Marvin Modern Inswing/Outswing Door

NOTES TO SPECIFIER: Select product options per 01 62 00

1. **GENERAL**
	1. SECTION INCLUDES:
		1. Modern Inswing/Outswing Door and frame complete with hardware, glazing, weather strip, insect screen, grilles-between-the-glass, simulated divided lite, and standard or specified anchors, trim, attachments, and accessories.
	2. RELATED SECTIONS
		1. 01 33 00: Submittal Procedures: Shop Drawings, Product Data and Samples
		2. 01 33 26: Source Quality Control Reporting
		3. 01 62 00: Product Options
		4. 01 65 00: Product Delivery Requirements
		5. 01 66 00: Storage and Handling Requirements
		6. 01 71 00: Examination and Preparation
		7. 01 73 19: Installation
		8. 01 74 23: Final Cleaning
		9. 01 76 00: Protecting Installed Construction
		10. 07 92 00: Joint Sealants
	3. REFERENCES
		1. ASTM International (ASTM):
			1. C1036: Standard Specification for Flat Glass
			2. C1048: Standard Specification for Heat-Strengthened and Fully Tempered Flat Glass
			3. C1376: Standard Specification for Pyrolytic and Vacuum Deposition Coatings on Flat Glass
			4. E1105: Standard Test Method for Field Determination of Water Penetration of Installed Exterior Windows, Skylights, Doors, and Curtain Walls, by Uniform or Cyclic Static Air Pressure Difference
			5. E1300: Standard Practice for Determining Load Resistance of Glass in Buildings
			6. E2190: Standard Specification for Insulating Glass Unit Performance and Evaluation
			7. E283: Standard Test Method for Determining Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors Under Specified Pressure Differences Across the Specimen
			8. E330: Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights and Curtain Walls by Uniform Static Air Pressure Difference
			9. E547: Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors, and Curtain Walls by Cyclic Static Air Pressure Difference
		2. American Architectural Manufacturer’s Association/Window and Door Manufacturer’s Association/Canadian Standards Association (AAMA/WDMA/CSA):
			1. 101/I.S.2/A440: North American Fenestration Standard (NAFS)/Specification for Windows, Doors and Skylights
		3. Window and Door Manufacturer’s Association (WDMA):
			1. 101/I.S.2 WDMA Hallmark Certification Program
		4. Insulating Glass Manufacturer’s Association/Insulating Glass Certification Council (IGMA/IGCC)
		5. Architectural Aluminum Manufacturer’s Association (AAMA):
			1. 2605: Voluntary specification, performance requirements and test procedures for superior performing organic coatings on aluminum extrusions and panels
			2. 2603: Voluntary specification, performance requirements and test procedures for pigmented organic coatings on aluminum extrusions and panels
			3. 502: Air and Water Leakage Resistance testing of Installed Windows and Doors
			4. 611: Voluntary Specification for Anodized Architecturally Finished Aluminum
			5. 625: Voluntary Specification, Performance Requirements and Test Procedures for Superior Performance Organic Coatings on Fiber Reinforced Thermoset Profiles
		6. 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
	4. SUBMITTALS
		1. Submit Shop Drawings: Submit shop drawings under provisions of CSI MasterFormat Section 01 33 00.
		2. 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).
		3. 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.
	5. QUALITY ASSURANCE
		1. Requirements: Consult local code for International Building Code (IBC) and International Residential Code (IRC) adoption year and pertinent revisions
		2. NFRC Certified U-Value:
			1. Gateway tested frame size of 3’-1 3/4” (959 mm) by 6’-10 3/8” (2092 mm)
		3. Forced Entry Resistance: AAMA 1304 300 lb load (135kg)
		4. Forced latch: 7 1/2 lbs
	6. DELIVERY, STORAGE, AND HANDLING
		1. Comply delivery, storage and handling per Section 01 65 00
		2. Deliver in original packaging and protect from weather
		3. 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
	7. PROJECT CONDITIONS
		1. Maintain environmental conditions (temperature, humidity, and ventilation) within the limits recommended by the manufacture for optimum results. Do not install products under environmental conditions outside of manufacture’s recommended limits
	8. WARRANTY

# Complete and current warranty information is available at [www.marvin.com/warranty](http://www.marvin.com/warranty) (effective 10/29/2018). 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:

* + 1. Glass Components:
			1. Glass warranties apply to factory-installed glass or Marvin supplied glass installed by Marvin-authorized service personnel. Standard 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 in sizes up to sixty (60) square feet, and for ten (10) years in sizes sixty (60) square feet and larger. Non-tempered glass is warranted against stress cracks caused by manufacturing defects for ten (10) years. All other glass and glass features are provided with the same warranties, limitations, and exclusions Marvin receives from its supplier; contact Marvin for further details
		2. Exterior Finish:
			1. Marvin’s standard exterior composite cladding finish is warranted against manufacturing defects per AAMA 625, Section 5, for ten (10) years
		3. Interior Finish:
			1. Factory applied interior coated aluminum finish is warranted to be free from finish defects for a period of ten (10) years. Anodized interior aluminum finish is warranted to be free from manufacturing defects for five (5) years
		4. Non-Glass Components:
			1. Hardware and other non-glass components are warranted to be free from manufacturing defects for ten (10) years. Stainless steel hardware and hardware with PVD finishes installed in coastal environments are warranted to be free from manufacturing defects that result in abnormal deterioration of the finish for a period of ten (10) years. Other hardware finishes are not warranted in coastal environments. Electric operators and other motorized accessories are provided with the same warranties, limitations, and exclusions Marvin receives from its supplier; contact Marvin for further details
1. **PRODUCTS**
	1. MANUFACTURERS
		1. Acceptable Manufacturer: Marvin Windows and Doors, States Avenue, Warroad, Minnesota 56763, 218-386-1430, [www.marvin.com](http://www.marvin.com/)
	2. FABRICATION
		1. Frame:
			1. Exterior: High-Density Fiberglass with aluminum covers
			2. Interior: Extruded Aluminum
			3. Thickness: 1-7/16” (36 mm)
			4. 2” Vinyl Nailing Fin
		2. Sill:
			1. High-Density Fiberglass and Extruded Aluminum in [Bronze] [Ebony]
			2. Panning/s required and supplied by others
			3. Saddle sill with overall height of 1/2" (13 mm)
			4. Performance sill with nominal height of 2” (51 mm) and 4 ½” (114 mm) width
			5. Low-Profile sill with nominal height of 1-9/16” (40 mm) and 4 ½” (114 mm) width
		3. Panel:
			1. Exterior: High-Density Fiberglass
			2. Interior: Extruded Aluminum
			3. Thickness: 2-1/4” (57 mm)
			4. Top rail height: 3.38” (86 mm)
			5. Bottom rail height: 3.38” (86 mm)
			6. Locking Stile width: 3.38” (86 mm)
		4. Glazing:

NOTE TO SPECIFIER

Glazing General:

* Specifier: Select the applicable glazing type and configuration, refer to the Architectural Detail Manual or Marvin Representative for additional information.

Glazing Pane Thickness:

* Glass types are dependent thickness and availability. Consult ADM or OMS for availability
* Triple-Pane IG pane thicknesses are limited to 4.7mm and below
* Low ELR are limited to pane thicknesses of 5.7mm and below
* Low ERS with other Low E coatings are limited to pane thicknesses of 5.7mm and below
* Obscure (Pattern 62) with Low E are limited to pane thicknesses of 4.7mm and below
* Frost with Low E are limited to pane thicknesses of 5.7 and 3.9 mm
* Tints are limited to pane thicknesses of 5.7mm
* Capillary tubes are required in air spaces for high elevation

Glazing Spacer:

* + - 1. [Dual-Pane] [Triple-Pane] insulating tempered one lite glass with preserve film on interior and exterior panes
				1. Insulating glass per ASTM E2190
				2. Glass thickness shall be sized to rated design pressure per ASTM E-1300
				3. Safety glazing per CPSC 16 CFR 1201, SGCC, & CAN/CGSB
			2. Configurations:
				1. Dual-Pane insulating glass

[15/16” (24mm)] [1-1/4” (32mm)] Overall thickness

Surface Treatment:

Low E Coating: [Low E1] [Low E2] [Low E3] [Low ELR] [Low E2/ERS] [Low E3/ERS] [Obscure/Low E1] [Low E2/Obscure] [Low E3/Obscure] [Frost/E1] [E2/Frost] [E3/Frost] [Gray Tint] [Bronze Tint] [Gray Tint/Low E1] [Gray Tint/Low E2] [Bronze Tint/Low E1] [Bronze Tint/Low E2]

Gas Fill:

[Air with capillary tubes] [Argon]

* + - * 1. Triple-Pane insulating glass:

1-1/4” (32mm) Overall thickness

Surface Treatment:

[Low E1/E1] [Low E2/E1] [Low E3/E1]

[Low E3/E1/ERS][Low E2/E1/ERS]

Gas Fill:

[Air with capillary tubes] [Argon]

* + - 1. Perimeter spacer material:
				1. [Black painted Stainless Steel] [Black painted Aluminum]
				2. Seal: Black silicone sealant
			2. Simulated Frame Divider:
				1. Optional 2-7/8” (73 mm) bar used to divide one lite glass in one direction [vertical] [horizontal] [4 lite bar to bar patterns]
				2. Dual glass spacers in stainless steel painted black in all air spaces
		1. Finish:
			1. Interior Frame and Panels
				1. Painted extruded aluminum covers with 70% PVDF coating applied to meet AAMA 2605 requirements in [Gunmetal].
				2. Painted extruded aluminum covers with acrylic coating applied to meet AAMA 2603 requirements in [Bronze] [Ebony] [Stone White].
				3. Anodize extruded aluminum covers meeting Class 1, AAMA 611 requirements in Clear Anodized, Dark Bronze Anodized, Ebony Anodized
			2. Exterior Astragal/Exterior Sill Cover
				1. Painted extruded aluminum covers with 70% PVDF coating applied to meet AAMA 2605 requirements in [Gunmetal] [Bronze] [Ebony] [Silver] [Stone White].

