

Architectural Binder Section zero by NanaWall

Minimal Framed Sliding Glass Wall

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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 a recessed frame. 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—double glazed cero II and triple glazed cero III.

FEATURES

Narrow Stiles and Rails—Symmetrical Picture Frame Effect

With cero, the panel's rail and stiles are uniform with a consistent 1 5/16" (34 mm) top to bottom, side to side, 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 double glazed, cero II, or triple glazed, cero III 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.

Enhanced Circle of Sight with Narrower Interlocks

Depending on the structural requirements of the projects, shallower interlock designs are available. For cero II interiors applications, the interlock is 5 11/16" (144 mm). For exterior applications, interlocks are either 7 3/16" (182 mm) or 8 11/16" (220 mm). For cero III, interlocks are either 8 3/4" (222 mm) or 10 1/4" (260 mm).

Thermally Broken Performance Sill for Increased Weather Resistance

cero's 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.

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

Thermally Broken Minimal Sill For Sleek Transitions

For cero II, the Minimal Sill offers a minimalistic and aesthetic transition between the interior and exterior. Finished flooring inserts can be easily installed in between the tracks making this sill virtually disappear. The Minimal Sill is shallow, provides water management, and is barefoot friendly.

Shallow Flush Sill for Interiors

The non-thermally broken Flush Sill for cero II is designed for interior environments. At a mere height of 7/8" (23 mm), the Flush Sill can be fully recessed into the floor and is ADA-compliant. Finished flooring inserts can be installed in between the tracks to visually disappear.

Panel Drainage for the Performance and Minimal Sills

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 1 5/16" (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 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 43 and an OITC of 35.

cero III with the 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 FL38028.2 and reinforced units with product approval number FL38028.1.

cero III is Florida statewide approved for standard units with product approval number FL35024.2 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' 1" wide (2150 mm) for unit heights up to 14' (4250 mm) and 7' 4" wide (2250 mm) for unit heights up to 13' 1" (4000 mm).

cero III panels are available in sizes up to 9' 10" wide (3000 mm) and up to a unit height of 15' (4550 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 up to 5 or more tracks for the Performance and Flush sills with pocketed and open corner configurations possible. For the Minimal Sill, up to 5 or more tracks are also possible. Contact NanaWall for additional options.

Glazing Area Options

Standard to cero is reduced iron, heat soaked tempered glass with a VLT of 89%. Other glazing choices include low iron with a VLT of 91% and laminated glass. All glazing has an option of argon filled double or triple insulated low-E. Contact NanaWall for additional specialty glass alternatives.

Matching Fixed Glass Panels

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

Handles

A contemporary flat handle complements the minimal lines of cero. The stainless steel handle comes in two finish options to choose from, brushed satin and black titanium.

Aluminum Finish Options

cero is available in 50 standard colors with over 200 additional color options available in powder coat and anodized finishes. Custom matched colors, SE (steel effect) colors, and simulated wood effects are also available.

Integrated Screening for Insect Free Enjoyment

A pleated screen option is available for cero configurations that slide and meet at the jamb for units using the Performance Sill. Sizing for cero II is up to 3' 3" x 11' 6" (1000 mm x 3500 mm), and cero III is up to 3' 7" x 11' 6" (1100 mm x 3500 mm).

Motorization

With cero's optional automation option by others, the unit can be connect to a home security system. 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, including a finger print option, can be located on the interior and/or exterior for convenience and peace of mind. Please contact NanaWall for details.

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. cero II is available with RC2 and cero III is available in both RC2 and RC3.

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.

Electronic Security Option

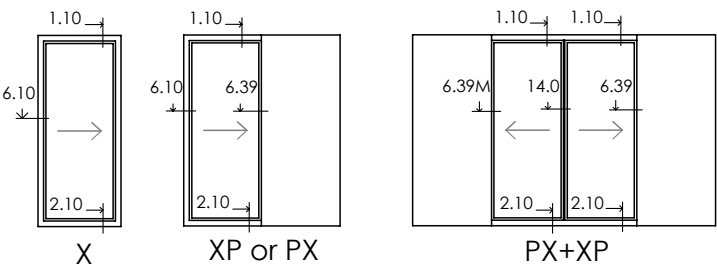
cero can be prepped in the factory for optional EMLocks, supplied by others, that are tested and rated for forced entry.

RECOMMENDATION

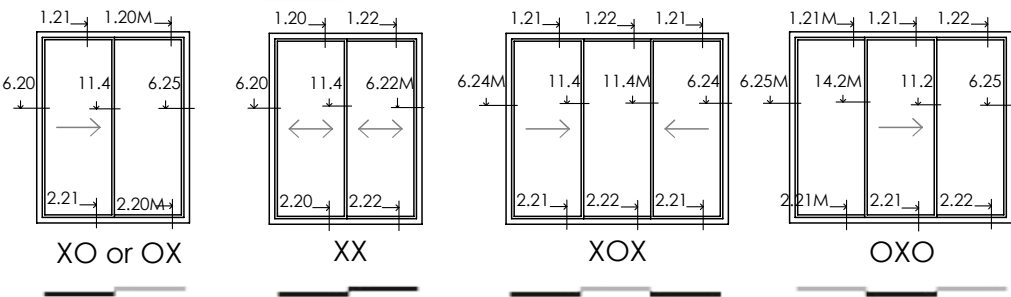
Condensation may occur when system is installed in cold climates or in a facility with high indoor humidity. If condensation could be an issue for your application, NanaWall recommends taking appropriate measures during the design and construction phase to reduce or eliminate the possibility of condensation. 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.



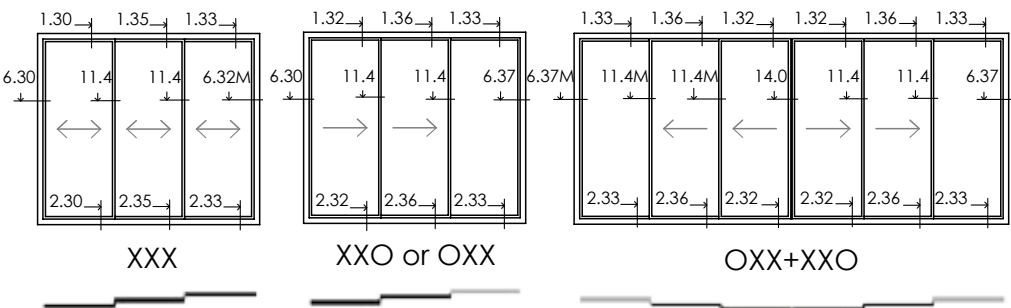
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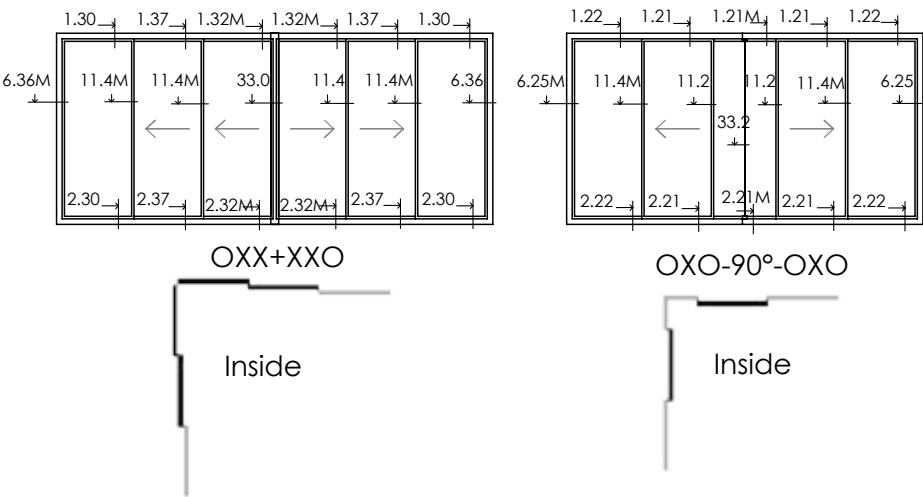
2 Tracks



3 Tracks



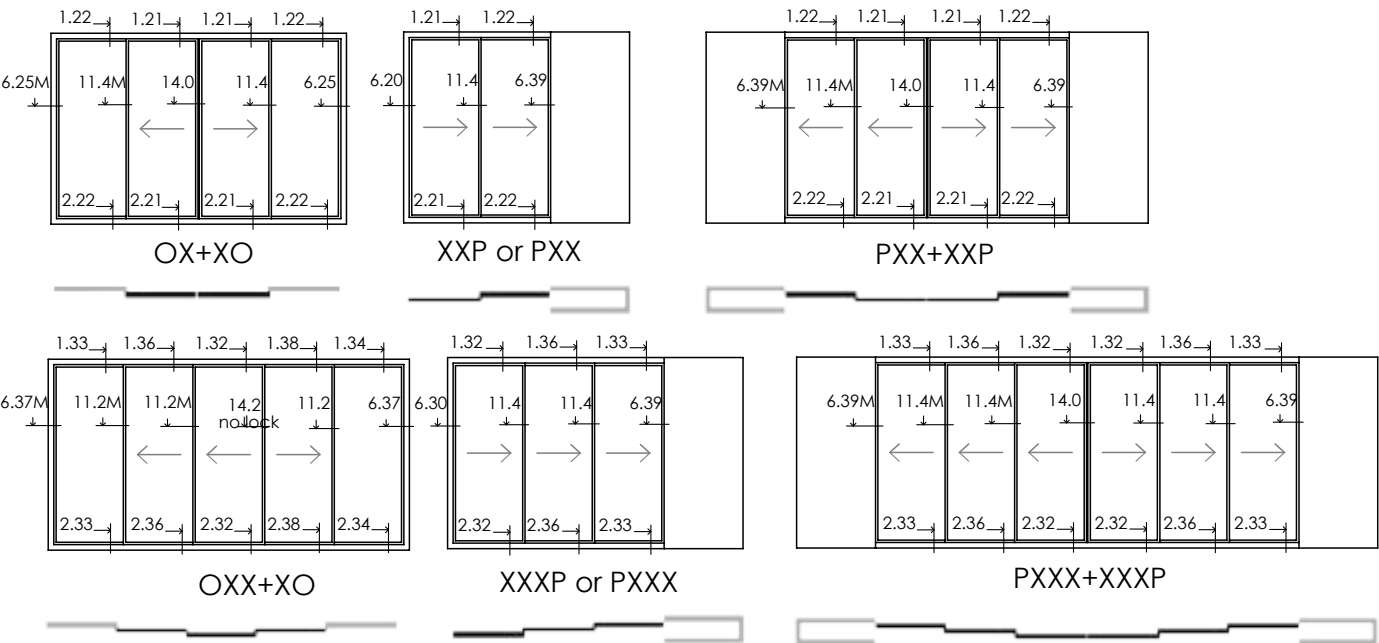
Special Configurations



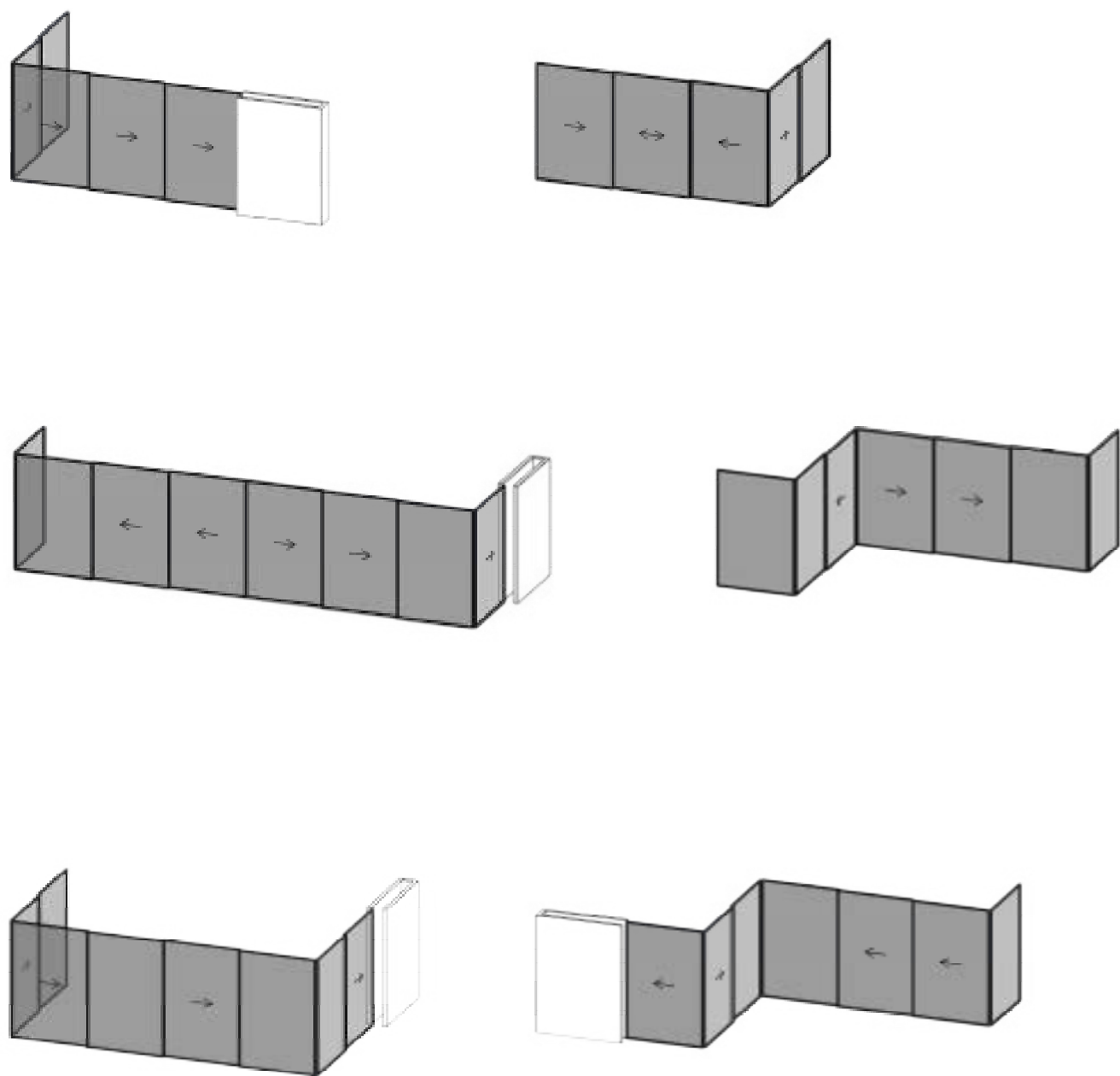
Contact NanaWall for 4 or more track configurations.

- 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.

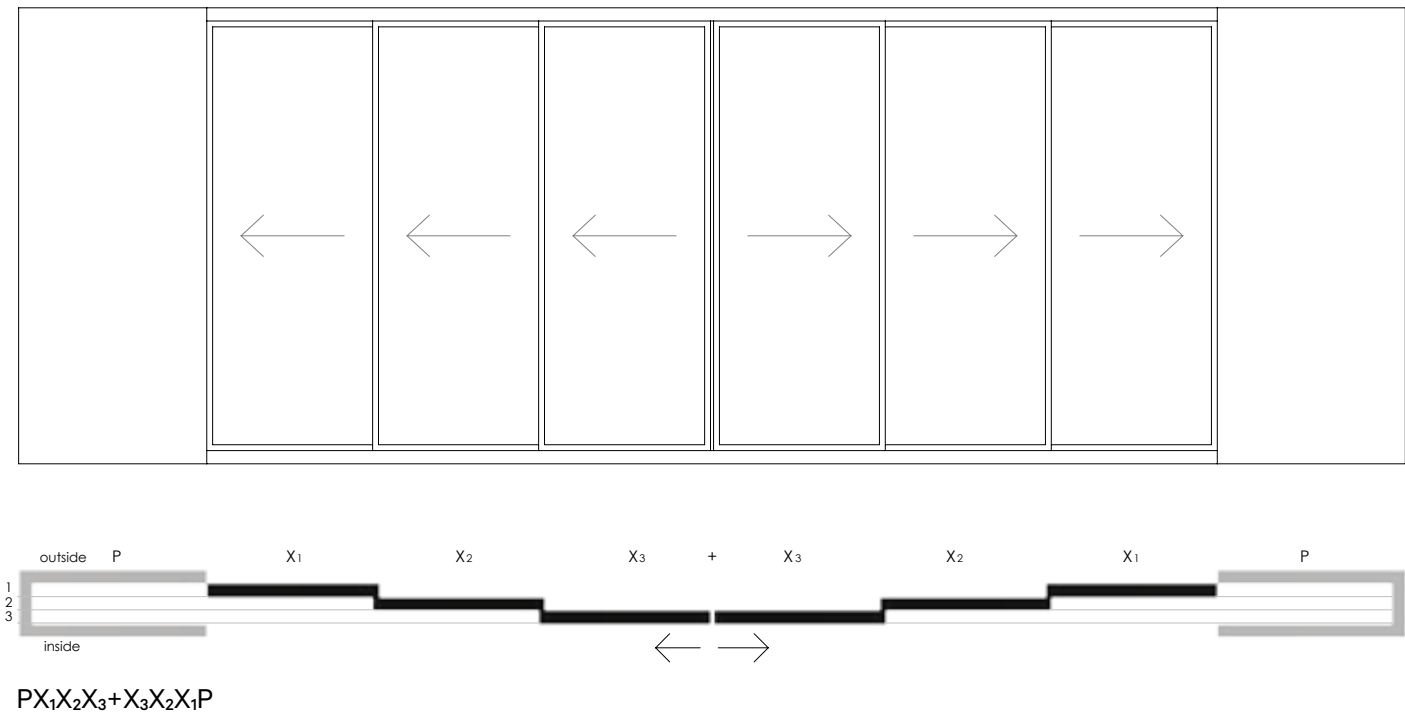


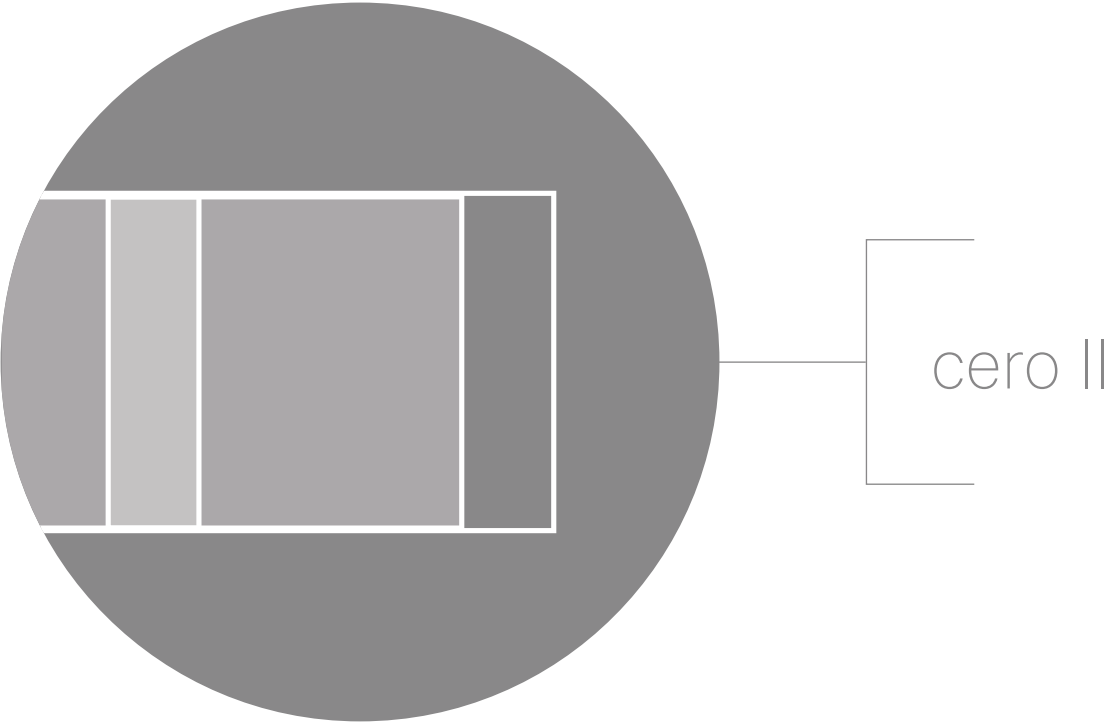
Contact NanaWall for 4 or more track configurations.



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








Testing Results | cero II

Maximum Panel Width of 7' 4" (2250 mm) for Unit Heights up to 13' 1" (4000 mm)

Maximum Panel Width of 7' 1" (2150 mm) for Unit Heights up to 14' (4250 mm)

Maximum Panel Weight: 1,300 lbs. (600 kg)

TYPE OF TEST	PERFORMANCE SILL ①	MINIMAL SILL ②	FLUSH SILL ③
 <p>Air Infiltration/Exfiltration (ASTM E283)</p>	<p>@ 1.57 psf 0.09/0.08 cfm/ft²</p> <p>A3 ④</p>	<p>@ 1.57 psf 0.08/0.08 cfm/ft²</p> <p>A3 ④</p> <p>@6.24 psf (300 Pa): 0.19/0.25 cfm/ft²</p>	<p>@ 1.57 psf 0.16/0.13 cfm/ft²</p> <p>A2 ④</p>
 <p>Water Penetration * (ASTM E547 and E331)</p>	<p>@ 12 psf (600 Pa)</p> <p>@ 8 psf (400 Pa) ④</p>	<p>@ 5.43 psf (260 Pa)</p> <p>@ 3.5 psf (175 Pa) ④</p>	<p>@ 3 psf (150 Pa)</p> <p>@ 2 psf (100 Pa) ④</p> <p>(Tested with U-channel on the inside)</p>
<p>Dynamic Water Penetration (AAMA 501)</p>	<p>@ 12 psf (600 Pa)</p>	<p>—</p>	<p>—</p>
 <p>Structural Load Deflection ** (ASTM E330)</p> <p>(See design windload charts)</p>	<p>Standard Unit</p> <p>+/-35 psf (1680 Pa)</p> <p>Pass L/175 Requirement</p> <p>Class CW - PG35 - SD</p> <p>unit size tested: 23' 7" x 10' 3"</p> <p>4 panel unit</p> <p>Florida Product Approval #: FL38028.2</p> <p>Reinforced Unit</p> <p>+65 psf (3120 Pa) / -60 psf (2880 Pa)</p> <p>Pass L/175 Requirement</p> <p>Class CW - PG60 - SD</p> <p>unit size tested: 23' 7" x 10' 3"</p> <p>4 panel unit</p> <p>Florida Product Approval #: FL38028.1</p>	<p>Standard Unit</p> <p>+/-100 psf (4800 Pa)</p> <p>Pass L/175 Requirement</p> <p>Reinforced Unit</p> <p>+/-100 psf (4800 Pa)</p> <p>Pass L/175 Requirement</p> <p>Class CW - PG40</p> <p>unit size tested: 8' 11" x 7' 2"</p> <p>2 panel unit</p>	<p>Standard Unit</p> <p>+/-35 psf (1680 Pa)</p> <p>Pass L/175 Requirement</p>

① Excerpts of results specific or equivalent to lab tested by Intertek Building & Construction, an independent testing laboratory per AAMA/WDMA/CSA 101/I.S.2/A440-11, NAFS-11 - North American Fenestration Standard; unit size tested: 23' 7" x 10' 3" (7100 mm x 3130 mm) 4 panel unit.

② Excerpts of results specific or equivalent to lab tested by Intertek Building & Construction, an independent testing laboratory per AAMA/WDMA/CSA 101/I.S.2/A440-17, NAFS-17 - North American Fenestration Standard; unit size tested: 8' 11" x 7' 2" (2710 mm x 2175 mm) 2 panel unit.

③ Excerpts of results specific or equivalent to lab tested by Intertek Building & Construction, an independent testing laboratory per AAMA/WDMA/CSA 101/I.S.2/A440-11, NAFS-11 - North American Fenestration Standard; unit size tested: 14' 0" x 10' 0" (4267 mm x 3048 mm) 2 panel unit.




④ For Canada, tested to NAFS-17 or equivalent and CSA A44051-09.

* Water rating may not be applicable for configuration not tested, especially 2 sliding panels meeting on the same track with wider interlock stile.

** Structural loads for reinforced units will not apply to 2 panels meeting on the same track with wider interlock stile.


Testing Results | cero II

Maximum Panel Width of 7' 4" (2250 mm) for Unit Heights up to 13' 1" (4000 mm)
Maximum Panel Width of 7' 1" (2150 mm) for Unit Heights up to 14' (4250 mm)
Maximum Panel Weight: 1,300 lbs. (600 kg)

TYPE OF TEST	PERFORMANCE SILL ①	MINIMAL SILL ②	FLUSH SILL ③
 Forced Entry Resistance ① (ASTM F842)	Standard Locking Mechanism Type: A - Grade: 10 pass 2 x 1591U EMLock Type: A - Grade: 30 with 850 lb. pull pass		
 Operating Force ① (ASTM E2068)	Initiate Motion: 60 N (13.2 lbf) Maintain Motion: 20 N (4.4 lbf)		
 Cycle Testing (per DIN EN 1191/12400)	40,000 cycles		

① Excerpts of results specific or equivalent to lab tested by Intertek Building & Construction, an independent testing laboratory per AAMA/WDMA/CSA 101/I.S.2/A440-11, NAFS-11 - North American Fenestration Standard; unit size tested: 23' 7" x 10' 3" (7100 mm x 3130 mm) 4 panel unit.
② Excerpts of results specific or equivalent to lab tested by Intertek Building & Construction, an independent testing laboratory per AAMA/WDMA/CSA 101/I.S.2/A440-17, NAFS-17 - North American Fenestration Standard; unit size tested: 8' 11" x 7' 2" (2710 mm x 2175 mm) 2 panel unit.
③ Excerpts of results specific or equivalent to lab tested by Intertek Building & Construction, an independent testing laboratory per AAMA/WDMA/CSA 101/I.S.2/A440-11, NAFS-11 - North American Fenestration Standard; unit size tested: 14' 0" x 10' 0" (4267 mm x 3048 mm) 2 panel unit.
* Water rating may not be applicable for configuration not tested.

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

TYPE OF GLASS	GLASS ONLY STC	FLUSH SILL	
		COMPLETE SYSTEM STC (Rw)	MAXIMUM UNIT HEIGHT POSSIBLE
1 3/8" (36 mm) 10 mm tempered + 10 mm tempered	38	33	14' 0" (4250 mm)
1 3/8" (36 mm) 8 mm laminated + 8 mm laminated	44	38	14' 0" (4250 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 II



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

Thermal Performance

		cero II with Performance Sill				cero II with Minimal / Flush 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

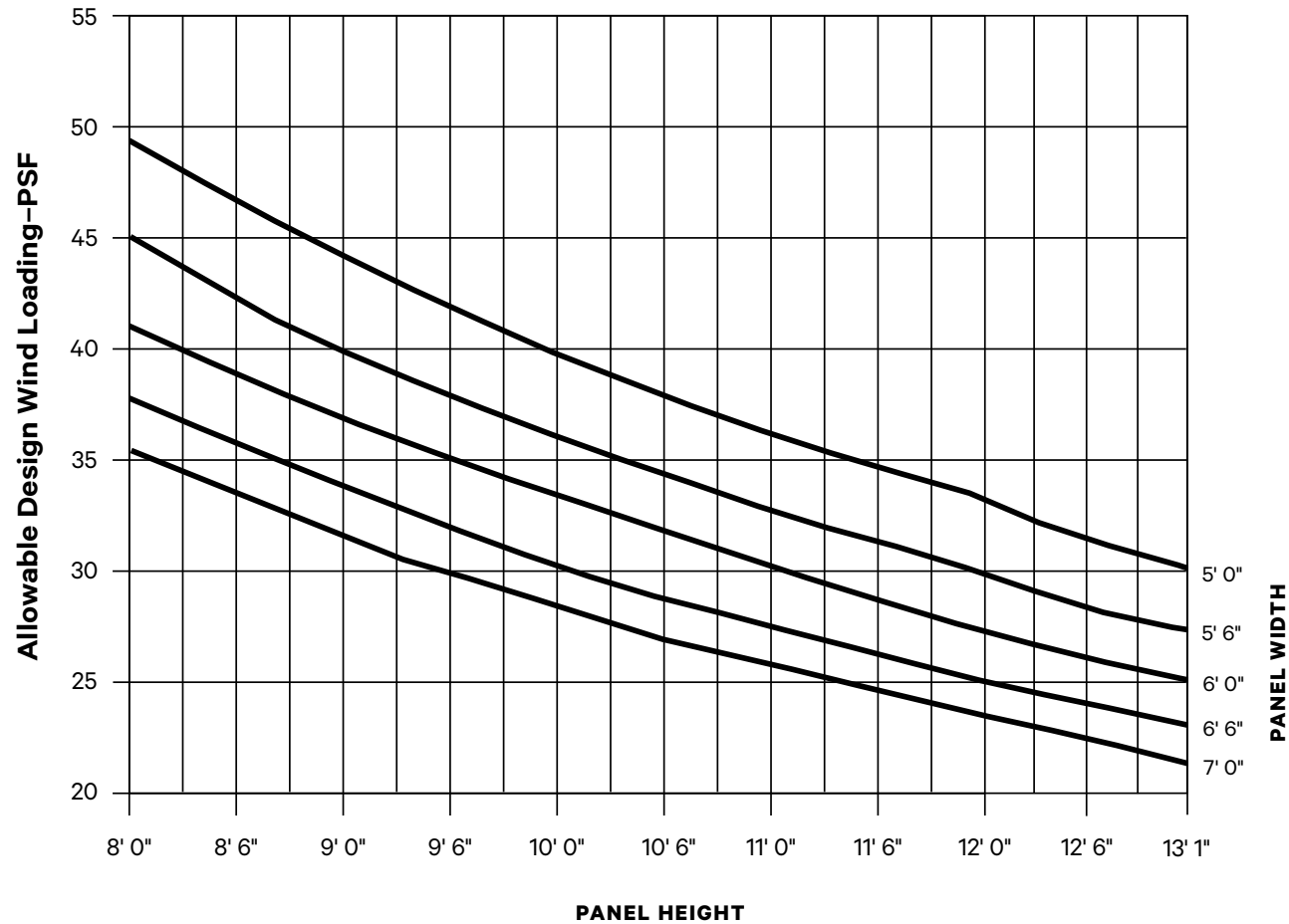
- ① SHGC = Solar Heat Gain Coefficient
- ② VT = Visible Transmittance

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.

Design Windload Chart | cero II

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

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



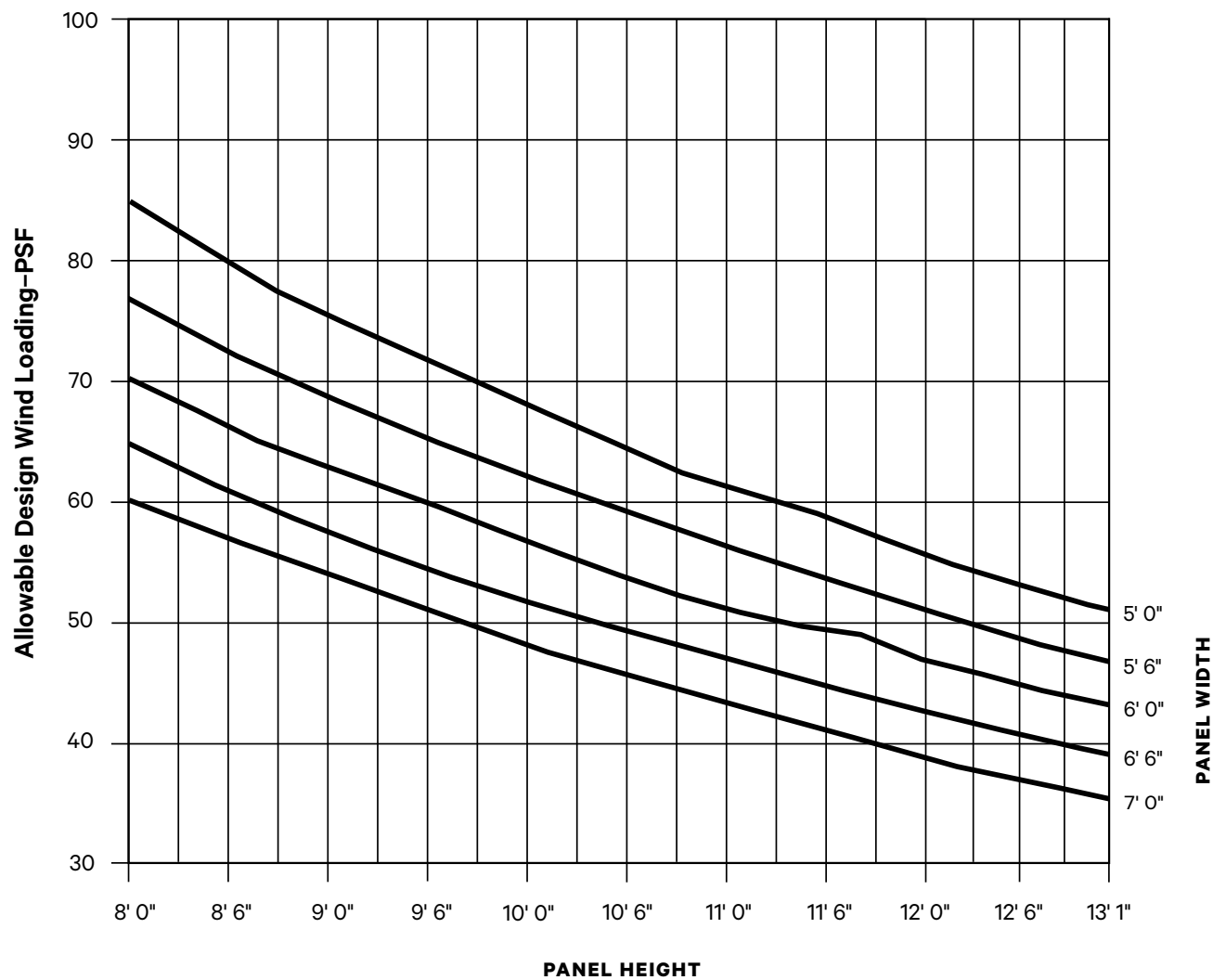
Any custom size is possible. See Maximum Frame Size Limits for maximum possible sizes.

(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 water infiltration rating or L/175 deflection restrictions 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 and Negative Design Pressures
with Reinforced cero II Performance Sill**
(In Accordance with Allowable Stress Design (ASD) Design Pressures*)

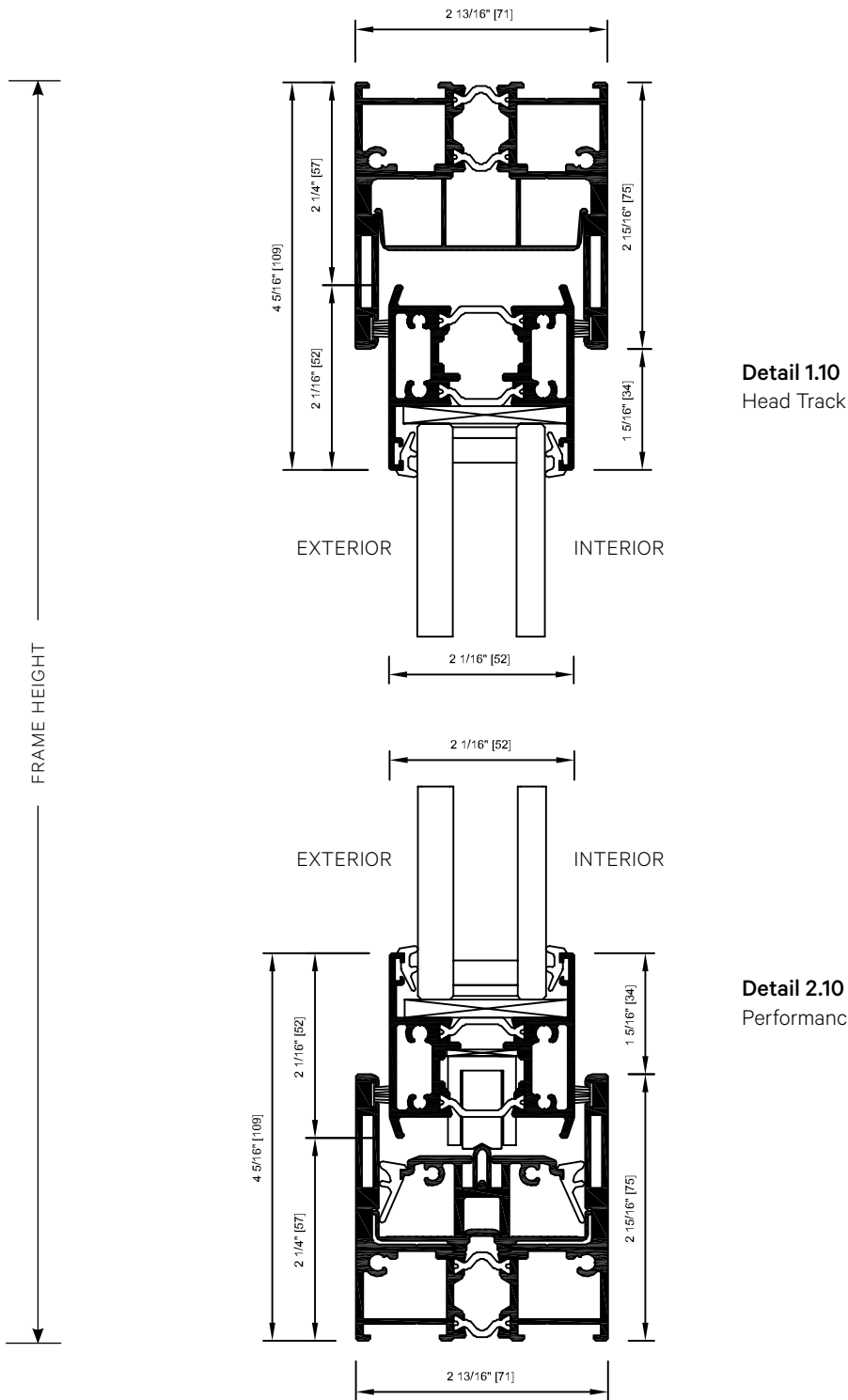


Any custom size is possible. See Maximum Frame Size Limits for maximum possible sizes.

