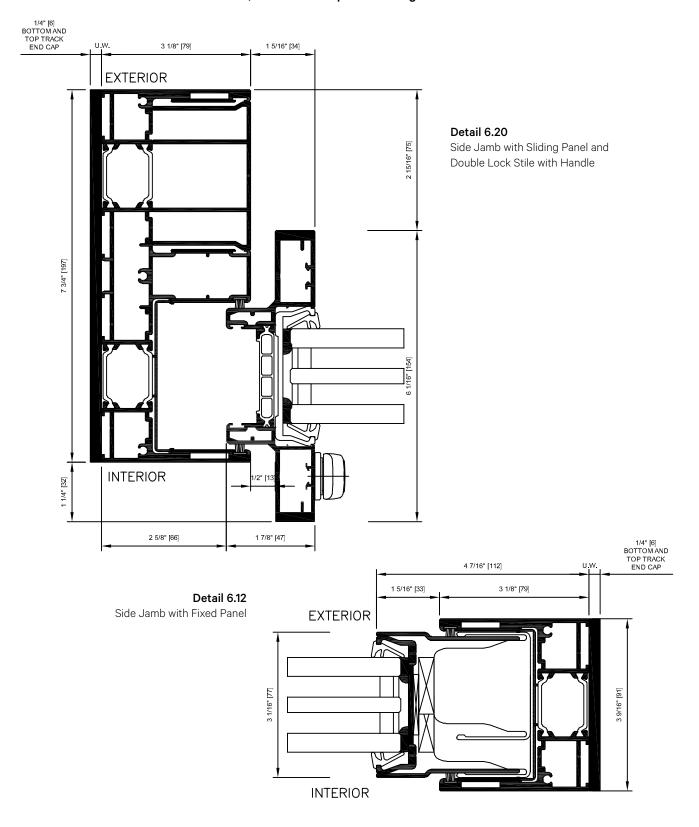




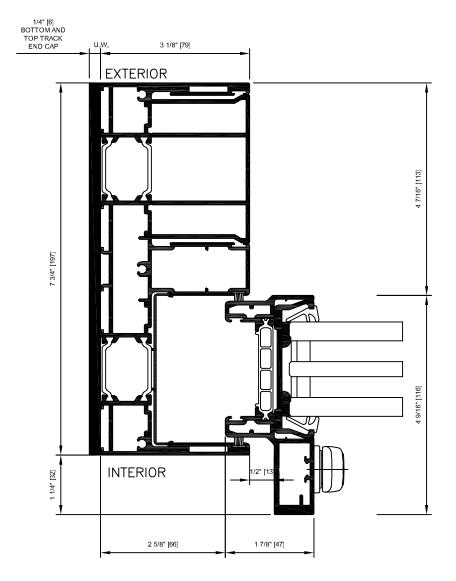








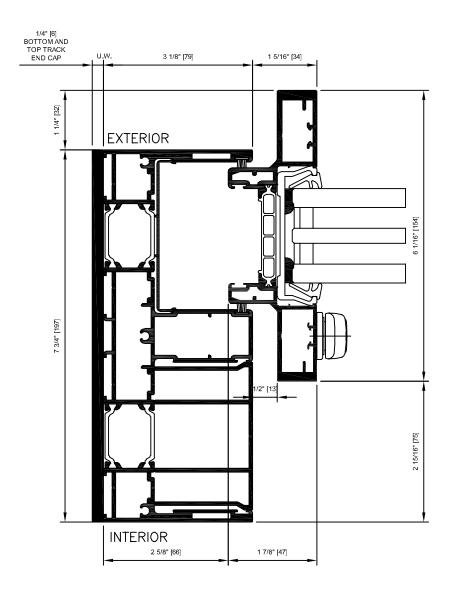




Detail 6.21Side Jamb with Sliding Panel and Single Lock Stile with Handle

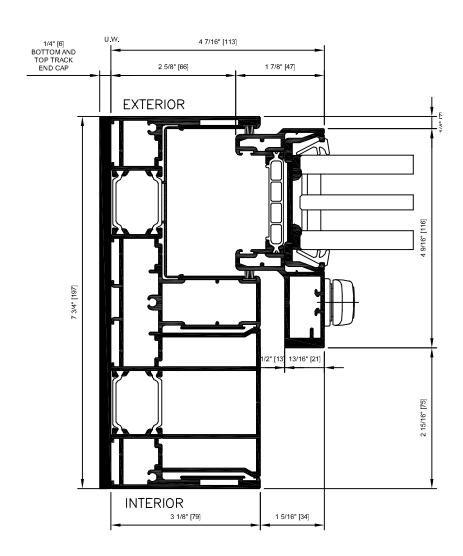


Detail 6.22Side Jamb with Sliding Panel and Double Lock Stile with Handle



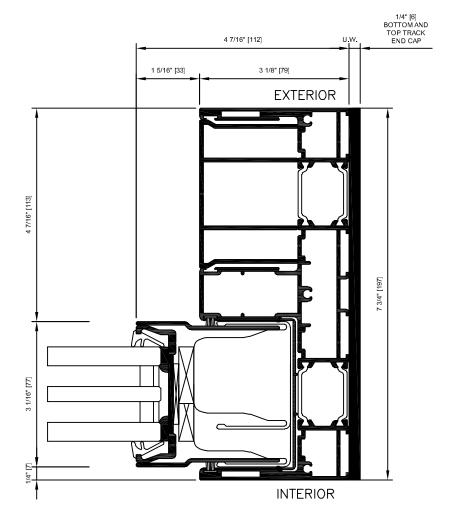


Detail 6.23Side Jamb with Sliding Panel and Single Lock Stile with Handle



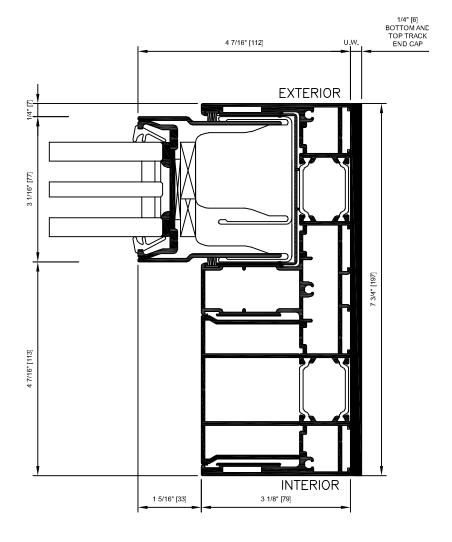


Detail 6.24Side Jamb with Fixed Panel



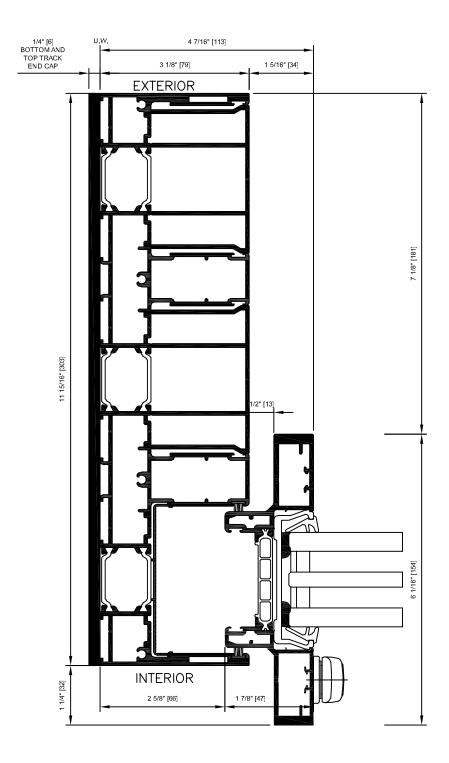


Detail 6.25Side Jamb with Fixed Panel

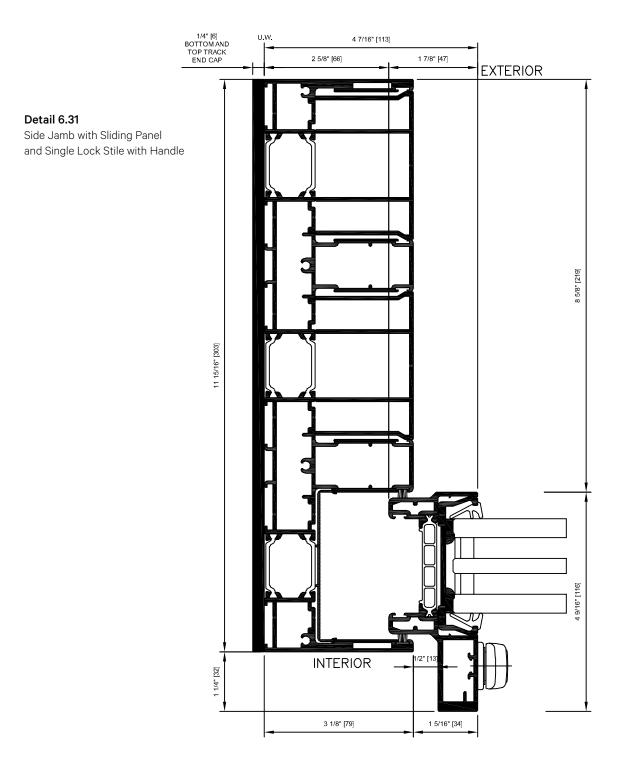




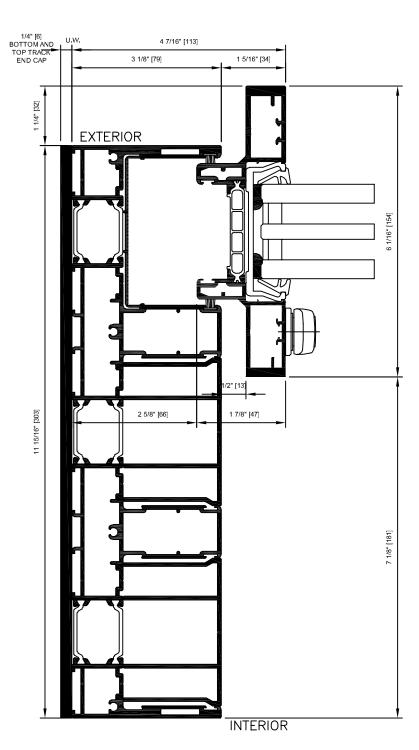
Detail 6.30Side Jamb with Sliding
Panel and Double Lock
Stile with Handle











Detail 6.32Side Jamb with Sliding Panel and Double Lock Stile with Handle

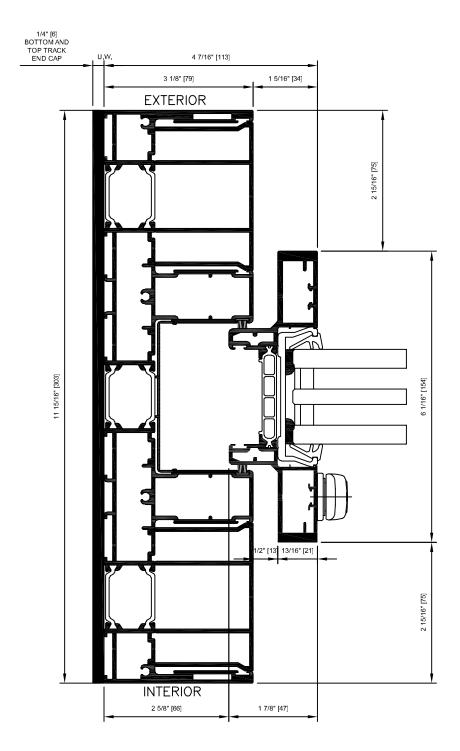


1/4" [6] BOTTOM AND TOP TRACK END CAP 2 5/8" [66] 1 7/8" [47] **EXTERIOR** 9/16" [116] 1/2" [13] 13/16" [21] 11 15/16" [303] **INTERIOR** 3 1/8" [79] 4 7/16" [113]

