PART 1 - GENERAL

1.01 SECTION INCLUDES
A. Factory assembled aluminum clad wood double hung windows [including fixed units], glass and glazing, operable hardware, weatherstripping, insect screen, and [grilles].
B. Anchorages, attachments, and accessories.

1.02 RELATED SECTIONS
A. Section 01340 - Shop Drawings, Product Data, and Samples.
B. Section 01610 - Delivery, Storage, and Handling.
C. Section 01710 - Final Cleaning.
D. Section 07200 - Batt and Blanket Insulation.
E. Section 07920 - Sealants and Caulking.
F. Section 08800 - Glass and Glazing.

1.03 REFERENCES
A. AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM):
   1. ASTM E-283 - Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors.
   2. ASTM E-547 - Water Penetration of Exterior Windows, Curtain Walls, and Doors by Cyclic Static Air Pressure Difference.
B. AMERICAN ARCHITECTURAL MANUFACTURERS ASSOCIATION (AAMA):
C. WINDOW & DOOR MANUFACTURERS ASSOCIATION (WDMA):
   1. WDMA I.S-4 – 07 Industry Standard for Water-Repellent Preservative Treatment for Millwork
D. AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI)
E. NATIONAL FENESTRATION RATING COUNCIL (NFRC)

1.04 PERFORMANCE CRITERIA
A. Patio Door units shall meet requirements in accordance with AAMA/WDMA/CSA 101/I.S.2/A440-11.
B. Air leakage shall not exceed 0.30 cfm per sq.ft. of sash when tested in accordance with ASTM E-283 at 1.57 psf.
C. No water penetration shall be allowed when tested in accordance with ASTM E-547.
D. Window units shall withstand positive and negative wind loads without damage. The units shall be tested in accordance with ASTM E-330.

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1.05 SUBMITTALS
A. Shop drawings shall be submitted in accordance with Section 01340.
B. Product data in the form of general catalogs, test lab reports, product performance, and warranty information shall be submitted in accordance with Section 01340.
C. Samples showing glazing, quality of construction, and finish shall be submitted in accordance with Section 01340.

1.06 DELIVERY, STORAGE, AND HANDLING
A. In compliance with Section 01610, window units shall be delivered undamaged, with protective packaging and fitted with sash shipping blocks. Complete installation and finishing instructions shall be included.
B. Store units in a clean, dry place off the ground in an upright position.
PART 2 – PRODUCTS

2.01 MANUFACTURER
A. Pinnacle Series Aluminum Clad Wood double hung window units [including fixed units] as manufactured by Windsor Windows & Doors.

2.02 MATERIALS
A. Frame: Shall be select softwoods treated with water repellent preservative in accordance with NWWDA I.S.-4-81, assembled with hardware installed. Exposed exterior portion shall be extruded aluminum cladding. Frame cladding sealed at corners with injected silicone and aluminum corner keys. Jamb thickness shall be 11/16". Jamb width shall be 4-9/16". Jamb extenders are available to match other finished wall thicknesses. Aluminum sill is thermally broken and end sealed. Vinyl hinged nailing fin and drip cap are utilized for installation. Rigid aluminum nail fin and color matched drip cap option is available. Natural Alder and Fir interior options are available. DP Upgrade units receive a ½" taller inside sill stop.

Concealed Jambliner Option: Exterior exposure shall have finished matched clad covers. Interior exposure shall have wood covers species matched to the sash/frame. The balance system shall be a block and tackle inverted balance mounted to the side jamb. A jamb jack will be standard, concealed with a removable transition dust pad. A kerf mount weatherstrip is applied to each side jamb, the entire length, providing a seal between the sash and both side jambs.

Standard Jambliner Option: A flexible hinge jambliner, available in white and beige. The balance system shall be a block and tackle balance mounted to the jambliner shell. The jambliner provides a tight seal to the sash. A dust pad is applied to the jambliner shell, providing a seal at the check rail assembly.

