

## SECTION 08550

## WOOD WINDOWS

1 PART 1 GENERAL

## 1.1 SUMMARY

- A. Section Includes: Vinyl Clad Double-Hung and Picture Wood windows.
- B. Related Sections:
  - 1. Division 6 Section: Finish Carpentry.
  - 2. Division 7 Section: Sealants.
  - 3. Division 7 Section: Thermal Insulation.
  - 4. Division 8 Section: Glazing.
  - 5. Division 9 Section: Painting.

## 1.2 REFERENCES

- A. General: Standards listed by reference, including revisions by issuing authority, form a part of this section to the extent indicated. Standards listed are identified by issuing authority, authority abbreviation, designation number, title or other designation established by issuing authority. Standards subsequently referenced herein are referred to by issuing authority abbreviation and standard designation.
- B. American National Standards Institute (ANSI):
  - 1. ANSI/AAMA/NWDA 101/I.S.2 Voluntary Specifications for Aluminum, Vinyl (PVC) and Wood Windows and Glass Doors.
- C. ASTM International:
  - 1. ASTM A36 Standard Specifications for Carbon Structural Steel.
  - 2. ASTM C1036 Standard Specification for Flat Glass.
  - 3. ASTM C1048 Standard Specification for Heat-Treated Flat Glass-Kind HS, Kind FT Coated and Uncoated Glass.
  - 4. ASTM D4216 Standard Specification for Rigid Poly (Vinyl Chloride) (PVC) and Related PVC and Chlorinated Poly (Vinyl Chloride) (CPVC) Building Products Compounds.
  - 5. ASTM E90 Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements.
- D. Insulating Glass Certification Council (IGCC):
  - 1. Requirements for Class CBA.
- E. Insulating Glass Manufacturers Association of Canada (IGMAC):
  - 1. Canadian General Standards Board Specification CAN/CGSB 12.8.
- F. National Institute of Standards and Technology (NIST):

1. Voluntary Product Standard PS1.
  - G. National Fenestration Rating Council (NFRC):
    1. NFRC 100 Procedure for Determining Fenestration Product Thermal Properties.
    2. NFRC 200 Procedure for Determining Solar Heat Gain Coefficient.
  - H. Window & Door Manufacturers Association (WDMA) (formerly National Wood Window and Door Association (NWWDA)):
    1. WDMA I.S.4 Industry Standard for Water-Repellent Preservative Non-Pressure Treated for Millwork.
- 1.3 SYSTEM DESCRIPTION
- A. Performance Requirements: Provide products/systems that have been manufactured, fabricated and installed to the following performance criteria:
    1. Comply with ANSI/AAMA/NWWDA 101/I.S.2.
- 1.4 SUBMITTALS
- A. General: Submit listed submittals in accordance with Conditions of the Contract and Division 1 Submittal Procedures Section.
  - B. Product Data: Submit manufacturer's product data and installation guides.
  - C. Shop Drawings: Provide drawings indicating direction of operable parts, typical jamb, head and sill conditions and special mullion reinforcement details.
  - D. Color Samples: Submit selection and verification samples, including the following.
    1. Hardware: Submit samples indicating typical finish on window hardware.
    2. Vinyl Cladding: Submit color samples of vinyl cladding.
  - E. Contract Closeout Submittals: Submit the following:
    1. Warranty documents specified herein.
    2. Owner's Manual: Bound manual clearly identified with project name, location and completion date. Identify type and size of window units installed. Provide recommendations for periodic inspections, care and maintenance. Identify common causes of damage with instructions for temporary repair.
- 1.5 QUALITY ASSURANCE
- A. Installer Qualifications: Utilize an installer having demonstrated experience on projects of similar size and complexity.
  - B. Insulating Glass Units: Provide insulating glass units permanently marked with certification label of Insulating Glass Certification Council (IGCC) indicating compliance

with Class CBA.

