



## Section 08210 Architectural Wood Doors

### PART I - GENERAL

#### **1.1 Description:**

**A** Applicable portions of bidding requirements, contract forms, conditions of the contract and Division I General Requirements are a part of this section.

**B** Work includes:

1. Solid core architectural wood doors as per specifications.
2. Premachining and prefinishing of wood doors.
3. Furnishing of special wood doors where applicable. Includes flush doors, applied molding, inlaid faces and face grooving.

**C** Related work in other sections:

1. Wood or metal doorframes.
2. Metal doors.
3. Glass and glazing.
4. Hardware and installation of hardware.
5. Installation of wood doors.

#### **1.2 Quality Assurance:**

**A** Non-fire-rated wood doors shall be 5-ply premium grade, bonded core in accordance with the Window and Door Manufacturers Association "Architectural Wood Flush Doors" I.S.1-A-97. Seven-Ply or other skin type constructions are not an acceptable substitution for the requirement of this specification.

**B** Eggers Industries, Algoma Hardwoods and Marshfield Door Systems are acceptable suppliers of this 5-ply construction. All wood doors on the project shall be by one manufacturer to ensure uniformity in appearance and construction.

**C** Fire - rated wood doors: Where fire-rated classifications are shown or scheduled for wood door assemblies, doors shall be installed in compliance with the requirements of NFPA 80 "Fire Doors and Fire Windows." Fire-rated doors shall bear the label of an independent testing agency approved by the local authority

having jurisdiction.

**D** Mark each door with individual opening numbers correlating with shop drawings.

**E** Door manufacturer to submit to architect, at time of shop drawing approval, certified independent laboratory test reports of:

<b>Minimum Performance Criteria</b>				
	C Label	B Label	20 minute or Non-rated	Test Method & Agency
Screw Holding, lbs	700	700	1000	TM10 WDMA
Split Resistance, lbs	900	900	500	TM5 WDMA
Hinge Loading, Lbs	860	860	1380	TM* WDMA
Acoustic, Decibels	STC Required	NA	STC Required	ASTM 90-90* ASTM 413-87*

\* Earlier Tests Not Acceptable

### **1.3 Submittal:**

**A** Shop Drawings: Submit Schedules and elevations indicating door sizes, construction, swing, label, clearance and applicable hardware locations. Show dimensions and detail openings for lites, louvers and grilles. Indicate internal solid blocking for locks or other surface applied hardware to eliminate the use of thru-bolts.

**B** Samples for factory finished door:

1. Provide manufacturer's standard color charts, followed by a physical sample of color selected for architect's approval. Architect has the option to furnish a color for the manufacturer to match.

### **1.4 Storage and Handling:**

**A** Doors to be stored and handled at the site in accordance with WDMA I.S.1-A-97. (See Appendix Care and Installation at Job Site.)

### **1.5 Warranty:**

**A** The doors shall be warranted by the manufacturer to be free of manufacturing defects as follows:

1. Interior - Life of original installation.

2. Exterior-Two years.

**B** Exceptions to fire-ratings as shown on plans, that affect the door manufacturer's specific fire-rating authority, shall be brought to the attention of the architect.

**C** Manufacturer shall pay a **reasonable charge** to remove a defective door and rehang with a new door provided the defect was **not** apparent prior to installation.

## **PART II - PRODUCTS**

### **2.1 Face species:**

**A** Doors shall be specified "A" grade. If a higher aesthetic requirement is needed, "AA" grade can be supplied.

*Note to Specifier:* Determine veneer cut and specie. Example: "Plain Sliced" and "Red Oak."

◆ Optional faces: Medium density over-lay or plastic laminate.

### **2.2 Door Construction:**

**A** Particleboard bonded core: Comply with particleboard standard ANSI A208.1, grade 1-LD-2. Stile and rails to be bonded to the core so that screw stress from hinges is transmitted directly to the core.

**B** Structural Composite Lumber (SCL) core: Approved core material per WDMA and AWI acceptance criteria.

**C** Labeled fire doors - specify 20, 45, 60 or 90 minute:

1. The vertical edges on labeled doors will require a minimum test rating from an independent laboratory as listed on the chart in 1.2e.
2. Construction:

**A.** Labeled fire doors shall be tested in conformance with UL-10B, UL-10C, NFPA-252 and UBC7-2 conducted by Underwriters Laboratories, Warnock Hersey or by other recognized, independent testing agencies.

Note to Specifier: For surface mounted closers attached with wood screws, specify 5" top blocking. For door bottom hardware attachment, specify 5" bottom blocking. Not for unlimited undercutting.

