

SECTION 08 14 16
FLUSH WOOD DOORS

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Flush wood doors.
 - 2. Door glazing.
 - 3. Louvers.
- B. Related Requirements:
 - 1. Section 08 12 13 - Hollow Metal Frames.
 - 2. Section 08 11 16 – Aluminum Frames.
 - 3. Section 08 41 13 – Aluminum Framed Entrances and Storefronts.
 - 4. Section 08 71 00 - Door Hardware.
 - 5. Section 08 80 00 - Glazing.

1.2 REFERENCE STANDARDS

- A. National Fire Protection Association:
 - 1. NFPA 80 - Standard for Fire Doors, Fire Windows.
 - 2. NFPA 252 - Standard Methods of Fire Tests of Door Assemblies.
- B. Underwriters Laboratories Inc.:
 - 1. UL 10C - Positive Pressure Fire Tests of Door Assemblies.
 - 2. UL 10B - Neutral Pressure Fire Tests of Door Assemblies.
- C. Wood Window and Door Manufacturers Association:
 - 1. WDMA I.S 1A-21 – Interior Architectural Wood Flush Doors.

1.3 COORDINATION

- A. Coordinate Work with door opening construction, door frame, and door hardware installation.

1.4 SUBMITTALS

- A. Product Data:
 - 1. Submit data for door core materials and construction.
 - 2. Submit data for veneer species, type, and characteristics.
 - 3. Submit data for factory finishes.
- B. Shop Drawings:
 - 1. Indicate door opening criteria, elevations, sizes, types, swings or slides, undercuts required, special beveling, special blocking for hardware, and factory machining criteria.
- C. Samples:
 - 1. Wood Veneer: Submit three 8 by 10 inch samples demonstrating expected color range for each wood species, cut, and factory finish.
 - 2. Plastic Laminate: Submit 12 inch square samples of high pressure plastic laminate for [selection] [verification].
- D. Qualifications: Manufacturer and Installer.

1.5 QUALITY ASSURANCE

- A. Perform Work in accordance with WDMA.

1.6 REGULATORY REQUIREMENTS:

- A. Fire Rated Assemblies:
 - 1. Tested using either UL 10C or NFPA 252 positive pressure test with neutral pressure level at 40 inches maximum above sill at 5 minutes into test.

POSITIVE PRESSURE TEST CATEGORY A REQUIRES THAT INTUMESCENT SEALS IN WOOD EDGES BE CONCEALED; CATEGORY B PERMITS SURFACED APPLIED SEALS.
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2. Category **[A] [B]**.

B. Installed Fire Rated Door Assembly: Conform to NFPA 80.

C. Attach label from agency approved by authority having jurisdiction to identify each fire rated door.

1.7 QUALIFICATIONS

A. Manufacturer: Company specializing in manufacturing products specified in this section with minimum three years experience.

B. Installer: Company specializing in performing work of this section with minimum three years experience.

1.8 DELIVERY, STORAGE, AND HANDLING

A. Doors are packed in corrugated boxes and are factory-sealed, top, and bottom. Do not store in damp or wet areas. Do not subject to abnormal heat, extreme dryness, or excessive humidity.

B. Accept doors on site in manufacturer's packaging. Inspect for damage.

1.9 WARRANTY

A. Include coverage for delamination of veneer, warping beyond specified installation tolerances, defective materials, and telegraphing core construction.

B. Interior Doors:

1. Factory Finished Doors, Premium Grade: Furnish manufacturer's lifetime-of-original-installation warranty.

PART 2 – PRODUCTS

2.1 FLUSH WOOD DOORS

A. Manufacturer List:

1. Basis of Design: IPIK Doors by Avalon.
2. Substitutions: Acceptability as determined by Architect.

B. Performance Duty Level: WDMA I.S. 1A **[Standard Duty] [Heavy Duty] [Extra Heavy Duty]**.

C. Flush Interior Doors, Swinging: Solid core non-rated and 20-minute fire rated doors.

1. Thickness: 1-3/4 inches.
2. Core: **[Particleboard core] [Staved lumber core (SLC)] [Structural composite lumber core (SCL)]**.
3. Face: **[Transparent] [Opaque] [Plastic Laminate]**.
4. Crossband: MDF; Medium Density Fiberboard.
5. Quality Grade: WDMA **[Custom] [Premium]** Grade.
6. **[Fire Rating: 20 minute.]**

D. Flush Interior Doors, Swinging: Solid core fire rated 60 minutes or greater.

1. Thickness: 1-3/4 inches.
2. Fire Rated Core: Composite material core to meet fire rating.
3. Face: **[Transparent] [Opaque] [Plastic Laminate]**.
4. Crossband: Wood composite.
5. Quality Grade: WDMA **[Custom] [Premium]** Grade.
6. Fire Rating: **[60 minutes] [90 minutes]**.

E. Flush Interior Doors, **[Sliding Barn] [Pocket] [Oversize Specialty]**: Solid core non-rated doors.

1. Thickness: 1-3/4 inches.
2. Core: Particleboard core.
3. Face: **[Transparent] [Opaque] [Plastic Laminate]**.
4. Crossband: MDF; Medium Density Fiberboard.
5. Quality Grade: WDMA Custom Grade.

2.2 MATERIALS

A. Door Cores:

1. Particleboard Core (PC): No formaldehyde added, meets carb2 standard for emissions, ANSI A208.1, 30 pound density. STC: 32 – 35.

