

DOOR HARDWARE (CONT.)

1.7 WARRANTY

- A. General Warranty: Reference Division 01, General Requirements. Special warranties specified in this Article shall not deprive Owner of other rights Owner may have under other provisions of the Contract Documents and shall be in addition to, and run concurrent with, other warranties made by Contractor under requirements of the Contract Documents.
B. Warranty Period: Written warranty, executed by manufacturer(s), agreeing to repair or replace components of standard and electrified door hardware that fails in materials or workmanship within specified warranty period after final acceptance by the Owner. Failures include, but are not limited to, the following:
1. Structural failures including excessive deflection, cracking, or breakage.
2. Faulty operation of the hardware.
3. Deterioration of metals, metal finishes, and other materials beyond normal weathering.
4. Electrical component defects and failures within the systems operation.
C. Standard Warranty Period: One year from date of Substantial Completion, unless otherwise indicated.
D. Special Warranty Periods:
1. Ten years for mortise locks and latches.
2. Five years for exit hardware.
3. Twenty five years for manual surface door closer bodies.

1.8 MAINTENANCE SERVICE

- A. Maintenance Tools and Instructions: Furnish a complete set of specialized tools and maintenance instructions as needed for Owner's continued adjustment, maintenance, and removal and replacement of door hardware.

PART 2 - PRODUCTS

2.1 SCHEDULED DOOR HARDWARE

- A. General: Provide door hardware for each door to comply with requirements in Door Hardware Sets and each referenced section that products are to be supplied under.
B. Designations: Requirements for quantity, item, size, finish or color, grade, function, and other distinctive qualities of each type of door hardware are indicated in the Door Hardware Sets at the end of Part 3. Products are identified by using door hardware designations, as follows:
1. Named Manufacturer's Products: Product designation and manufacturer are listed for each door hardware type required for the purpose of establishing requirements. Manufacturers' names are abbreviated in the Door Hardware Schedule.
C. Substitutions: Requests for substitution and product approval for inclusive mechanical and electromechanical door hardware in compliance with the specifications must be submitted in writing and in accordance with the procedures and time frames outlined in Division 01, Substitution Procedures. Approval of requests is at the discretion of the architect, owner, and their designated consultants.

2.2 HANGING DEVICES

- A. Hinges: ANSI/BHMA A156.1 certified butt hinges with number of hinge knuckles and other options as specified in the Door Hardware Sets.
1. Quantity: Provide the following hinge quantity:
a. Two Hinges: For doors with heights up to 60 inches.
b. Three Hinges: For doors with heights 61 to 90 inches.
c. Four Hinges: For doors with heights 91 to 120 inches.
d. For doors with heights more than 120 inches, provide 4 hinges, plus 1 hinge for every 30 inches of door height greater than 120 inches.
2. Hinge Size: Provide the following, unless otherwise indicated, with hinge widths sized for door thickness and clearances required:
a. Widths up to 3'0": 4-1/2" standard or heavy weight as specified.
b. Sizes from 3'1" to 4'0": 5" standard or heavy weight as specified.
3. Hinge Weight and Base Material: Unless otherwise indicated, provide the following:
a. Exterior Doors: Heavy weight, non-ferrous, ball bearing or oil impregnated bearing hinges unless Hardware Sets indicate standard weight.
b. Interior Doors: Standard weight, steel, ball bearing or oil impregnated bearing hinges unless Hardware Sets indicate heavy weight.
4. Hinge Options: Comply with the following:
a. Non-removable Pins: Provide set screw in hinge barrel that, when tightened into a groove in hinge pin, prevents removal of pin while door is closed; for the all-out-swinging lockable doors.
5. Manufacturers:
a. Hager Companies (HA).
b. McKinney Products; ASSA ABLLOY Architectural Door Accessories (MK).
c. Stanley Hardware (ST).

