

1000 COMMERCIAL DOUBLE HUNG PRODUCT SPECIFICATIONS

Part 1 - General

1.01 SUMMARY

- A. Section Includes: Armaclad Commercial Fiberglass Double Hung Window, painted interior and exterior, complete with all hardware, glazing, weather seals, insect screens and standard anchors, panning and accessories.

1.02 RELATED REQUIREMENTS

- A. SECTION 01600 - Product Requirements
- B. SECTION 07900 - Joint Sealants
- C. SECTION 08800 - Glass and Glazing

1.03 REFERENCE STANDARDS

- A. **AAMA/WDMA/CSA 101/1.S.2/A440-08** "Standard/Specification for Windows, Doors, and Unit Skylights"
- B. **AAMA 502** "Voluntary Specification for Field Testing of Newly Installed Fenestration Products"
- C. **AAMA 611** "Voluntary Specification for Anodized Architectural Aluminum"
- D. **AAMA 701/702** "Voluntary Specification for Pile Weather stripping and Replaceable Fenestration Weather seals"
- E. **AAMA 1503** "Voluntary Test Method for Thermal Transmittance and Condensation Resistance of Windows, Doors and Glazed Wall Sections"
- F. **ASTM E 283** "Standard Test Method for Determining Rate of Air Leakage Through Exterior Windows, Curtain Walls and Doors Under Specified Pressure Differences."
- G. **ASTM E 330** "Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights, and Curtain Walls by Uniform Static Air Pressure Difference"
- H. **ASTM E 547** "Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors, and Curtain Walls by Cyclic Static Air Pressure Differential"
- I. **ASTM E 1886** "Standard Test Method for Performance of Exterior Windows. Curtain Walls and Impact Protective Systems Impacted by Missile(s) and Exposed to Cyclic Pressure Differentials"
- J. **ASTM E 1996** "Standard Specification for Performance of Exterior Windows, Curtain Walls, Doors and Impact Protective Systems Impacted by Windborne Debris in Hurricanes."
- K. **ASTM E 2190** "Standard Specification for Insulating Glass Unit Performance and Evaluation"
- L. **ASTM F 588** "Standard Test Methods for Measuring the Forced Entry Resistance of Window Assemblies, Excluding Glazing Impact "NFCR 100" Procedure for Determining Fenestration Product U-Factors"

1.04 SUBMITTALS

- A. The window manufacturer shall supply test reports from an AAMA and accredited laboratory certifying compliance with performance specifications for this product.
- B. The window manufacturer shall supply all required data for this product including hardware and accessories.
- C. The window manufacturer shall supply required construction details and fabrication methods.
- D. The window manufacturer shall supply recommendations for maintenance and cleaning of exterior surfaces.
- E. Before proceeding with the manufacture of windows, the contractor shall submit complete shop drawings with installation details for the Architect's approval. These drawings shall also show window elevations, details of all window sections, collateral materials, details of anchorage and associated hardware.
- F. The window manufacturer shall submit three (3) samples of finish.
- G. The window manufacturer shall submit a copy of the product warranty to be applied to the project.

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1.05 WARRANTY

- A. The manufacturer shall warrant the product against defects in the materials and manufacturing. If a defect is discovered and brought to the attention of the manufacturer within the specified time limit, the defect will be corrected at no cost to the owner. The warranty shall not be pro-rated. Warranties requiring the owner to return windows to the factory for repair or replacement shall not be accepted.
1. Fiberglass: Warrant for Twenty (20) years against defects.
 2. Insulating Glass Units: Warrant Seal for Twenty (20) years against visual obstruction from film formation or moisture collection between internal glass surfaces, excluding failures caused by mishandling or breakage.
 3. Coatings: Warrant for Ten (10) years against chipping, peeling, cracking, chalking or fading.
 4. Hardware, Weather Stripping and Sealant: Manufacturer Warranty applies.

Part 2 - Product

2.01 MANUFACTURER

- A. Basis of Design: Armaclad Windows and Doors, LLC

2.02 MATERIALS

FRAME AND SASH

- Materials:** The primary frame and sash profiles are Pultruded Fiberglass (AAMA 305 glass fiber reinforced thermo set profiles) with critical wall thicknesses of .090 and higher to insure a solid and durable window construction. The primary profiles are supported with a series of extruded PVC profiles (used on interior side of window only) and ABS with an Acrylic Cap Stock profiles (Glazing Bead and Interlocks) to complete a window package that provides high performance standards.
- Insulation:** The Pultruded Fiberglass profiles are insulated using pre-shaped OC Styrofoam blocking that runs the full length of the component providing a superior thermal advantage.
- Corner Joinery:** The frame and sash corner joints are re-enforced with ABS Corner Keys and fastened/sealed using Novagard, Novabond 900-090 Structural Adhesive.
- Reinforcement:** All Interlock Sash Rail profiles are re-enforced with a specially designed Fiberglass profile to provide maximum sash strength.
On units with sash widths 36" and greater, all four sash rails will be reinforced.
All Commercial and Impact units will have all sash stiles and rails re-enforced.
- Screw Retention:** Hardware Screws are retained with Fiberglass Re-enforcement Sections or Custom PVC Profiles.

HARDWARE

- Balances:** Caldwell 3/4" Constant Force (Standard)
Caldwell ULTRA-LIFT® Spiral (When sash size or weight determines requirement)
ULTRA-LIFT® (up to 80lbs) and ULTRA-LIFT®nt (from 80lbs to 100lbs) Spiral Balances are designed for heavier window sash applications. These balances combine the best qualities of torsion spring, extension spring and spiral rod technologies and feature a proprietary coupling design. The ULTRA-LIFT® and ULTRA-LIFT®nt balances will consistently deliver exceptional AAMA Class 5 performance.
- Locks:** Ashland Dual Tech Cam Lock and Keeper package.
All Units Widths - 2 Locks, located 4 1/2" in from ends of sash.
- Lifts:** Ashland 13314-999 (die cast metal, surface mount design)
Bottom Sash: All Units Widths - 2 Lifts, located 4 1/2" in from ends of sash.
Top Sash: All Units Widths - 1 Lift, located on center of sash.

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Tilt Latches: Ashland partially Recessed w/ Surface Site line style.

Colors: Standard Manufacturer White, Faux Oil Rubbed Bronze, Polished Brass, Satin Nickel, Polished Chrome

SCREEN

Standard: Extruded Aluminum Frame with Fiberglass Screen Cloth

Option: Heavy Duty Extruded Aluminum Safety Screen with choice of .018, .023 and .028 Stainless Steel Mesh

WEATHER SEAL

Combination of Fin Pile seals.

GLAZING

Glass: 3/16" Minimum glass thickness, 1" to 1 1/8" Overall insulating unit thickness

Sealant: Dow Corning CWS Structural Adhesive

PAINT

Product: Sherwin Williams Polane Super S two part Urethane, Spray applied and Oven cured.

Colors: Standard colors include; Bronze, White, Beige, Sandstone

2.03 GENERAL PERFORMANCE REQUIREMENTS

- A. Thermal Performance: To comply with NFRC 100
- B. Air Infiltration, Water Resistance, Structural Test Pressure and Forced Entry Resistance Performances:
To comply with AAMA/WDMA/CSA 101/I.S.2/A440-08

2.04 WINDOW TYPE

- A. Fiberglass Commercial Double Hung Window - Series 1000, 54" x 92" test specimen size.
 - 1. 3 1/4" basic frame depth in pultruded fiberglass.
 - 2. Master frame and sash have a mitered and keyed corner construction, each corner bonded with epoxy resin.
 - 3. Structural Class achieved is CW-50 at a Gateway test specimen size of 54" x 92" (AAMA 101).
Structural Class achieved is CW-45 at a Gateway test specimen size of 56" x 91" (AAMA 101-08).

Performance Required

| | |
|---|--------------------------|
| 4. Design Pressure | 50.16 psf |
| 5. Operating Force per ASTM 2068 | 35 lbf |
| 6. Air Infiltration Resistance per ASTM E 283 | 0.18 cfm/ft ² |
| 7. Water Infiltration Resistance per ASTM E 547 | 9.20 psf |
| 8. Uniform Structural Load Test Pressure per ASTM E 330 | ± 75.24 psf |
| 9. Forced Entry Resistance per ASTM F 588 | Grade 10 |

2.04 GLAZING

- A. Insulating Glass - 1" Overall Thickness, LoE (366/Argon-95/Clear), Warm Edge Spacer
 - 1. U-Factor
 - 2. Solar Heat Gain Coefficient (SHGC)
 - 3. Visible Light Transmission (VT)
 - 4. Condensation Resistance (CR)

Specification Note: The insulating glass shown is the Armaclad standard but many options are available including triple insul, Heat Mirror, laminated and krypton gas fill. When specifying project requirements, include all applicable data being certain that the glazing for each window type is clearly noted on the drawings or the window schedule.

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2.06 INSECT SCREENS

- A. Screen Cloth: Standard - 18 x 16 black fiberglass mesh, securely held in place with a reusable vinyl spline.

Specification Note: Non-standard options can be obtained as required.

- B. Frame: Enameled aluminum in color to compliment the exterior color of window.

Specification Note: Heavy duty safety screen with .018, .023 or .028 stainless steel mesh option available.

- C. Screen Retention Hardware allow easy removal without the need of tools.

Standard Screen: Slide out of side jamb pocket, push up to depress springs at the top and push out at the bottom.

Safety Screen: Detach at bottom from side jambs by pulling latches toward the center and push out. Screen pivots from the top.

2.07 ACCESSORY ITEMS

- A. GRIDS

Flat or Contour Internal (in insulating glass air space)

Simulated Divided Lights (SDL's) - Applied to the exterior and interior sides of the glass unit.

- B. PANNING

Heavy duty extruded aluminum profiles

- C. INSTALLATION

Heavy duty extruded aluminum thermally broken Anchors

Through the frame screw grommets and jamb adjusters

Extruded PVC Frame Expanders, Nailing Fin, Brick mold and Drywall Receptor

Specification Note: All accessory item requirements must be listed as part of the project quote.

2.08 FINISH

- A. Pultruded Fiberglass Components

1. Five-step, baked on, water-borne paint system

2. Interior Finish: White

3. Exterior Finish: Bronze, White, Beige, Sandstone

Specification Note: Non-Standard colors and color combinations require custom charges and a longer delivery lead time.

2.09 CAULKING

- A. A Grade "A" Urethane Caulking Compound

Dow Corning 995 or equal as approved by the Architect shall be applied per installation drawings and points where the master frame and/or panning intersects the masonry or other exterior wall finish. The caulking material shall be applied in a manner which insures a continuous, air and water tight perimeter seal. The caulking color is to match the color of the windows unless specified otherwise by the Architect.

2.10 TESTING

- A. Laboratory Testing

1. At the discretion of the owner, one or a number of operable sash shall be removed from windows installed on the project and exchanged with the appropriate attic stock. The selected stock shall be tested by a certified testing laboratory to verify that the glass, glazing, hardware and finish are in conformance to the project specifications (AMMA 502-08). Should any component of the test specimen fail to conform to project specifications, action shall be taken by the window manufacturer to correct each deficiency for every window on the project at no additional cost to the owner.

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2. The owner shall assume the cost of the initial verification testing. However, should product be found to be non-compliant, the manufacturer shall reimburse the owner for the cost of the initial test. At the Architect's discretion, subsequent testing may be required and the cost of this test shall be borne by the manufacturer.
3. A representative of the manufacturer must be present for all testing.
4. In the case of a non-compliant test, the manufacturer must be allowed to make adjustments to the window and re-test as well as confirm the installation meets the prescribed requirements through air and water test cycles. These tests shall be conducted in compliance with ASTM E 783 (AIR) and ASTM E 1105 (Water).

Part 3 - Execution

3.01 EXAMINATION

- A. Inspect all openings in which windows will be installed.
 1. Verify that each opening complies with manufacturer recommendations and appropriate AAMA practice.
 2. Verify that all fasteners in wall framing are properly seated and will not interfere with the window installation.
- B. Arrange to have unsatisfactory conditions corrected.
- C. Installer will not start work until condition of window openings have been approved by contractor.

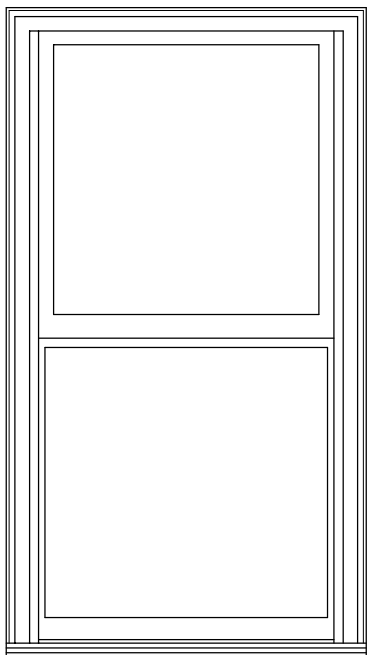
3.02 INSTALLATION

- A. Install windows in accordance with Architect/Contractor approved shop drawings or manufacturer's instructions.
- B. Do Not remove any labels until all windows are installed and are ready for cleaning. Insure all local building inspection regulations are adhered to where label removal is involved.
- C. Install insect screens if not already installed in operable units.

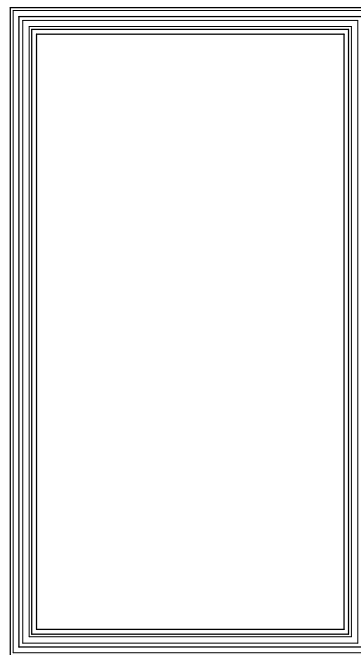
3.03 DELIVERY, STORAGE, ADJUSTMENTS AND CLEANING

- A. When the Fiberglass Double Hung windows are delivered they must be kept in a dry area and kept out of direct sunlight until time of installation.
- B. After installation, the erector shall remove all sealants, caulking and other misplaced materials from all surfaces, including adjacent work. The window frame, sash and glass shall be cleaned thoroughly with materials and methods recommended by the window and glass manufacturers and shall not cause any damage to the product.
- C. The installer shall make any and all adjustments to window sash and hardware to cause the operating sash to function properly and in accordance with the manufacturers standards including insuring that the frame and sash are square plumb and level.
- D. Protect glass and window materials from contact with contaminating substances resulting from construction operations. After installation and cleaning of windows by window installation contractor, the general contractor shall be responsible for maintaining the cleanliness and protection of the window from damage by other trades.
- E. Remove all sealant, caulking and other misplaced materials from all surfaces, including adjacent work. The window frames, panning, interior trim and glass shall be thoroughly cleaned with materials and methods recommended by the window and glass manufacturers and shall not cause any damage to the product or the installation.

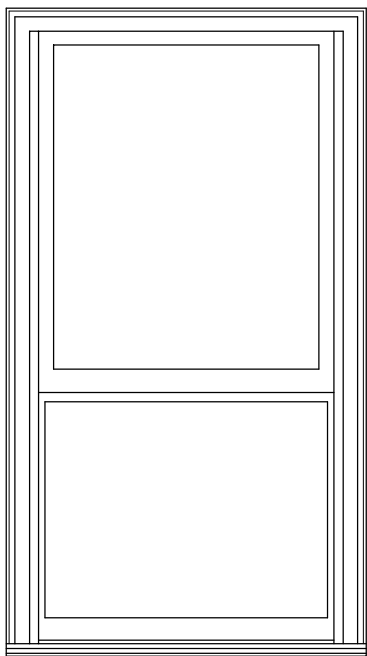
ELEVATIONS



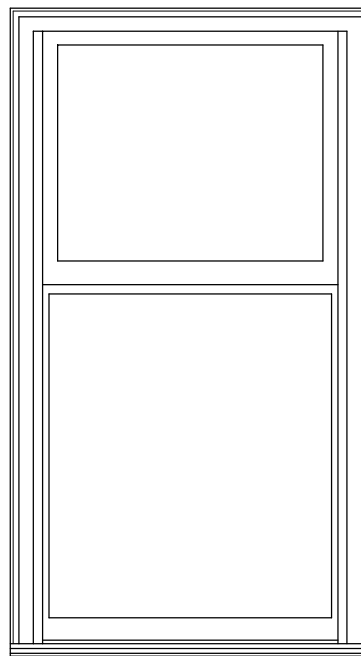
Standard Equal Sash Height



Fixed Picture Window/Transom - Series 1001
(See Section 3 - ADM for Product Information)



Oriel Style Window - 3/5-2/5 Sash Split



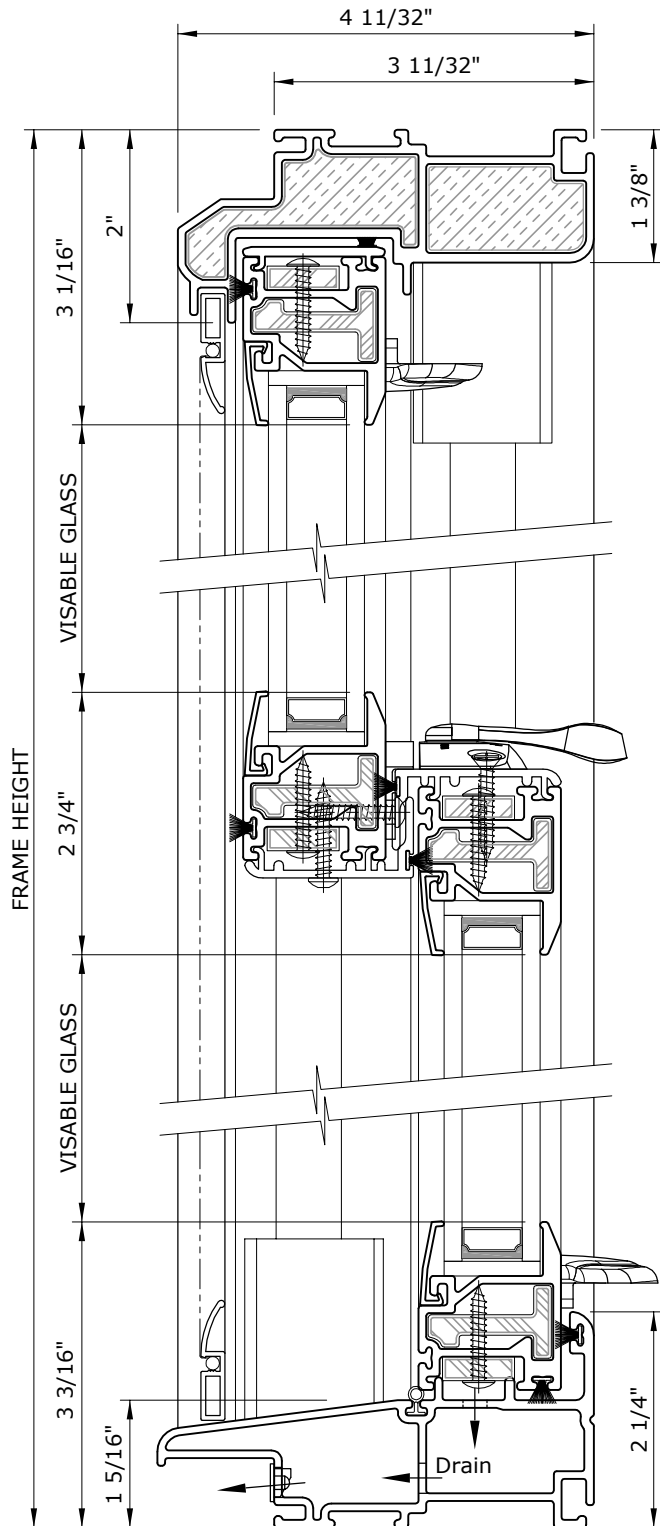
Cottage Style Window - 2/5-3/5 Sash Split