**B.** Lockblocks - for fire exit hardware.

**C.** Blocking for flush bolts. Specify lockblocks as required on door.

**D** Acoustical: Specify STC rating required.

1. The Sound Transmission Class (STC) specified shall be certified by the manufacturer to be based on tests conducted at an independent testing agency in accordance with ASTM E90-90 and E4-3-87. Earlier tests not acceptable.
2. Doors may be 20 or 45-minute fire labeled if specified.

**E** Lead Lined:

1. Specify: Lead sheet shall be two pieces with a total thickness of 1/32" to 1/4" (specify required dimension). Lead shall extend to all four edges.
2. Doors may be 20-minute fire labeled if specified.

**F** Bullet Resistant:

1. Specify NIJ rating 1, 2, 2-A, 3, 3-A. Rated glazing as specified.
2. Doors may be 20-minute fire labeled if specified.

**G** Full Lite:

1. Core material to be Structural Composite Lumber (SCL) or reinforced construction.
2. Doors may be 20 or 45-minute fire labeled if specified.

### ***2.3 Optional Lite, Louver & Astragal Details:***

**A** Lite openings shall be furnished with either same species wood lite beads, veneer wrapped metal vision panels or primed metal vision panels (specify one).

**B** Louvers shall be either wood or metal (specify one).

Wood louvers shall be manufacturer's standard construction. Louvers shall be the same species lumber as the door face and be factory installed. Wood louvers shall be single slat or V-slat chevron (specify one).

Specify manufacturer and model number for metal louvers.

**C** For pairs of fire doors where no metal edges are desired, specify "No metal meeting edges acceptable."

**D** Metal astragals or edge sets for pairs of fire doors to be formed, premachined and

veneer wrapped with the same species as the door face.

**E** Due to scarcity of Birch lumber, Maple lumber can be used on Birch faced doors as a substitute for beads, molding and louvers.

#### **2.4 Prefit and Premachined:**

**A** Manufacturer to premachine for cutouts, hinges, locks and all hardware requiring routing or mortising.

**B** The contractor is to furnish the wood door manufacturer with an approved coordinated schedule showing all the data relative to the frame, hardware and door information. In lieu of this, the contractor can furnish frame schedule (including all hardware locations), approved hardware schedule (including all necessary hardware templates) and an approved door schedule. The manufacturer can then coordinate the three schedules, which must be approved by the contractor.

**C** Contractor shall be responsible for boring pilot holes, wood screw holes, mounting holes for face plates and other surface applied hardware listed on the hardware schedule unless special arrangements are made with the door manufacturer prior to submittal of shop drawings to the architect.

**D** Kick plates, push plates, stretcher plates, edge guards and other protective hardware shall be furnished by the hardware supplier or general contractor and installed in the field by the general contractor.

#### **2.5 Prefinish:**

**A** All wood doors shall be completely factory finished using the manufacturer's standard finish. Systems performance to meet or exceed AWI system TR6 polyurethane.

*Note to Specifier: Other finish systems may be specified if required.*

**B** All finished doors shall be individually plastic wrapped.

### **PART III - EXECUTION**

#### **3.1 Installation:**

**A** Doors to be stored and handled at the site in accordance with WDMA I.S.1-A-97. (See Appendix Care and Installation at Job Site.)

**B** Inspect: Installer must examine doors and door frames to verify that frames have been installed as required for proper hanging and operation of door. Doors with apparent defects should not be hung. Notify the door sub-contractor in writing of

conditions, which are detrimental to the proper installation, and operation of wood doors. Do not proceed with installation until unsatisfactory conditions have been corrected.

**C Install:** Do not deliver or install doors until temperature and relative humidity have been stabilized (between 30% and 50%) and will be maintained in storage and installation areas during remainder of construction period.

Action on any claim for warp or photographing defects may be deferred at the option of the manufacturer for a period not to exceed twelve months to permit conditioning of the doors to temperature and humidity.

Reseal or refinish before installation if field machining or alterations are required at the job site.

Install fire doors in accordance with NFPA 80.

Doors shall swing in their respective frames free of hinge binding or improper latching. Protective door wrapping is to remain in place until all work by other trades is complete and final inspection is finished.

Rehang or replace doors that do not swing or operate freely.

**D Clean:** Owner is to be furnished with instructions on how to clean and maintain wood doors. Normal cleaning of wood doors should consist only of wiping with a damp, soft cloth and light polishing with lemon or tung oil. No other commercial or industrial cleaners should be used on wood doors as they may irreparably damage the finish.