*SECTION 081416 - FLUSH WOOD DOORS*

*PART 1 - GENERAL*

*1.1 RELATED DOCUMENTS*

*A. Drawings and general provisions of the Contract, including General and Supplementary*

*Conditions and Division 01 Specification Sections, apply to this Section.*

*1.2 SUMMARY*

*A. Section Includes:*

*1. Solid-core doors with [Veneer] [MDO] [HPDL]*

*2. Factory fitting flush wood doors to frames and factory machining for hardware.*

*3. Factory installed glazing*

*B. Related Requirements:*

*1. Section 081100 Hollow Metal Doors & Frames*

*2. Section 087100 Door Hardware*

*3. Section 088000 Factory Glazing for glass view panels in flush wood doors.*

*4. Section [099123 Interior Painting] [and] [099300 Staining and Transparent Finishing]*

*for field finishing doors.*

*1.3 ACTION SUBMITTALS*

*A. Product Data: For each type of door. Include details of core and edge construction, vision kits*

*for openings and factory finishing.*

*B. Shop Drawings: Indicate location, size, and hand of each door; elevation of each kind of door;*

*construction details not covered in Product Data; and the following:*

*1. Use same unit designations used in Contract Documents.*

*2. Hardware and [wiring chase] preparation.*

*3. Glazed openings*

*4. Blocking dimensions and locations*

*5. Fire-protection ratings for fire-rated doors.*

*C. Samples for Initial Selection: Available standard [Stain] [Paint] [Plastic laminate].*

*D. Samples for Verification:*

*1. Factory finish applied to actual door face material, approximately 8 x 10 inches, for each*

*material and finish.*

*2. Corner sections of doors, approximately 8 by 10 inches, with door faces and edges*

*representing actual materials to be used.*

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*3. Plastic Laminate, 5” square, for each color, texture and pattern selected.*

*4. Frames for light openings, 6 inches long, for each material, type, and finish when*

*required.*

*1.4 QUALITY ASSURANCE*

*A. Quality Standard: WDMA I.S.1-A, latest edition, "Industry Standard for Architectural Wood Flush*

*Doors”.*

*B. Security Standard: Filti Testing and Development (FTD), “Shooter Attack Test Method (SA)”*

*1.5 DELIVERY, STORAGE, AND HANDLING*

*A. Comply with requirements of referenced standard and manufacturer's written instructions.*

*B. Package doors individually in plastic bags and wrap bundles of doors in plastic sheeting.*

*C. Mark each door on top rail with opening number used on Shop Drawings.*

*1.6 FIELD CONDITIONS*

*A. Environmental Limitations: Do not deliver or install doors until spaces are enclosed and*

*weathertight, wet work in spaces is complete and dry, and HVAC system is operating and*

*maintaining ambient temperature and humidity conditions at occupancy levels during remainder*

*of construction period.*

*1.7 WARRANTY*

*A. Warranty: Manufacturer’s standard form in which manufacturer agrees to repair or replace*

*doors that fail in materials or workmanship within specified warranty period.*

*1. Failures include, but are not limited to, the following:*

*a. Warping (bow, cup, or twist) more than 1/4 inch in a 42-by-84-inch section.*

*b. Telegraphing of core construction in face veneers exceeding 0.01 inch in a 3-inch*

*span.*

*2. Warranty shall also include installation and finishing that may be required due to repair or*

*replacement of defective doors.*

*3. Warranty Period for Solid-Core Interior Doors: Life of installation.*

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*PART 2 - PRODUCTS*

*A. Masonite Architectural, Aspiro Series*

*1. A component of the Masonite DefendrTM Door System*

*B. Source Limitations: Obtain flush wood doors from single manufacturer.*

*2.2 FLUSH WOOD DOORS, GENERAL*

*A. Quality Standard: Provide WDMA I.S.1-A*

*1. Performance Grade: Extra Heavy Duty.*

*2. Aesthetic Grade: [Custom (A grade faces)] [Premium (AA grade faces)].*

*B. Security Standard: FTD-SA*

*1. Performance Class:*

*a. Class 3*

*C. Fire-Rated Wood Doors: Conforming to NFPA 80; listed and labeled for required ratings based*

*on testing at pressure NFPA 252 OR UL 10C by UL or other testing agency acceptable to*

