

SECTION 08 14 16
FLUSH WOOD DOORS

PART 1 – GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Solid-core doors with wood-veneer faces.
 - 2. Factory finishing flush wood doors.
 - 3. Factory fitting flush wood doors to frames and factory machining for hardware.
- B. Related Sections:
 - 1. Section 08 11 13 "Hollow Metal Doors and Frames" for hollow metal frames for flush wood doors.
 - 2. Section 08 71 00 "Door Hardware" for door hardware for flush wood doors.
 - 3. Section 08 80 00 "Glazing" for glass view panels in flush wood doors.

1.2 ACTION SUBMITTALS

- A. Shop Drawings:
 - 1. Indicate door opening criteria, elevations, sizes, types, swings, undercuts required, special blocking for hardware, and factory machining criteria.
 - 2. Indicate cutouts for glazing.
 - 3. Indicate requirements for veneer matching.
 - 4. Indicate doors to be factory finished and finish requirements.
 - 5. Indicate fire-protection ratings for fire-rated doors.
- B. Product Data: For each type of door indicated. Include details of core and edge construction and trim for openings. Include factory-finishing specifications.
- C. Samples:
 - 1. Factory finishes applied to actual door face materials, approximately 8 by 10 inches (200 by 250 mm), for each material and finish. For each wood species and transparent finish, provide a set of three samples showing typical range of color and grain to be expected in the finished work.
 - 2. Corner sections of doors, to show construction detail approximately 5 by 5 inches (127 by 127 mm), with door faces and edges representing actual materials to be used.
 - 3. Louver blade and frame sections, 6 inches (150 mm) long, for each material and finish specified.
 - 4. Frames for light openings, 6 inches (150 mm) long, for each material, type, and finish required.

1.3 INFORMATIONAL SUBMITTALS

- A. Warranty: Sample of special warranty.
- B. Quality Standard Compliance Certificates: AWI Quality Certification Program certificates.

1.4 INFORMATIONAL SUBMITTALS

- A. **Manufacturer Qualifications:** A qualified manufacturer that is certified for chain of custody by an FSC-accredited certification body and is a certified participant in AWI's Quality Certification Program is a licensee of WI's Certified Compliance Program.
- B. **Quality Standard:** In addition to requirements specified, comply with AWI's "Architectural Woodwork Quality Standards Illustrated." WDMA I.S.1-A, "Architectural Wood Flush Doors" whichever is stricter.
 - 1. Provide AWI Quality Certification Labels or an AWI letter of licensing for Project indicating that doors comply with requirements of grades specified.

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 or cardboard cartons.
- C. Mark each door on top and bottom rail with opening number used on Shop Drawings.

1.6 PROJECT 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 temperature between 60 and 90 deg F (16 and 32 deg C) and relative humidity between 25 and 55 percent during the remainder of the construction period.

1.7 WARRANTY

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

PART 2 – PRODUCTS

2.1 MANUFACTURERS

- A. **Manufacturers:** Subject to compliance with requirements, provide products by one of the following:
 - 1. VT Industries Inc.
 - 2. Masonite Wood doors

