

SECTION 08211

FLUSH WOOD DOORS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and General Provisions of Contract, including General and Supplementary Conditions and Division 1 Specifications sections, apply to work of this section.

1.2 SUMMARY:

- A. This section includes the following:
 - 1. Solid core doors with wood veneer faces.
 - 2. Factory finishing flush wood doors.
 - 3. Factory fitting flush wood doors to frames and factory machining for hardware

1.3 SUBMITTALS:

- A. Product Data: For each type of door. Include details of core and edge construction, trim for openings. Include factory-finishing specifications.
- B. Shop Drawings: Indicate location, size and hand of each door, elevation of each kind of door, construction details not covered in product data, location and extent of hardware blocking.
 - 1. Indicate dimensions and locations of mortises and holes for hardware.
 - 2. Indicate dimensions and locations of cutouts
 - 3. Indicate requirements for veneer matching.
 - 4. Indicate doors to be factory finished and finish requirements
 - 5. Indicate fire ratings for fire doors.
- C. Samples for Initial Selection: Color charts consisting of actual materials in small sections for the following: Faces of Factory-Finished Doors: Show the full range of colors available for stained finishes.
- D. Samples for Verification:
 - 1. Factory finishes applied to actual door face materials, approximately 8" x 10", for each material and finish. For each wood species and transparent stained finish, provide set of three samples showing typical range of color and grain to be expected in the finished work.
 - 2. Corner sections of doors, approximately 8" x 10", with door faces and edgings representing typical range of color and grain for each species of veneer and solid lumber required. Finish sample with same materials proposed for factory-finished type doors.
 - 3. Frames for light openings, 6" long, for each material, type and finish required.

1.4 QUALITY ASSURANCE

- A. Source Limitations: Obtain flush wood doors through one source from a single manufacturer.
- B. Quality Standard: Comply with NWWDA I.S.1-A "Architectural Wood Flush Doors" and AWI "Architectural Woodwork Quality Standards", of Architectural Woodwork Institute.
- C. Fire-Rated Wood Doors: Doors complying with NFPA 80 that are listed and labeled by a testing and inspecting agency acceptable to authorities having jurisdiction, for fire ratings indicated, based on testing according to NFPA 252.

1. Test Pressure: After 5 minutes into the test, the neutral pressure level in furnace shall be established at 40" or less above the sill.
2. Temperature Rise Rating: At exit enclosures, provide doors that have a temperature rise rating of 450 deg F maximum in 30 minutes of exposure.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Comply with requirements of referenced standards and manufacturer's instructions.
- B. Package doors individually in plastic bags or cardboard cartons.
- C. Mark each door on top and bottom with opening number used on shop drawings.

1.6 PROJECT CONDITIONS

- A. Environmental Limitations: Do not deliver or install doors until building is enclosed, wet work is complete, and HVAC system is operating and will maintain temperature and relative humidity at occupancy levels during the remainder of the construction period.

1.7 WARRANTY

- A. Special Warranty: Manufacturer's standard form signed by Manufacturer, Installer, and Contractor, in which manufacturer agrees to repair or replace doors that are defective in materials or workmanship, have warped (bow, cup or twist) more than 1/4" in a 42" x 84" section, or show telegraphing of core construction in face veneers exceeding 0.01" in a 3" span.

1. Warranty shall also include installation and finishing that may be required due to repair or replacement of defective doors
2. Warranty shall be in effect during the following period of time after date of Substantial Completion:

- a. Solid Core Interior Doors: life of installation.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Available Manufacturer: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the work include but are not limited to one of the following:

1. Flush Wood Doors:
 - a. Algoma Hardwoods, Inc.
 - b. Buell Door Company
 - c. Eggers Industries, Architectural Door Division
 - d. Weyerhaeuser Company

2.2 DOOR CONSTRUCTION, GENERAL

- A. Adhesives: Do not use adhesives containing urea formaldehyde
- B. Doors for Transparent Stained Finish:
 1. Grade: Premium, with Grade A faces
 2. Species and cut: Red Oak, rift sawn
 3. Match Between Veneer Leaves: Book match
 4. Assembly of Veneer Leaves on Door Faces: Balance Batch
 5. Pair and Set Match: Provide for doors hung in same opening or separated only by mullions.
 6. Room Match: Match door faces within each separate room or area of building. Corridor door faces do not need to match where they are separated by 20 feet or more.
 7. Stiles: Same species as faces.