*authorities having jurisdiction.*

*1. Ratings: [Category A positive pressure] [Category B positive pressure]*

*2. Cores:*

*a. 20-minute rated: [Extra heavy-duty particle board] [Structural composite*

*lumber]*

*b. 45-minute fire rated: Fire-resistant wood-based particleboard*

*3. Vertical Edges:*

*a. Category A Positive Pressure: Integral intumescent seals concealed by outer stile*

*where required.*

*b. Category B Positive Pressure: Intumescent seals applied to door frame per*

*requirements of section 08 71 00 where required.*

*4. Blocking: Provide blocking with improved screw holding capability approved for use in*

*doors of fire protection ratings indicated as follows:*

*. Blocking is not required in extra heavy duty particle board or structural composite*

*lumber core doors*

*D. Smoke and Draft Control Door Assemblies: Listed and labeled for smoke and draft control,*

*based on testing according to UL 1784 for I occupancy projects.*

*Specifier Note: Please Select the paragraph or paragraphs below that pertain to the door*

*requirements on your project.*

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*2.3 VENEER-FACED DOORS FOR TRANSPARENT FINISH*

*A. Interior Solid-Core Doors:*

*1. Aesthetic Grade: [Custom, with Grade A faces] or [Premium, with Grade AA faces]*

*2. Species: [Veneer]*

*3. Cut: [Rotary cut] [Plain sliced (flat sliced)] [Quarter sliced] [Rift cut]*

*4. Match between Veneer Leaves: [Book] or [Slip] match.*

*5. Assembly of Veneer Leaves on Door Faces: [Book & Running] [Balanced] [Center*

*balanced] match.*

*6. Pair and Set Match: Provide for doors hung in same opening or separated only by*

*mullions.*

*7. Vertical Edges: [Matching / Compatible Hardwood Lumber over structural composite*

*lumber] [Matching / Compatible Veneer edge band over structural composite*

*lumber] [Compatible high impact edge bonded to structural composite lumber]*

*8. Horizontal Edges: Structural Composite Lumber [Clean edge band bonded to the SCL*

*top rail].*

*9. Core: [Extra Heavy-Duty Particle Board] [Structural Composite Lumber]*

*10. Construction: Five plies. Stiles and rails are bonded to core, then entire unit is abrasive*

*planed before veneering.*

*2.4 PLASTIC-LAMINATE-FACED DOORS*

*A. Interior Solid-Core Doors:*

*1. Aesthetic Grade: Premium*

*2. Plastic-Laminate Faces: High-pressure decorative laminates complying with NEMA LD 3,*

*Grade HGS.*

*3. Colors, Patterns, and Finishes: [As indicated] [As selected by Architect from*

*manufacturer’s standard products].*

*4. Vertical Edges: [Matching HPDL edge band over structural composite lumber]*

*[Matching high impact edge bonded to structural composite lumber] [Hardwood for*

*staining or painting] [ Compatible high impact edge bonded to structural composite*

*lumber]*

*5. Horizontal Edges: Structural Composite Lumber [Clean edge band bonded to the SCL*

*top rail].*

*6. Core: [Extra Heavy-Duty Particle Board] {Structural Composite Lumber]*

*7. Construction: Five plies. Stiles and rails are bonded to core, then entire unit is abrasive*

*planed before crossbands and laminate faces are applied.*

*2.5 MDO FACED DOORS FOR OPAQUE FINISH-PAINT*

*A. Interior Solid-Core Doors:*

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*1. Aesthetic Grade: Premium*

*2. Faces: MDO, apply to high-density hardboard crossbands.*

*3. Vertical Edges: [Matching / Compatible Hardwood Lumber over structural composite*

*lumber] [Matching / Compatible Veneer edge band over structural composite*

*lumber] [Compatible high impact edge bonded to structural composite lumber]*

*4. Horizontal Edges: Structural Composite Lumber [Clean edge band bonded to the SCL*

*top rail].*

*5. Core: [Extra Heavy-Duty Particle Board] [Structural Composite Lumber].*

*6. Construction: Five plies. Stiles and rails are bonded to core, then entire unit is abrasive*

*planed before crossbands and MDO faces are applied.*

*2.6 LIGHT FRAMES*

*A. Metal Vision Frames for Light Openings:*

*1. 18 gauge cold-rolled steel*

*2. Finish: [Factory baked-enamel] [Powder-coated] [Veneer wrapped, factory finish to*