FIBERGLASS WINDOW SYSTEM

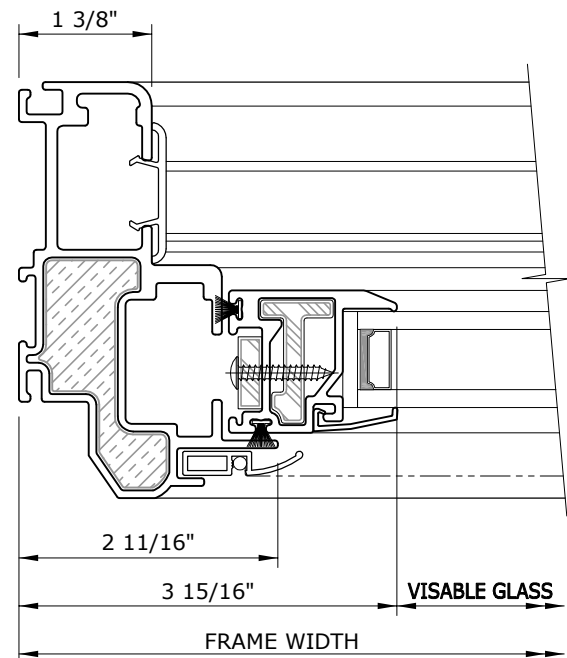
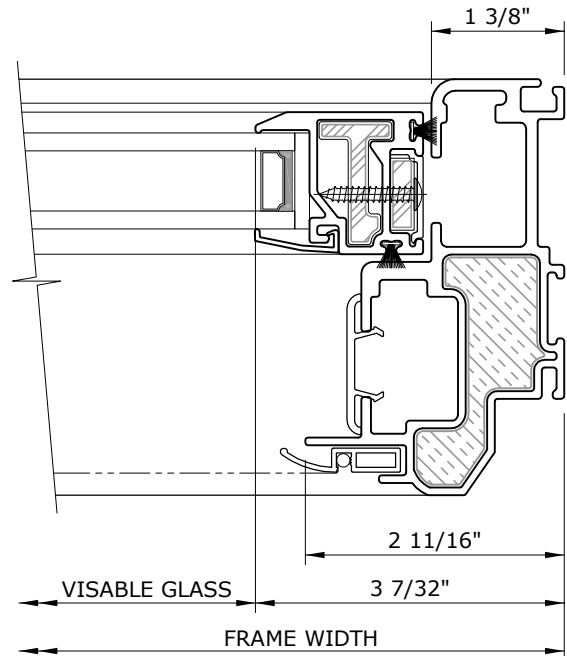
1000 COMMERCIAL DOUBLE HUNG WINDOW DIMENSIONAL DETAIL

CROSS SECTION DETAIL

SCALE: 1:2



SHOWN WITH STANDARD SCREEN OPTION



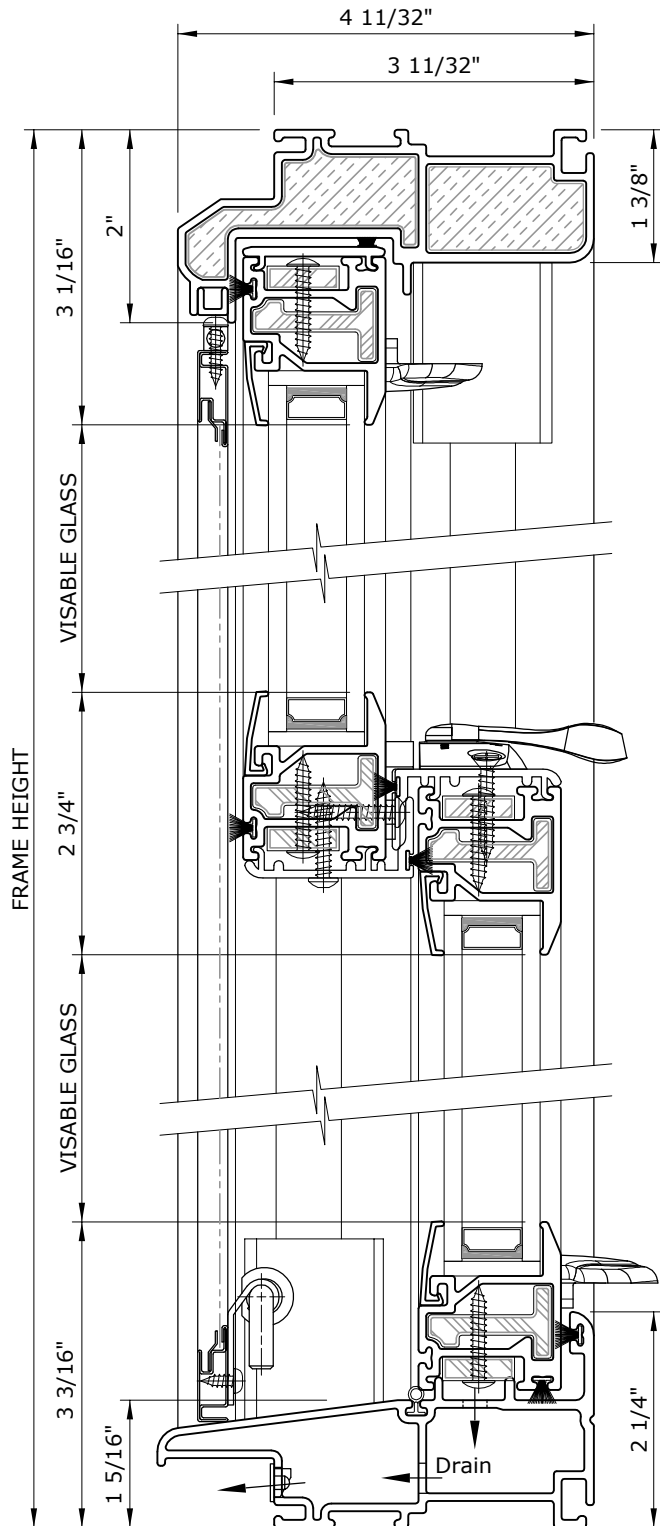
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FIBERGLASS WINDOW SYSTEM

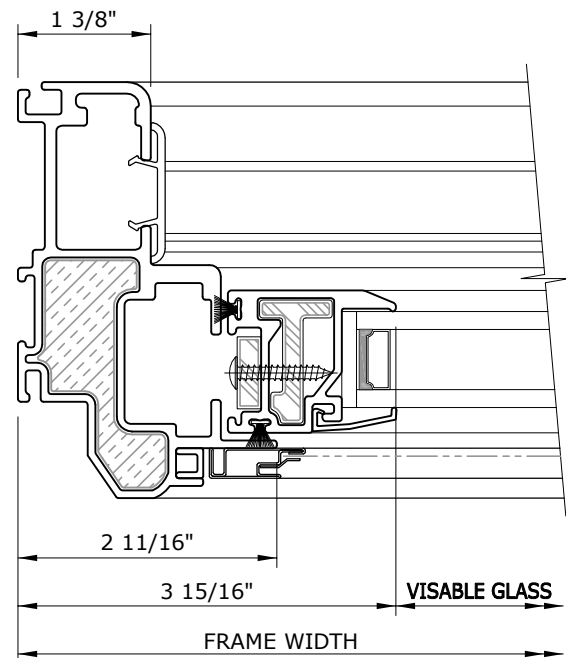
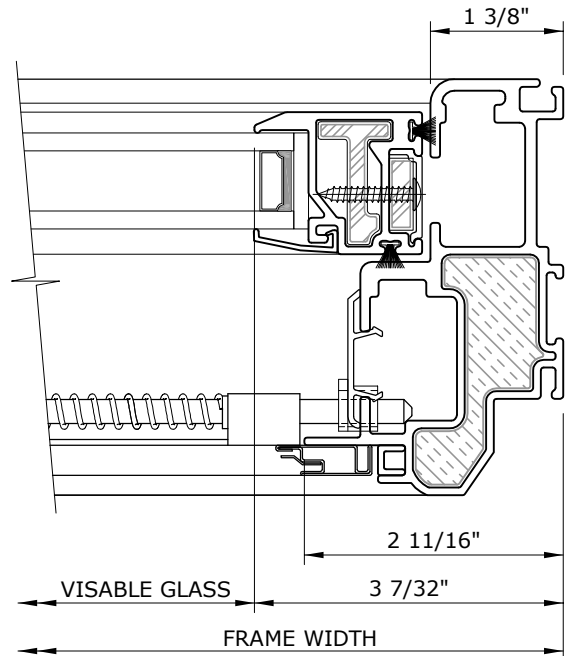
1000 COMMERCIAL DOUBLE HUNG WINDOW DIMENSIONAL DETAIL

CROSS SECTION DETAIL

SCALE: 1:2



SHOWN WITH SAFETY SCREEN OPTION



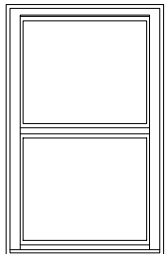
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FIBERGLASS WINDOW SYSTEM

1000 COMMERCIAL DOUBLE HUNG WINDOW SIZE LIMITATIONS

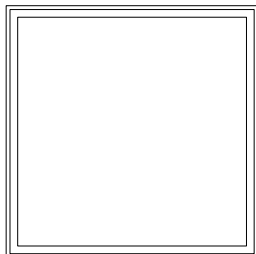
FACTORY SIZE LIMITS

1000 Double Hung



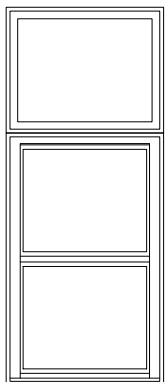
| | Standard Glazing | | Impact Glazing | |
|-----------------------------|------------------|---------|----------------|---------|
| | Minimum | Maximum | Minimum | Maximum |
| Width | 15 1/4" | 54" | 15 1/4" | 54" |
| Height | 25" | 92" | 25" | 80" |
| Max. U/I (United Inches) | 146" | | 134" | |

1001 Picture Window/Transom



| | Standard Glazing | | Impact Glazing | |
|-----------------------------|------------------|---------|----------------|---------|
| | Minimum | Maximum | Minimum | Maximum |
| Width | 15 3/4" | 84" | 15 3/4" | 60" |
| Height | 14 1/2" | 84" | 14 1/2" | 60" |
| Max. U/I (United Inches) | 168" | | 120" | |

1001 Picture Window Transom over 1000 Double Hung Combinations



| | Transom | Standard Glazing | | Impact Glazing | |
|--|---------|------------------|---------|----------------|---------|
| | | Minimum | Maximum | Minimum | Maximum |
| Width | | 15 3/4" | 54" | | |
| Height | | 14 1/2" | 24" | | N/A |
| Composite Max. U/I (United Inches) | | 170" | | | |

NOTES AND CALCULATIONS

An Egress Window has a Clear Opening when the sash is opened as far as it can go that is a sufficient size to permit the occupants to escape through and a fully fitted Fire Fighter to enter through.

All Windows Sized for an Egress Opening must comply with Local Building Code Standards but a Rule of Thumb for egress windows is as follows;
One window in each sleeping room above the ground level **MUST** have a Minimum Clear Opening of 20" in Width x 24" in Height x 5.7 Sq.Ft. and the Sill **MUST** be a Maximum of 44" from the floor.

Sleeping rooms on the ground level **Must** have a Minimum Clear Opening of 20" in Width x 24" in Height x 5.0 Sq.Ft. and the Sill **MUST** be a Maximum of 44" from the floor.

BASIC CLEAR OPENING CALCULATIONS

(Clear Opening Width x Clear Opening Height)/144

30" Opening Width x 24" Opening Height = 5.0 Sq.Ft.

34 1/4" Opening Width x 24" Opening Height = 5.7 Sq.Ft.

20" Opening Width x 36" Opening Height = 5.0 Sq.Ft.

20" Opening Width x 41 1/8" Opening Height = 5.7 Sq.Ft.

SERIES 1020 DOUBLE HUNG CLEAR OPENING CALCULATIONS

Frame Width - 5 7/16"

(Frame Height/2) - 8 1/8" (Equal Sash Heights)

SERIES 1020 DOUBLE HUNG FRAME SIZING

Equal Sash Heights

Minimum Egress Frame Width = 25 7/16"

Minimum Egress Frame Height = 64 1/4"

Minimum Egress Frame Sizes - Ground Floor

35 7/16" x 76 1/4" OR 25 7/16" x 88 1/4"

Minimum Egress Frame Sizes - Above Ground Floor

39 11/16" x 64 1/4" OR 27 3/16" x 92"

Oriel Style Window

Minimum Egress Frame Size - Ground Floor

35 7/16" x 65 1/2" (37 3/8" Top Sash Height)

Minimum Egress Frame Size - Above Ground Floor

39 11/16" x 65 1/2" (37 3/8" Top Sash Height)

Cottage Style Window

Minimum Egress Frame Size - Ground Floor

35 7/16" x 78 1/8" (45" Bottom Sash Height)

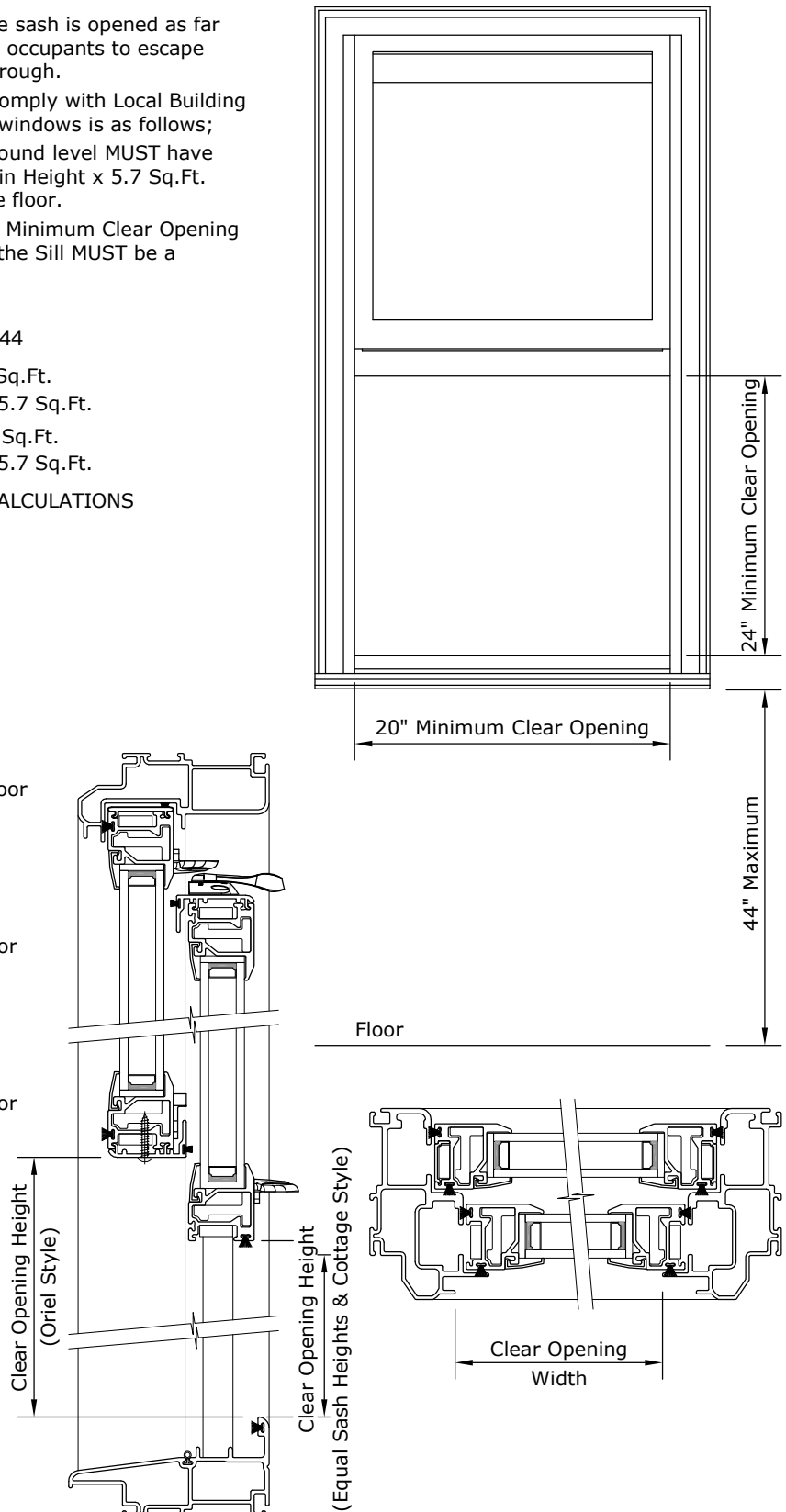
Minimum Egress Frame Size - Above Ground Floor

39 11/16" x 78 1/8" (45" Bottom Sash Height)

NOTES:

Maximum allowable frame height for Impact Windows = 80"

Calculations shown are rounded up to the next 16th" dimension



NOTES AND CALCULATIONS

The Daylight Opening is the visible glass area between the sash stiles and rails.

