

Section 08 14 23
Ultimate Swinging Doors

Part 1 General

1.1 Section Includes

Ultimate Inswing/**Outswing Door and frame** complete with hardware, glazing, weather strip, insect screen, grilles-between-the glass, simulated divided lite, jamb extension, raised/flat panels, and standard or specified anchors, trim, attachments, and accessories

1.2 Construction Specification Institute (CSI) MasterFormat Numbers and Titles

- A. Section 01 33 00 – Submittal Procedures: Shop Drawings, Product Data, and Samples
- B. Section 01 62 00 – Product Options
- C. Section 01 25 15 – Product Substitution Procedures
- D. Section 01 65 00 – Product Delivery Requirements
- E. Section 01 66 00 – Product Storage and Handling Requirements
- F. Section 01 71 00 – Examination and Preparation
- G. Section 01 73 00 - Execution
- H. Section 01 74 00 – Cleaning and Waste Management
- I. Section 01 75 00 – Starting and Adjusting
- J. Section 01 76 00 – Protecting Installed Construction
- K. Section 06 22 00 – Millwork: Wood trim other than furnished by door and frame manufacturer
- L. Section 07 92 00 – Joint Sealants: Sill sealant and perimeter caulking
- M. Section 08 71 00 – Door Hardware: Hardware other than furnished by door and frame manufacturer
- N. Section 09 90 00 – Paints and Coatings: Paint and stain other than factory applied finish

1.3 References

- A. ASTM, International:
 - 1. E283: Standard Test Method for Determining Rate of Air Leakage through Exterior Windows, Skylights, Curtain Walls, and Doors Under Specified Pressure Differences Across the Specimen

2. E330: Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights, and Curtain Walls, and Doors by Uniform Static Air Pressure Difference
 3. E547: Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors, and Curtain Walls by Cyclic Static Air Pressure Difference
 4. E2190: Standard Specification for Insulating Glass Unit Performance and Evaluation
 5. C1036: Standard Specification for Flat Glass
 6. E 2112: Standard Practice for Installation of Exterior Windows, Doors, and Skylights
- B. North American Fenestration Standards (NAFS) - American Architectural Manufacturer's Association/Window and Door Manufacturer's Association/Canadian Standards Association (AAMA/WDMA/CSA 101/I.S.2/A440):
1. AAMA/WDMA/CSA 101/I.S.2/A440-11: NAFS - North American Fenestration, Standard/Specification for windows, doors, and skylights
 2. AAMA/WDMA/CSA 101/I.S.2/A440-17: NAFS – North American Fenestration Standard/Specification for windows, doors, and skylights
- C. Window and Door Manufacturers Association (WDMA)
1. WDMA I.S.4: Industry Standard for Water Repellant Preservative Treatment for Millwork
 2. WDMA I.S.2 Hallmark Certification Program
- D. Insulating Glass Certification Council (IGCC) and Fenestration Glazing Industry Alliance (FGIA) Glass Products Council (GPC)
- E. Fenestration Glazing Industry Alliance (FGIA) – note: AAMA combined with IGMA and formed FGIA as of 08/01/2019
1. AAMA 2605: Voluntary Specification for High Performance Organic Coatings on Architectural Extrusions and Panels
- F. National Fenestration Rating Council (NFRC):
1. NFRC 101: Procedure for Determining Fenestration Product Thermal Properties
 2. NFRC 200: Procedure for Determining Solar Heat Gain Coefficients at Normal Incidence
- G. Window Covering
1. WCMA A100.0: Standard for safety of window covering products

1.4 System Description

- A. Design and Performance Requirements:

1.5 Submittals

- A. Shop Drawings: Submit shop drawings under provision of CSI MasterFormat Section 01 33 00.
- B. Product Data: Submit product data for certified options under provision of CSI MasterFormat Section 01 33 00. Product performance rating information may be provided via quote, performance rating summary (NFRC Data), or certified performance grade summary (WDMA Hallmark data).
- C. Samples:
 - 1. Submit corner section under provision of CSI MasterFormat Section 01 33 00.
 - 2. Specified performance and design requirements under provisions of CSI MasterFormat Section 01 33 00.

1.6 Quality Assurance

- A. Requirements: consult local code for IBC [International Building Code] and IRC [International Residential Code] adoption year and pertinent revisions

1.7 Delivery

- A. Comply with provisions of CSI MasterFormat Section 01 65 00
- B. Deliver in original packaging and protect from weather

1.8 Storage and Handling

- A. Prime and seal wood surfaces, including to be concealed by wall construction, if more than thirty (30) days will expire between delivery and installation. Seal unfinished top and bottom edges of door panels if panels are stored at the job site more than one (1) week.
- B. Store door panels flat on a level surface in a clean and dry storage area above ground to protect from weather under provision of CSI MasterFormat Section 01660
- C. Condition doors to local average humidity before hanging

1.9 Warranty

Complete and current warranty information is available at marvin.com/warranty. The following summary is subject to the terms, condition, limitations and exclusions set forth in the Marvin Windows and Door Limited Warranty and Products in Coastal Environments Limited Warranty Supplement:

- A. Clear insulating glass with stainless steel spacers is warranted against seal failure caused by manufacturing defects and resulting in visible obstruction through the glass for twenty (20) years from the original date of purchase. Glass is warranted against stress cracks caused by manufacturing defects from ten (10) years from the original date of purchase.
- B. Standard exterior aluminum cladding finish is warranted against manufacturing defects resulting in chalk, fade and loss of adhesion (peel) per the American Architectural Manufacturer's Association (AAMA) Specification 2605-11 Section 8.4 and 8.9 for twenty (20) years from the original date of purchase.
- C. Factory-applied interior finish is warranted to be free from finish defects for a period of five (5) years from the original date of purchase.
- D. Hardware and other non-glass components are warranted to be free from manufacturing defects for ten (10) years from the original date of purchase.

Part 2 Products

2.1 Manufactured Units

- A. Description: Factory-assembled Ultimate Inswing / Outswing Door and/or related stationary units as manufactured by Marvin Windows and Doors, Ripley, Tennessee.

2.2 Frame Description

- A. Interior: Non Finger-Jointed Pine or finger-jointed core with non finger-jointed Pine veneer; optional non finger-jointed Mixed Grain Douglas Fir or finger-jointed core with non finger-jointed Mixed Grain Douglas Fir veneer; optional non finger-jointed White Oak or finger-jointed with non finger-jointed Oak veneer; non finger-jointed Cherry or finger-jointed core with Cherry veneer; non finger-jointed Mahogany or finger-jointed core with non finger-jointed Mahogany veneer; non finger-jointed Vertical Grain Douglas Fir or finger-jointed with non finger-jointed Vertical Grain Douglas Fir veneer
 - 1. Kiln-dried to moisture content no greater than twelve (12) percent at time of fabrication
 - 2. Water repellant, preservative treated in accordance with WDMA I.S.4
- B. Frame exterior aluminum clad with 0.050" (1.3mm) thick extruded aluminum
- C. Frame width: Outswing: 4 9/16" (116mm); Inswing: 6 9/16" (167mm)
- D. Frame thickness: 1 1/16" (27mm)
- E. Inswing French Door Sill: A single pultrusion of Fiber Reinforced Plastic (FRP), also known as Ultrex®, provides superior thermal performance

1. An integral weep system is part of a water management system that directs any incidental moisture to the exterior
 2. Sill depth is 6 9/16" (167mm) jambs
 3. Standard finish is bronze
 4. Optional exterior sill cover in Mahogany and Oak for O, X, or XX operating configurations
- F. Outswing Door Sill: A single pultrusion of Fiber Reinforced Plastic (FRP), also known as Ultrex™, provides superior thermal performance
1. Sill depth is 5 21/32" (144mm)
 2. Standard finish is bronze
 3. Optional interior sill cover in Mahogany and Oak for all operating configurations

2.3 Panel Description

- A. Interior: Non Finger-Jointed Pine or finger-jointed core with non finger-jointed Pine veneer; optional non finger-jointed Mixed Grain Douglas Fir or finger-jointed core with non finger-jointed Mixed Grain Douglas Fir veneer; optional non finger-jointed White Oak or finger-jointed with non finger-jointed Oak veneer; non finger-jointed Cherry or finger-jointed core with Cherry veneer; non finger-jointed Mahogany or finger-jointed core with non finger-jointed Mahogany veneer.
1. Kiln-dried to moisture content no greater than twelve (12) percent at time of fabrication
 2. Water repellant, preservative treated in accordance with WDMA I.S.4.
- B. Panel exterior aluminum clad with 0.050" (1.3mm) thick extruded aluminum
- C. Panel thickness: 2 1/4" (44mm)
- D. Top and bottom rails and stile width: 3" (121mm)
- E. Panel corners glued and fastened with 5/8" x 4" (16mm by 102mm) fluted hardwood dowels. No visible fasteners.