3. Algoma Hardwoods Inc
4. Marshfield Company.
5. Graham Doors.

2.2 DOOR CONSTRUCTION

- A. Quality Standard: In addition to requirements specified, comply with AWI's, AWMAC's, and WI's "Architectural Woodwork Standards."
- B. WDMA I.S.1-A Performance Grade:
 1. Heavy Duty unless otherwise indicated.
 2. Extra Heavy Duty: public toilets, assembly spaces, exits.
- C. Rails (Horizontal Edges): Solid lumber - hardwood or softwood, with grain running perpendicular to stiles.
- D. Stiles (Vertical Edges): Compatible - Similar in overall color, grain characteristics as the face veneer. Outer stile minimum widths after factory trim to be 1/2-inch (13mm).
- E. Particleboard-Core Doors:
 1. Particleboard: ANSI A208.1, Grade LD-1 or Grade LD-2, made with binder containing no urea-formaldehyde.
 2. Blocking:
 - a. 5-inch top-rail blocking, in doors indicated to have closers.
 - b. 5-inch bottom-rail blocking, in exterior doors and doors indicated to have kick, mop, or armor plates.
 - c. 5-inch midrail blocking, in doors indicated to have exit devices.
- F. Structural-Composite-Lumber-Core Doors:
 1. Structural Composite Lumber: WDMA I.S.10.
 - a. Screw Withdrawal, Face: 700 lbf.
 - b. Screw Withdrawal, Edge: 400 lbf (1780 N).
- G. Fire-Protection-Rated Doors: Provide core specified or mineral core as needed to provide fire-protection rating indicated.
 1. Edge Construction: Provide edge construction with intumescent seals concealed by outer stile. Comply with specified requirements for exposed edges.
 2. 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.
 - a. Finish steel edges and astragals to match door hardware (locksets or exit devices).
- H. Mineral-Core Doors:
 1. Core: Noncombustible mineral product complying with requirements of referenced quality standard and testing and inspecting agency for fire-protection rating indicated.
 2. Blocking: Provide hardwood or softwood blocking approved for use in doors of fire-protection ratings indicated or provide wider stiles and rails as needed to eliminate through-bolting hardware as follows:

- a. 5-inch (125-mm) top-rail blocking.
 - b. 5-inch (125-mm) bottom-rail blocking, in doors indicated to have protection plates.
 - c. 5-inch (125-mm) midrail blocking, in doors indicated to have armor plates.
 - d. 5-inch (125-mm) midrail blocking, in doors indicated to have exit devices.
3. Edge Construction: At hinge stiles, provide laminated-edge construction with improved screw-holding capability and split resistance. Comply with specified requirements for exposed edges.

2.3 VENEERED-FACED DOORS FOR TRANSPARENT FINISH

1. Grade: Premium, with Grade AA faces.
2. Wood Species and Cut: Red Oak, Plain Sliced.
3. Match between Veneer Leaves: Book match.
4. Assembly of Veneer Leaves on Door Faces: Balance match.
5. Pair and Set Match: Provide for doors hung in same opening or separated only by mullions.
6. Room Match: Provide door faces of compatible color and grain within each separate room or area of building.
7. Transom Match: Continuous match.
8. Core: Particleboard Core or Mineral core as applicable
9. Construction: Five plies. Stiles and rails are bonded to core, then entire unit abrasive planed before veneering. Faces are bonded to core using a hot press.

2.4 LIGHT FRAMES

- A. Wood-Veneered Beads for Light Openings in Fire-Rated Doors: Manufacturer's standard wood-veneered noncombustible beads matching veneer species of door faces and approved for use in doors of fire-protection rating indicated. Include concealed metal glazing clips where required or opening size and fire-protection rating indicated.

2.5 FABRICATION

- A. Fabricated doors in sizes indicated for project site fitting.
- B. 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.
- C. 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, DHI A115-W series standards, and hardware templates.
- D. Openings: Cut and trim openings through doors to comply with applicable requirements of referenced standards for kind(s) of door(s) required.

1. Light Openings: Trim openings with moldings of material and profile indicated.
 - a. For 45, 60, and 90 minute fire rated glazed openings, provide veneered metal for transparent finish doors (primed metal for opaque finish) for glazed openings.
2. Louvers: Factory install louvers in prepared openings.

2.6 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.
 1. 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.
- B. Transparent Finish:
 1. Grade: Same as item to be finished.
 2. Finish: System - 5, conversion varnish.
 3. Staining: As selected by Architect from manufacturer's full range.
 4. Effect: Open-grain finish.
 5. Sheen: As scheduled. Gloss units measured on 60-degree gloss meter per ASTM D 523

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 08 7100 "Door Hardware."
- B. Installation Instructions: Install doors to comply with manufacturer's written instructions and referenced quality standard, and as indicated.
 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 fire-rated 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, provide 1/4 inch from bottom of door to top of threshold unless otherwise indicated.