(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 water infiltration ratings or L/175 deflection restrictions 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.

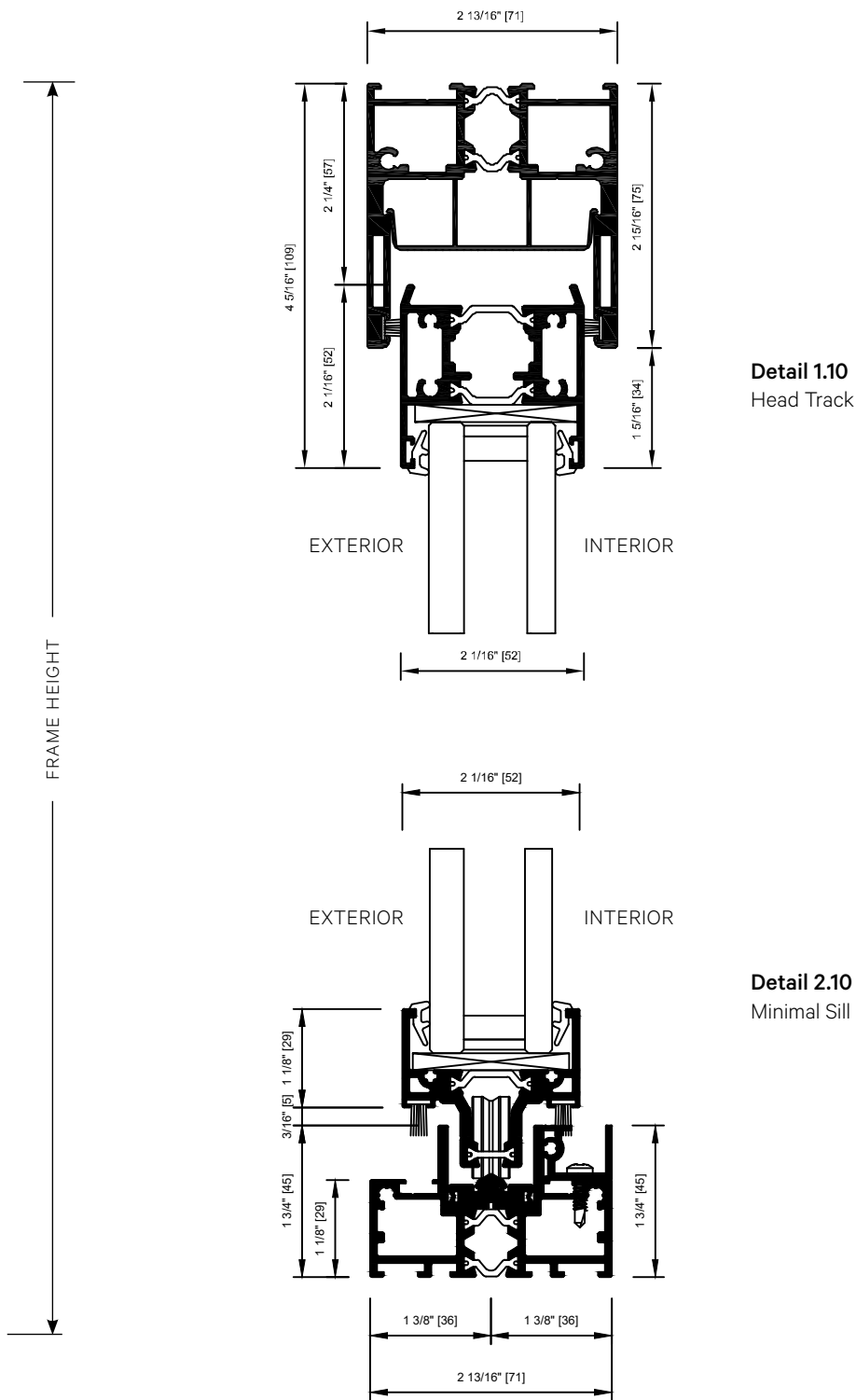
1 Track Configurations Details



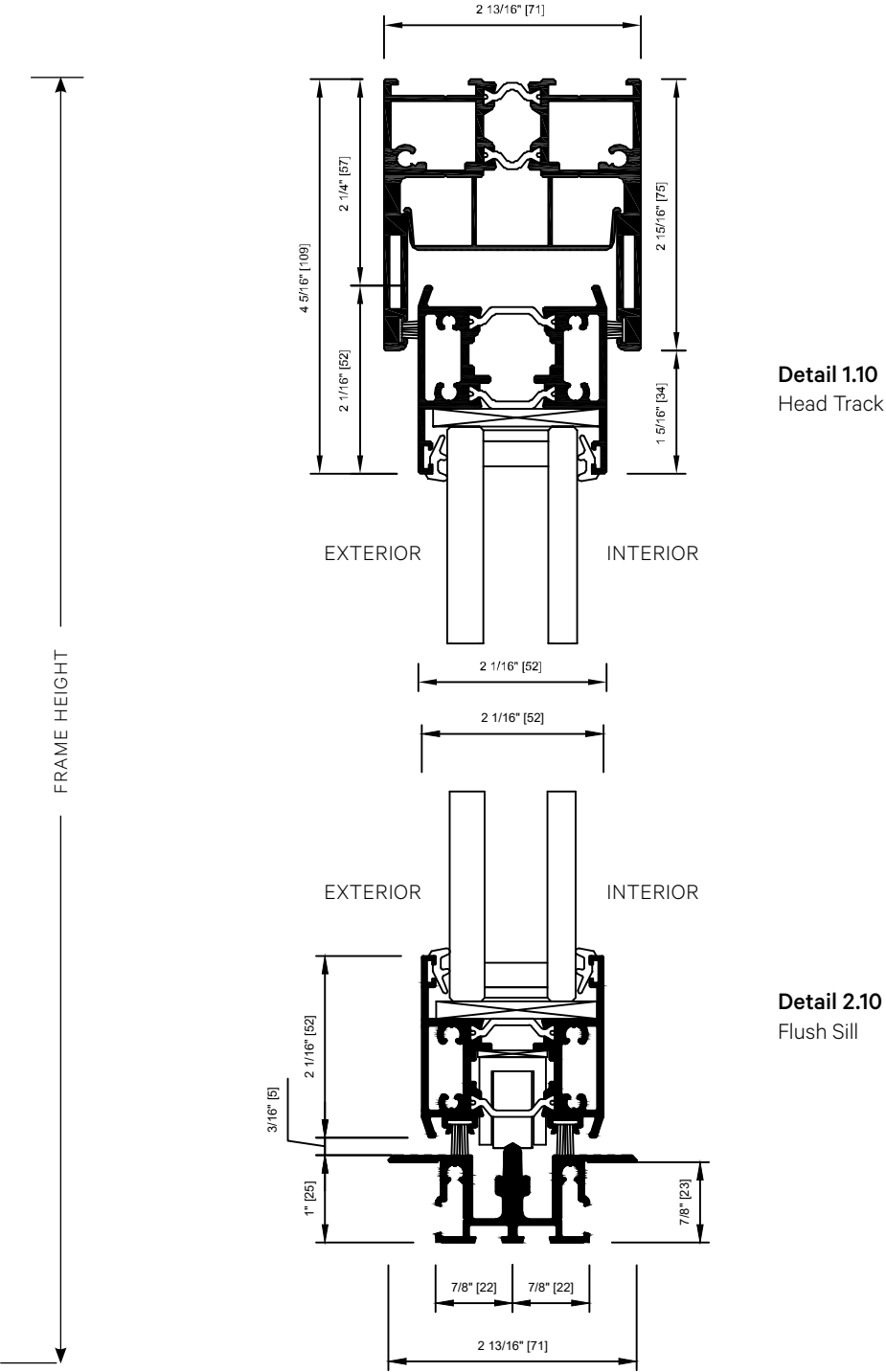
Detail 1.10
Head Track

Detail 2.10
Performance Sill

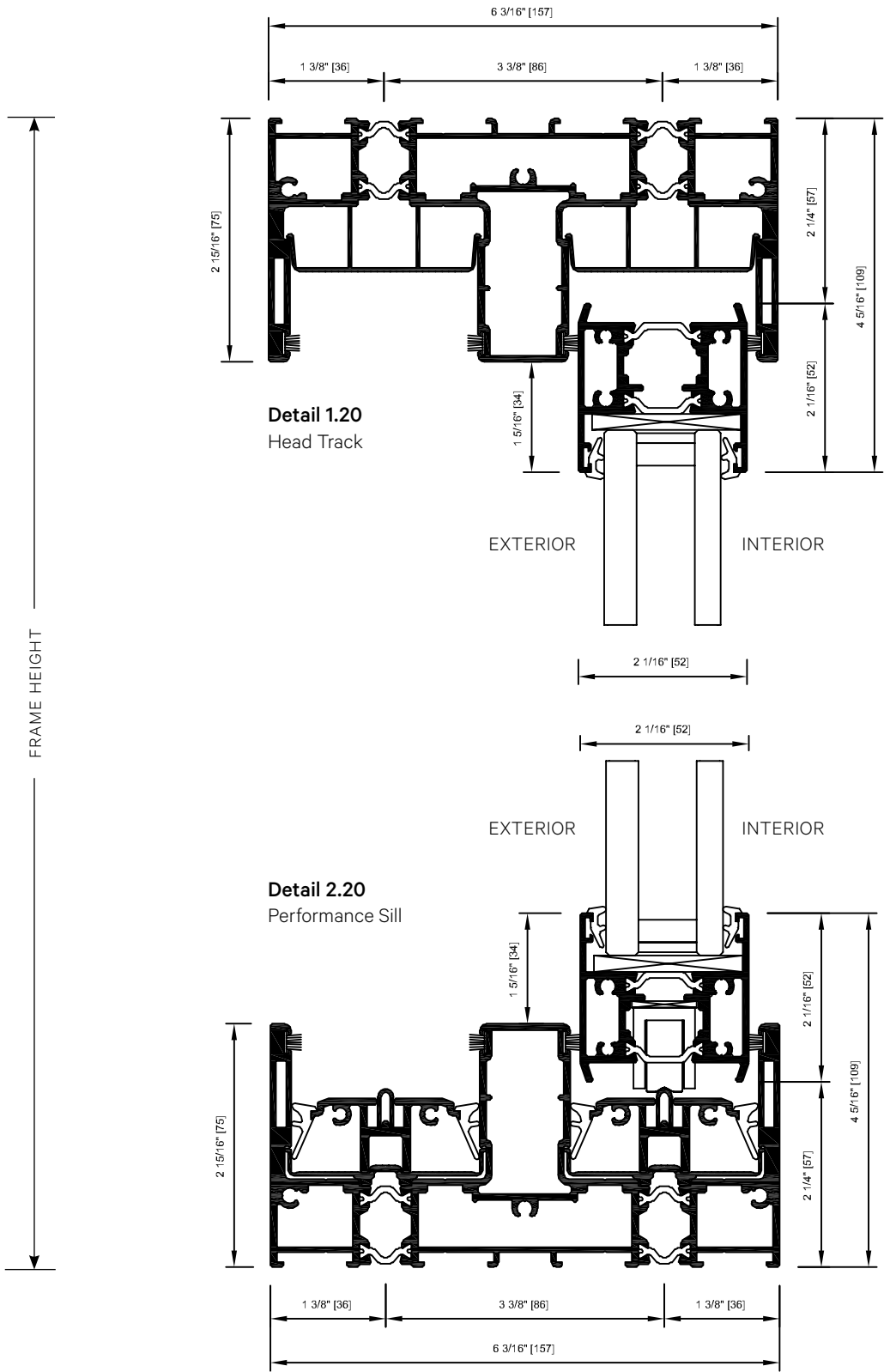
1 Track Configurations Details



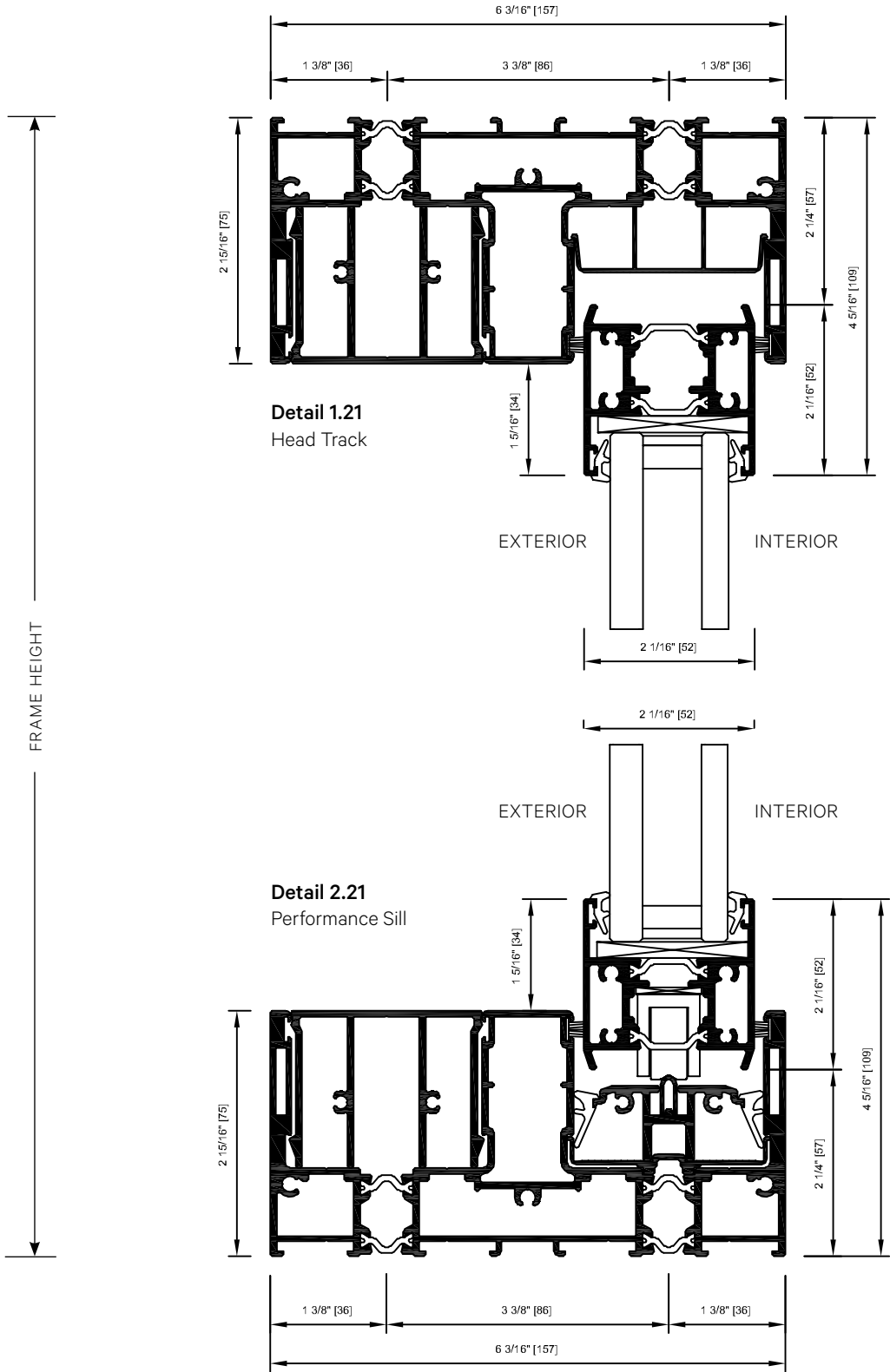
1 Track Configurations Details



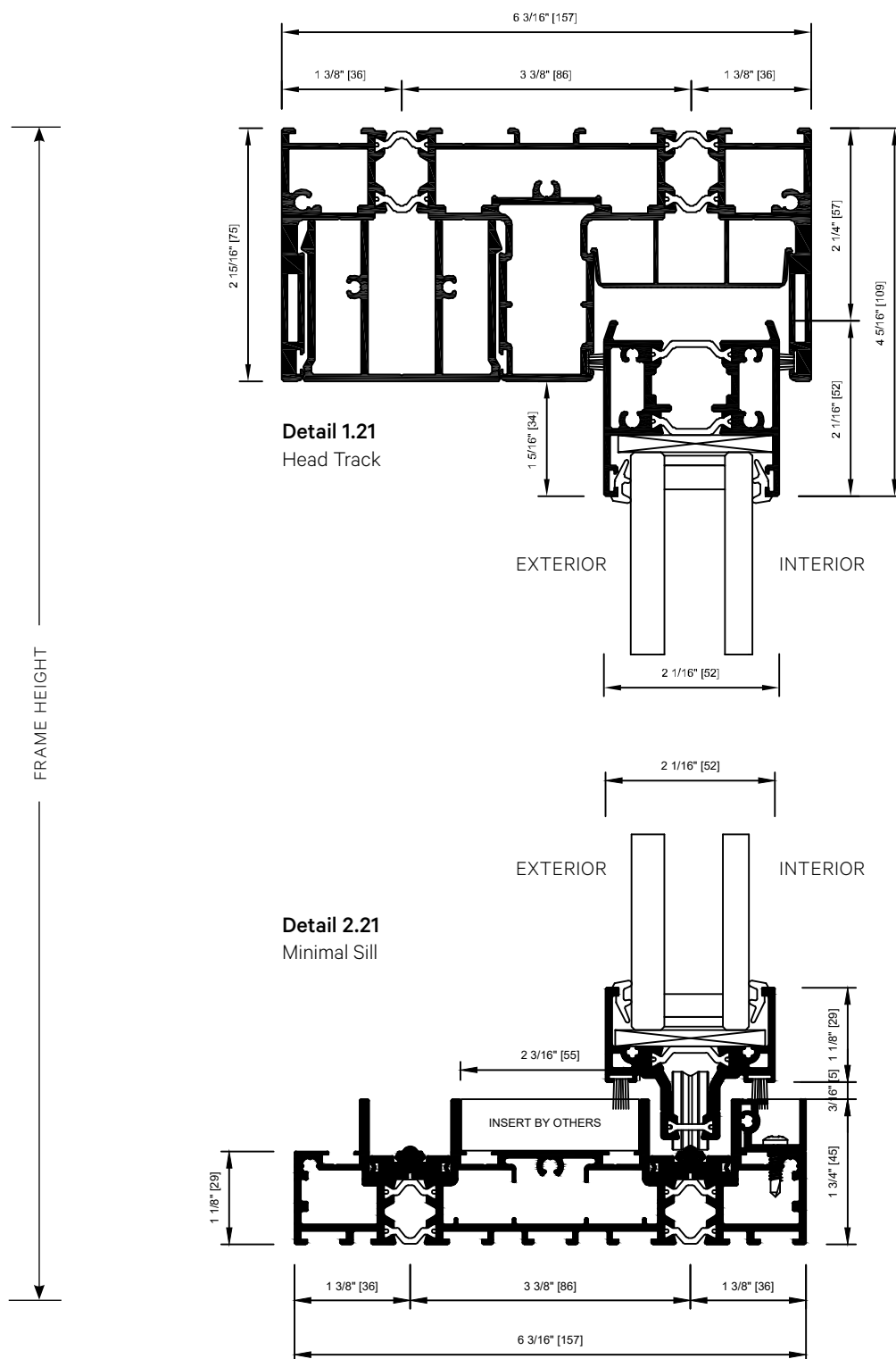
2 Track Configurations Details (Including Special Configurations)



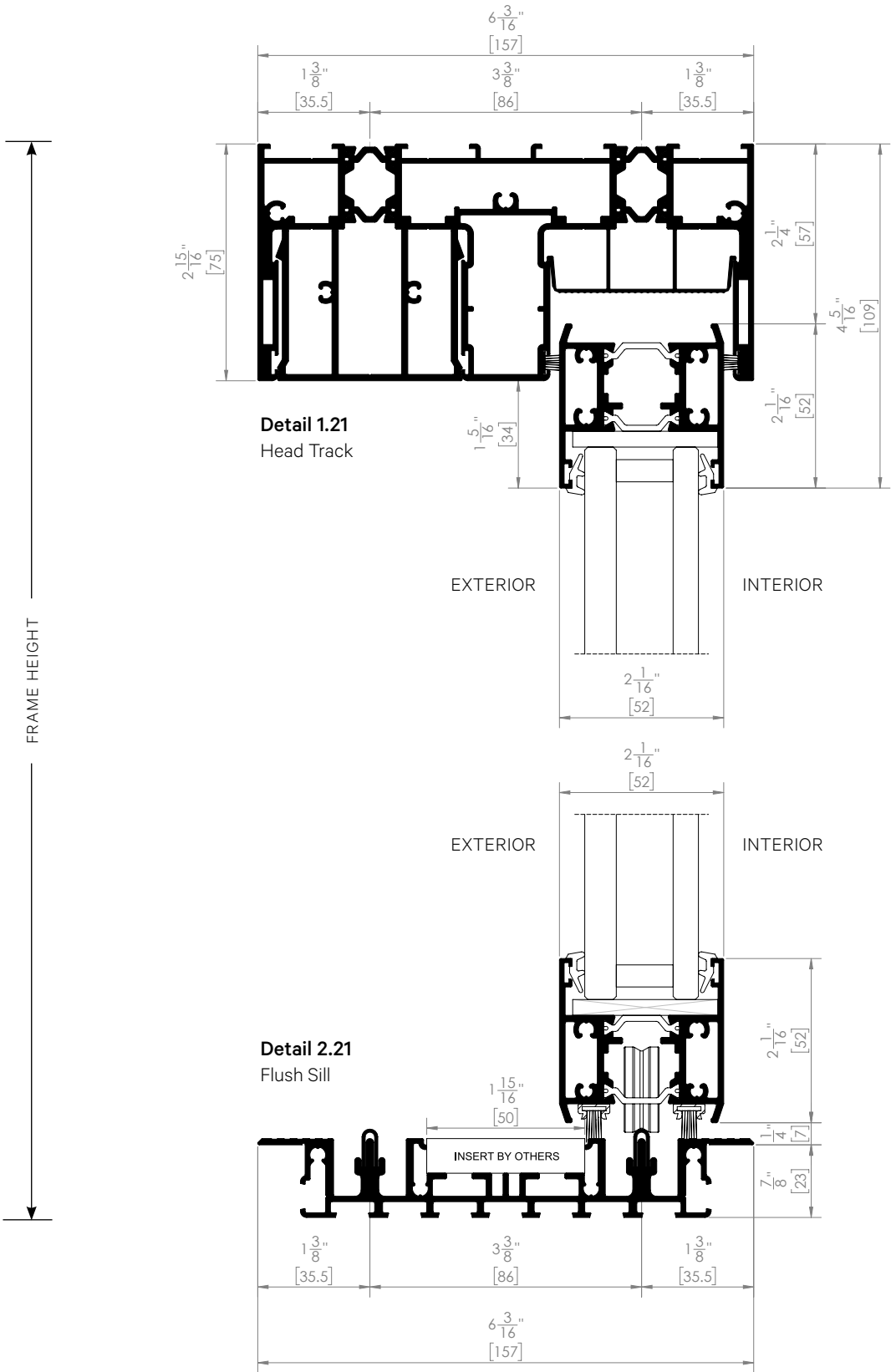
2 Track Configurations Details (Including Special Configurations)



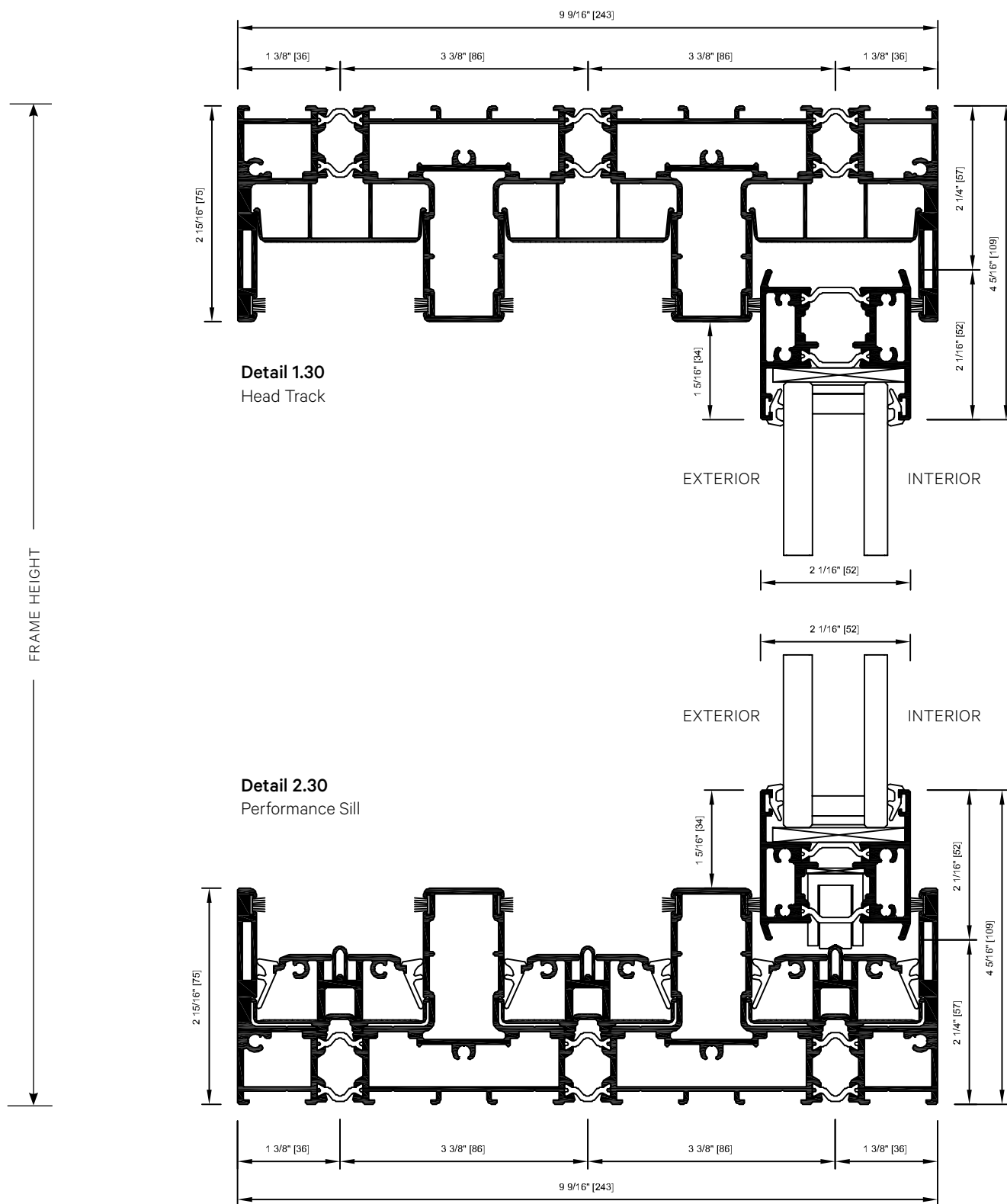
2 Track Configurations Details (Including Special Configurations)



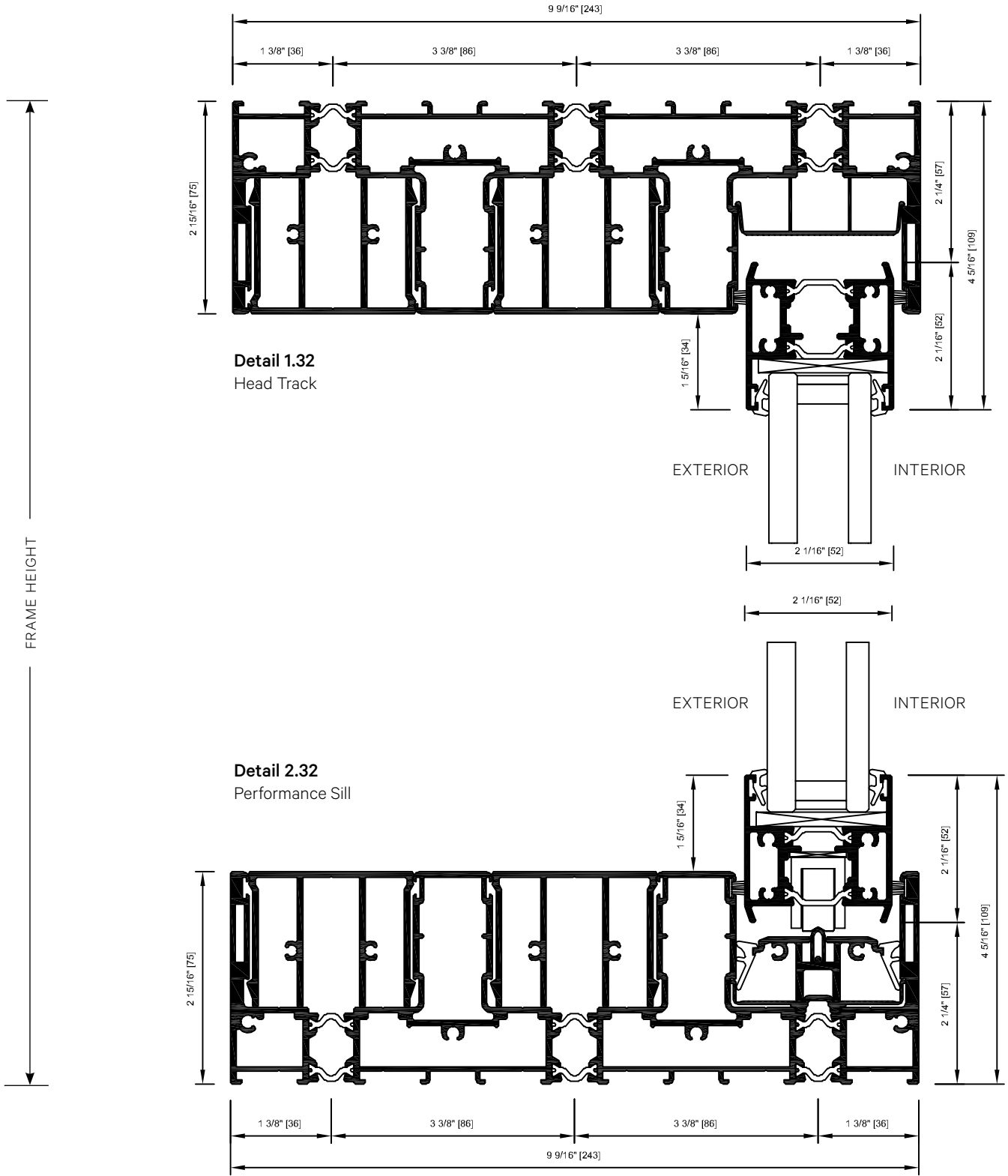
2 Track Configurations Detail—Additional Sill Options



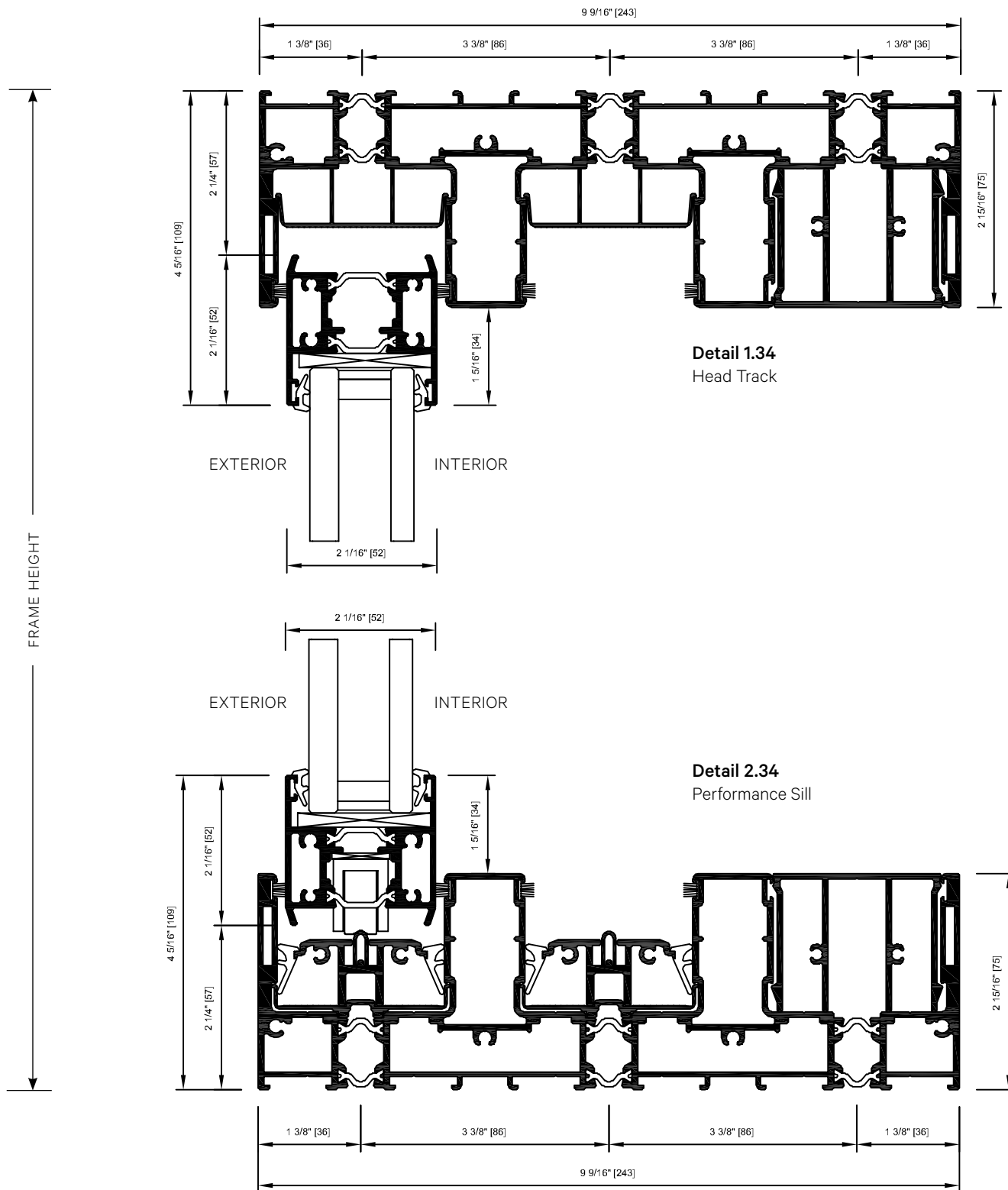
3 Track Configurations Details (Including Special Configurations)