2.3 SOLID CORE DOORS

- A. Particleboard Cores: Comply with the following requirements:
1. Particleboard: ANSI A208.1, Grade LD-2. Use particleboard made with binder containing no urea-formaldehyde resin.
 2. Blocking: Provide wood blocking in particleboard-core doors as needed to eliminate through bolting hardware.
 3. Provide doors with either glued-block or structural composite lumber cores instead of particleboard cores at locations where exit devices are indicated.
- B. Interior Veneer Faced Doors:
1. Core: Particleboard or glued block or structural composite lumber.
 2. Construction: Five piles with stiles and rails bonded to core, then entire unit abrasive planed before veneering
- C. Fire Rated Doors:
1. Construction: Construction and core specified above for type of face indicated or manufacturer's standard mineral-core construction as needed to provide fire rating indicated.
 2. Blocking: For mineral-core doors, provide composite blocking with improved screw-holding capability approved for use in doors of fire ratings indicated as needed to eliminate through-bolting hardware.
 3. Edge Construction: At hinge stiles, provide manufacturer's standard laminated-edge construction with improved screw-holding capability and split resistance with outer stile matching face veneer.
 4. Pairs: Provide fire-rated pairs with fire-retardant stiles matching face veneer that are labeled and listed for kinds of applications indicated without formed-steel edges and astragals.

2.4 LIGHT FRAMES

- A. Metal Frames for Light Openings in Fire Doors: Manufacturer's standard frame formed of 0.048" thick, cold-rolled steel sheet, with backed enamel or powder coated finish, and approved for use in door of fire-rating indicated.

2.5 FABRICATION

- A. Fabricate doors in sizes indicated for Project site fitting.
- B. Factory fit doors to fit frame opening sizes indicated with the following uniform clearances and bevels, unless otherwise indicated:
1. Comply with clearance requirements of referenced quality standard for fitting.
 2. Comply with requirements of NFPA 80 for fire-rated doors.
- C. Factory machine doors for hardware that is not surface applied. Locate hardware to comply with DHI-WDHS-3. Comply with final hardware schedules, door frame shop drawings, DHI-A115-W series standards and hardware templates. Coordinate measurements of hardware mortises in metal frames to verify dimensions and alignment before factory machining.
- D. Openings: Cut and trim openings through doors to comply with applicable requirements of referenced standards for kind(s) of doors required.
1. Light Openings: Trim openings with moldings of material and profile indicated.

2.5 FACTORY FINISHING

- A. Comply with referenced quality standard AWI's "Architectural Woodwork Quality Standards Illustrated" for factory finishing.
- B. Finish doors at factory.
- C. Transparent Stained Finish: Comply with requirements indicated for grade, finish system, staining effect and sheen.
 - 1. Grade: Premium
 - 2. Finish: AWI System TR-6 catalyzed polyurethane.
 - 3. Staining: As selected by Architect from manufacturer's full range.
 - 4. Effect: Open grain finish
 - 5. Sheen: Semi-gloss.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine installed door frames before hanging doors:
 - 1. Verify that frames comply with indicated requirements for type, size location, and swing characteristics and have been installed with plumb jambs and level heads.
 - 2. Reject doors with defects.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

- A. Hardware: For installation see Division 8 "Finish Hardware" section of these specifications.
- B. Manufacturer's Written Instructions: Install wood doors to comply with manufacturer's instructions, referenced quality standard, and as indicated. Install fire-rated doors in corresponding fire-rated frames in accordance with requirements of NFPA No. 80.
- C. Factory-fitted Doors: Align in frames for uniform clearance at each edge.

3.3 ADJUSTING

- A. Operation: Rehang or replace doors which do not swing or operate freely.
- B. Finished Doors: Replace doors that are damaged or do not comply with requirements. Doors may be repaired or refinished if work complies with requirements and shows no evidence of repair or refinishing.

END OF SECTION