Detail 6.33Side Jamb with Sliding Panel and Single Lock Stile with Handle

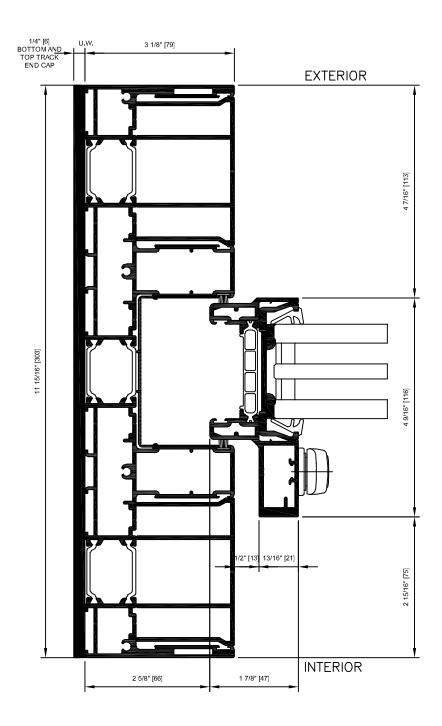


Detail 6.34Side Jamb with Sliding Panel and Double Lock Stile with Handle



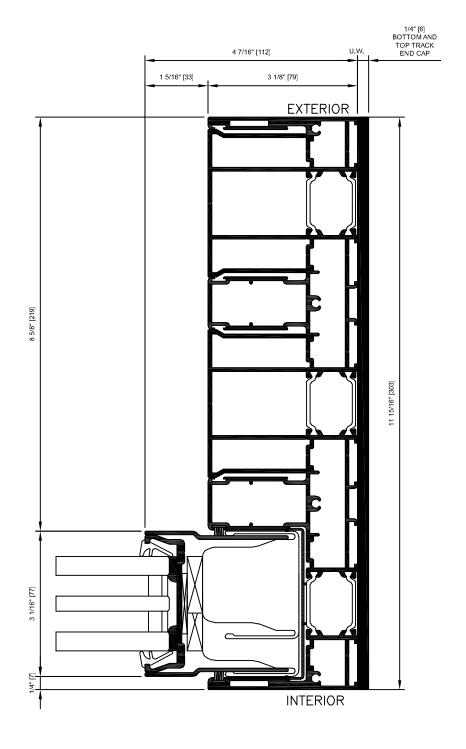


Detail 6.35Side Jamb with Sliding Panel and Single Lock Stile with Handle



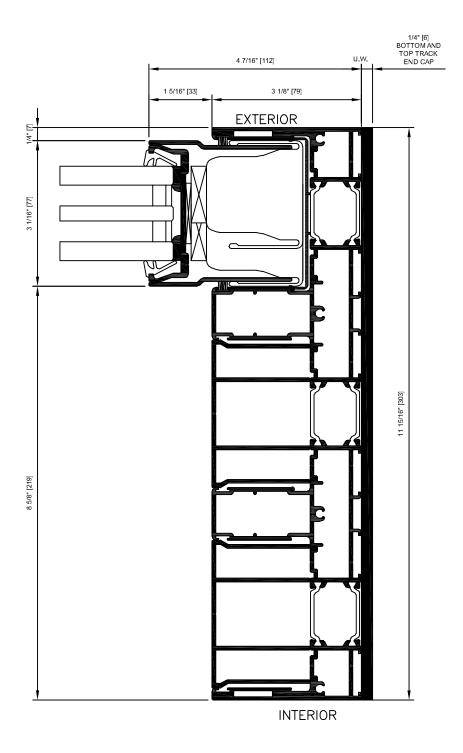


Detail 6.36Side Jamb with Fixed Panel



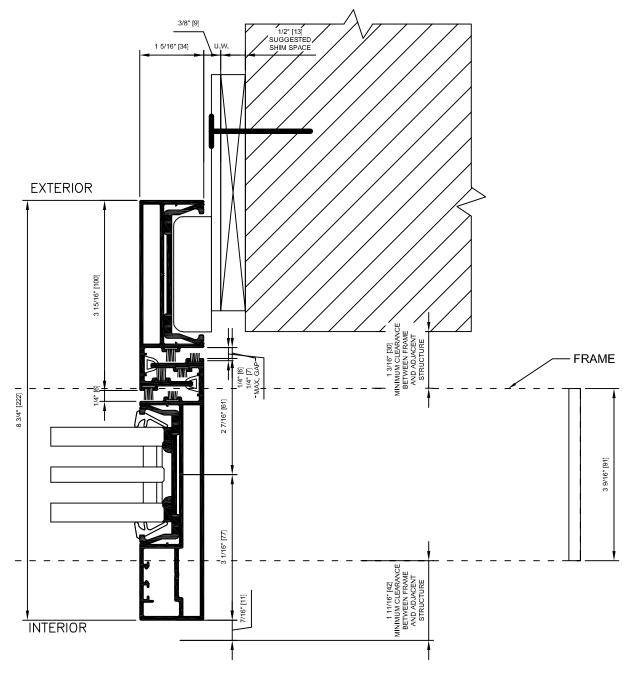


Detail 6.37Side Jamb with Fixed Panel





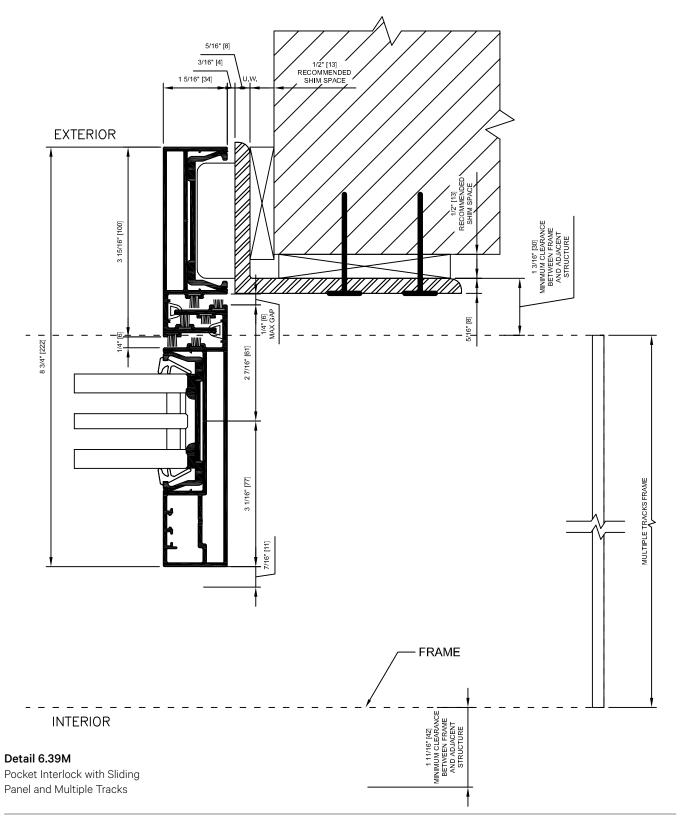
Horizontal Cross Section Details For 1 Track



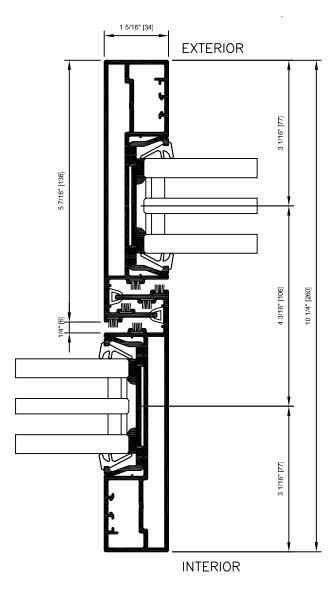
Detail 6.39Pocket Interlock with Sliding Panel and 1 Track



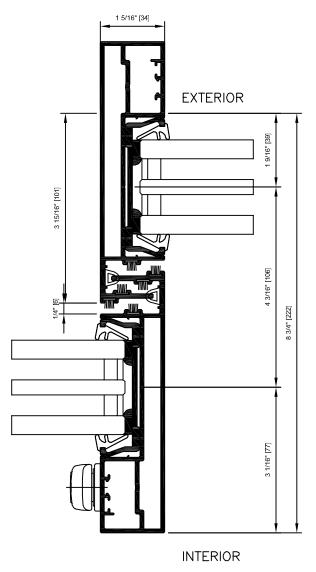
Horizontal Cross Section Details For 2 or More Tracks





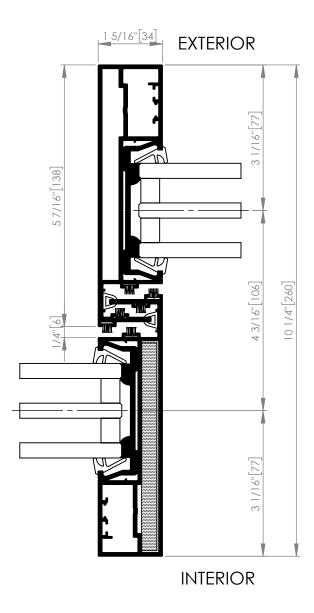


Detail 11.0Interlock Sliding Panels



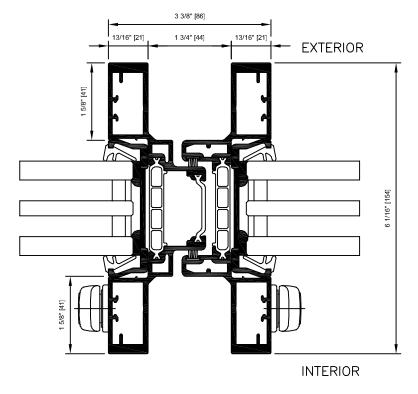
Detail 11.1Sliding Panels with Single
Lock Stile and Handle





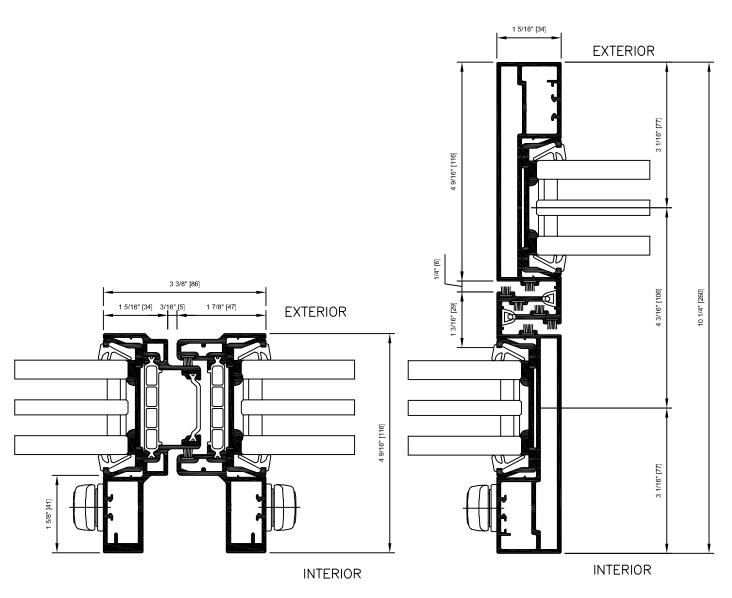
Detail 11.8Reinforced Interlock
Sliding Panels





