#### Part 1 General

# Section Includes

## Ultrex® direct set clad wood polygon window complete with glazing, grilles-between-the-glass, simulated divided lite, jamb extension and standard or specified anchors, trim and attachments.

# Related Sections

## Section 01 33 00 – Submittal Procedures: Shop Drawings, Product Data and Samples

## Section 01 62 00 – Product Options

## Section 01 65 00 – Product Delivery

## Section 01 66 00 – Storage and Handling requirements

## Section 01 71 00 – Examination and Preparation

## Section 01 73 00 – Execution

## Section 01 74 00 – Cleaning and Waste Management

## Section 01 76 00 – Protecting Installed Construction

## Section 06 22 00 – Millwork: Wood trim other than furnished by window manufacturer

## Section 07 92 00 – Joint Sealants: Sill sealant and perimeter caulking

## Section 09 90 00 – Paints and Coatings: Paint or stain other than factory applied finish

# References

## ASTM, International:

### 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.

### E 330: Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights, and Curtain Walls by Uniform Static Air Pressure Difference.

### E 547: Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors, and Curtain Walls by Cyclic Static Air Pressure Differential.

### E 2190: Standard Specification for Insulating Glass Unit Performance and Evaluation.

### C 1036: Standard Specification for Flat Glass.

### E 2112: Standard Practice for Installation of Exterior Windows, Doors, and Skylights.

## North American Fenestration Standard (NAFS) – American Architectural Manufacturers Association / Window and Door Manufacturers Association / Canadian Standards Association (AAMA/WDMA/CSA 101/I.S.2/A440)

### AAMA/WDMA/CSA 101/I.S.2/A440-17: NAFS – North American Fenestration Standard/Specification for windows, doors, and skylights

## Window and Door Manufacturer’s Association (WDMA):

### WDMA I.S.4: Industry Standard for Water Repellent Preservative Treatment for Millwork

### WDMA: I.S.2 WDMA Hallmark Certification Program

## Insulating Glass Certification Council (IGCC) and Fenestration Glazing Industry Alliance (FGIA) Glass Products Council (GPC) .

## Fenestration Glazing Industry Alliance (FGIA) – note:  AAMA combined with IGMA and formed FGIA as of 08/01/2019

### AAMA: 2605: Voluntary Specification for High Performance Organic Coatings on Architectural Extrusions and Panels

## National Fenestration Rating Council (NFRC):

### NFRC 101: Procedure for Determining Fenestration Product Thermal Properties

### NFRC 200: Procedure for Determining Solar Heat Gain Coefficients at Normal Incidence

## G.  Window Covering Manufacturer’s Association

### WCMA A100.0: American National Standard for Safety of Window Covering Products

# System Description

STANDARD

### Window units shall be designed to comply with 101/I.S.2/A440-11 and 101/I.S.2/A440-17: CW-PG50 ratings.

### Air leakage shall not exceed the following when tested at 1.57 psf according to ASTM E 283: 0.30 cfm per square foot of frame.

### No water penetration when tested at the following pressure according to ASTM E547: 7.5psf

### Units shall be designed to comply with ASTM E330 for structural performance when tested at the following pressures: 75psf.

IMPACT

### Window units shall be designed to comply with 101/I.S.2/A440-11 and 101/I.S.2/A440-17: LC-PG-55 rating.

### Air leakage shall not exceed the following when tested at 1.57 psf according to ASTM E 283: .30 cfm per square foot of frame.

### No water penetration when tested at the following pressure according to ASTM E 547: 8.25 psf.

### Units shall be designed to comply with ASTM E 330 for structural performance when tested at the following pressure: (+83.5/-97.5 psf)

### Missile Impact at missile level D, complies ASTM E 1996-14a, ASTM E 1886-13a.

### Impact Pressure Cycling at +55/-65 psf. Complies with ASTM E 1996-14a, ASTM E 1886-13a

# Submittals

## Shop Drawings: Submit shop drawings under provision of CSI MasterFormat Section 01 33 00.

## 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).

## Samples:

### Submit corner section under provision of CSI MasterFormat Section 01 33 00.

### Specified performance and design requirements under provisions of CSI MasterFormat Section 01 33 00.

# Quality Assurance

## Code Requirements: Consult local code for IBC [International Building Code] and IRC [International Residential Code] adoption year and pertinent revisions for information on:

### Egress, emergency escape and rescue requirements

### Basement window requirements

### Windows fall prevention and/or window opening control device requirements.

# Delivery

## Comply with provisions of CSI MasterFormat Section 01 65 00

## Deliver in original and protect from weather

# Storage and Handling

## Prime and seal wood surfaces, including to be concealed by wall construction, if more than thirty (30) days will expire between delivery and installation

## Store window units in an upright position in a clean and dry storage area above ground to protect from weather under provision of CSI MasterFormat Section 01660

# Warranty

#### **The following limited warranty is subject to conditions and exclusions. There are certain conditions or applications over which Marvin has no control. Defects or problems as a result of such conditions or applications are not the responsibility of Marvin. For a more complete description of the Marvin limited warranty, refer to the complete and current warranty information available at marvin.com/support/warranty.**

## 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.

## Hardware another non-glass components are warranted to be free from manufacturing defects for ten (10) years from the original date of purchase.

#### Part 2 Products

# Manufactured Units

## Description: Factory assembled Ultrex® Direct Set Clad Wood Polygon window as manufactured by Marvin Windows and Doors, Fargo, North Dakota.

# Frame Description

## Interior: Clear pine

### Kiln-dried to moisture content no greater than twelve (12) percent at the time of fabrication

### Water preservative treated in accordance with ANSI/NWWDA I.S.4-94

## Exterior: Fiberglass reinforced (Ultrex®) 0.080 inch (2 mm) thick

## Composite frame thickness: 2 1/16 inch (52mm)

## Frame depth: 4 9/16 inch (116mm)

# Glazing

## Select quality complying with ASTM C 1036. Insulating glass SIGMA/IGCC certified to performance level CBA when tested in accordance with ASTM E 2190. STC ratings are certified to the level in accordance with ASTM E90.

## Glazing Method: 11/16 inch (17mm) or 7/8 inch (22mm) Insulting glass

## Glass fill: Air with capillary tubes, Argon

## Glass Type: Low E1, E2, E3, E3/ERS

## Glass Type Options: Obscure Glass or California Fire Glass (Annealed exterior and tempered interior glazing configuration), Rain Glass, Glue Chip, Narrow Reed, Reed, Frost, Bronze Tint, Gray Tint, Green Tint.

## Glazing Seal: Silicone bedding at exterior, closed cell co-polymer foam tape at interior

## Optional Glazing: STC/OITC upgrade

## Optional Impact Glazing – Zone 3 for winds up to 140 miles per hour for rectangles only. The laminated glass is laminated insulating Low E2 or Low E3 with Argon, consisting of tempered glass to the exterior and laminated glass to the interior. The laminated glass is comprised of two pieces of glass with either SGP or PVB laminated layer between them. The interior is glazed with silicon and the exterior is glazed with closed cell co-polymer foam tape.

## Optional Tripane glazing: Units are manufactured with 1 1/8” (29mm), 1 1/4" (32mm), 1 3/8” (35mm) or 1 1/2” (38mm)

## Triple-Pane Glass: Low E2/E1, Low E3/E1, Low E2/E1/ERS, Low E3/E1/ERS

# Certified Mulling for Standard Units

## Directional mull limits: 5 units wide by 1 unit high; Rough Opening not to exceed 113 ½ x 68 ¼ inches (2882 mm x 1733 mm)

## Directional mull limits: 1 unit wide by 5 units high; Rough Opening not to exceed 62 ½ x 92 inches (1587 mm x 2336 mm)

# Certified Reinforced Space Mulling for Standard Units

## Directional mull limits (Vertical ½” Space Mull): 5 units wide by 1 unit high; Rough Opening not to exceed 113 ½ x 76 ¼ inches (2883 mm x 1937 mm)

## Directional mull limits (Vertical ½” Space Mull): 5 units wide by 1 unit high; Rough Opening not to exceed 108 ½ x 84 1/4 inches (2756 mm x 2140 mm)

## Directional mull limits (Horizontal ½” Space Mull): 1 unit wide by 5 units high: Rough Opening not to exceed 62 ½ x 92 inches (1588mm x 2337mm)

## Directional mull limits (Vertical Continuous ½” Space Mull, Optional Horizontal Space Mull): 3 units wide by 5 units high: Rough Opening not to exceed 84 x 92 inches (2134mm x 2337mm)

## Directional mull limits (Horizontal Continuous ½” Space Mull): 3 units wide by 5 units high: Rough Opening not to exceed 62 ½ x 83 ½ inches (1588mm x 2121mm)