- a. Comply with NFPA 80 for fire-rated doors.
 2. Bevel non-fire-rated doors 1/8 inch in 2 inches at lock and hinge edges.
 3. 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 08 1416

SECTION 08 1423.19
MOLDED-HARDBOARD-FACED 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. Interior molded panel doors.

- B. Related Requirements:

- 1. Section 06 4800 "Wood Door Frames".
- 2. Section 08 7100 "Door Hardware".

1.3 REFERENCES

- A. Codes:

- 1. California Building Code (CBC): Title 24 Part 2.
- 2. California Green Building Standards Code (CALGreen), Title 24 Part 11.

- B. Reference Standards:

- 1. ANSI A208.1: Particleboard.
- 2. NFPA 252: Standard Methods of Fire Tests of Door Assemblies.
- 3. UL 10C: Standard for Positive Pressure Fire Tests of Door Assemblies.

1.4 SUBMITTALS, GENERAL

- A. See Section 01 3300 "Submittal Procedures".
- B. See Section 01 6116 "Material Contaminant Restrictions" for additional submittals.

1.5 ACTION SUBMITTALS

- A. Product Data: For each item to be installed.
- 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. Dimensions and locations of blocking.
 2. Dimensions and locations of mortises and holes for hardware.
 3. Dimensions and locations of cutouts.
 4. Undercuts.
 5. Requirements for veneer matching.
 6. Doors to be factory finished and finish requirements.
 7. Fire-protection ratings for fire-rated doors.
- C. Sample Warranty.
- 1.6 DELIVERY, STORAGE, AND HANDLING
- A. See Section 01 6000 "Product Requirements".
 - B. Comply with requirements of referenced standard and manufacturer's written instructions.
 - C. Package doors individually in plastic bags or cardboard cartons.
 - D. Mark each door with opening number used on Shop Drawings.
- 1.7 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.
- 1.8 WARRANTY
- A. Provide manufacturer's standard warranty.

PART 2 - PRODUCTS

- 2.1 REGULATORY REQUIREMENTS
- A. See Section 01 4100 "Regulatory Requirements".
 - B. See Section 01 6116 "Material Contaminant Restrictions" for certification requirements for composite wood products to be used in this Project.
- 2.2 ACCEPTABLE MANUFACTURERS
- A. Subject to compliance with requirements, acceptable manufacturers include, but are not limited to:
 1. Masonite.

2. Doormerica.
3. Jeld-Wen.
4. Steves and Sons.
5. Substitutions: See Section 01 2500 "Substitution Procedures".

2.3 SOLID-CORE DOORS

A. Interior Solid-Core Doors with Hardboard Faces: Three ply; particleboard cores.

1. Stiles and Rails: Softwood, 1-1/4-inch- wide stiles and 2-1/2-inch- widerails. Provide 5-inch- wide rails at doors indicated to receive closers. Bond stiles and rails to cores.
2. Particleboard: ANSI A208.1, Grade LD-1. Rout cores to provide clearance for recessed areas of faces and provide full contact at remainder of faces.
3. Basis of Design Manufacturer and Product: Masonite., Molded Panel
 - i. Particleboard core
4. Location: Unit entry

2.4 HOLLOW-CORE DOORS

A. Hollow-Core Doors with Hardboard Faces: Three-ply hollow cores with lock blocks on both sides.

1. Core: Honeycomb or grid core routed to provide clearance for recessed areas of faces and provide full contact at remainder of faces.
2. Stiles and Rails: Softwood, 1-1/4-inch- wide stiles and 2-1/2-inch- widerails.
4. Basis of Design Manufacturer and Product: Masonite., Molded Panel
 - i. Particleboard core
5. Location: Unit interior doors

2.5 MATERIALS

A. Low-Emitting Materials: Provide doors made with adhesives and composite wood products that do not contain urea formaldehyde.