- B. Continuous Geared Hinges: ANSI/BHMA A156.26 Grade 1-600 certified continuous geared hinge, with minimum 0.120-inch thick extruded 6060 T6 aluminum alloy hinge leaves and a minimum overall width of 4 inches. Hinges are non-handed, reversible and fabricated to template screw locations. Factory trim hinges to suit door height and prepare for electrical cut-outs.
1. Manufacturers:
a. Hager Companies (HA).
b. McKinney Products; ASSA ABLLOY Architectural Door Accessories (MK).
c. Pemko Products; ASSA ABLLOY Architectural Door Accessories (PE).

2.3 DOOR OPERATING TRIM

- A. Flush Bolts and Surface Bolts: ANSI/BHMA A156.3 and A156.1, Grade 1, certified.
1. Flush bolts to be furnished with top rod of sufficient length to allow bolt retraction device location approximately six feet from the floor.
2. Furnish dust proof strikes for bottom bolts.
3. Surface bolts to be minimum 8" in length and U.L. listed for use on fire doors and U.L. listed for windstorm components where applicable.
4. Provide related accessories (mounting brackets, strikes, coordinators, etc.) as required for appropriate installation and operation.
5. Manufacturers:
a. Door Controls International (DC).
b. Rockwood Products; ASSA ABLLOY Architectural Door Accessories (RO).
c. Trimco (TC).
B. Push/Pull Hardware: ANSI/BHMA A156.6 certified door pushes and pulls of type and design as specified in the Hardware Sets. Coordinate and provide proper width and height as required where conflicting hardware details exist.
1. Push/Pull Hardware: Minimum .050 inch thick, size as indicated in hardware sets, with beveled edges, secured with exposed screws unless otherwise indicated.
2. Door Pull and Push Bar Design: Size, shape, and material as indicated in the hardware sets. Minimum clearance of 2 1/2-inches from face of door unless otherwise indicated.
3. Offset Pull Design: Size, shape, and material as indicated in the hardware sets. Minimum clearance of 2 1/2-inches from face of door and offset of 90 degrees unless otherwise indicated.

DOOR HARDWARE (CONT.)

- 4. Fasteners: Provide manufacturer's designated fastener type as indicated in Hardware Sets.
5. Manufacturers:
a. Howatha, Inc. (HI).
b. Rockwood Products; ASSA ABLLOY Architectural Door Accessories (RO).
c. Trimco (TC).

2.4 CYLINDERS AND KEYING

- A. General: Cylinder manufacturer to have minimum (10) years experience designing secured master key systems and have on record a published security keying system policy.
B. Source Limitations: Obtain each type of keyed cylinder and keys from the same source manufacturer as locksets and exit devices, unless otherwise indicated.
1. Manufacturers:
a. Corbin Russwin Hardware (RU).
b. Sargent Manufacturing (SA).
C. Cylinders: Original manufacturer cylinders complying with the following:
1. Mortise Type: Threaded cylinders with rings and cams to suit hardware application.
2. Rim Type: Cylinders with back plate, flat-type vertical or horizontal tailpiece, and raised trim ring.
3. Bored-Lock Type: Cylinders with tailpieces to suit locks.
4. Mortise and rim cylinder callouts to be solid and recessed to allow the cylinder face to be flush and be free spinning with matching finishes.
5. Keyway: Manufacturer's Standard.
D. Keying System: Each type of lock and cylinders to be factory keyed.
1. Conduct specified "Keying Conference" to define and document keying system instructions and requirements.
2. Furnish factory cut, nickel-silver large bow permanently inscribed with a visual key control number as directed by Owner.
3. New System: Key locks to a new key system as directed by the Owner.
E. Key Quantity: Provide the following minimum number of keys:
1. Change Keys per Cylinder: Two (2)
2. Master Keys (per Master Key Level/Group): Five (5)
3. Construction Keys (where required): Ten (10)
F. Construction Keying: Provide construction master keyed cylinders.
G. Key Registration List (Bitting List):
1. Provide keying transcript list to Owner's representative in the proper format for importing into key control software.
2. Provide transcript list in writing or electronic file as directed by the Owner.
H. Key Control Cabinet: Provide a key control system including envelopes, labels, and tags with self-locking key clips, receipt forms, 3-way visible card index, temporary markers, permanent markers, and standard metal cabinet. Key control cabinet shall have expansion capacity of 150% of the number of locks required for the project.
1. Manufacturers:
a. Lund Equipment (LU).
b. MMF Industries (MM).
c. Telkeo (TK).