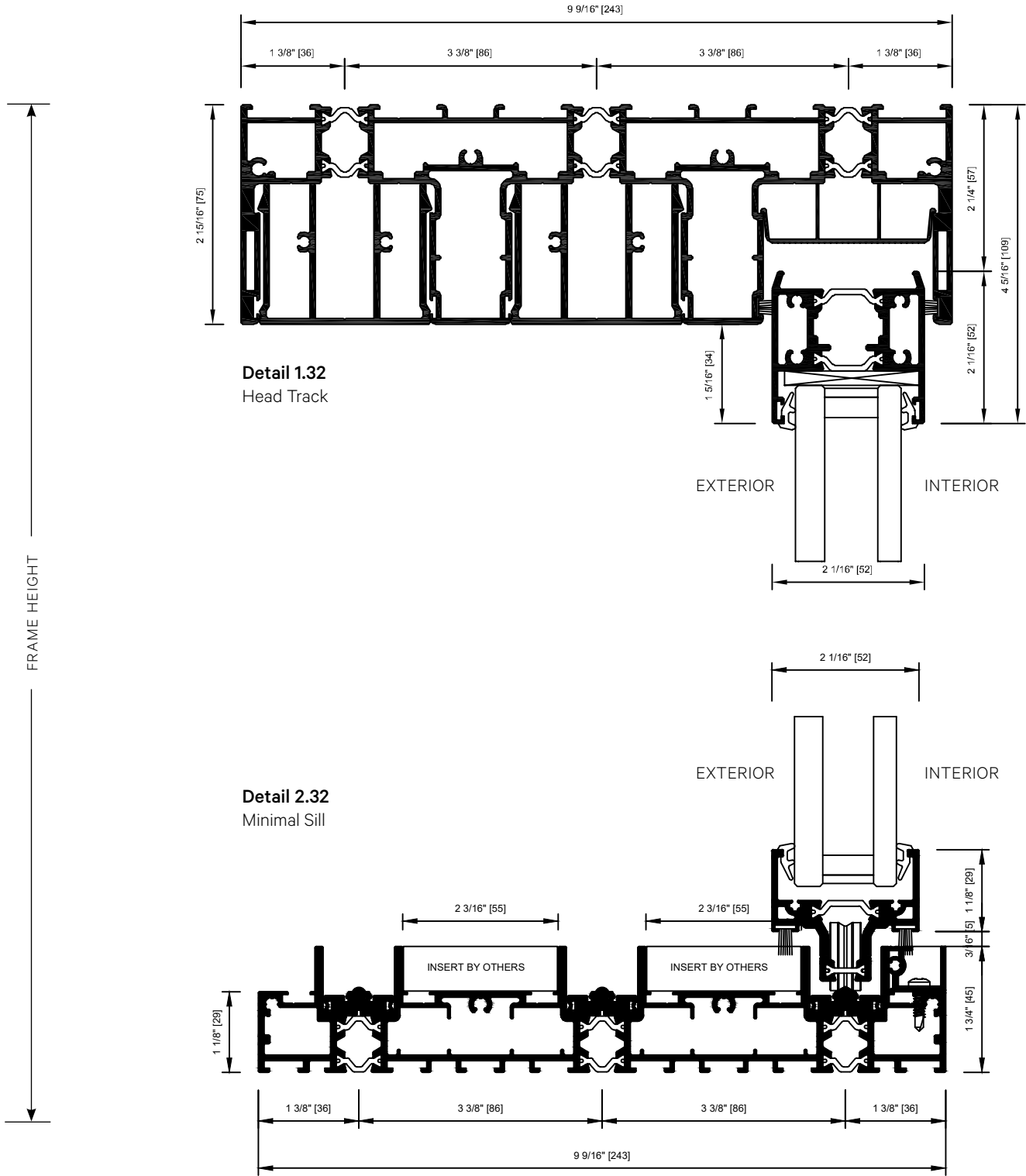
3 Track Configurations Details (Including Special Configurations)



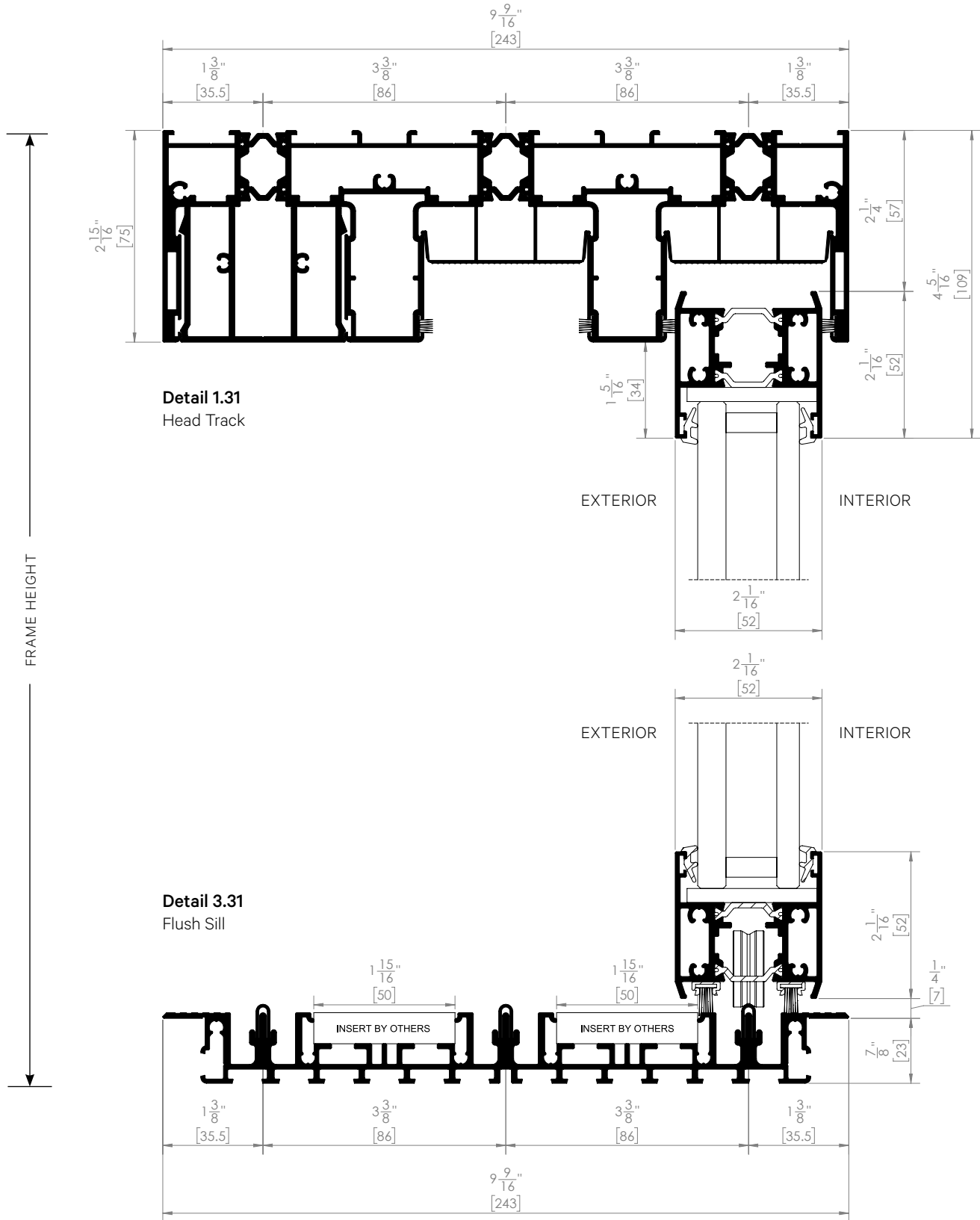
3 Track Configurations Details (Including Special Configurations)



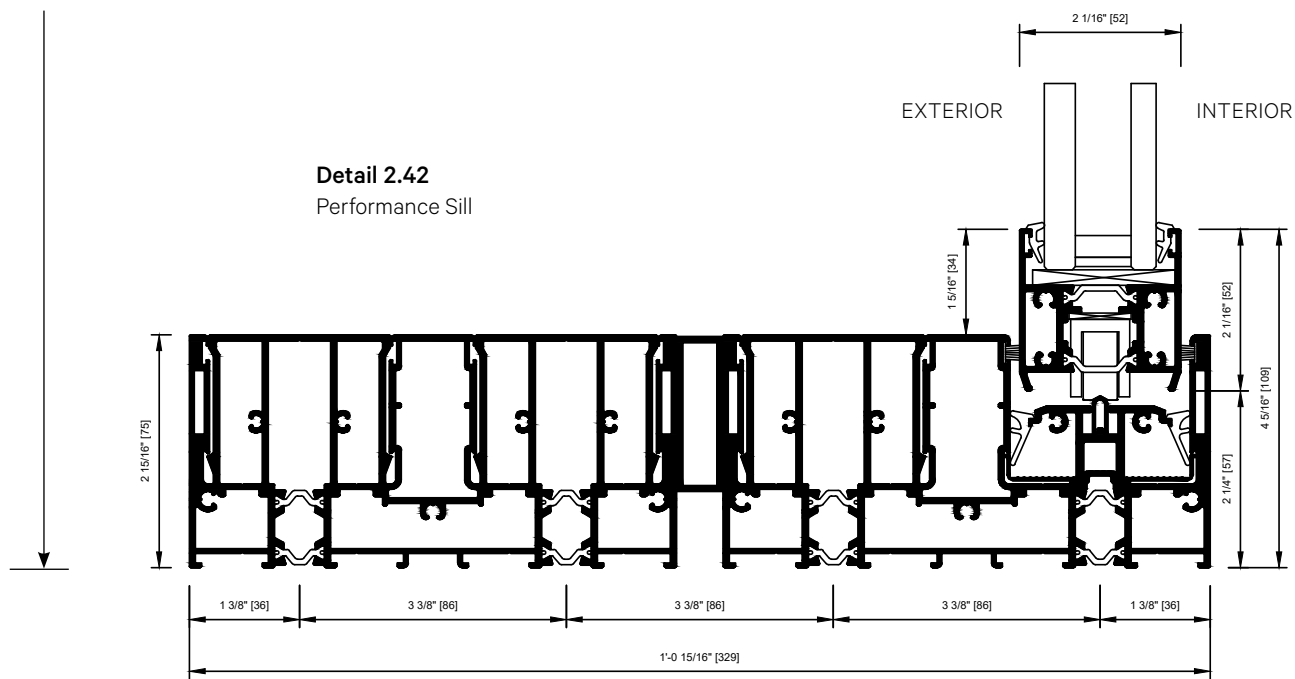
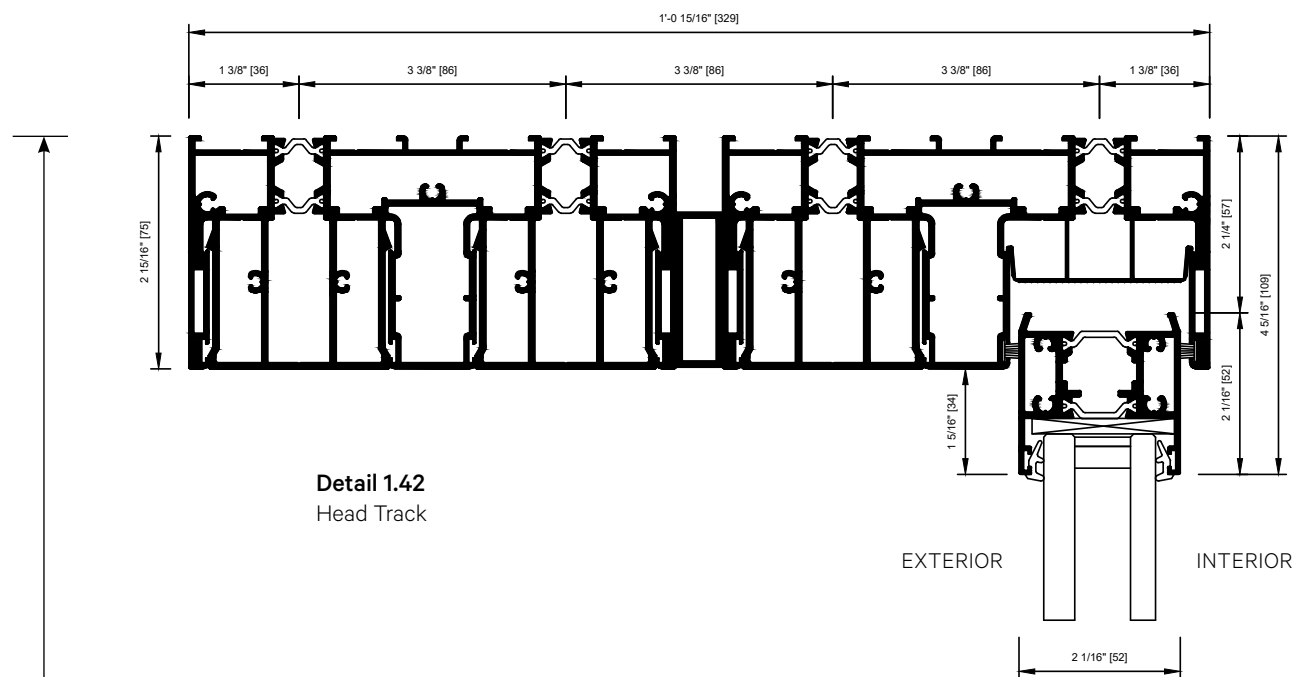
3 Track Configurations Details (Including Special Configurations)



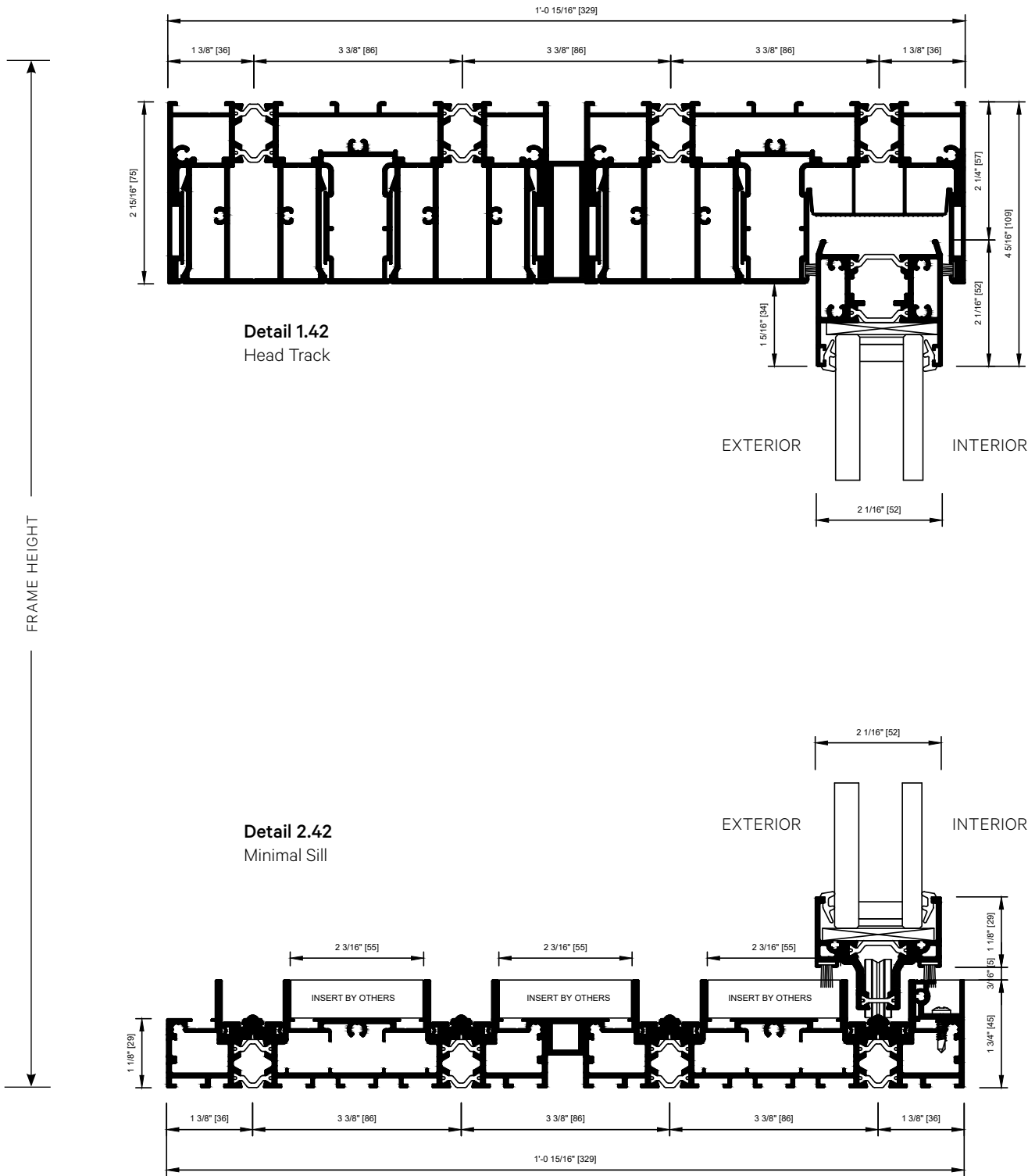
3 Track Configurations Detail—Additional Sill Options



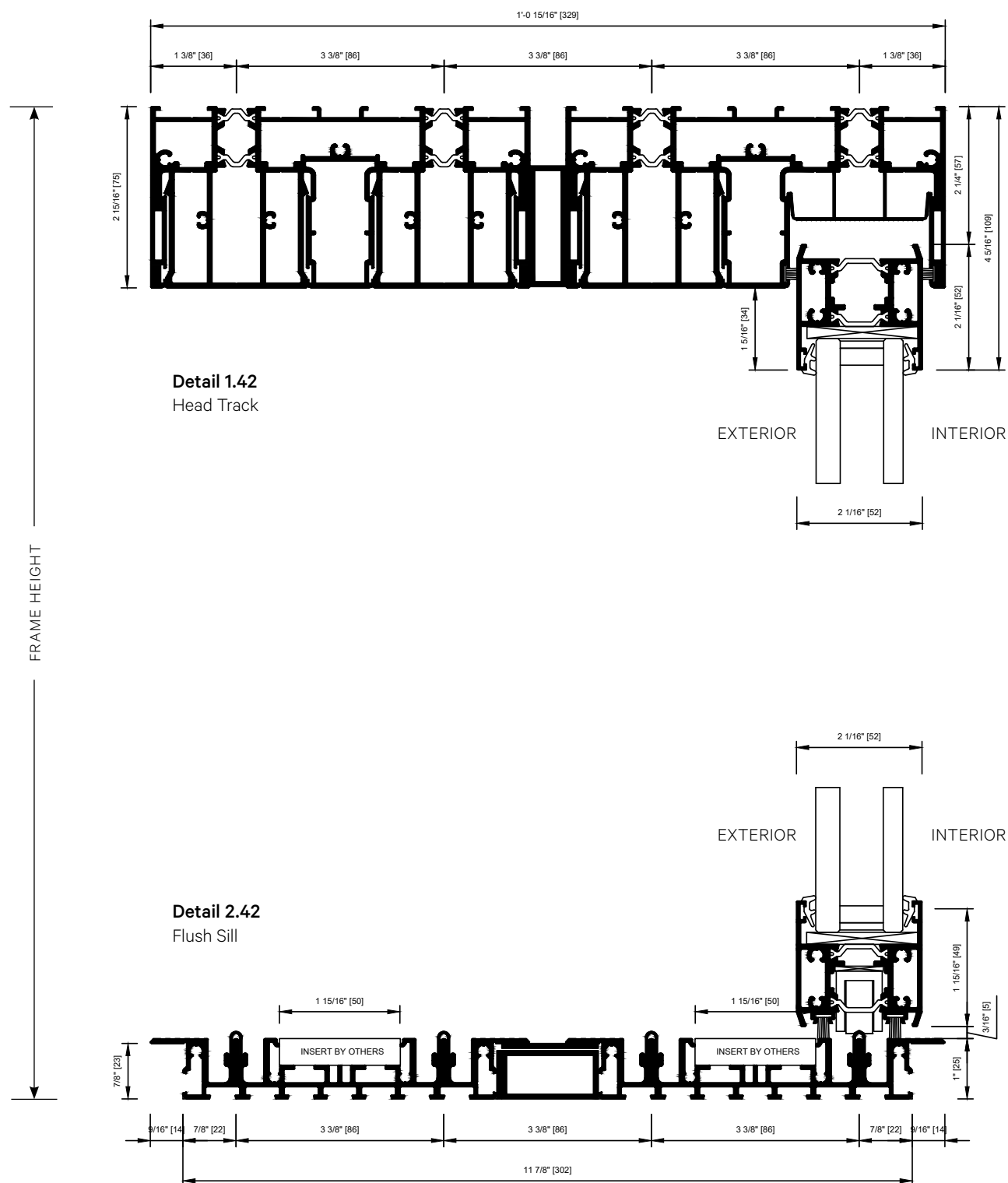
4 Track Configurations Details (Including Special Configurations)



4 Track Configurations Details (Including Special Configurations)

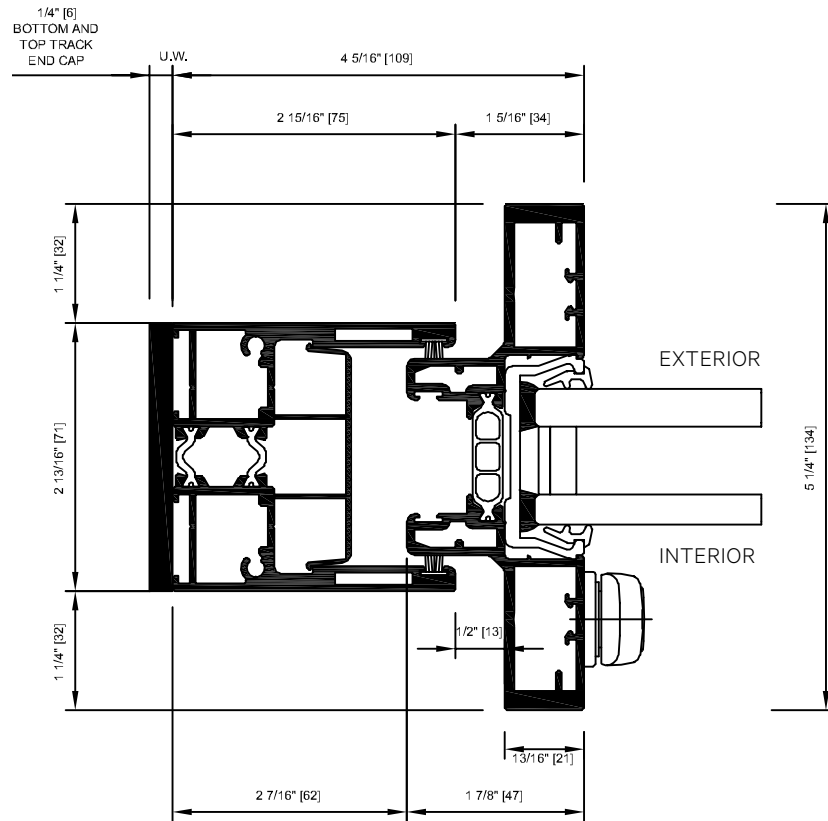


4 Track Configurations Detail—Additional Sill Options

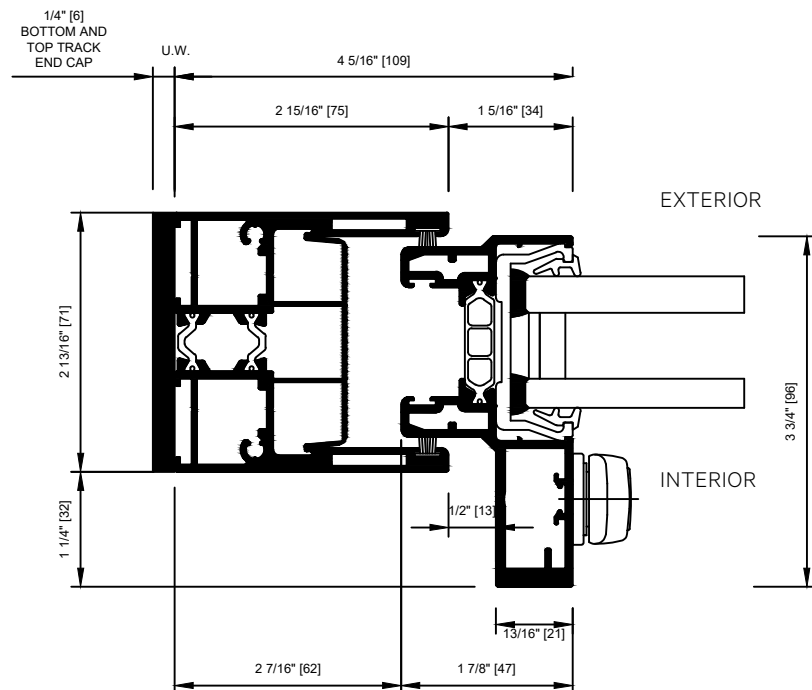


Horizontal Cross Section Details For 1 Track and Special Configurations

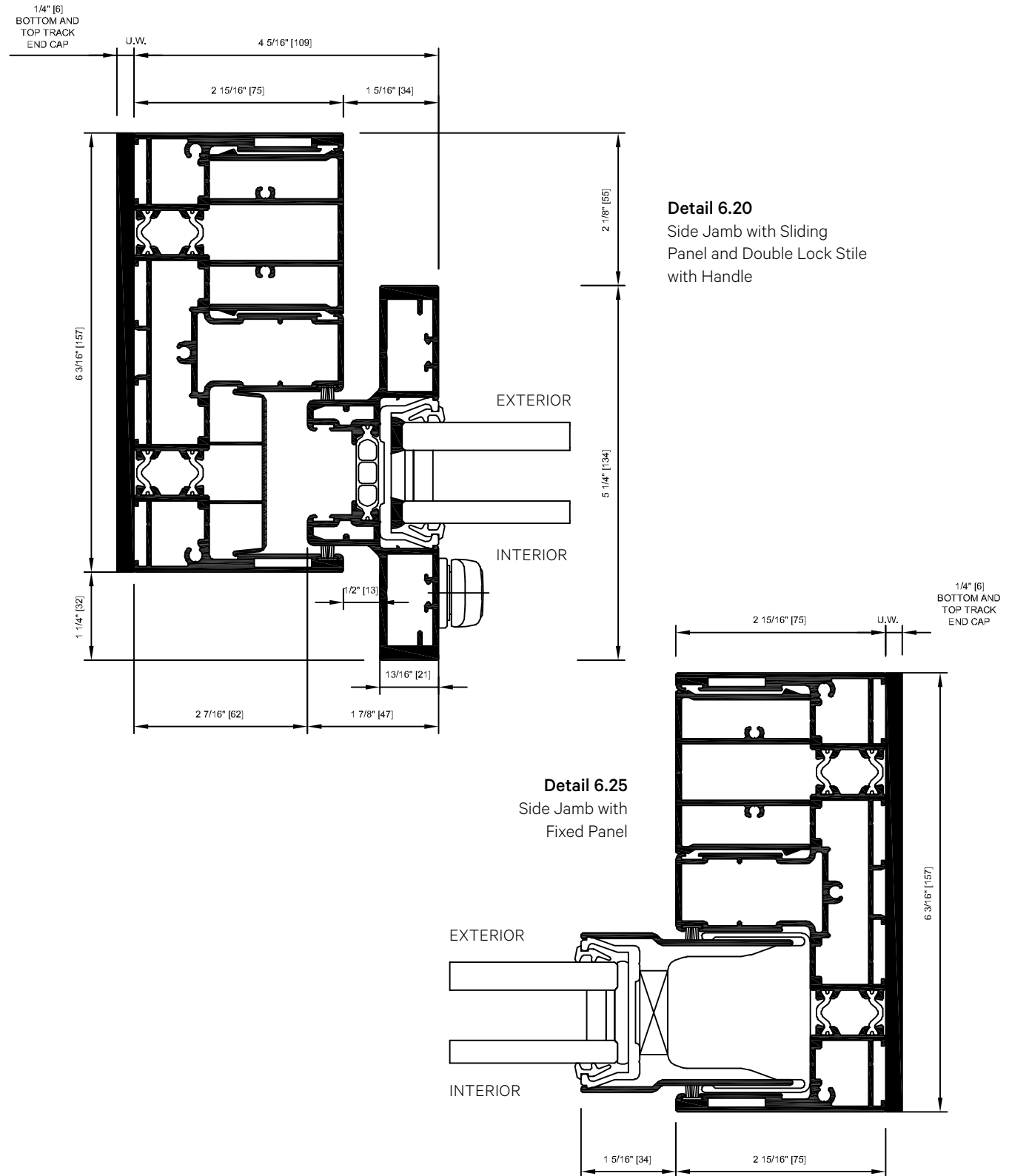
Detail 6.10
Side Jamb with Sliding
Panel and Double Lock
Stile with Handle



Detail 6.11
Side Jamb with Sliding
Panel and Single Lock
Stile with Handle

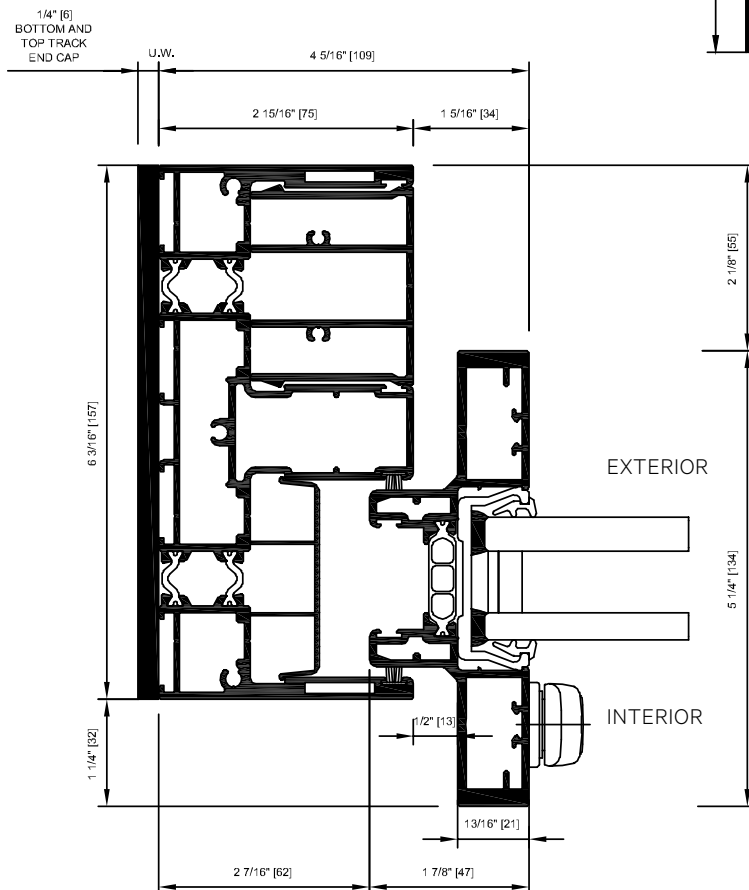
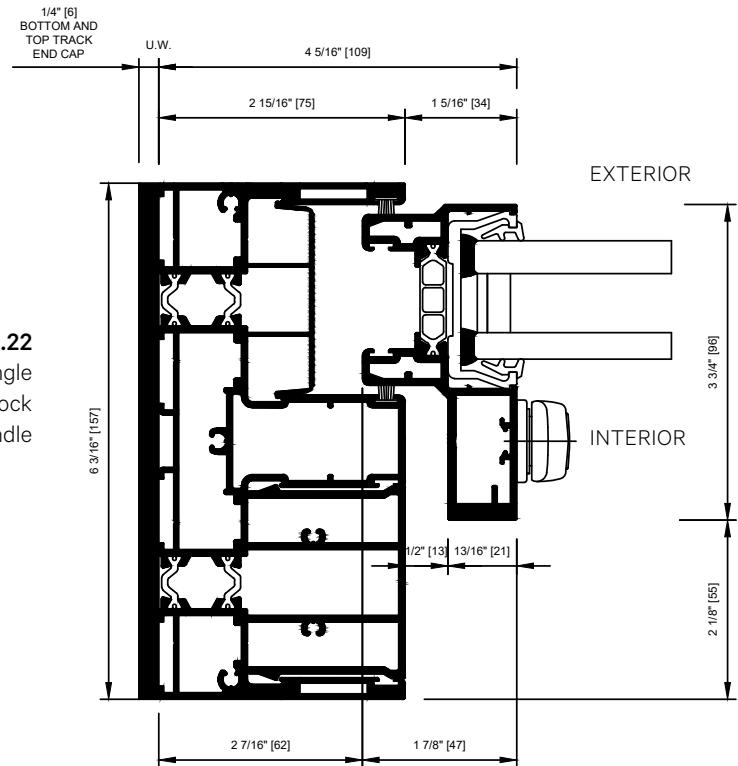


Horizontal Cross Section Details For 2 Track and Special Configurations



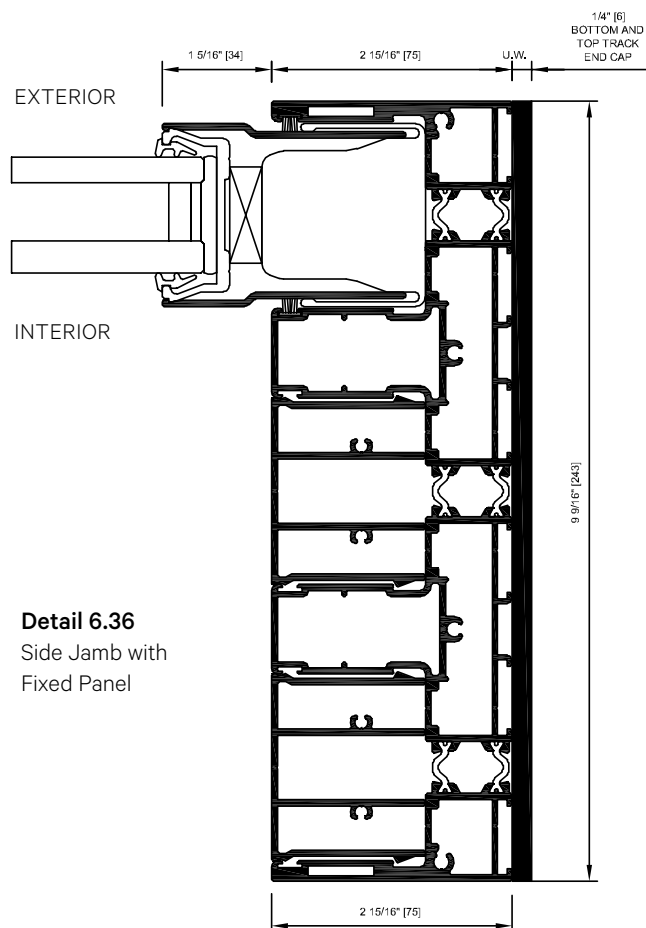
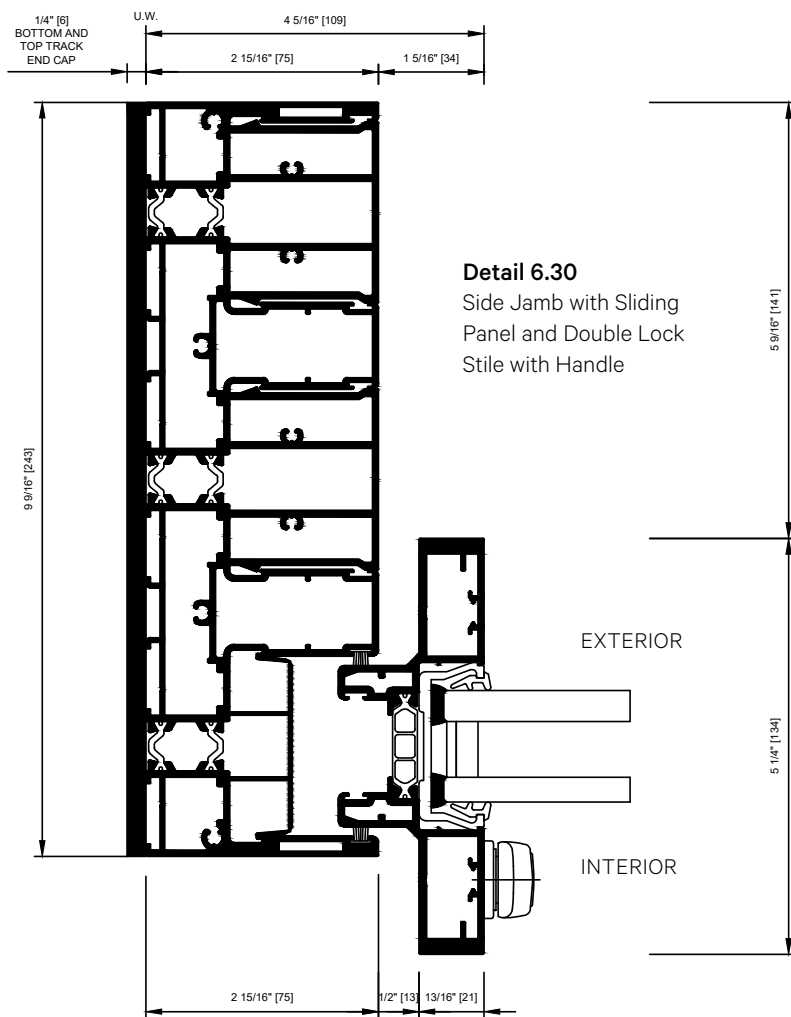
Horizontal Cross Section Details For 2 Track and Special Configurations

