SECTION 081416 - FLUSH WOOD DOORS AND WOOD FRAMES

1. GENERAL
   * + 1. RELATED DOCUMENTS
          1. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.
       2. SUMMARY
          1. Section Includes:

Solid core doors with wood veneer, hardboard or MDF faces.

Interior wood door frames.

Factory finishing wood doors.

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

Louvers installed in flush wood doors.

Light frames and glazing installed in wood doors.

Factory installed glazing in wood doors.

* + - * 1. Related Sections:

Division 01 Section "Sustainable Design Requirements" for additional LEED documentation and requirements.

Division 06 Section "Interior Architectural Woodwork" for requirements for veneers from the same flitches for both wood doors and wood paneling.

Division 08 Section "Hollow Metal Doors and Frames" for wood doors in steel frames.

Division 08 Section "Glazing" for glass view panels in wood doors.

Division 08 Section "Door Hardware" for door hardware for flush wood doors and wood frames.

Division 08 Section "Access Control Hardware" for electromechanical hardware for flush wood doors and wood frames.

Division 13 Section "Radiation Protection" for lead-lined wood doors.

Division 28 Section "Access Control" for access control devices installed at door openings and provided as part of a security access system.

* + - * 1. Standards and References: Comply with the version year adopted by the Authority Having Jurisdiction.

ANSI A208.1 – Wood Particleboard.

ASTM E90-90 - Measurement of Airborne Sound Transmission Loss of Building Partitions.

ASTM E 413 - Classification for Rating Sound Insulation.

Architectural Woodwork Standards - AWS Section 9, Doors; Quality Standards of the Architectural Woodwork Institute (AWI) and Woodwork Institute (WI).

Architectural Woodwork Standards - AWS Section 5, Finishing. Quality Standards of the Architectural Woodwork Institute (AWI) and Woodwork Institute (WI).

Forestry Stewardship Council (FSC) - Guidelines for environmentally certified wood doors.

Intertek Testing Service (ITS Warnock Hersey) - Certification Listings for Fire Doors.

NFPA 80 - Standard for Fire Doors and Fire Windows; National Fire Protection Association.

NFPA 252 - Standard Methods of Fire Tests of Door Assemblies; National Fire Protection Association.

UL 10C - Positive Pressure Fire Tests of Door Assemblies; UL 1784 - Standard for Air Leakage Tests of Door Assemblies.

UL 10B - Fire Tests of Door Assemblies.

United States Green Building Council (USGBC).

Window and Door Manufacturers Association - WDMA I.S.1-A Architectural Wood Flush Doors.

Window and Door Manufacturers Association - WDMA I.S. 10 Industry Standard for Testing Cellulosic Composite Materials for Use in Fenestration Products.

* + - 1. SUBMITTALS
         1. Product Data: For each type of door indicated. Include details of core and edge construction, louvers, trim for openings, and WDMA I.S.1-A or AWS classifications. Include factory finishing specifications.
         2. Door hardware supplier is to furnish templates, template reference number and/or physical hardware to the wood door supplier in order to prepare the doors and frames to receive the finish hardware items.
         3. Shop Drawings: Indicate location, size, and hand of each door; elevation of each kind of door; construction details not covered in Product Data; location and extent of hardware blocking; and other pertinent data.

Indicate dimensions and locations of mortises and holes for hardware.

Indicate dimensions and locations of cutouts.

Indicate requirements for veneer matching.

Indicate doors to be factory finished and finish requirements.

Indicate fire protection ratings for fire rated doors.

* + - * 1. LEED Submittals:

Product Data for Credit MR 4: For products having recycled content, documentation indicating percentages by weight of postconsumer and preconsumer recycled content.

Include statement indicating cost for each product having recycled content.

Product Certificates for Credit MR 5 (LEED CI only): For products and materials required to comply with requirements for regionally manufactured materials. Include statement indicating cost for each regionally manufactured material.

Include statement indicating location of manufacturer and distance to Project for each regionally manufactured material.

Certificates for Credit MR 6: Manufacturer’s certificates indicating that products qualify as rapidly renewable products.

Include statement indicating cost for each rapidly renewable product.

Certificates for Credit MR 6 (LEED CS only) or Credit MR 7: Chain-of-custody certificates indicating that flush wood doors comply with forest certification requirements. Include documentation that manufacturer and supplier is certified for chain of custody by an FSC-accredited certification body.