2.5 MECHANICAL LOCKS AND LATCHING DEVICES

- A. Mortise Locksets, Grade 1 (Heavy Duty): ANSI/BHMA A156.13, Series 1000, Operational Grade certified. Locksets are to be manufactured with a corrosion resistant steel case and be field-reversible for handing without disassembly of the lock body.
1. Manufacturers:
a. Corbin Russwin Hardware (RU) - ML2000 Series.
b. Sargent Manufacturing (SA) - 8200 Series.
B. Hurricane and Tornado Resistance Compliance: Mechanical locking and latching devices to be U.L. listed for windstorm assemblies where applicable. Provide the appropriate hurricane or tornado resistant products that have been independently third party tested, certified, and labeled to meet state and local windstorm building codes applicable to project.

2.6 LOCK AND LATCH STRIKES

- A. Strikes: Provide manufacturer's standard strike with strike box for each latch or lock bolt, with curved lip extended to protect frame, finished to match door hardware set, unless otherwise indicated, and as follows:
1. Flat-Lip Strikes: For locks with three-piece adjustable latches, as recommended by manufacturer.
2. Extra-Long-Lip Strikes: For locks used on doors with applied wood casing trim.
3. Aluminum-Framed Strike Box: Provide manufacturer's special strike box fabricated for aluminum framing.
4. Double-Lip strikes: For locks on double doors. Furnish with retractable stop for rescue hardware.
B. Strikes: Comply with the following:
1. Strikes for Mortise Locks and Latches: BHMA A156.13.
2. Strikes for Bored Locks and Latches: BHMA A156.2.
3. Strikes for Auxiliary Deadlocks: BHMA A156.36.
4. Dustproof Strikes: BHMA A156.16.

2.7 CONVENTIONAL EXIT DEVICES

- General Requirements: All exit devices specified herein shall meet or exceed the following criteria:
1. All doors not requiring a fire rating, provide devices complying with NFPA 101 and listed and labeled for "Panic Hardware" according to UL305. Provide proper fasteners as required by manufacturer including sex nuts and bolts at openings specified in the Hardware Sets.
2. Where exit devices are required on fire rated doors, provide devices complying with NFPA 80 and with UL labeling indicating "Fire Exit Hardware". Provide devices with the proper fasteners for installation as tested and listed by UL. Consult manufacturer's catalog and template book for specific requirements.
3. Except on fire rated doors, provide exit devices with hex key dogging device to hold the pushbar and latch in a retracted position. Provide optional keyed dogging on devices where specified in Hardware Sets.
4. Devices must fit flat against the door face with no gap that permits unauthorized dogging of the push bar. The addition of filler strips is required in any case where the door light extends behind the device as in a full glass configuration.
5. Flush End Caps: Provide flush end caps made of architectural metal in the same finish as the devices as in the Hardware Sets. Plastic end caps will not be acceptable.
6. Lever Operating Trim: Where exit devices require lever trim, furnish manufacturer's heavy duty extrusion trim with threaded studs for thru-bolts.
a. Lock Trim Design: As indicated in Hardware Sets, provide finishes and designs to match that of the specified locksets.
b. Where function of exit device requires a cylinder, provide a cylinder (Rim or Mortise) as specified in Hardware Sets.
7. Vertical Rod Exit Devices: Where surface or concealed vertical rod exit devices are used at interior openings, provide a less bottom rod (LBR) unless otherwise indicated. Provide dust proof strikes where thermal pins are required to project into the floor.

DOOR HARDWARE (CONT.)