DAYLIGHT OPENING CALCULATIONS

Equal Sash Heights

Top Sash Width:
Frame Width - 7 7/8"
Bottom Sash Width:
Frame Width - 6 7/16"
Top and Bottom Sash Height:
(Frame Height - 9")/2

Oriel Style Window

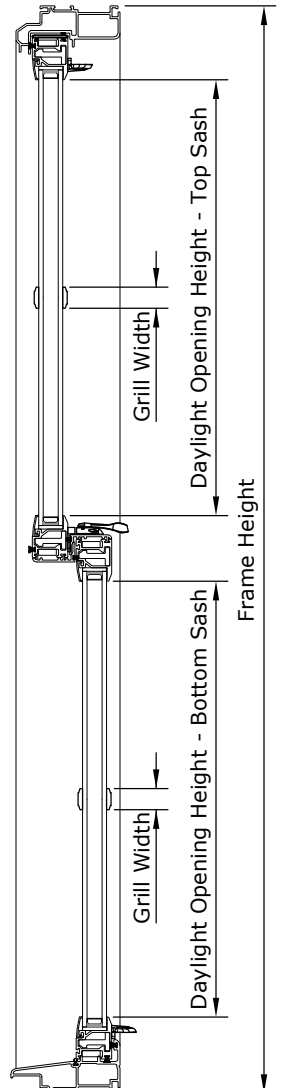
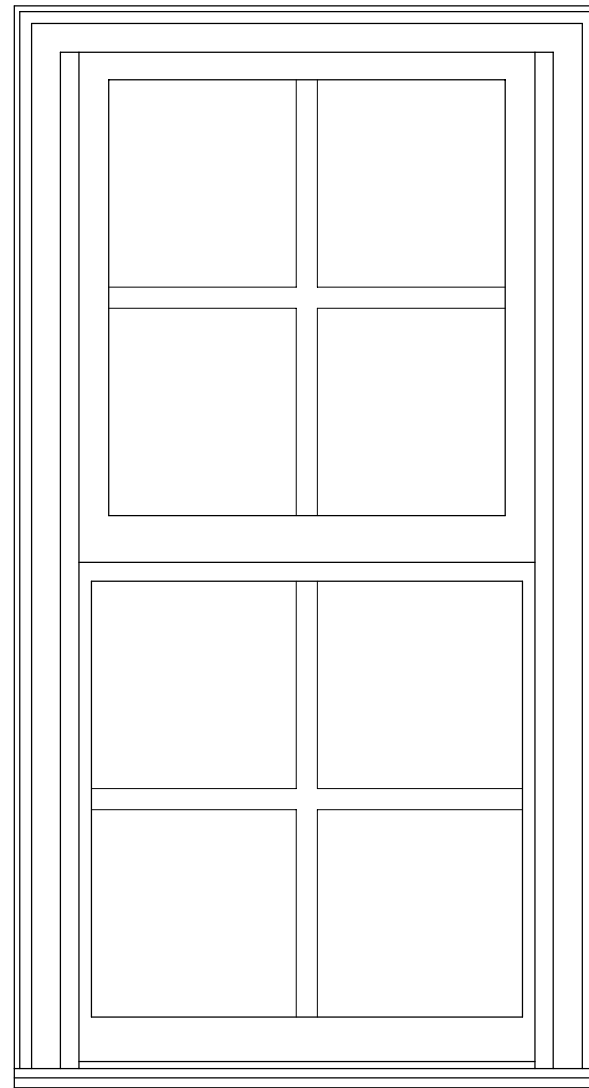
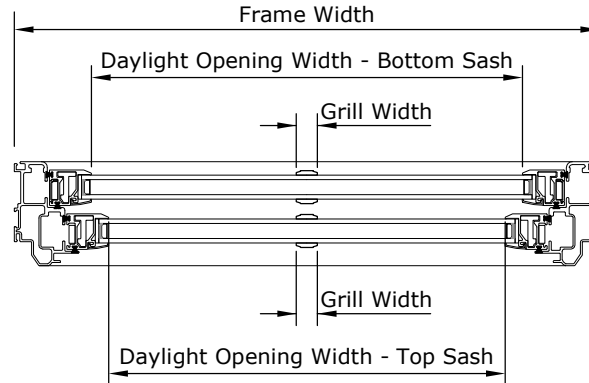
Top Sash Width:
Frame Width - 7 7/8"
Bottom Sash Width:
Frame Width - 6 7/16"
Top Sash Height:
[(Frame Height - 9")/3]x2
Bottom Sash Height:
(Frame Height - 9")/3

Cottage Style Window

Top Sash Width:
Frame Width - 7 7/8"
Bottom Sash Width:
Frame Width - 6 7/16"
Top Sash Height:
(Frame Height - 9")/3
Bottom Sash Height:
[(Frame Height - 9")/3]x2

Individual Daylight Openings (With Grills)

Calculate Daylight Opening (DLO)
using formulas above and;
 $DLO - [(\# \text{Grills} \times \text{Grill Width}) / (\# \text{Grills} + 1)]$
Note: Formula typical for both width and
height calculations.

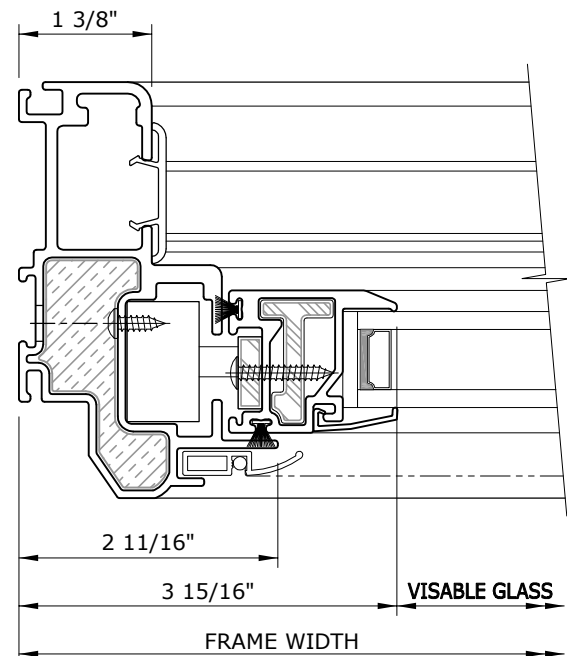
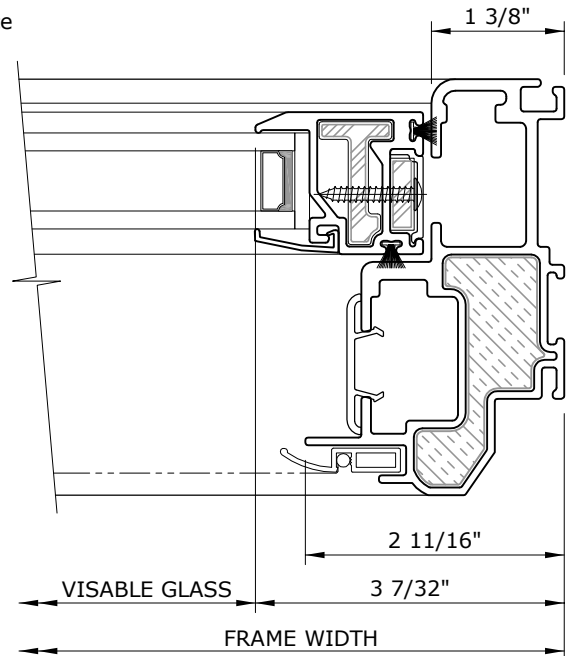
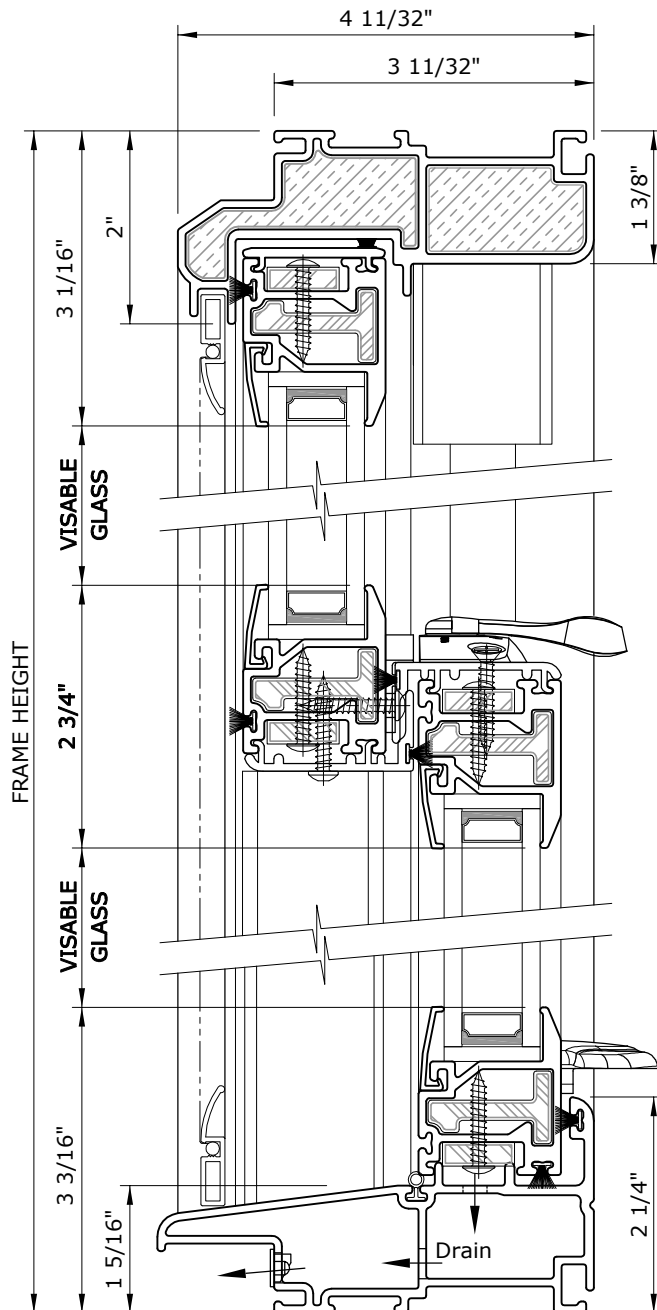


CROSS SECTION DETAIL

SCALE: 1:2

The Armaclad 1000 COMERCIAL SINGLE HUNG is fabricated using the same components and methods as the DOUBLE HUNG allowing it to all technical data and test standards. Balance Pins are attached to the top sash in the same way as a venting sash and locked into the balance shoes. The sash is then pushed into a fully closed position and fastened in place using a screw through the back side of the frame into the balance shoe. The sash stops below the top sash run fully between the sill and the sash.

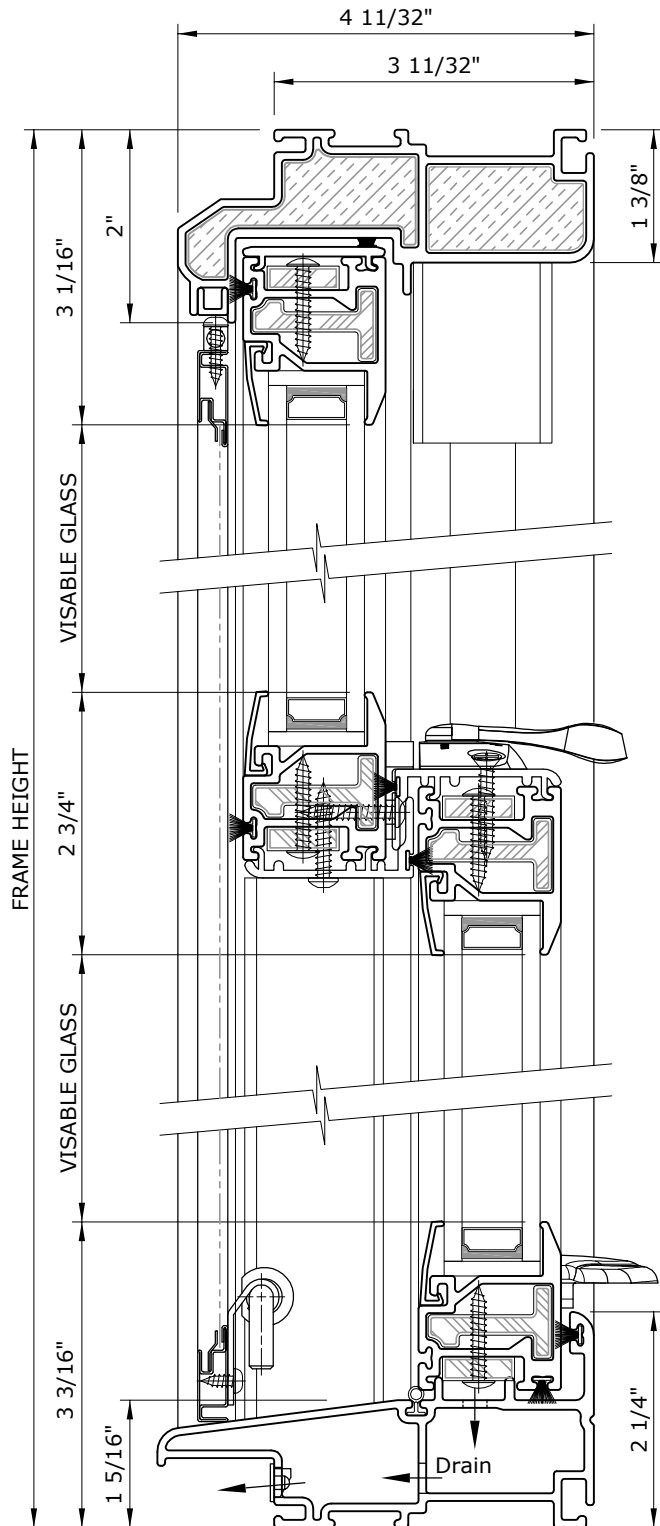
SHOWN WITH STANDARD SCREEN OPTION



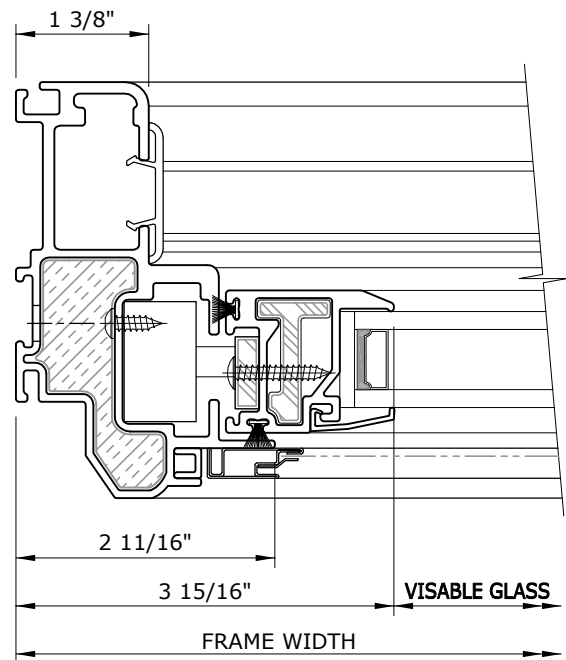
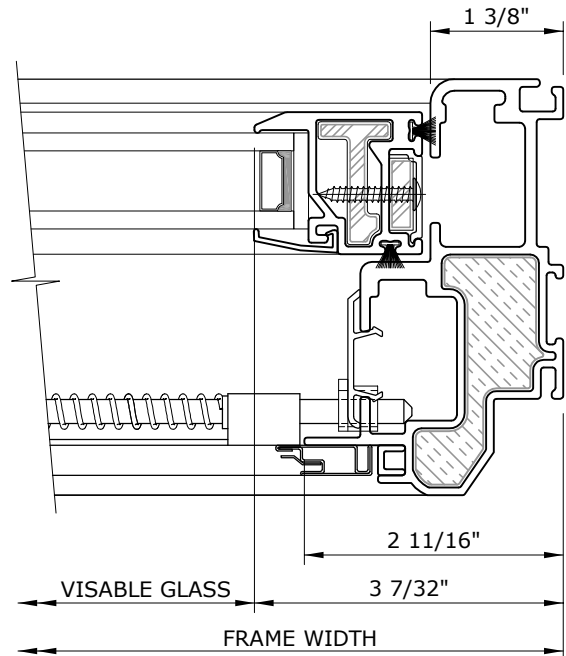
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CROSS SECTION DETAIL

SCALE: 1:2



SHOWN WITH SAFETY SCREEN OPTION



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FIBERGLASS WINDOW SYSTEM

1000 COMMERCIAL DOUBLE HUNG

MULLING GUIDELINES

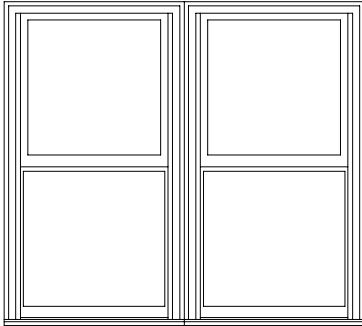
ELEVATIONS

NOTES: To determine individual minimum and maximum window unit sizes refer to page 1.1.9 Window Size Limitations.

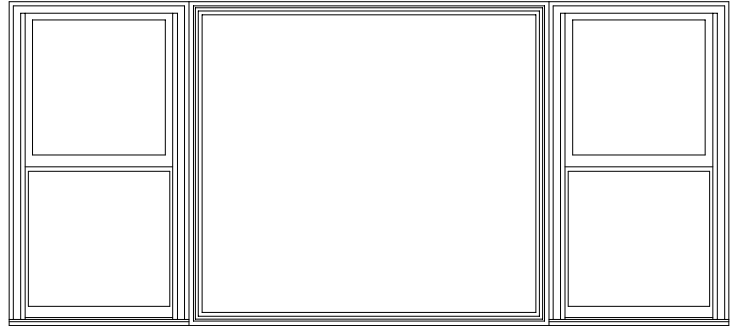
: When using 1" Architectural Mullions, add 1/2" per mullion to overall composite frame size for each mullion.

: All composite mulling should be completed in the factory unless circumstances dictate that field mulling is necessary.