Include statement indicating cost for each certified wood product.

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

Laboratory Test Reports for Credit IEQ 4.1 (LEED for Schools only): For adhesives, documentation indicating that products comply with the testing and product requirements of the California Department of Health Services' "Standard Practice for the Testing of Volatile Organic Emissions from Various Sources Using Small-Scale Environmental Chambers."

Laboratory Test Reports for Credit IEQ 4.2 (LEED for Schools only): For paints and coatings, documentation indicating that products comply with the testing and product requirements of the California Department of Health Services' "Standard Practice for the Testing of Volatile Organic Emissions from Various Sources Using Small-Scale Environmental Chambers."

Laboratory Test Reports for Credit IEQ 4.4 (LEED for Schools only): For composite wood products, documentation indicating that products comply with the testing and product requirements of the California Department of Health Services' "Standard Practice for the Testing of Volatile Organic Emissions from Various Sources Using Small-Scale Environmental Chambers."

* + - * 1. Samples for Initial Selection: For factory finished doors.

Factory finishes applied to actual door face materials, approximately 8 by 10 inches, for each material and finish. For each wood species and transparent finish, provide set of three samples showing typical range of color and grain to be expected in the finished work.

Corner sections of doors, 8 by 10 inches, with door faces and edges representing actual materials to be used.

Provide samples for each species of veneer and solid lumber required.

Finish veneer faced door samples with same materials proposed for factory finished doors.

Frames for light openings, 6 inches long, for each material, type, and finish required.Cre

* + - * 1. Warranty: Sample of special warranties.
      1. QUALITY ASSURANCE
         1. Manufacturer’s Environmental Qualifications: A qualified manufacturer that is certified for chain of custody by an FSC-accredited certification body.
         2. Source Limitations: Obtain flush wood doors through one source from a single manufacturer wherever possible.
         3. Quality Standard: In addition to requirements specified, comply with WDMA I.S.1-A, latest edition, "Industry Standard for Architectural Wood Flush Doors’.
         4. Fire Rated Wood Doors: Doors complying with NFPA 80 that are listed and labeled by a testing and inspecting agency acceptable to authorities having jurisdiction, for fire ratings indicated, based on testing at positive pressure according to NFPA 252 (neutral pressure at 40” above sill) or UL 10C (neutral pressure testing according to UL 10B where specified).

Oversize Fire Rated Door Assemblies: For units exceeding sizes of tested assemblies provide manufacturer’s construction label, indicating compliance to independent 3rd party certification agency’s procedure, except for size.

Temperature Rise Limit: Where indicated and at vertical exit enclosures (stairwell openings) and exit passageways, provide doors that have a maximum transmitted temperature end point of not more than 450 deg F (250 deg C) above ambient after 30 minutes of standard fire test exposure.

Smoke Control Door Assemblies: Comply with NFPA 105.

Smoke "S" Label: Doors to bear “S” label, and include smoke and draft control gasketing applied to frame and on meeting stiles of pair doors.

Blocking: Indicate size and location of blocking in 45, 60 and 90 minute mineral core doors.

* + - * 1. Sound Rating Test Reports: Submit manufacturer’s test results of STC ratings from testing performed by independent testing agency for sound resistant doors.
        2. Pre-Submittal Conference: Conduct conference in compliance with requirements in Division 01 Section "Project Meetings" with attendance by representatives of Supplier, Installer, and Contractor to review proper methods and procedures for receiving, handling, and installing flush wood doors.
      1. DELIVERY, STORAGE, AND HANDLING
         1. Comply with requirements of referenced standard and manufacturer's written instructions.
         2. Package pre-finished doors individually in plastic bags or cardboard cartons and wrap bundles of doors in plastic sheeting.
         3. Mark each door on top rail with opening number used on Shop Drawings.
      2. PROJECT CONDITIONS
         1. Environmental Limitations: Do not deliver or install doors until spaces are enclosed and weather tight, wet work in spaces is complete and dry, and HVAC system is operating and maintaining ambient temperature and humidity conditions at occupancy levels during the remainder of the construction period.
      3. WARRANTY
         1. Special Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace doors that fail in materials or workmanship within specified warranty period.

Failures include, but are not limited to, the following:

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

Telegraphing of core construction in wood face veneers exceeding 0.01 inch in a 3-inch span.