- 8. Narrow Stile Applications: At doors constructed with narrow stiles, or as specified in Hardware Sets, provide devices designed for maximum 2" wide stiles.
9. Dummy Push Bar: Nonfunctioning push bar matching functional push bar.
10. Rail Sizing: Provide exit device rails factory sized for proper door width application.
11. Through Bolt Installation: For exit devices and trim as indicated in Door Hardware Sets.
12. Hurricane and Tornado Resistance Compliance: Conventional exit devices are to be U.L. listed for windstorm assemblies where applicable. Provide the appropriate hurricane or tornado resistant products that have been independently third party tested, certified, and labeled to meet state and local windstorm building codes applicable to project.
B. Conventional Push Rail Exit Devices (Heavy Duty): ANSI/BHMA A156.3, Grade 1 certified panic and fire exit hardware devices furnished in the functions specified in the Hardware Sets. Exit device latch to be stainless steel, pullman type, with deadlock feature.
1. Manufacturers:
a. Corbin Russwin Hardware (RU) - ED4000 / ED5000 Series.
b. Sargent Manufacturing (SA) - 80 Series.

2.8 DOOR CLOSERS

- A. All door closers specified herein shall meet or exceed the following criteria:
1. General: Door closers to be from one manufacturer, matching in design and style, with the same type door preparations and templates regardless of application or spring size. Closers to be non-handed with full sized covers including installation and adjusting information on inside of cover.
2. Standards: Closers to comply with UL-10C for Positive Pressure Fire Test and be U.L. listed for use of fire rated doors.
3. Cycle Testing: Provide closers which have surpassed 15 million cycles in a test witnessed and verified by UL.
4. Size of Units: Comply with manufacturer's written recommendations for sizing of door closers depending on size of door, exposure to weather, and anticipated frequency of use. Where closers are indicated for doors required to be accessible to the physically handicapped, provide units complying with ANSI ICC/A117.1.
5. Closer Arms: Provide heavy duty, forged steel closer arms unless otherwise indicated in Hardware Sets.
6. Closers shall not be installed on exterior or corridor side of doors; where possible install closers on door for optimum aesthetics.
7. Closer Accessories: Provide door closer accessories including custom templates, special mounting brackets, spacers and drop plates as required for proper installation. Provide through-bolt or security type fasteners as specified in the hardware sets.
B. Door Closers, Surface Mounted (Commercial Duty): ANSI/BHMA 156.4, Grade 1 certified surface mounted, institutional grade door closers with camless spring power adjustment, sizes 1 thru 6 and fully operational adjustable according to door safe frequency of use, and closing force. Closing to be rack and pinion type, one piece cast iron or aluminum alloy body construction, with operable backcheck, closing sweep, and latch speed control valves. Provide non-handed units.
1. Manufacturers:
a. Corbin Russwin Hardware (RU) - ED5000 Series.
b. Norton Door Closers (NO) - 8500 Series.
c. Sargent Manufacturing (SA) - 1400 Series.

2.9 ARCHITECTURAL TRIM

- A. Door Protective Trim
1. General: Door protective trim units to be of type and design as specified below or in the Hardware Sets.
2. Size: Protective plates (kick, armor, or mop) not more than 2" less than door width (LDW) and stop edge of single doors and 1" LDW on stop side of pairs of doors, and not more than 1/2" less than door width on pull side. Coordinate and provide proper width and height as indicated where conflicting hardware dictates. Height to be as specified in the Hardware Sets.
3. Where plates are applied to fire rated doors with the top of the plate more than 16" above the bottom of the door, provide plates complying with NFPA 80. Consult manufacturer's catalog and template book for specific requirements for size and applications.
4. Protection Plates: ANSI/BHMA A156.6 certified protection plates (kick, armor, or mop), fabricated from the following:
a. Stainless Steel: 300 grade, .050-inch thick.
5. Options and Fasteners: Provide manufacturer's designated fastener type as specified in the Hardware Sets. Provide countersunk screw holes.
6. Manufacturers:
a. Howatha, Inc. (HI).
b. Rockwood Products; ASSA ABLLOY Architectural Door Accessories (RO).
c. Trimco (TC).

