

SECTION 062043 FIRE-RATED WOOD JAMBS

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
1. **[Solid wood] [Particle board]** fire-rated interior door[**and sidelight**] frames.
 2. Intumescent/wood fire-rated interior door[**and sidelight**] frames.
- B. Related Sections:

EDIT NOTE: ADD OR DELETE SECTIONS PER PROJECT REQUIREMENTS.

1. Section 064023 – Interior Architectural Woodwork.
2. Section 081416 – Wood Doors.
3. Section 081433 – Stile and Rail Wood Doors.
4. Section 087100 – Door Hardware.

1.2 ACTION SUBMITTALS

- A. Product Data: For each type of process and factory-fabricated product. Indicate component materials, dimensions, profiles, and construction and installation details.
- B. LEED Submittals:

PRODUCT CERTIFICATES FOR CREDIT MR 5' SUBPARAGRAPH BELOW APPLIES TO LEED-NC, LEED-CS, AND LEED FOR SCHOOLS.

1. Product Certificates for Credit MR 5: For products and materials required to comply with requirements for regional materials, certificates indicating location of material manufacturer and point of extraction, harvest, or recovery for each raw material. Include statement indicating distance to Project, cost for each regional material, and fraction by weight that is considered regional.

"PRODUCT DATA FOR CREDIT IEQ 4.1" SUBPARAGRAPH BELOW APPLIES TO LEED-NC, LEED-CI, AND LEED-CS; COORDINATE WITH REQUIREMENTS FOR ADHESIVES.

2. Product Data for Credit IEQ 4.1: For adhesives and glues used at Project site, documentation including printed statement of VOC content.

"PRODUCT DATA FOR CREDIT IEQ 4.4" SUBPARAGRAPH BELOW APPLIES TO LEED-NC, LEED-CI, AND LEED-CS.

3. Product Data for Credit IEQ 4.4: For composite wood products, documentation indicating that product contains no urea formaldehyde.

"LABORATORY TEST REPORTS FOR CREDIT IEQ 4" SUBPARAGRAPH BELOW APPLIES TO LEED FOR SCHOOLS.

4. Laboratory Test Reports for Credit IEQ 4: For **[adhesives] [and] [composite wood products]**, documentation indicating that products comply with testing and product requirements of California Department of Health Services' "Standard Practice for the Testing of Volatile Organic Emissions from Various Sources Using Small-Scale Environmental Chambers."

- C. Samples for Verification:

1. Two 6 inch samples of each type of wood frame.

1.3 INFORMATIONAL SUBMITTALS

- A. Evaluation Reports: For intumescent/wood fire-rated interior door[**and sidelight**] frames, WHI-certification by Intertek.

1.4 QUALITY ASSURANCE

- A. Source Limitations: Obtain fire-rated wood frames from single source from single manufacturer.

RETAIN FIRST PARAGRAPH BELOW IF APPLICABLE. DO NOT RETAIN BOTH UL 10B AND UL 10C. UL 10B IS A NEUTRAL-PRESSURE TEST; UL 10C IS A POSITIVE-PRESSURE TEST. NFPA 252 CONTAINS TWO CHOICES FOR TEST PRESSURE: "POSITIVE PRESSURE" AND "AS CLOSE TO NEUTRAL PRESSURE AS POSSIBLE." UBC STANDARD 7-2 REQUIRES TESTING AT POSITIVE PRESSURE FOR "SIDE-HINGED OR PIVOTED SWINGING DOORS" AND AT "AS NEARLY EQUAL TO THE ATMOSPHERE'S PRESSURE AS POSSIBLE" FOR "OTHER TYPES OF DOORS, INCLUDING SWINGING ELEVATOR DOORS."

- B. Fire-Rated Door Assemblies: Assemblies complying with NFPA 80 that are listed and labeled by a qualified testing agency, for fire-protection ratings indicated, based on testing at positive pressure [~~as close to neutral pressure as possible~~] per NFPA 252 [or] [~~UL 10B~~] UL 10C.