Telegraphing of core construction and delaminating of face in decorative laminate-faced doors.

Warranty includes installation and finishing that may be required due to repair or replacement of defective doors.

Warranty Period for Solid Core Interior Doors: Life of installation according to manufacturer's written warranty.

1. PRODUCTS
   * + 1. DOOR CONSTRUCTION – GENERAL
          1. WDMA I.S.1-A Performance Grade: Extra Heavy Duty; Aesthetic Grade: Premium.
          2. Fire Rated Doors: Provide construction and core as needed to provide fire ratings indicated.

Category A Edge Construction: Provide fire rated door edge construction with intumescent seals concealed by outer stile (Category A) at 45, 60, and 90 minute rated doors. Comply with specified requirements for exposed edges.

Category B Edge Construction: Provide 20 minute fire rated doors as Category B, with smoke and fire seals (supplied by seal manufacturer) applied to frame for 20 minute openings.

Pairs: Provide fire retardant stiles that are listed and labeled for applications indicated without formed steel edges and astragals. Provide stiles with concealed intumescent seals. Comply with specified requirements for exposed edges.

Where required or specified, provide formed steel edges and astragals with intumescent seals. Finish steel edges and astragals with baked enamel.

* + - * 1. Environmentally Responsible Doors: Provide doors constructed with the following environmentally responsible characteristics:

Recycled Content of Composite Wood Products: Postconsumer recycled content plus one-half of preconsumer recycled content not less than the following:

Agrifiber Core: 35 percent.

Particleboard Core: 35 percent, typical.

Particleboard Core: 20 percent, with FSC certification.

Regional Materials (LEED CI only): Wood doors shall be manufactured within 500 miles (800 km) of Project site.

Rapidly Renewable Materials: Agrifiber cores shall be made from agricultural products that are typically harvested within a ten-year or shorter cycle.

Forest Certification: Provide wood doors made from wood-based materials and products that are certified in accordance with the Forest Stewardship Council’s principles and criteria, for wood building components.

Low-Emitting Materials: Fabricate doors with adhesives and composite wood products that do not contain added urea formaldehyde.

Low-Emitting Materials (LEED for Schools Only): Fabricate doors with adhesives and composite wood products that comply with the testing and product requirements of the California Department of Health Services' "Standard Practice for the Testing of Volatile Organic Emissions from Various Sources Using Small-Scale Environmental Chambers."

* + - 1. CORE CONSTRUCTION
         1. Agrifiber Core Doors:

Core: Rapidly renewable agrifiber based materials complying with ANSI A208.1 Particleboard standard containing no added urea formaldehyde.

Adhesive: Fully bonded construction using Polyurethane Reactive (PUR) adhesive technology.

Blocking: When through-bolted hardware is not used, provide wood blocking as follows:

5-inch (125-mm) top-rail blocking, in doors indicated to have closers.

5-inch (125-mm) mid-rail blocking, in doors indicated to have exit devices.

Basis of Design: Graham AP, AP5.

* + - * 1. Engineered Composite Core Wood Doors:

Structural Composite Lumber: Engineered hardwood composite wood products tested in accordance with WDMA I.S.1A, Testing Cellulosic Composite Materials for Use in Fenestration Products containing no added Urea Formaldehyde. Comply with minimum performance levels below:

Screw Withdrawal, Face: 700 lbf (3100 N).

Screw Withdrawal, Edge: 550 lbf (2440 N).

LEED: Meet requirements of EQ4.4.

Sound Transmission Class: Have an operable STC rating of 30.

Basis of Design: Graham EC, EC5.

* + - * 1. Particleboard Core Doors:

Particleboard: Wood fiber based materials complying with ANSI A208.1 Particleboard standard. Grade LD-2.

Adhesive: Fully bonded construction using Polyurethane (PUR) glue.

Blocking: When through-bolted hardware is not used, provide wood blocking in particleboard core doors as follows:

5-inch (125-mm) top-rail blocking, in doors indicated to have closers.

5-inch (125-mm) mid-rail blocking, in doors indicated to have exit devices.

Optional Cores for Blocking: Provide doors with either glued-wood-stave or structural-composite-lumber core instead of particleboard core for doors indicated to receive closers and exit devices.