NOTE TO SPECIFIER: Split finishes available between interior and exterior, color of frame and panels must be same color to interior or exterior

* + - 1. Exterior Frame and Panels:
				1. High-Density Fiberglass coated with a PVDF Fluoropolymer FEVE (fluoroethylene vinyl ether) resin with ceramic pigments designed to meet AAMA 625 requirements in [Bronze] [Ebony] [Gunmetal] [Silver] [Stone White]
			2. Split finishes optional between Interior and Exterior
		1. Configuration:
			1. One panel door: O, X
			2. Two panel doors: OX, XO, XX
			3. Operation: Left hand or Right hand (determined by which hand is used to operate the panel when standing with your back against the hinged jamb). Jamb-hinged only.
		2. Hardware:
			1. The hardware allows the swinging operation of the panels and sealing and security when panels are in the locked position.
			2. Adjustable Hinges
				1. 2 hinges per panel up to 144” frame height, used in conjunction with concealed panel alignment bolt/receiver.
				2. Finish: Aluminum substrate with stainless steel pin

Matte Black (painted)

Matte Bronze (painted)

Stone White (painted)

Satin Nickel, brushed (anodized)

Silver, brushed (clear anodized)

* + - 1. Multipoint lock: Three locking points engage and disengage with keeper
				1. Applied to all active panel, latches at three lock points (dead bolt, sill bolt, head jamb bolt).
				2. 35mm back-set
			2. Trim Set
				1. Minimalist handle

Handle includes interior and exterior handles and lock mechanism with minimalist escutcheons.

Finishes: [Matte Black] [Matte Bronze] [Satin Nickel] [Silver] [Stone White] [Mixed finishes optional between Interior and Exterior]

Keyed alike available

* + - 1. Strike Plates: Stainless steel
				1. Inswing strike plate finishes will be matched to the interior trim set selection
				2. Outswing strike plate finishes will be matched to the exterior trim set selection

Brushed stainless strikes will be used in conjunction with Stone White, Satin Nickel, or Silver trim sets

Matte Black strikes will be used in conjunction with Matte Black or Matte Bronze trim sets.

* + 1. Weather Strip:
			1. Units are constructed with vinyl weather strip within the frame, panel and astragal to assure compliance to performance ratings. Weather strip exposed to the exterior shall be UV resistant material. All weather strip black.
		2. Screen (Optional):
			1. Exterior application for Inswing units
			2. Interior application for Outswing units
			3. Not available with saddle sill
			4. Standard Frame colors available
				1. Stone White, Bronze, Ebony, Gunmetal, Clear Anodized
			5. Sill Options
				1. Available in Ebony and Bronze
			6. Handle colors
				1. Available in Black and White
			7. Mesh
				1. Black polyester/PVC mesh
		3. Lock Status Sensor (Optional)
			1. 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 is wireless only.

Wireless requires purchase of secondary transmitter for operation, supplied by others. Marvin will prep for this option.

* + - * 1. For Swinging Doors, the sensor will always be integrated into the locking hardware system.
				2. The actuator (keyed or thumb turn) is integrated into the locking hardware system.
1. **EXECUTION**
	1. EXAMINATION AND PREPARATION
		1. Verification of Condition:
			1. Before installation, verify openings are plumb, square and of proper dimensions as required in Section 01 71 00
			2. Report frame defects or unsuitable conditions to the General contractor before proceeding
		2. Acceptance of Condition:
			1. Beginning of installation confirms acceptance of existing conditions
	2. INSTALLATION
		1. Assemble and install window/door unit(s) per manufacturer’s instruction and reviewed shop drawing
		2. Installation to comply with Section 01 73 19
		3. Install sealant and related backing materials at perimeter of unit or assembly in accordance with Section 07 92 00. Do not use expansive foam sealant
		4. Install accessory items as required
	3. FIELD QUALITY CONTROL
		1. 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)
		2. 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
	4. CLEANING AND PROTECTION
		1. Protect installed construction as required in Section 01 76 00
		2. Remove visible labels and adhesive residue per manufacturer’s instruction
		3. Leave windows and glass in a clean condition, final cleaning as required in Section 01 74 23
		4. Protecting windows from damage by chemicals, solvents, paint or other construction operations that may cause damage

END OF SECTION