Detail 14.0Male/Female Sliding Panels with
Double Lock Stile and Handle

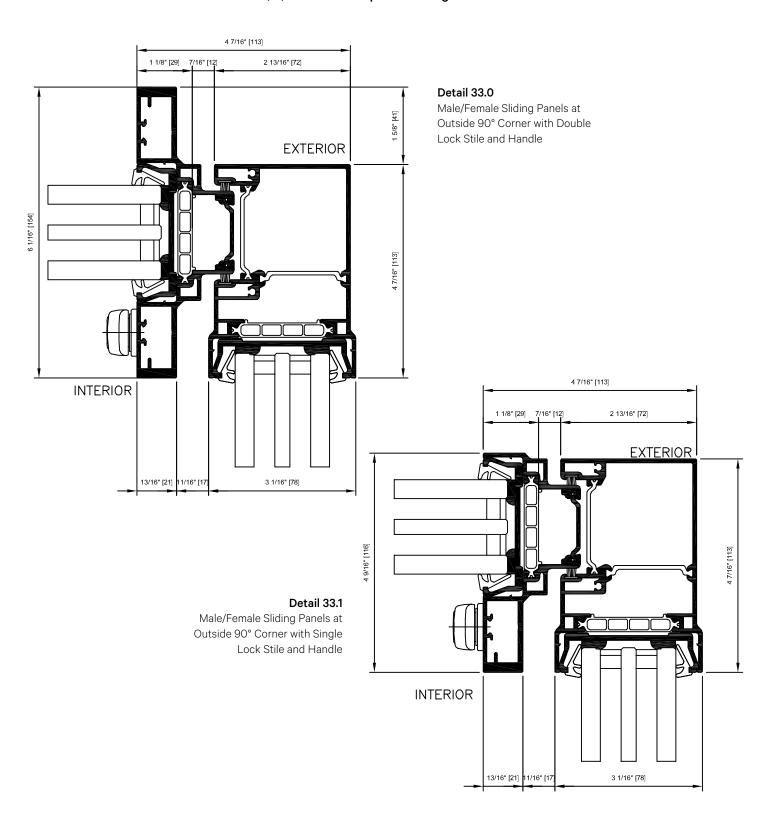




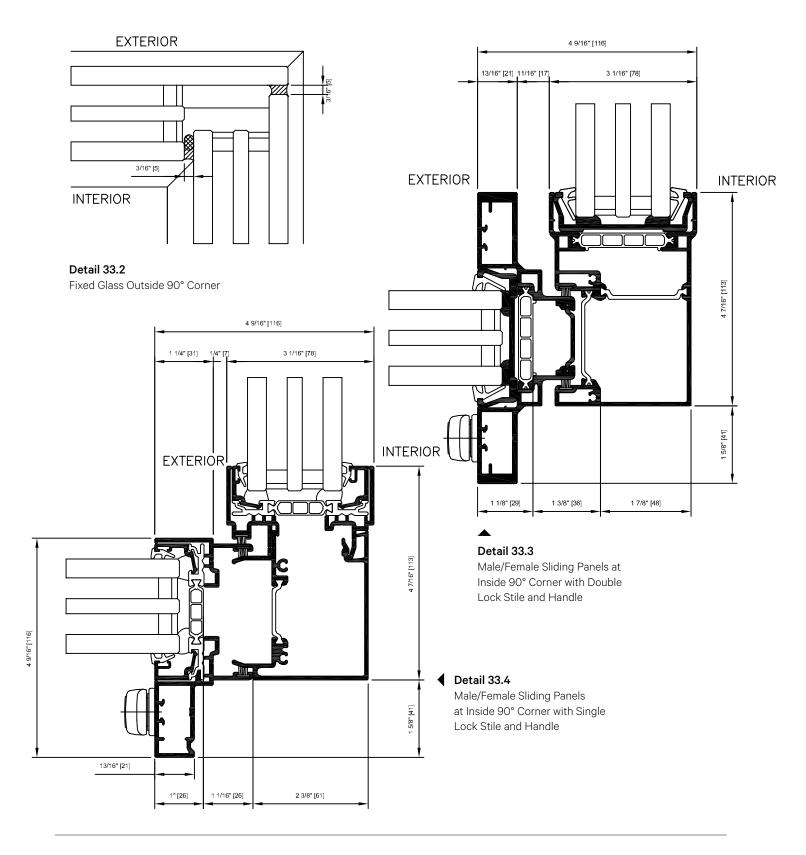
Detail 14.1Male/Female Sliding Panels with Single Lock Stile and Handle

Detail 14.2Reversed Interlock Sliding Panels with Double Lock Stile and Handle



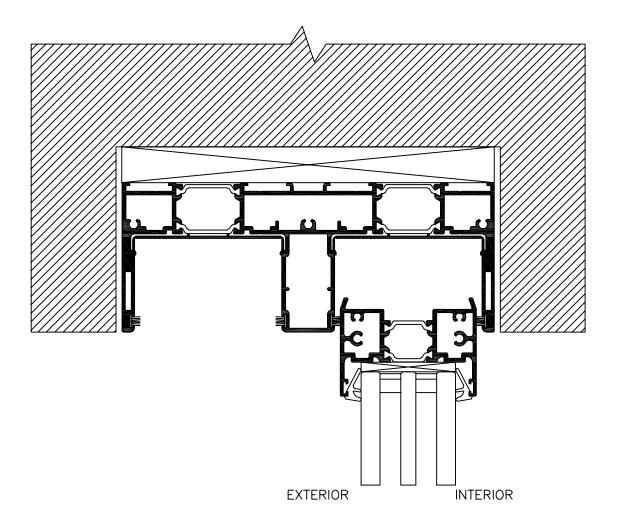






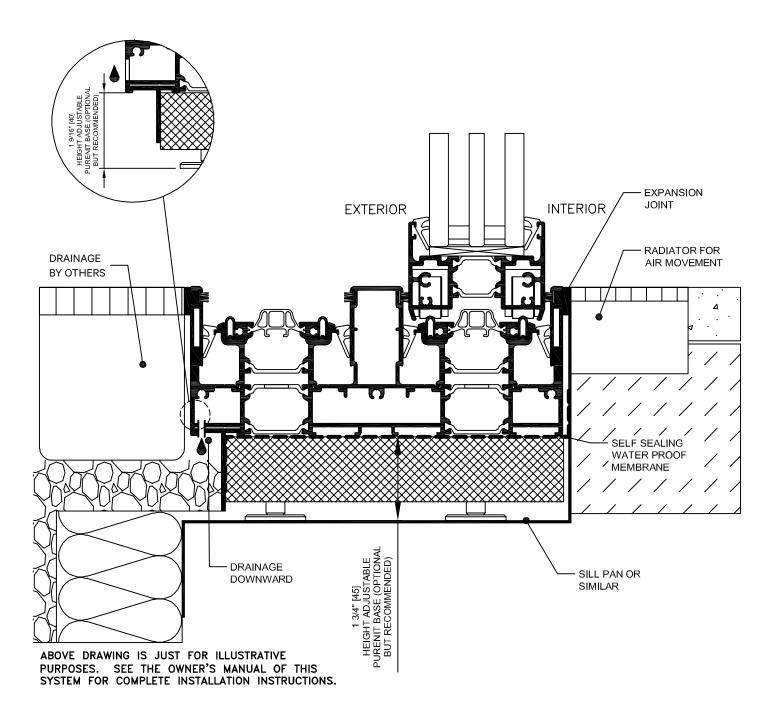


Recessed Head Track



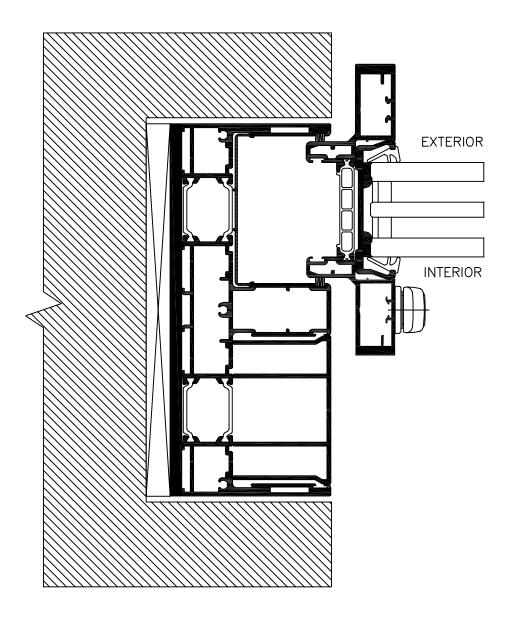


Recessed Higher Weather Performance Sill





Recessed Side Jamb

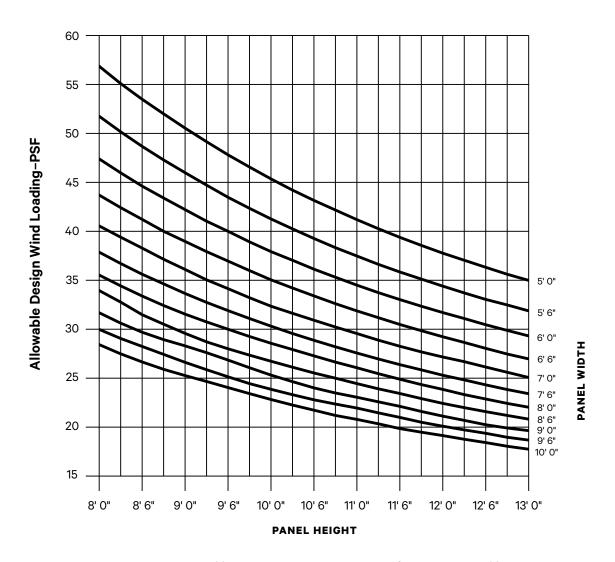




Design Windload Chart | cero III

Applies to Positive and Negative Design Pressures with Standard cero III Higher Weather Performance Sill

(In Accordance with Allowable Stress Design (ASD) Design Pressures*)



Any custom size is possible. See Maximum Frame Size Limits for maximum possible sizes.

(Derived from Comparative Analysis) Test Panel Size: 5' 9 7/16" x 9' 10 7/16".

Please note that some jurisdictions may limit the use of these charts or may not accept them at all. Design pressures and/or sizes may be restricted to what was tested. For Florida approved products, please see detailed FL Evaluation Report for restrictions. This chart is only applicable for units with referenced NanaWall supplied locking and tempered glass. Note that any limitations from water infiltration ratings have not been considered in these charts.

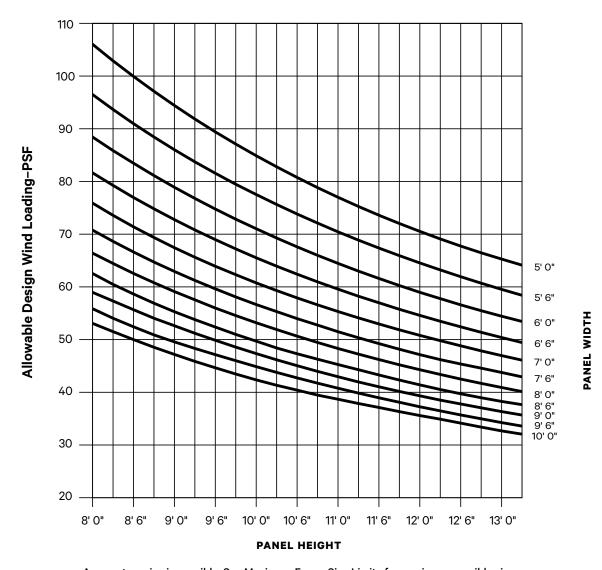
^{*} If the project design pressures have been calculated in accordance with Ultimate Design Wind Speed (ULT), then these design pressures have to be multiplied by a factor of 0.6 to obtain the equivalent ASD design pressures shown in this chart.



Design Windload Chart | cero III

Applies to Positive and Negative Design Pressures with Reinforced cero III Higher Weather Performance Sill

(In Accordance with Allowable Stress Design (ASD) Design Pressures*)



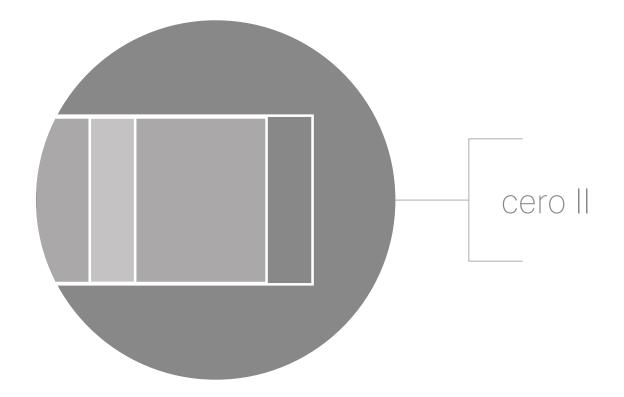
Any custom size is possible. See Maximum Frame Size Limits for maximum possible sizes.

(Derived from Comparative Analysis) Test Panel Size: 5' 9 7/16" x 9' 10 7/16".

Please note that some jurisdictions may limit the use of these charts or may not accept them at all. Design pressures and/or sizes may be restricted to what was tested. For Florida approved products, please see detailed FL Evaluation Report for restrictions. This chart is only applicable for units with referenced NanaWall supplied locking and tempered glass. Note that any limitations from water infiltration ratings have not been considered in these charts.