Basis of Design:

Graham: PC, PC5

* + - * 1. Mineral Core Doors:

Core: Non-combustible mineral product complying with requirements of referenced quality standard and testing and inspecting agency for fire protection rating indicated.

Blocking: Provide composite blocking with improved screw holding capability approved for use in doors of fire protection ratings indicated as needed to eliminate through-bolting hardware.

Edge Construction: At hinge stiles, provide laminated edge construction with improved screw holding capability and split resistance. Comply with specified requirements for exposed edges.

Basis of Design: Graham FD.

* + - * 1. Sound Resistant Doors:

Provide 1-3/4" thick sound resistant doors complying with the Sound Transmission Class (STC) ratings as prescribed in the latest version of ASTM Standard E-90. Doors are to be furnished complete with gaskets and other acoustical accessories required for specified STC rating. Consult manufacturer details for gasketing, automatic door seals, thresholds, and other hardware or special frames which may be required.

Provide sound resistant doors with minimum STC sound rating as indicated.

Basis of Design: Graham SR

* + - * 1. Radiation Protection (Lead-Lined) Doors

Lead lined doors manufactured with a particleboard or structural composite lumber core with continuous lead sheeting from edge to edge in the center of the door or between the cross banding and the core.<

Provide lead-lined doors with minimum thickness as indicated:

1/32-inch.

1/16-inch.

1/8-inch.

1/4-inch.

Basis of Design: Graham LLP, LLS.

* + - 1. VENEERED DOORS FOR TRANSPARENT FINISH
         1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

Algoma Hardwoods – Architectural Wood Doors

Graham: GPD

Marshfield: Signature

VT Industries: Artistry

* + - * 1. Interior Solid Core Doors:

Grade: Premium

Faces: Veneer grades as noted below; veneer minimum 1/50-inch (0.5mm) thickness at moisture content of 12% or less.

Sketch Face and Custom Inlays: Customized faces cut and deigned in patterns of varying intricacy by piecing together wood veneers in different grain directions and specie types. Submit architect approved door detail design of sketch face inlay.

Plain Sliced Select White Birch, AA grade faces.

Rotary Sliced Select White Birch, AA grade faces.

Quarter Sliced Select White Birch, AA grade faces.

Plain Sliced Select White Birch, A grade faces.

Rotary Sliced Select White Birch, A grade faces.

Quarter Sliced Select White Birch, A grade faces.

Plain Sliced Red Birch, A grade faces.

Rotary Sliced Red Birch, A grade faces.

Quarter Sliced Red Birch, A grade faces.

Plain Sliced Natural Birch, AA grade faces.

Rotary Sliced Natural Birch, AA grade faces.

Quarter Sliced Natural Birch, AA grade faces.

Plain Sliced Natural Birch, A grade faces.

Rotary Sliced Natural Birch, A grade faces.

Quarter Sliced Natural Birch, A grade faces.

Plain Sliced Natural Birch, Mill grade faces.

Rotary Sliced Natural Birch, Mill grade faces.

Quarter Sliced Natural Birch, Mill grade faces.

Plain Sliced Red Oak, AA grade faces.

Rotary Sliced Red Oak, AA grade faces.

Quarter Sliced Red Oak, AA grade faces.

Rift Cut Red Oak, AA grade faces.

Plain Sliced Red Oak, A grade faces.

Rotary Sliced Red Oak, A grade faces.

Quarter Sliced Red Oak, A grade faces.

Rift Cut Red Oak, A grade faces.

Plain Sliced Red Oak, Mill grade faces.

Rotary Sliced Red Oak, Mill grade faces.

Quarter Sliced Red Oak, Mill grade faces.

Plain Sliced White Oak, AA grade faces.

Rotary Sliced White Oak, AA grade faces.

Quarter Sliced White Oak, AA grade faces.

Rift Cut White Oak, AA grade faces.

Plain Sliced White Oak, A grade faces.

Rotary Sliced White Oak, A grade faces.

Quarter Sliced White Oak, A grade faces.

Rift Cut White Oak, A grade faces.

Plain Sliced Select White Maple, AA grade faces.

Rotary Sliced Select White Maple, AA grade faces.

Quarter Sliced Select White Maple, AA grade faces.

Rift Cut Select White Maple, AA grade faces.

Plain Sliced Select White Maple, A grade faces.

Rotary Sliced Select White Maple, A grade faces.