2. Staved Lumber Core (SLC): Combination of wood blocks or strips not more than 2-1/2 inches wide, of one specie of wood glued together in butcher block fashion with joints staggered in adjacent rows. STC: 36-40.
3. Structural Composite Lumber Core (SCL): Engineered composite wood product made by fusing a network of wood strands together with a water-resistant adhesive to produce a strong, solid and stable product.
4. Fire Resistant Composite Core (FD): Fire resistant composite core for fire doors per manufacturer's label service listing.
5. Acoustic Core: STC 45, specific certifications available upon request.

SELECT ONE OR MORE OF THE FOLLOWING FINISHES. NOTE THAT SPECIAL ORDER MUST TO REQUESTED FOR ANIGRE, SAPELE, BIRCH, BEECH, OR ASH VENEERS.

- B. Interior Door Faces:
 1. Transparent Finished Faces: Wood veneer.
 - a. WDMA Veneer Grade: A.
 - b. Species: **[Red Oak] [White Oak] [Maple] [Cherry] [Walnut] [Mahogany]**
1) **[Special order available on request; Anigre, Sapele, Birch, Beech, Ash].**
 - c. Veneer Cut: **[Plain sliced] [Rift cut] [Quarter Sawn] [Rotary Cut].**
 - d. Veneer Matching: **[Plain sliced wood -Book matched] [Quarter Sawn and Rift Cut - slip matched].**
 - e. Face Matching: Match multiple door leaves in single opening.
 2. Opaque Finished Faces: Closed Grain Hardwood Veneer (Birch or Maple).
 3. Opaque Finish Faces: MDO, paint-grade non-veneer.
 4. Plastic Laminate Faces: ISO 4586. Color, Finish, and Pattern as selected by Architect.
- C. Cross Banding Behind Wood Faces: Medium density fiberboard.
- D. Top and Bottom Rail:
 1. 2- 1/8 inch wide Structural Composite Lumber (SCL) rail.
 2. Top Rail to Receive Closers: 6 inch top rail.
- E. Stiles: Overall 1-3/8 inch wide SCL; 1/2 inch matching hardwood outer stile with 7/8 inch inner SCL stile.
- F. Facing Adhesive: Type II – water resistant.

RETAIN LEAD LINING ONLY IF APPLICABLE TO THE PROJECT. COORDINATE WITH RADIATION PROTECTION LAB REPORT.

- G. Lead Lining: FS QQ-L-201, Grade C, or ASTM B749, type L51120 (chemical lead).
 1. Bonded or secured with lead covered bolts to each side of core or centered in divided core.
 2. Thickness: Match thickness of lead in adjacent lead lined walls.

RETAIN FOLLOWING 2 PARAGRAPHS IF GLAZING IN DOORS. USE METAL MOLDING FOR FIRE RATED DOORS.

- H. Vision Openings: Refer to Section 08 80 00 – Glazing.
- I. Vision Panel Molding: **[Metal] [Wood].**

RETAIN FOLLOWING IF LOUVERS IN DOORS.

- J. Louvers: **[Metal] [Wood].**
 1. Door manufacturer's standard design, unless otherwise indicated.
 2. **[Hardwood, species to match face veneer.]**

2.3 FABRICATION

- A. Fabricate doors in accordance with WDMA I.S 1A-21 including tolerance requirements.
- B. Fire Rated Assemblies: Identify each assembly with factory applied label indicating applicable fire rating, fasten to hinge stile edge.
- C. Factory pre-fit to size ready for installation; trimming at Project site not permitted.
- D. Install wood blocking for panic devices and top of door for closer.
- E. Stiles and rails, bonded to cores.

- F. Factory machine doors for finish hardware in accordance with hardware requirements and dimensions. Do not machine for surface hardware. Furnish solid blocking for through bolted hardware.
- G. Provide edge clearances in accordance with WDMA I.S 1A-21.
- H. **[Vision Openings] [and] [Louver Openings]:** Factory cut openings.

2.4 FINISHES

- A. Finish work in accordance with WDMA I.S 1A-21 .
- B. Finish System: Manufacturer's standard finish system:
 - 1. TR-8 and OP-8: UV Cured Acrylated Polyester/Urethanes.
 - 2. Dry Film Thickness: 1.5 – 2 mils.
- C. Transparent Finish: Stained, to match approved sample.
- D. Opaque Finish: Solid color painted finish, to match approved sample.
- E. Seal top and bottom edges, **[vision panel cutouts,] [louver cutouts,]** and mortised hardware cutouts using manufacturer's standard sealer.

PART 3 – EXECUTION

3.1 EXAMINATION

- A. Verify opening sizes and tolerances are acceptable.
- B. Do not install doors in frame openings that are not plumb or are out-of-tolerance for size or alignment.

3.2 INSTALLATION

RETAIN NFPA 80 FOR INSTALLATION OF FIRE DOORS.

- A. Install doors in accordance with WDMA I.S 1A-21 **[NFPA 80]**.
- B. Acclimate doors to the prevailing humidity prior to installation.
- C. Install accurately in frame, within clearances specified.
- D. Coordinate installation of doors with installation of frames specified in Section **[08 11 16] [08 12 13] [08 41 13]** and hardware specified in Section 08 71 00 – Door Hardware.
- E. **[Coordinate installation of glass and glazing specified in Section 08 80 00.]**
- F. Install doors to operate freely, but not loosely, free from hinge bound conditions, sticking, or binding. Do not install in frames which would hinder operation of doors.
- G. Ensure doors are free from rattling when in latched position.

3.3 TOLERANCES

- A. Conform to WDMA I.S 1A-21 requirements for the following:
 - 1. Fit and clearance tolerances.
 - 2. Gaps.
 - 3. Flushness.
 - 4. Flatness.
 - 5. Squareness.

3.4 ADJUSTING

- A. Adjust door for smooth and balanced door movement.
- B. Adjust door closer for proper latching.

END OF SECTION