# Finish

## Exterior: Factory applied finish.

### Color: Stone White, Pebble Gray, Bronze, Cashmere, Gunmetal, Ebony.

## Interior:

### Treated pine wood, White, Clear interior, Designer Black interior factory finish.

# Jamb Extension

## Furnish jamb extension: 6 9/16 inch (167mm) or 6 13/16 inch (173mm) factory-installed

1. Optional jamb extension: 4 11/16 inch (119mm), 4 13/16 inch (122mm), or 5 1/16 inch (129mm) – 8 9/16 inch (217mm) shipped loose.
2. Finish: White, Clear Lacquer, Designer Black

# Simulated Divided Lites (SDL)

## Rectangle units only. 7/8 inch (22mm) wide. Available with optional spacer bars.

### Exterior muntins: Ultrex finished to color match exterior

### Interior muntins: Bare pine wood with optional composite white, clear interior, or designer black interior finish

### Patterns:

1. Rectangular
2. 9 lite Prairie cut with 4” DLO corners
3. 6 lite top or bottom Prairie cut with 4” DLO corners
4. 6 lite left or right Prairie cut with 4” DLO corners
5. Cottage style up to 2H with specified DLO height (4” min)
6. Size limitations may apply to Prairie and Cottage lite cut availability

### Simulated Check rail option: 2 11/32” (60mm). Available with optional spacer bars.

# Grilles-Between-The-Glass (GBG)

## Rectangle units only. Manufactured from aluminum in an 23/32 inch (18mm) wide contoured profile placed between the two panes of glass. On tri-pane configurations, GBG profile is placed between exterior and center glass panes.

## 1. Colors:

### a. Interior: White, Bronze, Black

### b. Exterior: White, Pebble Gray, Bronze, Cashmere, Gunmetal, or Ebony

### Patterns:

a. Rectangular

b. 9 lite Prairie cut with 4” DLO corners

c. 6 lite top or bottom Prairie cut with 4” DLO corners

d. 6 lite left or right Prairie cut with 4” DLO corners

e. Cottage style up to 2H with specified DLO height (3” min)

f. Size limitations may apply to Prairie and Cottage lite cut availability

### Not available for Impact glazed units

# Accessories and Trim

## Exterior Casing (Rectangular Unit Only)

### Non-integral to the unit. Fastened to the exterior wall with barb and kerf

### 2 inch Brick Mould available as a full surround or with Sill Nosing

### 3 ½ inch Flat Casing available as full surround or with Sill Nosing

### Color: All exterior Ultrex colors

## Installation Accessories:

### Factory installed nailing fin

### Installation Brackets: Brackets for 4 9/16 inch (116mm), or 6 9/16 inch (167mm) jambs

### Mullion kit: Standard mullion kit for field assembly of related units available in horizontal, vertical, round top over double hung and 2-wide and/or 2-high configurations. Kits include: Instructions, aluminum pins, filler blocks, wood mullion tie, sealant foam tape, interior mullion trim, mull tee, related screws and nailing fin connectors.

### Structural mullion kit: Structural mullion kit for field assembly or related units available in horizontal, vertical, round top over double hung and 2-wide and/or 2-high configurations. Kit includes: Instructions, reinforcement member, aluminum pins, filler blocks, wood mullion tie, sealant foam tape, interior mullion trim, mull tee, related screws, nailing fin connectors and structural brackets

### ½” MRF Mullion kit (Double Hung style frame only): Structural mullion kit with ½” spacing for field assembly or related units available in horizontal, vertical, and multi-wide, multi high configurations. Kit includes: mulling pins, mull reinforcement, mull support, weatherstrip, plugs, exterior mull cover, interior mull trim, brackets, drip cap and hardware.

#### Part 3 Execution

# Examination

## 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.

## Acceptance of Condition: Beginning on installation confirms acceptance of existing conditions.

# Installation

## Comply with Section 01 73 00.

## Assemble and install window/door unit(s) according to manufacturer’s instruction and reviewed shop drawing.

## Install sealant and related backing materials at perimeter of unit or assembly in accordance with Section 07 92 00 Joint Sealants. Do not use expansive foam sealant.

## Install accessory items as required.

## Use finish nails to apply wood trim and mouldings.

# Field Quality Control

## Remove visible labels and adhesive residue according to manufacturer’s instruction.

## 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).

## 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.

# Cleaning

## Remove visible labels and adhesive residue according to manufacturer’s instruction.

## Leave windows and glass in a clean condition. Final cleaning as required in Section 01 74 00.

# Protecting Installed Construction

## Comply with Section 07 76 00.

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

End of Section