1. See Section 01 6116 "Material Contaminant Restrictions" for additional requirements.

B. Faces: 1/8-inch- thick tempered hardboard, molded to panel configuration indicated.

1. Panel Configuration: As shown on Architectural drawings.

C. Adhesive: Assemble with Type-I PVA adhesive.

D. Factory-fit doors to suit frame-opening sizes indicated and to comply with clearances specified.

1. Prefit and bevel to net opening size less approximately 1/4 inch in width on single swing doors, and 3/16 inch in width for paired doors.
 2. Provide 1/4-inch clearance above finished floor, unless otherwise indicated on drawings.
 3. Bottom rail to remain full 10-inch face after under-cut in compliance with CBC chapter 11A and 11B.
 4. Provide 1/8-inch clearance at top of door.
 5. Slightly ease vertical edges.
- E. Factory-machine doors for hardware that is not surface applied. Locate hardware to comply with DHI-WDHS-3.
1. Provide blocking for hardware per hardware manufacturers requirements for hardware to be installed without thru-bolts. Wood top rail required for sliding door hardware.
- F. Factory-finish doors with manufacturer's standard primer and opaque finish.
1. Color: As selected by Architect from manufacturer's standard colors.
 2. Finish all six sides of the door.
 3. See Section 06 0583 "Shop-Applied Wood Coatings" for additional information.

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 VERIFICATION OF CONDITIONS

- A. Verify temperature and humidity level are acceptable to door manufacturer.

3.3 PREPARATION

- A. Condition doors to average temperature and humidity in area of installation for not less than 48 hours prior to installation.

3.4 INSTALLATION

- A. Install door to comply with manufacturer's written instructions and referenced quality standard, and as indicated.

1. Install fire-rated doors to comply with NFPA 80.
- B. Align and fit doors in frames with uniform clearances and bevels.
- C. Install in neat and workmanlike manner, free from hammer or tool marks, open joints, or slivers.

3.5 ADJUSTING

- A. Operation: Rehang or replace doors that do not swing or operate freely.
- B. 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 08 1423.19

SECTION 08 71 00

DOOR HARDWARE

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - a. Mechanical door hardware for the following:
 - i. Swinging doors.
 - b. Cylinders for door hardware specified in other Sections.
 - c. Electrified door hardware.
- B. Related Sections:
 - a. Section 081113 "Hollow Metal Doors and Frames"
 - b. Section 081416 "Flush Wood Doors"
 - c. Section 084113 "Aluminum-Framed Entrances and Storefronts".

1.2 ACTION SUBMITTALS

- A. Product Data: For each type of product.
- B. Shop Drawings: Details of electrified door hardware, indicating the following:
 - i. Wiring Diagrams: For power, signal and control wiring and including the following:
 - i. Details of interface of electrified door hardware and building safety and security systems.
 - ii. Schematic diagram of systems that interface with electrified door hardware.
 - iii. Point-to-point wiring.
 - iv. Risers.
 - v. Elevation of doors controlled by electrified door hardware.
 - ii. Operation Narrative: Describe the operation of doors controlled by electrified hardware.
- C. Samples: For each exposed product in each finish specified.
- D. Door hardware schedule. Prepared by or under the supervision of Installer's Architectural Hardware Consultant. Coordinate door hardware schedule with doors, frames, and related work to ensure proper size, thickness, hand, function, and finish of door hardware.
- E. Submittal Sequence: Submit door hardware schedule concurrent with submissions of Product Data, Samples, and Shop Drawings. Coordinate submission of door hardware schedule with scheduling requirements of other work to facilitate the fabrication of other work that is critical in Project construction schedule.
- F. Format: Use same scheduling sequence and format and use same door numbers as in door hardware schedule in the Contract Documents.
 - i. Content: Include the following information:
 - ii. Identification number, location, hand, fire rating, size, and material of each door and frame.
 - iii. Locations of each door hardware set, cross-referenced to Drawings on floor plans and to
- G. door and frame schedule.
- H. Complete designations, including name and manufacturer, type, style, function, size, quantity, function, and finish of each door hardware product.
- I. Description of electrified door hardware sequences of operation and interfaces with other building control systems.