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

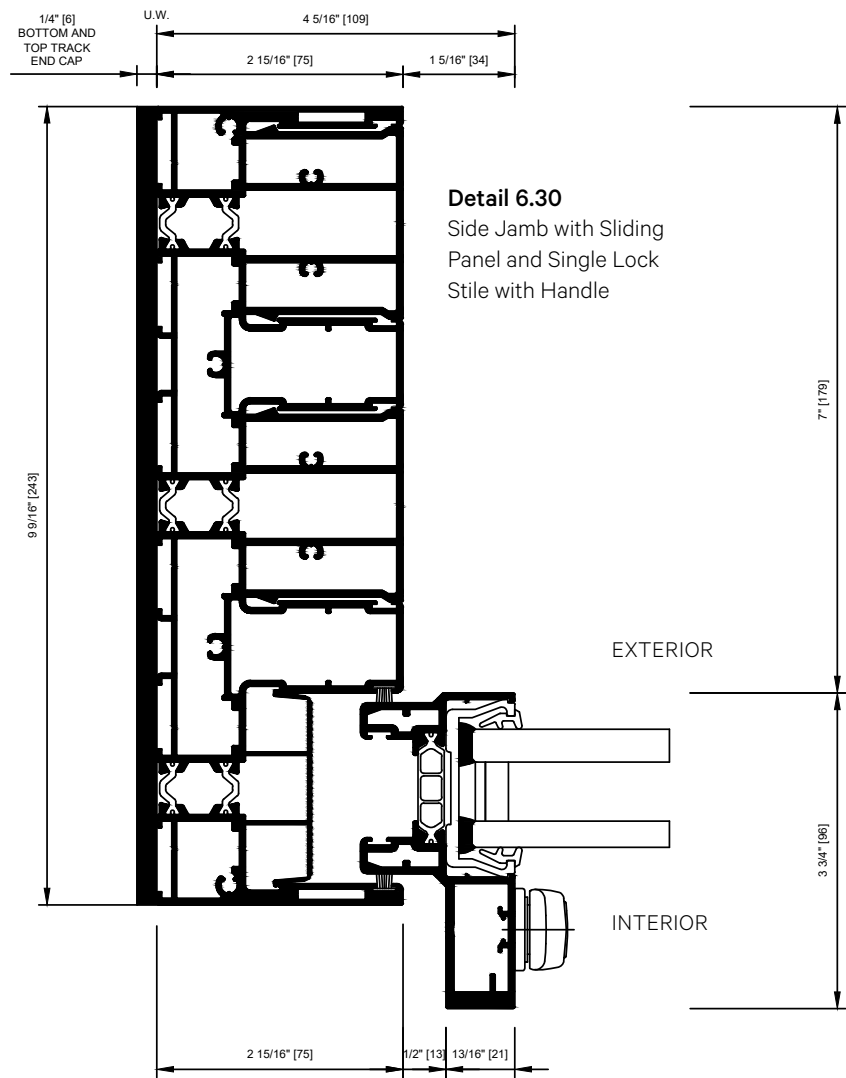


Detail 6.24
Side Jamb with Sliding
Panel and Double Lock
Stile with Handle

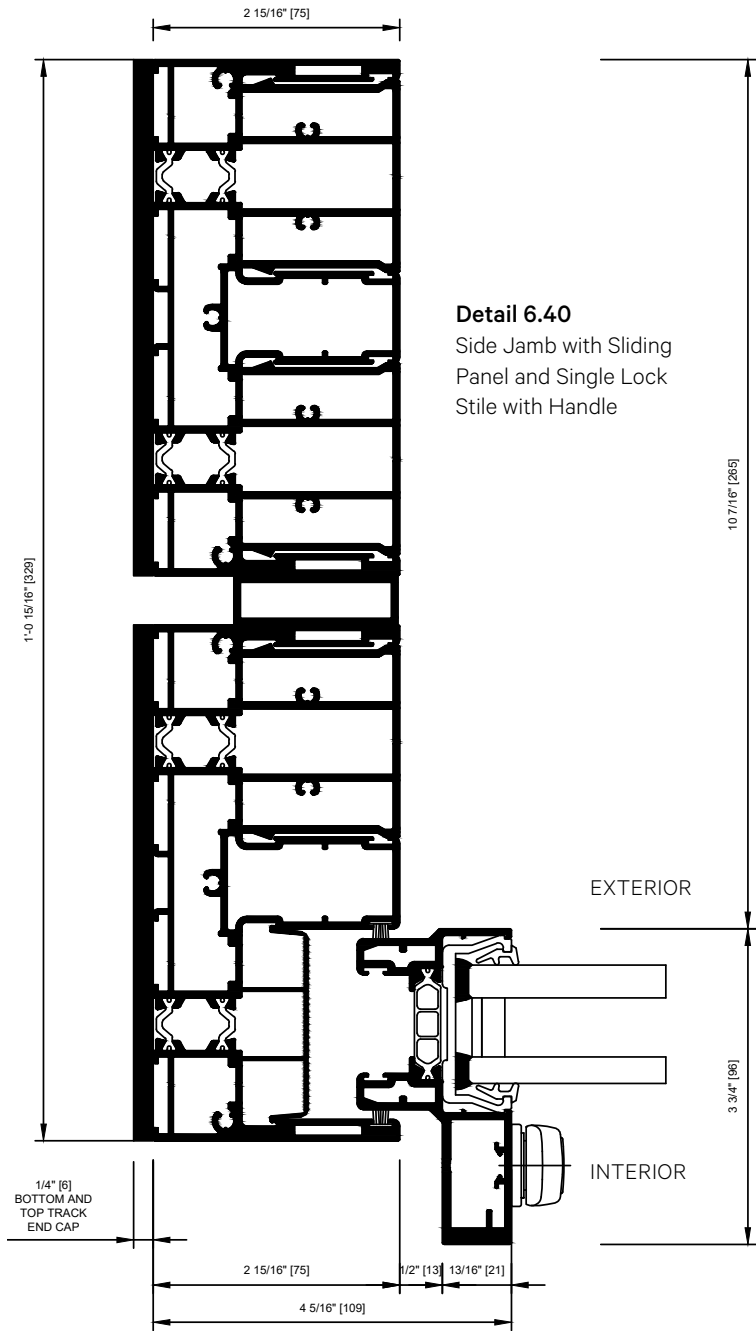
Horizontal Cross Section Details For 3 Track and Special Configurations



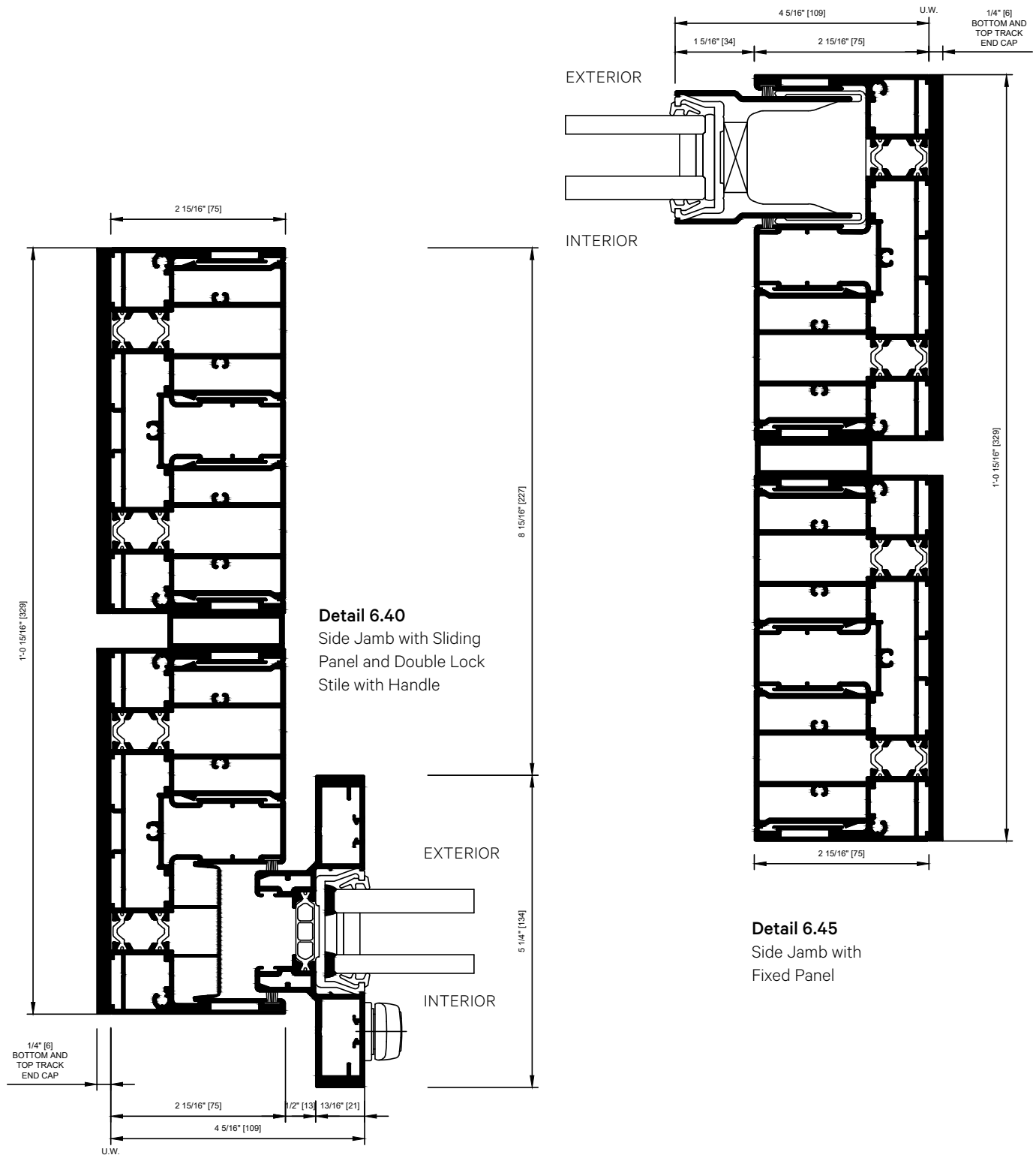
Horizontal Cross Section Details For 3 Track and Special Configurations



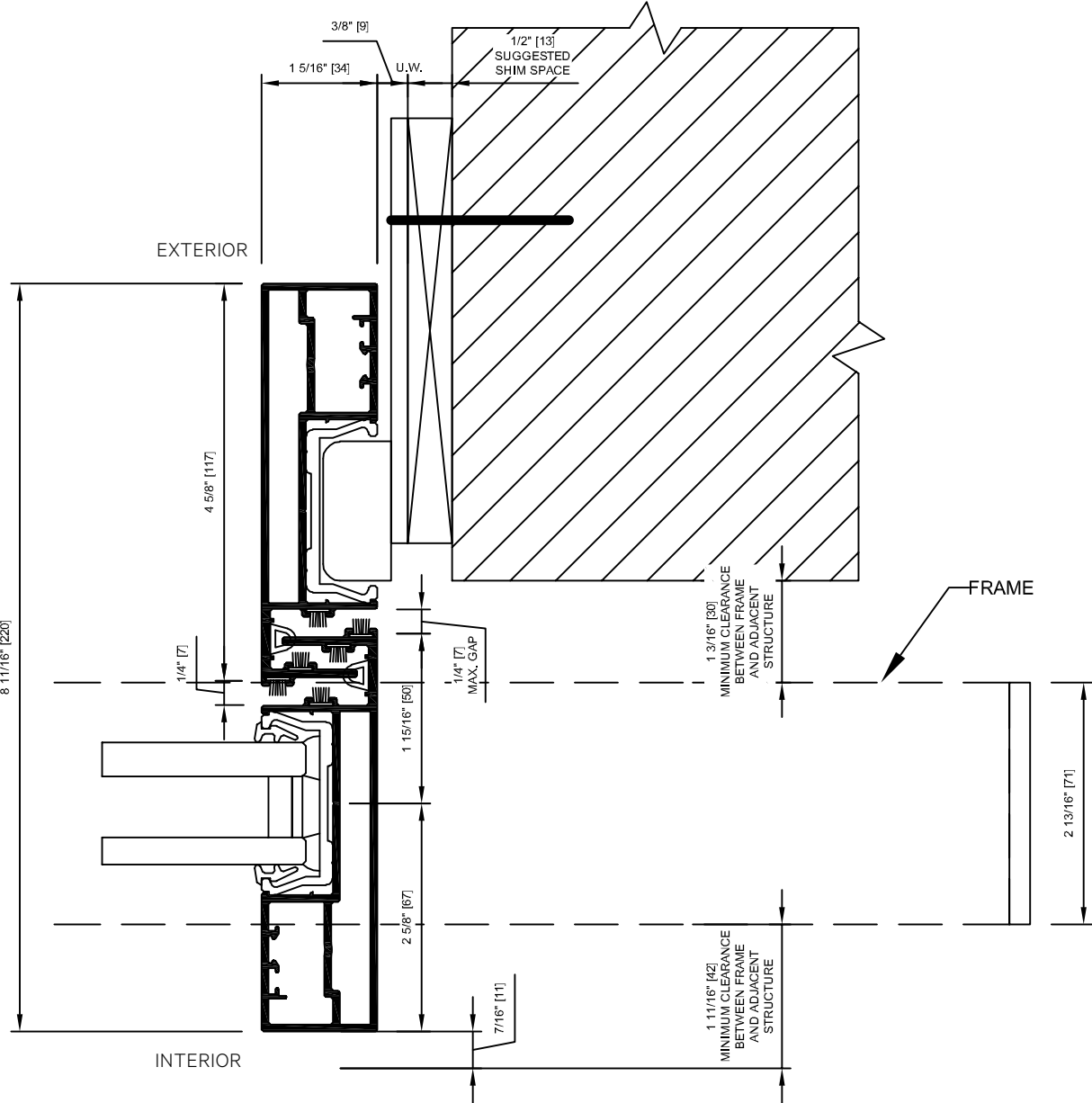
Horizontal Cross Section Details For 4 Track and Special Configurations



Horizontal Cross Section Details For 4 Track and Special Configurations

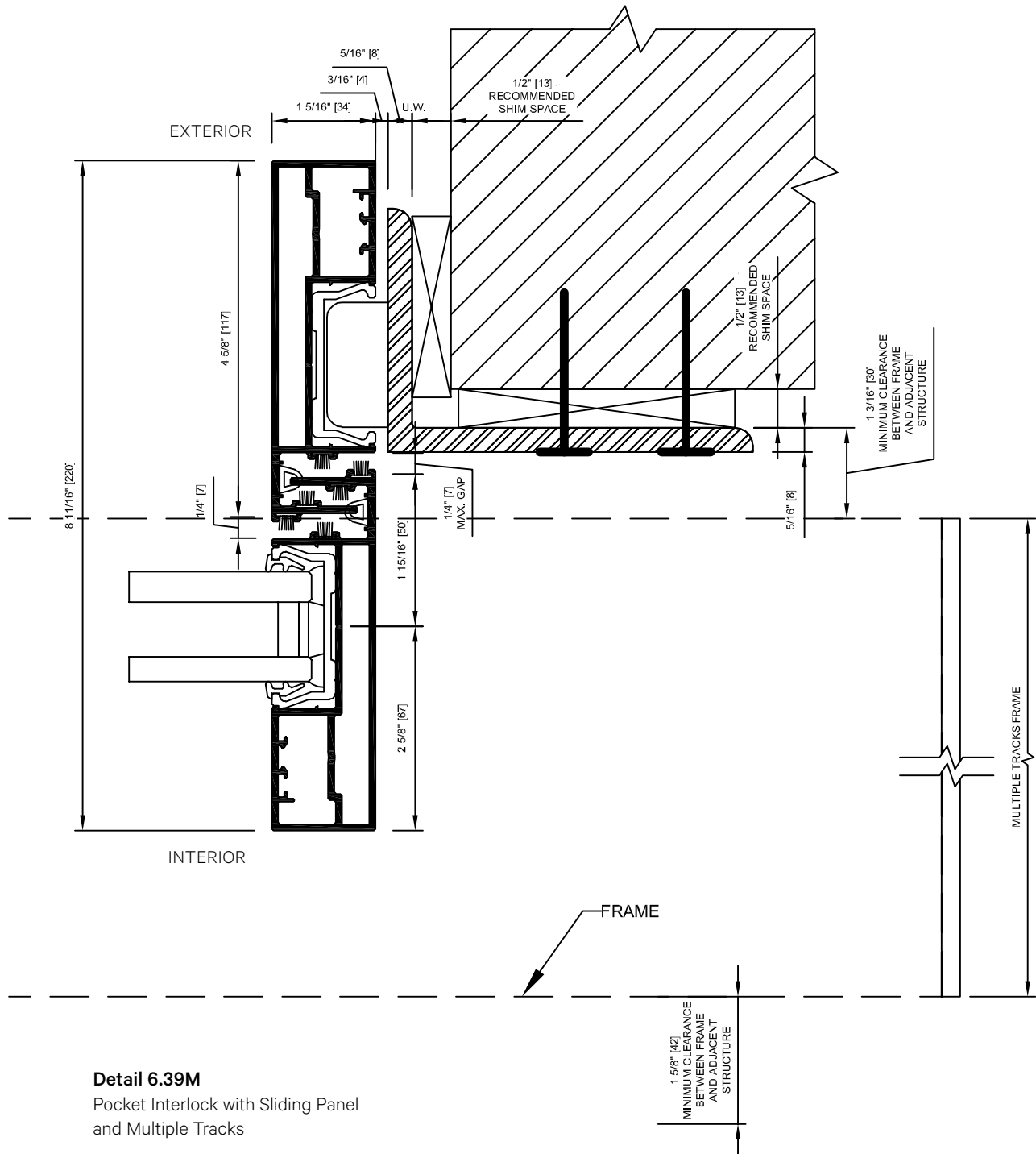


Horizontal Cross Section Details For 1 Track



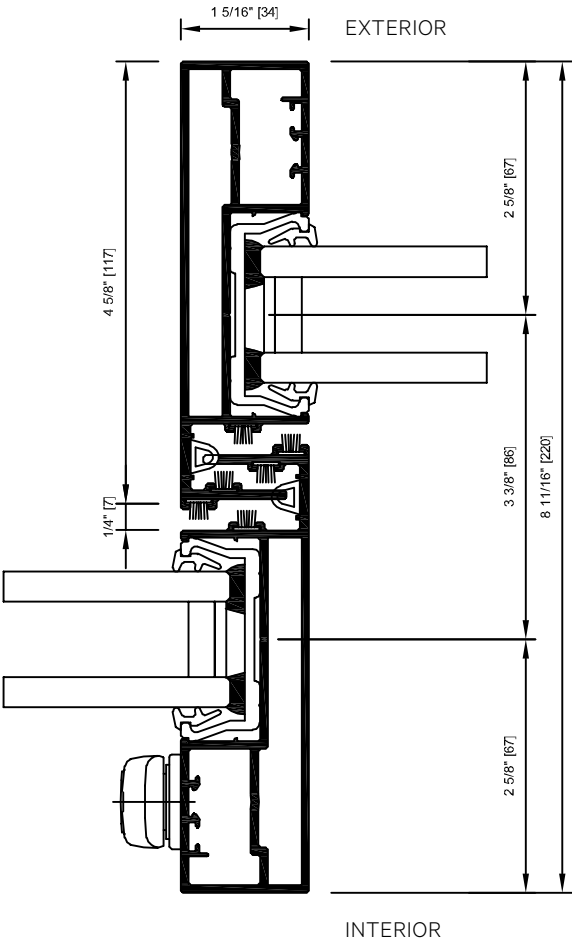
Detail 6.39
Panel Interlock
with Sliding Panel

Horizontal Cross Section Details For 2 or More Tracks

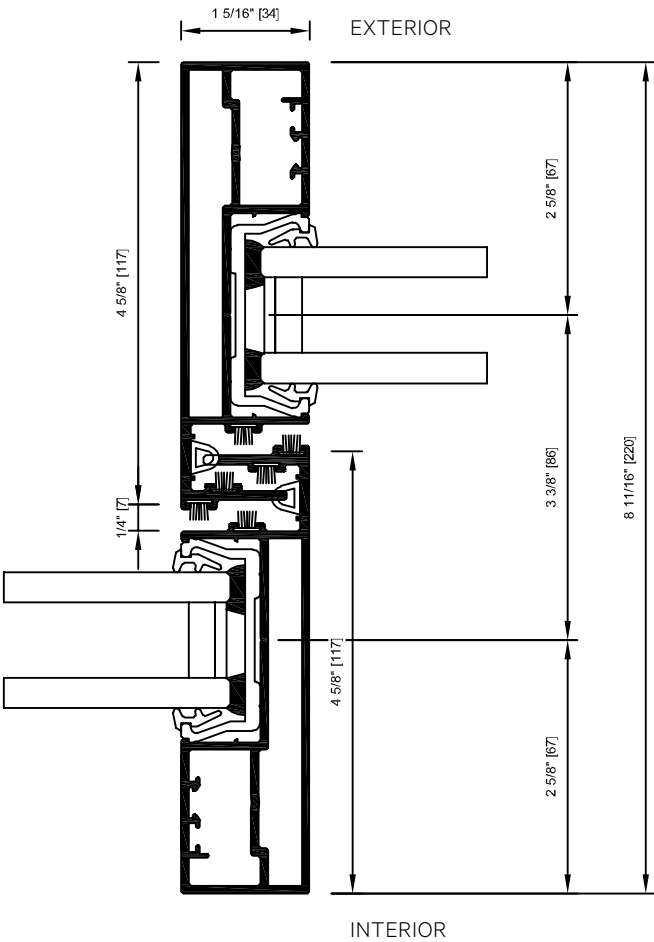


Detail 6.39M
Pocket Interlock with Sliding Panel
and Multiple Tracks

Horizontal Cross Section Details For 1, 2, 3 Track and Special Configurations

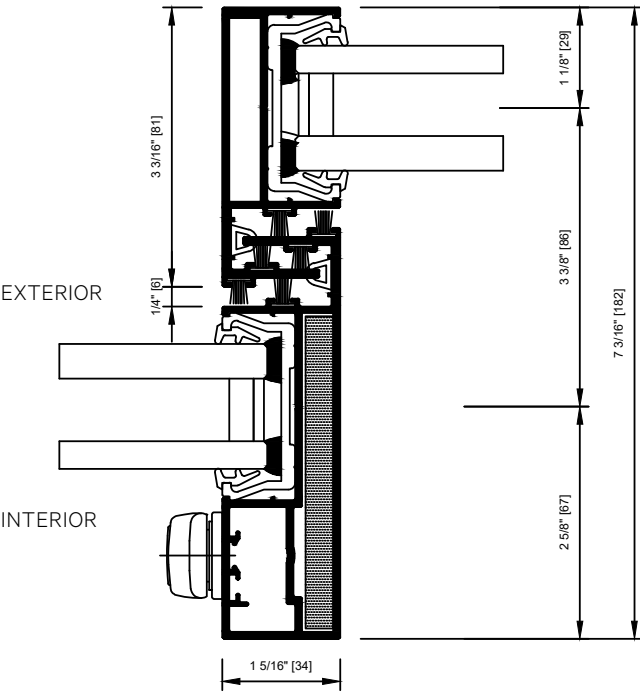


Detail 11.2
Interlock Sliding Panels with
Double Lock Stile and Handle

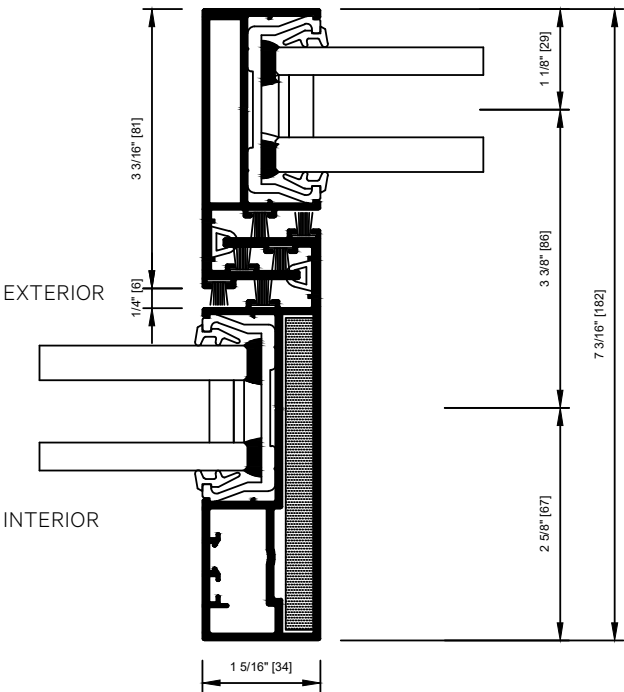


Detail 11.4
Interlock Sliding Panels
with Double Lock Stile

Horizontal Cross Section Details For 1, 2, 3 Track and Special Configurations

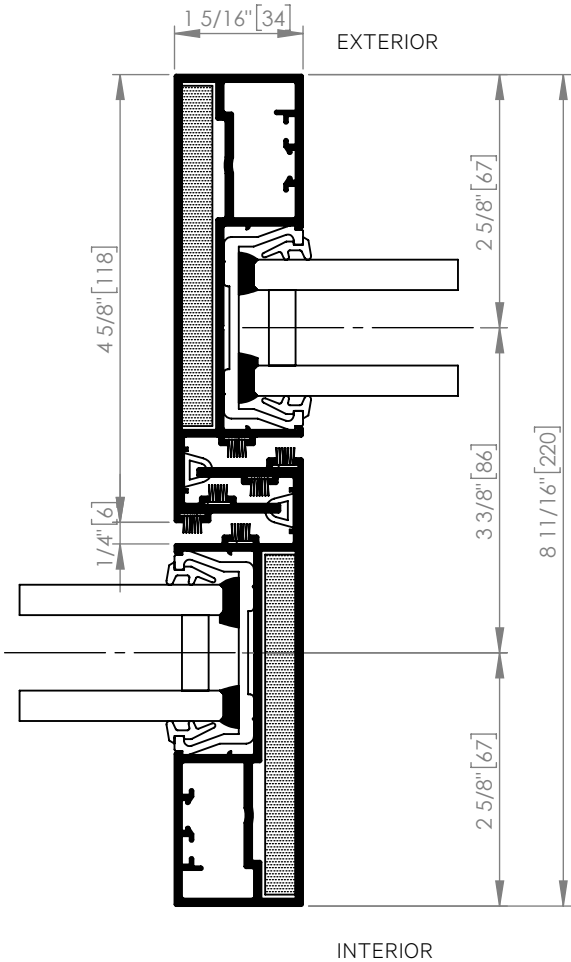


Detail 11.2
Interlock Sliding Panels with
Reduced Circle of Sight and
Handle and Reinforcement



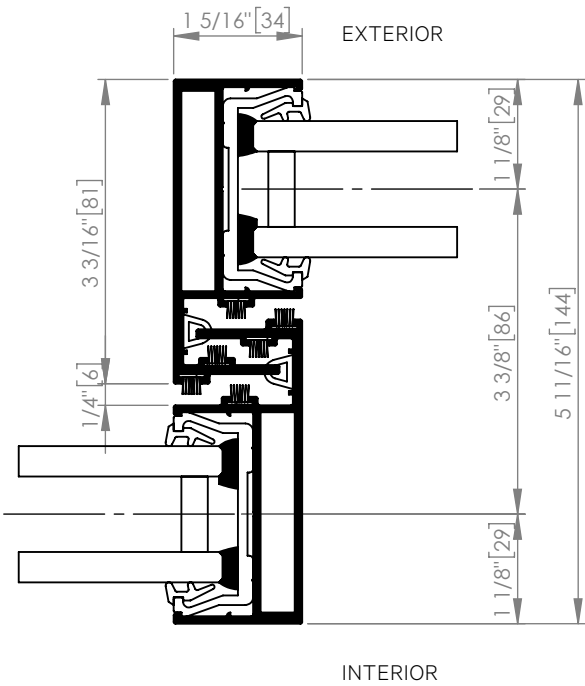
Detail 11.4
Interlock Sliding Panels
with Reduced Circle of
Sight and Reinforcement

Horizontal Cross Section Details For 1, 2, 3 Track and Special Configurations



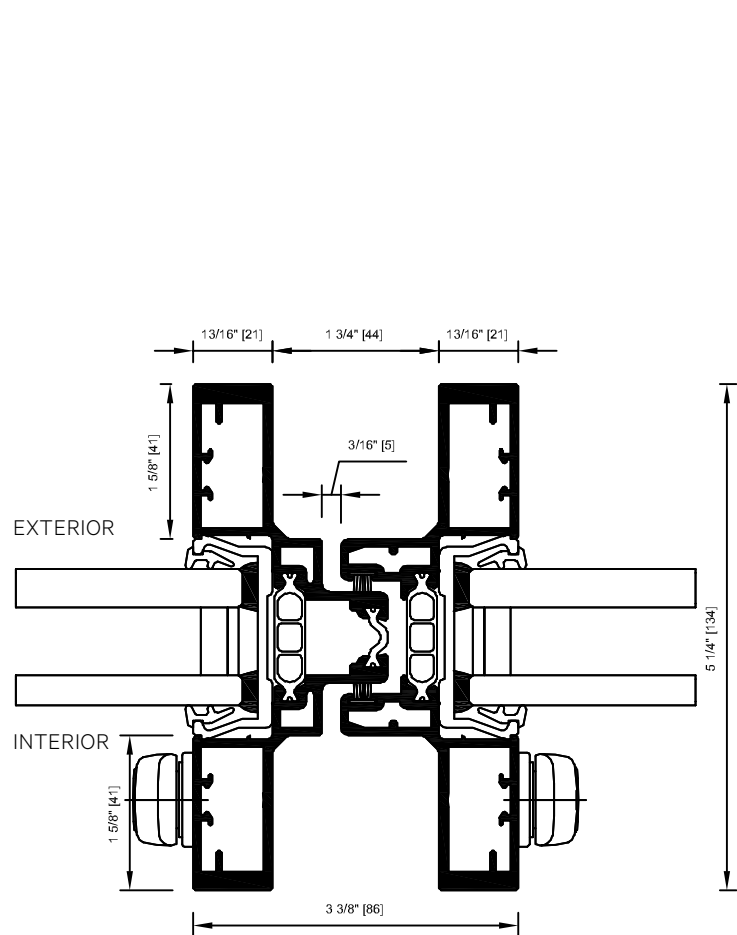
Detail 11.4
Interlock Sliding Panels
with Double Lock Stile
and Reinforcements

Horizontal Cross Section Details For 1, 2, 3 Track and Special Configurations

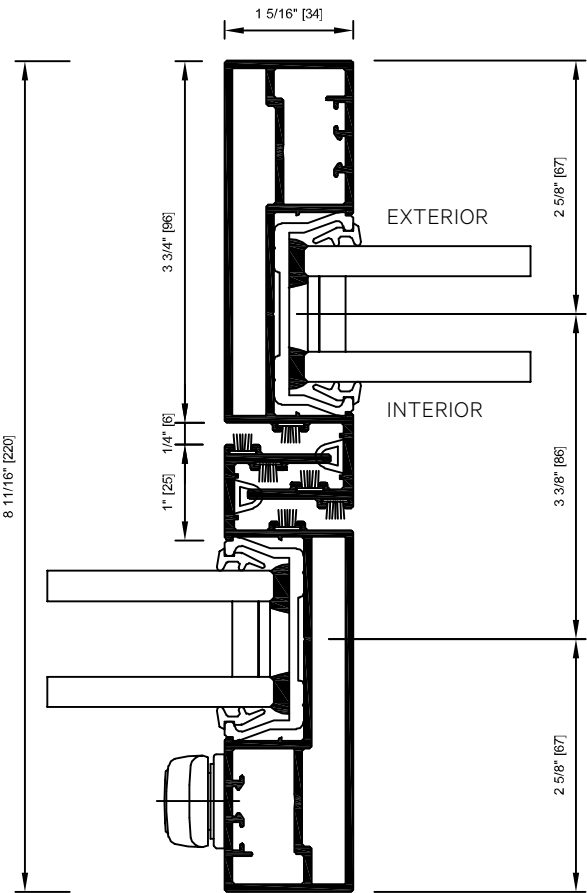


Detail 11.4
Interlock Sliding Panels for
Interior Applications Only

Horizontal Cross Section Details For 1, 2, 3 Track and Special Configurations

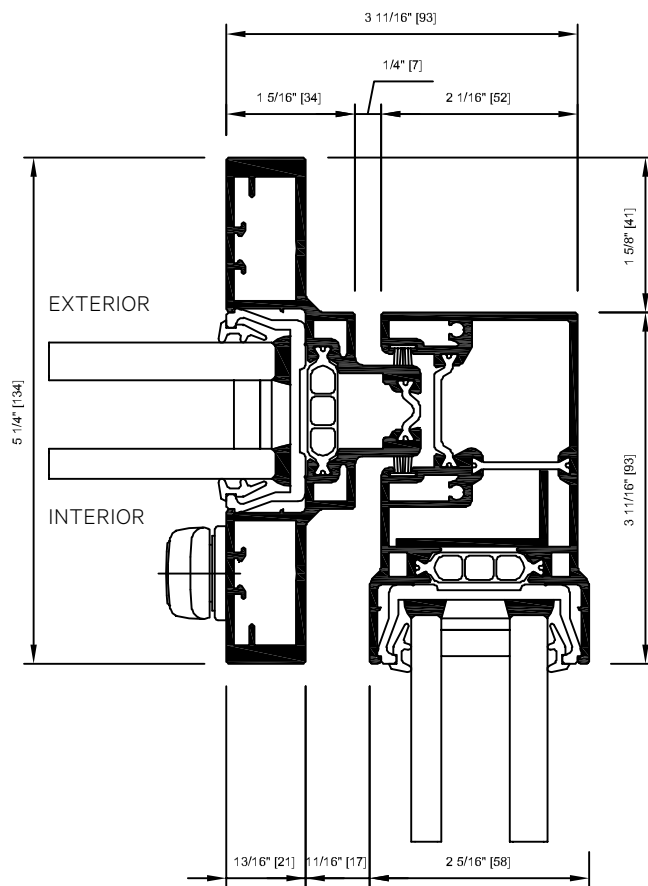


Detail 14.0
Male/Female Sliding Panels with
Double Lock Stile and Handle

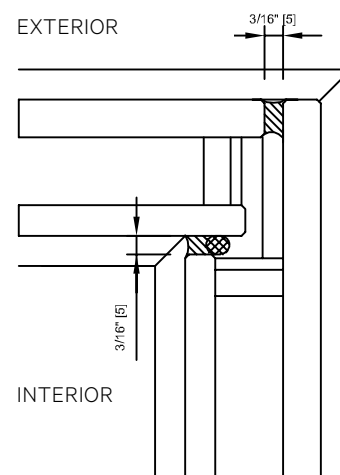


Detail 14.2
Reversed Interlock Sliding Panels
with Double Lock Stile and Handle

Horizontal Cross Section Details For 1, 2, 3 Track and Special Configurations

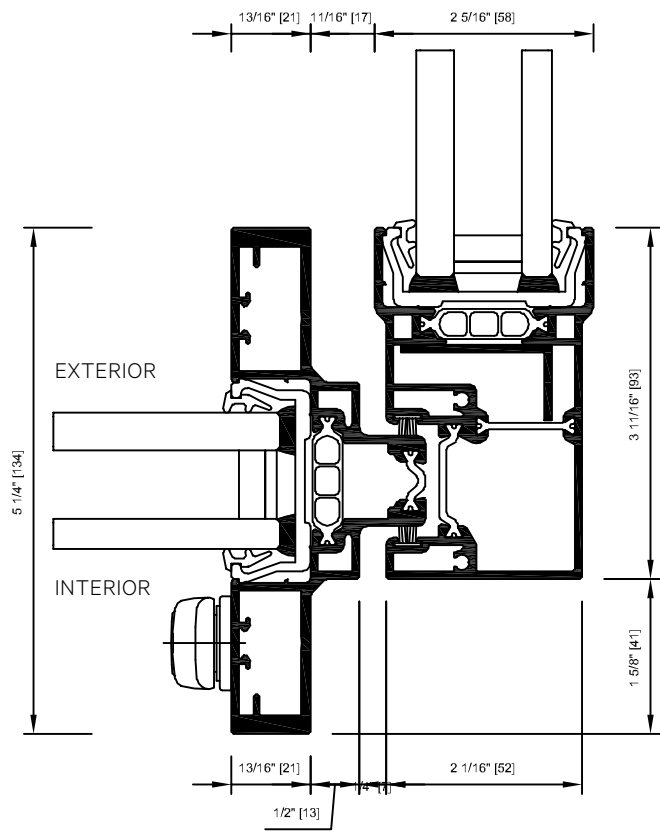
**Detail 33.0**

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

**Detail 33.2**

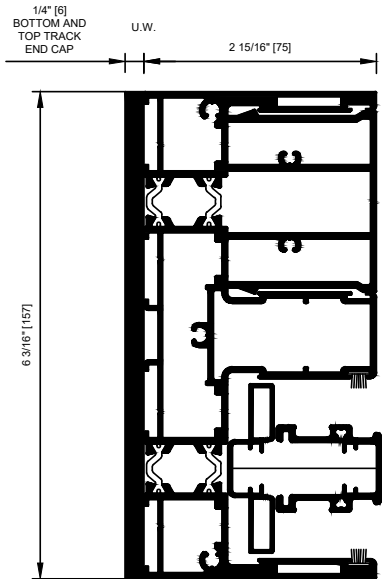
Fixed Glass Outside
90° Corner

Horizontal Cross Section Details For 1, 2, 3 Track and Special Configurations

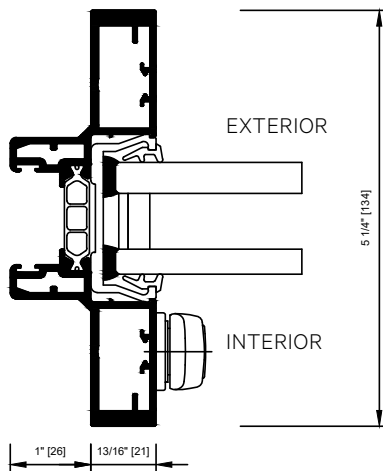
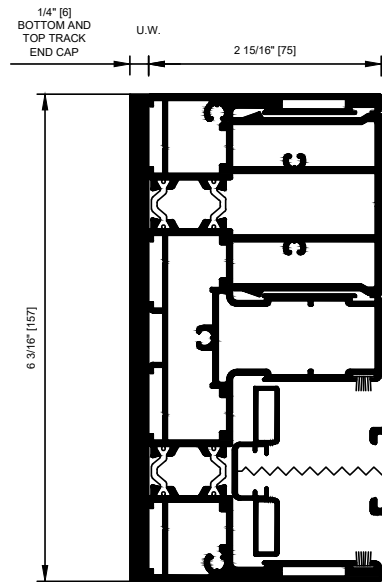
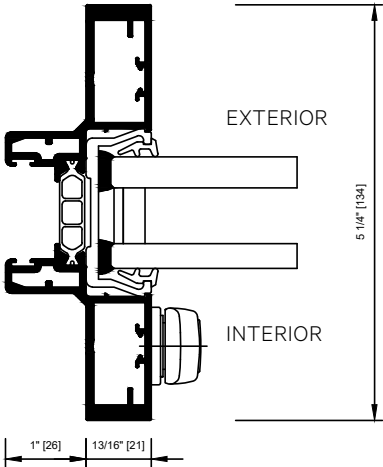