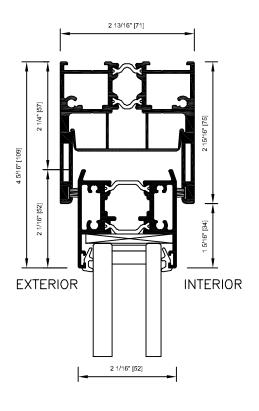
^{*} If the project design pressures have been calculated in accordance with Ultimate Design Wind Speed (ULT), then these design pressures have to be multiplied by a factor of 0.6 to obtain the equivalent ASD design pressures shown in this chart.



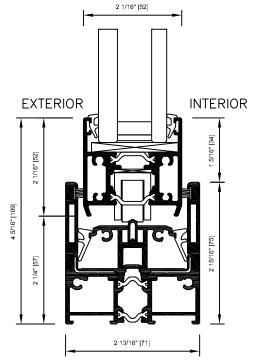


1 Track Configurations Details



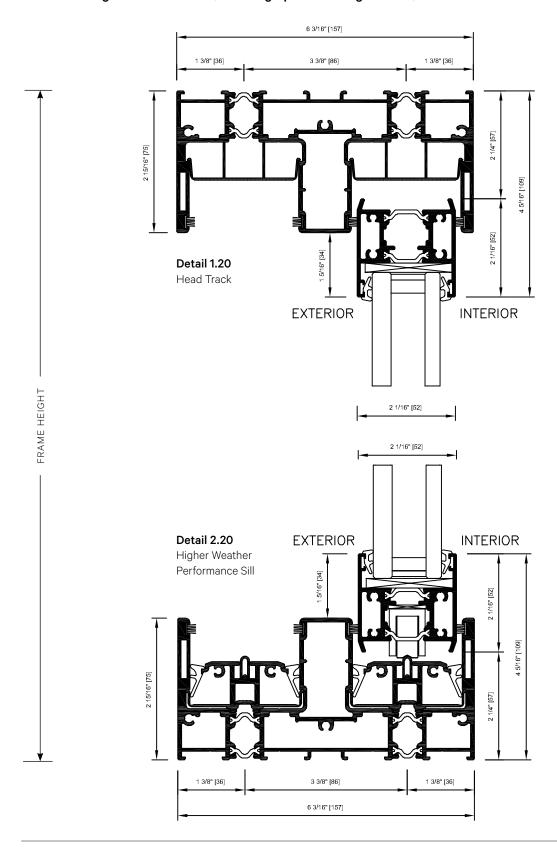


Detail 1.10 Head Track

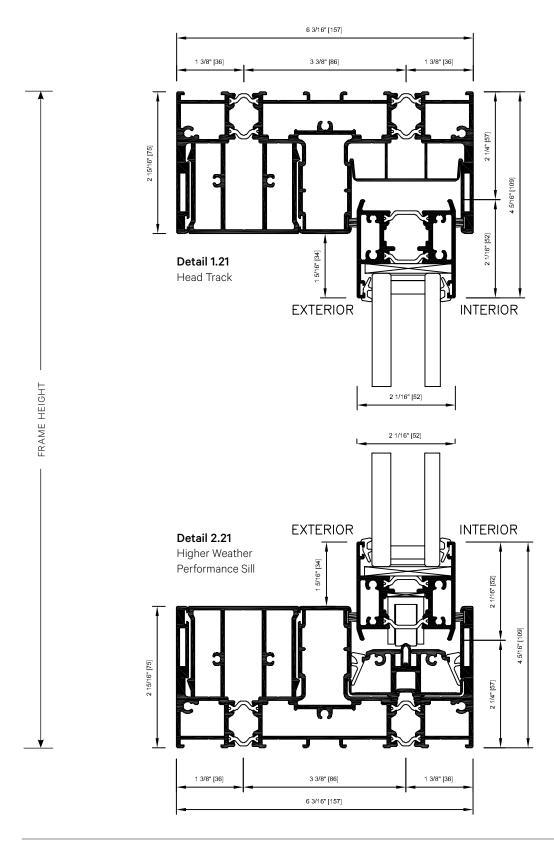


Detail 2.10 Higher Weather Performance Sill

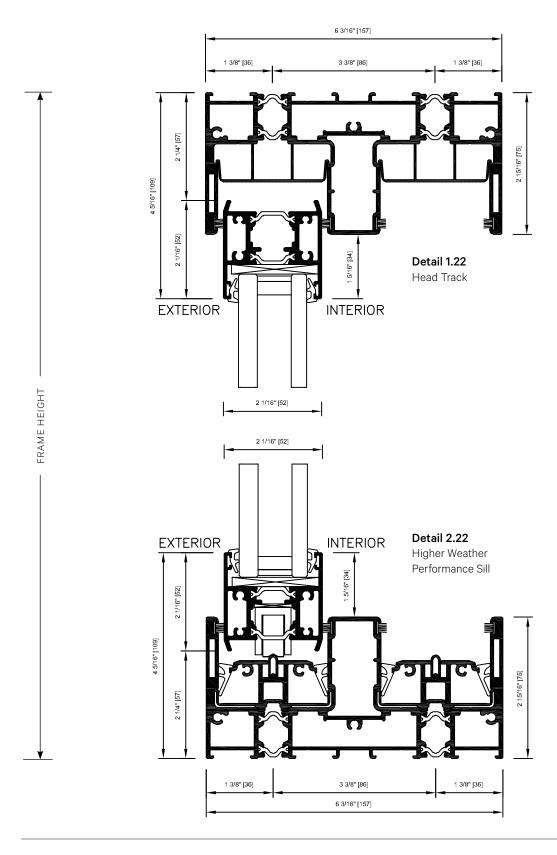




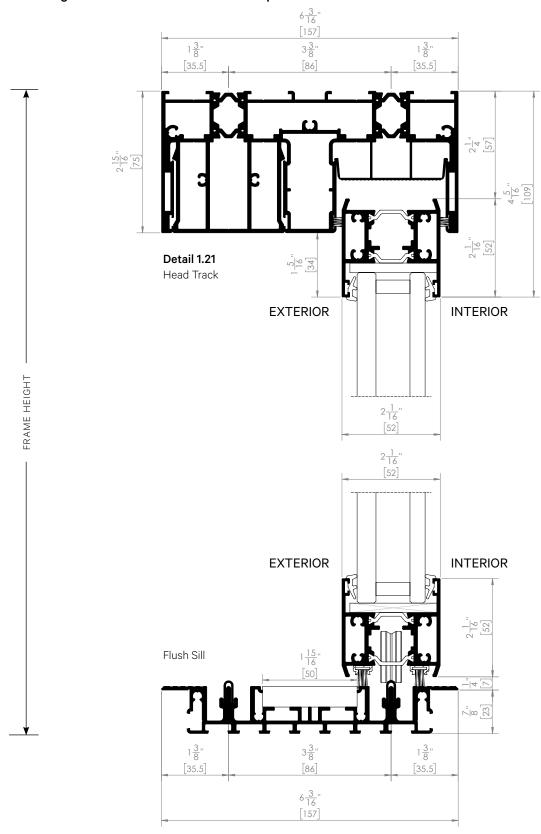




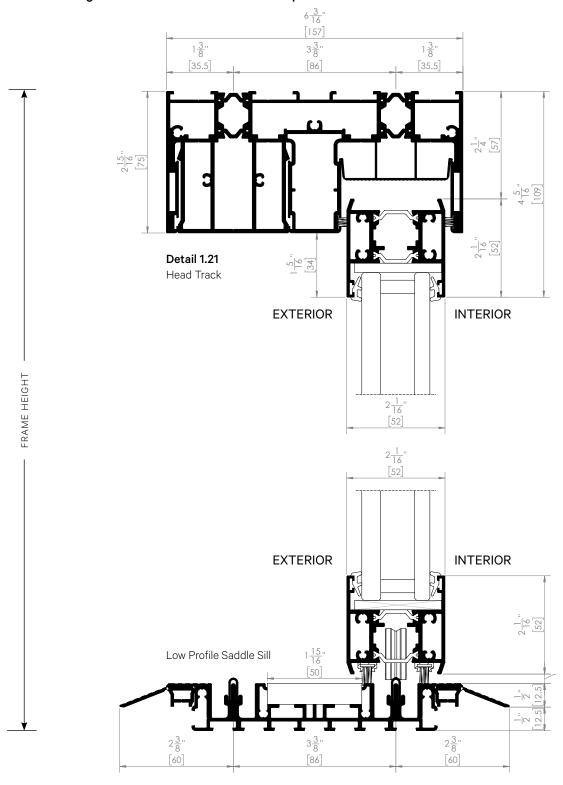