#### 1.6 DELIVERY, STORAGE & HANDLING

- A. General: Comply with Division 1 Product Requirements Section.
- B. Comply with manufacturer's ordering instructions and lead time requirements to avoid construction delays.
- C. Delivery: Deliver materials in manufacturer's original unopened, undamaged containers with identification labels intact.
- D. Storage and Protection: Store materials protected from exposure to harmful environmental conditions and at temperature and humidity conditions recommended by the manufacturer.
  - 1. Store windows and accessories off ground, under cover and protected from weather and construction activities.

#### 1.7 PROJECT CONDITIONS

- A. Field Measurements: Verify actual dimensions of openings by field measurements before fabrication. Record measurements on shop drawings. Coordinate field measurements and fabrication schedule with construction progress to avoid construction delays.
- B. Install windows in strict accordance with manufacturer's safety and weather requirements.

#### 1.8 WARRANTY

- A. Manufacturer's Warranty: Submit, for Owner's acceptance, manufacturer's standard limited warranty document. Manufacturer's limited warranty is in addition to, and not a limitation of, other rights Owner may have under contract documents.

## 2 PART 2 PRODUCTS

#### 2.1 WOOD WINDOWS

- A. Manufacturer: Andersen Corporation.
- B. Proprietary Products/Systems: Vinyl clad, double-hung tilting wood windows, including the following:
  - 1. Andersen® 400 Series Woodwright™ Tilt-Wash Double-Hung Windows.
  - 2. Andersen® 400 Series Woodwright™ Picture Window.

#### 2.2 PRODUCT SUBSTITUTIONS

- A. Substitutions: Refer to alternate pricing items within specification section 01001.

## 2.3 MATERIALS

- A. Frame: Fabricated from a wood species approved in WDMA I.S.4.
- B. Double-Hung Exterior Frame Members: Vinyl wrapped wood (PVC) complying with the requirements of ASTM D4216.
  - 1. Color: Sandtone®
- C. Double-Hung Sash:
  - 1. Exterior Components: Provide Fibrex® material extrusion finished with Sandtone® color capping.
  - 2. Interior Components: Provide finished White interior, water repellent wood preservative treated wood interior.
  - 3. Adhesively bond exterior and interior sash components.
- D. Picture Sash Members:
  - 1. Exterior Components: Provide Fibrex® material extrusion finished with Sandtone® color capping.
  - 2. Interior Components: Provide finished White interior, water repellent wood preservative treated wood interior per WDMA I.S.4.
  - 3. Interior components shall be clip fastened to exterior components.
- E. Double-Hung and Picture Sill: Provide a Fibrex® material sill cover over a wood species approved in ANSI/AAMA/NWDA 101/I.S.2.
- F. Weatherstripping:
  - 1. Double-Hung Weatherstripping:
    - a. Provide continuous bulb type weatherstrip at upper sash head.
    - b. Provide continuous PVC scissors type interlock with an integral leaf located on the lower sash at unit check rail.
    - c. Provide compressible bulb with fin weatherstrip at lower sash sill.
    - d. Provide spring-tensioned PVC profiles installed in side jamb liners contacting sash edges.
- G. Hardware:
  - 1. Double-Hung Window Hardware:
    - a. Sash Locks and Keepers: Provide 1 sash lock and keeper.
      - 1) Classic Series™ Hardware Locks: Injection molded, glass reinforced polyester sash locks with integral color. Color: White.
    - b. Sash Lift: Provide Two finger lifts per window unit.
      - 1) Finger Lift: Classic Series™ hardware, zinc cast hardware with a baked powder coated finish on chromate protective coating in

White color.

- c. Balances: Fit top and bottom sash with concealed sash mounted balances consisting of spring power with block and tackle. Design balances to ensure easy operation of double-hung units.
- d. Wash Assists: Provide 2 wash assists mounted in interior pocket of side jamb liners. Depressing wash assists between liner and lower check rail ends will cause lower sash to unhook from side jamb liners. When lower sash is unhooked, lower sash can be easily pulled in for cleaning.
- e. Wash Assist Stops: Provide 2 wash assist stops at side jamb liner center pockets.