Detail 33.3
Male/Female Sliding Panels at
Inside 90° Corner with Double
Lock Stile and Handle

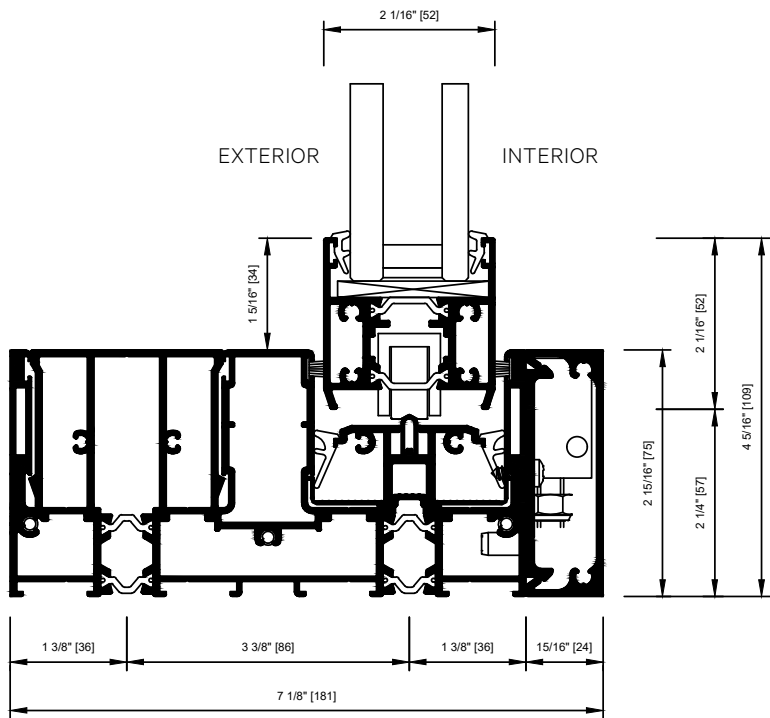
Insect Screen



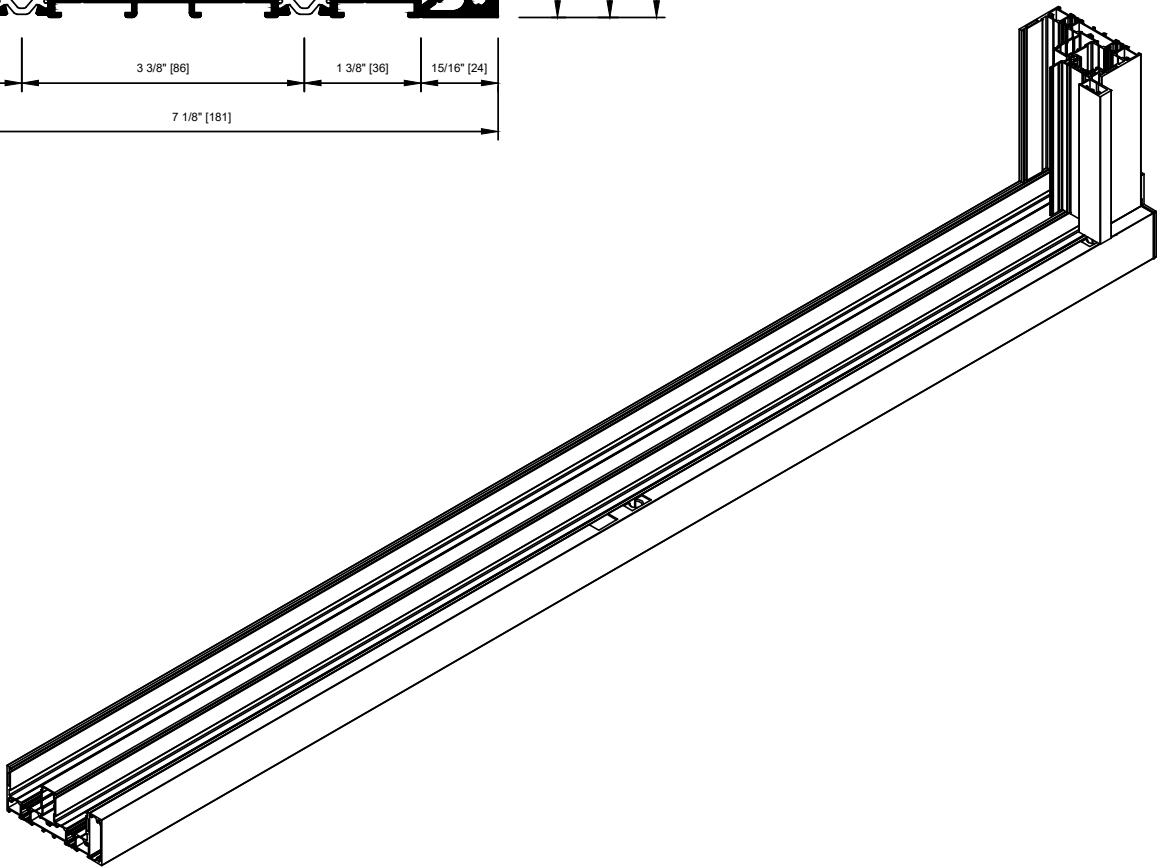
Detail 6.20
Side Jamb with Sliding Panel
and Double Locking Stile with
Handle and Pleated Screen



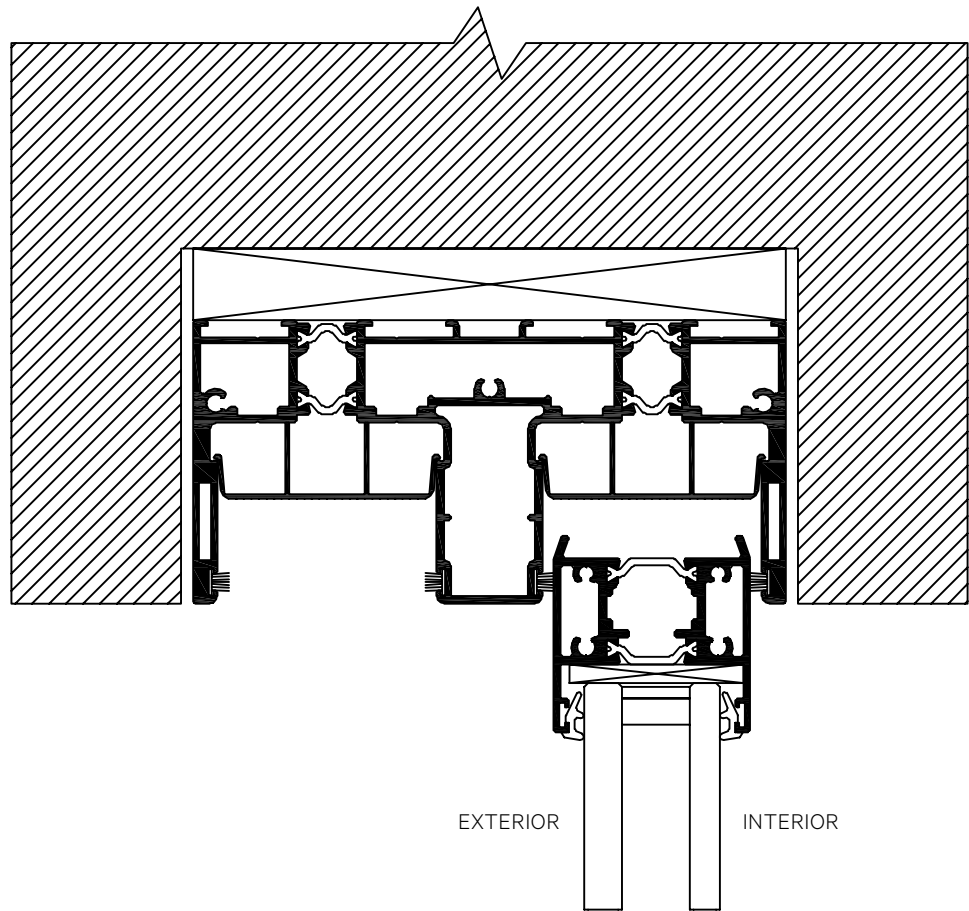
Locking Receiver Cover Profile



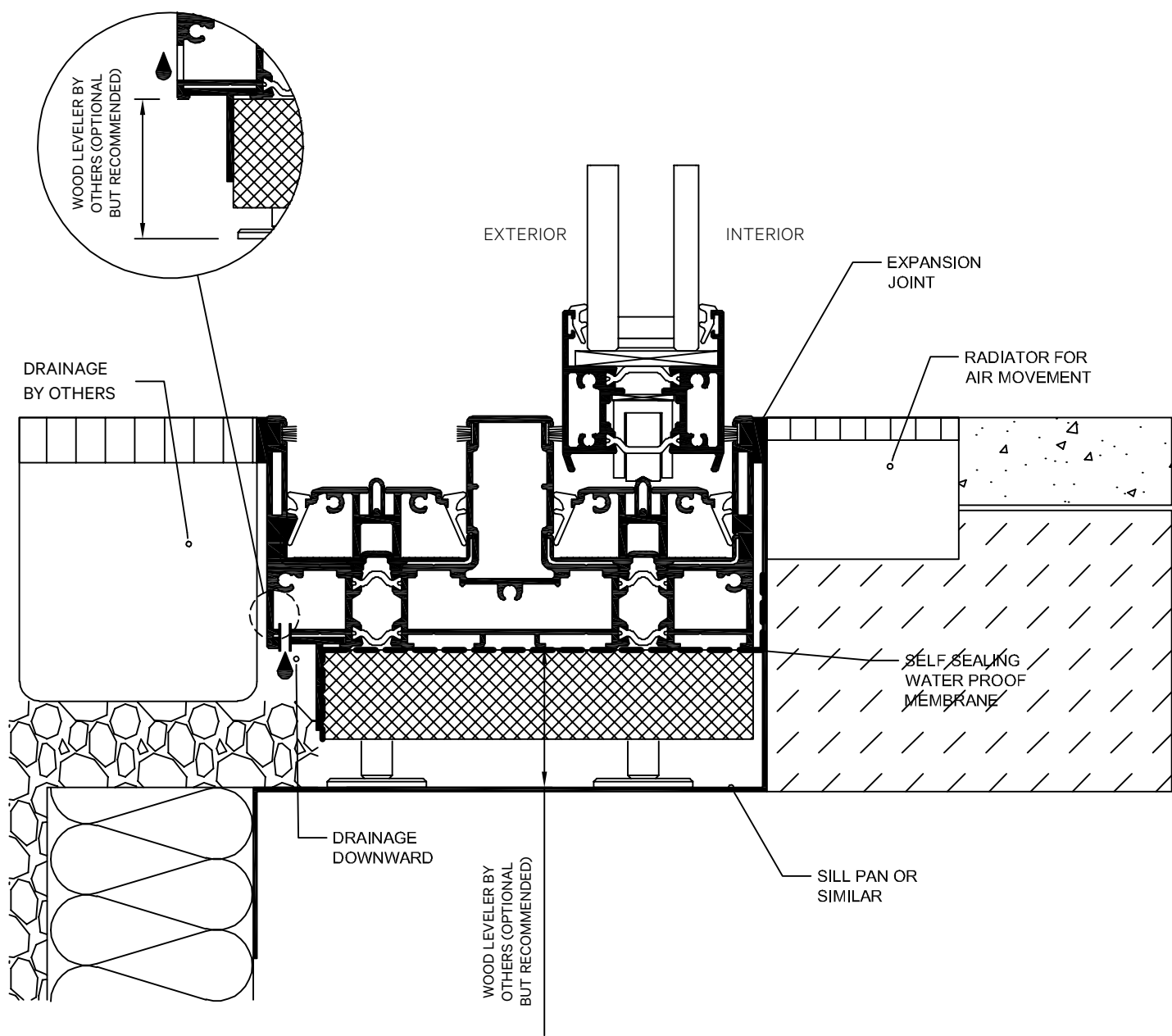
Detail 2.21
Locking Receiver Cover Profile



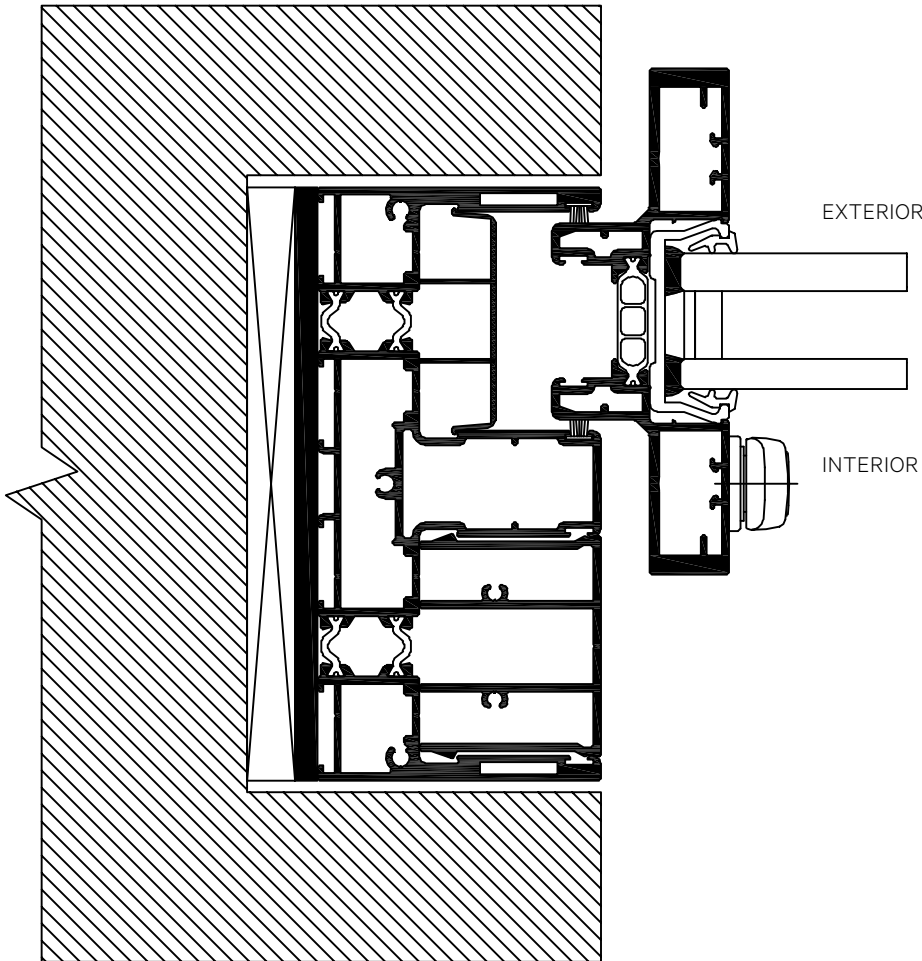
Recessed Head Track

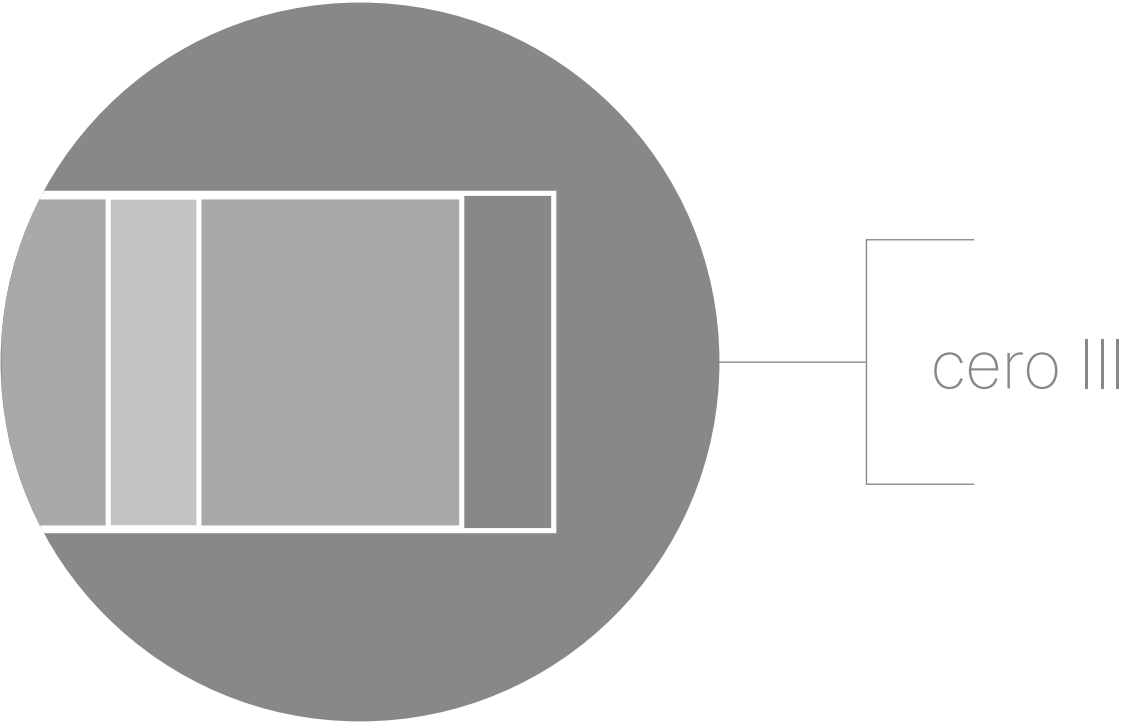


Recessed Performance Sill



Recessed Side Jamb





Testing Results | cero III

Maximum Unit Panel Width: 9' 10" (3000 mm)
 Maximum Unit Panel Height: 15' (4550 mm)
 Maximum Unit Panel Weight: 2,200 lbs. (1,000 kg)

TYPE OF TEST	PERFORMANCE SILL ^①	
 Air Infiltration/Exfiltration (ASTM E283)	@ 1.57 psf 0.05/0.04 cfm/ft² A3 ^②	
 Water Penetration * (ASTM E547 and E331)	@ 12 psf (600 Pa) @ 8 psf (400 Pa) ^②	
 Structural Load Deflection ** (ASTM E330) (See design windload charts)	Standard Unit +/-40 psf (1920 Pa) Pass L/175 Requirement Class CW - PG40 - SD unit size tested: 23' 1" x 10' 2" 4 panel unit Florida Product Approval #: FL35024.2	Reinforced Unit +80 psf (3840 Pa) /-73 psf (1920 Pa) Pass L/175 Requirement Class CW - PG75 - SD unit size tested: 23' 1" x 10' 2" 4 panel unit Florida Product Approval #: FL35024.1
 Forced Entry Resistance (ASTM F842)	Standard Locking Mechanism Type: A - Grade: 10 pass 2 x 1591U EMLock Type: A - Grade: 30 with 850 lb. pull pass	
 Operating Force (ASTM E2068)	Initiate Motion: 60 N (13.2 lbf) Maintain Motion: 20 N (4.4 lbf)	
 Cycle Testing (per DIN EN 1191/12400)	40,000 cycles	

^① Excerpts of results specific or equivalent to lab tested by Intertek Building & Construction, an independent testing laboratory per AAMA/WDMA/CSA 101/LS.2/A440-11, NAFS-11 - North American Fenestration Standard; unit size tested: 23' 1" x 10' 2" (7047 mm x 3122 mm) 4 panel unit.

^② For Canada, tested to NAFS-17 or equivalent and CSA A44051-09.

* Water rating may not be applicable for configuration not tested, especially 2 sliding panels meeting on the same track with wider interlock stile.

** Structural loads for reinforced units will not apply to 2 panels meeting on the same track with wider interlock stile.

Thermal Performance cero III



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

Thermal Performance

		cero III with 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

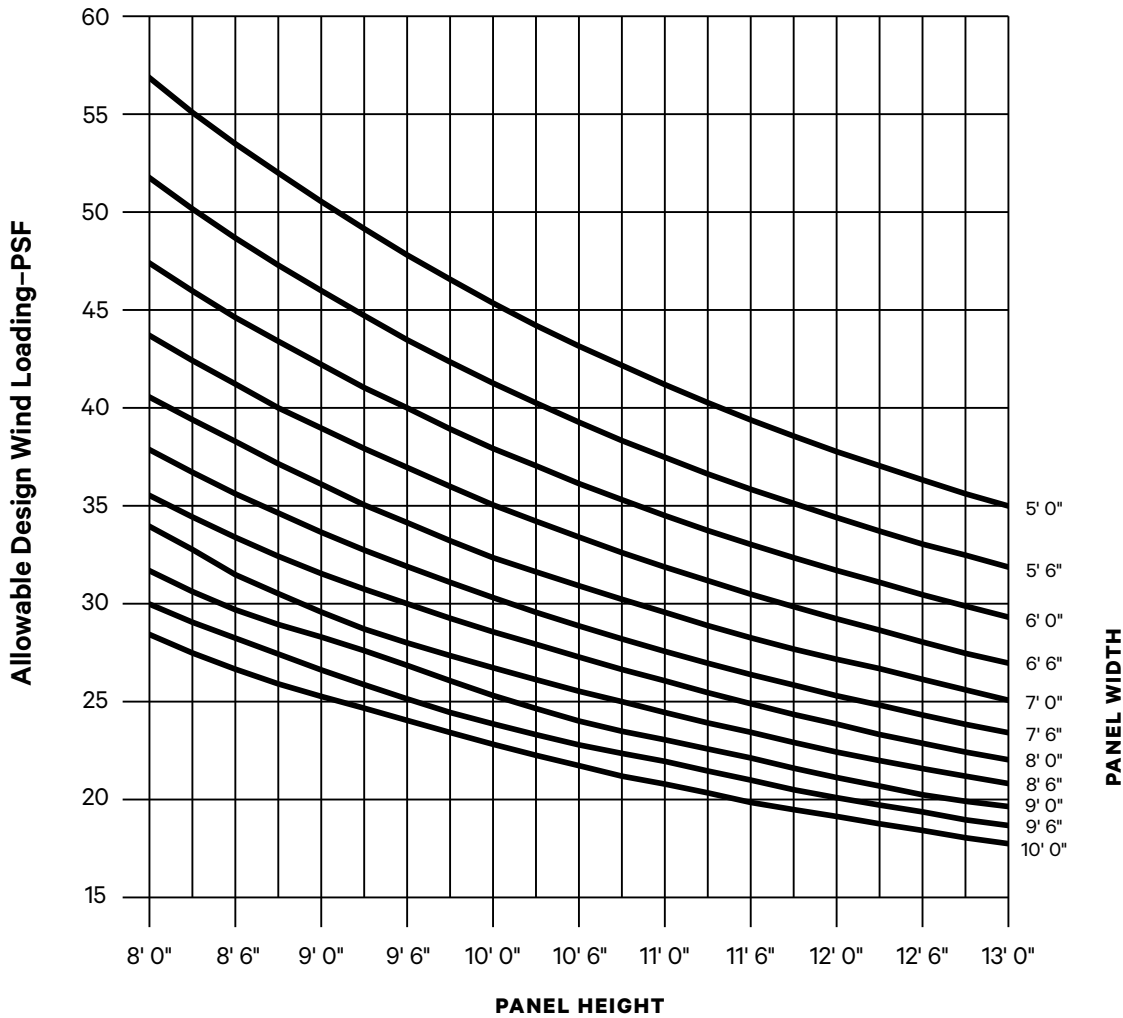
* 2015 Energy Star Qualification Criteria: U-Factor for doors in all climate zones ≤ 30 , SHGC ≤ 25 in South/South Central zones and ≤ 40 in North/North Central zones. (For guidance only. NanaWall is not a participant of the Energy Star program.)

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.

Design Windload Chart | cero III

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

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



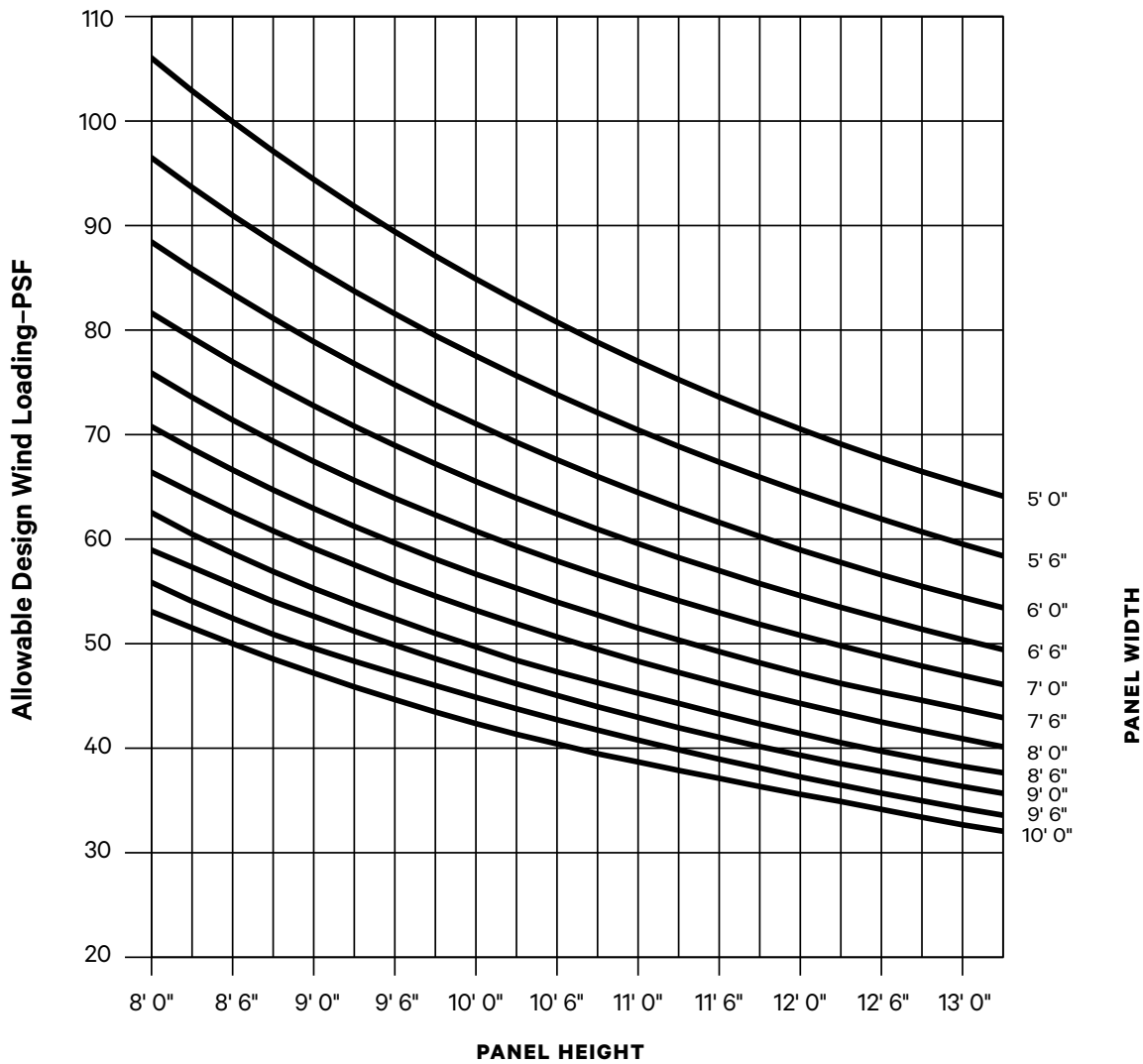
Any custom size is possible. See Maximum Frame Size Limits for maximum possible sizes.

(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 water infiltration rating or L/175 deflection restrictions 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 Performance Sill**
(In Accordance with Allowable Stress Design (ASD) Design Pressures*)

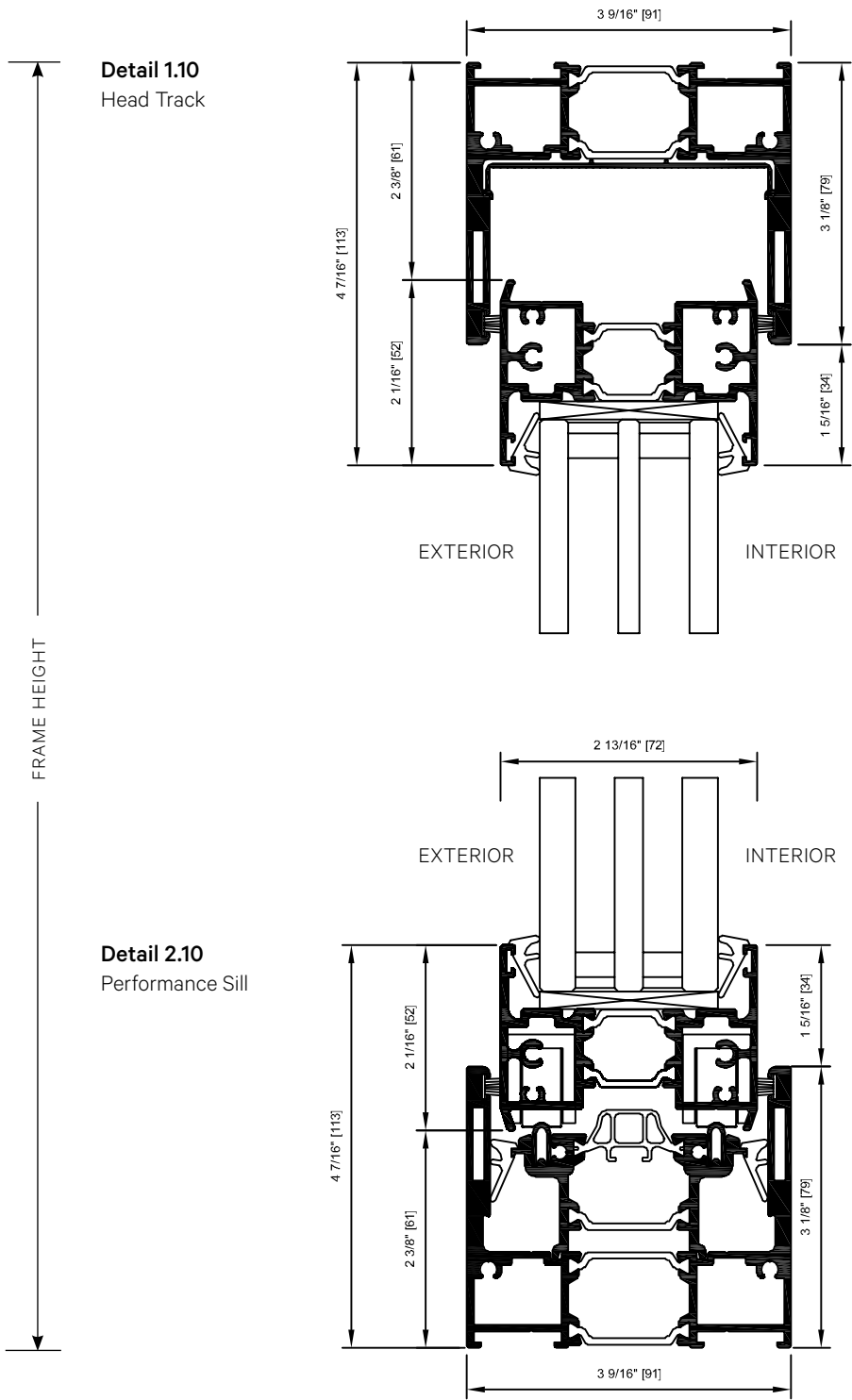


Any custom size is possible. See Maximum Frame Size Limits for maximum possible sizes.

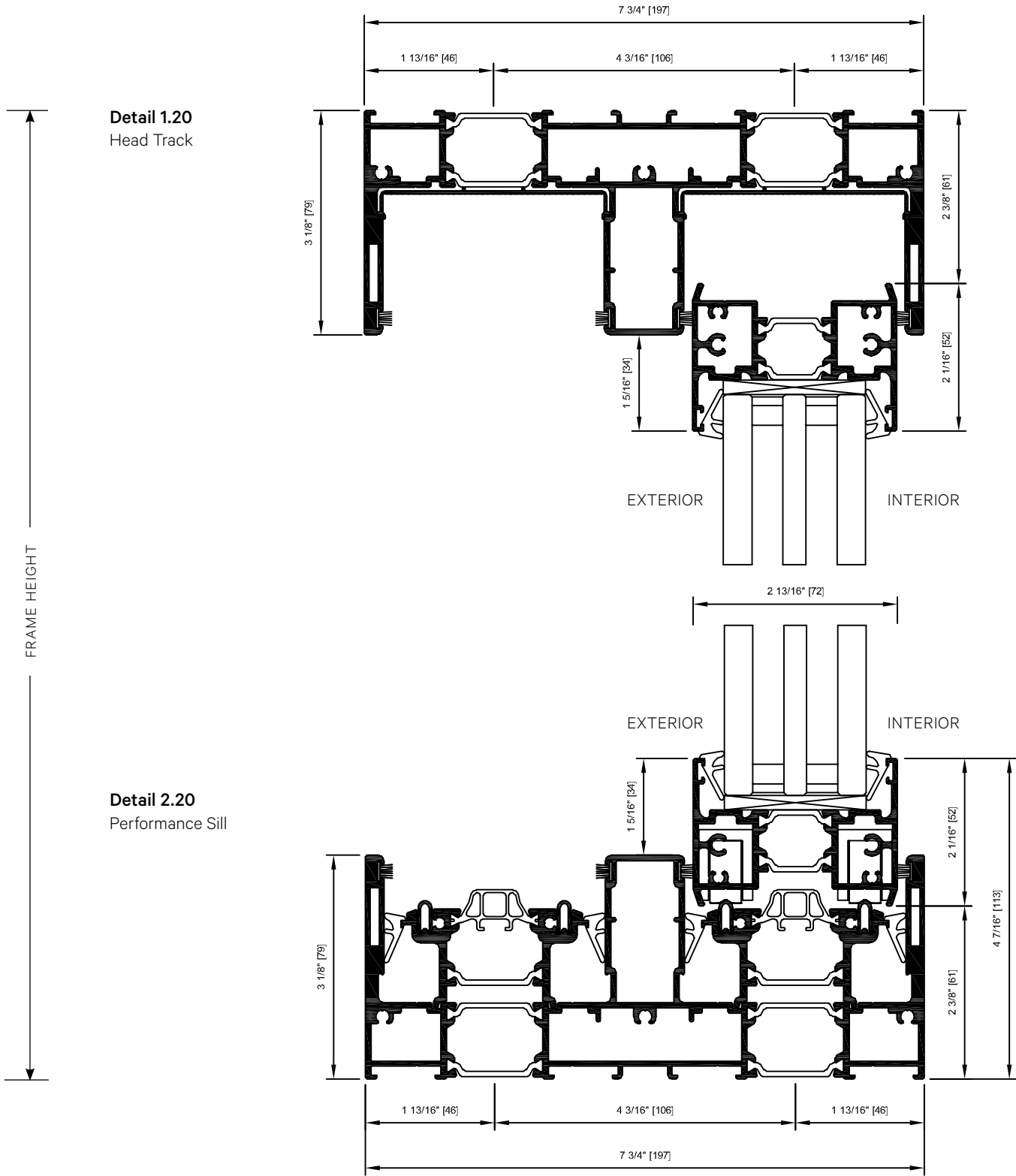
(Derived from Comparative Analysis) Test Panel Size: 5' 9 7/16" x 9' 10 7/16".
Please note that some jurisdictions may limit the use of these charts or may not accept them at all. Design pressures and/or sizes may be restricted to what was tested. For Florida approved products, please see detailed FL Evaluation Report for restrictions. This chart is only applicable for units with referenced NanaWall supplied locking and tempered glass. Note that any water infiltration rating or L/175 deflection restrictions 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.