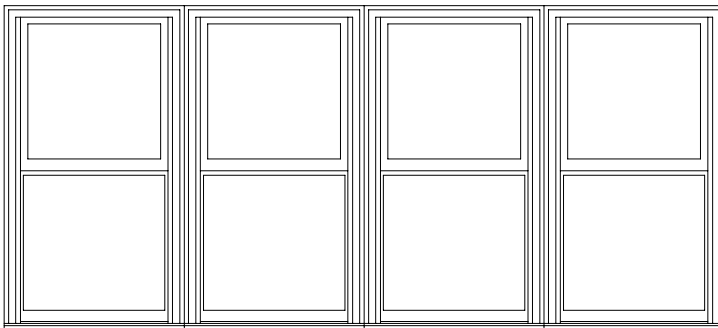
: All Mullions In Composites For Commercial Applications Must Have 1" Architectural Mullions. See page 1.1.14 for details.



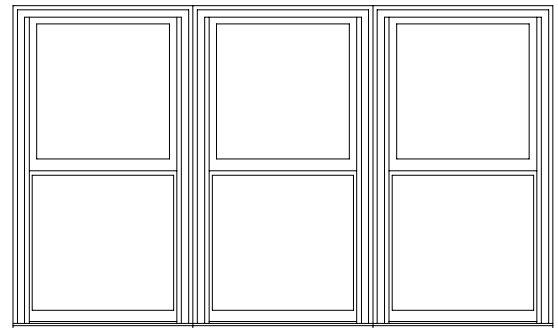
Maximum Composite Width = 108 1/2"
Maximum Composite Height = 92"
Maximum United Inches = 200 1/2"



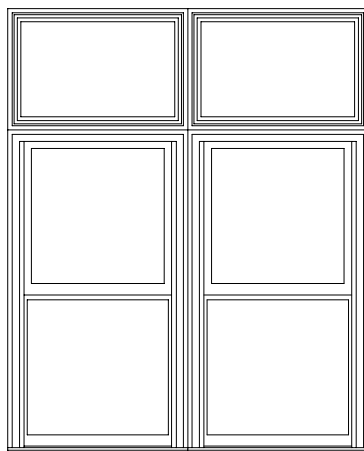
Maximum Composite Width = 120"
Maximum Composite Height = 84"
Maximum United Inches = 204"



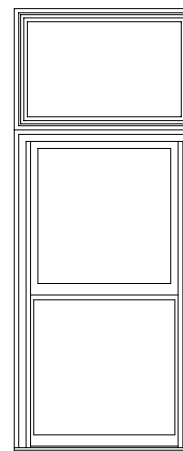
Maximum Composite Width = 120"
Maximum Composite Height = 92"
Maximum United Inches = 212"



Maximum Composite Width = 120"
Maximum Composite Height = 92"
Maximum United Inches = 212"



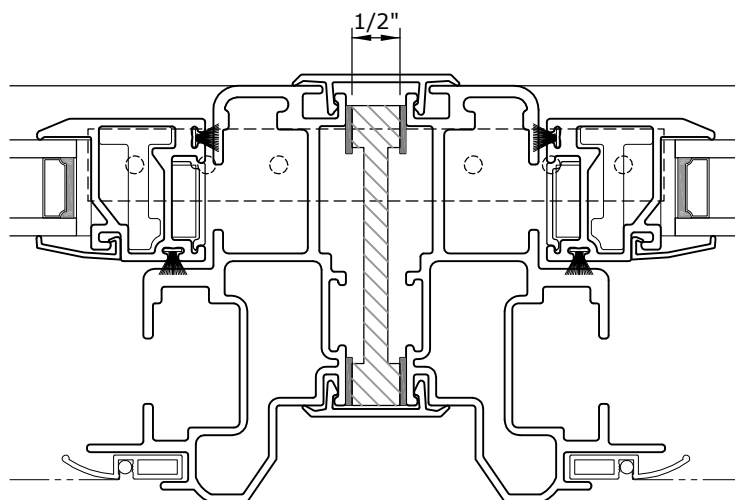
Maximum Composite Width = 108 1/2"
Maximum Composite Height = 110"
Maximum United Inches = 218 1/2"



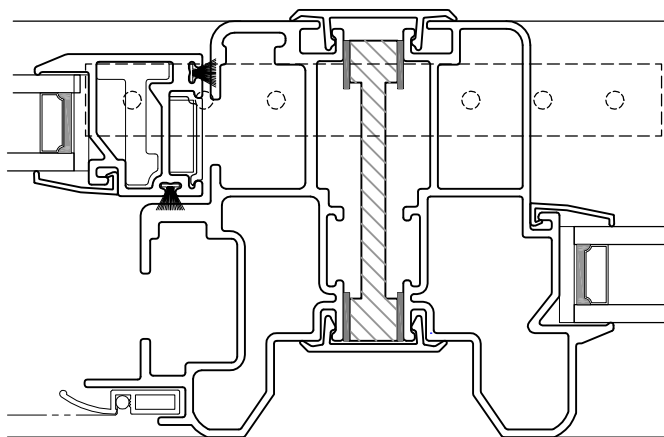
Maximum Composite Width = 54"
Maximum Composite Height = 116"
Maximum United Inches = 170"

CROSS SECTION DETAIL

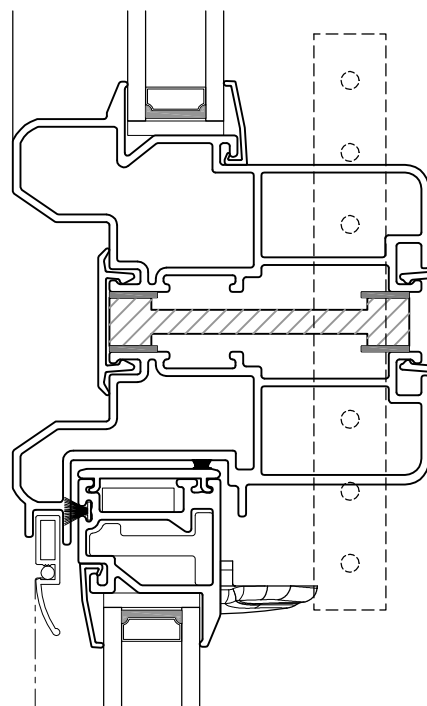
SCALE: 1:2



DOUBLE HUNG/DOUBLE HUNG



DOUBLE HUNG / 1001 PICTURE WINDOW



1001 TRANSOM / DOUBLE HUNG

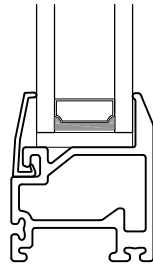
FIBERGLASS WINDOW SYSTEM

1000 COMMERCIAL DOUBLE HUNG STANDARD GLAZING AND GRID OPTIONS

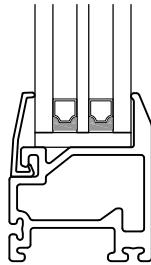
CROSS SECTION DETAIL

SCALE: 1:2

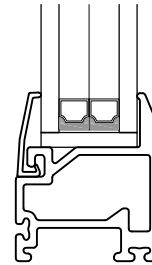
GLAZING OPTIONS



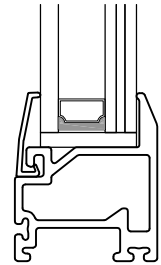
Standard Insul
(1" to 1 1/8" O/A)



Standard Triple Insul
(1" to 1 1/8" O/A)



Standard Heat Mirror
(1" to 1 1/8" O/A)

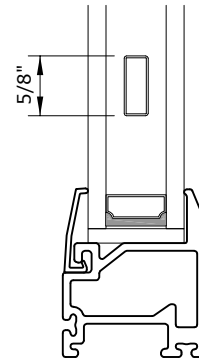


Standard Laminated
(1" to 1 1/8" O/A)

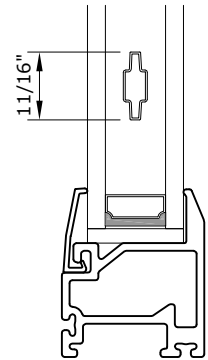
NOTES:

- External sheet glass on all commercial window applications will be 3/16" thick.
- Glass options include Annealed, Tempered and Laminated
- Glass type options include Clear, LoE, Heat Mirror and Reflective
- Fill options include Air, Argon and Krypton.

BETWEEN GLASS GRID OPTIONS



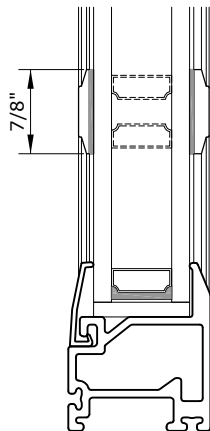
5/8" Flat Bar



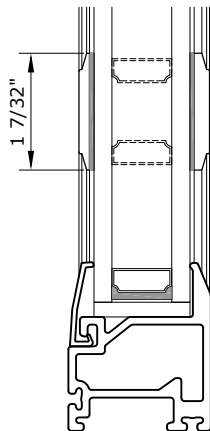
Contour Bar

SIMULATED DIVIDED LIGHT OPTIONS (SDL's)

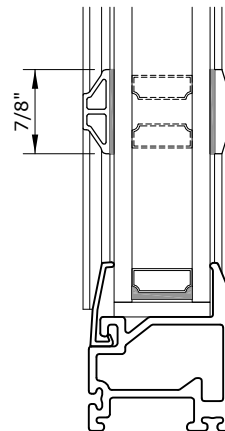
(Extruded Aluminum Exterior Grids and Extruded PVC Interior Grids)



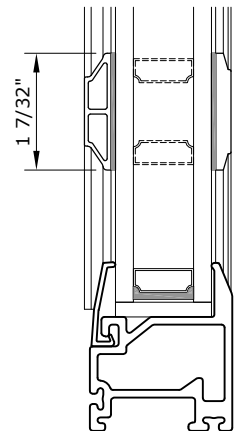
Combination
DS5/VG15



Combination
DS6/VG16



Combination
PS1/VG15



Combination
PS2/VG16

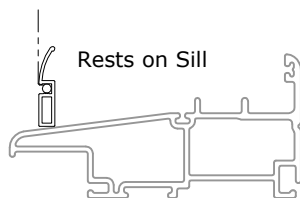
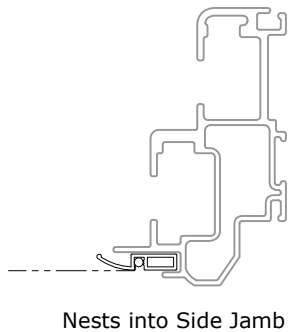
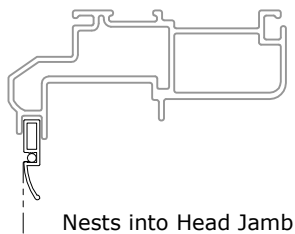
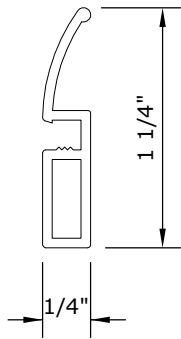
NOTE: All Simulated Divided Light Options and Combinations Available With Or Without Spacer Bars Behind The Grids.

CROSS SECTION DETAIL

SCALE: 1:1

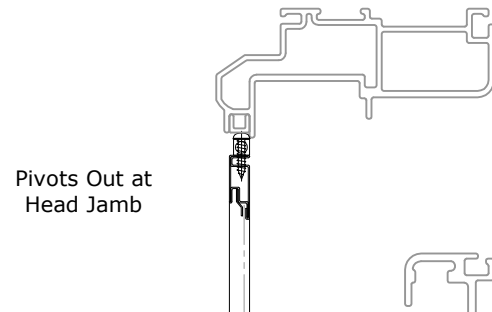
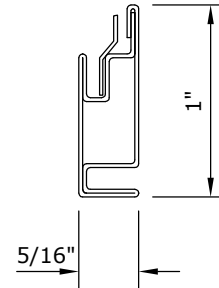
STANDARD SCREEN FRAME

Available in Full or Half Screen options.



SAFETY SCREEN FRAME

Available in Full or Half Screen options.



Nests on Side Jamb

Full Open under Check Rail

Attaches and Detaches with Spring Bolts into Keepers in Side Jamb

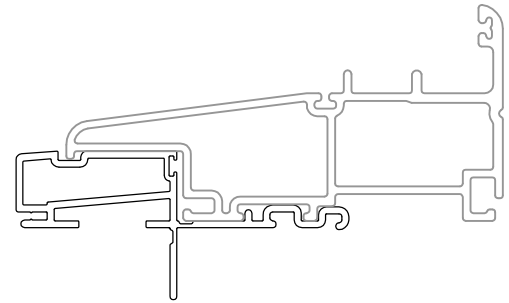
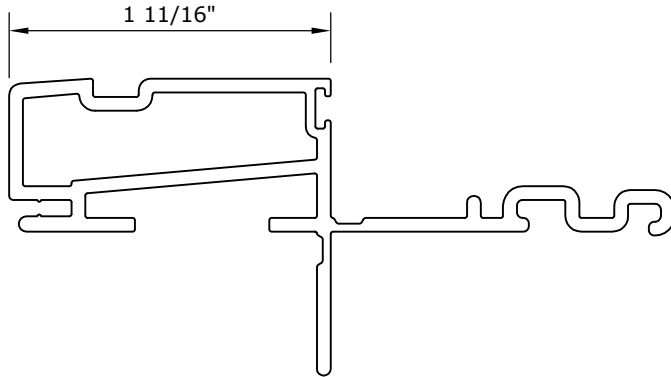
Fully Closed at Sill

Rests on Sill

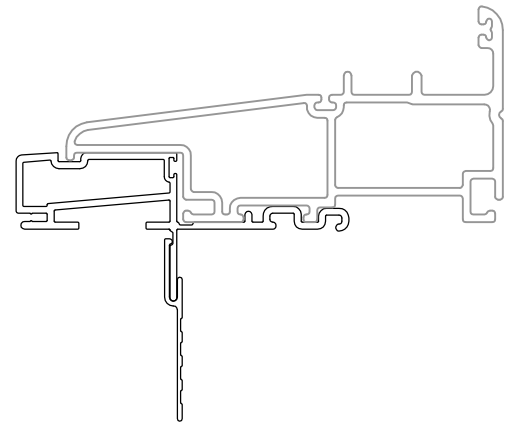
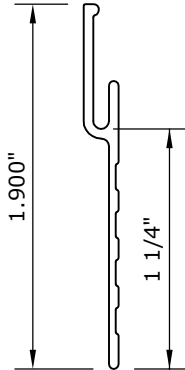
STANDARD ARMACLAD PANNING PROFILES

SCALE: 1:1

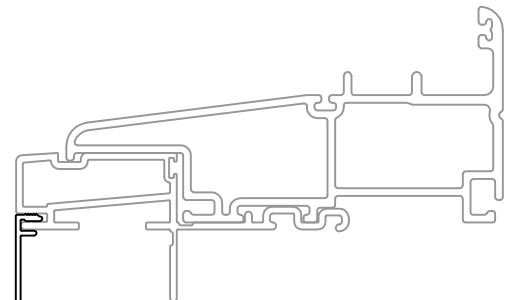
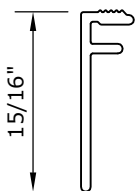
PAN-001 - 1 11/16" x 13/16" SQUARE NOSE ALUMINUM EXTERIOR SILL EXTENDER



PAN-013 - 2" ALUMINUM INSTALLATION FIN EXTENDER



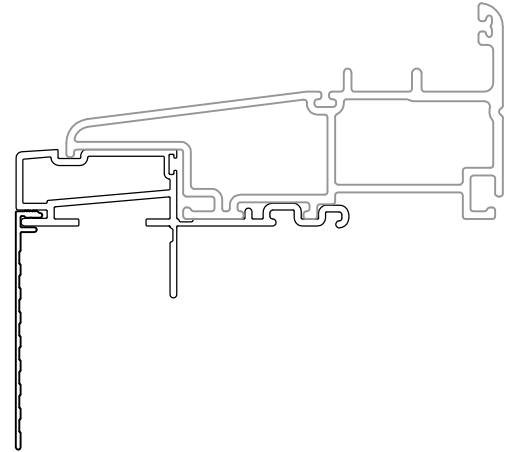
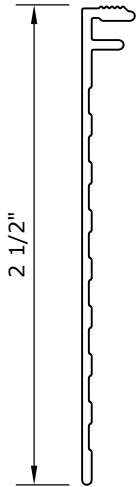
PAN-002 - 15/16" ALUMINUM JAMB EXTENDER FLASHING



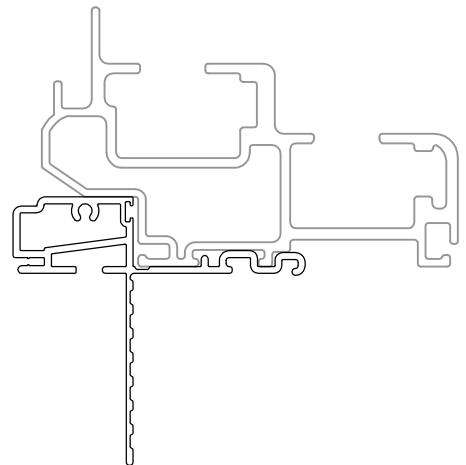
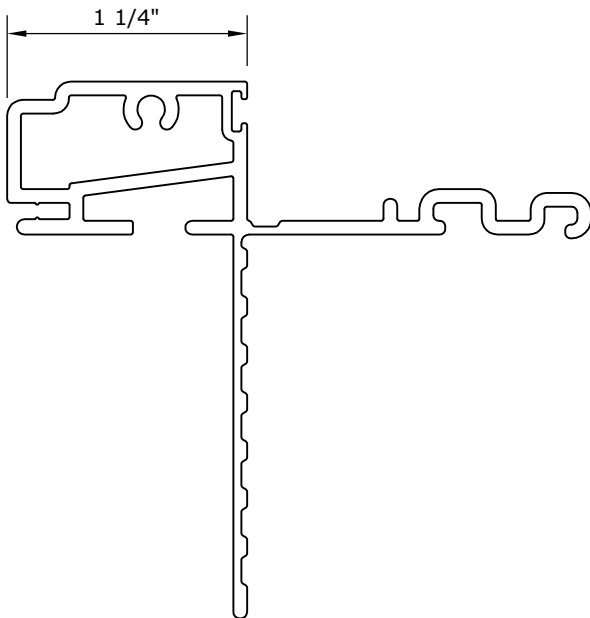
STANDARD ARMACLAD PANNING PROFILES