*match door faces] finish; and approved for use in doors of fire-protection rating*

*indicated.*

*B. MVF Manufacturer’s: Subject to compliance, meeting Filti Testing and Development (FTD),*

*“Shooter Attack Test Method (SA)”.*

*1. All Metal Stamping-110 (non-rated)*

*2. All Metal Stamping 110-D2 (fire-rated)*

*2.7 FABRICATION*

*A. Factory fit doors to suit frame-opening sizes indicated. Comply with clearance requirements of*

*referenced quality standard for fitting unless otherwise indicated.*

*1. Comply with NFPA 80 requirements for fire-rated doors.*

*B. 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, BHMA-*

*156.115-W, and hardware templates.*

*1. Coordinate with hardware mortises in metal frames to verify dimensions and alignment*

*before factory machining.*

*C. Openings:*

*1. Light Openings: Factory cut and install with vision kits indicated above.*

*2. Glass: Factory install glass in doors per manufacturer’s instructions.*

*a. Non-rated glass to be Armoured One AOTSG516*

*b. 20-minute glass to be Dual Glazed:*

*1) Armoured One AOTSG516*

*2) Pyroswiss 20 .”*

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*c. 45-minute glass to be Dual Glazed:*

*1) Armoured One AOTSG516*

*a) 45-min: Keralite FR-F 3/16” or Firelite NT 3/16”*

*b) 45-min: Keralite FR-L 5/16” or Firelite Plus 5/16”*

*2.8 FACTORY FINISHING*

*A. General: Comply with referenced quality standard for factory finishing. Complete fabrication,*

*including fitting doors for openings and machining for hardware that is not surface applied,*

*before finishing.*

*B. Transparent Finish:*

*1. Grade: Premium*

*2. Finish: WDMA TR-8 UV Cured Acrylated Polyester/Urethane.*

*3. Staining: [Match Architect's sample] [As selected by Architect from manufacturer's*

*full range].*

*4. Sheen: Satin*

*C. Factory Painted:*

*1. Grade: Premium*

*2. Finish: WDMA I.S. 1-A System OP-8*

*3. Color: [Matching Architect’s paint sample] [As selected by Architect from*

*manufacturers full range].*

*4. Sheen: Satin*

*PART 3 - EXECUTION*

*3.1 EXAMINATION*

*A. Examine doors and installed door frames, with Installer present, before hanging doors.*

*1. Verify that installed frames comply with indicated requirements for type, size, location, and*

*swing characteristics and have been installed with level heads and plumb jambs.*

*2. Reject doors with defects.*

*B. Proceed with installation only after unsatisfactory conditions have been corrected.*

*3.2 INSTALLATION*

*A. Hardware: For installation, see Section 087100 Door Hardware.*

*B. Installation Instructions: Install doors to comply with manufacturer's written instructions and*

*referenced quality standard, and as indicated.*

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*1. Install fire-rated doors according to NFPA 80.*

*2. Install smoke- and draft-control doors according to NFPA 105.*

*C. Job-Fitted Doors: Align and fit doors in frames with uniform clearances and bevels as indicated*

*below; do not trim stiles and rails in excess of limits set by manufacturer or permitted for firerated*

*doors. Machine doors for hardware. Seal edges of doors, edges of cutouts, and mortises*

*after fitting and machining.*

*1. Clearances: Provide 1/8 inch at heads, jambs, and between pairs of doors. Provide 1/8*

*inch from bottom of door to top of decorative floor finish or covering unless otherwise*

*indicated. Where threshold is shown or scheduled, provide1/4 inch from bottom of door to*

*top of threshold unless otherwise indicated.*

*a. Comply with NFPA 80 for fire-rated doors.*

*b. Bevel non-fire-rated doors 1/8 inch in 2 inches at lock and hinge edges.*

*2. Bevel fire-rated doors 1/8 inch in 2 inches at lock edge; trim stiles and rails only to extent*

*permitted by labeling agency.*

*D. Factory-Fitted Doors: Align in frames for uniform clearance at each edge.*

*E. Factory-Finished Doors: Restore finish before installation if fitting or machining is required at*

*Project site.*

*3.3 ADJUSTING*

*A. Operation: Rehang or replace doors that do not swing or operate freely.*

*B. Finished Doors: Replace doors that are damaged or that 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 081416*