

**SECTION 08 1416  
FLUSH WOOD DOORS**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Flush wood doors; flush and flush glazed configuration; fire rated, non-rated, and acoustical.

**1.02 RELATED REQUIREMENTS**

- A. Section 08 7100 - Door Hardware.
- B. Section 08 8000 - Glazing.

**1.03 REFERENCE STANDARDS**

- A. ASTM E90 - Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements; 2009.
- B. ASTM E413 - Classification for Rating Sound Insulation; 2010.
- C. AWI (QCP) - Quality Certification Program; current edition at [www.awiqcp.org](http://www.awiqcp.org).
- D. AWI/AWMAC/WI (AWS) - Architectural Woodwork Standards; 2014.
- E. ICC (IBC) - International Building Code; 2015.
- F. NEMA LD 3 - High-Pressure Decorative Laminates; 2005.
- G. NFPA 80 - Standard for Fire Doors and Other Opening Protectives; 2016.
- H. UL 10C - Standard for Positive Pressure Fire Tests of Door Assemblies; Current Edition, Including All Revisions.
- I. UL 1784 - Standard for Air Leakage Tests of Door Assemblies; Current Edition, Including All Revisions.

**1.04 SUBMITTALS**

- A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
- B. Shop Drawings: Show doors and frames, elevations, sizes, types, swings, undercuts, beveling, blocking for hardware, factory machining, factory finishing, cutouts for glazing and other details.
- C. Specimen warranty.
- D. Test Reports: Show compliance with specified requirements for the following:
  - 1. Sound-retardant doors and frames; sealed panel tests are not acceptable.
- E. Warranty, executed in Owner's name.

**1.05 QUALITY ASSURANCE**

- A. Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum three years of documented experience.
  - 1. Accredited participant in the specified certification program prior to the commencement of fabrication and throughout the duration of the project.
- B. Quality Certification: Provide AWI (QCP) inspection report and quality certification of completed work.
  - 1. Provide labels or certificates indicating that the work complies with requirements of AWI/AWMAC/WI (AWS) grade or grades specified.
  - 2. This project has been registered as AWI (QCP) project number \_\_\_\_\_.
  - 3. Prior to delivery to the site provide shop drawings with certification labels.
  - 4. Provide labels on each product when required by certification program.
  - 5. Upon completion of installation provide certificate certifying that the installation and products meet the specified requirements.
  - 6. Arrange and pay for inspections required for certification.
  - 7. Replace, repair, or rework all work for which certification is refused.

- C. Installed Fire Rated Door and Transom Panel Assembly: Conform to NFPA 80 for fire-rating as indicated.

#### **1.06 DELIVERY, STORAGE, AND HANDLING**

- A. Package, deliver and store doors in accordance with specified quality standard.
- B. Accept doors on site in manufacturer's packaging. Inspect for damage.
- C. Protect doors with resilient packaging sealed with heat shrunk plastic. Do not store in damp or wet areas; or in areas where sunlight might bleach veneer. Seal top and bottom edges with tinted sealer if stored more than one week. Break seal on site to permit ventilation.

#### **1.07 WARRANTY**

- A. See Section 01 7800 - Closeout Submittals, for additional warranty requirements.
- B. Interior Doors: Provide manufacturer's warranty for the life of the installation.
- C. Include coverage for delamination of veneer, warping beyond specified installation tolerances, defective materials, and telegraphing core construction.