2.4 Glazing

- A. Select quality complying with ASTM C 1036; Shall comply with 16 CFR 1201 Safety Standard for Architectural Glazing Materials
- B. Glazing Method: Tempered Insulating Glass (altitude adjusted)
- C. Interior and Exterior Glazing Profile: Square
- D. Dual-pane thickness: 15/16"; Tri-pane thickness: 1 1/4".

- E. Glass fill: Air with capillary tubes, Argon
- F. Glass Type: Clear, Bronze, Gray, Reflective Bronze, Tempered, Obscure, Laminated,
- G. Glazing Option: Low E2, Low E3, Low E1, Low E2/ERS, Low E3/ERS
- H. Glazing Seal: Silicone bedding

2.5 Finish

- A. Exterior: Aluminum Clad. Fluoropolymer modified acrylic topcoat over a primer. Meets AAMA 2605 requirements.
 - 1. Aluminum clad color options: Bahama Brown, Bronze, Cadet Gray, Cascade Blue, Cashmere, Clay, Coconut Cream, Ebony, Evergreen, Gunmetal, Hampton Sage, Pebble Gray, Sierra White, Stone White, Suede, Wineberry, Bright Silver (pearlescent), Copper (pearlescent), Liberty Bronze (pearlescent)
 - 2. Custom colors: Contact your Marvin representative
- B. Interior Finish Options:
 - 1. Prime: Factory-applied water-borne acrylic primer. Meets WDMA-TM 11 requirements.
 - 2. Painted Interior Finish. Available on Pine product only. Available in White or Designer Black. Meets WDMA TM-14 requirements.
 - 3. Factory-applied water-borne acrylic enamel clear coat. Applied in two separate coats with light sanding between coats. Available on Pine, Mahogany, Vertical Grain Douglas Fir, Mixed Grain Douglas Fir, Cherry, or White Oak. Meets WDMA TM-14 requirements.
 - 4. Factory-applied water-borne stain. Stain applied over a wood (stain) conditioner. A water-borne acrylic enamel clear coat applied in two separate coats, with light sanding coats, applied over the stain. Available on Pine, Mahogany, Vertical Grain Douglas Fir, Mixed Grain Douglas Fir, Cherry, or White Oak. Colors available: Wheat, Honey, Hazelnut, Leather, Cabernet, or Espresso. Meets WDMA TM-14 requirements.

2.6 Hardware

- A. Adjustable Hinges:
 - 1. 4 ¼" x 3 ¾" with 3/8" radius corners. Adjustment is 3/16" for horizontal and vertical of panels in frame.
 - 2. Rectangular doors have three adjustable hinges on 6-6, 6-8, 7-0 and 8-0 heights; optional four hinges on 7-0 and 8-0 heights
 - 3. Finish: Optional powder coat finish: Dark Bronze, Matte Black
 - 4. Optional PVD finishes: Satin Nickel PVD and Oil Rubbed Bronze PVD

B. Minimalist Handle Set: Active, Inactive

1. Painted finishes: Matte Black or Dark Bronze (aluminum substrate)
2. Nanotech finishes: Oil rubbed Bronze or Satin Nickel

C. Locking System:

1. Active and Inactive panel: Marvin exclusive concealed multi-point locking system. Stainless steel head and shoot bolts operated from lever set. One inch dead bolt.

2.7 Lock Status Sensor (Optional)

A. Lock Status Sensor

1. Unit is factory-prepared for an integrated lock status sensor system. Contact sensor mounted inside the boundaries of the operating panel. Refer to Lock Status Sensor Installation Instructions.
2. Lock Status Sensor wireless only.
 - a. Only wireless option available. Requires purchase of secondary transmitter for operation. Marvin will prep for this option.
3. For Swinging Doors, the sensor will always be integrated into the locking hardware system.
4. The actuator (keyed or thumb turn) is integrated into the locking hardware system.

2.8 Weather Strip

- A. Inswing: Head jamb and side jambs to have 2 rows of bulb weather strip maintaining contact with door panels
1. Color: Black
- B. Outswing: Head jamb and side jambs to have single bulb weather strip maintaining contact with door panels
1. Color: Black
- C. Inswing and Outswing: Threshold to have bulb weather strip maintaining contact with bottom of panel
1. Color: Black

2.9 Jamb Extension

- A. Factory-applied up to 3" (76mm) for other wall thickness indicated or required (shipped loose)

- B. Finish: Matches interior frame finish

2.10 Insect Screen (Inswing Only)

A. Ultimate Sliding Screen

1. Extruded aluminum sliding frame, top hung roller assembly with stainless steel ball bearings in nylon wheels, top rollers adjustable up to ¼" (6mm). Frame to have edge mounted wool pile bug strip.
2. Sliding screen for XO, OX, OOX, XOO, OXXO operation
3. Ultimate Sliding Screen comes with a roller bar. Screen will match exterior aluminum clad color.
4. Standard screen mesh: Marvin Bright View™
5. Ultimate screen mesh: Standard is Marvin Bright View™. Optional Charcoal Aluminum Wire, Black Aluminum Wire, Bright Bronze Aluminum Wire, Bright Aluminum Wire

B. Ultimate Swinging Screen

1. Extruded aluminum swinging frame. Screen will match exterior aluminum clad color.
2. Screen mesh: mesh: Standard is Marvin Bright View™. Optional Charcoal Aluminum Wire, Black Aluminum Wire, Bright Bronze Aluminum Wire, Bright Aluminum Wire
3. For standard swinging screen: black hinges: 2 for doors under 90" and 3 hinges for doors over 90". Ultimate swinging screen has 4 hinges per panel and a factory installed Z-bar.
4. Handle includes latch with exterior handle and internal locking mechanism. Available in Bronze, Satin Nickel, Brass, or Satin Taupe.

2.11 Simulated Divided Lites (SDL)

- A. 5/8" (16mm) wide, 7/8" (22mm) wide, 1 1/8" (29mm) wide, 1 15/16" (49mm), 2 13/32" (61mm) wide with or w/out internal spacer bar
- B. Muntins: Pine, Mixed Grain Douglas Fir, White Oak, Cherry, Mahogany, Vertical Grain Douglas Fir
- C. Muntins adhere to glass with double coated acrylic foam tape
- D. Profile is Square, interior and exterior
- E. Pattern: Rectangular, Cottage, Custom lite layout
- F. Finish: Match panel finish

2.12 Grilles-Between-the-Glass (GBG)

- A. 23/32" contoured aluminum bar
 - 1. Exterior colors: The exterior GBG color is designed to best match the Marvin aluminum clad color when used with Low E glass. The use of different types of glazing may alter the exterior GBG color appearance.
 - 2. Interior Color: Stone White is the default. Optional colors: Bronze, Pebble Gray, Sierra White, Ebony (only available with Ebony exterior).
- B. Optional flat aluminum spacer bar
 - 1. Contact your Marvin representative.
- C. Pattern: Rectangular, Cottage, Custom lite layout

2.13 Accessories and Trim

- A. Installation and Hardware Accessories:
 - 1. Factory-installed vinyl nailing/drip cap
 - 2. Installation brackets: 6 3/8" (162mm), 9 3/8" (238mm), 15 3/8" (390mm)
 - 3. Masonry brackets: 6" (152mm), 10" (254mm)
- B. Aluminum Extrusions:
 - 1. Casing Profile: Brick Mould Casing (BMC), Flat Casing, Stucco Brick Mould, Stucco Flat Casing, Columbus Casing, Grayson Casing, Ridgeland Casing, Stratton Casing, Thorton Casing, Potter Casing, 1 1/2" Flat Casing
 - 2. Aluminum clad Extrusion: Frame Expander, Jamb Extender, Mullion Cover, Mullion Expander
 - 3. Finish: Match exterior frame finish

Part 3 Execution

3.1 Examination

- A. Verification of Condition: Before installation, verify openings are plumb, square and of proper dimensions as required in CSI MasterFormat Section 01 71 00. Report frame defects or unsuitable conditions to the General contractor before proceeding.
- B. Acceptance of Condition: Beginning on installation confirms acceptance of existing conditions.

3.2 Installation

- A. Comply with CSI MasterFormat Section 01 73 00.
- B. Assemble and install window/door unit(s) according to manufacturer's instruction and reviewed shop drawing.
- C. Install sealant and related backing materials at perimeter of unit or assembly in accordance with CSI MasterFormat Section 07 92 00 Joint Sealants. Do not use expansive foam sealant.
- D. Install accessory items as required.
- E. Use finish nails to apply wood trim and mouldings.