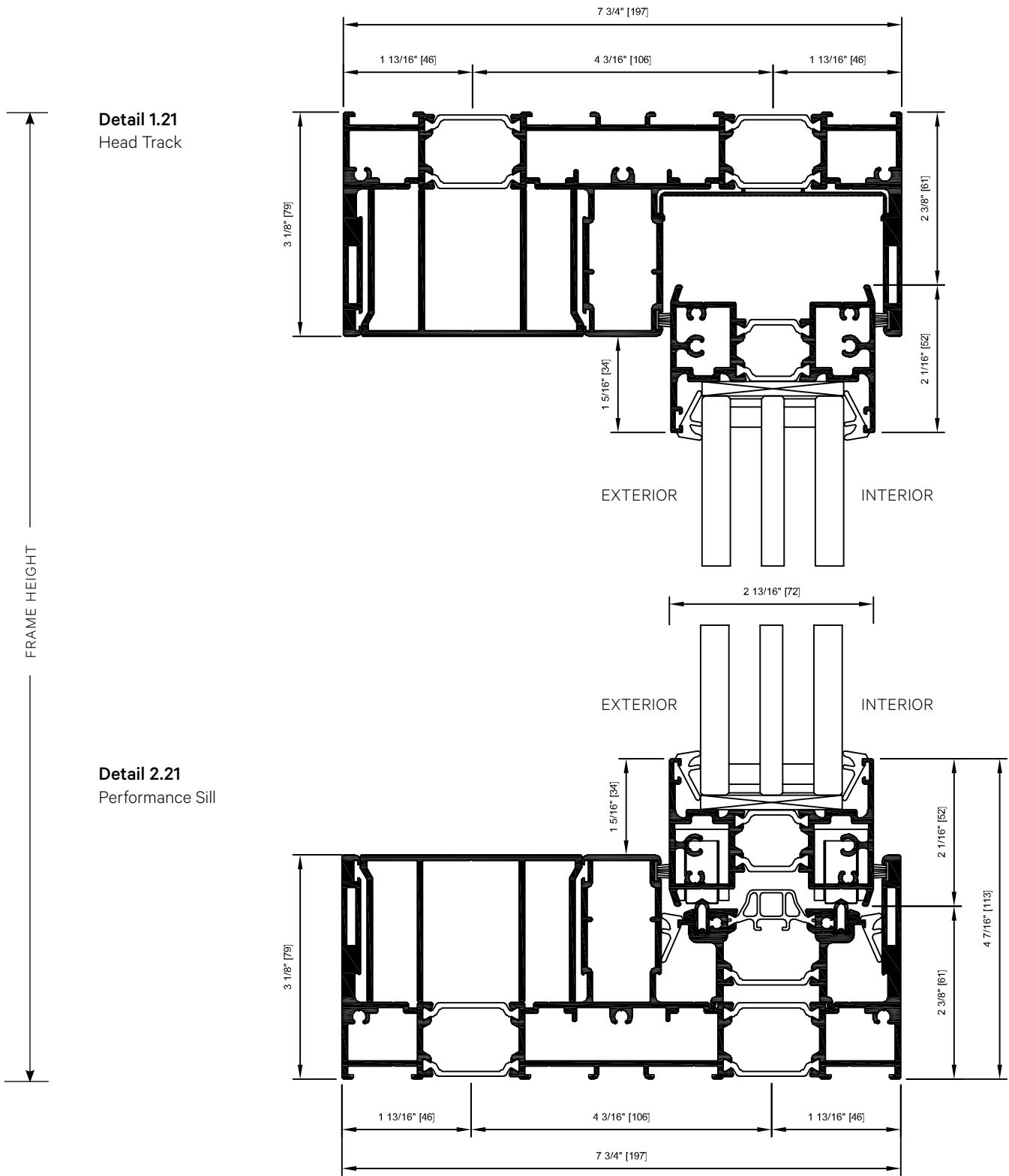
1 Track Configurations Details



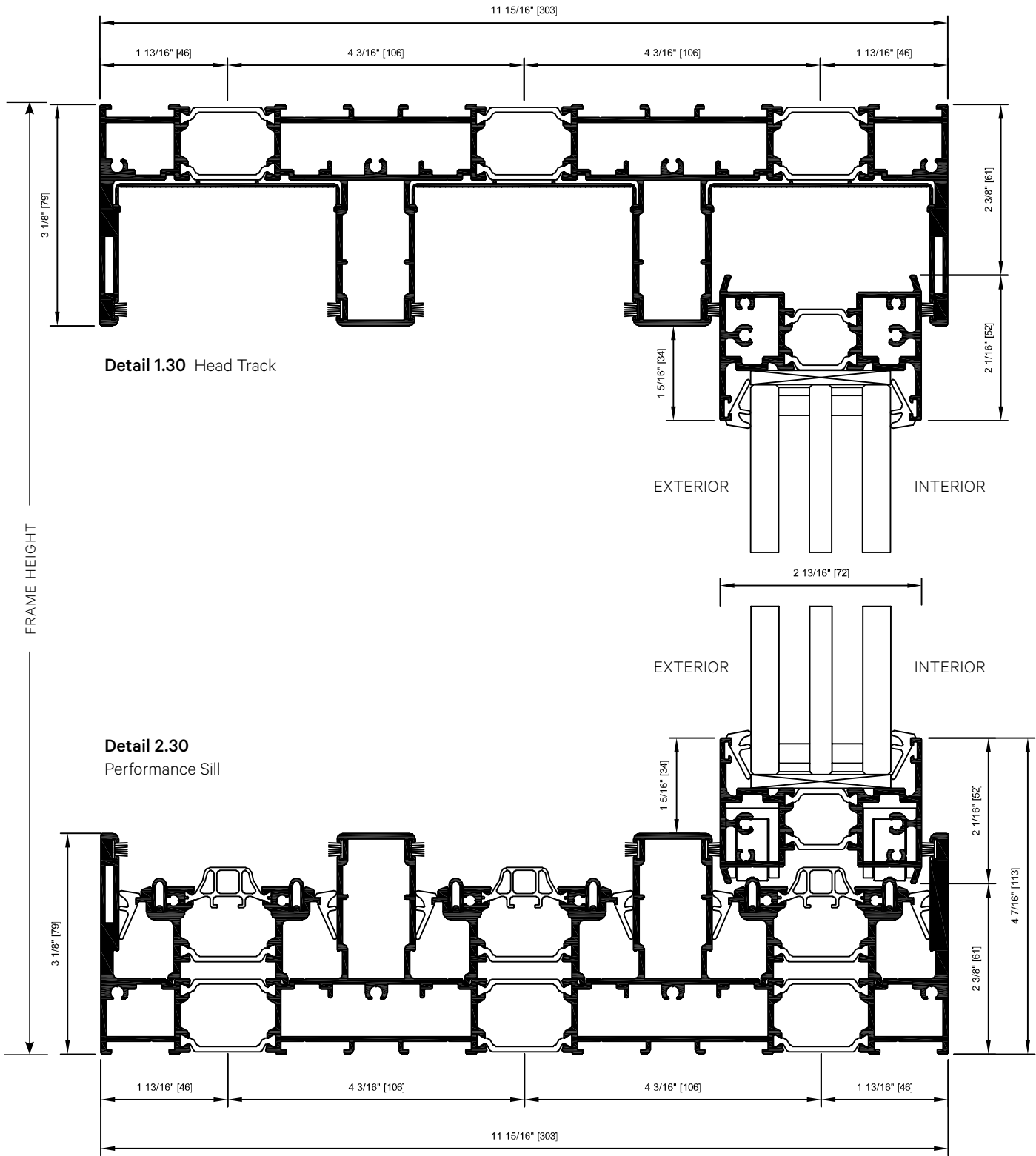
2 Track Configurations Details (Including Special Configurations)



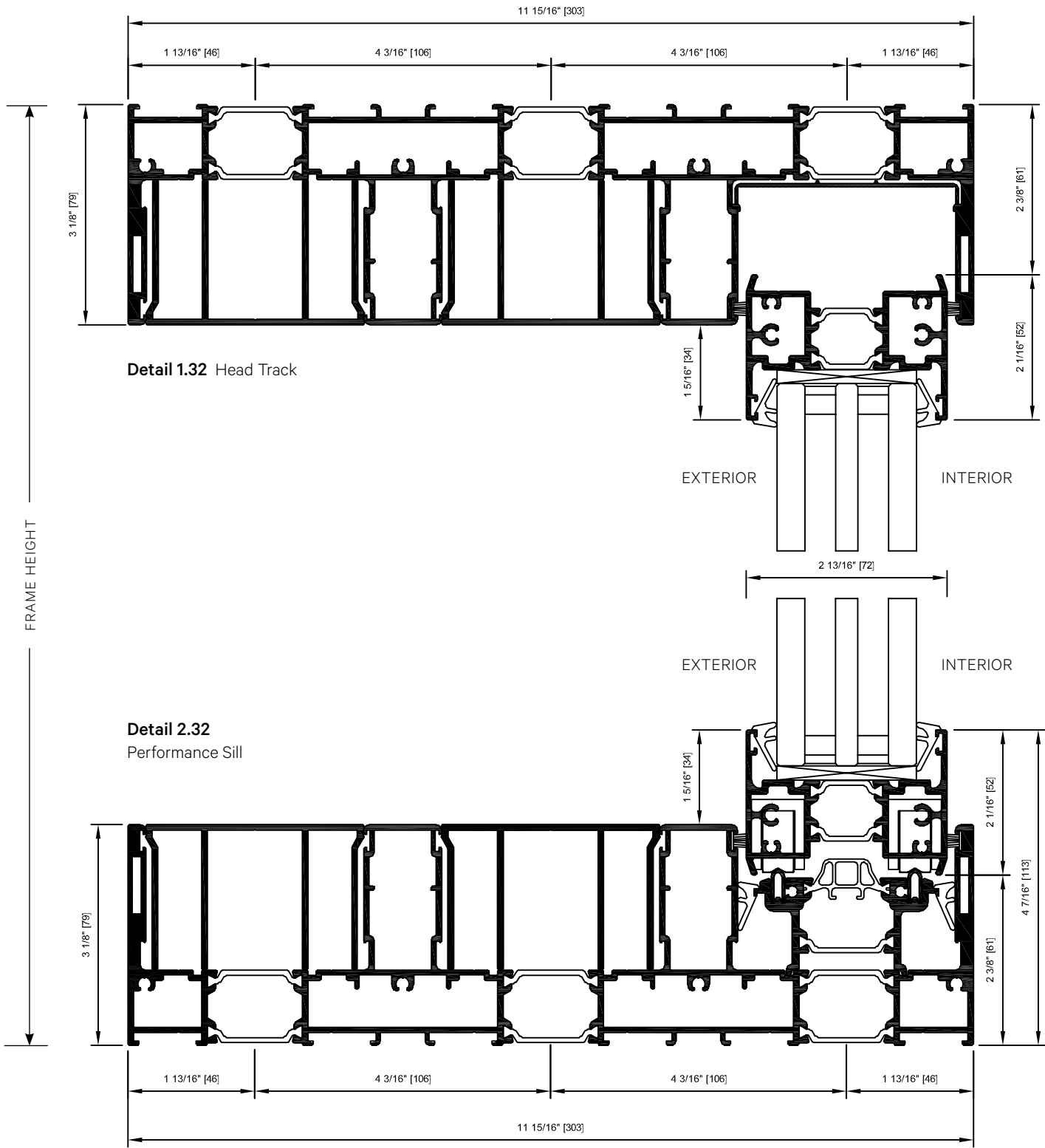
2 Track Configurations Details (Including Special Configurations)



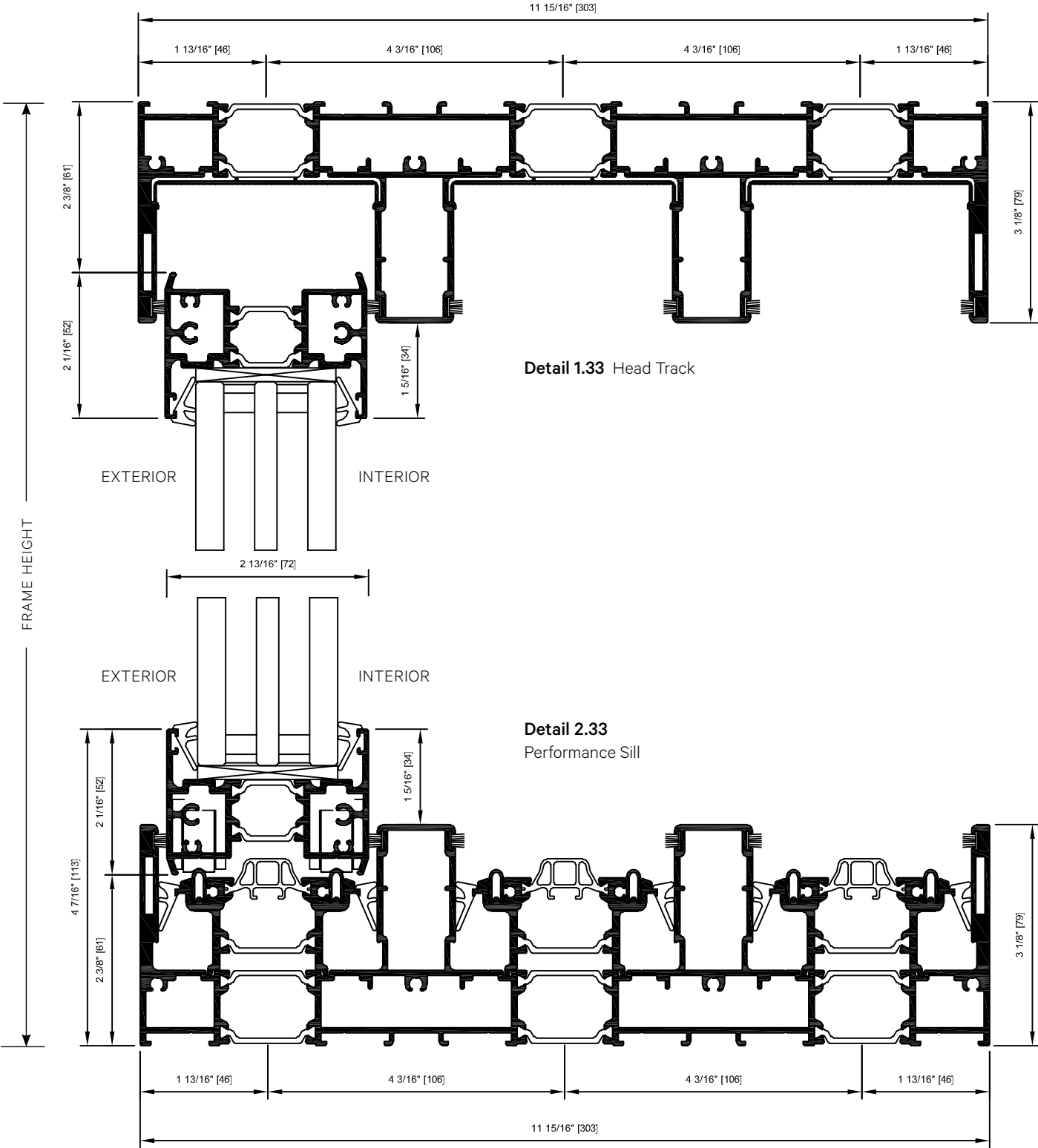
3 Track Configurations Details (Including Special Configurations)



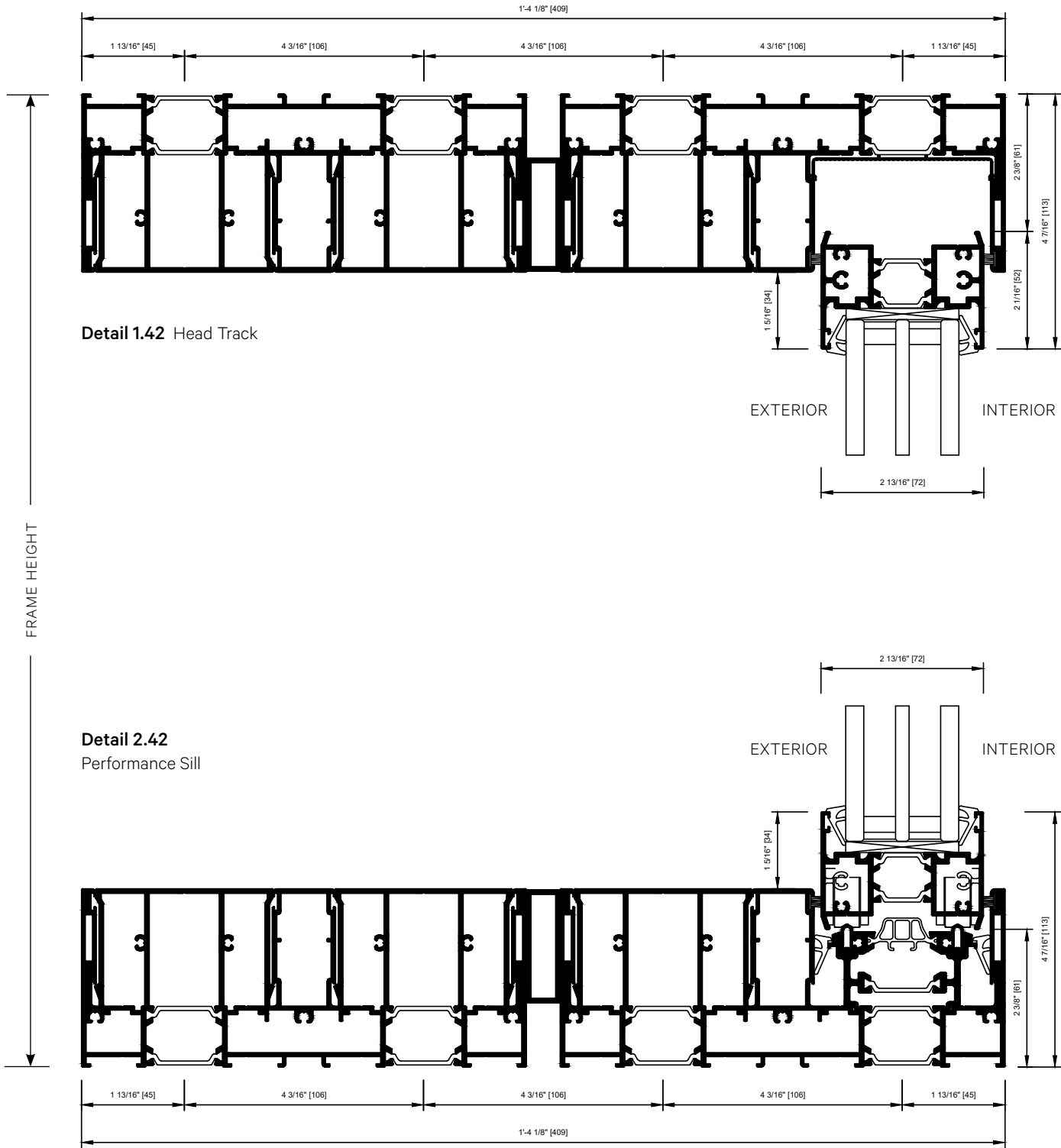
3 Track Configurations Details (Including Special Configurations)



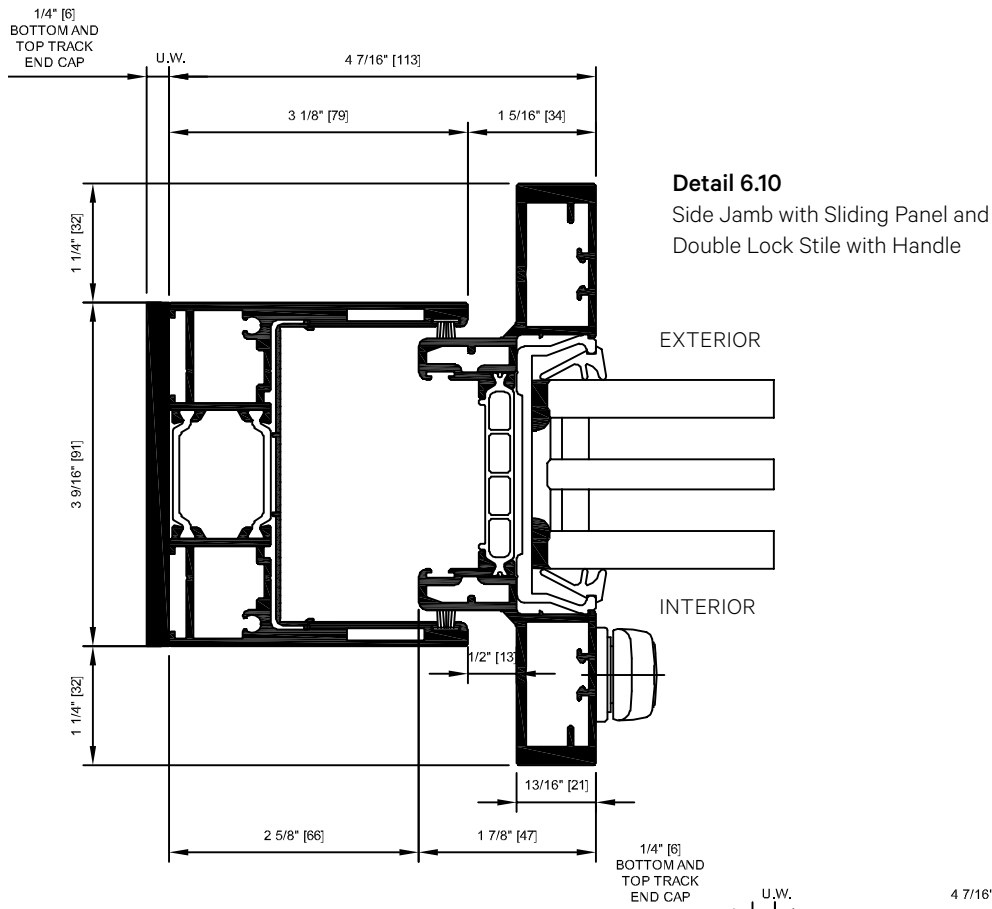
3 Track Configurations Details (Including Special Configurations)



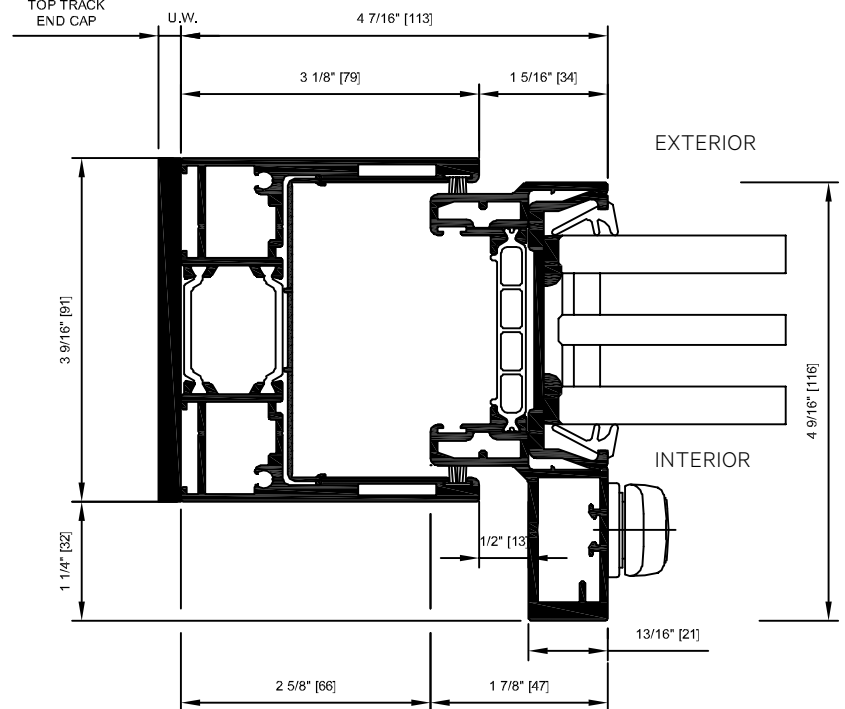
4 Track Configurations Details (Including Special Configurations)



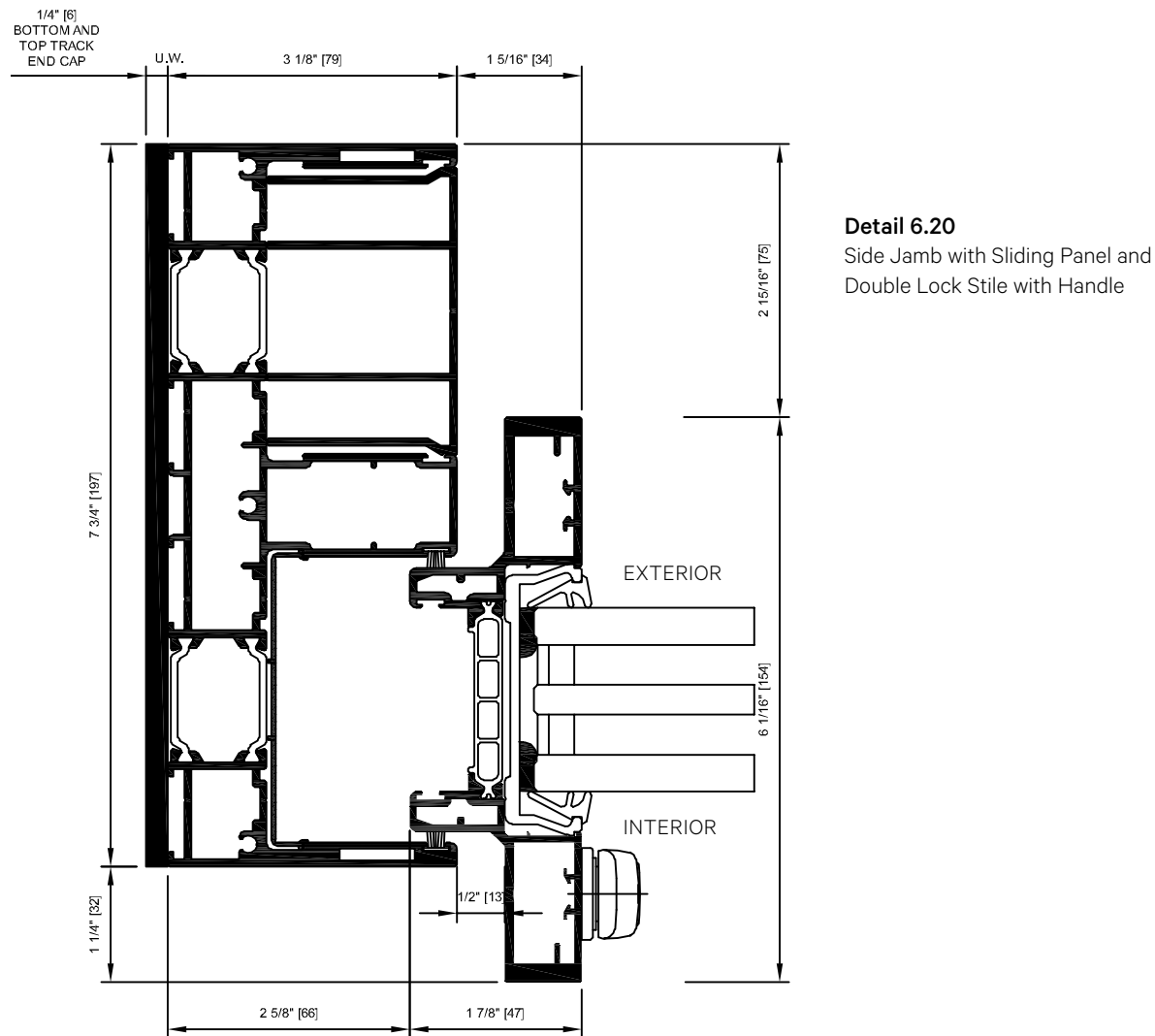
Horizontal Cross Section Details For 1 Track and Special Configurations



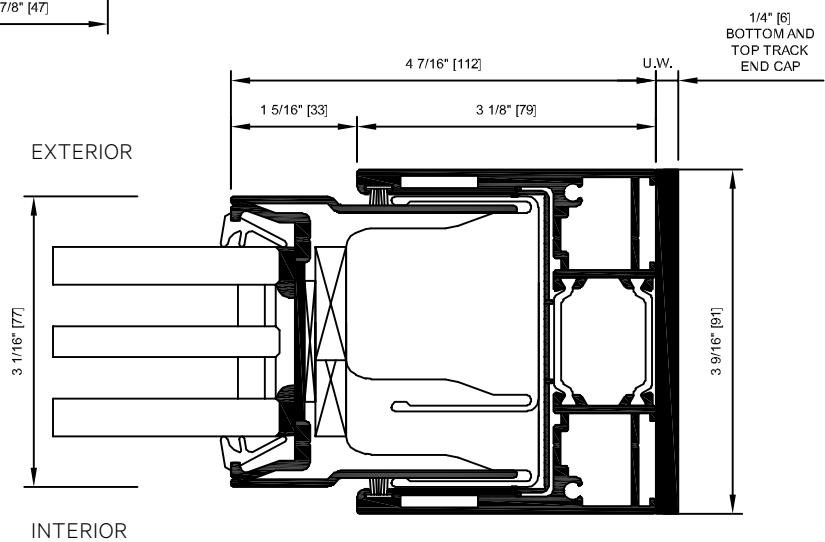
Detail 6.11
Side Jamb with Sliding Panel and Single Lock Stile with Handle



Horizontal Cross Section Details For 1, 2 Track and Special Configurations

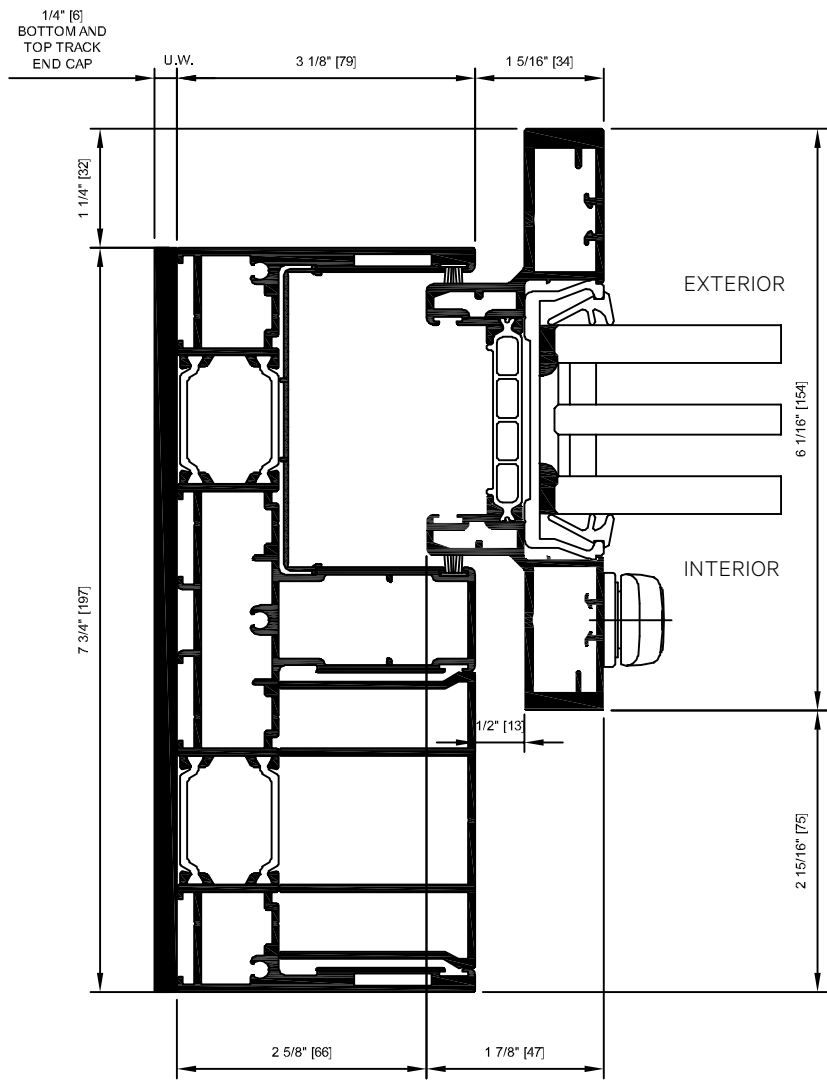


Detail 6.12
Side Jamb with Fixed Panel



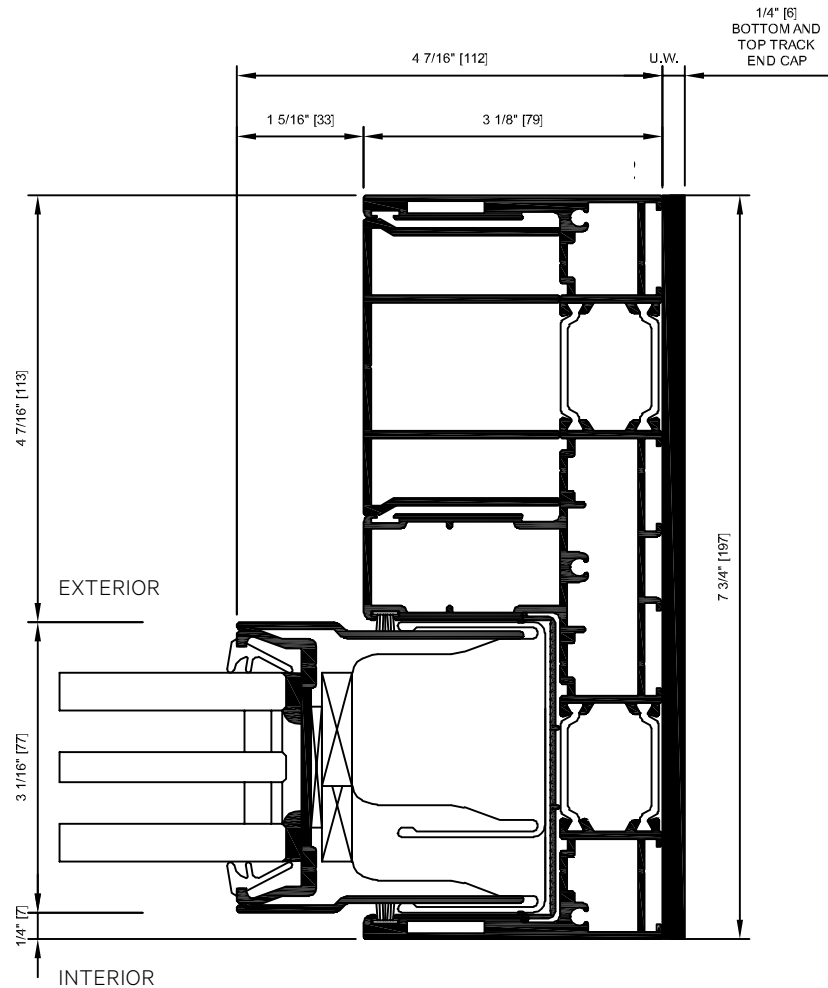
Horizontal Cross Section Details For 2 Track and Special Configurations

