

## SECTION 087100 - DOOR HARDWARE

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

#### 1.2 SUMMARY

- A. This Section includes commercial door hardware for the following:
  - 1. Swinging doors.
  - 2. Sliding doors.
  - 3. Other doors to the extent indicated.
- B. Door hardware includes, but is not necessarily limited to, the following:
  - 1. Mechanical door hardware.
  - 2. Electromechanical door hardware.
  - 3. Cylinders specified for doors in other sections.
- C. Related Sections:
  - 1. Division 08 Section "Hollow Metal Doors and Frames".
  - 2. Division 08 Section "Flush Wood Doors".
  - 3. Division 08 Section "Aluminum-Framed Entrances and Storefronts".
  - 4. Division 28 Section "Access Control Hardware Devices".
- D. Codes and References: Comply with the version year adopted by the Authority Having Jurisdiction.
  - 1. ANSI A117.1 - Accessible and Usable Buildings and Facilities.
  - 2. ICC/IBC - International Building Code.
  - 3. NFPA 70 - National Electrical Code.
  - 4. NFPA 80 - Fire Doors and Windows.
  - 5. NFPA 101 - Life Safety Code.
  - 6. NFPA 105 - Installation of Smoke Door Assemblies.
  - 7. State Building Codes, Local Amendments.
- E. Standards: All hardware specified herein shall comply with the following industry standards as applicable. Any undated reference to a standard shall be interpreted as referring to the latest edition of that standard:

1. ANSI/BHMA Certified Product Standards - A156 Series.
2. UL10C - Positive Pressure Fire Tests of Door Assemblies.
3. ANSI/UL 294 - Access Control System Units.
4. UL 305 - Panic Hardware.
5. ANSI/UL 437- Key Locks.

### 1.3 SUBMITTALS

- A. Product Data: Manufacturer's product data sheets including installation details, material descriptions, dimensions of individual components and profiles, operational descriptions and finishes.
- B. Door Hardware Schedule: Prepared by or under the supervision of supplier, detailing fabrication and assembly of door hardware, as well as procedures and diagrams. Coordinate the final Door Hardware Schedule with doors, frames, and related work to ensure proper size, thickness, hand, function, and finish of door hardware.
  1. Format: Comply with scheduling sequence and vertical format in DHI's "Sequence and Format for the Hardware Schedule."
  2. Organization: Organize the Door Hardware Schedule into door hardware sets indicating complete designations of every item required for each door or opening. Organize door hardware sets in same order as in the Door Hardware Sets at the end of Part 3. Submittals that do not follow the same format and order as the Door Hardware Sets will be rejected and subject to resubmission.
  3. Content: Include the following information:
    - a. Type, style, function, size, label, hand, and finish of each door hardware item.
    - b. Manufacturer of each item.
    - c. Fastenings and other pertinent information.
    - d. Location of door hardware set, cross-referenced to Drawings, both on floor plans and in door and frame schedule.
    - e. Explanation of abbreviations, symbols, and codes contained in schedule.
    - f. Mounting locations for door hardware.
    - g. Door and frame sizes and materials.
    - h. Warranty information for each product.
  4. Submittal Sequence: Submit the final Door Hardware Schedule at earliest possible date, particularly where approval of the Door Hardware Schedule must precede fabrication of other work that is critical in the Project construction schedule. Include Product Data, Samples, Shop Drawings of other work affected by door hardware, and other information essential to the coordinated review of the Door Hardware Schedule.
- C. Shop Drawings: Details of electrified access control hardware indicating the following:
  1. Wiring Diagrams: Upon receipt of approved schedules, submit detailed system wiring diagrams for power, signaling, monitoring, communication, and control of the access

control system electrified hardware. Differentiate between manufacturer-installed and field-installed wiring. Include the following:

- a. Elevation diagram of each unique access controlled opening showing location and interconnection of major system components with respect to their placement in the respective door openings.
    - b. Complete (risers, point-to-point) access control system block wiring diagrams.
    - c. Wiring instructions for each electronic component scheduled herein.
  2. Electrical Coordination: Coordinate with related sections the voltages and wiring details required at electrically controlled and operated hardware openings.
- D. Keying Schedule: After a keying meeting with the owner has taken place prepare a separate keying schedule detailing final instructions. Submit the keying schedule in electronic format. Include keying system explanation, door numbers, key set symbols, hardware set numbers and special instructions. Owner must approve submitted keying schedule prior to the ordering of permanent cylinders/cores.
- E. Informational Submittals:
1. Product Test Reports: Indicating compliance with cycle testing requirements, based on evaluation of comprehensive tests performed by manufacturer and witnessed by a qualified independent testing agency.
- F. Operating and Maintenance Manuals: Provide manufacturers operating and maintenance manuals for each item comprising the complete door hardware installation in quantity as required in Division 01, Closeout Procedures.
- 1.4 QUALITY ASSURANCE
- A. Manufacturers Qualifications: Engage qualified manufacturers with a minimum 5 years of documented experience in producing hardware and equipment similar to that indicated for this Project and that have a proven record of successful in-service performance.
  - B. Certified Products: Where specified, products must maintain a current listing in the Builders Hardware Manufacturers Association (BHMA) Certified Products Directory (CPD).
  - C. Installer Qualifications: A minimum 3 years documented experience installing both standard and electrified door hardware similar in material, design, and extent to that indicated for this Project and whose work has resulted in construction with a record of successful in-service performance.
  - D. Door Hardware Supplier Qualifications: Experienced commercial door hardware distributors with a minimum 5 years documented experience supplying both mechanical and electromechanical hardware installations comparable in material, design, and extent to that indicated for this Project. Supplier recognized as a factory direct distributor by the manufacturers of the primary materials with a warehousing facility in Project's vicinity. Supplier to have on staff a certified Architectural Hardware Consultant (AHC) available during

the course of the Work to consult with Contractor, Architect, and Owner concerning both standard and electromechanical door hardware and keying.