2.10 DOOR STOPS AND HOLDERS

- A. General: Door stops and holders to be of type and design as specified below or in the Hardware Sets.
B. Door Stops and Bumpers: ANSI/BHMA A156.16, Grade 1 certified door stops and wall bumpers. Provide wall bumpers, either convex or concave types with anchorage as indicated, unless floor or other types of door stops are specified in Hardware Sets. Do not mount floor stops where they will impede traffic. Where floor or wall bumpers are not appropriate, provide overhead type stops and holders.
1. Manufacturers:
a. Howatha, Inc. (HI).
b. Rockwood Products; ASSA ABLLOY Architectural Door Accessories (RO).
c. Trimco (TC).
C. Overhead Door Stops and Holders: ANSI/BHMA A156.6, Grade 1 certified overhead stops and holders to be surface or concealed types as indicated in Hardware Sets. Track, slide, arm and jamb bracket to be constructed of extruded bronze and shock absorber spring of heavy tempered steel. Provide non-handed design with mounting brackets as required for proper operation and function.
1. Manufacturers:
a. Rixson Door Controls (RF).
b. Rockwood Products; ASSA ABLLOY Architectural Door Accessories (RO).
c. Sargent Manufacturing (SA).

2.11 ARCHITECTURAL SEALS

- A. General: Thresholds, weatherstripping, and gasket seals to be of type and design as specified below or in the Hardware Sets. Provide continuous weatherstrip gasketing on exterior doors and provide smoke, light, or sound gasketing on interior doors where indicated. At exterior applications provide non-corrosive fasteners and elsewhere where indicated.
B. Smoke Labeled Gasketing: Assemblies complying with NFPA 105 that are listed and labeled by a testing and inspecting agency acceptable to authorities having jurisdiction, for smoke control ratings indicated, based on testing according to UL 1784.
1. Provide smoke labeled perimeter gasketing at all smoke labeled openings.
C. Fire Labeled Gasketing: Assemblies 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 according to UL-10C.
1. Provide intumescent seals as indicated to meet UL10C Standard for Positive Pressure Fire Tests of Door Assemblies, and NFPA 252, Standard Methods of Fire Tests of Door Assemblies.

DOOR HARDWARE (CONT.)

- D. Sound-Rated Gasketing: Assemblies that are listed and labeled by a testing and inspecting agency, for sound ratings indicated.
E. Replaceable Seal Strips: Provide only those units where resilient or flexible seal strips are easily replaceable and readily available from stocks maintained by manufacturer.
F. Hurricane and Tornado Resistance Compliance: Architectural seals to be U.L. listed for windstorm assemblies where applicable. Provide the appropriate hurricane or tornado resistant products that have been independently third party tested, certified, and labeled to meet state and local windstorm building codes applicable to project.
G. Manufacturers:
1. National Guard Products (NG).
2. Pemko Products; ASSA ABLLOY Architectural Door Accessories (PE).
3. Reese Enterprises, Inc. (RE).

2.12 FABRICATION

- A. Fasteners: Provide door hardware manufactured to comply with published templates generally prepared for machine, wood, and sheet metal screws. Provide screws according to manufacturers recognized installation standards for application intended.

2.13 FINISHES

- A. Standard: Designations used in the Hardware Sets and elsewhere indicate hardware finishes complying with ANSI/BHMA A156.18, including coordination with traditional finishes indicated by certain manufacturers for their products.
B. Provide quality finish, including thickness of plating or coating (if any), composition, hardness, and other qualities complying with manufacturer's standards but in no case less than specified by referenced standards for the applicable units of hardware.
C. Protect mechanical finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.

3 - EXECUTION

3.1 INSTALLATION

- A. Prepare schedule openings, with installer present, for compliance with requirements for installation of hinges, locking and fire door assembly construction, wall and floor construction, and other conditions affecting performance.
B. Notify architect of any discrepancies or conflicts between the door schedule, door types, drawings and scheduled hardware. Proceed only after such discrepancies or conflicts have been resolved in writing.

