

Section 08210 – Stile & Rail Doors

Marshfield Signature Series™ (Marshfield DoorSystems Stile & Rail Doors)

This section is written utilizing WDMA Premium grade and AWI Custom grade as the quality standard. Refer to WDMA I.S. 1- A-97, AWI Quality Standards 7th Edition Version 1.0 1997, and WIC Manual of Millwork, 9th edition, 1998. Marshfield Signature Series™ doors are used as the base for this section. Provision is made for adding other proprietary names of equivalent quality products.

For additional information see the Marshfield Signature Series Technical Guide or visit our web site at www.marshfielddoors.com.

PART 1. GENERAL

1.1 Wood Doors, Non-rated and Fire-rated

- A. Glazed
- B. Louvers
- C. Dutch
- D. Stile and Rail

1.2 Related Sections

- A. Section 06200 - Finish Carpentry
- B. Section 06400 - Architectural Woodwork
- C. Section 08100 - Metal Frames
- D. Section 08700 - Finish Hardware
- E. Section 08800 - Glazing
- F. Section 10200 - Metal Louvers

1.3 References and Regulatory Requirements

- A. ASTM E152-81a - Standard Methods of Fire Tests of Door Assemblies.
- B. NFPA 252 - Standard Methods of Fire Tests of Door Assemblies 1995 Edition.
- C. UL 10B - Fire Tests of Door Assemblies, 9th Edition.
- D. UBC 43-2 - Fire Tests of Door Assemblies.
- E. NFPA 80 - Fire Doors and Windows.
- F. Quality Standards:
 - 1. WDMA Industry Standard I.S. 6-A-99 (Window & Door Manufacturers Association).
 - 2. AWI Quality Standards 7th Edition, Version 1.0 1997.
 - 3. ANSI A115. W Series, Wood Door Hardware Standards. (American National Standard Institute)
 - 4. WIC - Wood Work Institute of California (1998)

1.4 Door Description

- A. Provide interior doors as selected from Marshfield DoorSystems, Inc., model options or as customized per referenced drawings.
- B. Provide doors in thickness of 2 1/4", 2", 1 3/4", 1 3/8" as specified in door schedule.

1.5 Submittals

- A. Submit under provisions of Section 01300.
- B. Shop Drawings: Illustrate door opening criteria, elevations, sizes, types, swings, undercuts, special beveling, glass and glazing.
- C. Product Data: Indicate door core materials, thickness, construction, panel and sticking profile, veneer species, cut and matching requirements, factory machining and factory finishing criteria.
- D. Construction Samples: Submit one or more of manufacturer's standard samples demonstrating door construction.
- E. Finish Samples: A set of 3 illustrating the range of color and grain of the specified door face materials.
- F. Manufacturer's Limited Lifetime Warranty

1.6 Quality Assurance

- A. Meet or exceed WDMA I.S.6-A-99 Custom Grade and/or AWI Version 1.0 1997 Custom Grade.

1.7 Delivery, Storage, Handling and Site Conditions

- A. Deliver, store, protect and handle products under provisions of WDMA, AWI and manufacturer's instructions.
- B. Accept doors on site in manufacturer's standard packaging. Inspect for damage upon receipt.
- C. Do not store in damp or wet areas or in areas where light might cause oxidization.
- D. HVAC systems should be operating and balanced prior to arrival of doors. Acceptable humidity shall be no less than 25% nor greater than 55%.
- E. Break seal on packages while at site to permit ventilation.

1.8 Coordination

- A. Coordinate work under provisions of Section 01620.
- B. Coordinate work with door opening construction, door frame and door hardware installation with a pre-installation conference.

1.9 Warranty

- A. Provide manufacturer's warranty to the following term:
 - 1. Interior Stile and Rail Doors: Limited Lifetime.

PART 2. PRODUCTS

2.1 Manufacturer

- A. Marshfield DoorSystems Inc., quality as defined in this section.

2.2 Workmanship

- A. Comply with WDMA/AWI workmanship for veneer faces, vertical edges, stiles, rails, panels, horizontal edges and dimensional tolerances.
- B. Face veneers to be wide belt machine sanded to not less than 180 grit paper. Cross grain sanding scratches must not exceed 180 grit.