3.3 Field Quality Control

- A. Remove visible labels and adhesive residue according to manufacturer's instruction.
- B. Unless otherwise specified, air leakage resistance tests shall be conducted at a uniform static pressure of 75 Pa (~1.57 psf). The maximum allowable rate of air leakage shall not exceed 2.3 L/sm² (~0.45 cfm/ft²).
- C. Unless otherwise specified, water penetration resistance testing shall be conducted per AAMA 502 and ASTM E1105 at 2/3 of the fenestration products design pressure (DP) rating using "Procedure B" – cyclic static air pressure difference. Water penetration shall be defined in accordance with the test method(s) applied.

3.4 Cleaning

- A. Remove visible labels and adhesive residue according to manufacturer's instruction.
- B. Leave windows and glass in a clean condition. Final cleaning as required in CSI MasterFormat Section 01 74 00.

3.5 Protecting Installed Construction

- A. Comply with CSI MasterFormat Section 07 76 00.
- B. Protecting windows from damage by chemicals, solvents, paint or other construction operations that may cause damage.

End of Section

Section 08 52 13
Ultimate Double Hung G2

Part 1 General

1.1 Section Includes

- A. **Ultimate Double Hung G2**, Single Hung, Transom, Picture window complete with hardware, glazing, certified mulls, weather strip, insect screen, grilles-between-the-glass, simulated divided lite, jamb extension, combination storm/screen, and standard or specified anchors, trim, attachments, factory-applied historic casing(s) and accessories
- B. Ultimate Double Hung G2 Bay, Bow window complete with hardware, glazing, weather strip, insect screen, grilles-between-the-glass, simulated divided lite, jamb extension, combination storm/screen, head/seat board, and standard or specified anchors, trim attachments, and accessories

1.2 Related Sections

- A. Section 01 33 00 – Submittal Procedures; Shop Drawings, Product Data and Samples
- B. Section 01 62 00 – Product Options
- C. Section 01 65 00 – Product Delivery
- D. Section 01 66 00 – Storage and Handling Requirements
- E. Section 01 71 00 – Examination and Preparation
- F. Section 01 73 00 - Execution
- G. Section 01 74 00 – Cleaning and Waste Management
- H. Section 01 76 00 – Protecting Installed Construction
- I. Section 06 22 00 – Millwork: Wood trim other than furnished by window manufacturer
- J. Section 07 92 00 – Joint Sealant: Sill sealant and perimeter caulking
- K. Section 09 90 00 – Painting and Coasting: Paint and stain other than factory-applied finish

1.3 References

- A. American Society for Testing Materials (ASTM):
 - 1. E283: Standard Test method for Rate of Air Leakage through Exterior Windows, Curtain Walls and Doors
 - 2. E330: Standard Test Method for Structural Performance of Exterior Windows, Curtain Walls and Door by Uniform Static Air Pressure Difference

3. E547: Standard Test Method for Water Penetration of Exterior Windows, Curtain Walls and Doors by Cyclic Static Air Pressure Differential
 4. E2190: Specification for Sealed Insulated Glass Units
 5. C1036: Standard Specification for Flat Glass
 6. E2068: Standard Test Method for Determination of Operating Force of Sliding Windows and Doors
 7. E 1996: Standard Specification for Performance of Exterior Windows, Curtain Walls, Doors and Storm Shutters Impacted by Windborne Debris in Hurricanes
 8. E 1886: Standard Test method for Performance of Exterior Windows, curtain Walls, and Storm Shutters Impacted by Missile(s) and Exposed to Cyclic Pressure Differentials
 9. F 2090-17: Standard Specifications for Windows Fall Prevention Devices with Emergency Escape (egress) Release Mechanisms
- B. American Architectural Manufacturer's Association/Window and Door Manufacturer's Association (AAMA/WDMA/CSA):
1. AAMA/WDMA/CSA 101/I.S.2/A440-08, Standard/Specification for windows, doors and skylights
 2. AAMA/WDMA/CSA 101/I.S.2/A440-11, Standard/Specification for windows, doors and skylights
 3. AAMA 450-10, Voluntary Performance Rating Method for Mulled Fenestration Assemblies
- C. WDMA I.S.4: Industry Standard for Water Repellant Preservative Treatment for Millwork
- D. Window and Door Manufacturer's Association (WDMA): 101/I.S.2 WDMA Hallmark Certification Program
- E. Sealed Insulating Glass Manufacturer's Association/Insulating Glass Certification Council (SIGMA/IGCC)
- F. American Architectural Manufacturer's Association (AAMA): 2605: Voluntary Specification for High Performance Organic Coatings on Architectural Extrusions and Panels
- G. National Fenestration Rating Council (NFRC):
1. 101: Procedure for Determining Fenestration Product thermal Properties
 2. 200: Procedure for Determining Solar Heat Gain Coefficients at Normal Incidence
- H. Window Covering Manufacturer's Association
1. A100.1: American National Standard for Safety of Corded Window Coverings Products

1.5 Submittals

- A. Shop Drawings: Submit shop drawings under provision of Section 01 33 00.
- B. Product Data: Submit production data for certified options under provision of CSI MasterFormat Section 01 33 00. Product performance rating information may be provided via quote, performance rating summary (NFRC Data), or certified performance grade summary (WDMA Hallmark data).
- C. Samples:
 - 1. Submit corner section under provision of section 01 33 00.
 - 2. Specified performance and design requirements under provisions of CSI MasterFormat Section 01 33 00.

1.6 Quality Assurance

- A. Requirements: consult local code for IBC [International Building Code] and IRC [International Residential Code] adoption year and pertinent revisions for information on:
 - 1. Egress, emergency escape and rescue requirements
 - 2. Basement window requirements
 - 3. Windows fall prevention and/or window opening control device requirements

1.7 Delivery

- A. Comply with provisions of Section 01 65 00
- B. Deliver in original packaging and protect from weather

1.8 Storage and Handling

- A. Prime and seal wood surfaces, including to be concealed by wall construction, if more than thirty (30) days will expire between delivery and installation
- B. Store window units in an upright position in a clean and dry storage area above ground to protect from weather under provision of Section 01 66 00
 - 1. Available 30 degree, 45 degree, and 90 degree
 - 2. With and w/out head and seat board

2.2 Frame Description

- A. Interior: Non Finger-Jointed Pine or finger-jointed core with non finger-jointed Pine veneer; optional non finger-jointed Douglas Fir or finger-jointed core with non finger-jointed Douglas Fir veneer; optional non finger-jointed White Oak or finger-jointed with non finger-jointed Oak veneer; non finger-jointed Cherry or finger-jointed core with Cherry veneer; non finger-jointed Mahogany or finger-jointed core with non finger-jointed Mahogany veneer; non finger-jointed Vertical Grain Douglas Fir or finger-jointed with non finger-jointed Vertical Grain Douglas Fir veneer
 - 1. Kiln-dried to moisture content no greater than 12 percent at the time of fabrication
 - 2. Water repellant, preservative treated in accordance with ANSI/WDMA I.S.4.
- B. Frame exterior aluminum clad with 0.050" (1.3mm) thick extruded aluminum
- C. Frame thickness: 11/16" (17mm) head and jambs
- D. Frame depth: Frame depth had an overall 5 21/32" jamb (144mm). 4 9/16" (116mm) jamb depth from the nailing fin plane to the interior face of the frame for new construction.
- E. Sill assembly including the sill liner: 2 7/32" (56mm)
- F. Factory-applied historic profile extrusion

2.3 Sash Description

- A. Interior: Non Finger-Jointed Pine or finger-jointed core with non finger-jointed Pine veneer; optional non finger-jointed Douglas Fir or finger-jointed core with non finger-jointed Douglas Fir veneer; optional non finger-jointed White Oak or finger-jointed with non finger-jointed Oak veneer; non finger-jointed Cherry or finger-jointed core with Cherry veneer; non finger-jointed Mahogany or finger-jointed core with non finger-jointed Mahogany veneer; non finger-jointed Vertical Grain Douglas Fir or finger-jointed with non finger-jointed Vertical Grain Douglas Fir veneer
 - 1. Kiln-dried to moisture content no greater than 12 percent at the time of fabrication
 - 2. Water repellant preservative treated with accordance with WDMA I.S.4.
- B. Sash exterior aluminum clad with 0.050" (1.3mm) thick extruded aluminum
- C. Sash thickness: 1 3/4" (44mm). Corner slot and tenoned.
- D. Operable sash tilt to interior for cleaning or removal
- E. Sash Options:
 - a. Standard: Equal Sash
 - b. Optional:
 - i. Unequal Sash

ii. Both Sash Stationary

F. Exterior Cope Profile: Putty

G. Interior Sash Sticking

1. Standard: Ogee
2. Optional: Square

2.4 Glazing

- A. Select quality complying with ASTM C1036. Insulating glass SIGMA/IGCC certified to performance level CBA when tested in accordance with ASTM E2190.
- B. Glazing method: Insulating glass
- C. Glazing seal: Silicone bedding on interior and exterior
- D. Glass fill: Air with capillary tubes, Argon
- E. Glass Type: Clear, Bronze, Gray, Reflective Bronze, Tempered, Obscure, Laminated, Low E2 with or without Argon, Low E3 with or without Argon, Low E1, Low E2/ERS, Low E3/ERS
- F. Triple-Pane Glass(TG): Triple-Pane Low E1, Triple-Pane Low E2, Triple-Pane Low E3.