Quarter Sliced Select White Maple, A grade faces.

Rift Cut Select White Maple, A grade faces.

Plain Sliced Natural Maple, A grade faces.

Rotary Sliced Natural Maple, A grade faces.

Quarter Sliced Natural Maple, A grade faces.

Rift Cut Natural Maple, A grade faces.

Flat Cut Mahogany, AA grade faces.

Ribbon Striped Mahogany, AA grade faces.

Flat Cut Mahogany, A grade faces.

Ribbon Striped Mahogany, A grade faces.

Quarter Sliced Caramelized Bamboo, A grade faces.

Plain Sliced Cherry, AA grade faces.

Quarter Sliced Cherry, AA grade faces.

Plain Sliced Cherry, A grade faces.

Quarter Sliced Cherry, A grade faces.

Plain Sliced Black Walnut, AA grade faces.

Quarter Sliced Black Walnut, AA grade faces.

Plain Sliced Black Walnut, A grade faces.

Quarter Sliced Black Walnut, A grade faces.

Match between Veneer Leaves:  Book match. Slip match.

Assembly of Veneer Leaves on Door Faces:

Running Match.

Balance match.

Center Balance Match.

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

Transom Match: Continuous match.

Vertical Edges: Matching same species as faces. Wood or composite material, one piece, laminated, or veneered. Minimum requirements per WDMA section P-1, Performance Standards for Architectural Wood Flush Doors.

Horizontal Edges: Solid wood or structural composite material meeting the minimum requirements per WDMA section P-1, Performance Standards for Architectural Wood Flush Doors

Construction: Five plies. Stiles and rails are bonded to core, then entire unit sanded before applying face veneers.

At doors over 40% of the face cut-out for lights and or louvers, furnish engineered composite lumber core.

* + - 1. DOORS FOR OPAQUE FINISH
         1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

Algoma Hardwoods – Architectural Wood Doors

Graham.

Marshfield.

VT Industries.

* + - * 1. Interior Solid Core Doors:

Grade: Custom.

Faces: Sound closed grain hardwood of mill option, Hardboard or MDF. Face veneer minimum 1/50-inch (0.5mm) thickness at moisture content of 12% or less.

Hardboard Faces: AHA A135.4, Class 1 (tempered) or Class 2 (standard).

MDF Faces: ANSI A208.2, Grade 150 minimum.

Vertical Edges: Any closed grain hardwood. Wood or composite material, one piece, laminated, or veneered. Minimum requirements per WDMA section P-1, Performance Standards for Architectural Wood Flush Doors.

Horizontal Edges: Solid wood or structural composite material meeting the minimum requirements per WDMA section P-1, Performance Standards for Architectural Wood Flush Doors

Construction: Five plies. Stiles and rails are bonded to core, then entire unit sanded before applying face veneers.

* + - 1. LOUVERS
         1. Wood Louvers: Door manufacturer's standard solid wood louvers unless otherwise indicated.

Wood Species: Same species as door faces.

* + - * 1. Metal Louvers: Door manufacturer's standard metal louvers unless otherwise indicated.

Blade Type: Vision proof inverted V or inverted Y.

Metal and Finish: Galvanized steel, 0.040 inch thick, factory primed for paint finish with baked enamel or powder coated finish.

* + - * 1. Louvers for Fire Rated Doors: Metal louvers with fusible link and closing device, listed and labeled for use in doors with fire protection rating of 1-1/2 hours and less.

Manufacturers: Subject to compliance with requirements, provide door manufacturers standard louver to meet rating indicated.

Metal and Finish: Galvanized steel, 0.040 inch thick, factory primed for paint finish with baked enamel or powder coated finish.

* + - 1. LIGHT FRAMES AND GLAZING
         1. Wood Beads for Light Openings in Wood Doors up to and including 20-minute rating:

Wood Species: Same species as door faces.

Profile: Manufacturer’s standard lipped profile. At wood core doors with 20-minute fire protection ratings, provide wood beads and metal glazing clips approved for such use.

* + - * 1. Metal Frames for Light Openings in Fire Rated Doors over 20-minute rating: Manufacturer's standard frame formed of 0.048-inch-thick, cold rolled steel sheet; with baked enamel or powder coated finish; and approved for use in doors of fire protection rating indicated.
        2. Glazing: Comply with installation requirements in Division 08 Section "Glazing" and with the flush wood door manufacturer's written instructions.