SCALE: 1:1

PAN-014 - 2 1/2" ALUMINUM JAMB EXTENDER FLASHING



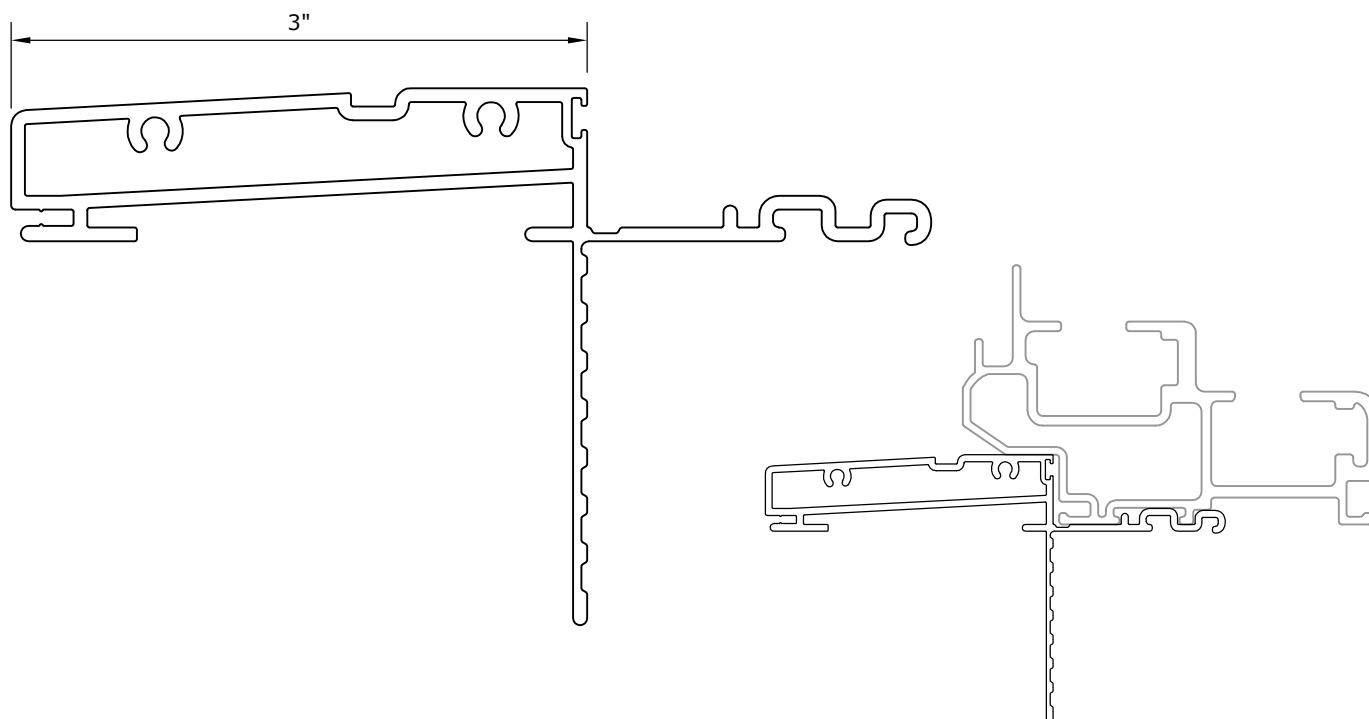
PAN-003 - 1 1/4" X 13/16" SQUARE NOSE ALUMINUM JAMB EXTENDER



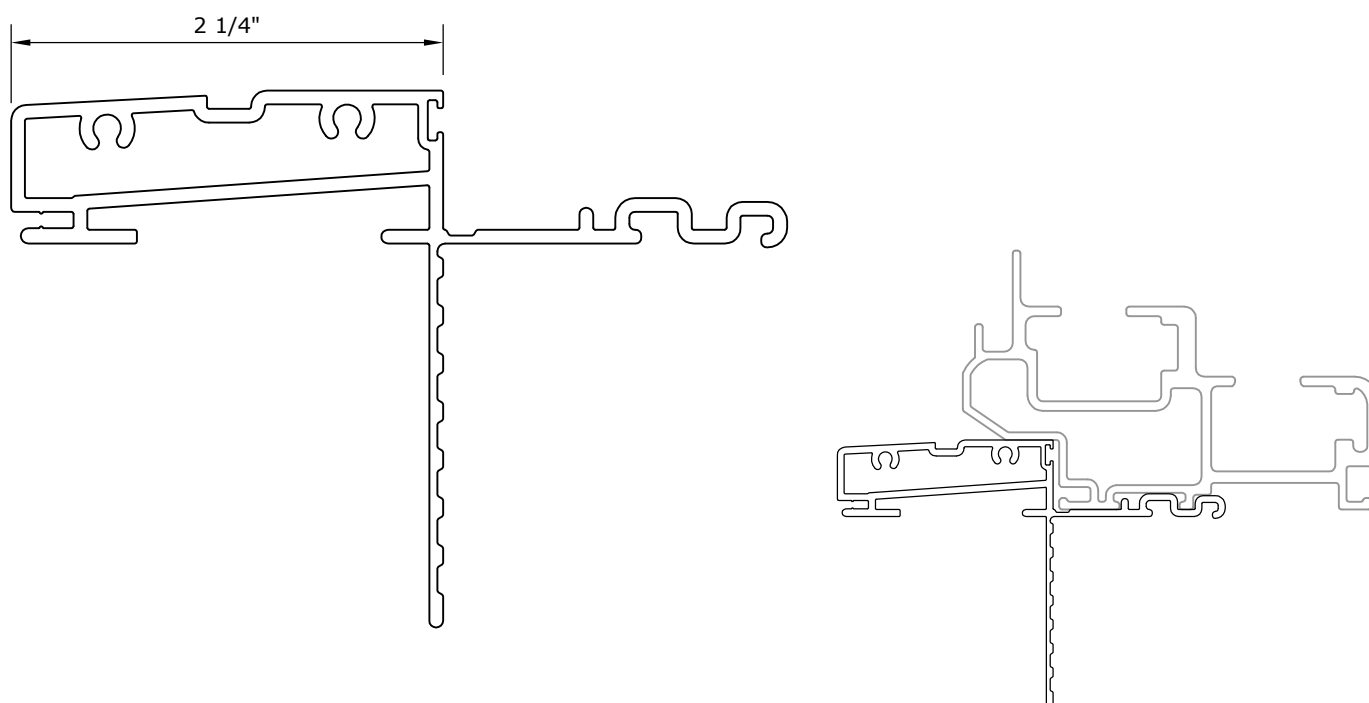
STANDARD ARMACLAD PANNING PROFILES

SCALE: 1:1

PAN-004 - 3" X 13/16" SQUARE NOSE ALUMINUM EXTERIOR JAMB EXTENDER



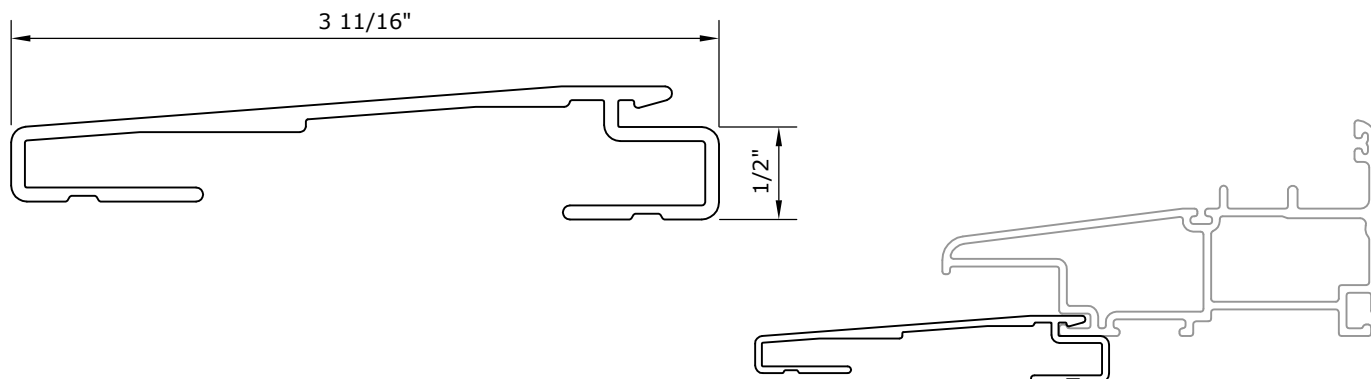
PAN-005 - 2 1/4" X 13/16" SQUARE NOSE ALUMINUM EXTERIOR JAMB EXTENDER



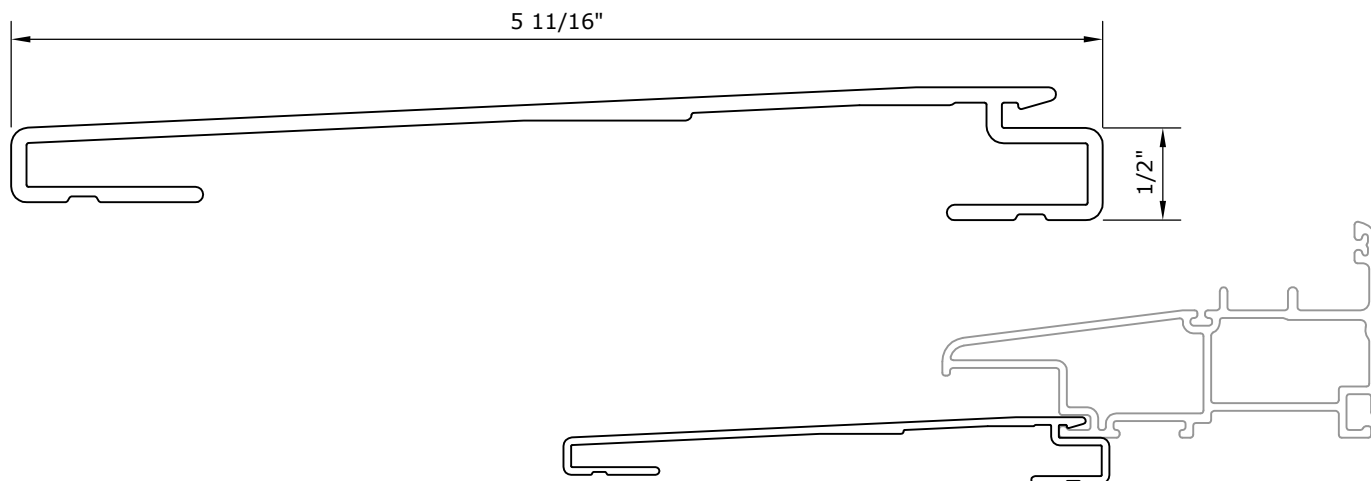
STANDARD ARMACLAD PANNING PROFILES

SCALE: 1:1

PAN-006 - 3" ALUMINUM EXTERIOR SLOPED SILL EXTENDER

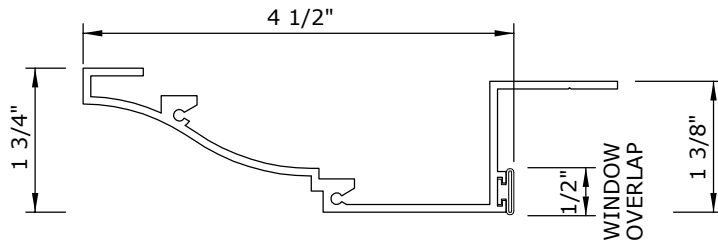


PAN-007 - 5" ALUMINUM EXTERIOR SLOPED SILL EXTENDER

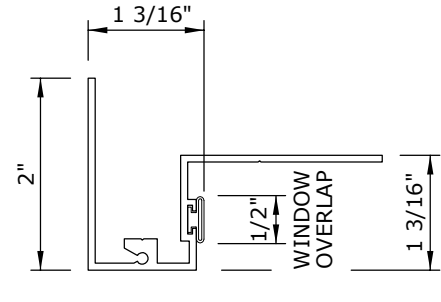


PRE-SET CONTOURED PANNING OPTIONS AVAILABLE FROM ARMACLAD

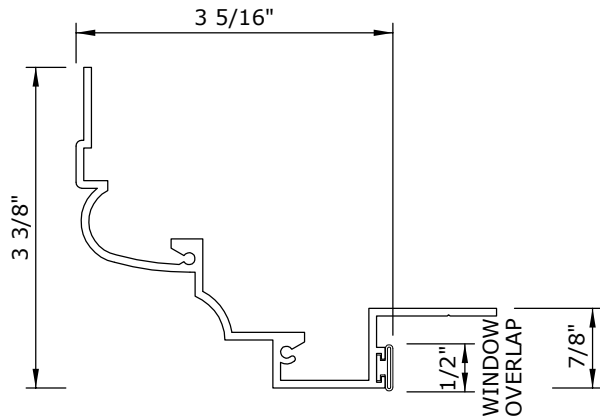
SCALE: 1:1



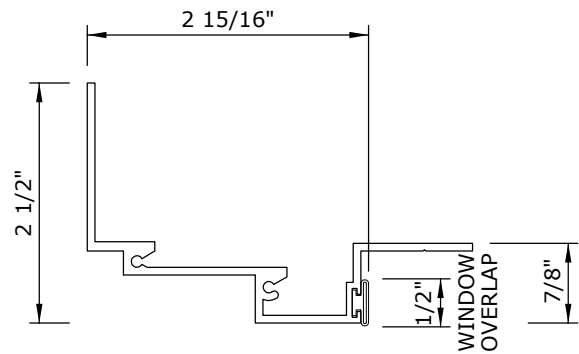
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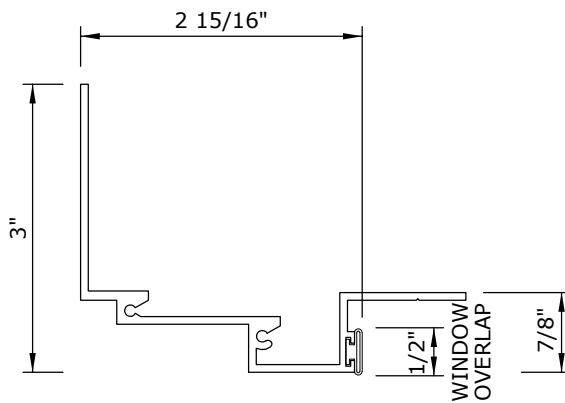
#996014



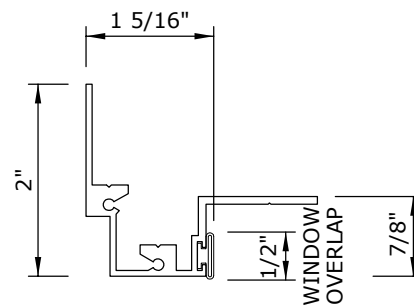
#996050



#996052



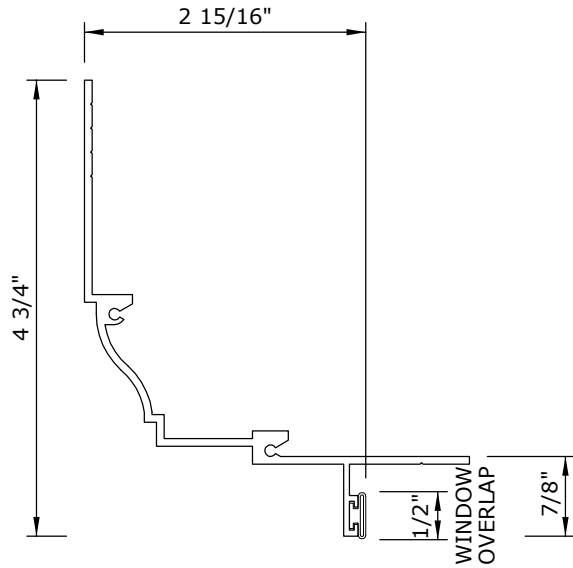
#996053



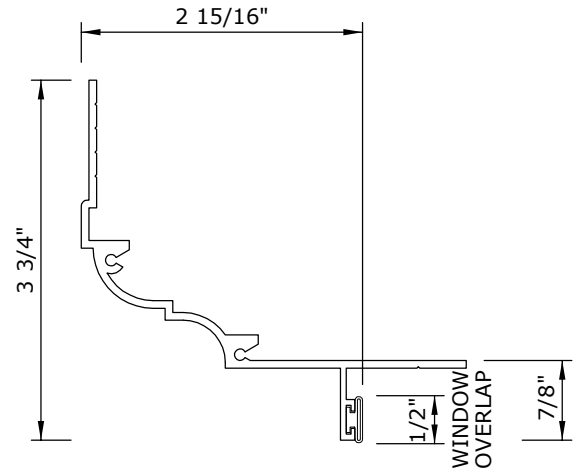
#996054

PRE-SET CONTOURED PANNING OPTIONS AVAILABLE FROM ARMACLAD

SCALE: 1:1



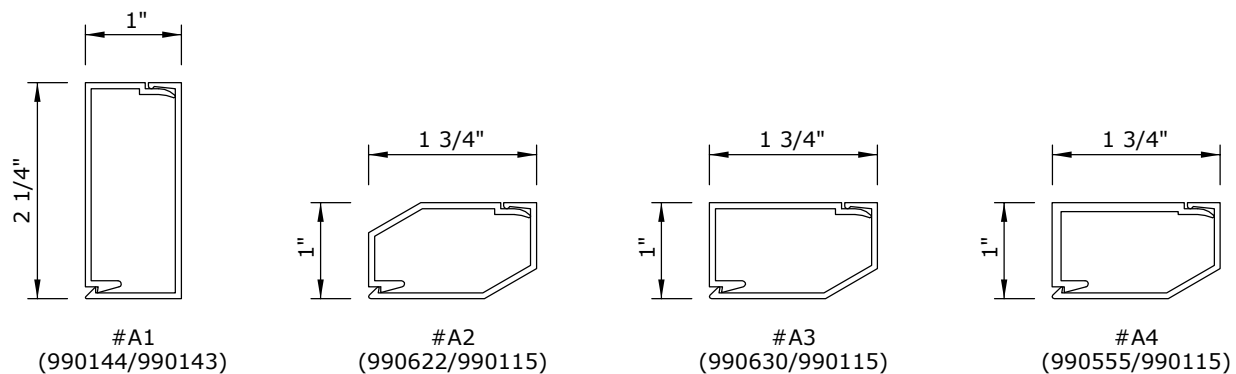
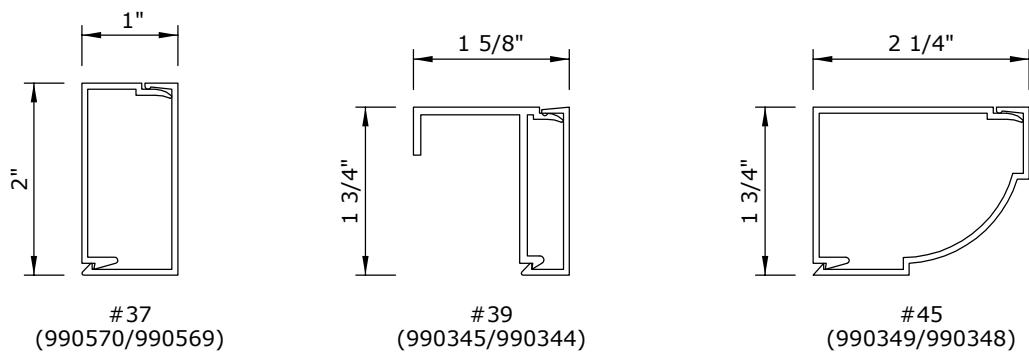
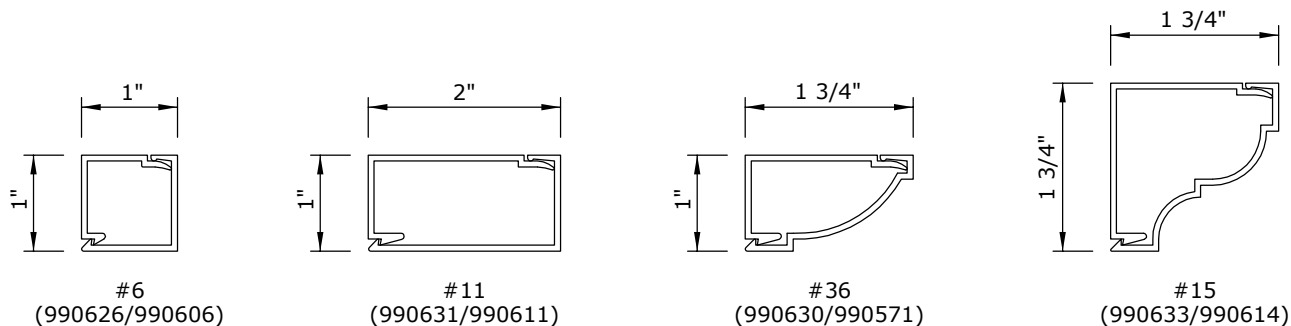
#996055