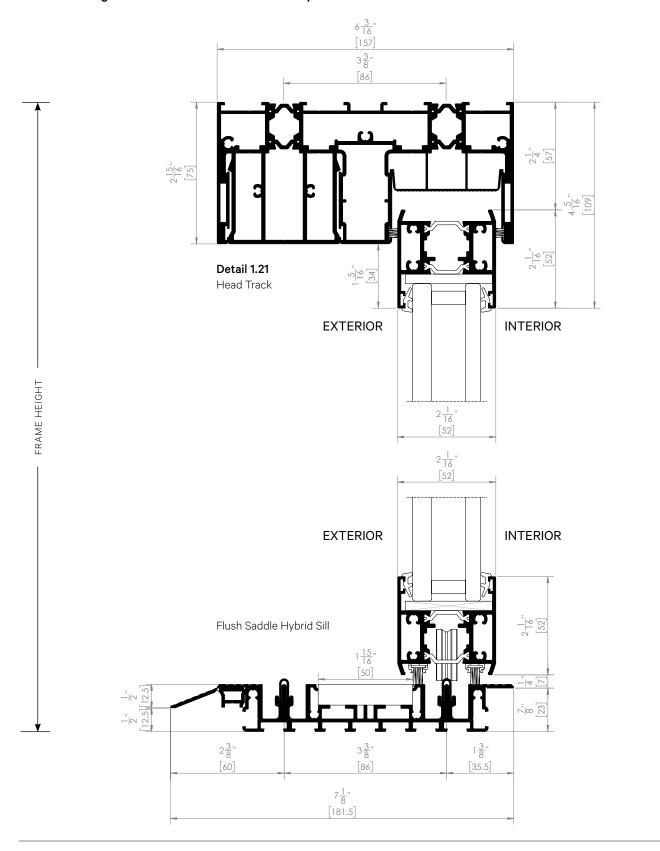




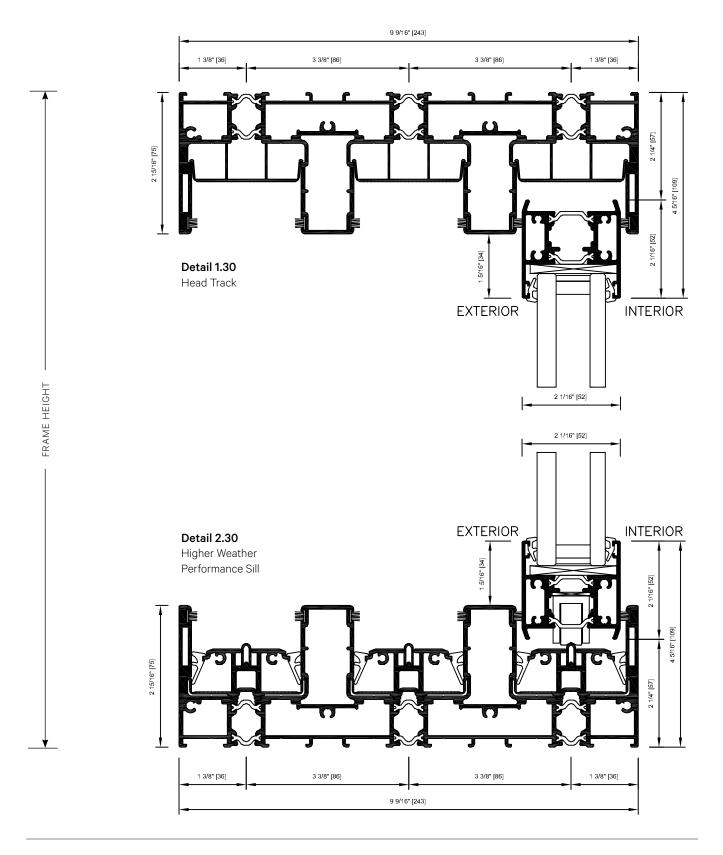




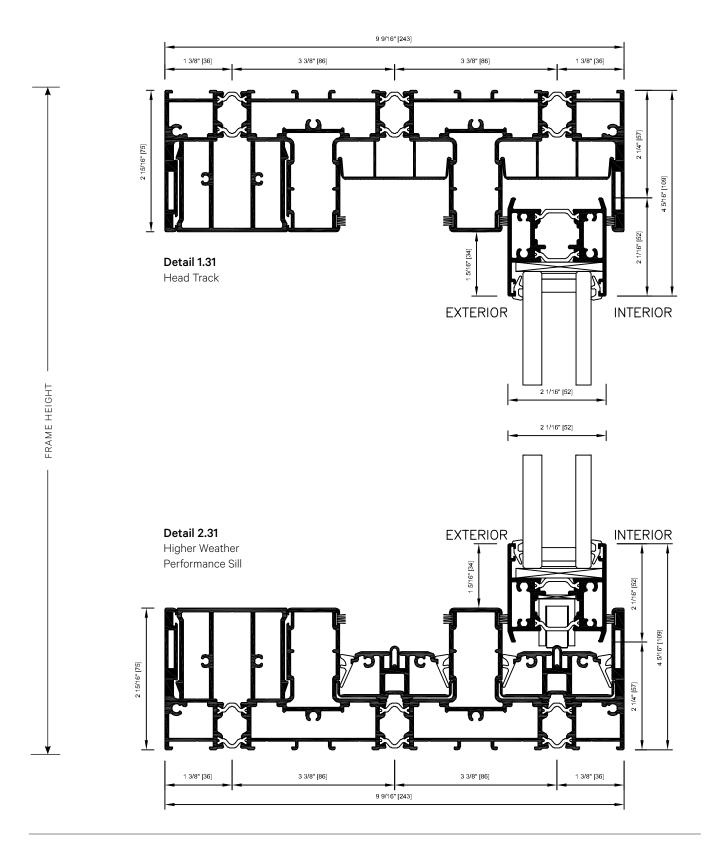




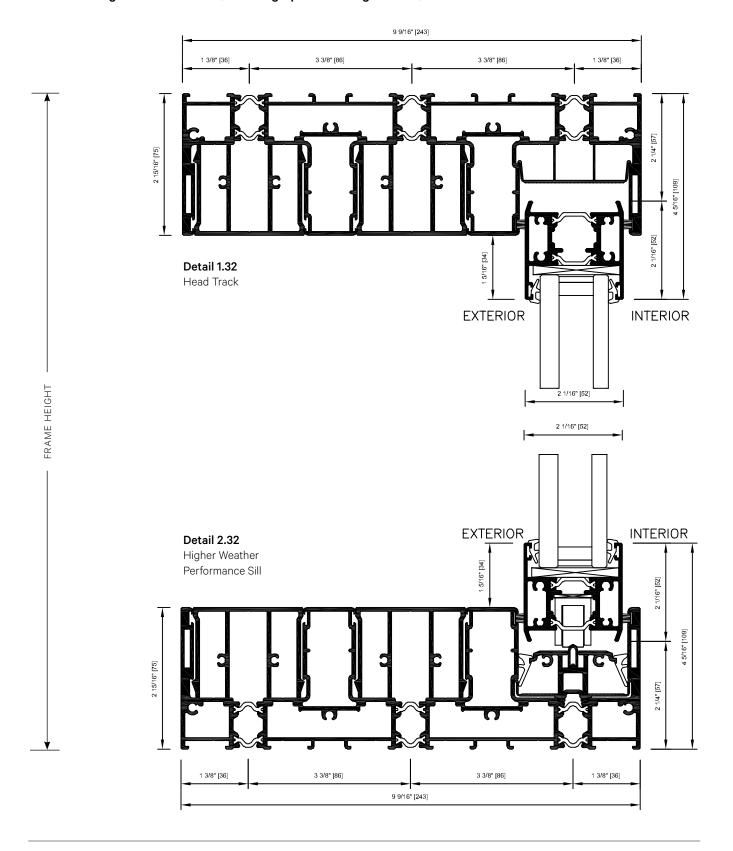




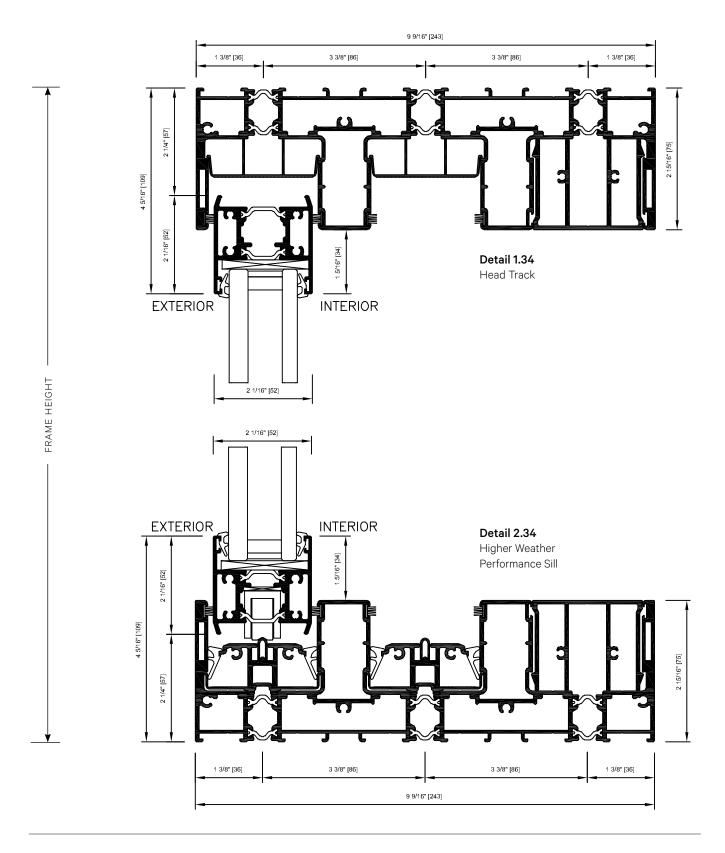




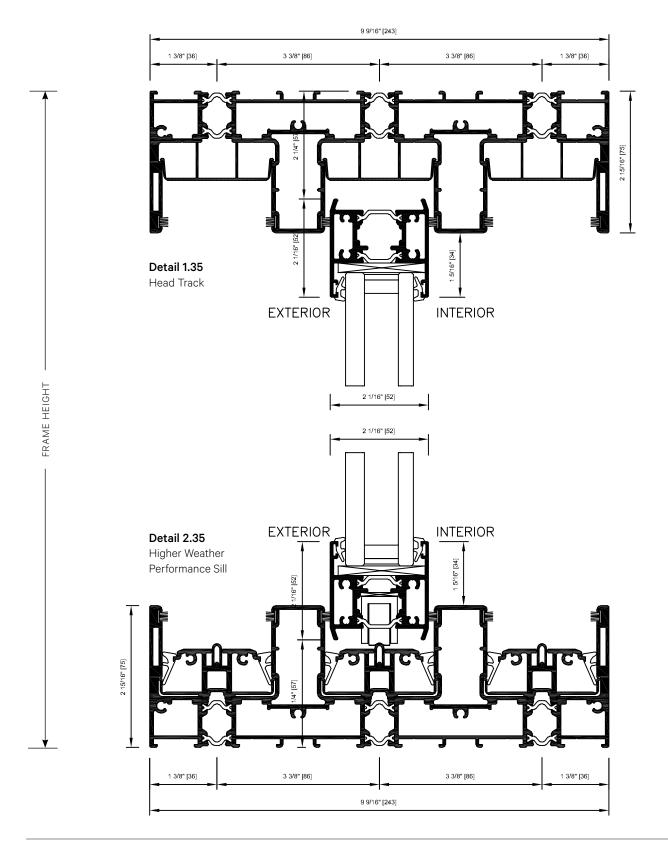




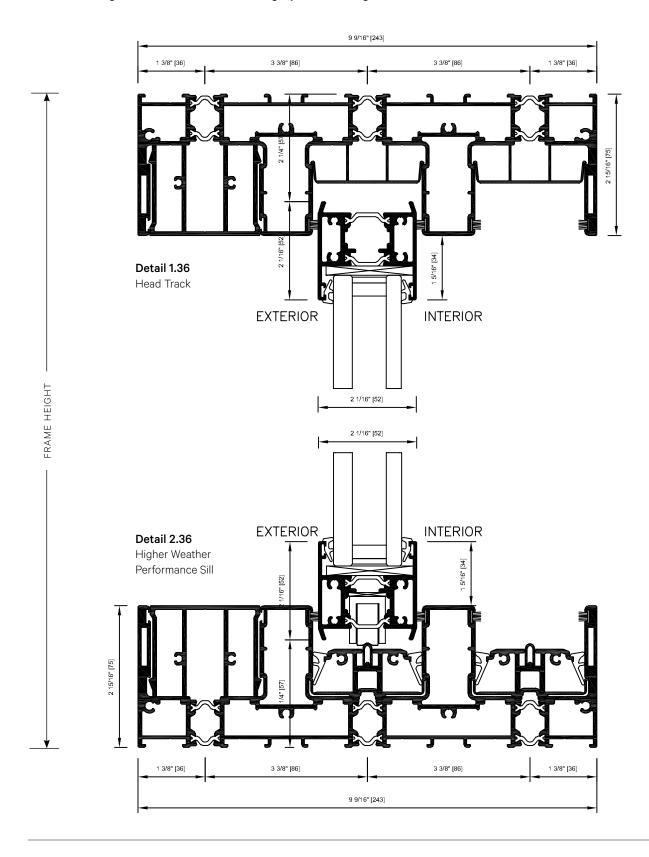




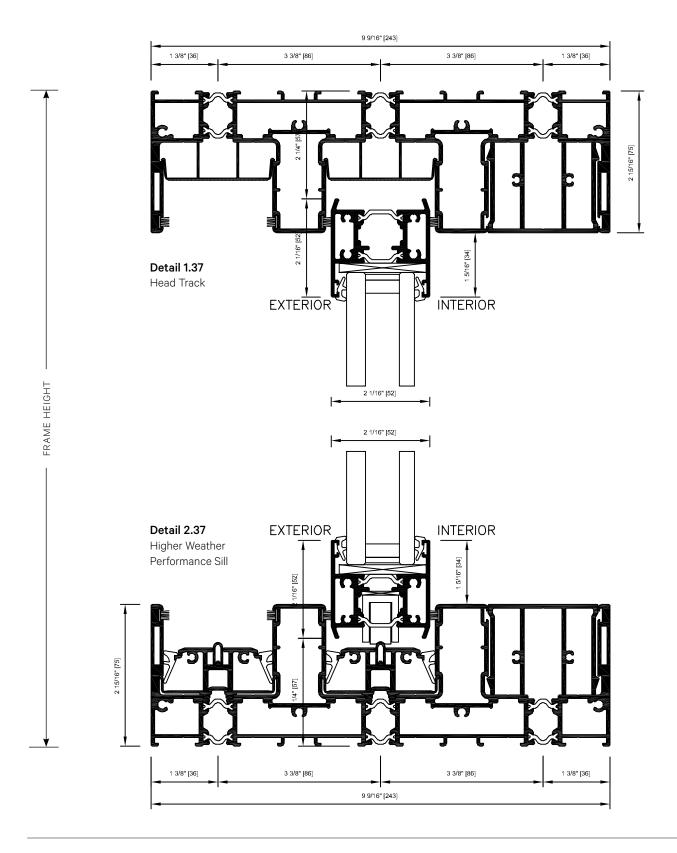




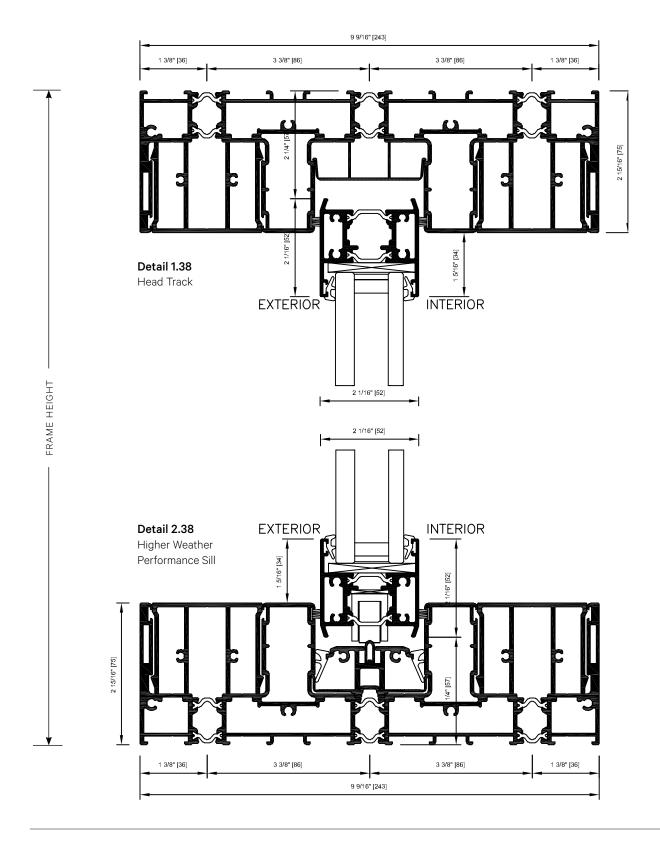




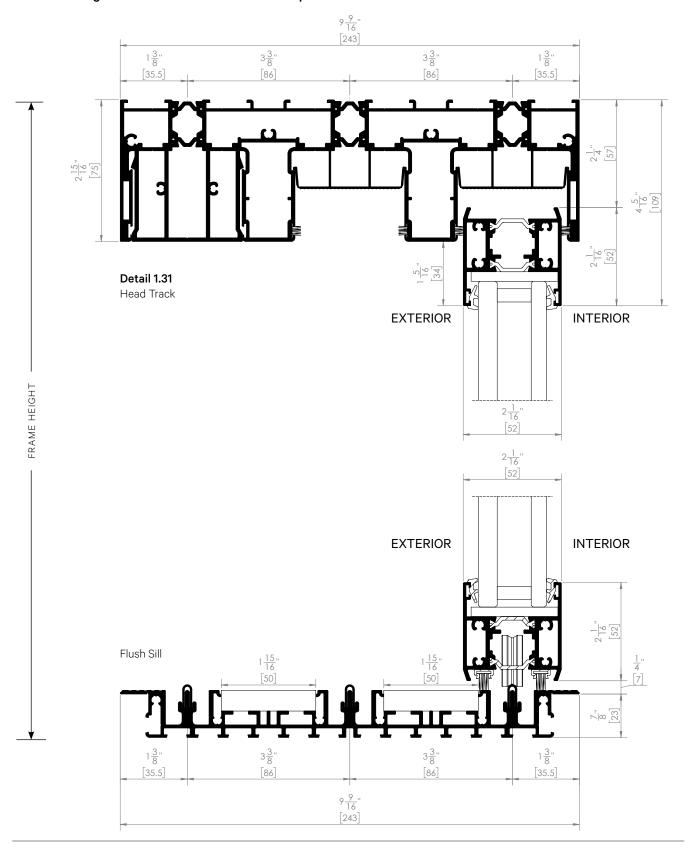




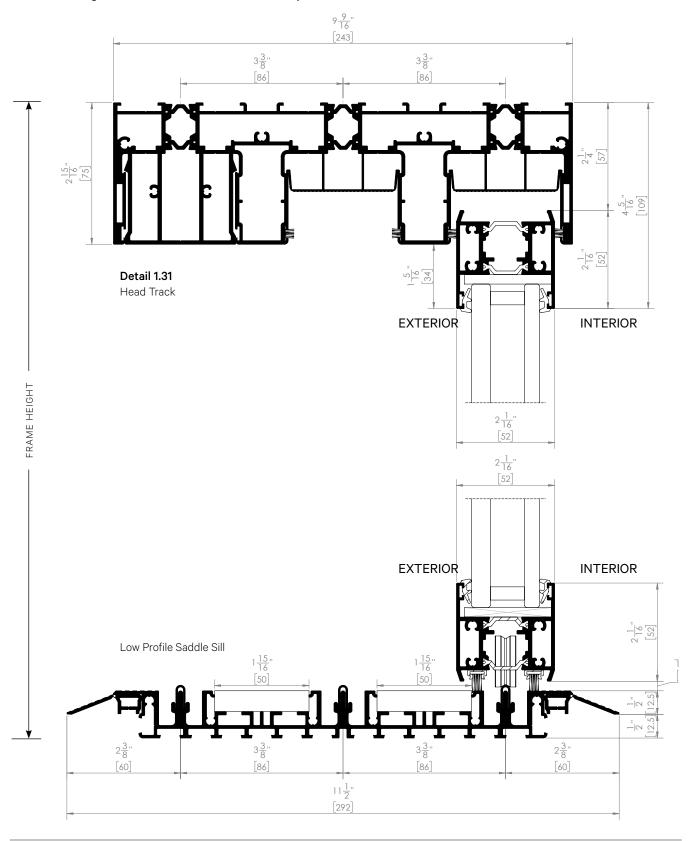




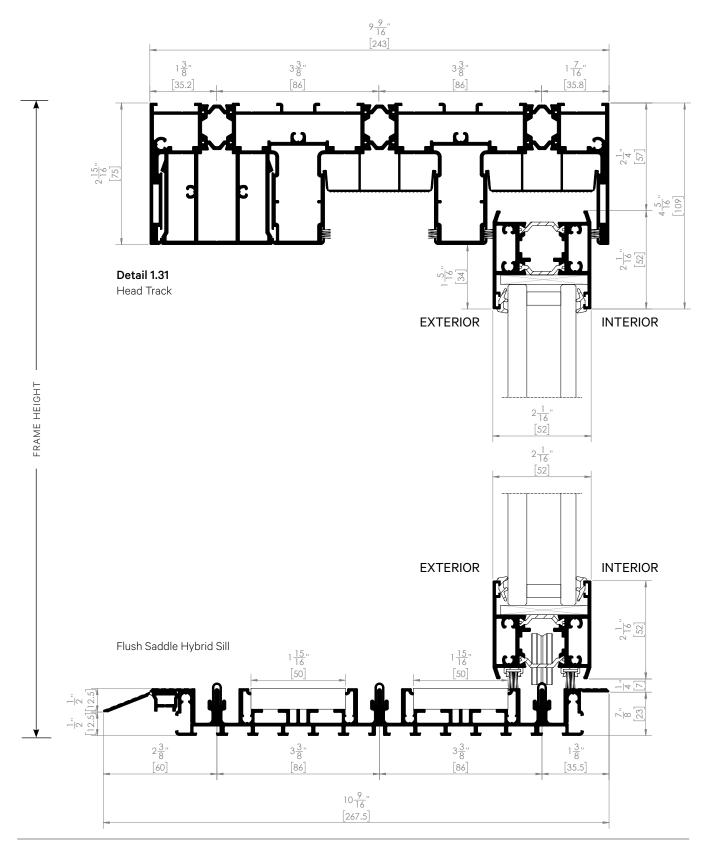




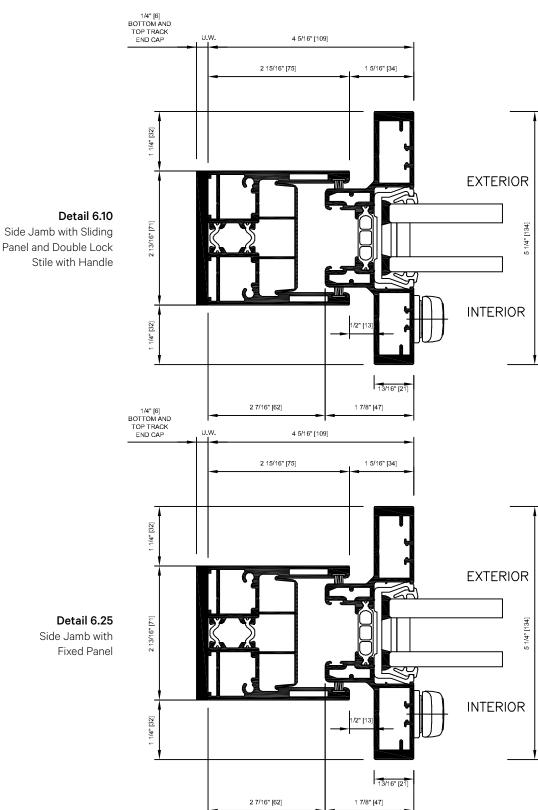




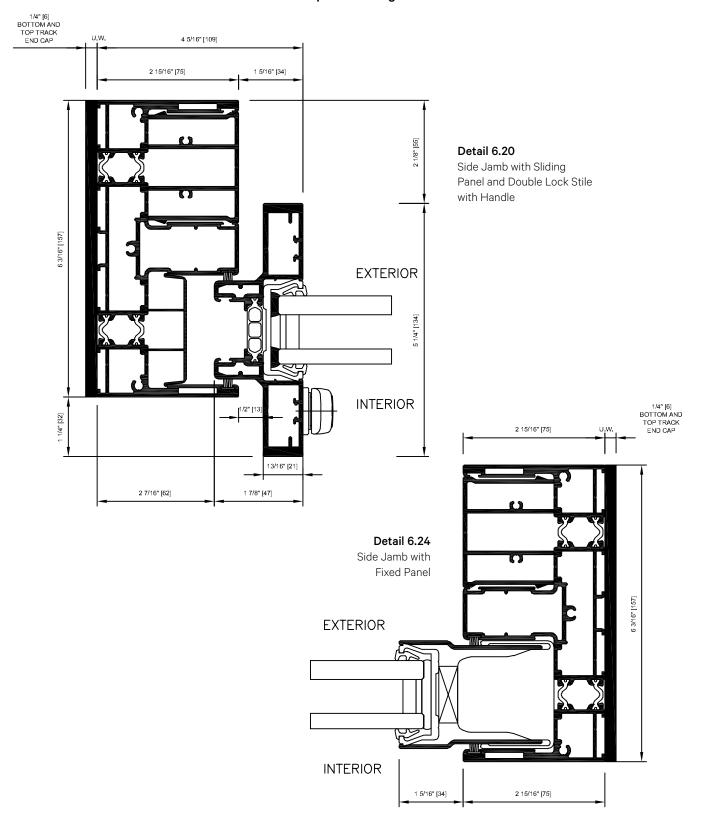