- i. Fastenings and other installation information.
 - J. Explanation of abbreviations, symbols, and designations contained in door hardware schedule.
 - i. Mounting locations for door hardware.
 - ii. List of related door devices specified in other Sections for each door and frame.
 - K. Keying schedule. Prepared by or under the supervision of Installer's Architectural Hardware Consultant,
 - L. detailing Owner's final keying instructions for locks. Include schematic keying diagram and index each key set to unique door designations that are coordinated with the Contract Documents.
- 1.3 INFORMATIONAL SUBMITTALS
 - A. Sample warranty.
- 1.4 CLOSEOUT SUBMITTALS
 - A. Maintenance data.
- 1.5 QUALITY ASSURANCE
 - A. Installer Qualifications: Supplier of products and an employer of workers trained and approved by product manufacturers and of an Architectural Hardware Consultant who is available during the course of the Work to consult Contractor, Architect, and Owner about door hardware and keying.
 - a. Scheduling Responsibility: Preparation of door hardware and keying schedule.
 - B. Architectural Hardware Consultant Qualifications: A person who is experienced in providing consulting services for door hardware installations that are comparable in material, design, and extent to that indicated for this Project and who is currently certified by DHI as an Architectural Hardware Consultant (AHC).
 - C. Source Limitations: Obtain each type of door hardware from single manufacturer.
 - a. Provide electrified door hardware from same manufacturer as mechanical door hardware unless otherwise indicated. Manufacturers that perform electrical modifications and that are listed by a testing and inspecting agency acceptable to authorities having jurisdiction are acceptable.
 - D. Electrified Door Hardware: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.
- 1.6 WARRANTY
 - A. Special Warranty: Manufacturer agrees to repair or replace components of door hardware that fail in materials or workmanship within specified warranty period.
 - a. Warranty Period: Three years from date of Substantial Completion unless otherwise indicated below:
 - i. Exit Devices: Two years from date of Substantial Completion.
 - ii. Manual Closers: 10 years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

- A. Means of Egress Doors: Latches do not require more than 15 lbf to release the latch. Locks do not require use of a key, tool, or special knowledge for operation.
- B. Accessibility Requirements: For door hardware on doors in an accessible route, comply with the USDOJ's "2010 ADA Standards for Accessible Design", the ABA standards of the Federal agency having jurisdiction, ICC A117.1, and HUD's "Fair Housing Accessibility Guidelines".

2.2 HINGES

- A. Hinges: BHMA A156.1. Provide template-produced hinges for hinges installed on hollow-metal doors and hollow-metal frames.
 - a. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - i. PBB
 - ii. Ives.
 - iii. Mckinney.

2.3 CONTINUOUS HINGES

- A. Continuous Hinges: BHMA A156.26; minimum 0.120-inch-thick, hinge leaves with minimum overall width of 4 inches; fabricated to full height of door and frame and to template screw locations; with components finished after milling and drilling are complete.
- B. Continuous, Gear-Type Hinges: Extruded-aluminum, pinless, geared hinge leaves joined by a continuous extruded-aluminum channel cap; with concealed, self-lubricating thrust bearings.
 - a. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - i. ABH
 - ii. Ives.
 - iii. Pemko & Markar

2.4 MECHANICAL LOCKS AND LATCHES

- A. Lock Functions: As indicated in door hardware schedule.
- B. Lock Throw: Comply with testing requirements for length of bolts required for labeled fire doors, and as follows:
 - a. Cylindrical Locks: Minimum 1/2-inch latchbolt throw.
 - b. Mortise Locks: Minimum 3/4-inch latchbolt throw.
- C. Lock Backset: 2-3/4 inches unless otherwise indicated.
- D. Lock Trim:
 - a. Description: As indicated in Hardware Sets. Drawings.
- E. Strikes: Provide manufacturer's standard strike for each lock bolt or latchbolt complying with requirements indicated for applicable lock or latch and with strike box and curved lip extended to protect frame; finished to match lock or latch.
- F. Cylindrical Locks: BHMA A156.2; Operational Grade 2; Series 4000.
 - a. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - b. Schlage (ALX Series).
 - c. Falcon (W Series).