## 2.4 GLAZING

- A. General: Insulating glass units certified through the Insulating Glass Certification Council as conforming to the requirements of IGCC Class CBA. Provide dual sealed units consisting of polyisobutylene primary seal and silicone secondary seal. Metal spacers to have bent corners.
- B. High-Performance™ Low-E, Argon Blend Filled Insulating Glass Units:
  - 1. Glass: Insulating glass units to consist of an outboard lite of clear annealed glass conforming to ASTM C1036, Type 1, Class 1, q3 and an inboard lite of clear, heat strengthened glass conforming to ASTM C1048, Type 1, Class 1, q3, Kind HS.
  - 2. High-Performance™ Low-E Coating: Magnetron sputtering vapor deposition (MSVD) Low-E coating applied to the No. 2 surface.
  - 3. Filling: Fill space between glass lites with an argon gas blend.

## 2.5 JOINING SYSTEMS

Specifier Note: Andersen strongly recommends consultation with an experienced structural engineer, architect or contractor and a local Andersen representative when specifying Andersen joining systems.

- A. Narrow Non-Reinforced Joining:
  - 1. Joining Clips (Narrow Mull Interior).
  - 2. Gusset Plates: Galvanized steel gusset plates.
    - a. 0.028 inch (0.71 mm) flat gusset plate at head and jamb.
    - b. 0.031 inch (0.79 mm) preformed sill gusset plate.
  - 3. Head Flashing: 6 inch (152 mm) long sheet vinyl. Color to match window exterior.
  - 4. Silicone Sealant: Silicone sealant recommended by window manufacturer.
  - 5. Vinyl Outside Trim Strips: As recommended by window manufacturer for each joining method used. Color to match window unit exterior color.

## 2.6 ACCESSORIES

- A. Grilles:
  - 1. Finelight™ Grilles: Contour profile 3/4 inch wide aluminum muntin bars permanently mounted within the insulated glass unit where indicated on Drawings. Grille intersections to be ABS concealed plastic connectors with nylon end keepers.
- B. Sill Stool: Wood members machined from clear material or veneered finger-jointed material approved in ANSI/AAMA/NWDA 101/I.S.2.
- C. Extension Jamb: Wood members machined from clear material or veneered finger-jointed material. Pre-drill extension jamb for application.
- D. Picture Unit Interior Accessory Stop: Wood pieces machined from clear material.
- E. Exterior Trim:
  - 1. Trim Channels: Rigid vinyl extrusions supplied by window manufacturer for use on same product line.
  - 2. Support Mullion Trim: 2 inch (51 mm) wide wood filler and vinyl trim strip. Color to match window unit exterior color.
- F. Insect Screens:
  - 1. Insect Screens: Provide venting sash with an insect screen, including attachment hardware.
    - a. Frames: 0.020 inch (0.51 mm) rolled aluminum frame with chromate conversion coating. Provide matching corner locks and latch retainers.
    - b. Insect Screen Cloth: 18 x 16 aluminum mesh, gunmetal finish.
    - c. Frame Finish: Sandtone® color high-bake polyester finish.

## 2.7 FABRICATION

- A. Preservative Treatment: Treat wood sash and frame members after machining with a water repellent preservative in accordance with WDMA I.S.4.
- B. Tilt Wash Double-Hung Units:
  - 1. Outer frame shall be vinyl wrapped treated wood with corners sealed with silicone and vinyl corner flashing.
  - 2. Sill to be fabricated Fibrex® material laminated to wood sub-sill core with PVC end caps.
  - 3. Bond outer frame members and sill cover to wood base frame with adhesive.
  - 4. Fasten inside stops to jamb and sill base.
  - 5. Jamb and Head Liners:

- a. Provide 0.060 inch (1.52 mm) thick rigid vinyl side jamb liner extrusion with PVC spring-tensioned weatherstripping.
  - b. Provide 0.060 inch (1.52 mm) thick rigid vinyl head jamb liner extrusion.
6. Sash Components:
- a. Exterior Sash: Extruded Fibrex® material with adhesively bonded PVC corner keys.
  - b. Interior Sash: Clear wood adhesively applied to exterior sash components.
7. Factory apply weatherstripping.