#996101

INTERIOR TRIM ASSEMBLY OPTIONS AVAILABLE FROM ARMACLAD

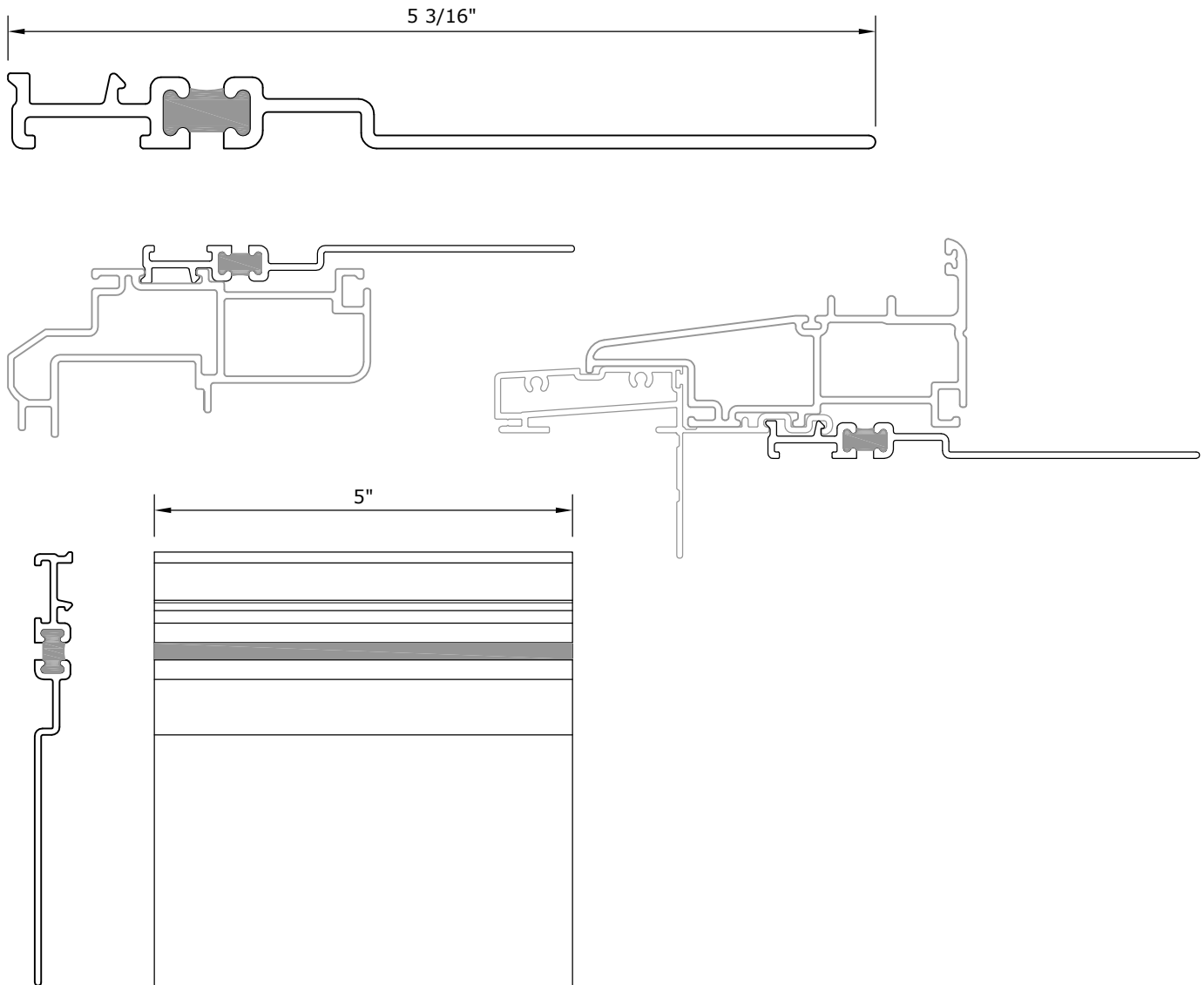
SCALE: 1:2



STANDARD ARMACLAD COMPONENTS

SCALE: 1:1

PAN-011 - THERMALLY BROKEN ALUMINUM ANCHOR CLIP



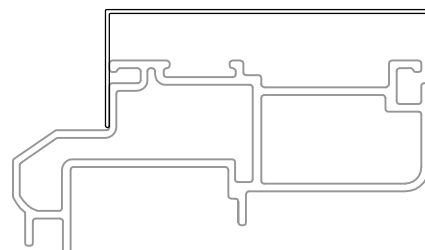
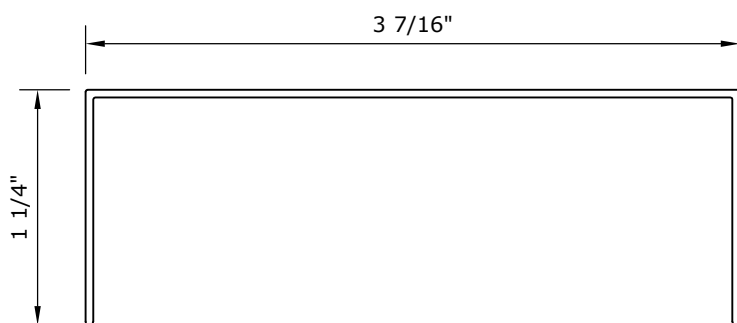
PAN-012 - THERMALLY BROKEN SILL ANCHOR



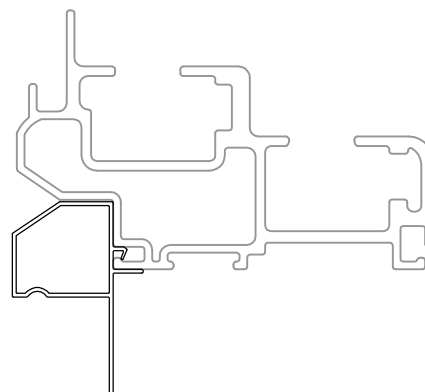
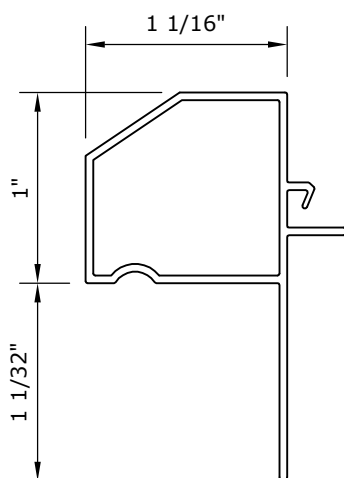
STANDARD ARMACLAD COMPONENTS

SCALE: 1:1

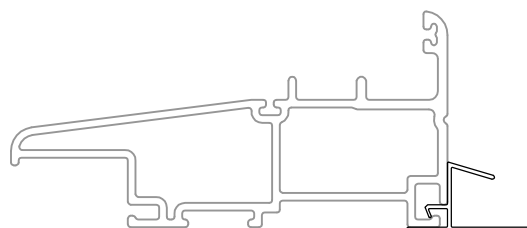
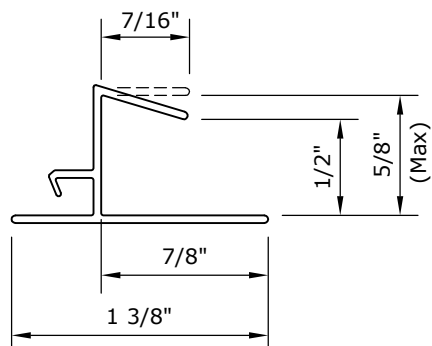
SV 34 - HEAD EXPANDER



SV 35 - BRICK MOLD



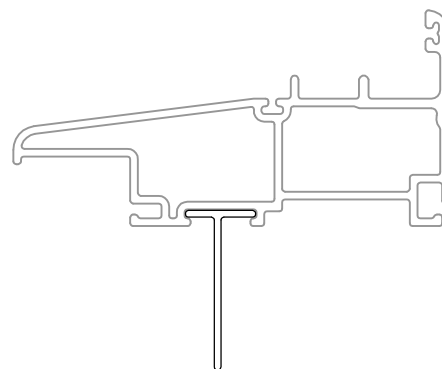
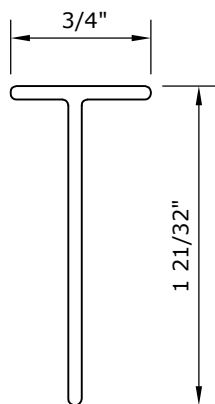
SV 36 - 5/8" DRYWALL RECEPTOR



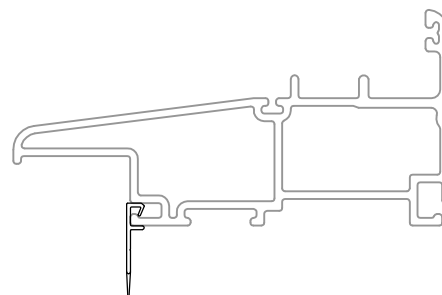
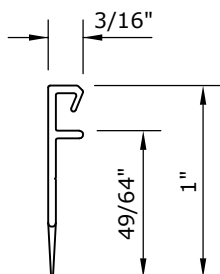
STANDARD ARMACLAD COMPONENTS

SCALE: 1:1

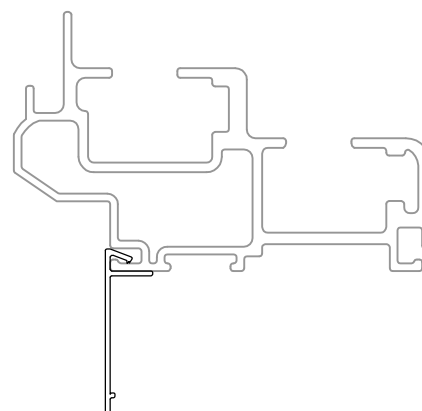
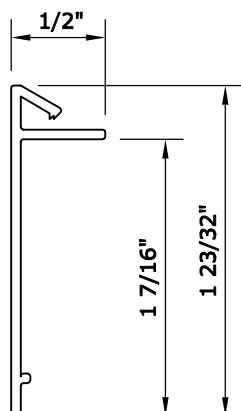
SS37B - NAILING FLANGE



SV 38 - 3/4" SILL TRIM



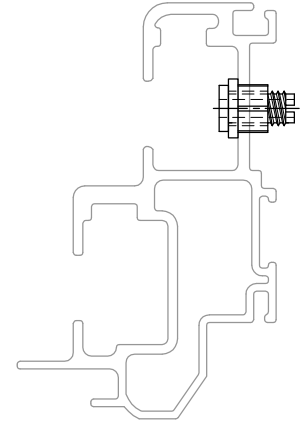
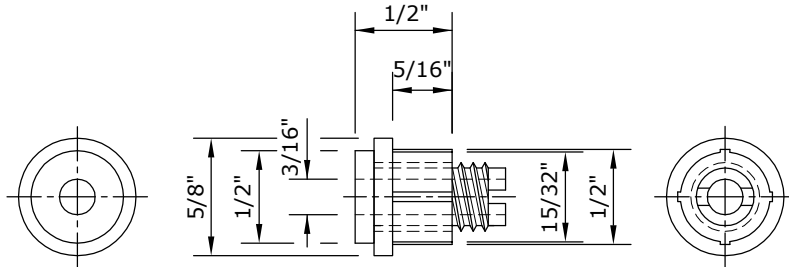
XF 12 - FLORIDA ($1 \frac{7}{16}$ ") FLANGE



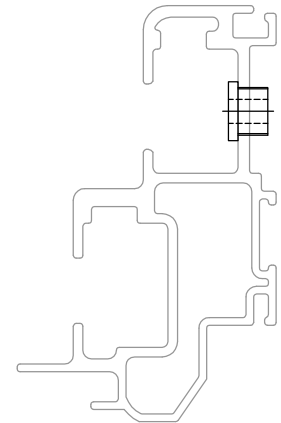
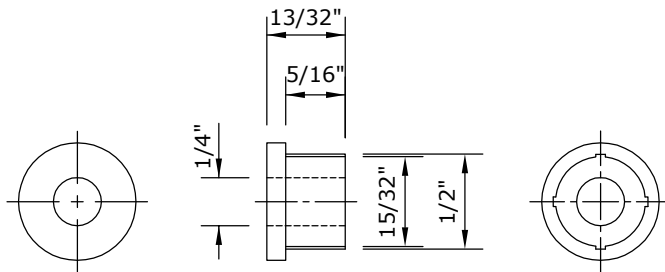
STANDARD COMPONENTS AVAILABLE FROM ARMACLAD

SCALE: 1:1

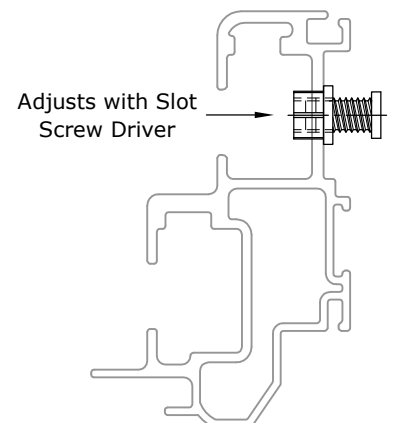
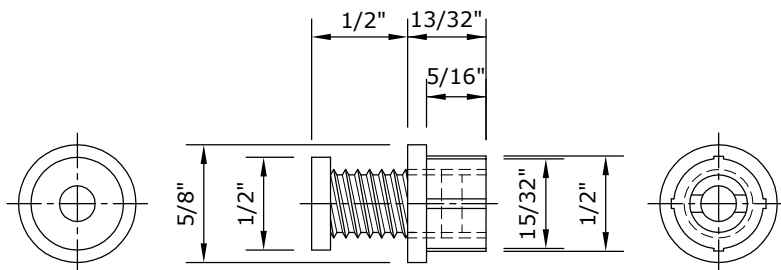
SCREW THROUGH FRAME GROMMET - #8 SCREWS



SCREW THROUGH FRAME GROMMET - TAPCON SCREWS



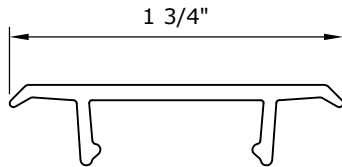
JAMB ADJUSTER



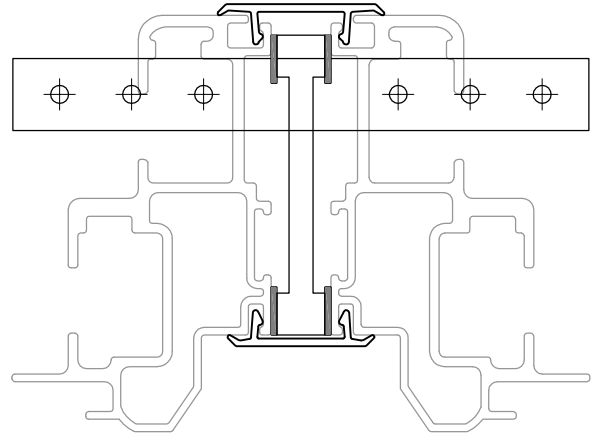
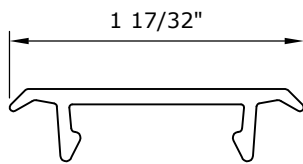
STANDARD ARMACLAD COMPONENTS

SCALE: 1:1

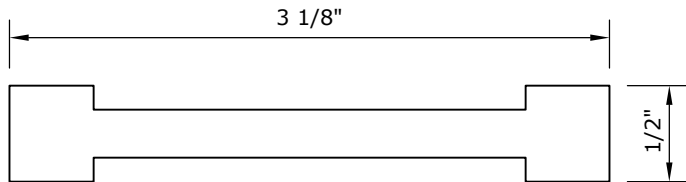
SS53 - INTERIOR ARCHITECTURAL MULLION COVER



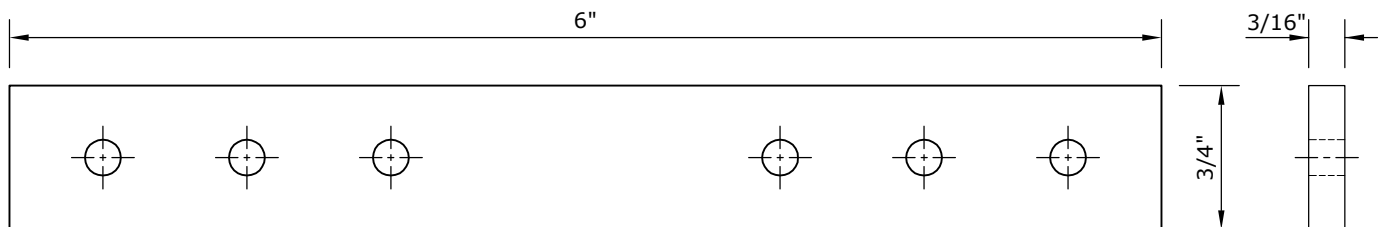
SS 54 - EXTERIOR ARCHITECTURAL MULLION COVER



SV 31-A - ARCHITECTURAL MULLION CORE



SV 31-B - ARCHITECTURAL MULLION SUPPORT BAR



NOTES

In this section, Armaclad gives Basic Installation Instructions, Guide Lines and General Applications using Armaclad Fiberglass Window Products and Accessories. As each installation is unique due to the design of the structure and the installation requirement, each project must be reviewed individually and designed to meet the specified need.