3.2 PREPARATION

- A. Hollow Metal Doors and Frames: Comply with ANSI/DHI A115 series.
B. Wood Doors: Comply with ANSI/DHI A115-W series.

3.3 INSTALLATION

- A. Install each item of mechanical and electromechanical hardware and access control equipment to comply with manufacturer's written instructions and according to specifications.
1. Installers are to be trained and certified by the manufacturer on the proper installation and adjustment of fire, life safety, and security products including: hanging devices; locking devices; closing devices; and seals.
B. Mounting Heights: Mount door hardware units at heights indicated in following applicable publications, unless specifically indicated or required to comply with governing regulations:
1. Standard Steel Doors and Frames: DHI's "Recommended Locations for Architectural Hardware for Standard Steel Doors and Frames."
2. Wood Doors: DHI WDHS.3, "Recommended Locations for Architectural Hardware for Wood Flush Doors."
3. Where indicated to comply with accessibility requirements, comply with ANSI A117.1 "Accessibility Guidelines for Buildings and Facilities."
4. Provide blocking in drywall partitions where wall stops or other wall mounted hardware is located.
C. Refitting: Install door hardware to comply with manufacturer's published templates and 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 specified in Division 9 Sections. Do not install surface-mounted items until finishes have been completed on substrates involved.
D. Thresholds: Set thresholds for exterior and acoustical doors in full bed of sealant complying with requirements specified in Division 7 Section "Joint Sealants."
E. Storage: Provide a secure lock up for hardware delivered to the project but not yet installed. Control the handling and installation of hardware items so that the completion of the work will not be delayed by hardware losses before and after installation.

3.4 FIELD QUALITY CONTROL

- A. Field Inspection: Supplier will perform a final inspection of installed door hardware and state in report whether work complies with or deviates from requirements, including whether door hardware is properly installed, operating and adjusted.

3.5 ADJUSTING

- A. Initial Adjustment: 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.

3.6 CLEANING AND PROTECTION

- A. Protect all hardware stored on construction site in a covered and dry place. Protect exposed hardware installed on doors during the construction phase. Install any and all hardware at the latest possible time frame.
B. Clean adjacent surfaces soiled by door hardware installation.
C. Clean operating items as necessary to restore proper finish. Provide final protection and maintain conditions that ensure door hardware is without damage or deterioration at time of owner occupancy.

3.7 DEMONSTRATION

- A. Instruct Owner's maintenance personnel to adjust, operate, and maintain mechanical and electromechanical door hardware.

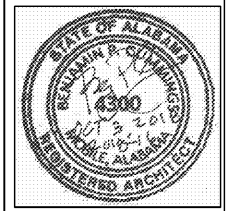
3.8 DOOR HARDWARE SETS

- A. The hardware sets represent the design intent and direction of the owner and architect. They are a guideline only and should not be considered a detailed hardware schedule. Discrepancies, conflicting hardware and missing items should be brought to the attention of the architect with corrections made prior to the bidding process. Omitted items not included in a hardware set should be scheduled with the appropriate additional hardware required for proper application and functionality.
The supplier is responsible for handling and sizing all products as listed in the door hardware sets. Quantities listed are for each pair of doors, or for each single door.
C. Manufacturer's Abbreviations:

- 1. MK - McKinney
2. PE - Pemko
3. SA - Sargent
4. RO - Rockwood
5. RF - Rixson
6. HS - HES



Cummings Architecture Corp
1000 House Street
Mobile, Alabama 36606
TEL: 251.433.9600



Mulherin Custodial Home
2496 Halls Mill Road
Mobile, AL 36606

THIS DRAWING AND ITS REPRODUCTIONS ARE THE PROPERTY OF THE ARCHITECT AND MAY NOT BE REPRODUCED, PUBLISHED, OR USED IN ANY MANNER WITHOUT THE PERMISSION OF THE ARCHITECT.

Table with 2 columns: MARK, DATE

SHEET NAME
ARCHITECTURAL SPECIFICATIONS

PROJECT NO. 2018-16
DATE OCTOBER 3, 2018
SHEET NO.

A0.10