2.5 AUTOMATIC AND SELF-LATCHING FLUSH BOLTS

- A. Automatic Flush Bolts: BHMA A156.3, Type 25; minimum 3/4-inch throw; with dust-proof strikes; designed for mortising into door edge.
 - a. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - i. PDQ
 - ii. Ives.

iii. Rockwood

2.6 EXIT DEVICES AND AUXILIARY ITEMS

- A. Exit Devices and Auxiliary Items: BHMA A156.3.
 - a. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - i. Falcon (25 Series).
 - ii. Von Duprin (98/99 Series)

2.7 LOCK CYLINDERS

- A. Lock Cylinders: Interchangeable core type, constructed from brass or bronze, stainless steel, or nickel silver.
 - a. Manufacturer: Same manufacturer as for locking devices.

2.8 KEYING

- A. Keying System: Factory registered, complying with guidelines in BHMA A156.28, Appendix A. Provide one extra key blank for each lock. Incorporate decisions made in keying conference.
 - a. Grand Master Key System: Change keys, a master key, and a grand master key operate cylinders.
 - i. Provide three-cylinder change keys and five each of master and grand master keys and two control keys.

2.9 OPERATING TRIM

- A. Operating Trim: BHMA A156.6; stainless steel unless otherwise indicated.
 - a. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - i. PDQ
 - ii. Rockwood Manufacturing Company.
 - iii. IVES

2.10 ACCESSORIES FOR PAIRS OF DOORS

- A. Coordinators: BHMA A156.3; consisting of active-leaf, hold-open lever and inactive-leaf release trigger fabricated from steel with nylon-coated strike plates; with built-in, adjustable safety release; and with internal override.
- B. Carry-Open Bars: BHMA A156.3; prevent the inactive leaf from opening before the active leaf; provide polished brass or bronze carry-open bars with strike plate for inactive leaves of pairs of doors unless automatic or self-latching bolts are used.
- C. Astragals: BHMA A156.22.

2.11 SURFACE CLOSERS

- A. Surface Closers: BHMA A156.4; rack-and-pinion hydraulic type with adjustable sweep and latch speeds controlled by key-operated valves and forged-steel main arm. Comply with manufacturer's written instructions for size of door closers depending on size of door, exposure to weather, and anticipated frequency of use. Provide factory-sized closers, adjustable to meet field conditions and requirements for opening force.
 - a. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - i. PDQ (5500 Series)

- ii. LCN (1460 Series)
- iii. Falcon (SC81A Series).

2.12 MECHANICAL STOPS AND HOLDERS

- A. Wall- and Floor-Mounted Stops: BHMA A156.16.
 - a. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - i. PDQ
 - ii. Rockwood Manufacturing Company.
 - iii. IVES

2.13 OVERHEAD STOPS AND HOLDERS

- A. Overhead Stops and Holders: BHMA A156.8.
 - a. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - i. ABH (Architectural Builders Hardware).
 - ii. Glynn-Johnson.
 - iii. Rixson.

2.14 DOOR GASKETING

- A. Door Gasketing: BHMA A156.22; with resilient or flexible seal strips that are easily replaceable and readily available from stocks maintained by manufacturer.
 - a. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - i. Resse Enterprise, Inc.
 - ii. Pemko Manufacturing Company; an ASSA ABLOY Group company.
 - iii. Zero International Inc.

2.15 THRESHOLDS

- A. Thresholds: BHMA A156.21; fabricated to full width of opening indicated.
 - a. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - i. Resse Enterprise, Inc.
 - ii. Pemko Manufacturing Company; an ASSA ABLOY Group company.
 - iii. Zero International Inc.