RETAIN FIRST TWO PARAGRAPHS BELOW IF APPLICABLE. THESE ONLY APPLY TO 20 MINUTE FRAMES. DELETE PARAGRAPHS FOR PROJECTS WITH NO 20 MINUTE RATED FRAMES.

- C. Fire-Rated, Borrowed-Light Frame Assemblies: Assemblies complying with NFPA 80 that are listed and labeled, by a testing and inspecting agency acceptable to authorities having jurisdiction, for fire-protection ratings indicated, based on testing per NFPA 257 or UL 9. Label each individual glazed lite.
- D. Smoke-Control Door Assemblies: Comply with NFPA 105 or UL 1784.

1.5 FIELD CONDITIONS

- A. Environmental Limitations: Do not deliver or install wood frame materials until building is enclosed and weatherproof, wet Work in space is completed and nominally dry, and HVAC system is operating and maintaining temperature and relative humidity at occupancy levels during remainder of construction period.
- B. Do not install wood frame materials that are wet, moisture damaged, or mold damaged.
 1. Indications that materials are wet or moisture damaged include discoloration, sagging, or irregular shape.
 2. Indications that materials are mold damaged include fuzzy or splotchy surface contamination and discoloration.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Subject to compliance with requirements, provide products from the following manufacturer:

1. Ferche Millwork
400 Division Street North
Rice, MN 56367
Toll Free: 800.328.7867
Telephone: 320.393.5700
Fax: 320.393.5800
Website: www.ferche.com
E-mail: webmaster@ferche.com

2.2 FIRE-RATED INTERIOR DOOR[**AND SIDELIGHT**] FRAMES

RETAIN APPROPRIATE OPTION BELOW AND RETAIN RELATED SUBPARAGRAPHS.

- A. Materials – 20 Minute Rated: Fabricated from **[solid wood] [particle board]**. Frames shall comply with NFPA 80 and be listed and labeled by testing and inspecting agency acceptable to authorities having jurisdiction, based on testing per NFPA 252.
1. Particle Board Core: Minimum 45 pcf density.

RETAIN SUBPARAGRAPH ABOVE FOR PARTICLE BOARD CORE FRAMES. RETAIN SUBPARAGRAPH BELOW FOR SOLID WOOD FRAMES.

2. Lumber Core: Solid wood with minimum specific gravity of 0.38 at 12 percent moisture content. Finger joints optional for end joints of solid pieces.
3. Edgbanding: Solid wood with minimum specific gravity of 0.40 at 12 percent moisture content. Solid piece or finger jointed with minimum distance of 8 inches on center between finger joints
 - a. Minimum Thickness: 3/16 inch.
4. Veneer: Solid wood with minimum specific gravity of 0.40 at 12 percent moisture content.
 - a. Minimum Thickness: 1/32 inch.
5. Applied "T" Stop: Solid wood with minimum specific gravity of 0.40 at 12 percent moisture content.
6. Veneer Species: Any species meeting minimum specific gravity of 0.40 at 12 percent moisture content.

RETAIN FIRE RATING REQUIRED FOR PROJECT AND DELETE RATINGS NOT REQUIRED.

7. Fire Rating: 20 minutes.
8. Jamb Thickness: Nominal 3/4 inch, plus/minus 1/16 inch.
9. Opening Size: Maximum opening of 96 inches wide by 96 inches high.

B. Sidelite and Borrowed Lites:

1. Frames Material: Match adjacent door frame material.
2. Glass: Nominal 1/4 inch rated glass complying with Section 088100.
3. Glazing Clips: Frame manufacturer's proprietary 0.0179 inch galvanized steel.
4. Sealants: Comply with section 079200.

RETAIN APPROPRIATE RATING OPTION BELOW AND DELETE RATINGS NOT REQUIRED FOR PROJECT.

- C. Materials - **[45 Minute] [60 Minute] [90 Minute]** Rating.: Fabricated from laminated core of intumescent and wood composite with veneered exposed surfaces. Frames shall comply with NFPA 80 and be listed and labeled by testing and inspecting agency acceptable to authorities having jurisdiction, based on testing per NFPA 252.