To allow as much flexibility as possible in the installation of our Fiberglass Window Products, Armaclad has developed and offers a wide range of Installation Accessories to choose from when designing and specifying the requirements.

To allow us to confirm the installation requirements are compatible with our products and to assist in the design specifications and material requirements, Armaclad requests that as much new or existing window opening building structure information as is available be supplied in dimensioned drawings and sketches, or in Autocad format if possible.

If an installation requirement cannot be met with the standard Armaclad accessory offering, we will work with Architects and Contractors to design and/or source the necessary components.

All Installation Requirements must be specified prior to the fabrication of the windows to allow all necessary preparations to be made during the manufacturing process.

Armaclad strongly discourages and will not warrant any product and installation that involves screws through the nailing fins only. All installations must include anchors that are attached to or nested into the frame, screws through the side jambs or a panning/clip system that nests and firmly holds the system in place and meets required code.

No fasteners should penetrate the fiberglass walls of the sill profile. This profile is designed to be a water reservoir and drain and must remain water tight.

Unless specifically made a part of the sales contract, Armaclad does not supply any of the installation materials including but not limited to sealants, fasteners, shims, insulation, ice and water shield, flashings and interior casings.

When sizing rough and masonry openings, please insure that the recommended clearances are used. These clearances are an important component in a successful installation.

SIZING THE OPENINGS

SCALE: 1:5

ROUGH OPENING:

Window Frame Width + 1"

Window Frame Height + 1"

MASONRY OPENING:

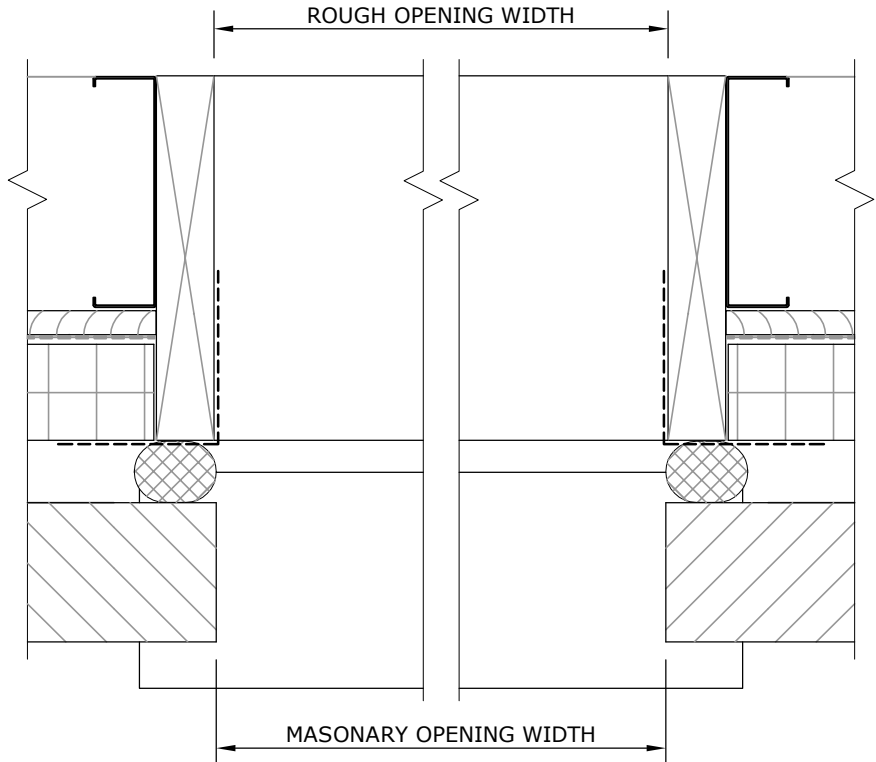
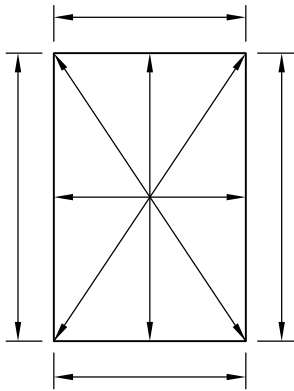
Window Frame Width (If No Panning) or
O/A Panning Width + 1"

Window Frame Height (If No Panning) or
O/A Panning Width + 1"

BUILDING THE ROUGH OPENING

Using the size calculations shown above the R.O. should be built Plumb, Level and Square to insure the best possible conditions to install the window unit into.

The corresponding horizontal, vertical and corner to corner dimensions should measure within 1/8" of each other.



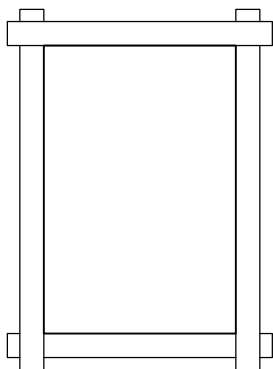
PREPARING THE ROUGH OPENING

ICE AND WATER SHIELD:

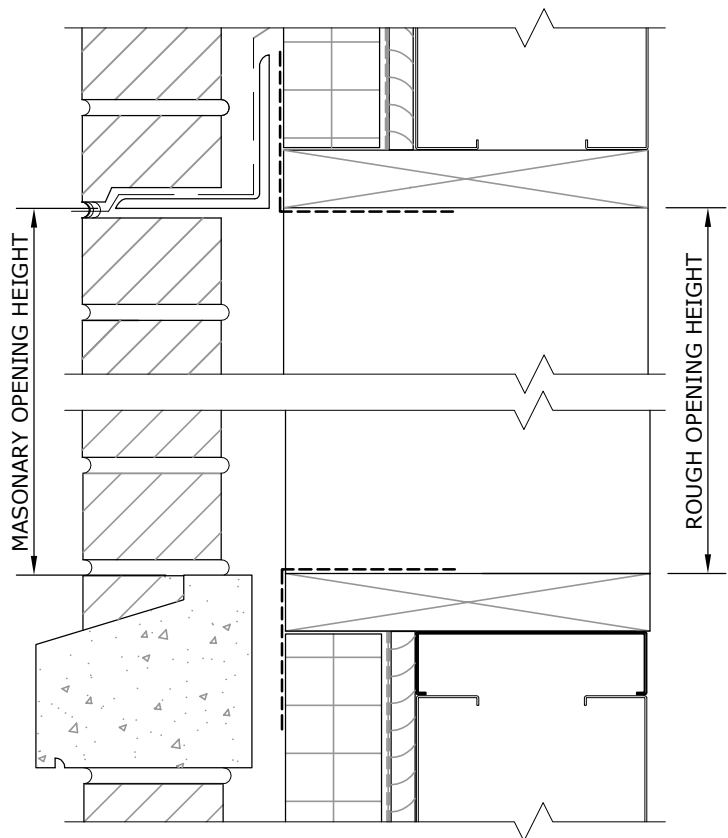
Whenever possible, the exterior of the R.O. should be wrapped with a high quality Ice And Water Shield to protect the structure around the opening from any un-detected sealant failures.

See ---- lines in section details on right.

This material should be applied like a flashing starting with the bottom piece, the side pieces overlapping the bottom and the top piece overlapping the sides.



Please refer to the Ice And Water Shield manufacturer's instructions prior to applying it to the openings.



FIBERGLASS WINDOW SYSTEM

1000 COMMERCIAL DOUBLE HUNG INSTALLATION - BASIC REQUIREMENTS

INSTALLATION SECTION DRAWING

SCALE: 1:4

STEP 6

Place High Quality Insulation around the interior of the installation between the window frame and the structure

STEP 5

Apply a continuous bead of High Quality Exterior Grade Sealant around the perimeter of the installation between the panning and brick veneer

STEP 4

Place Backer Rod around exterior perimeter of the installation between the panning and brick veneer

STEP 3

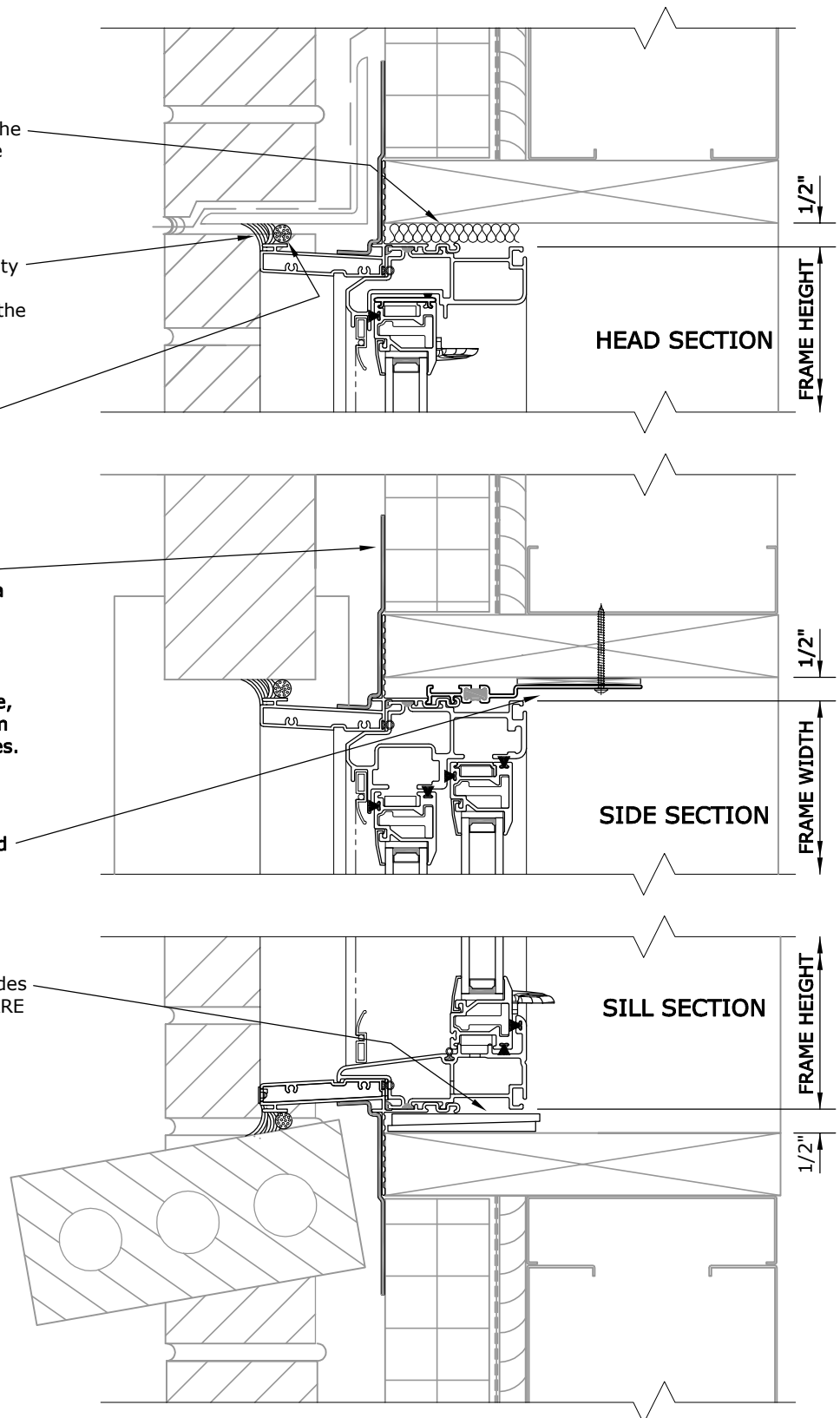
When ever possible, seal around the exterior side of the installation using a High Quality Ice and Water Shield overlapping the panning onto the structure.
This material should be applied like a flashing starting with the bottom piece, the side pieces overlapping the bottom and the top piece overlapping the sides.

STEP 2

Secure window in place using specified method and fasteners

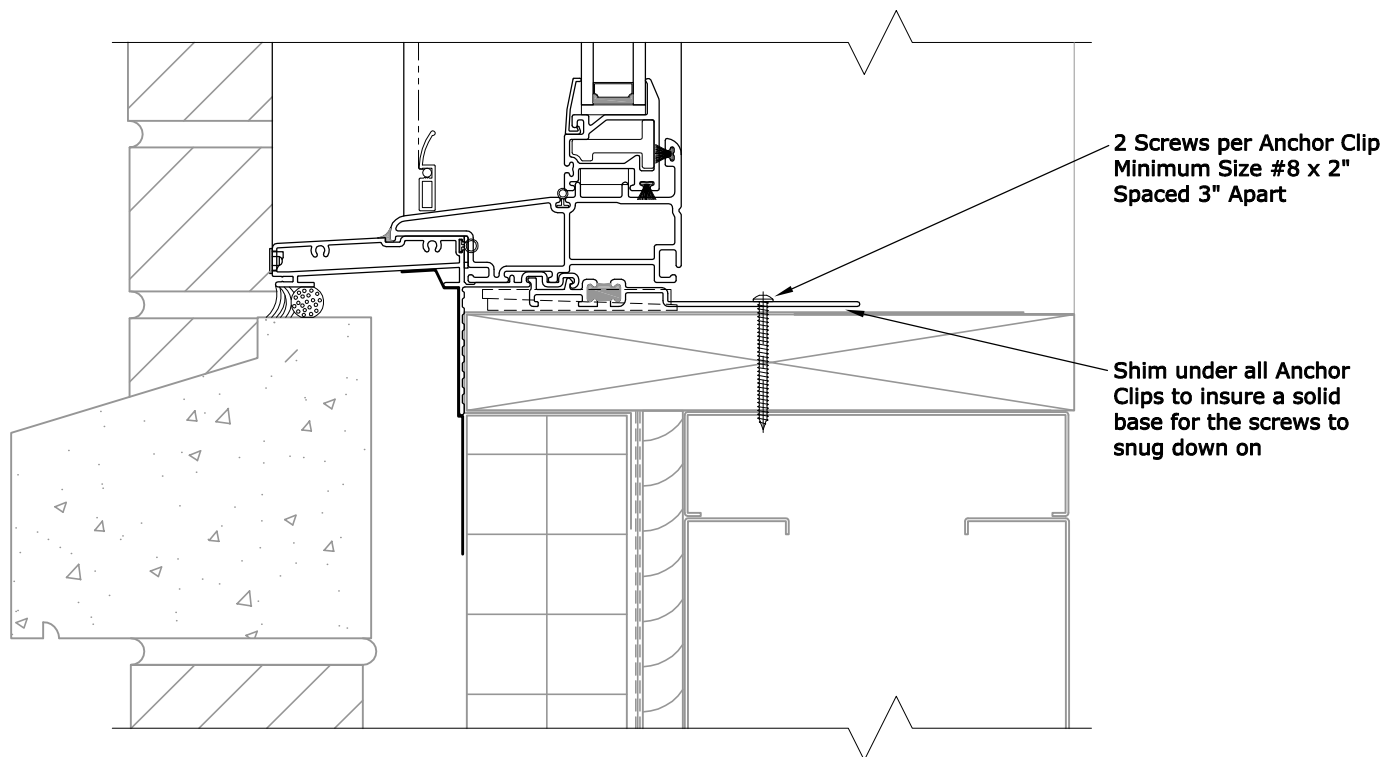
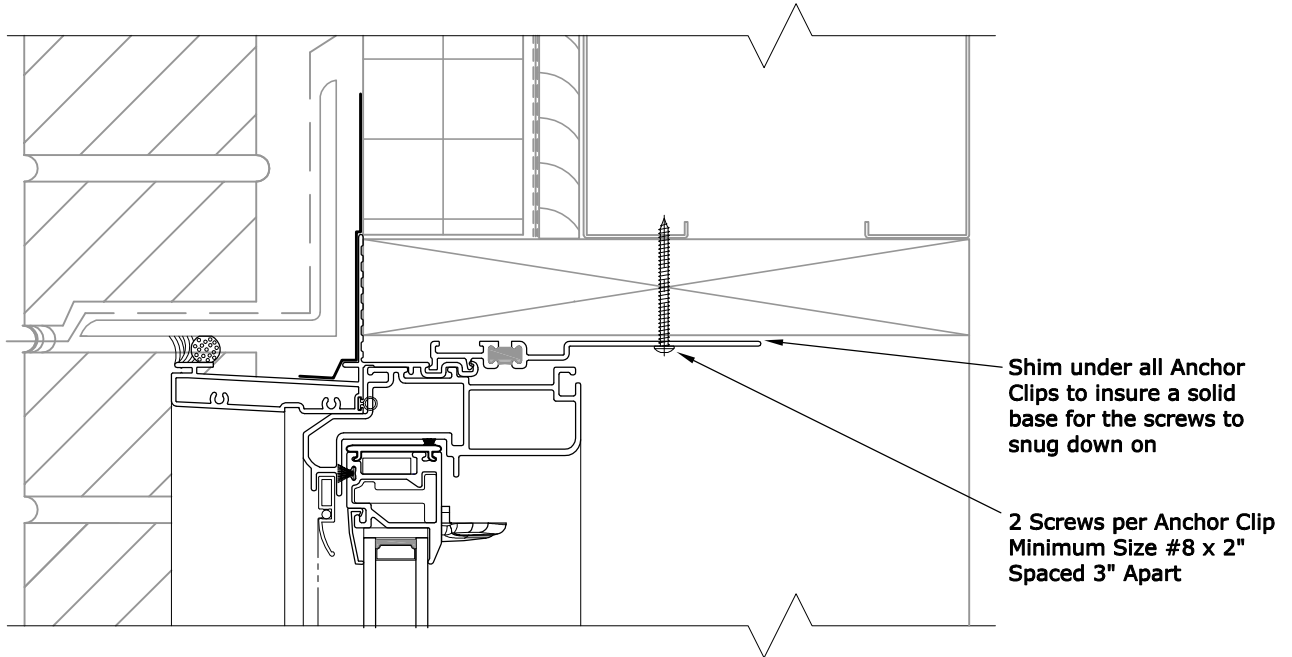
STEP 1