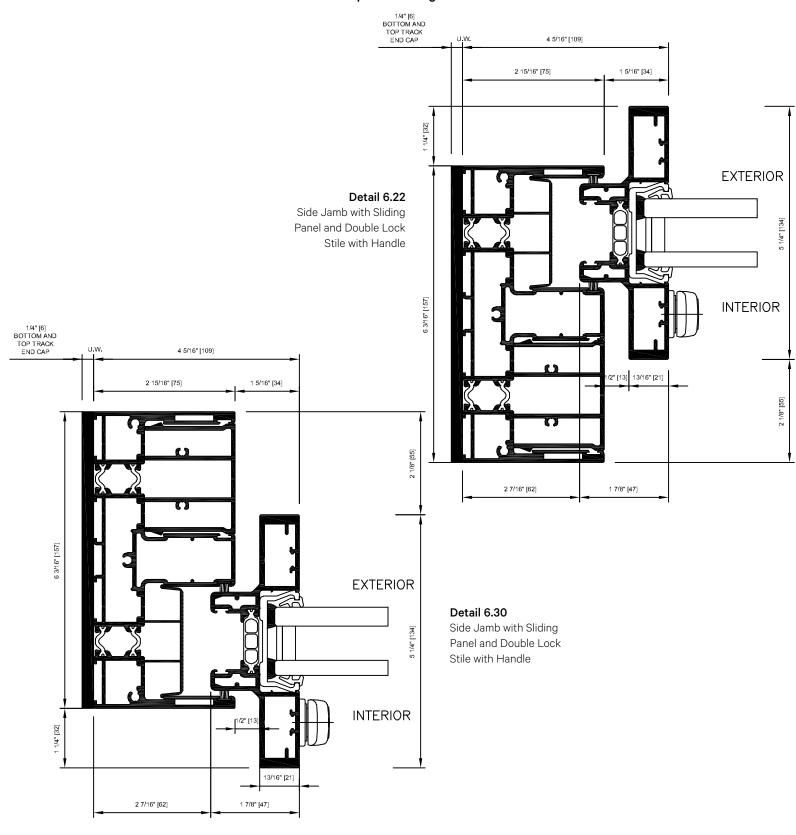




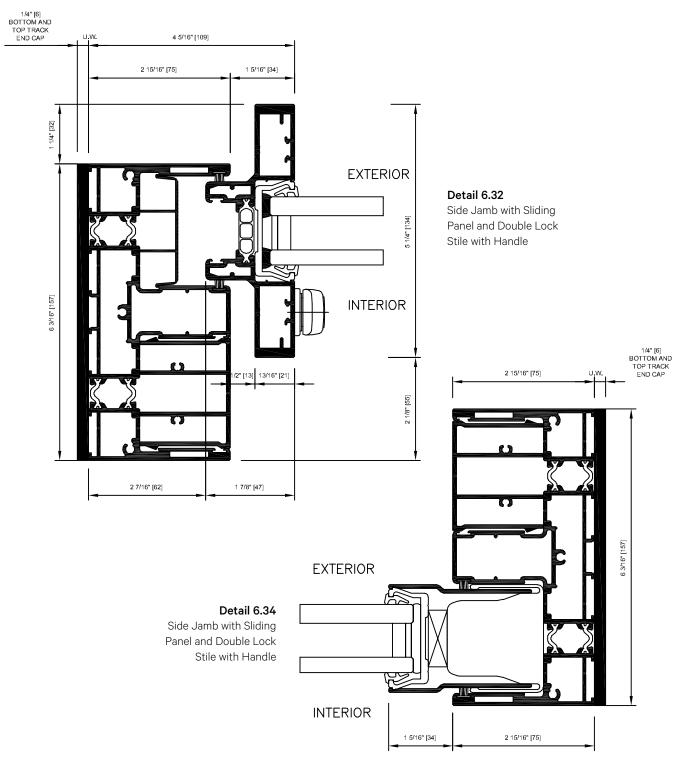




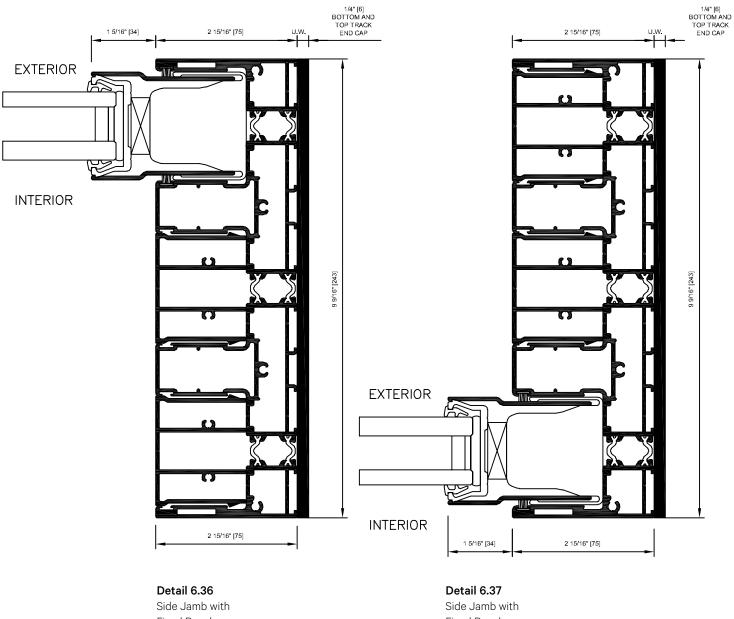








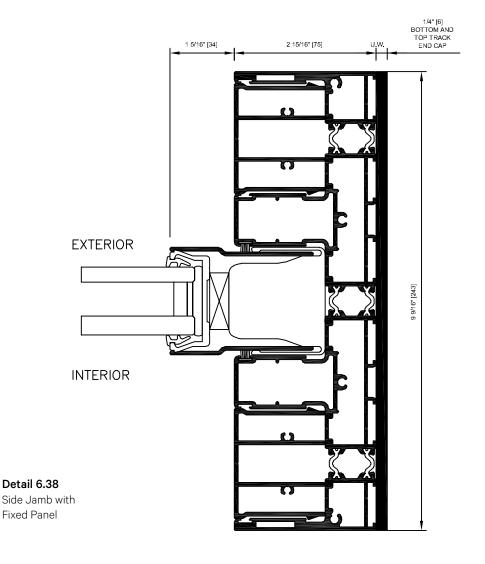






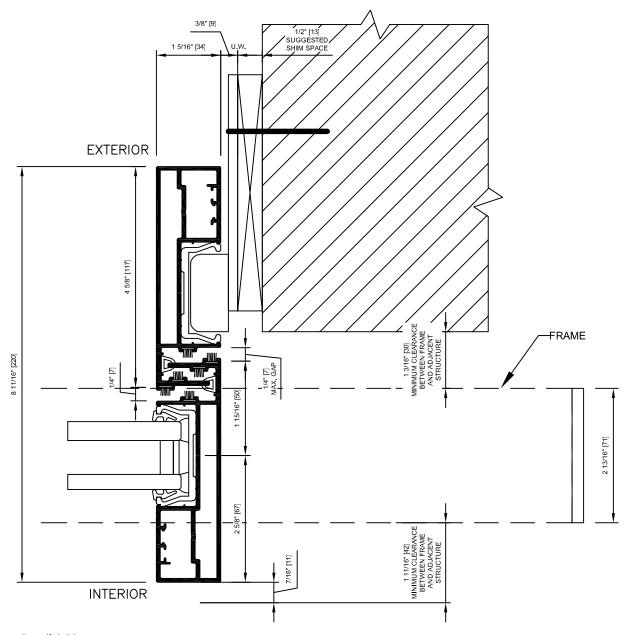
Fixed Panel







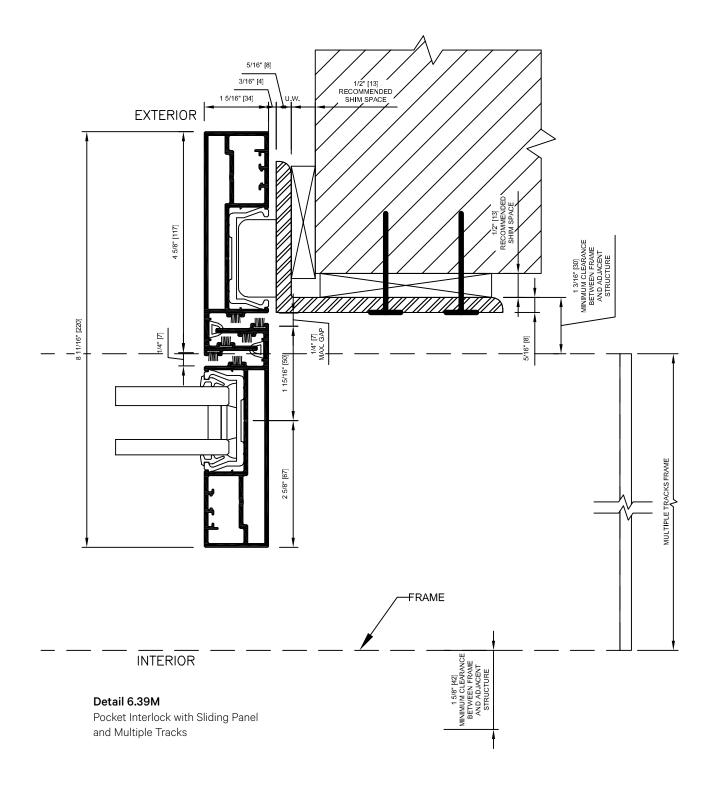
Horizontal Cross Section Details For 1 Track



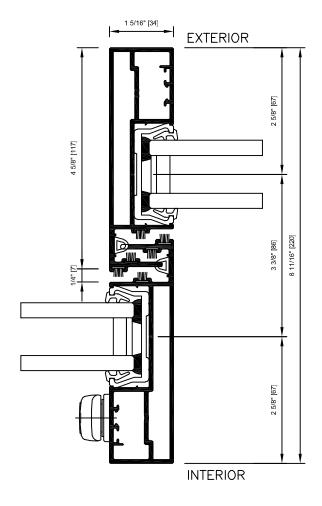
Detail 6.39Panel Interlock with Sliding Panel

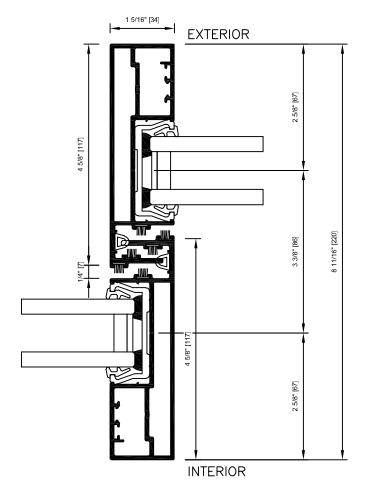


Horizontal Cross Section Details For 2 or More Tracks





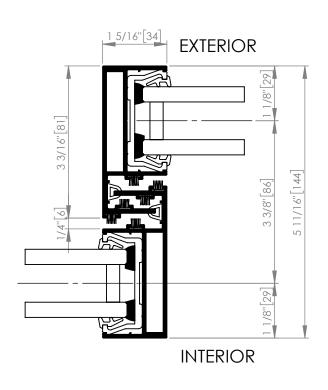


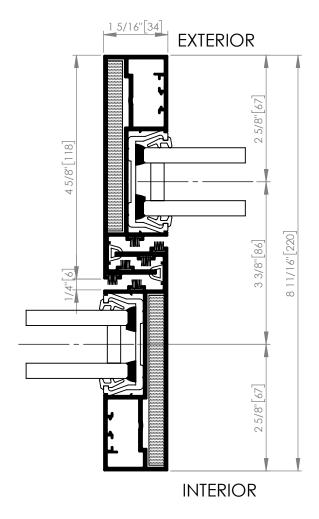


Detail 11.2Interlock Sliding Panels with