2.5 Certified Mulling

- A. Directional mull limits: 1 High (can be 2 or more units wide in an assembly)
 - 1. Max mullion span is 71 ½" (1816mm); max tributary width 45 ¼" (1149mm)
 - 2. CUDH NG 2.0 to CUDH NG 2.0 only
 - 3. Certified to Design Pressure 50
- B. Directional mull limits: 1 Wide (can be 2 or more units high in an assembly)
 - 1. Max mullion span is 69 ¼" (1759mm); max tributary height 53 19/32" (1361mm)
 - 2. CUDH NG 2.0 over CUDH NG 2.0 only
 - 3. Certified to Design Pressure 50
- C. Multiple Wide x Multiple High assemblies with 1" LVL
 - 1. Max mullion span is 75 11/16" (1922mm); max tributary width is 45 1/4" (1149mm)
 - 2. LVL must be in vertical mull
 - 3. Certified to Design Pressure 50
- D. Multiple Wide x Multiple High assemblies with 3/8" (10mm) MRF

1. Max mullion span is 83 11/16" (2125mm); max tributary width 45 1/4" (1149mm)
 2. CUDH NG 2.0 over CUDH NG 2.0 only
 3. Certified to Design Pressure 65
- E. If any units have a lower design pressure the entire assembly will have the lowest design pressure of any unit or mull in the assembly.

2.6 Finish

- A. Exterior: Aluminum clad. Fluoropolymer modified acrylic topcoat over a primer. Meets AAMA 2605 requirements.
1. Aluminum clad color options: Bahama Brown, Bronze, Cadet Gray, Cascade Blue, Cashmere, Clay, Coconut Cream, Ebony, Evergreen, Gunmetal, Hampton Sage, Pebble Gray, Sierra White, Stone White, Suede, Wineberry, Bright Silver (pearlescent), Copper (pearlescent), Liberty Bronze (pearlescent)
 2. Custom colors: Contact your Marvin representative
- B. Interior Finish options:
1. Prime: Factory-applied water-borne acrylic primer. Meets WDMA TM-11 requirements.
 2. Painted Interior Finish. Factory-applied water-borne acrylic enamel. Available on Pine product only. Available in White or Designer Black. Meets WDMA TM-14 requirements.
 3. Factory-applied water-borne acrylic enamel clear coat. Applied in two separate coats with light sanding between coats. Available on Pine, Mahogany, Mixed Grain Douglas Fir, Vertical Grain Douglas Fir, Cherry, or White Oak. Meets WDMA TM-14 requirements.
 4. Factory-applied water-borne urethane stain. Stain applied over a wood (stain) conditioner. A water-borne acrylic enamel clear coat applied in two separate coats, with light sanding between coats, applied over the stain. Available on Pine, Mahogany Mixed Grain Douglas Fir, Vertical Grain Douglas Fir, Cherry, or White Oak. Colors available: Wheat, Honey, Hazelnut, Leather, Cabernet, and Espresso. Meets WDMA TM-14 requirements.

2.7 Hardware

- A. Locking system that provides locking, unlocking, balancing, and tilting of the sash members
- B. Lock Actuator Assembly
1. Material
 - a. Zinc die-cast
 - b. Available finishes: Satin Taupe, White, Bronze, Matte Black, Brass, Antique Brass, Polished Chrome, Satin Chrome, Oil Rubbed Bronze, or Satin Nickel

2. Design Feature and Components

- a. To unlock unit, turn the handle 135°
- b. Lock automatically locks when both sash are closed.
- c. To tilt the bottom sash for wash mode, the bottom sash must be unlocked and raised a few inches; push the button on top of the lock handle and rotate the handle 180°
- d. To tilt the top sash for wash mode, the bottom sash must be tilted and/or removed from the frame; lower the top sash to a good working height, retract the tilt latches on the top rail and tilt sash inward out of the frame
- e. Custodial hardware colors: Satin Taupe, White, Bronze, Matte Black

C. Bottom Rail Lock Actuator Assembly - Lift Lock (Optional for Single Hung)

1. Material

- a. Zinc die-cast
- b. Available finishes: Satin Taupe, White, Bronze, Matte Black, Brass, Antique Brass, Polished Chrome, Satin Chrome, Oil Rubbed Bronze, or Satin Nickel

2. Design Feature and Components

- a. Does not contain Check Rail Lock Actuator Assembly or Strike Assembly
- b. Available in Traditional and Contemporary designs
- c. To unlock unit, lift the lock
- d. Lock automatically locks when bottom sash is closed.
- e. To tilt the bottom sash for wash mode, raise the bottom sash and manually retract the latches.
- f. Custodial hardware colors (available with traditional design): Satin Taupe, White, Bronze, Matte Black

D. Latches

1. Bottom sash latch

- a. Material
 - i. Bolt: Glass-filled nylon
 - ii. Latch housing: Acetal
 - iii. Sash latch reinforcement: Stainless steel

2. Top sash tilt latch

- a. Material
 - i. Bolt: Glass-filled nylon
 - ii. Latch housing: Glass-filled nylon
- 3. Latches accommodate travel of sash in frame, and tilting into wash-mode
- 4. Color: Beige (manual latch for Lift Lock also available in White and Black)
- E. Strike Assembly
 - 1. Material
 - f. Zinc die-cast strike plate and injection-molded Acetal housing and button
 - g. Available finishes: Satin Taupe, White, Bronze, Matte Black, Brass, Antique Brass, Polished Chrome, Satin Chrome, Oil Rubbed Bronze, or Satin Nickel
 - 2. Strike assembly accommodates locking/unlocking
- F. Balance System (balance system determined by sash weight)
 - 1. Block & tackle balances
 - 2. Hybrid spiral balances
- G. Factory-applied Window Opening Control Device (WOCD) is a sash limiter that prevents the window opening more than 4" vertically. It meets ASTM F2090-17 specifications for window fall prevention standards. The system consists of two single action devices that allows for egress (when applied to an egress size window) by bypassing the 4" stop feature.
 - 1. Material
 - a. WOCD device: zinc die-cast
 - b. WOCD strike plate: nylon
 - 2. 2 WOCD's applied to each double and single hung window and will be recessed into the stiles of the top sash
 - 3. Default color matches lock handle
 - 4. Strike plate mounted to the bottom sash check rail
 - 5. Strike plate color to match weather strip
- H. Sash Limiter
 - 1. Bottom Sash Limiter (Acetal)
 - a. Available on all operator configurations, and StormPlus IZ3
 - b. Selectable bottom sash locations, 4", 6" or 8" Net Clear Opening (NCO)

- c. Non-tilt hardware is default, and a sash removal tool is required in order to bypass the Sash limiter for sash removal (tilt wash mode)
 - d. Standard application is factory applied. Available for field retrofit applications.
 - e. Color: Will align with the Exterior Weather Strip Package selection
- 2. Top Sash Limiter (Extruded PVC)
 - a. Available on all operator configurations, with the exception Single Hung configurations. This includes StormPlus IZ3
 - b. Standard application is factory applied. Available for field applications
 - c. Color: Will align with the Interior Weather Strip Package selection

2.8 Weather Strip

- A. Operating units:
 - 1. Jambs: Foam-filled bulb
 - 2. Header: Continuous dual leaf
 - 3. Bottom rail and check rail: Hollow bulb
- B. Stationary units:
 - 1. Jambs: Foam for picture units; foam-filled bulb for transom unit
 - 2. Header and bottom rail: Hollow bulb

2.9 Jamb Extension

- A. Jamb extensions are available for various wall thickness factory-applied up to a 14" (356mm) wide
- B. Finish: Match interior frame finish

2.10 Head/Seat Board (For use with Bow and Bay units)

- A. Factory-installed (head board) (seat board) for wall thickness indicated or required
- B. Finish: Match interior finish

2.11 Insect Screen

- A. Factory-installed full or half screen. Half screen covers sash opening.
 - 1. Screen Mesh: Marvin Bright View™

2. Optional Screen mesh: Charcoal Aluminum Wire, Black Aluminum Wire, Bright Bronze Aluminum Wire, Bright Aluminum Wire

B. Screen Frame

1. Window frame height less than or equal to 54 ½" Aluminum Screen Frame. Option: Extruded Aluminum Screen Frame.
2. Window frame height greater than 54 ½" Extruded Screen Frame. Option: None.