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



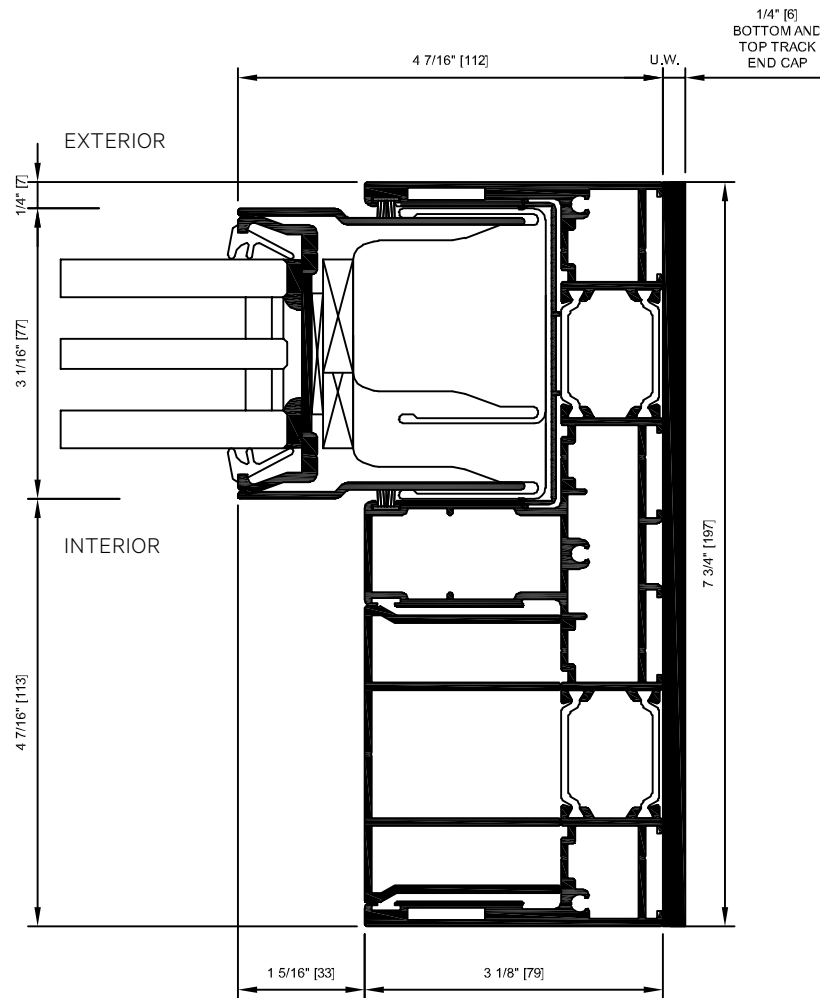
Horizontal Cross Section Details For 2 Track and Special Configurations

Detail 6.24
Side Jamb with Fixed Panel



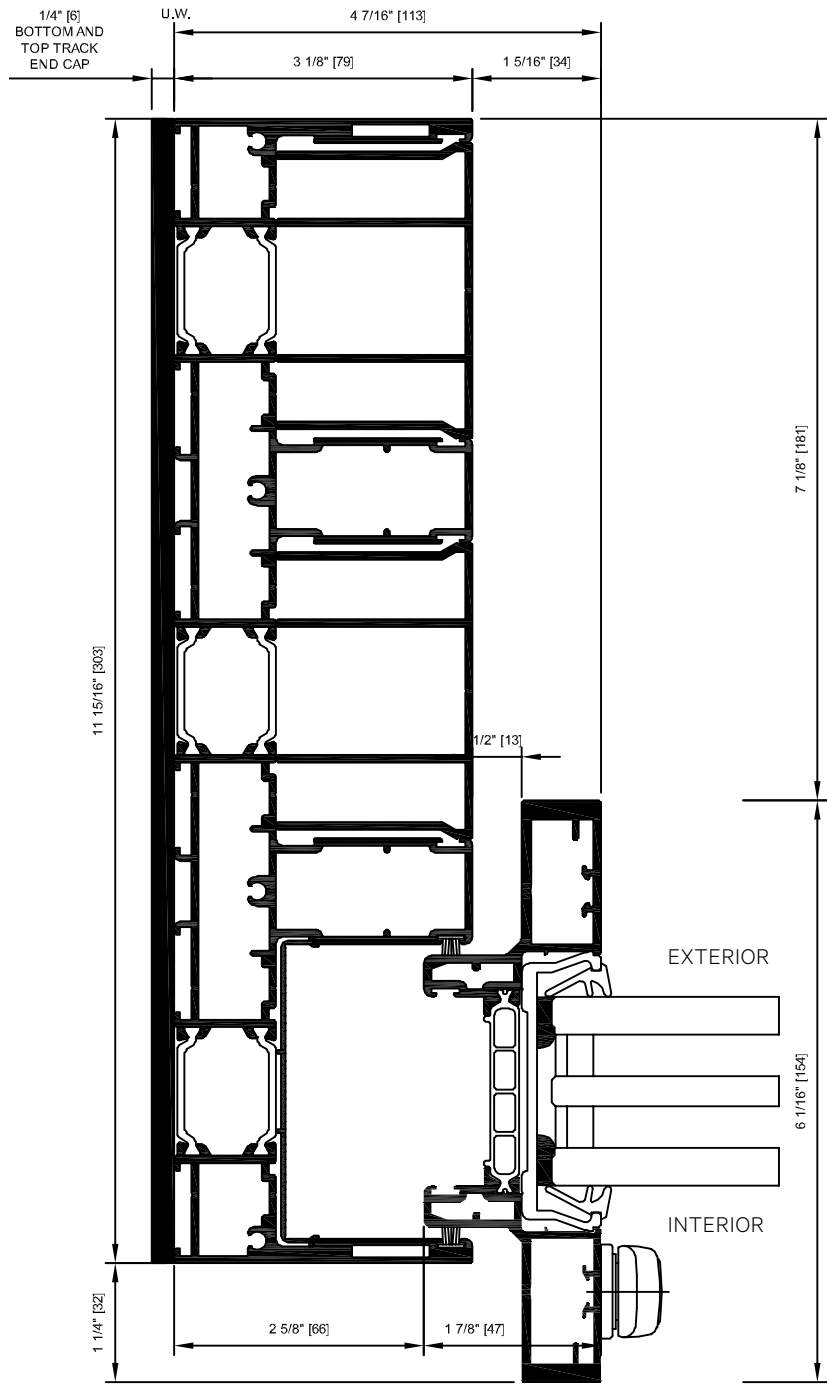
Horizontal Cross Section Details For 2 Track and Special Configurations

Detail 6.25
Side Jamb with Fixed Panel



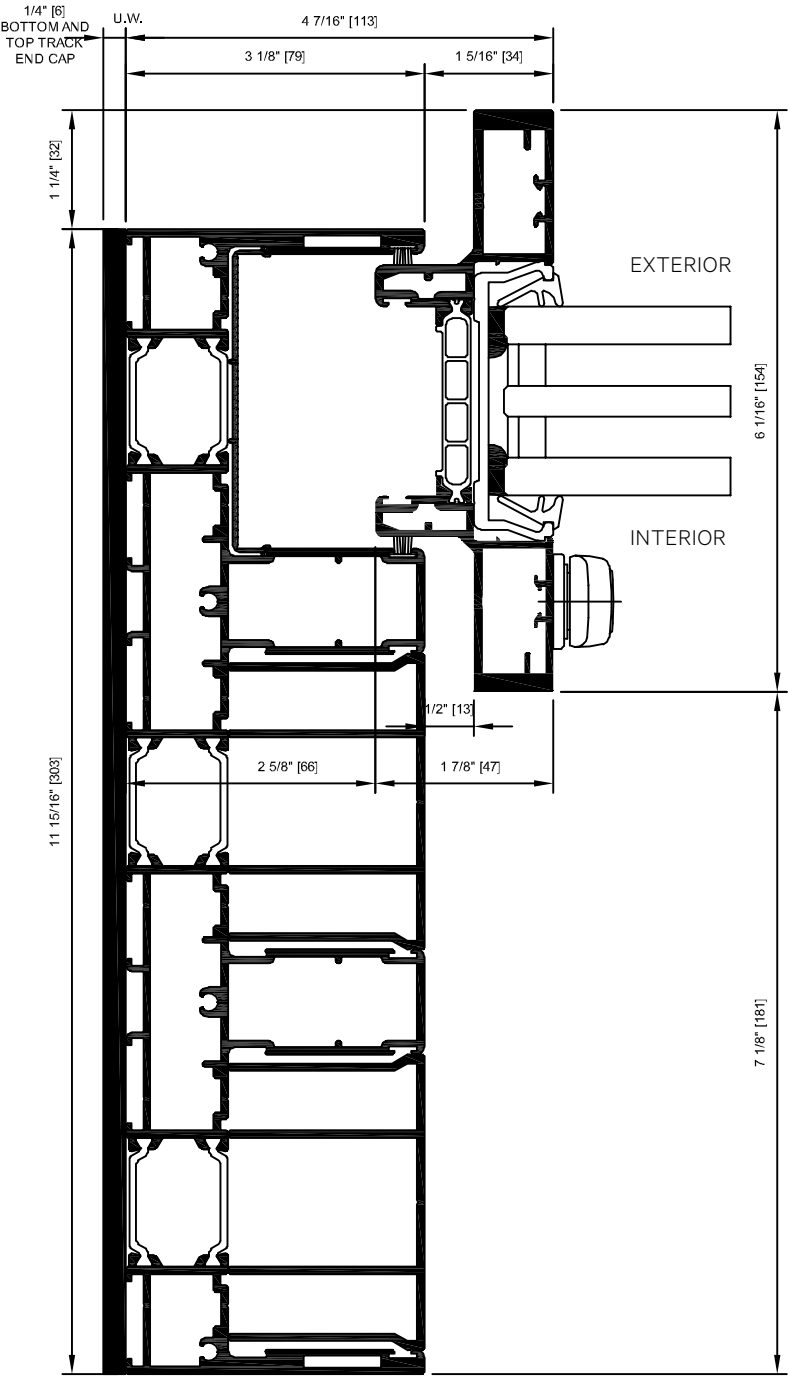
Horizontal Cross Section Details For 3 Track and Special Configurations

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



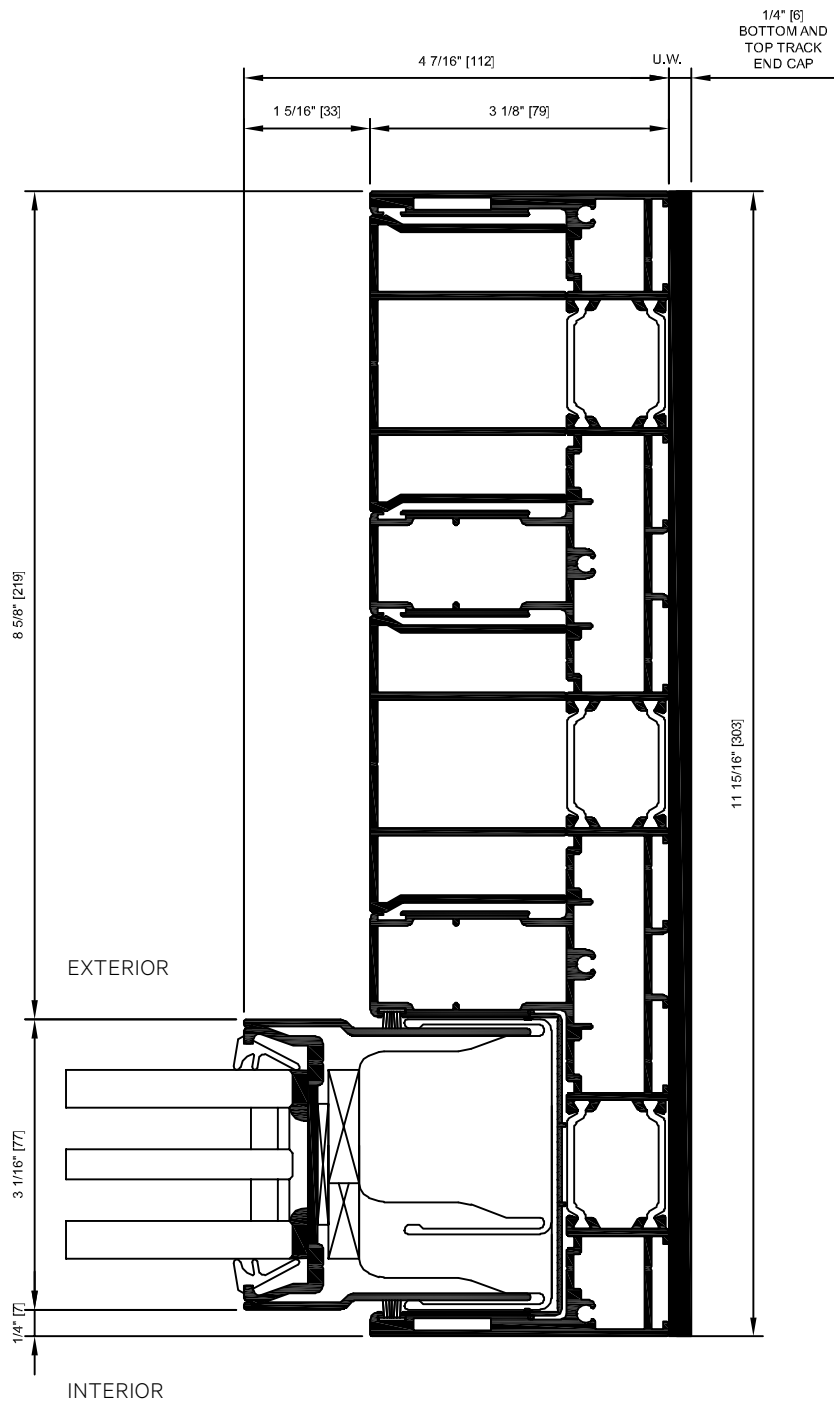
Horizontal Cross Section Details For 3 Track and Special Configurations

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



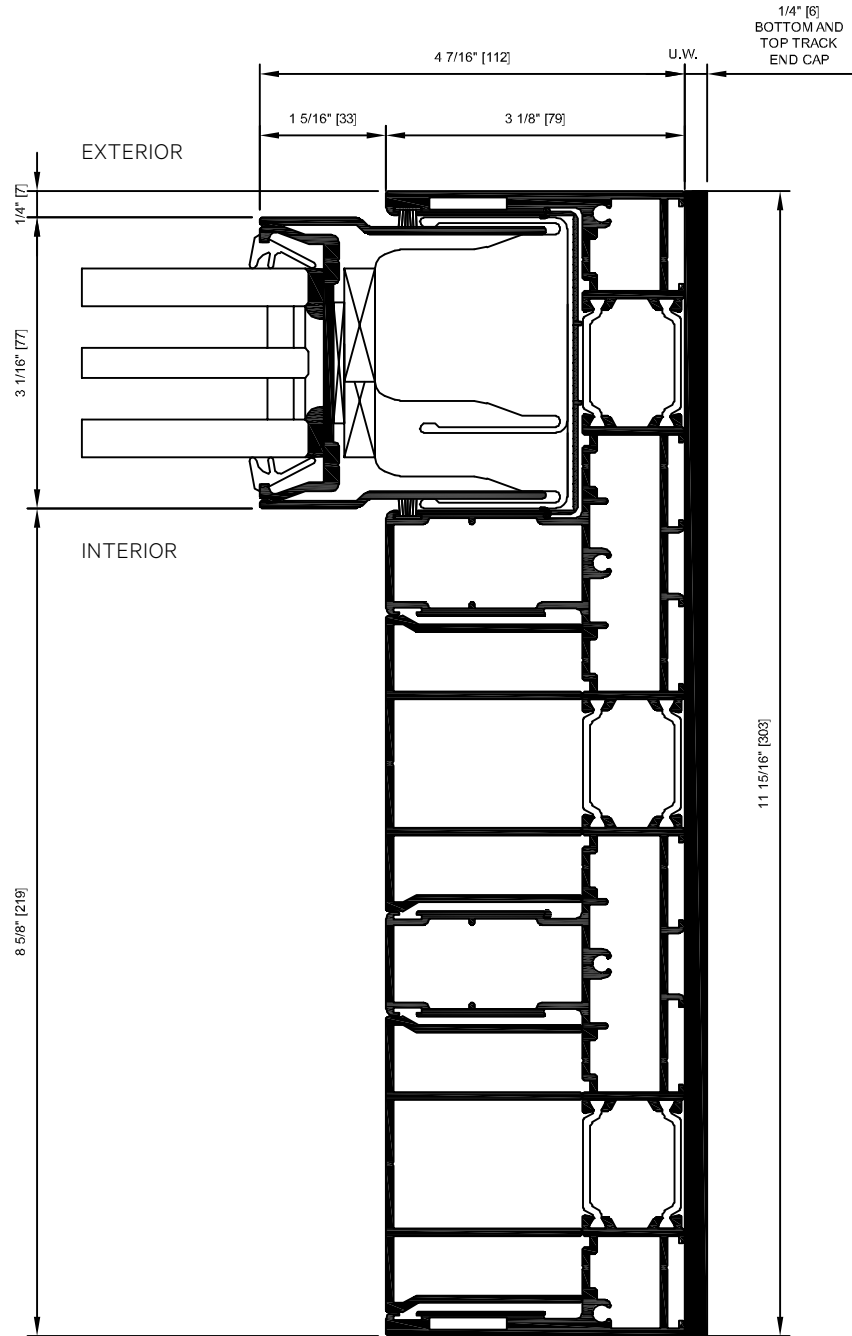
Horizontal Cross Section Details For 3 Track and Special Configurations

Detail 6.36
Side Jamb with Fixed Panel

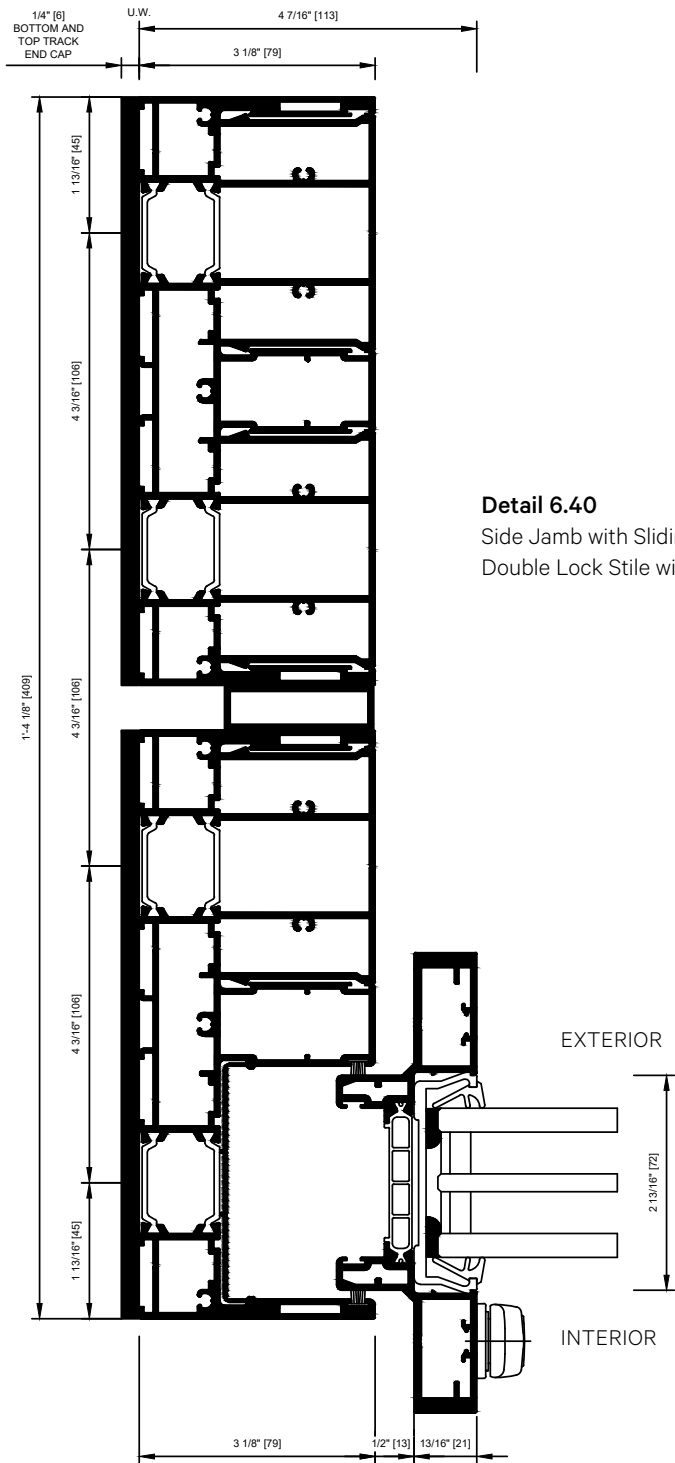


Horizontal Cross Section Details For 3 Track and Special Configurations

Detail 6.37
Side Jamb with Fixed Panel

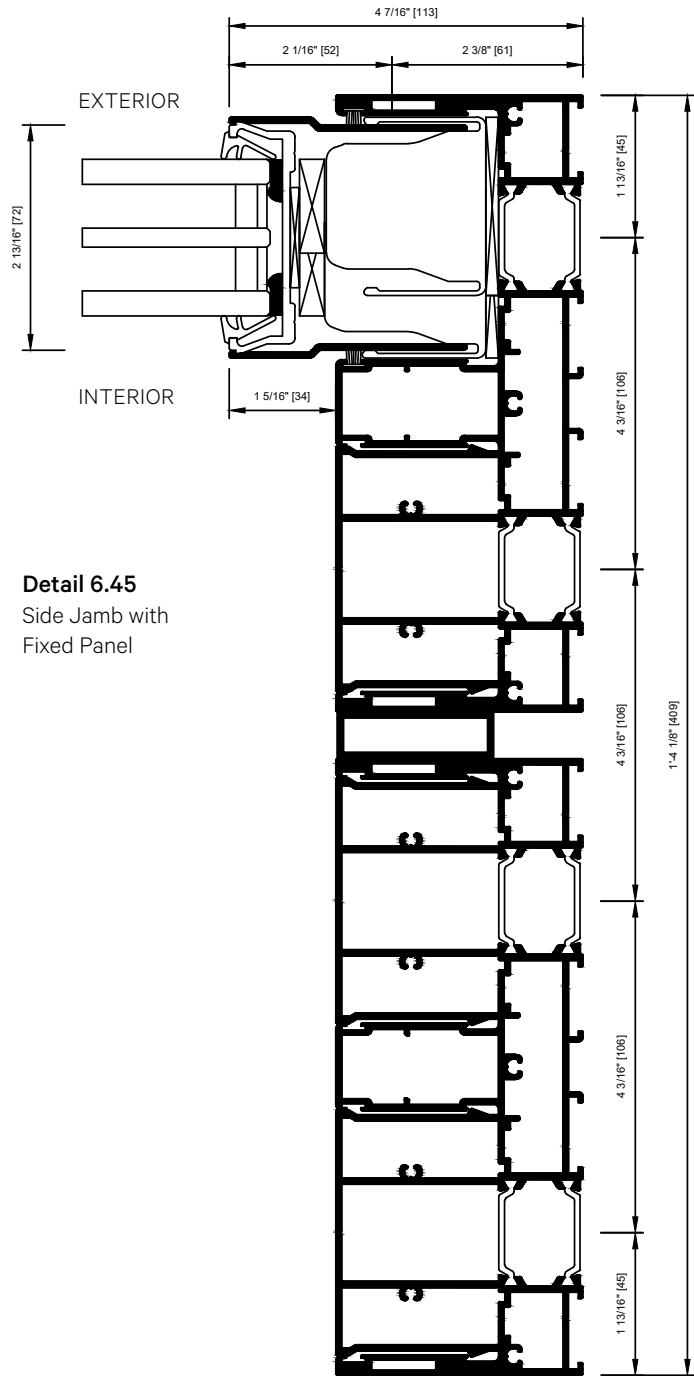


Horizontal Cross Section Details For 4 Track and Special Configurations



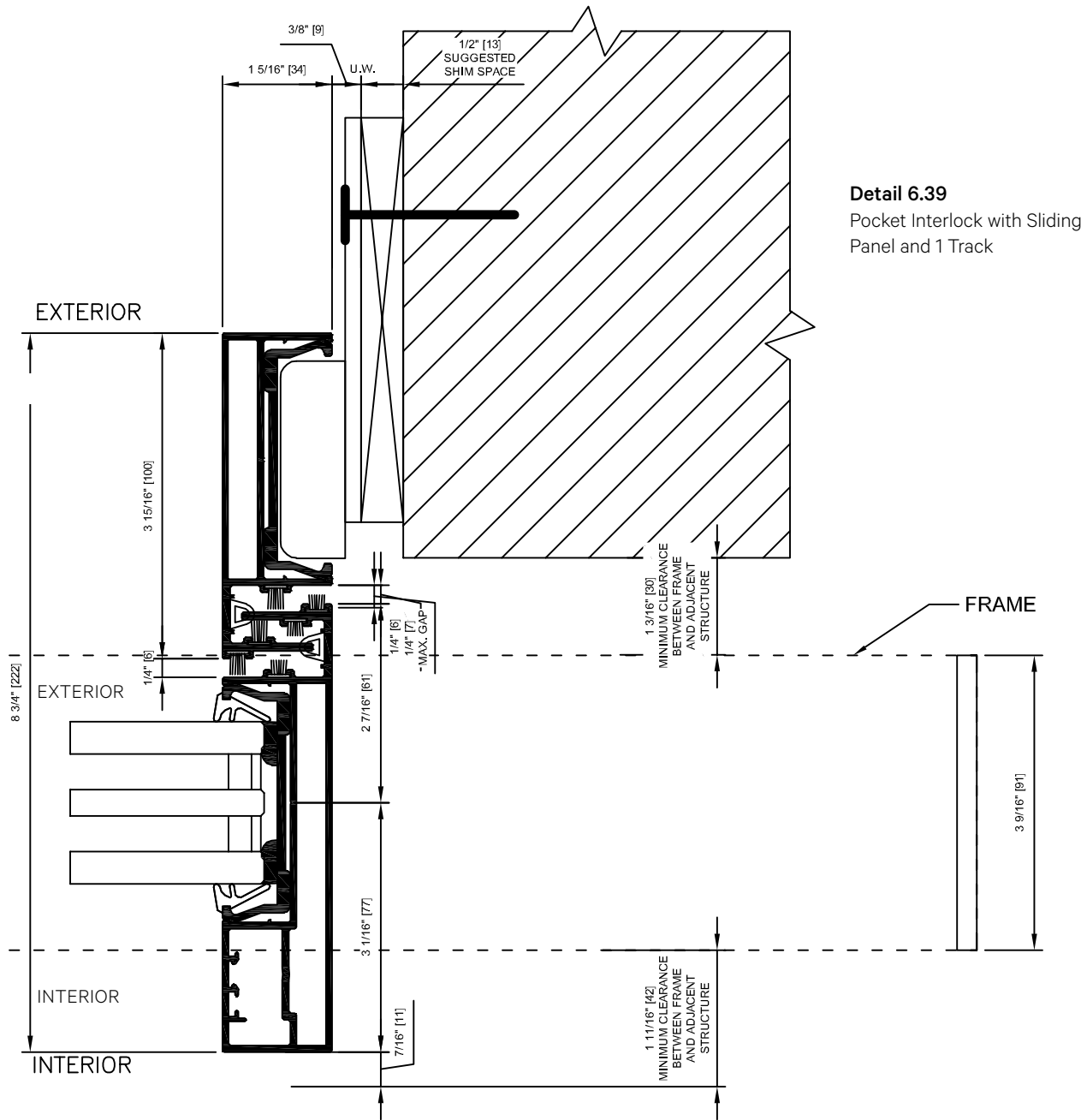
Detail 6.40
Side Jamb with Sliding Panel and
Double Lock Stile with Handle

Horizontal Cross Section Details For 4 Track and Special Configurations

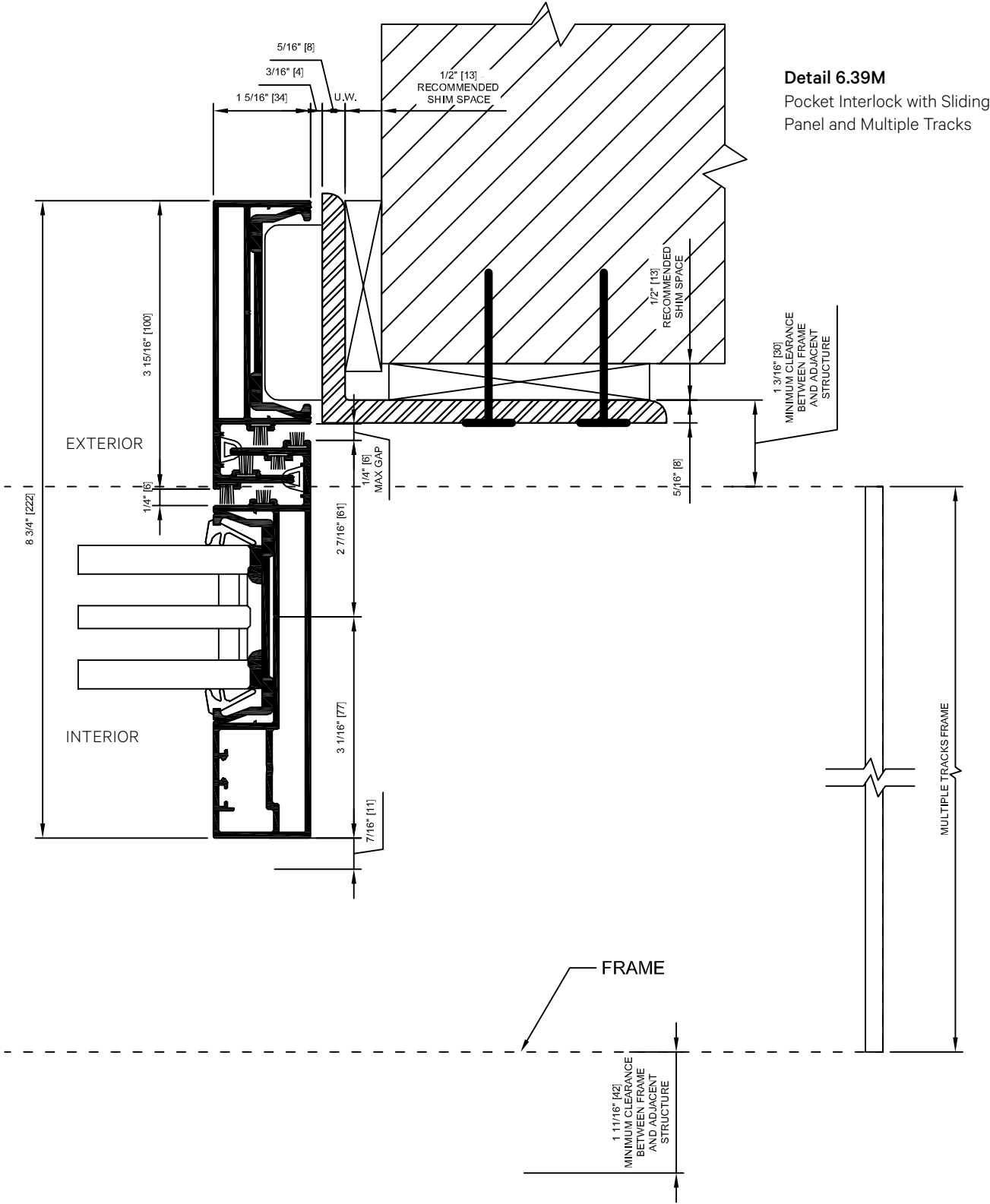


Detail 6.45
Side Jamb with
Fixed Panel

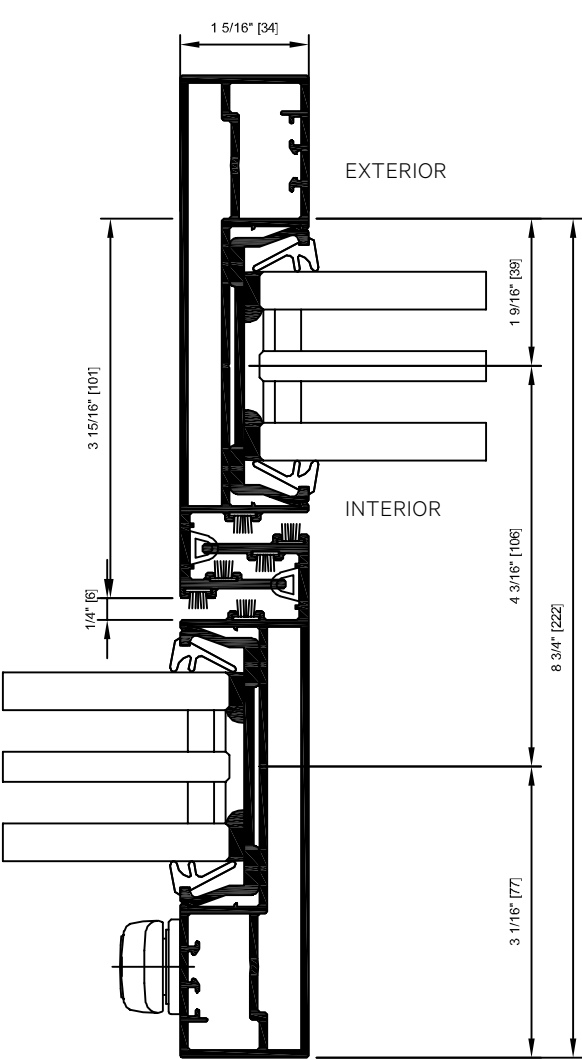
Horizontal Cross Section Details For 1 Track



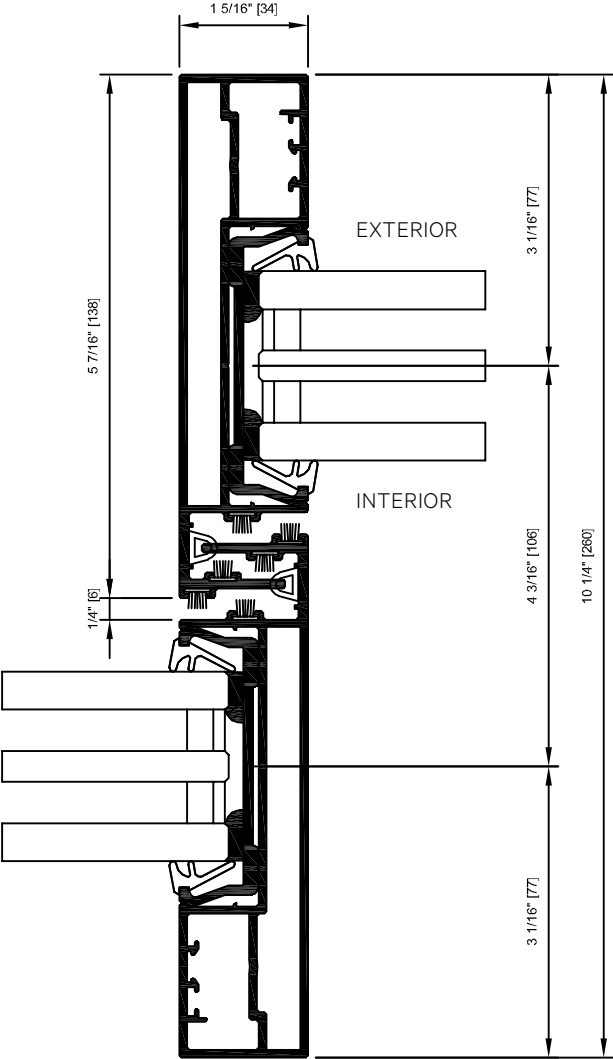
Horizontal Cross Section Details For 2 or More Tracks