RETAIN VENEER REQUIRED FOR PROJECT AND DELETE VENEERS NOT REQUIRED. ANY HARDWOOD SPECIES MAY BE USED FOR VENEER.

1. Veneer Species: **[Alder] [Birch] [Cherry] [Hickory] [Mahogany] [Maple] [Oak] [Poplar] [Walnut]**.

RETAIN FIRE RATING REQUIRED FOR PROJECT AND DELETE RATINGS NOT REQUIRED.

2. Fire Rating: **[45 minutes] [60 minutes] [90 minutes]**.
3. Jamb Thickness: Nominal 3/4 inch, plus/minus 1/16 inch.
4. Opening Size: Maximum opening of 48 inches wide by 96 inches high.

2.3 MISCELLANEOUS MATERIALS

- A. Fasteners for Interior Finish Carpentry: Nails, screws, and other anchoring devices of type, size, material, and finish required for application indicated to provide secure attachment, concealed where possible.

2.4 FABRICATION

- A. Factory-machine frames 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 as furnished by door hardware supplier.
 - 1. Comply with requirements in NFPA 80 for fire-rated doors.
- B. Manufacturer's Label: Do not remove, cover, or paint over label. After completion of machining frame, apply Warnock Hersey (WH) certification label to finished frame with screw-type nails a minimum length of 5/8 inch or with minimum 18 gage staples with 1/4 inch crown and 5/8 inch leg length. If staples are used, Use 2 staples, 1 at each end of label.

RETAIN THE FOLLOWING PARAGRAPHS FOR FRAMES REQUIRING SMOKE OR DRAFT GASKETS.

- C. Smoke/Draft Gaskets: Machine frames for smoke [**draft**] gaskets by company registered with Warnock Hersey (Intertek Testing).
 - 1. Gaskets: Pressure-sensitive or kerf type (Category H) attached to machined frame per manufacturer's requirements in order to give frame an "S" label rating.

THE FOLLOWING SUBPARAGRAPH ONLY REFERS TO 20 MINUTE FRAMES. IF NO 20 MINUTE FRAMES ON PROJECT, DELETE THIS SUBPARAGRAPH.

- 2. Positive Pressure Certification: Apply edge sealing gasket (Category G) to achieve certification.

2.5 FINISHES

- A. General: Complete fabrication, including fitting doors for openings and machining for hardware that is not surface applied, before finishing.
 - 1. Finish faces, all 4 edges, edges of cutouts, and mortises. Stains and fillers may be omitted on bottom edges, edges of cutouts, and mortises.
- B. Transparent Finish:

USUALLY RETAIN SAME GRADE FOR FINISH AS SPECIFIED FOR DOORS.

- 1. Grade: [**Premium**] [**Custom**].

RETAIN ONE OF THREE "FINISH" SUBPARAGRAPHS BELOW AND ONE OR MORE OPTIONS IN SUBPARAGRAPH RETAINED, OR INSERT ANOTHER OPTION. BEFORE SPECIFYING, VERIFY AVAILABILITY OF FINISHES WITH MANUFACTURERS SELECTED.

CONVERSION VARNISH IS DURABLE, REPAIRABLE, AND GOOD GENERAL-PURPOSE FINE FINISH

CATALYZED POLYURETHANE IS VERY DURABLE BUT NOT EASILY REPAIRED.

- 2. Finish: AWI [**conversion varnish**] [or] [**catalyzed polyurethane**] system.
- 3. Finish: WDMA [**TR-4 conversion varnish**] [or] [**TR-6 catalyzed polyurethane**].
- 4. Finish: WI System [**4 clear conversion varnish**] [**5 catalyzed polyurethane**] [or] [**8 UV-curable coating**].
- 5. Staining: Match Architect's sample [**Selected by Architect from manufacturer's full range**] [**None required**].