Specifier Note: Add the following paragraph for double-hung picture and transoms.

C. Double-Hung Picture Units:

1. Outer Frame: Provide extruded Fibrex® material with adhesively bonded corner keys.
2. Sill: Provide extruded Fibrex® material with PVC end caps laminated to wood sub-sill core.
3. Interior Sash: Provide clear wood interior sash components adhesively bonded to exterior sash profile.
4. Provide clear wood stops.
5. Mechanically fasten sill assembly and wood sub frame components. Bond outer frame members to sub-frame with adhesive and mechanical fasteners.

D. Glazing: Factory glaze with high quality glazing sealant.

### 3 PART 3 EXECUTION

#### 3.1 MANUFACTURER'S INSTRUCTIONS

- A. Comply with the instructions and recommendations of the window manufacturer.

#### 3.2 EXAMINATION

A. Site Verification of Conditions:

1. Verify that site conditions are acceptable for installation of windows, including the following:
  - a. Concrete surfaces are dry and free of excess mortar, rocks, sand and other construction debris.
  - b. Rough opening or masonry opening is square and dimensions are correct.
  - c. Sill plates are level.
  - d. Wood frame walls are dry, clean, sound and well nailed, and/or glued,

- e. free of voids and without offsets at joints.  
Nail heads are driven flush with all surfaces in opening and within 3 inches (75 mm) of rough opening.
- 2. Do not proceed with installation of windows until unacceptable conditions are corrected.

### 3.3 INSTALLATION

#### A. Techniques:

1. Remove window components, parts, accessories and installation guides from carton.
2. Inspect window components and verify that components are not damaged and that all parts are included before disposing of carton.
3. [Shop] [Field] assemble multiple units before installation in accordance with manufacturer's installation guides.

#### B. Interface with Other Work:

1. Install windows level, plumb and square, true to line without distortion, anchored securely in place to structural support, and in proper relation to wall flashing and other adjacent construction.
2. Install insulation in shim space around window perimeter to maintain continuity of building insulation. Do not overfill.
3. Hold back exterior siding or other finish materials from edge of window to allow for expansion and contraction and the installation of a proper sealant joint with backing materials. Seal perimeter of window after exterior finish is applied in accordance with the requirements of related section.
4. Finish interior window components according to requirements specified in related sections. Refer to, and comply with, any additional requirements in manufacturer's installation guides.
5. Install optional hardware and unit accessories after cleaning.

#### C. Site Tolerances:

1. Adjust operating sashes, screens, hardware and accessories for a tight fit at contact points and weatherstripping for smooth operation and weathertight closure.

#### D. Extend vapor barrier to interior face of window frame and attach.

Specifier Note: Specify the final action required to clean installed equipment or other completed work to properly function or perform. Coordinate article below with Division 1 Execution Requirements (Cleaning) Section and specific project requirements.



### 3.4 CLEANING

- A. Clean window using cleaning material and methods specifically recommended by window manufacturer.
  - 1. Remove excess sealants, glazing materials, dirt and other substances.
  - 2. Avoid damaging protective coatings and finishes.
- B. Protect glass and hardware from masonry cleaning solution that could damage insulation glass panels or hardware.
- C. Remove debris from work site and properly dispose of debris.

### 3.5 PROTECTION

- A. Protect installed work from damage due to subsequent construction activity on the site.

...END OF SECTION