C. Aluminum frame finish:

1. Color: Matches exterior aluminum clad color

2.12 Combination Storm Sash and Screen

A. Frame: Exterior extruded aluminum 0.050" (1.3mm) thick

B. Finish: Fluoropolymer modified acrylic topcoat applied over Fluoropolymer primer. Meets AAMA 2605 requirements

1. Finish: Stone White, Bahama Brown, Bronze, Evergreen, Pebble Gray

C. Hardware: Spring loaded locking pins to hold movable storm panel in position. Heavy metal clips to lock upper and lower storm panels together

D. Weather strip: Dual durometer weather strip on center cross rail seals against operating panel in closed position

E. Storm panel: Select quality glass in aluminum frame

1. Frame finish: Standard color: Stone White, Bahama Brown, Bronze, Evergreen, Pebble Gray

F. Insect screen panel:

1. Extruded aluminum surround
2. Screen mesh: Standard is Marvin Bright View™. Optional Charcoal Aluminum Wire, Black Aluminum Wire, Bright Bronze Aluminum Wire, Bright Aluminum Wire
3. Aluminum frame finish: Bronze, White

2.13 Simulated Divided Lites (SDL)

A. 5/8" (16mm) wide, 7/8" (22mm) wide, 1 1/8" (29mm) wide, 1 3/4" (44mm) wide, 1 15/16" (49mm) wide, 2 13/32" (61mm) wide with or w/out internal spacer bar

B. Exterior muntins: 0.050" (1.3mm) thick extruded aluminum

C. Interior muntins: Pine, Mixed Grain Douglas Fir, White Oak, Cherry, Mahogany Vertical Grain Douglas Fir

- D. Muntins adhere to glass with closed-cell copolymer acrylic foam tape
- E. Exterior sticking: Putty
- F. Interior Sticking:
 - 1. Standard: Ogee
 - 2. Optional: Square
- G. Patterns: Rectangular, diamond, custom lite cut
- H. Finish – exterior matches exterior aluminum clad colors, interior matches interior wood species and color

2.14 Grilles-Between-the-Glass (GBG)

- A. 23/32" (18mm) contoured aluminum bar
 - 1. Exterior Colors: Exterior matches exterior aluminum clad colors. The exterior GBG color is designed to best match the Marvin aluminum clad color when used with Low E glass. The use of different types of glazing may alter the exterior GBG color appearance
 - 2. Interior Colors: White is the default color. Optional colors: Bronze, Pebble Gray, Sierra, White
- B. Optional flat aluminum spacer bar. Contact your Marvin representative.
- C. Pattern: Rectangular, Cottage, Custom lite layout

2.15 Accessories and Trim

- A. Installation Accessories:
 - 1. Factory-installed vinyl nailing/drip cap
 - 2. Installation brackets: 6 3/8" (162mm), 9 3/8" (283mm), 15 3/8" (390mm)
 - 3. Masonry brackets: 6" (152mm), 10" (254mm)
- B. Aluminum Extrusions:
 - 1. Casing Profile: Brick Mould Casing (BMC), Flat Casing, Columbus Casing, Grayson Casing, Ridgeland Casing, Stratton Casing, Thorton Casing, Potter Casing
 - 2. Aluminum clad Extrusion: Frame Expander, Jamb Extender, Mullion Cover, Mullion Expander, Subsill, Subsill End Cap and Lineal Cap
 - 3. Finish: Fluoropolymer modified acrylic topcoat applied over primer. Meets AAMA 2605 requirements
 - 4. Available in all exterior aluminum clad colors

- C. Historic casing, factory-applied profiles: Ridgeland, Flat, BMC, Custom
 - a. Subsills factory-applied
- D. Exterior Sash Lugs – Standard Option
 - 1. Standard Profile: Ogee
 - 2. Available on Top Sash
 - 3. Color: Available in all exterior clad color options
 - a. Color shall be the same as top sash clad color
 - 4. Standard application is factory applied. Available for field applications

2.16 Lock Status Sensor (Optional)

A. Lock Status Sensor

- 1. Unit is factory-prepared for an integrated lock status sensor system. Sensor and Magnet mounted inside the boundaries of the overall frame size. Refer to **Lock Status Sensor Installation Instructions**.
- 2. Lock Status Sensor may be wired or wireless.
 - a. For wired option, check with local codes on potential contractor requirements for low voltage networking connections.
 - b. Wireless option available. Requires purchase of secondary transmitter for operation. Marvin will prep for this option.
- 3. For CUDH-NG 2.0 products, the sensor will always be located on the right-hand side of the check rail (from the exterior) for the bottom sash. For the top sash, the sensor will be located in the header parting stop of the frame on the right side (from the exterior).
- 4. Actuator (magnet) for the sensor will be located on the stile for the top sash. For the bottom sash, it will be integrated into the locking hardware on the same side as the sensor.

B. Lock Status Sensor Option Includes:

- 1. Sensor - Reed
- 2. Actuator – Neodymium Magnet
- 3. Actuator Cover (Casement and Double Only)
 - a. Colors: Black: Bare, stain and designer black; White: PIF-White and Prime

Part 3 Execution

3.1 Examination

- A. Verification of Condition: Before installation, verify openings are plumb, square and of proper dimensions as required in Section 01 71 00. Report frame defects or unsuitable conditions to the General contractor before proceeding.
- B. Acceptance of Condition: Beginning on installation confirms acceptance of existing conditions.

3.2 Installation

- A. Comply with Section 01 73 00.
- B. Assemble and install window/door unit(s) according to manufacturer's instruction and reviewed shop drawing.
- C. Install sealant and related backing materials at perimeter of unit or assembly in accordance with Section 07 92 00 Joint Sealants.
- D. Install accessory items as required.
- E. Use finish nails to apply wood trim and mouldings.

3.3 Field Quality Control

- A. Remove visible labels and adhesive residue according to manufacturer's instruction.
- B. Unless otherwise specified, air leakage resistance tests shall be conducted at a uniform static pressure of 75 Pa (~1.57 psf). The maximum allowable rate of air leakage shall not exceed 2.3 L/sm² (~0.45 cfm/ft²).
- C. Unless otherwise specified, water penetration resistance testing shall be conducted per AAMA 502 and ASTM E1105 at 2/3 of the fenestration products design pressure (DP) rating using "Procedure B" – cyclic static air pressure difference. Water penetration shall be defined in accordance with the test method(s) applied.

3.4 Cleaning

- A. Remove visible labels and adhesive residue according to manufacturer's instruction.
- B. Leave windows and glass in a clean condition. Final cleaning as required in Section 01 74 00.

3.5 Protecting Installed Construction

- A. Comply with Section 07 76 00.

- B. Protecting windows from damage by chemicals, solvents, paint or other construction operations that may cause damage.