Shim window in opening on all four sides insuring it is PLUMB, LEVEL and SQUARE



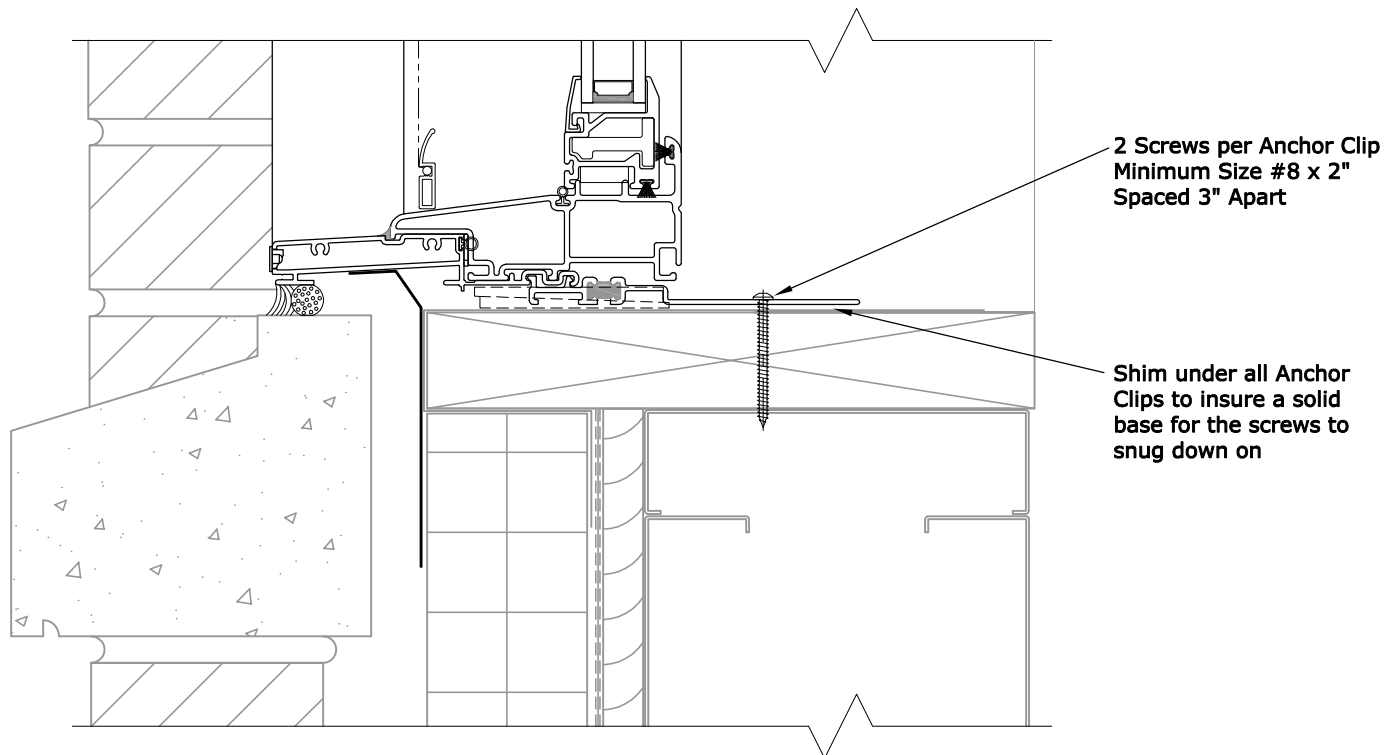
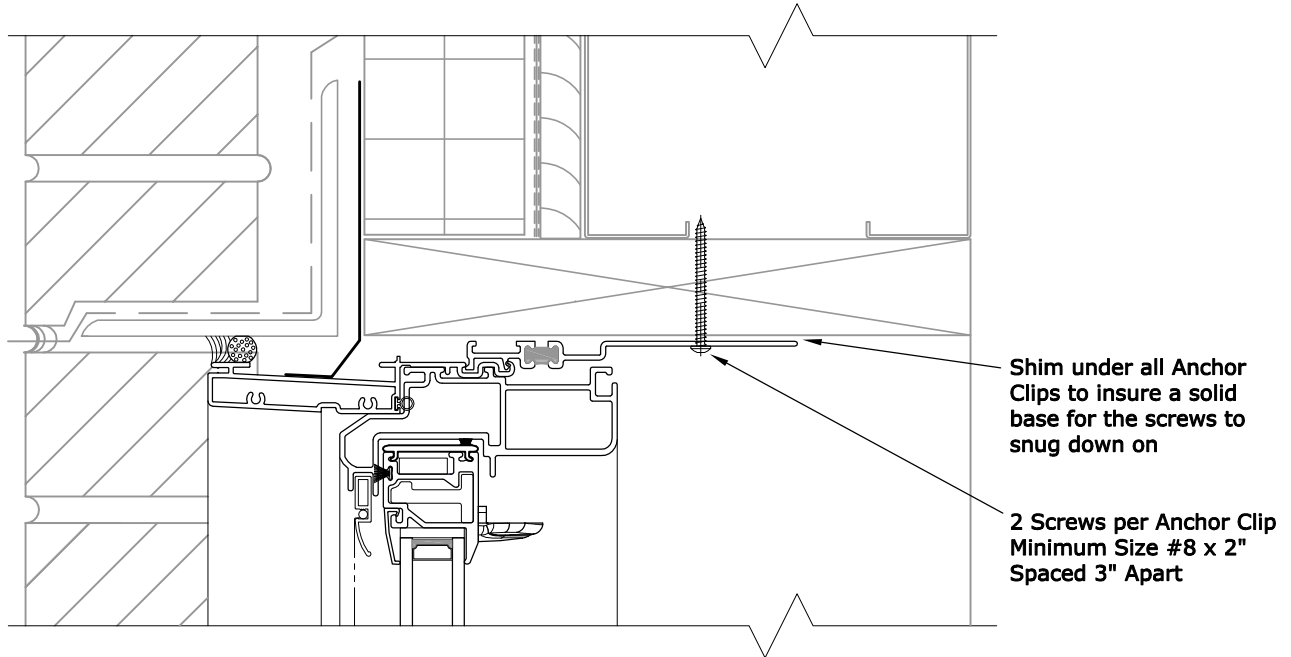
ANCHOR CLIP WITH PANNING

SCALE: 1:3



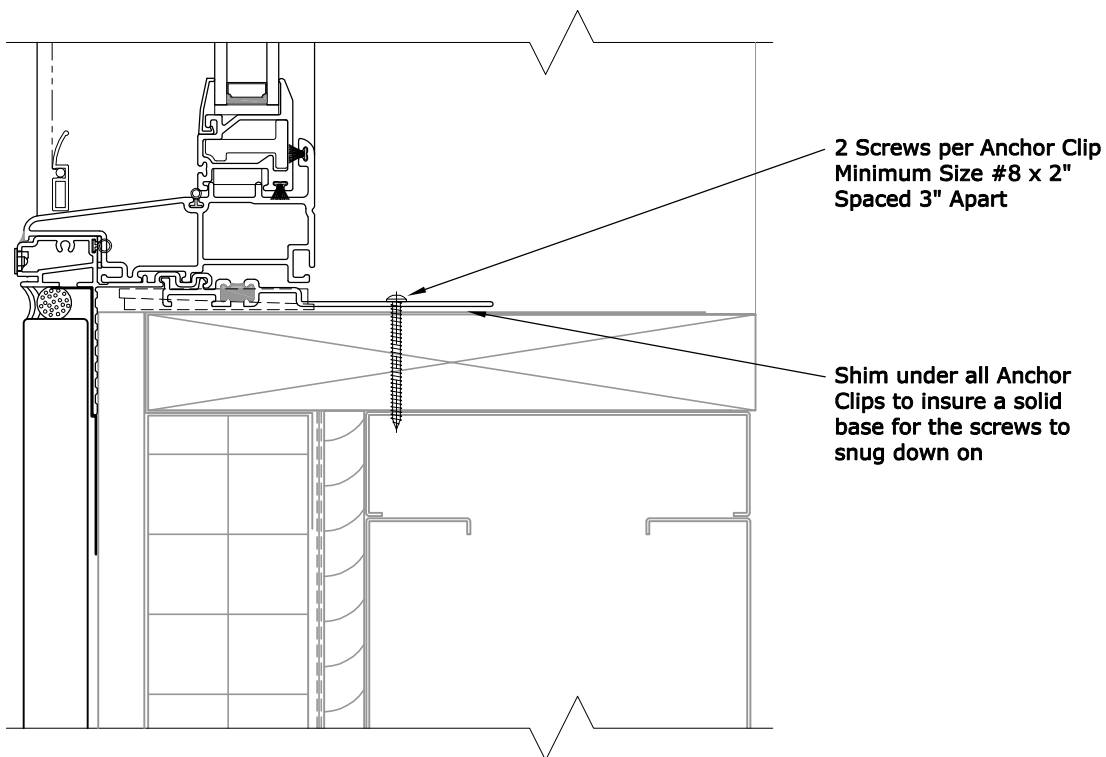
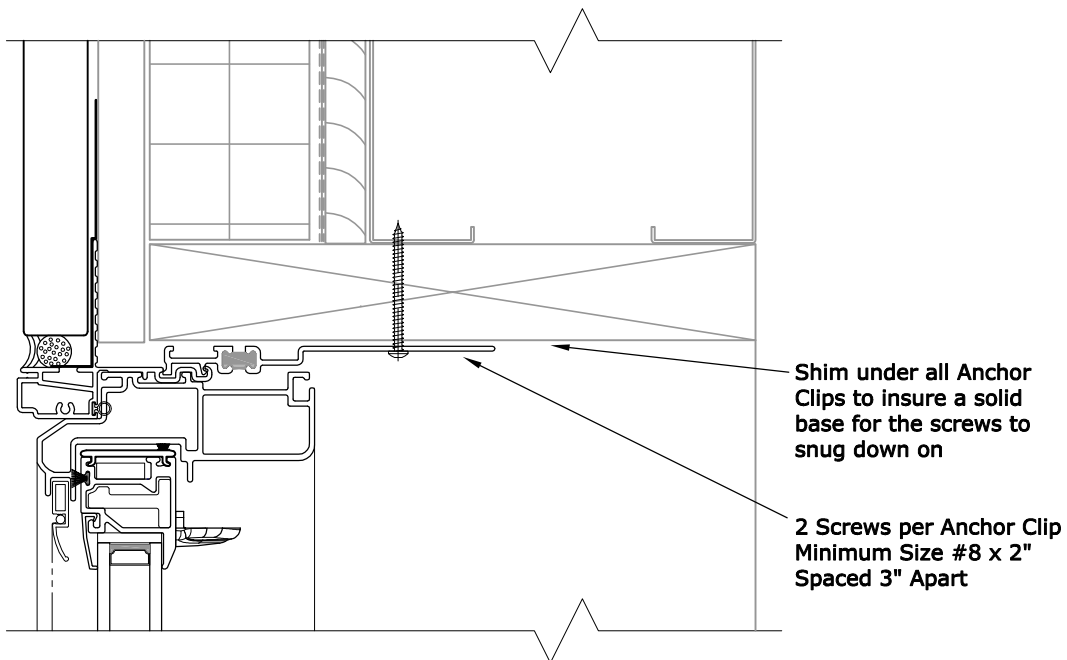
ANCHOR CLIP WITH PANNING (NO INSTALLATION FIN)

SCALE: 1:3



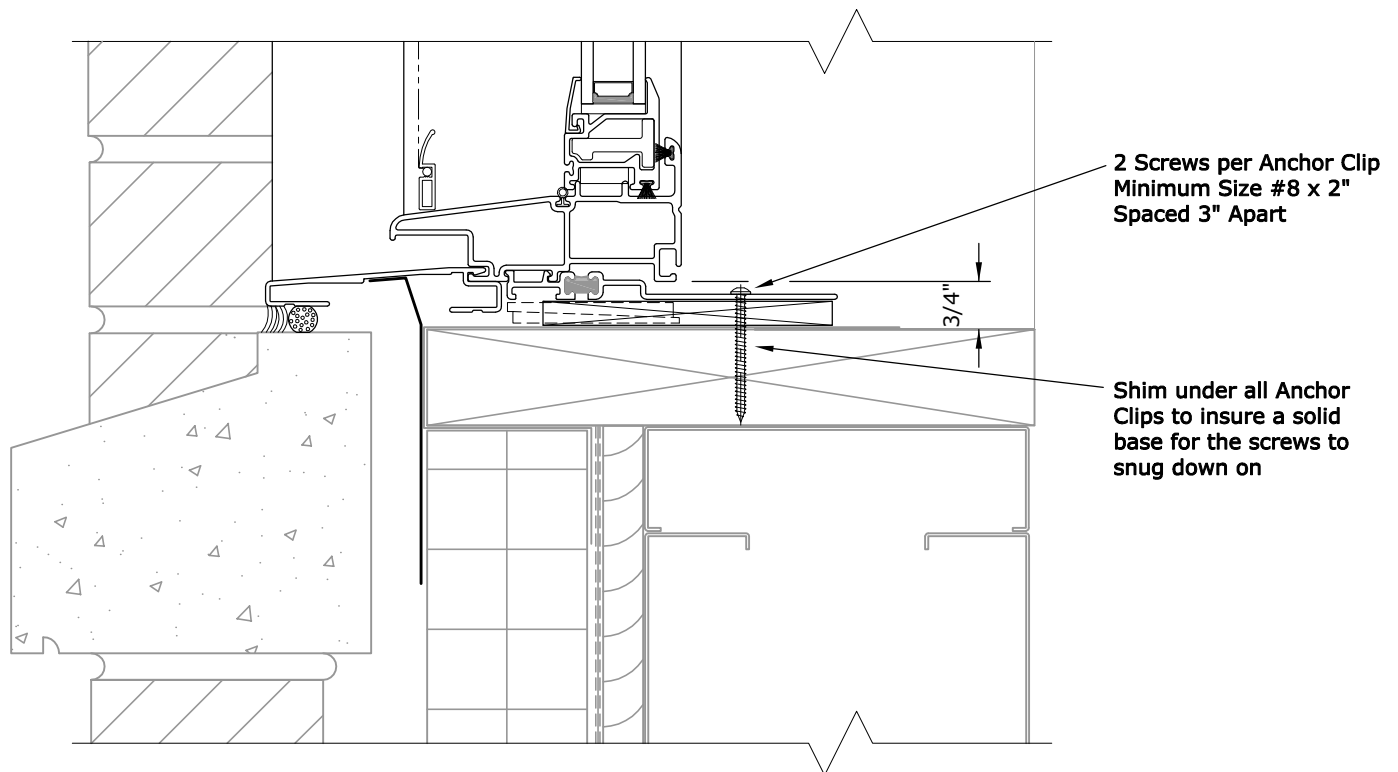
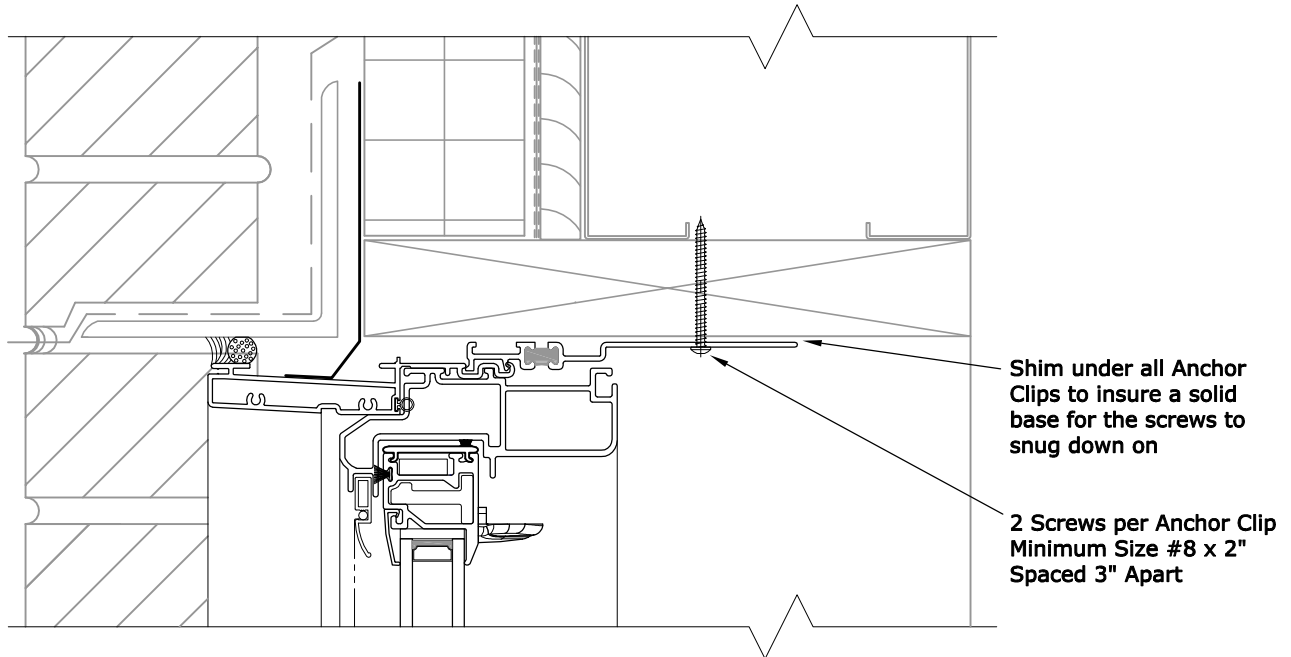
ANCHOR CLIP WITH PAN-001 - SIDING VENEER

SCALE: 1:3



ANCHOR CLIP WITH SLOPE SILL PAN

SCALE: 1:3



SILL ANCHOR AND SCREW THROUGH THE FRAME

SCALE: 1:3