Double Lock Stile and Handle

Detail 11.4Interlock Sliding Panels with Double Lock Stile



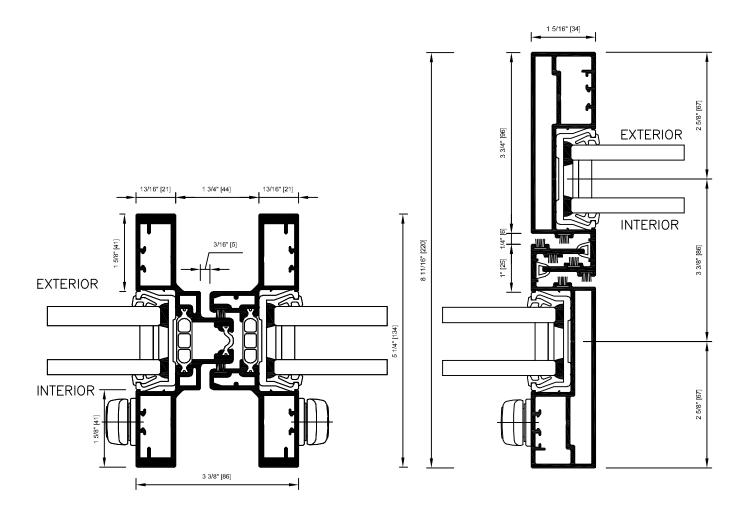




Detail 11.5Interlock Sliding Panels for Interior Applications Only

Detail 11.6Reinforced Sliding Panels with Double Lock Stile

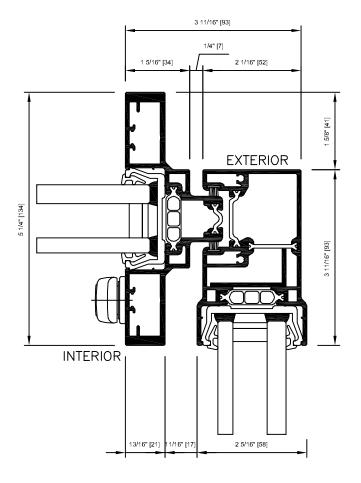


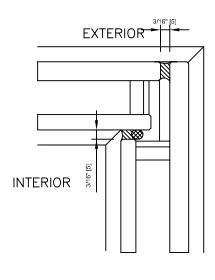


Detail 14.0Male/Female Sliding Panels with
Double Lock Stile and Handle

Detail 14.2Reversed Interlock Sliding Panels with Double Lock Stile and Handle



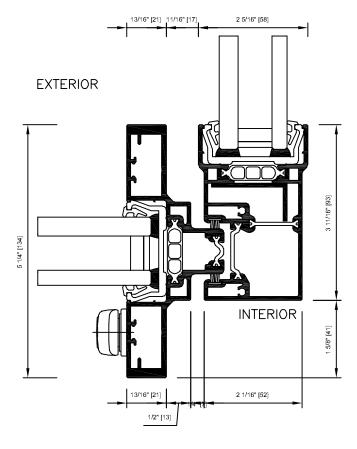




Detail 33.0Male/Female Sliding Panels at Outside 90° Corner with Double Lock Stile and Handle