End of Section

Section 08 52 13
Ultimate Casement/Awning Collection

Part 1 General

1.1 Section Includes

- A. **Ultimate** Casement/Awning Crank Out: Operators, Stationary, and Picture units complete with hardware, glazing, weather strip, insect screen, removable screen, grilles-between-the-glass, simulated divided lite, jamb extension, and standard or specified anchors, trim, and attachments
- B. Ultimate Casement/Awning Crank Out Bow and Bay units: Operators, Stationary and Picture units complete with hardware, glazing, weather strip, insect screen, removable screen, grilles-between-the-glass, simulated divided lite, jamb extension, head/seat board, and standard or specified anchors, trim and attachments
- C. Ultimate Casement Polygon (Stationary Units only) units complete with glazing, weather strip, grilles-between-the-glass, simulated divided lite, jamb extension, and standard or specified anchors, trim, and attachments
- D. Ultimate Casement Venting Picture unit capable of opening for ventilation complete with hardware, glazing, weather strip, insect screen, grilles-between-the-glass, simulated divided lite, jamb extension, and standard or specified anchors, trim, and attachments
- E. Ultimate Casement/Awning Narrow Frame Crank Out: Operators, Stationary and Picture units complete with hardware, glazing, weather strip, insect screen, removable screen, grilles-between-the-glass, simulated divided lite, jamb extension, and standard or specified anchors, trim, and attachments
- F. Ultimate Casement Narrow Frame Polygon (Stationary Units only) units complete with glazing, weather strip, grilles-between-the-glass, simulated divided lite, jamb extension, and standard or specified anchors, trim, and attachments

1.2 Construction Specification Institute (CSI) MasterFormat Numbers and Titles

- A. Section 01 33 00 – Submittal Procedures; Shop Drawings, Product Data, and Samples
- B. Section 01 62 00 – Product Options
- C. Section 01 65 00 – Product Delivery
- D. Section 01 66 00 – Storage and Handling Requirements
- E. Section 01 71 00 – Examination and Preparation
- F. Section 01 73 00 - Execution
- G. Section 01 74 00 – Cleaning and Waste Management
- H. Section 01 76 00 – Protecting Installed Construction

- I. Section 06 22 00 – Millwork: Wood trim other than furnished by the window manufacturer
- J. Section 07 92 00 – Joint Sealant: Sill sealant and perimeter caulking
- K. Section 09 90 00 – Painting and Coatings: Paint and stain other than factory applied finish

1.3 References

- A. American Society for Testing Materials (ASTM):
 - 1. E283: Standard Test Method for Rate of Air Leakage through Exterior Windows, Curtain Walls, and Doors
 - 2. E330: Standard Test Method for Structural Performance of Exterior Windows, Curtain Walls, and Door by Uniform Static Air Pressure Difference
 - 3. E547: Standard Test Method for Water Penetration of Exterior Windows, Curtain Walls, and Doors by Cyclic Static Air Pressure Differential
 - 4. E2190: Specification for Sealed Insulated Glass Units
 - 5. C1036: Standard Specification for Flat Glass
 - 6. F2090: Standard Specifications for Windows Fall Prevention Devices with Emergency Escape (egress) Release Mechanisms
- B. American Architectural Manufacturer's Association/Window and Door Manufacturer's Association (AAMA/WDMA/CSA):
 - 1. AAMA/WDMA/CSA 101/I.S.2/A440-05 Standard/Specification for Window, Skylights, and Doors
 - 2. AAMA/WDMA/CSA 101/I.S.2/A440-08, NAFS – North American Fenestration Standard/Specification for Windows, Doors, and Skylights
 - 3. AAMA/WDMA/CSA 101/I.S.2/A440-11, NAFS 2011 – Northern American Fenestration Standard/Specification for Windows, Doors, and Skylights
- C. WDMA I.S.4: Industry Standard for Water Repellant Preservative Treatment for Millwork
- D. Window and Door Manufacturer's Association (WDMA): 101/I.S.2 WDMA Hallmark Certification Program
- E. Sealed Insulating Glass Manufacturer's Association/Insulating Glass Certification Council (SIGMA/IGCC)
- F. American Architectural Manufacturer's Association (AAMA): 2605: Voluntary Specification for High-Performance Organic Coatings on Architectural Extrusions and Panels
- G. National Fenestration Rating Council (NFRC):
 - 1. 101: Procedure for Determining Fenestration Product thermal Properties

2. 200: Procedure for Determining Solar Heat Gain Coefficients at Normal Incidence

1.4 Submittals

- A. Shop Drawings: Submit shop drawings under the provision of CSI MasterFormat Section 01 33 00.
- B. Product Data: Submit product data for certified options under provision of CSI MasterFormat Section 01 33 00. Product performance rating information may be provided via quote, performance rating summary (NFRC Data), or certified performance grade summary (WDMA Hallmark data).
- C. Samples:
 - 1. Submit corner section under provision of CSI MasterFormat Section 01 33 00.
 - 2. Specified performance and design requirements under provisions of CSI MasterFormat Section 01 33 00.

1.5 Quality Assurance

- A. Requirements: consult local code for IBC [International Building Code] and IRC [International Residential Code] adoption year and pertinent revisions for information on:
 - 1. Egress, emergency escape, and rescue requirements
 - 2. Basement window requirements
 - 3. Windows fall prevention and/or window opening control device requirements

1.6 Delivery

- A. Comply with provisions of CSI MasterFormat Section 01 65 00
- B. Deliver in original packaging and protect from weather

1.7 Storage and Handling

- A. Prime and seal wood surfaces, including to be concealed by wall construction, if more than thirty (30) days will expire between delivery and installation
- B. Store window units in an upright position in a clean and dry storage area above ground to protect from the weather under the provision of CSI MasterFormat Section 01660

1.8 Warranty

Complete and current warranty information is available at marvin.com/warranty. The following summary is subject to the terms, conditions, limitations, and exclusions set forth in the Marvin Windows and Door Limited Warranty and Products in Coastal Environments Limited Warranty Supplement:

- A. Clear insulating glass with stainless steel spacers is warranted against seal failure caused by manufacturing defects and resulting in visible obstruction through the glass for twenty (20) years from the original date of purchase. Glass is warranted against stress cracks caused by manufacturing defects from ten (10) years from the original date of purchase.
- B. Standard exterior aluminum cladding finish is warranted against manufacturing defects resulting in chalk, fade, and loss of adhesion (peel) per the American Architectural Manufacturer's Association (AAMA) Specification 2605-11 Section 8.4 and 8.9 for twenty (20) years from the original date of purchase.
- C. Factory-applied interior finish is warranted to be free from finish defects for a period of five (5) years from the original date of purchase.
- D. Hardware and other non-glass components are warranted to be free from manufacturing defects for ten (10) years from the original date of purchase.

Part 2 Products

2.1 Manufactured Units

- A. Description: Factory-assembled Ultimate Casement/Awning, operating exterior swing window on Casement and a top pivoting awning (stationary or picture units) manufactured by Marvin Windows and Doors, Warroad, Minnesota.
- B. Description: Factory-assembled Ultimate Casement/Awning Narrow Frame, operating exterior swing window on Casement and a top pivoting awning (stationary or picture units) as manufactured by Marvin Windows and Doors, Warroad, Minnesota.
- C. Description: Factory-assembled Ultimate Casement Polygon (stationary only) manufactured by Marvin Windows and Doors, Warroad, Minnesota.
- D. Description: Factory-assembled Ultimate Casement Narrow Frame Polygon (stationary only) manufactured by Marvin Windows and Doors, Warroad, Minnesota.
- E. Description: Factory-assembled Ultimate Casement Venting Picture Unit manufactured by Marvin Windows and Doors, Warroad, Minnesota.
- F. Description: Factory-assembled Ultimate Casement Bow Assemblies manufactured by Marvin Windows and Doors, Warroad, Minnesota.
 - 1. Available in 3, 4, 5, and 6 wide assemblies
 - 2. 6-degree angle
 - 3. With and w/out head and seat board
- G. Description: Factory-assembled Ultimate Casement Bay Assemblies manufactured by Marvin Windows and Doors, Warroad, Minnesota.
 - 1. Available 30 degree, 45 degrees, and 90 degree
 - 2. Optional retrofit square jamb return – crank out units only
 - 3. With and w/out head and seat board

2.2 Frame Description

- A. Interior: Non-Finger-Jointed Pine or finger-jointed core with non-finger-jointed Pine veneer; optional non-finger-jointed Douglas Fir or finger-jointed core with non-finger-jointed Douglas Fir veneer; optional non-finger-jointed White Oak or finger-jointed with non-finger-jointed Oak veneer; non-finger-jointed Cherry or finger-jointed core with Cherry veneer; non-finger-jointed Mahogany or finger-jointed core with non-finger-jointed Mahogany veneer; non-finger-jointed Vertical Grain Douglas Fir or finger-jointed with non-finger-jointed Vertical Grain Douglas Fir veneer.
 - 1. Kiln-dried to moisture content no greater than twelve (12) percent at the time of fabrication

2. Water repellant preservative treated in accordance with WDMA I.S.4.
- B. Frame exterior aluminum clad with 0.050 inches (1.3mm) thick extruded aluminum
- C. Frame thickness: 1 3/16" (30mm)
- D. Frame depths for full-frame units have an overall 5 21/32" jamb (144mm). 4 9/16" (116mm) jamb depth from the nailing fin plane to the interior face of the frame for new construction.
- E. Frame depth for replacement frame units have an overall 3 1/4" jamb (83mm) for replacement application and 2 3/16" (56mm) jamb depth from the nailing fin plane to the interior face of the frame for new construction
- F. Frame bevel: Standard is no bevel; optional available are 8 degrees and 14 degrees bevel (Narrow Frame frame only)
- G. In-Sash Casement Polygon: minimum frame angle 15°, minimum short leg of Rough Opening 6" (152mm)