Horizontal Cross Section Details For 1, 2, 3 Track and Special Configurations

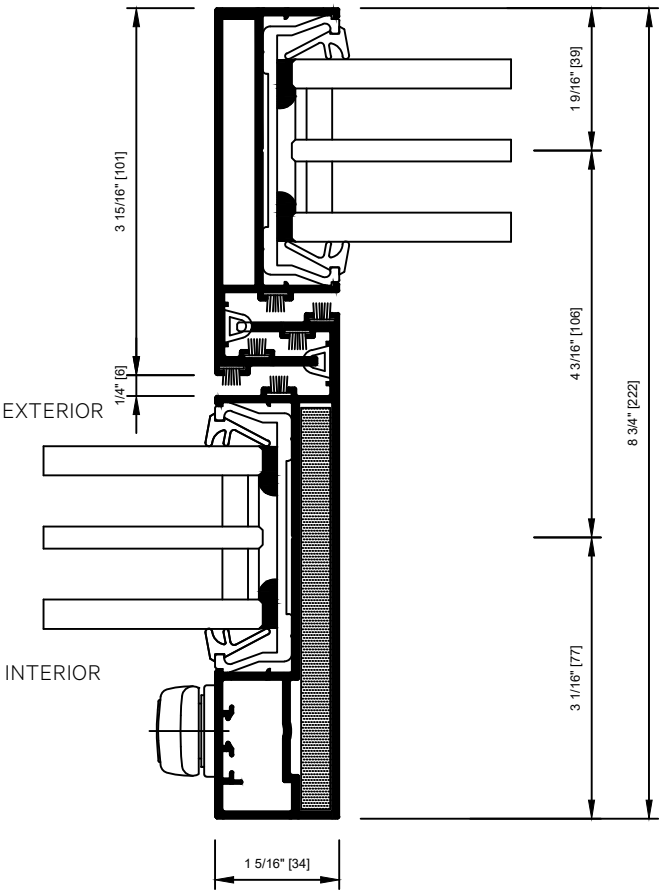


Detail 11.2
Interlock Sliding Panels with
Double Lock Stile and Handle

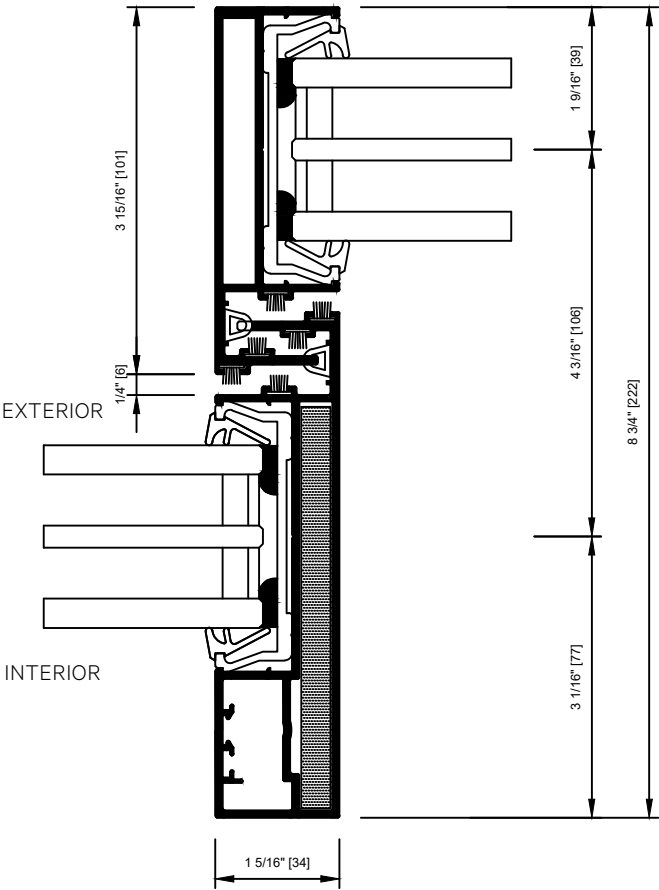


Detail 11.4
Interlock Sliding Panels with
Double Lock Stile

Horizontal Cross Section Details For 1, 2, 3 Track and Special Configurations

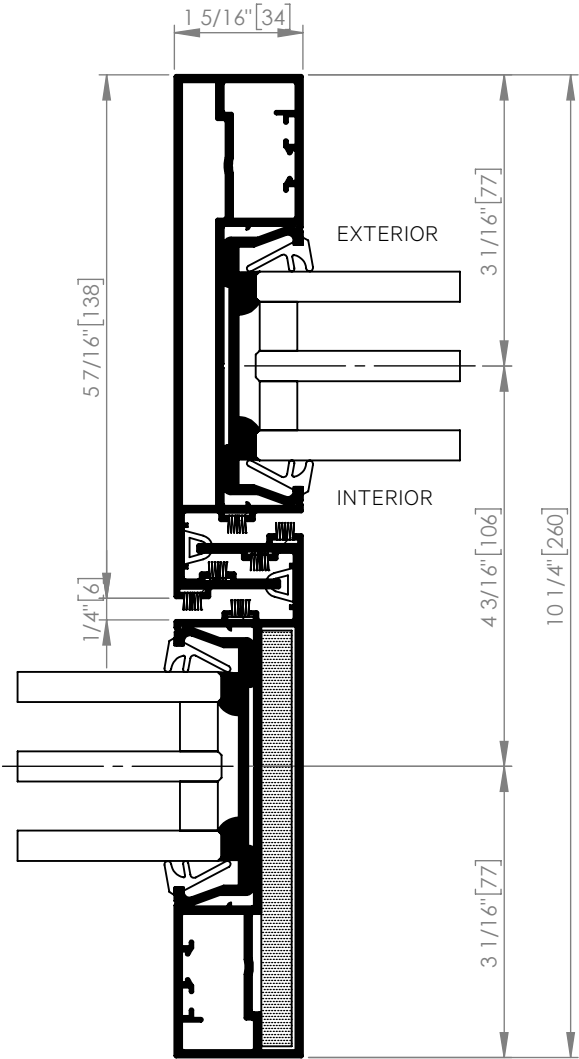


Detail 11.2
Interlock Sliding Panels with
Reduced Circle of Sight with Handle
and Reinforcement



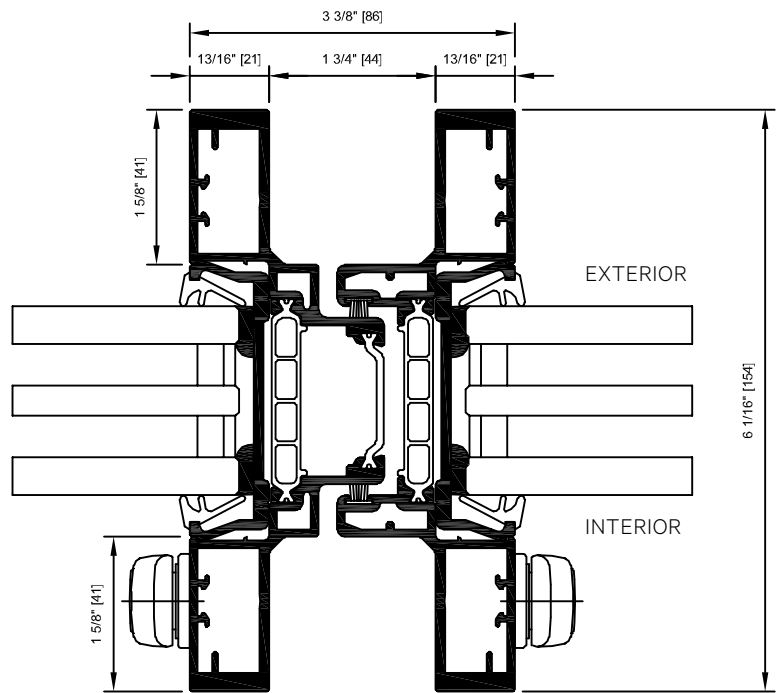
Detail 11.4
Interlock Sliding Panels with
Reduced Circle of Sight and
Reinforcement

Horizontal Cross Section Details For 1, 2, 3 Track and Special Configurations



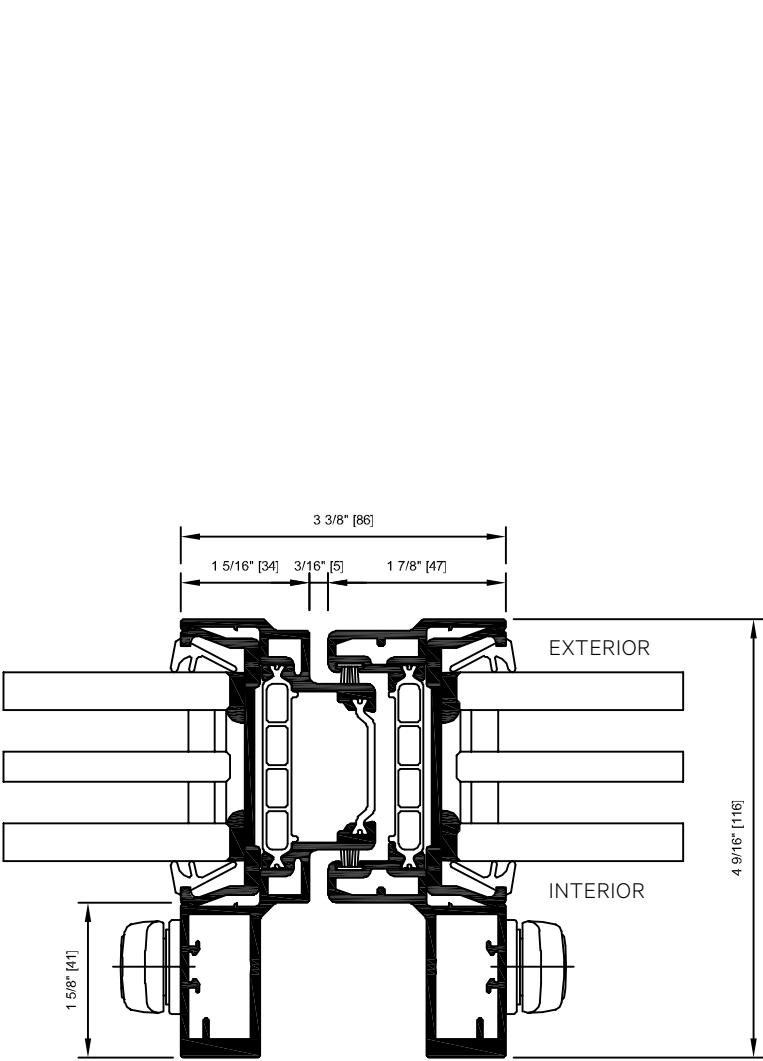
Detail 11.4
Interlock Sliding Panels
with Double Lock Stile
and Reinforcement

Horizontal Cross Section Details For 1, 2, 3 Track and Special Configurations

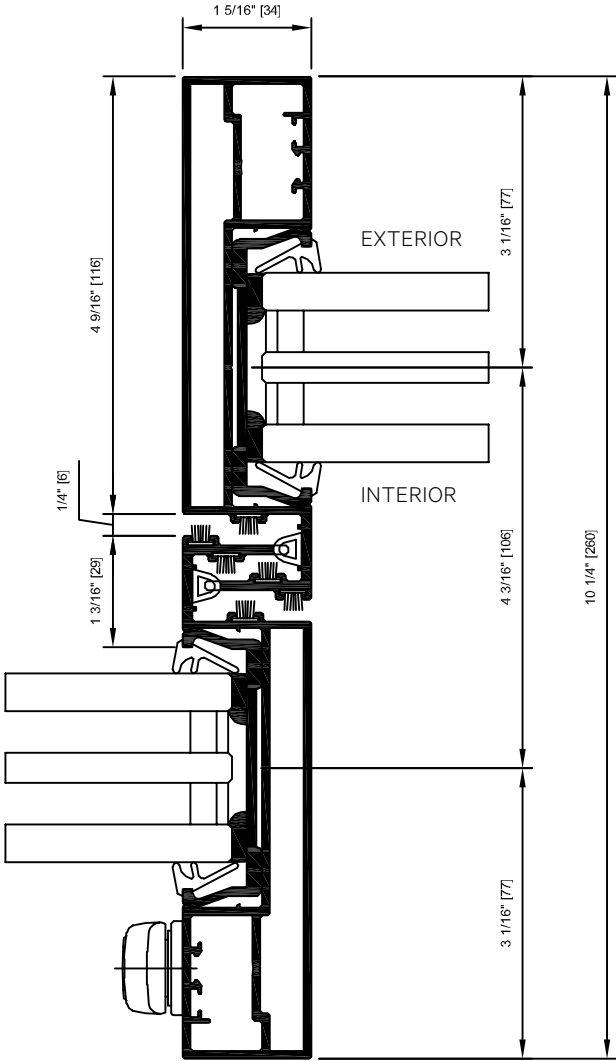


Detail 14.0
Male/Female Sliding Panels with
Double Lock Stile and Handle

Horizontal Cross Section Details For 1, 2, 3 Track and Special Configurations

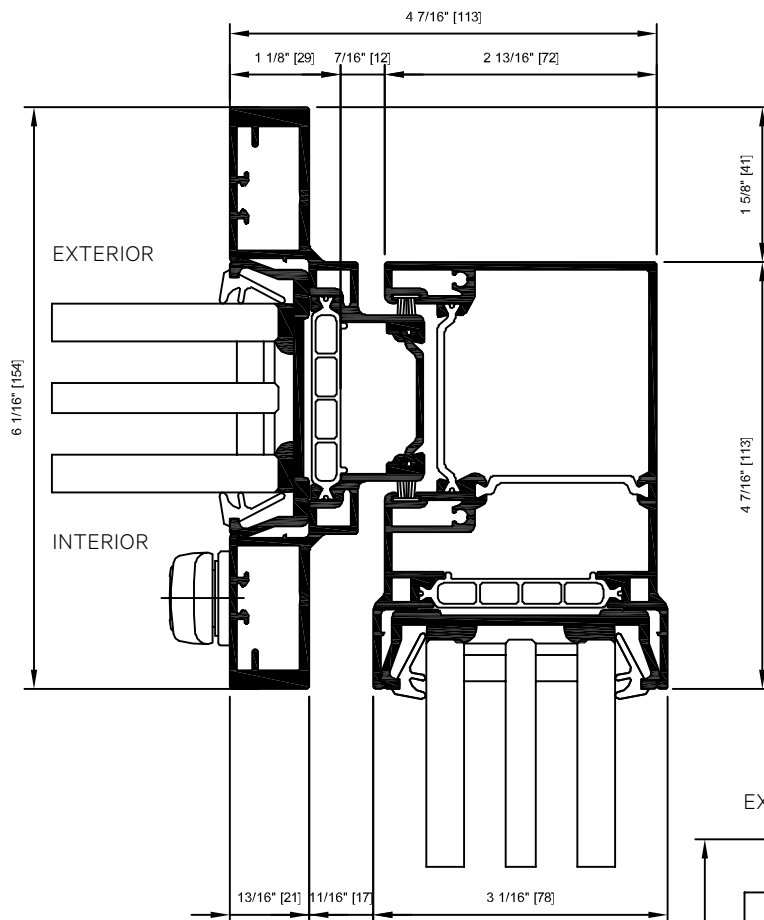


Detail 14.1
Male/Female Sliding Panels with
Single Lock Stile and Handle

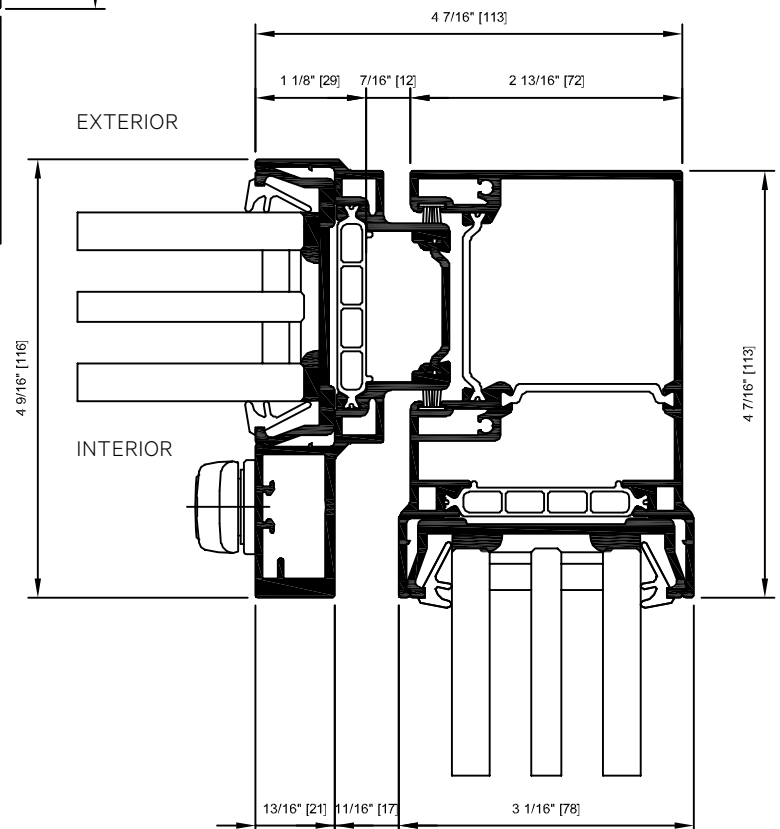


Detail 14.2
Reversed Interlock Sliding Panels
with Double Lock Stile and Handle

Horizontal Cross Section Details For 1, 2, 3 Track and Special Configurations

**Detail 33.0**

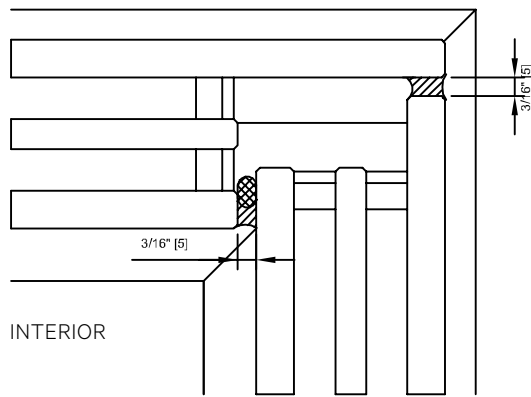
Male/Female Sliding Panels at
Outside 90° Corner with Double
Lock Stile and Handle

**Detail 33.1**

Male/Female Sliding Panels at
Outside 90° Corner with Single
Lock Stile and Handle

Horizontal Cross Section Details For 1, 2, 3 Track and Special Configurations

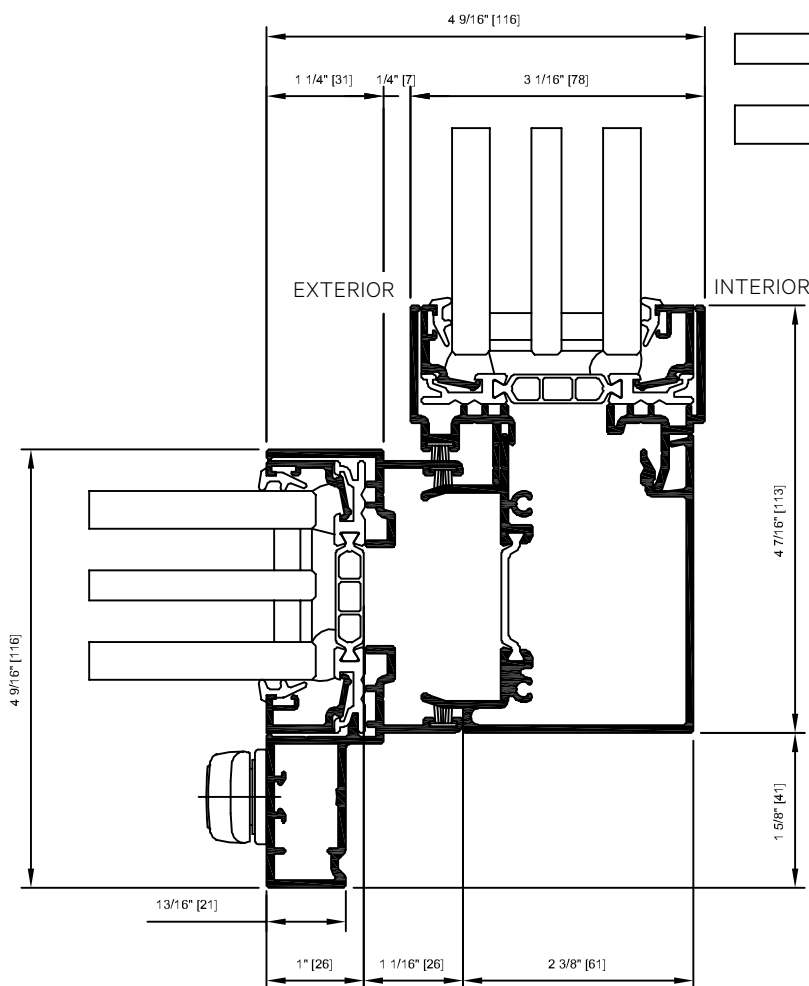
EXTERIOR



INTERIOR

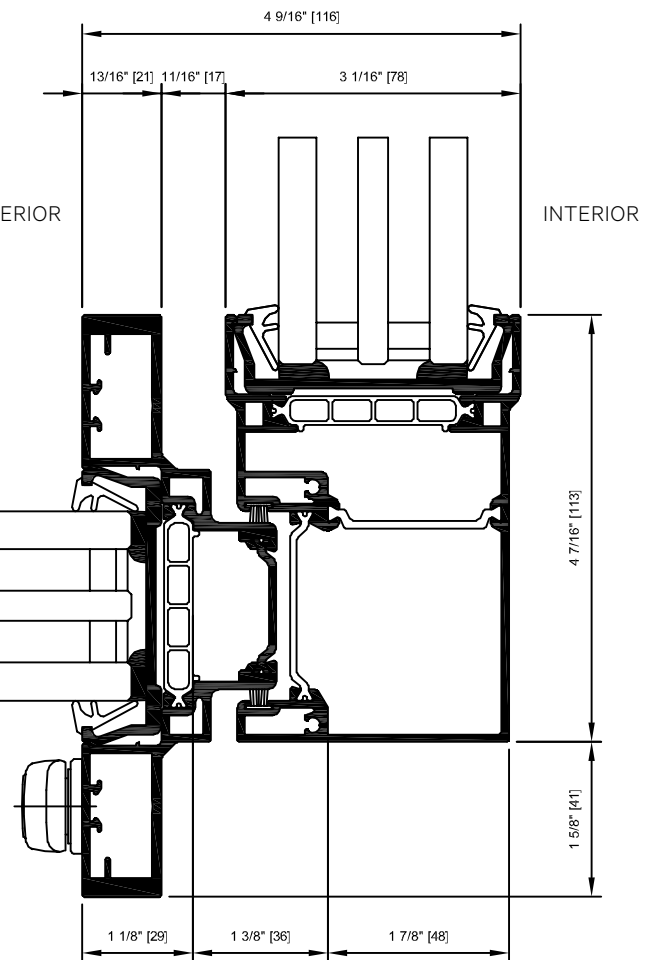
Detail 33.2

Fixed Glass Outside 90° Corner



EXTERIOR

INTERIOR

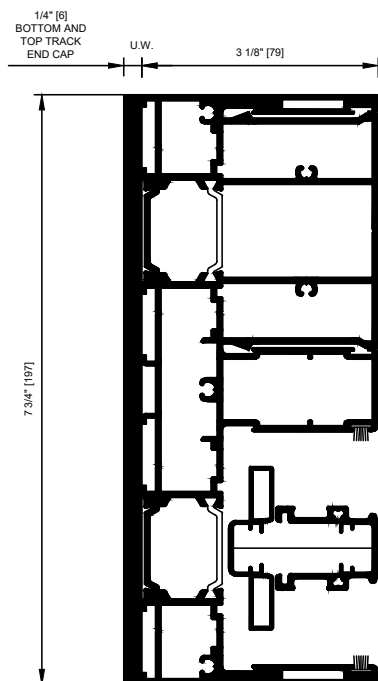
**Detail 33.3**

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

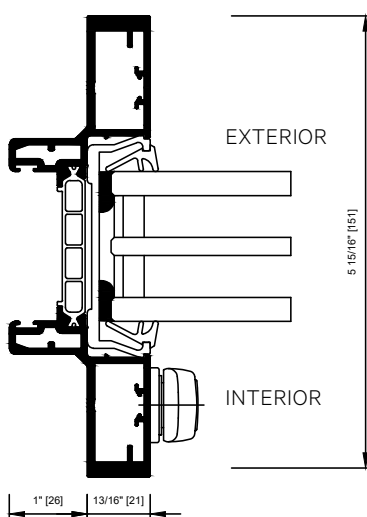
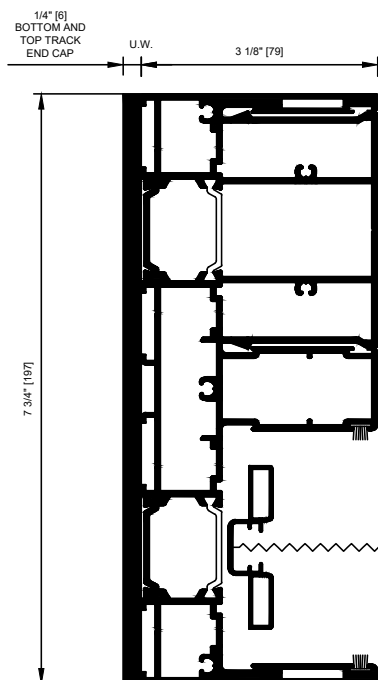
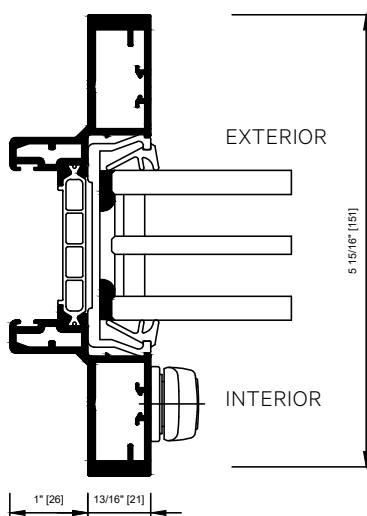
Detail 33.4

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

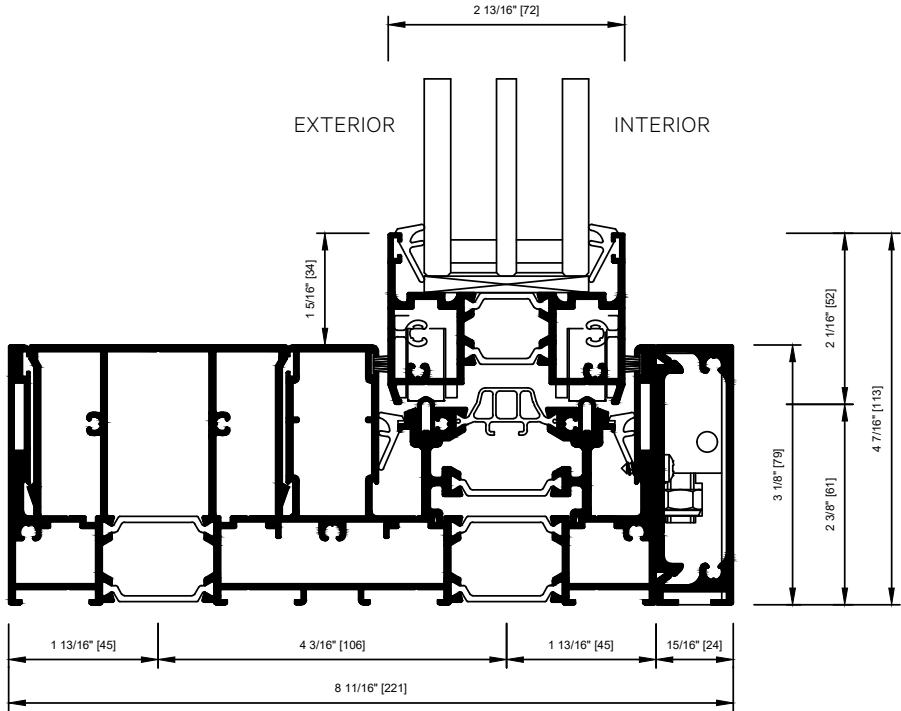
Insect Screen

**Detail 6.20**

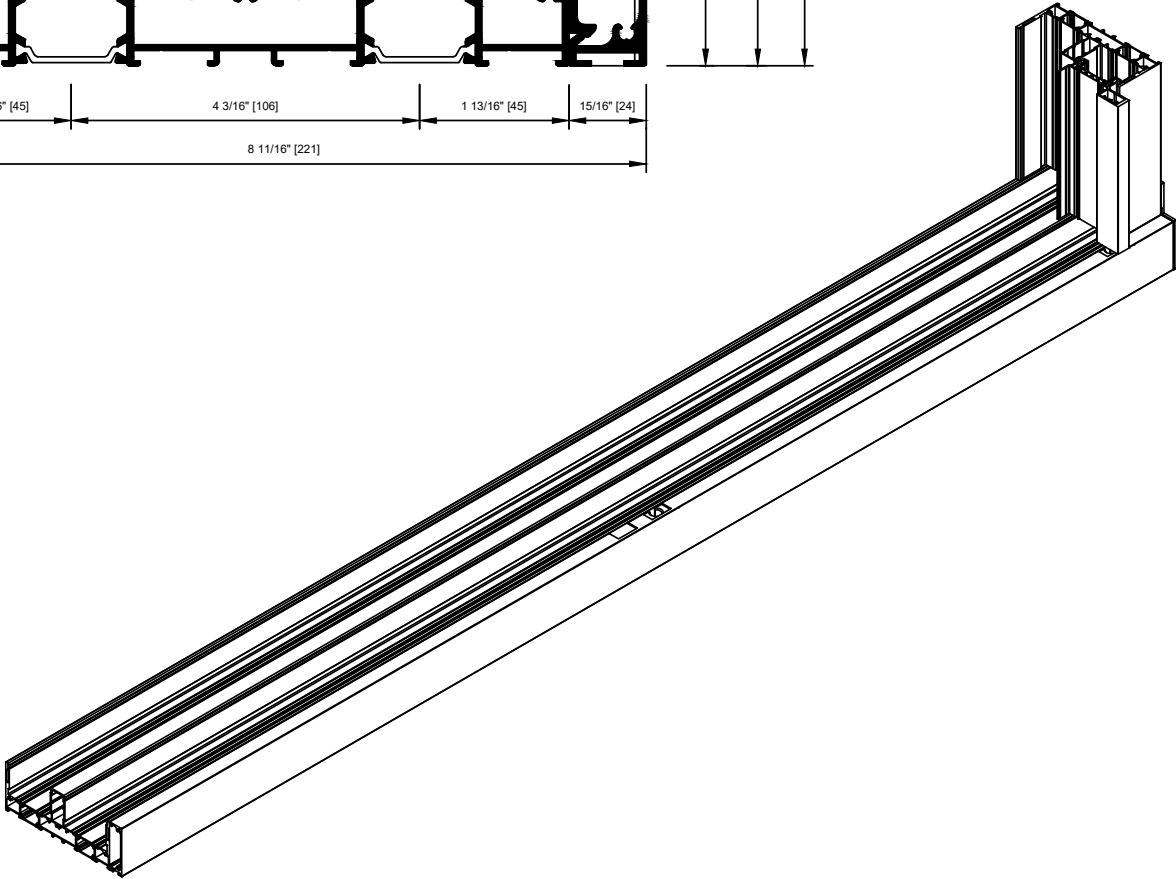
Side Jamb with Sliding Panel and
Double Lock Stile with Handle
and Pleated Screen



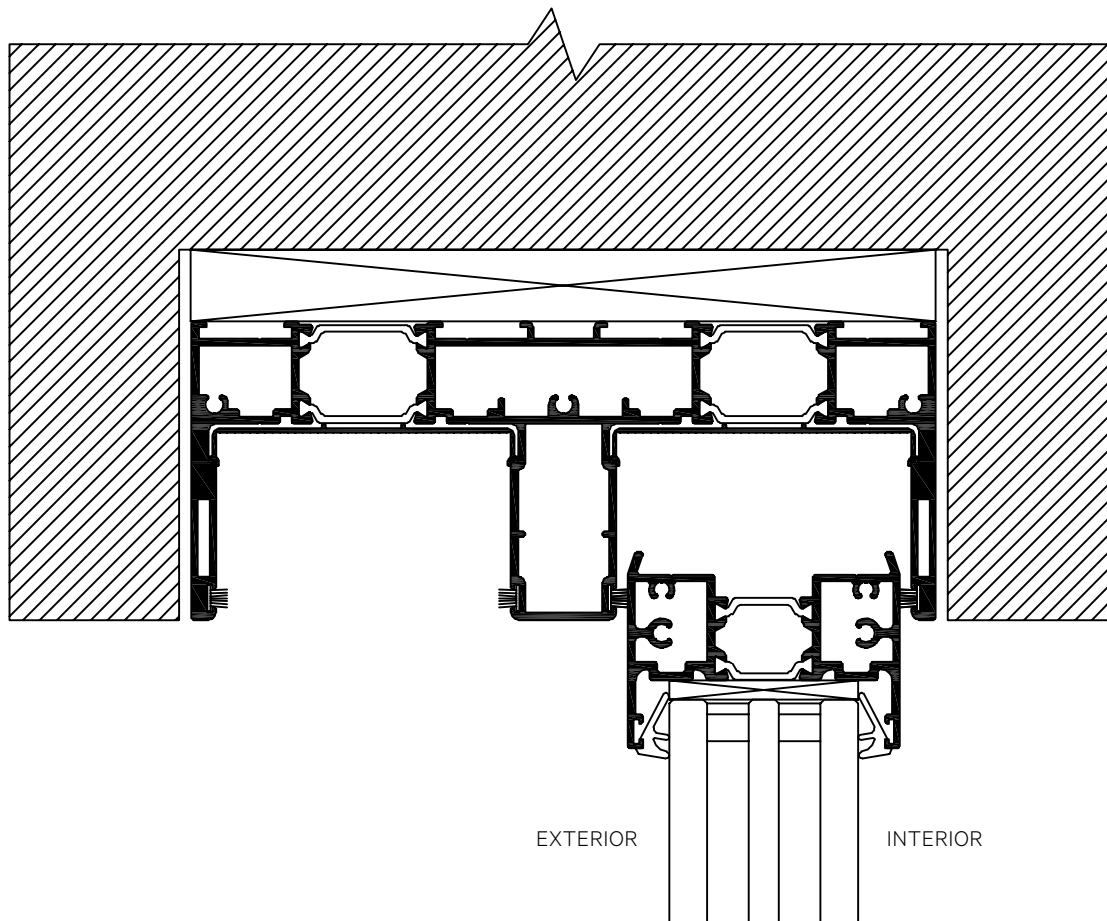
Locking Receiver Cover Profile



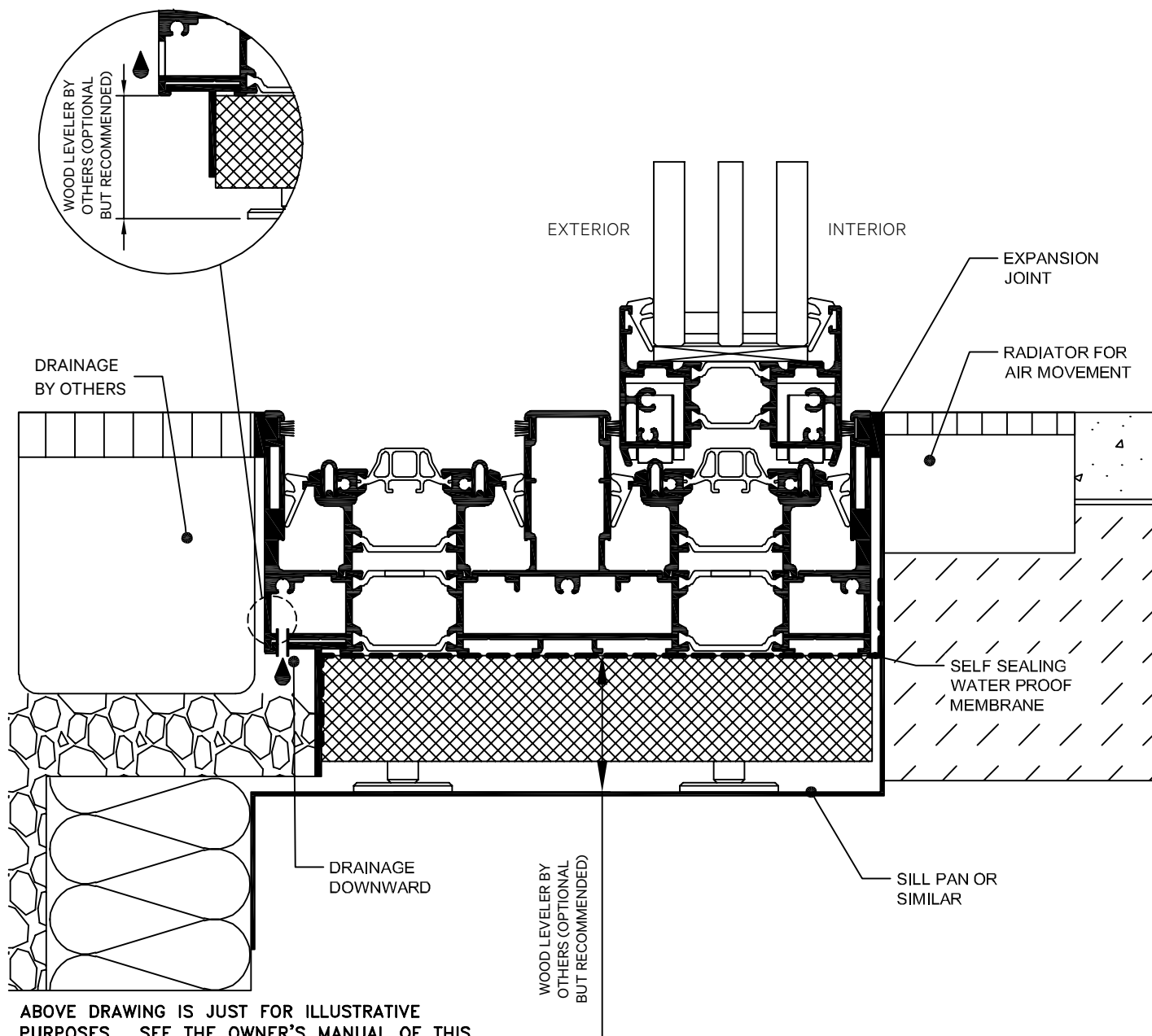
Detail 2.21
Locking Receiver Cover Profile



Recessed Head Track



Recessed Performance Sill



ABOVE DRAWING IS JUST FOR ILLUSTRATIVE PURPOSES. SEE THE OWNER'S MANUAL OF THIS SYSTEM FOR COMPLETE INSTALLATION INSTRUCTIONS.

Recessed Side Jamb