RETAIN ONE OF THREE OPTIONS IN SUBPARAGRAPH ABOVE AND USUALLY ONE OF THREE OPTIONS IN FIRST SUBPARAGRAPH BELOW. SOME DOOR MANUFACTURERS WILL NOT PROVIDE FILLED FINISH BECAUSE FILLING IS BEST

DONE BY HAND, WHICH CANNOT BE DONE ON A FINISHING LINE; INSTEAD, SOME WILL OFFER SEMIFILLED FINISH AS DESCRIBED BELOW. DELETE BELOW IF ONLY CLOSED-GRAIN WOOD SPECIES ARE USED.

1. Effect: **[Open-grain finish] [Filled finish] [Semifilled finish, produced by applying an additional finish coat to partially fill the wood pores].**

RETAIN ONE OF TWO OPTIONS IN SUBPARAGRAPH BELOW OR REVISE TO SUIT PROJECT.

2. Sheen: **[Satin] [Semigloss].**

VERIFY AVAILABILITY OF OPAQUE FINISHES WITH MANUFACTURERS SELECTED.

C. Opaque Finish:

USUALLY RETAIN SAME GRADE FOR FINISH AS SPECIFIED FOR DOORS.

1. Grade: **[Premium] [Custom].**

RETAIN ONE OF THREE "FINISH" SUBPARAGRAPHS BELOW AND ONE OR MORE OPTIONS IN SUBPARAGRAPH RETAINED, OR INSERT ANOTHER OPTION. BEFORE SPECIFYING, VERIFY AVAILABILITY OF FINISHES WITH MANUFACTURERS SELECTED.

2. Finish: AWI **[conversion varnish] [or] [catalyzed polyurethane]** system.
3. Finish: WDMA **[OP-4 conversion varnish] [or] [OP-6 catalyzed polyurethane].**
4. Finish: WI System **[4 conversion varnish] [5 catalyzed polyurethane] [or] [8 UV-curable coating].**
5. Color: Selected by Architect from manufacturer's full range.

RETAIN ONE OF THREE OPTIONS IN SUBPARAGRAPH BELOW OR REVISE TO SUIT PROJECT.

6. Sheen: Satin **[Semigloss] [Gloss].**

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance.
- B. Examine finish carpentry materials before installation. Reject materials that are wet, moisture damaged, and mold damaged.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Before installing interior finish carpentry, condition materials to average prevailing humidity in installation areas for a minimum of 24 hours unless longer conditioning is recommended by manufacturer.

3.3 INTERIOR FRAME INSTALLATION

- A. Do not use materials that are unsound, warped, improperly finished, or with defective surfaces, sizes, or patterns.
- B. Comply with frame manufacturer's written instructions for installation.
- C. Install wood frames level, plumb, true, and aligned with adjacent materials. Use concealed shims where necessary for alignment.
 1. Scribe and cut interior finish carpentry to fit adjoining Work. Refinish and seal cuts as recommended by manufacturer.

2. Coordinate wood frames with materials and systems in or adjacent to it. Provide cutouts for mechanical and electrical items that penetrate interior finish carpentry.
3. Install frames after gypsum-board joint finishing operations are completed.
4. Install without splitting; drill pilot holes before fastening where necessary to prevent splitting. Fasten to prevent movement or warping. Countersink fastener heads on exposed frame Work and fill holes.

3.4 FIELD MODIFICATIONS

- A. Per NFPA 80, site modifications are restricted to the following:
 1. Circular or rectangular function holes for latch bolts.
 2. Prepping area around function holes for strike plates.
 3. Installing gasketing or seals to frame if required.

3.5 CLEANING

- A. Clean wood frames on exposed and semiexposed surfaces. Touch up finishes to restore damaged or soiled areas.

3.6 PROTECTION

- A. Protect installed frames from damage from weather and other causes during remainder of construction period.
- B. Remove and replace frame material that is wet, moisture damaged, and mold damaged.
 1. Indications that materials are wet or moisture damaged include discoloration, sagging, or irregular shape.
 2. Indications that materials are mold damaged include fuzzy or splotchy surface contamination and discoloration.

END OF SECTION