2.3 Sash Description

- A. Interior: Non-Finger-Jointed Pine or finger-jointed core with non-finger-jointed Pine veneer; optional non-finger-jointed Douglas Fir or finger-jointed core with non-finger-jointed Douglas Fir veneer; optional non-finger-jointed White Oak or finger-jointed with non-finger-jointed Oak veneer; non-finger-jointed Cherry or finger-jointed core with Cherry veneer; non-finger-jointed Mahogany or finger-jointed core with non-finger-jointed Mahogany veneer; non-finger-jointed Vertical Grain Douglas Fir or finger-jointed with non-finger-jointed Vertical Grain Douglas Fir veneer.
 1. Kiln-dried to moisture content no greater than twelve (12) percent at the time of fabrication
 2. Water repellant preservative treated in accordance with WDMA I.S.4
- B. Sash exterior aluminum clad with 0.050" (1.3mm) thick extruded aluminum
- C. Sash thickness: 1 5/8" (41mm) and 1 7/8" (48mm) for full-frame units. The narrow-frame units will have a sash thickness of 1 5/8" (41mm).
- D. Stiles and Rails: 2 1/16" (52mm)
- E. Sash Option: Optional tall bottom rail: 3 9/16" (90mm)
- F. Interior Sash Sticking
 1. Standard is: Ogee
 2. Optional: Square Sticking profile

2.4 Glazing

- A. Select quality complying with ASTM C 1036. Insulating glass SIGMA/IGCC certified to performance level CBA when tested in accordance with ASTM E 2190
- B. Glazing method: Insulating glass
- C. Glazing seal: Silicone bedding at interior and exterior
- D. Insulating glass will be altitude adjusted with capillary tubes for higher elevations. Argon gas is not available for elevations that require capillary tubes
- E. Dual-pane thickness: 3/4" or 1"; Tri-pane thickness: 1"
- F. Glass fill: Air with capillary tubes, Argon.
- G. Glass Type: Clear, Bronze, Gray, Reflective Bronze, Tempered, Obscure, Laminated, Low E2, Low E3, Low E1, Low E2/ERS, Low E3/ERS
- H. Tripane glass(TG) Tripane Low E3/E1/ERS, Tripane E2/E1/ERS: Tripane Low E1, Tripane Low E2, Tripane Low E3.
 - a. This glass type is dependent on sash thickness and availability. Consult ADM or OMS for availability.

2.5 Finish

- A. Exterior: Aluminum clad. Fluoropolymer modified acrylic topcoat over a primer. Meets or exceeds AAMA 2605 requirements.
 - 1. Aluminum clad color options: Bahama Brown, Bronze, Cadet Gray, Cascade Blue, Cashmere, Clay, Coconut Cream, Ebony, Evergreen, Gunmetal, Hampton Sage, Pebble Gray, Sierra White, Stone White, Suede, Wineberry, Bright Silver (pearlescent), Copper (pearlescent), Liberty Bronze (pearlescent)
 - 2. Custom colors: Contact your Marvin representative
- B. Interior Finish options:
 - 1. Prime: Factory-applied water-borne acrylic primer. Meets WDMA TM-11 requirements.
 - 2. Painted Interior Finish. Factory-applied water-borne acrylic enamel. Available on Pine product only. Available in White or Designer Black. Meets WDMA TM-14 requirements.
 - 3. Factory-applied water-borne acrylic enamel clear coat. Applied on two coats with light sanding between coats. Available on Pine, Mahogany, Mixed Grain Douglas Fir, Vertical Grain Douglas Fir, Cherry, White Oak. Meets WDMA TM-14 requirements.
 - 4. Factory-applied water-borne urethane stain. Stain applied over a wood (stain) conditioner. A water-borne acrylic enamel clear coat applied in two separate coats, with light sanding between coats applied over the stain. Available on Pine, Mahogany, Mixed Grain Douglas Fir, Vertical Grain Douglas Fir, Cherry, White Oak. Colors available: Wheat, Honey, Hazelnut, Leather, Cabernet, and Espresso. Meets WDMA TM-14 requirements.

2.6 Hardware

A. Casement operating hardware:

1. Locks: Multi-point sequential concealed locking system in the jamb opposite the hinge side for casement units. Lock handles are removable, non-handed, and are available in the same finishes as the handles. Standard tie bars, cams, and keepers – steel coated with E-Gard™. The keeper features a roller to reduce average lock force and does not easily disengage with the cam even under severe loading. Stainless steel packages are available for coastal application.
2. Handles: Standard operating handle is a folding handle, zinc painted with the standard folding cover being molded plastic. Available colors: standard is Satin Taupe (painted), White (painted), Bronze (painted), Matte Black (painted), Satin Chrome (plated), Satin Nickel (plated), Oil Rubbed Bronze (plated), Brass (plated), Antique Brass (plated)
3. Hinges: One at the sill to the bottom rail and the head jamb to the top rail. Hinges are steel coated with E-Gard™. The hinge track is stainless steel. Unit with a frame OM of 20 inches (508mm) and greater use an 18 inch (457mm) wash/egress hinge to allow the sash to slide across the frame opening, which causes the sash exterior to rotate towards the user for easy washability. Units under a frame OM of 20 inches (508mm) width use a standard 2 bar hinge, which will position the sash when fully open to 90degrees for the user to wash but does not include the feature of sliding the sash across the opening and rotating the exterior towards the user.
4. Optional Factory Installed Window Opening Control Device (WOCD): The standard operation of the WOCD limits the operation of the sash to an opening of less than 4" (102mm). The sash arm detaches from the lock housing by a two-step function actuation to allow the normal operation of the unit. The WOCD re-engages when the unit is fully closed. WOCD is Coastal-compliant. Hardware meets ASTM F2090-17.
 - a. Minimum frame OSM 20" (508mm) x 19 1/8" (486mm);
 - b. Maximum frame
 - i. 44" (1118mm) width
 - ii. If the width is greater than 36" (914mm) or less than 44" (1118), then 92" (2337mm) maximum height
 - iii. If the width is less than or equal to 36" (914), then 96 1/8" (2442mm).
 - c. The WOCD hardware is handed. The Lock Housing and Sash Arm are comprised of multiple stainless steel, injection molded components, and a single stainless steel spring. The Lock Housing fits within a pocket of the jamb. The Sash Arm will fit within a pocket between the jamb/sill cover and the locking hardware.

B. Awning hardware:

1. Locks: Uses a multipoint sequential concealed locking system in both jambs. Lock handles are removable, non-handed, and are available in the same finishes as the handles. Standard tie bars and cams – steel coated with E-Gard™. Standard keepers – steel coated with E-Gard™. The keeper features a roller to reduce average lock force and does not easily disengage with the cam even under severe loading.
2. Handles: Standard operating handle is a folding handle, zinc painted with the standard folding cover being molded plastic. Available colors: standard is Satin Taupe (painted), White (painted), Bronze (painted), Matte Black (painted), Satin Chrome (plated), Satin Nickel (plated), Oil Rubbed Bronze (plated), Brass (plated), Antique Brass (plated)
3. Hinges: Two hinges that connect the stiles of the sash to the jambs of the frame. Hinges are steel coated with E-Gard™, and the hinge track is stainless steel. Hinges are designed to support up to a 210 lb sash.
4. Optional: Op-O-Lock Hardware: Requires the folding handle. The minimum frame OM width is 28" (711mm). A minimum frame OM height is 15 1/8" (384mm). Maximum frame OM width is 72" (1829mm). Maximum frame OM height is 47 1/8" (1197mm).
5. Optional: Power Drive: This is an optional remote control operating system that is applied in the field. If an op-o-lock is installed on the awning, the Power Drive will also engage the cam locks. If the op-o-lock is not used, the sash locks must be manually engaged. Power Drive is available on Awnings with a frame width of 16" or wider. Available colors: Satin Taupe, White, Bronze.

C. Venting Picture hardware:

1. Hardware that operates and locks the sash operates simultaneously on widths less than 36" (914mm) and independently on widths greater than 36" (914mm). Sliding mechanisms attached to the frame operate the hinges, which projects the sash outward approximately 2.25" parallel to the frame. Unit is operated using two (2) handles, located one on each jamb. Venting Picture window hardware will not allow this unit to be used for egress applications. Optional tall handle location available on units with OM height of 77 1/8" (1959) or greater, places center of handle 36" (914) from the bottom of the unit.
2. On larger units, a stainless steel structural cable is used to achieve structural DP.
3. The lock handle and base are painted zinc (Satin Taupe, White, and Bronze). Plated finishes are (Satin chrome, Antique Brass, Oil-rubbed Bronze, Satin Nickel, and Polished Chrome).