Detail 33.2Fixed Glass Outside 90° Corner



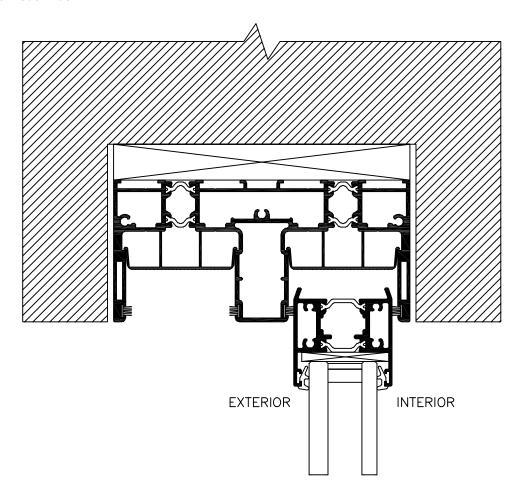


Detail 33.3

Male/Female Sliding Panels at Inside 90° Corner with Double Lock Stile and Handle

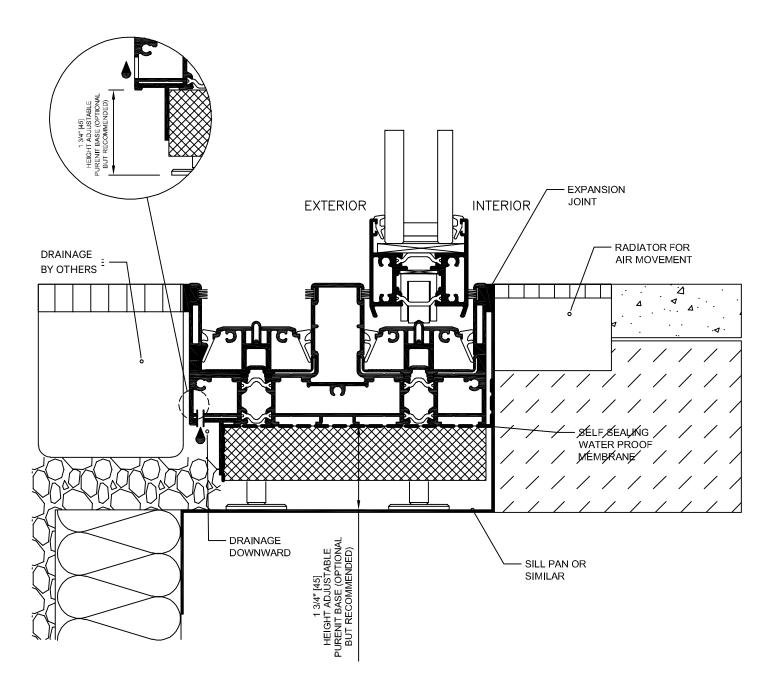


Recessed Head Track



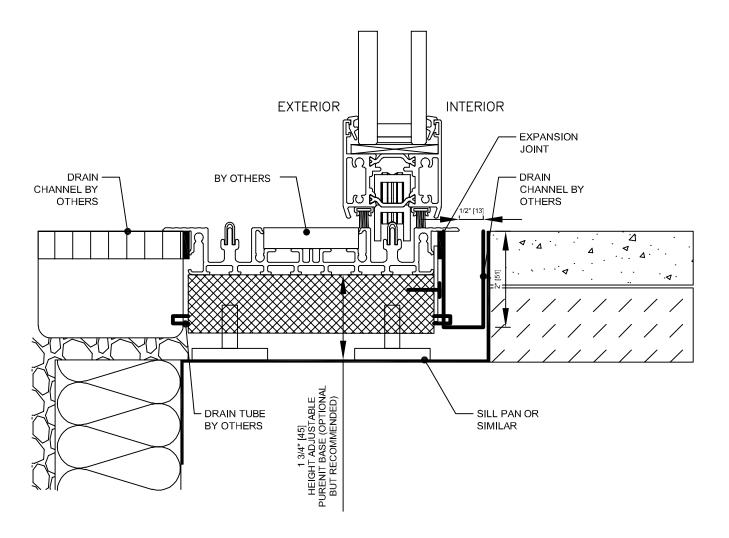


Recessed Higher Weather Performance Sill



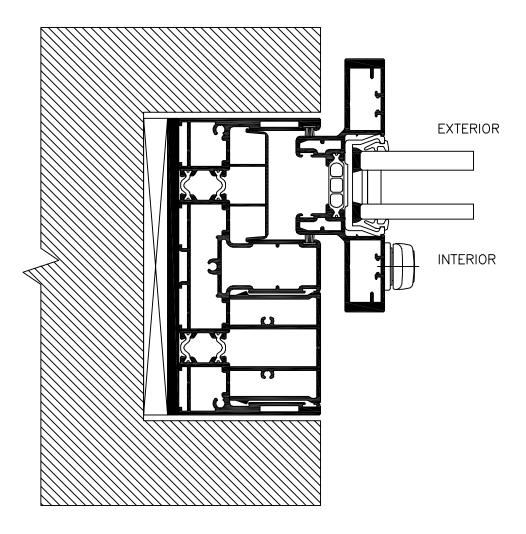


Flush Sill





Recessed Side Jamb

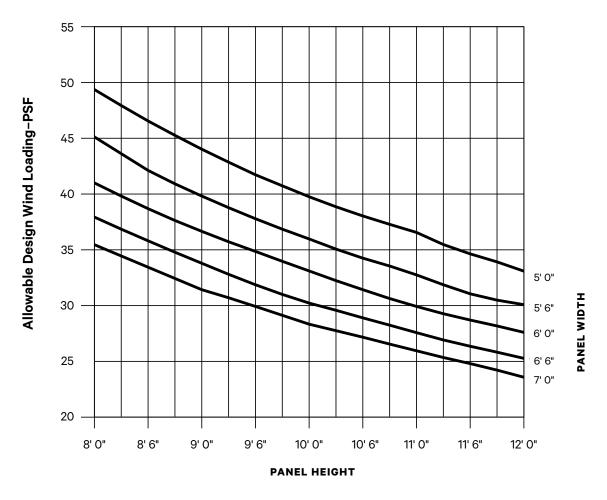




Design Windload Chart | cero II

Applies to Positive and Negative Design Pressures with Standard cero II Higher Weather Performance Sill

(In Accordance with Allowable Stress Design (ASD) Design Pressures*)



Any custom size is possible. See Maximum Frame Size Limits for maximum possible sizes.

(Derived from Comparative Analysis) Test Panel Size: 5' 9 7/16" x 9' 10 7/16".

Please note that some jurisdictions may limit the use of these charts or may not accept them at all. Design pressures and/or sizes may be restricted to what was tested. For Florida approved products, please see detailed FL Evaluation Report for restrictions. This chart is only applicable for units with referenced NanaWall supplied locking and tempered glass. Note that any limitations from water infiltration ratings have not been considered in these charts.

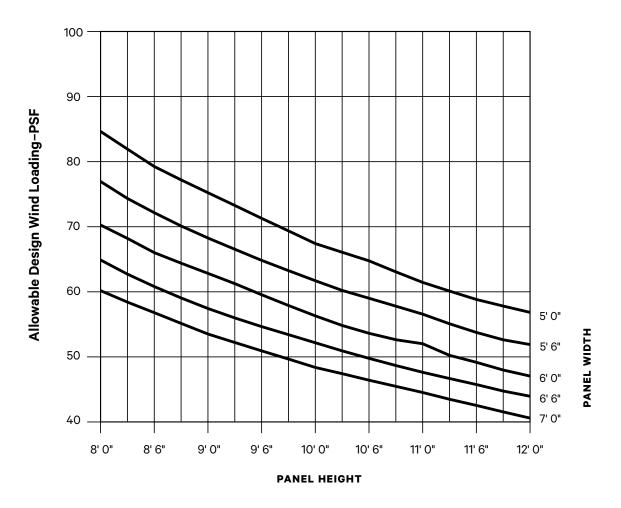
* If the project design pressures have been calculated in accordance with Ultimate Design Wind Speed (ULT), then these design pressures have to be multiplied by a factor of 0.6 to obtain the equivalent ASD design pressures shown in this chart.



Design Windload Chart | cero II

Applies to Positive Design Pressures with Reinforced cero II Higher Weather Performance Sill

(In Accordance with Allowable Stress Design (ASD) Design Pressures*)



Any custom size is possible. See Maximum Frame Size Limits for maximum possible sizes.

(Derived from Comparative Analysis) Test Panel Size: $5' 9 7/16" \times 9' 10 7/16"$.

Please note that some jurisdictions may limit the use of these charts or may not accept them at all. Design pressures and/or sizes may be restricted to what was tested. For Florida approved products, please see detailed FL Evaluation Report for restrictions. This chart is only applicable for units with referenced NanaWall supplied locking and tempered glass. Note that any limitations from water infiltration ratings have not been considered in these charts.

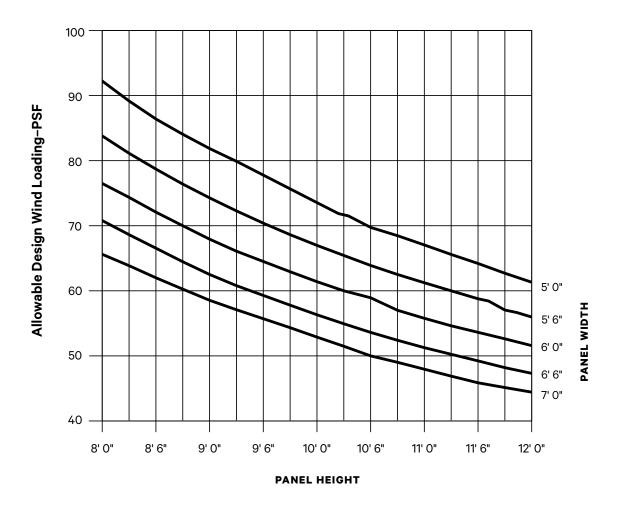
* If the project design pressures have been calculated in accordance with Ultimate Design Wind Speed (ULT), then these design pressures have to be multiplied by a factor of 0.6 to obtain the equivalent ASD design pressures shown in this chart.



Design Windload Chart | cero II

Applies to Negative Design Pressures with Reinforced cero II Higher Weather Performance Sill

(In Accordance with Allowable Stress Design (ASD) Design Pressures*)



Any custom size is possible. See Maximum Frame Size Limits for maximum possible sizes.

(Derived from Comparative Analysis) Test Panel Size: 5' 9 7/16" x 9' 10 7/16".

Please note that some jurisdictions may limit the use of these charts or may not accept them at all. Design pressures and/or sizes may be restricted to what was tested. For Florida approved products, please see detailed FL Evaluation Report for restrictions. Please also note that this chart is only applicable for units with referenced NanaWall supplied locking and tempered glass. Note that any limitations from water infiltration ratings have not been considered in these charts.



^{*} If the project design pressures have been calculated in accordance with Ultimate Design Wind Speed (ULT), then these design pressures have to be multiplied by a factor of 0.6 to obtain the equivalent ASD design pressures shown in this chart.