Factory Glazing: Factory install glazing in doors as indicated. Doors with factory installed glass to include all of the required glazing material.

* + - 1. INTERIOR WOOD FRAMES
         1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

Algoma Hardwoods, Inc.

Ferche Millwork

The Maiman Company.

* + - * 1. Non-Rated and 20 Minute Fire Rated Wood Door Frames: Frames, with or without casings, complete with transom and sidelite frames, fabricated from veneered structural composite lumber for transparent finish or solid lumber close grained hardwood for opaque finish.
        2. Fire Rated (45, 60 and 90 Minute) Wood Door Frames: Frames, with or without casings, fabricated from veneered high density composite fire resistant board, with fire rating duration indicated.
        3. Frame Profile: As indicated on the drawings.
        4. Interior Wood Frames for Transparent Finish:

Species: Same as door faces.

Cut: Same as door faces.

* + - * 1. Interior Wood Frames for Opaque Finish:

Veneer: Sound closed grain hardwood of mill option, MDF or HDF.

MDF Faces: ANSI A208.2, Grade 150 or 160.

Cut: Mill option.

* + - 1. FABRICATION
         1. Factory fit doors to suit frame opening sizes indicated. Comply with clearance requirements of referenced quality standard for fitting unless otherwise indicated.

Comply with requirements in NFPA 80 for fire rated doors.

* + - * 1. Factory machine doors for hardware that is not surface applied. Comply with final hardware schedules, door frame Shop Drawings, DHI A115-W series standards, and hardware templates.

Coordinate with hardware mortises in metal frames to verify dimensions and alignment before factory machining.

Metal Astragals: Factory machine astragals and formed steel edges for hardware for pairs of fire rated doors.

* + - * 1. Transom and Side Panels: Fabricate matching panels with same construction, exposed surfaces, and finish as specified for associated doors. Finish bottom edges of transoms and top edges of rabbeted doors same as door stiles.
        2. Openings: Cut and trim openings through doors in factory.

Light Openings: Trim openings with moldings of material and profile indicated.

Glazing: Comply with applicable requirements in Division 08 Section "Glazing."

Louvers: Factory install louvers in prepared openings.

* + - * 1. Electrical Raceways: Provide flush wood doors receiving electrified hardware with concealed wiring harness and standardized Molex™ plug connectors on both ends to accommodate up to twelve wires. Coordinate connectors on end of the wiring harness to plug directly into the electrified hardware and the through wire transfer hardware or wiring harness specified in hardware sets in Division 08 "Door Hardware". Wire nut connections are not acceptable.
      1. FACTORY FINISHING
         1. 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.

Finish faces, all four edges, edges of cutouts, and mortises. Stains and fillers may be omitted on top and bottom edges, edges of cutouts, and mortises.

* + - * 1. Transparent Finish: Provide a clear protective coating over the wood veneer allowing the natural color and grain of the selected wood species to provide the appearance specified. Stain is applied to the wood surface underneath the transparent finish to add color and design flexibility.

Grade: Premium.

Finish: Meet or exceed WDMA I.S. 1A TR6 Catalyzed Polyurethane finish performance requirements.

Staining: As selected by Architect from manufacturer's full range.

Sheen: Satin.

* + - * 1. Opaque Finish: Factory applied finish. Color as selected from manufacturer’s standard range.

1. EXECUTION
   * + 1. EXAMINATION
          1. Examine doors and installed door frames before hanging doors.

Verify that frames comply with indicated requirements for type, size, location, and swing characteristics and have been installed with level heads and plumb jambs.

Reject doors with defects.

* + - * 1. Proceed with installation only after unsatisfactory conditions have been corrected.
      1. INSTALLATION
         1. Hardware: For installation, see Division 8 Section "Door Hardware."
         2. Installation Instructions: Install doors to comply with manufacturer's written instructions and the referenced quality standard, and as indicated.

Install fire rated doors in corresponding fire rated frames according to NFPA 80.

* + - * 1. Factory Fitted Doors: Align in frames for uniform clearance at each edge.
        2. Factory Finished Doors: Restore finish before installation if fitting or machining is required at Project site.
      1. ADJUSTING
         1. Operation: Re-hang or replace doors that do not swing or operate freely.
         2. Finished Doors: Replace doors 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