

SECTION 08 52 00**WOOD WINDOWS****PART 1 - GENERAL****1.1 DESCRIPTION**

- A. Section includes factory primed wood windows.

1.2 RELATED WORK

- A. Trim: Section 06 20 00, FINISH CARPENTRY.
- B. Sealant: Section 07 92 00, JOINT SEALANTS.
- C. Paint Finishes: Section 09 91 00, PAINTING.

1.3 SUBMITTALS

- A. Product Data: For each type of product.
- B. Product test reports.
- C. Sample warranties.
- D. Shop Drawings: Include plans, elevations, sections, hardware, accessories, insect screens, operational clearances, and details of installation, including anchor, flashing, and sealant installation.
- E. Samples: For each exposed product and for each color specified, 2 by 4 inches (50 by 100 mm) in size.
 - 1. Submit corner section including glazing and muntin to demonstrate aesthetic effects and set quality standards for materials and execution.
- F. Product Schedule: Use same designations indicated on Drawings.

1.4 WARRANTY

- A. Manufacturer's Warranty: Manufacturer agrees to repair or replace wood windows that fail in materials or workmanship within specified warranty period.
 - 1. Warranty Period:
 - a. Window: 10 years from date of Substantial Completion.

- b. Insulated glazing units: 20 years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Basis-of-Design Product: Subject to compliance with requirements, Marvin Windows and Doors Ultimate Double Hung Magnum units with insect screens.

2.2 WINDOW PERFORMANCE REQUIREMENTS

- A. Product Standard: AAMA/WDMA/CSA 101/I.S.2/A440.
 - 1. Minimum Performance Class: LC.
 - 2. Minimum Performance Grade: 40.
- B. Thermal Transmittance: NFRC 100 maximum whole-window U-factor of 0.32 Btu/sq. ft. x h x deg F (1.83 W/sq. m x K).
- C. Solar Heat-Gain Coefficient (SHGC): NFRC 200 maximum whole-window SHGC of 0.40.

2.3 WOOD WINDOWS

- A. Operating Types: Double hung sash.
- B. Certified Wood: Windows shall be certified as "FSC Pure" or "FSC Mixed Credit" according to FSC STD-01-001, "FSC Principles and Criteria for Forest Stewardship," and FSC STD-40-004, "FSC Standard for Chain of Custody Certification."
- C. Frames and Sashes: Fine-grained wood lumber complying with AAMA/WDMA/CSA 101/I.S.2/A440; kiln dried to a moisture content of not more than 12 percent at time of fabrication; free of visible finger joints, blue stain, knots, pitch pockets, and surface checks larger than 1/32 inch (0.8 mm) deep by 2 inches (51 mm) wide; water-repellent preservative treated.
 - 1. Exterior Finish: Manufacturer's standard factory-prime coat wood.
 - 2. Interior Finish: Unfinished.
- D. Glass: Clear annealed glass, ASTM C 1036, Type 1, Class 1, q3.
 - 1. Safety Glass: Provide Kind FT, fully tempered, labeled safety glass where indicated on Drawings.

- E. Insulating-Glass Units: ASTM E 2190.
 - 1. Glass: ASTM C 1036, Type 1, Class 1, q3.
 - a. Tint: Clear.
 - b. Safety Glass: Provide Kind FT, fully tempered, labeled safety glass where indicated on Drawings.
 - 2. Lites: As indicated.
 - 3. Filling: Fill space between glass lites with air.
 - 4. Low-E Coating: Sputtered on second surface.
- F. Glazing System: Manufacturer's standard factory-glazing system that produces weathertight seal.
- G. Hardware, General: Manufacturer's standard corrosion-resistant hardware sized to accommodate sash weight and dimensions.
 - 1. Exposed Hardware Color and Finish: As selected by Contracting Officer from manufacturer's full range.
- H. Hung Window Hardware:
 - 1. Counterbalancing Mechanism: AAMA 902.
 - 2. Locks and Latches: Operated from the inside only.
 - 3. Tilt Hardware: Releasing tilt latch allows sash to pivot about horizontal axis.
 - 4. Roller Assemblies: Low-friction design.
- I. Weather Stripping: Provide full-perimeter weather stripping for each operable sash unless otherwise indicated.
- J. Fasteners: Noncorrosive and compatible with window members, trim, hardware, anchors, and other components.
 - 1. Exposed Fasteners: Do not use exposed fasteners to the greatest extent possible. For application of hardware, use fasteners that match finish hardware being fastened.

2.4 ACCESSORIES

- A. Simulated Divided Lites (SDL): Provide divider muntins in designs indicated for each sash lite.
 - 1. Quantity and Type: Three per sash, two permanently located at exterior and interior lites and one permanently located between insulating-glass lites.
 - 2. Material: Match window finish.
 - 3. Pattern: As indicated on Drawings.
 - 4. Profile: As indicated.
 - 5. Color: Factory Primed.

2.5 INSECT SCREENS

- A. General: Fabricate insect screens, custom fabricated, to integrate with window frame. Provide screen for each new operable window. Screen wickets are not permitted.
 - 1. Type and Location: Full, outside for double-hung units.
- B. Aluminum Frames: Complying with SMA 1004 or SMA 1201.
 - 1. Finish for Exterior Screens: Baked-on organic coating in color selected by VA to match window sash color.
 - 2. Fabricate frames with a minimum of exposed fasteners and latches.
- C. Glass-Fiber Mesh Fabric: 16-by-16 mesh complying with ASTM D 3656.
 - 1. Mesh Color: Charcoal.

2.6 FABRICATION

- A. Fabricate wood windows in sizes and profiles indicated. Include a complete system for installing and anchoring windows.
 - 1. Provide simulated divided lites (SDL) in patterns indicated.
- B. Glaze wood windows in the factory.
- C. Weather strip each operable sash to provide weathertight installation.
- D. Provide mullions and cover plates, matching window units, complete with anchors for support to structure and installation of window units. Allow for erection tolerances and provide for movement of window units due to thermal expansion and building deflections. Provide mullions and cover plates capable of withstanding design wind loads of window units.
- E. Complete fabrication, assembly, finishing, hardware application, and other work in the factory to greatest extent possible. Disassemble components only as necessary for shipment and installation. Allow for scribing, trimming, and fitting at Project site.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Comply with manufacturer's written instructions for installing windows, hardware, accessories, and other components. For installation procedures and requirements not addressed in manufacturer's written instructions, comply with installation requirements in ASTM E 2112.
- B. Install windows level, plumb, square, true to line, without distortion, anchored securely in place to structural support, and in

proper relation to wall flashing and other adjacent construction to produce weathertight construction.

- C. Adjust operating sashes and hardware for a tight fit at contact points and weather stripping for smooth operation and weathertight closure.
- D. Clean exposed surfaces immediately after installing windows. Remove excess sealants, glazing materials, dirt, and other substances.
- E. Remove and replace sashes if glass has been broken, chipped, cracked, abraded, or damaged during construction period.

3.2 INSECT SCREEN INSTALLATION

- A. Install aluminum insect screen frames for each new wood window.
 - 1. Locate insect screen frames on outside of window unless otherwise indicated.
- B. Install insect screening to be smooth, flat, and uniformly taut.

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