2.3 Materials

- A. DOOR CONSTRUCTION GRADE
 - 1. Except as may be otherwise shown on the drawings, fabricate the work of this section to WDMA "Custom Grade/" AWI "Custom Grade".
- B. STILE AND RAIL DOOR FACE, SLICE OR CUT, FINISH AND MATCHING
 - 1. Transparent finish wood veneer: AWI - A Grade: specie and cut shall be as noted.
 - 2. Matching: Direction of veneer for all rails shall be horizontal and shall be vertical for mullions and stiles. Veneer match and sequence within and between all panels shall be mill option. Panel species to match stiles and rails. All door components shall be selected for compatibility of grain and color.
 - 3. Panels: species to be the same as stiles and rails.
- C. STILE AND RAIL DOOR FACING, SLICE OR CUT, FINISH AND MATCHING
 - 1. Painted wood veneer: AWI - A Grade: species shall be Natural selections of Birch, Maple, Poplar, White Pine or other closed grain species.
 - 2. Matching: Direction of veneer for all rails shall be horizontal and shall be vertical for mullions and stiles. Veneer match and sequence within and between all panels shall be mill option. Panel species to match stiles and rails.
 - 3. Panels: species to be the same as stiles and rails.

2.4 Fabrication

- A. DOOR AND TRANSOM PANEL CORE CONSTRUCTION
 - 1. Stiles, rails mullions and cross rails shall be veneered construction using Medium Density Fiberboard core. Joints to be tongue and groove plus doweled and glued under pressure.
- B. VERTICAL EDGES
 - 1. Non-rated
 - a. Solid lumber edges to match face veneer. Veneer banded by specification only.
 - 2. 20 Minute Rated
 - a. Singles: solid lumber edges to match face veneer. Veneer banded by specification only.
 - b. Pairs: Fire treated meeting edges, may be veneer banded to match face veneer.
- C. PANELS
 - 1. Panel core shall be Medium Density Fiberboard with perimeter shaped to proper contour and laminated with veneer to form a 3-ply panel. Raised panels shall be not less than 1 1/4" thick and flat panels not less than 5/8" thick. Panel edges to be concealed after assembly by matching solid lumber sticking.
- D. STICKING
 - 1. Sticking shall be solid lumber, to match face specie and coped at corners. Sticking shape as selected from Marshfield DoorSystems Inc. standard profile selection.
- E. COMPONENT FACE DIMENSIONS
 - 1. Sizes of stiles, rails, mullions and muntins shall conform to Marshfield DoorSystems Inc. standard face dimensions, prior to beveling or fitting or shall meet custom dimensions as specified.
- F. ADHESIVES
 - 1. Face veneer and component assembly adhesive: Type 1 - Waterproof.
- G. MACHINING FOR FIRE RATED DOORS
 - 1. Factory fit and machine doors for frame and finish hardware in accordance with hardware and NFPA 80 requirements and dimensions. Do not machine for surface hardware. Apply appropriate fire labels.
- H. DUTCH DOORS TYPE:
 - 1. One side shelf with two matching wood supporting brackets.
 - 2. Two side shelf with four matching wood supporting brackets.
 - 3. No shelf; top rail of gate door banded with matching veneer.

2.5 Accessories

A. LOUVERS

1. Louvers to be supplied and fully integrated into door by door manufacturer, species and finish to match door.
2. Louver blade as selected from either vented round slat or un-vented V-slat.

2.6 Factory Finish

- A. Factory finish doors in accordance with WDMA Finish System Description or AWI Division 1500-S-4 - Finish System Standards. Factory finish to be water based stain and infrared cured waterborne lacquer to comply with DPA Title 5 guidelines for Volatile Organic Compound (VOC) emission limitations. Finish must meet or exceed performance standards of TR-3 waterborne lacquer. Color shall be Marshfield DoorSystems Inc. Enviroclad UV™ Designer or custom color as selected by architect.
- B. Factory finish doors in accordance with approved sample set.
- C. Factory finished doors to be installed just prior to substantial completion.

PART 3. EXECUTION

3.1 Examination

- A. Verify substrate opening conditions.
- B. Verify that opening sizes and tolerances are acceptable and ready to receive doors.
- C. Do not install doors in frame openings which are not plumb or are out of tolerance for size or alignment.

3.2 Installation

- A. Install fire-rated and non-rated doors in accordance with NFPA 80, manufacturers' instructions and fire rated labeling requirements.
- B. Trim non-rated door width by cutting equally on both outer stile edges.
- C. Trim door height by cutting bottom edge to a maximum 3/4 inch (19 mm).
- D. Trim fire door height at bottom edge only, in accordance with fire rating requirements.
- E. Pilot drill screw and bolt holes using templates provided by hardware manufacturer. (Use threaded throughbolts for half surface hinges).
- F. Coordinate installation of doors with installation of frames and hardware.
- G. Align and install light molding, astragal or other accessories plumb and level.
- H. Reseal and or refinish any doors that required site alteration.

3.3 Warranty Tolerances

- A. Conform to WDMA standards and testing methods for determining unacceptable warp, cup, bow and telegraphing.

3.4 Adjusting

- A. Adjust work under provisions Division 1.
- B. Adjust doors for smooth, quiet and balanced movement.

3.5 Door and Frame Components Schedules

- A. Refer to door and frame schedule.

END OF SECTION