2.16 METAL PROTECTIVE TRIM UNITS

- A. Metal Protective Trim Units: BHMA A156.6; fabricated to full width of opening indicated. from 0.050-inch-thick stainless steel; with manufacturer's standard machine or self-tapping screw fasteners.
 - a. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - i. Rockwood Manufacturing Company.
 - ii. Ives
 - iii. Burns.

2.17 AUXILIARY DOOR HARDWARE

- A. Auxiliary Hardware: BHMA A156.16.
 - a. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - i. PDQ
 - ii. Rockwood Manufacturing Company.
 - iii. Ives.

2.18 FINISHES

- A. Hardware finishes shall conform to Building Hardware Manufacturers Association (BHMA) finish standards or U.S. standards listed.

PART 3 – EXECUTION

3.1 INSTALLATION

- A. Mounting Heights: Mount door hardware units at heights to comply with the following unless otherwise indicated or required to comply with governing regulations.
 - a. Standard Steel Doors and Frames: ANSI/SDI A250.8.
 - b. Wood Doors: DHI's "Recommended Locations for Architectural Hardware for Wood Flush Doors."
- B. Install each door hardware item to comply with manufacturer's written instructions. Where cutting and fitting are required to install door hardware onto or into surfaces that are later to be painted or finished in another way, coordinate removal, storage, and reinstallation of surface protective trim units with finishing work. Do not install surface-mounted items until finishes have been completed on substrates involved.
- C. Hinges: Install types and in quantities indicated in door hardware schedule, but not fewer than the number recommended by manufacturer for application indicated or one hinge for every 30 inches of door height, whichever is more stringent, unless other equivalent means of support for door, such as spring hinges or pivots, are provided.
- D. Lock Cylinders: Install construction cores to secure building and areas during construction period.
 - a. Furnish permanent cores to Owner for installation.
- E. Key Control Cabinet: Tag keys and place them on markers and hooks in key control system cabinet, as determined by final keying schedule.
- F. Thresholds: Set thresholds for exterior doors and other doors indicated in full bed of sealant complying with requirements specified in Section 079200 "Joint Sealants."
- G. Stops: Provide floor stops for doors unless wall or other type stops are indicated in door hardware schedule. Do not mount floor stops where they will impede traffic.
- H. Perimeter Gasketing: Apply to head and jamb, forming seal between door and frame.
- I. Meeting Stile Gasketing: Fasten to meeting stiles, forming seal when doors are closed.
- J. Door Bottoms: Apply to bottom of door, forming seal with threshold when door is closed.

3.2 ADJUSTING

- A. Adjust and check each operating item of door hardware and each door to ensure proper operation or function of every unit. Replace units that cannot be adjusted to operate as intended. Adjust door control devices to compensate for final operation of heating and ventilating equipment and to comply with referenced accessibility requirements.

3.3 DOOR HARDWARE SCHEDULE

Hardware Set 1: Community Building - Office

3	EA	HINGE	BB81-4.5 X 4.5	652	PBB
1	EA	OFFICE LOCK	ALX53RD X ATH	626	SCHLAGE
1	EA	WALL STOP	101	630	PDQ

Hardware Set 2: Community Building – Office

3	EA	HINGE	BB81-4.5 X 4.5	652	PBB
1	EA	PASSAGE	ALX10S X ATH	626	SCHLAGE
1	EA	WALL STOP	101	630	PDQ

Hardware Set 3: Community Building ☐ Storage / Mechanical Room

3	EA	HINGE	BB81-4.5 X 4.5	652	PBB
1	EA	STOREROOM LOCK	ALX80RD X ATH	626	SCHLAGE
1	EA	CLOSER	5500	689	PDQ
1	EA	WALL STOP	101	630	PDQ
1	SET	SEALS	797B	BLK	REESE

END OF SECTION 08 71 00