### **PART 2 PRODUCTS**

#### **2.01 DOORS AND PANELS**

- A. Doors: See drawings for locations and additional requirements.
  - 1. Wood Veneer Faced Doors: 5-ply unless otherwise indicated.
  - 2. High Pressure Decorative Laminate (HPDL) Faced Doors: 5-ply unless otherwise indicated.
- B. Exterior Doors: Flush solid core construction and water repellent treated.
  - 1. Thickness: 1-3/4 inches, unless otherwise indicated.
- C. Interior Doors: 1-3/4 inches thick unless otherwise indicated; flush construction.
  - 1. Provide solid core doors at each location.
  - 2. Fire Rated Doors: Tested to 20 minutes, 60 minutes, 90 minutes, and ratings as indicated on drawings in accordance with UL 10C - Positive Pressure; Underwriters Laboratories Inc. (UL) or Intertek/Warnock Hersey (WHI) labeled without any visible seals when door is open.
  - 3. Smoke and Draft Control Doors (Indicated as "S" on Drawings): In addition to required fire rating, provide door assemblies tested in accordance with UL 1784 with maximum air leakage of 3.0 cfm per sq ft of door opening at 0.10 inch wg pressure at both ambient and elevated temperatures for "S" label; if necessary, provide additional gasketing or edge sealing.
  - 4. Sound Retardant Doors: Minimum STC of 35, calculated in accordance with ASTM E413, tested in accordance with ASTM E90.
  - 5. Lead Lined (X-ray) Doors: Minimum of 1/16 inch thick lead, unless otherwise indicated.
  - 6. Wood veneer facing with factory transparent finish as indicated on drawings.
  - 7. High pressure decorative laminate finish as indicated on drawings.

#### **2.02 DOOR AND PANEL CORES**

- A. Fire Rated Doors: Mineral core type, with fire resistant composite core (FD), plies and faces as indicated above; with core blocking as required to provide adequate anchorage of hardware without through-bolting.
- B. Sound Resistant Doors: Equivalent to type, with particleboard core (PC) construction with core as required to achieve STC rating specified; plies and faces as indicated above.
- C. Lead Lined Doors: Equivalent to type, with bonded particleboard core (PC) with continuous lead sheet from edge to edge in the center of the core or between the crossband and the core; lead thickness; plies and faces as indicated above.

### **2.03 DOOR FACINGS**

- A. Veneer Facing for Transparent Finish: Species as specified above, veneer grade in accordance with quality standard indicated, plain sliced (flat cut), with book match between leaves of veneer, running match of spliced veneer leaves assembled on door or panel face.
  - 1. "Running Match" each pair of doors and doors in close proximity to each other.
- B. High Pressure Decorative Laminate (HPDL) Facing for Non-Fire-Rated Doors: NEMA LD 3, HGS; color as selected; textured, low gloss finish.

### **2.04 ACCESSORIES**

- A. Glazing: As specified in Section 08 8000.
- B. Door Hardware: As specified in Section 08 7100.

### **2.05 DOOR CONSTRUCTION**

- A. Fabricate doors in accordance with door quality standard specified.
- B. Cores Constructed with stiles and rails:
- C. Factory machine doors for hardware other than surface-mounted hardware, in accordance with hardware requirements and dimensions.
- D. Factory fit doors for frame opening dimensions identified on shop drawings, with edge clearances in accordance with specified quality standard.
- E. Provide edge clearances in accordance with the quality standard specified.

### **2.06 FACTORY FINISHING - WOOD VENEER DOORS**

- A. Finish work in accordance with AWI/AWMAC/WI (AWS), Section 5 - Finishing for grade specified and as follows:

## **PART 3 EXECUTION**

### **3.01 INSTALLATION**

- A. Install doors in accordance with manufacturer's instructions and specified quality standard.
  - 1. Install fire-rated doors in accordance with NFPA 80 requirements.
- B. Factory-Finished Doors: Do not field cut or trim; if fit or clearance is not correct, replace door.
- C. Use machine tools to cut or drill for hardware.
- D. Coordinate installation of doors with installation of frames and hardware.

### **3.02 TOLERANCES**

- A. Conform to specified quality standard for fit and clearance tolerances.
- B. Conform to specified quality standard for telegraphing, warp, and squareness.

### **3.03 ADJUSTING**

- A. Adjust doors for smooth and balanced door movement.
- B. Adjust closers for full closure.

**END OF SECTION 08 1416**