B. Sash: Wood interior shall be select pine treated with water repellent preservative. Corners shall be coped and stapled. Exterior surfaces shall consist of aluminum extrusion with lapped corners held together by color-matched injected-molded corner keys. Foam tape is applied to the back side of glass stop. Natural Alder and Fir interior option is available. DP upgrade units shall have no finger pulls. No finger pull option is available for standard units.

C. Finish: All aluminum exterior surfaces shall be covered with a factory applied, polyester powder-coat paint in 22 standard and 20 feature colors. Anodized colors are also available.

D. Glazing: Shall be 3/4" double pane LoE 366 insulating glass as standard, glazed with double-faced tape plus a full perimeter bead of silicone, and interior wood stops. A wide array of other glass options is offered including clear, tinted, tempered, and obscure. Cardinal’s Preserve™ option is available on all LoE 366, glass. It is a removable, factory-applied protective film adhered to both interior and exterior surfaces of the glass.

E. Weatherstripping: Shall be closed-cell foam encased in TPE skin installed at the head and sill. A PVC-Alcryn hollow bulb applied to the inside check rail. Concealed jambliner shall have a wood parting stop with a kerf mount bulb providing a seal to the top rail. Flex back jambliner shall have a vinyl kerf mount parting stop with a hollow bulb providing a seal to the top rail.

F. Hardware: Spring-loaded die-cast tilt latches allow both sash to be tilted in with ease. Balance system consists of a block and tackle with a locking shoe that allows for easy cleaning or removal. Flange mounted cam action locks have contemporary curved handle and concealed fasteners. One lock is used on glass widths 26" and below. Two locks are used on glass widths of 28" on up. Locks, keepers, and tilt latches all have a baked on champagne enamel finish. White, black, bronze, brass, oil-rubbed bronze, and satin nickel hardware options available.

G. Screens: Shall be a fiberglass BetterVue™ screen set in painted aluminum frame. UltraVue™ Screen option is available. Screens are full height of opening. Screens available in 22 standard and 20 feature colors. The screen is intended to allow air and light in and keep insects out. The screen is not intended to stop children, adults or animals from falling out an open window.
H. Grilles: (Extra when specified) Colonial grilles shall be select pine with moulded edges. Stick grilles are fastened to sash with press pins, while perimeter grilles use a hidden clip system. Stick grilles and perimeter grilles are available in 7/8” or 1-1/4” widths. White, cinnamon, bronze, tan, ivory, hunter green, or black; aluminum inner grilles (in air space) are also available in 13/16” flat, 3/4” profiled, or 1” profiled. Two-toned inner grilles (3/4” profiled only) are available with a white interior, and a bronze, green, tan, ivory, or black exterior. Windsorlite (WDL) simulates true divided lite, but is created by adhesively fixing the wood interior and aluminum exterior to the surfaces of the insulated glass. WDL is available in 7/8” and 1-1/4” standard, 5/8” putty, and 7/8” putty with standard interior. All are available with or without inner bar between the glass. Exterior bars are available in 22 standard and 20 feature colors.

PART 3 - EXECUTION

3.01 EXAMINATION
A. Verify that there is no visible damage to the unit before installation.

3.02 INSTALLATION
A. Verify the rough opening is of the recommended size and that it is plumb, level, and square.
B. Install the window unit in accordance with the manufacturer’s recommendations. On operating units, remove shipping blocks after unit is fully installed.
C. Install sealant, backing material, and insulation around opening perimeter in accordance with Section 07900 and Section 07920.

3.03 ADJUSTMENT AND CLEANING
A. Operate unit and verify that all hardware operates freely. Make any adjustments necessary.
B. Cover the window unit to avoid damage due to spray paint, plaster, and other construction operations.
C. Remove all visible labels and instructions.
D. Final cleaning of glass in accordance of Section 01710.