2.7 Weather Strip

- A. Weather strip at the frame is a hollow-foamed material bent around a 90-degree corner to allow for seamless corner joints
 1. Color: Beige
- B. Sash weather strip bulb-shaped glass-filled material
 1. Color: White, beige, or black

2.8 Jamb Extension

- A. Jamb extensions are available for various wall thickness factory-applied up to a 12 (305mm) wide
- B. Finish: Match interior frame finish

2.9 Insect Screen

- A. Crank Out
 - 1. Aluminum frame finish is available in Satin, Bronze, Stone White, or Ebony
 - 2. Screen Frame
 - a. Window Frame Height less than or equal to 54 ½" Aluminum Screen Frame. Option: Extruded Aluminum Screen Frame
 - b. Window Frame Height greater than 54 ½" Extruded Screen Frame. Option: None.
 - 3. Screen mesh: Standard is Marvin Bright View™. Optional Charcoal Aluminum Wire, Black Aluminum Wire, Bright Bronze Aluminum Wire, Bright Aluminum Wire
 - 4. Optional Wood Screen Surround with Marvin Bright View™. Species will match unit species
- B. Venting Picture Window
 - 1. Silver-gray fiberglass screen mesh encasing a reticulated foam bulb which is retained by a reticulated foam bulb which is retained by a vinyl carrier and fastened to the sash with an adhesive tape. The position of the screen bulb places it in contact with the frame to block insects and large airborne particles while still allowing airflow.

2.10 Simulated Divided Lites (SDL)

- A. 5/8" (16mm) wide, 7/8" (22mm) wide, 1 1/8" (29mm) wide, 1 15/16" (49mm), 2 13/32" (61mm) wide with or w/out internal spacer bar
- B. Exterior muntins: 0.055" (1.4mm) thick extruded aluminum
- C. Interior muntins: Pine, Douglas Fir, White Oak, Cherry, Mahogany, Vertical Grain Douglas Fir
- D. Muntins adhere to glass with closed-cell copolymer acrylic foam tape
- E. Sticking:
 - 1. Standard: Ogee
 - 2. Optional: Square
- F. Patterns: Rectangular, diamond, custom lite cut
- G. Finish – exterior matches exterior aluminum clad colors, interior matches' interior wood species and color

2.11 Grilles-Between-the-Glass (GBG)

- A. 23/32" (18mm) contoured aluminum bar
 - 1. Exterior Colors: exterior matches exterior aluminum-clad colors. The exterior GBG color is designed to best match the Marvin aluminum clad color when used with Low E glass. The use of different types of glazing may alter the exterior GBG color appearance
 - 2. Interior Colors: Stone White, Bronze, Pebble Gray, Sierra, White, Ebony (only available with Ebony exterior)
- B. Optional flat aluminum spacer bar. Contact your Marvin representative.
- C. Pattern: Rectangular, Cottage, Custom lite layout

2.12 Accessories and Trim

- A. Installation Accessories:
 - 1. Factory-installed vinyl nailing/drip cap
 - 2. Installation brackets: 6 3/8" (162mm), 9 3/8" (283mm), 15 3/8" (390mm)
 - 3. Masonry brackets: 6" (152mm), 10" (254mm)
- B. Installation Kit: (Venting Picture Window)
 - 1. Units will be shipped from the factory with (2) jamb jack screws and up to 24 - #8 x3" square drive screws. The jamb jack and screws will use a number two (2) square bit. The jamb jacks shall be placed at the center span of the jambs to allow for fine-tuning the installation.
- C. Aluminum Extrusions:
 - 1. Profile: Brick mold casing, flat casing, various special casing, frame expander, jamb extender, mullion cover, mullion expander, subsill, subsill end cap, and lineal cap
 - 2. Finish: Fluoropolymer modified acrylic topcoat applied over primer. Meets or exceeds AAMA 2605 requirements.
 - 3. Available in all exterior aluminum clad colors

2.13 Lock Status Sensor (Optional)

- A. Lock Status Sensor
 - 1. Unit is factory-prepared for an integrated lock status sensor system. Sensor and Magnet mounted inside the boundaries of the overall frame size. Refer to **Lock Status Sensor Installation Instructions**.
 - 2. Lock Status Sensor may be wired or wireless.

- a. For the wired option, check with local codes on potential contractor requirements for low voltage networking connections.
 - b. Wireless option available. Requires purchase of secondary transmitter for operation. Marvin will prep for this option.
 3. For CUCA, CURCA, the **sensor** will always be attached to the top of the tie bar on the locking/jamb side.
 4. For CUAWN, CURAWN, the **sensor** will always be attached to the top of the tie bar on the right-handed locking jamb side (from the exterior).
 5. **Actuator** (magnet) for the sensor is always located on the same side as the sensor and located on the stile of the operating sash.
- B. Lock Status Sensor Option Includes:
1. Sensor - Reed
 2. Actuator – Neodymium Magnet
 3. Actuator Cover (Casement and Double Only)
 - a. Colors: Black: Bare, stain and designer black; White: PIF-White and Prime

Part 3 Execution

3.1 Examination

- A. Verification of Condition: Before installation, verify openings are plumb, square, and of proper dimensions, as required in CSI MasterFormat Section 01 71 00. Report frame defects or unsuitable conditions to the General Contractor before proceeding.
- B. Acceptance of Condition: Beginning on installation confirms acceptance of existing conditions.

3.2 Installation

- A. Comply with CSI MasterFormat Section 01 73 00.
- B. Assemble and install window/door unit(s) according to manufacturer's instruction and review shop drawing.
- C. Install sealant and related backing materials at the perimeter of the unit or assembly in accordance with CSI MasterFormat Section 07 92 00 Joint Sealants. Do not use expansive foam sealant.
- D. Install accessory items as required.
- E. Use finish nails to apply wood trim and mouldings.

3.3 Field Quality Control

- A. Remove visible labels and adhesive residue according to the manufacturer's instructions.
- B. Unless otherwise specified, air leakage resistance tests shall be conducted at a uniform static pressure of 75 Pa (~1.57 psf). The maximum allowable rate of air leakage shall not exceed 2.3 L/sm² (~0.45 cfm/ft²).
- C. Unless otherwise specified, water penetration resistance testing shall be conducted per AAMA 502 and ASTM E1105 at 2/3 of the fenestration products design pressure (DP) rating using "Procedure B" – cyclic static air pressure difference. Water penetration shall be defined in accordance with the test method(s) applied.

3.4 Cleaning

- A. Remove visible labels and adhesive residue according to the manufacturer's instructions.
- B. Leave windows and glass in a clean condition. Final cleaning as required in Section 01 74 00.

3.5 Protecting Installed Construction

- A. Comply with CSI MasterFormat Section 07 76 00.
- B. Protecting windows from damage by chemicals, solvents, paint, or other construction operations that may cause damage.

End of Section

Manor Outdoor Glass & Iron Sconce



Overview

Construction

- Crafted of iron and glass.
- Sides and front have glass panes, top and bottom do not.
- Finished by hand in water-based Bronze, Nickel or Tumbled Brass.
- Not compatible with a dimmer switch.
- Accommodates two 40W Type B Bulbs or LED equivalent.
- ETL Damp UL-listed for use indoors, or in a protected outdoor area.
- Imported.

Care

- Dust with soft, dry cloth.
- We do not recommend using harsh household chemicals as they can damage the finish.
- Do not exceed specified wattage.
- Using Damp Rated Products Outdoor: Outdoor damp rated fixtures can only be used in covered, fully protected locations that are not directly exposed to water, even during storms. Outdoor Damp Locations include covered patios and covered porches that are fully protected from water, even during storms.

Assembly

- Hardwired; professional installation recommended.
-

Dimensions & Care

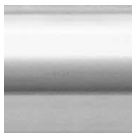
DIMENSIONS

- Overall:
- 9" w x 8.75" d x 18.75" h
- Side Glass Panels:
- 5.75" w x 13.5" h
- Front Glass Panel:
- 8.25" w x 13.5" h
- Back Plate:
- 6.25" w x 9" h x 1" t
- Base Type:
- E12 socket
- Weight:
- 8.75 lbs

Colors Available



Bronze



Polished
Nickel



Tumbled
Brass



White

Pricing may vary at time of purchase.

Product subject to availability. If you have any questions regarding this item(s), please call 1.888.779.5176.