- E. Source Limitations: Obtain each type and variety of door hardware specified in this section from a single source unless otherwise indicated.
  - 1. Electrified modifications or enhancements made to a source manufacturer's product line by a secondary or third party source will not be accepted.
  - 2. Provide electromechanical door hardware from the same manufacturer as mechanical door hardware, unless otherwise indicated.
- F. Each unit to bear third party permanent label demonstrating compliance with the referenced standards.
- G. Keying Conference: Conduct conference to comply with requirements in Division 01 Section "Project Meetings." Keying conference to incorporate the following criteria into the final keying schedule document:
  - 1. Function of building, purpose of each area and degree of security required.
  - 2. Plans for existing and future key system expansion.
  - 3. Requirements for key control storage and software.
  - 4. Installation of permanent keys, cylinder cores and software.
  - 5. Address and requirements for delivery of keys.
- H. Pre-Submittal Conference: Conduct coordination conference in compliance with requirements in Division 01 Section "Project Meetings" with attendance by representatives of Supplier(s), Installer(s), and Contractor(s) to review proper methods and the procedures for receiving, handling, and installing door hardware.
  - 1. Prior to installation of door hardware, conduct a project specific training meeting to instruct the installing contractors' personnel on the proper installation and adjustment of their respective products. Product training to be attended by installers of door hardware (including electromechanical hardware) for aluminum, hollow metal and wood doors. Training will include the use of installation manuals, hardware schedules, templates and physical product samples as required.
  - 2. Inspect and discuss electrical roughing-in, power supply connections, and other preparatory work performed by other trades.
  - 3. Review sequence of operation narratives for each unique access controlled opening.
  - 4. Review and finalize construction schedule and verify availability of materials.
  - 5. Review the required inspecting, testing, commissioning, and demonstration procedures
- I. At completion of installation, provide written documentation that components were applied to manufacturer's instructions and recommendations and according to approved schedule.

## 1.5 DELIVERY, STORAGE, AND HANDLING

- A. Inventory door hardware on receipt and provide secure lock-up and shelving for door hardware delivered to Project site. Do not store electronic access control hardware, software or accessories at Project site without prior authorization.
- B. Tag each item or package separately with identification related to the final Door Hardware Schedule, and include basic installation instructions with each item or package.
- C. Deliver, as applicable, permanent keys, cylinders, cores, access control credentials, software and related accessories directly to Owner via registered mail or overnight package service. Instructions for delivery to the Owner shall be established at the "Keying Conference".

## 1.6 COORDINATION

- A. Templates: Obtain and distribute to the parties involved templates for doors, frames, and other work specified to be factory prepared for installing standard and electrified hardware. Check Shop Drawings of other work to confirm that adequate provisions are made for locating and installing hardware to comply with indicated requirements.
- B. Door Hardware and Electrical Connections: Coordinate the layout and installation of scheduled electrified door hardware and related access control equipment with required connections to source power junction boxes, low voltage power supplies, detection and monitoring hardware, and fire and detection alarm systems.
- C. Door and Frame Preparation: Doors and corresponding frames are to be prepared, reinforced and pre-wired (if applicable) to receive the installation of the specified electrified, monitoring, signaling and access control system hardware without additional in-field modifications.

## 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. Warranty Period: Unless otherwise indicated, warranty shall be one year from date of Substantial Completion.

## 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 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: With the exception of electric through wire hinges, 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. Ives (IV) - 5BB Series, 5 knuckle.
    - b. McKinney (MK) - TA/T4A Series, 5 knuckle.
    - c. dormakaba Best (ST) - F/FBB Series, 5 knuckle.
- B. Continuous Geared Hinges: ANSI/BHMA A156.26 Grade 1-600 continuous geared hinge. with minimum 0.120-inch thick extruded 6063-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. Ives (IV).
    - b. Pemko (PE).
    - c. Select Hinges (SL).
- C. Sliding and Folding Door Hardware: Hardware is to be of type and design as specified and should conform with ANSI/BHMA A156.14.
  1. Sliding Bi-Passing Pocket Door Hardware: Provide complete sets consisting of track, hangers, stops, bumpers, floor channel, guides, and accessories indicated.
  2. Bi-folding Door Hardware: Rated for door panels weighing up to 125 lb.
  3. Pocket Sliding Door Hardware: Rated for doors weighing up to 200 lb.
  4. Manufacturers:
    - a. Hafele Manufacturing (HF).
    - b. Johnson Hardware (JO).
    - c. Pemko (PE).

## 2.3 POWER TRANSFER DEVICES

- A. Electrified Quick Connect Transfer Hinges: Provide electrified transfer hinges with Molex™ standardized plug connectors and sufficient number of concealed wires (up to 12) to accommodate the electrified functions specified in the Door Hardware Sets with a 1-year

warranty. Connectors plug directly to through-door wiring harnesses for connection to electric locking devices and power supplies. Wire nut connections are not acceptable.

1. Manufacturers:

- a. Ives (IV) - Connect.
- b. McKinney (MK) - QC (# wires) Option.
- c. Dormakaba Best (ST) - C Option.

- B. Concealed Quick Connect Electric Power Transfers: Provide concealed wiring pathway housing mortised into the door and frame for low voltage electrified door hardware. Furnish with Molex™ standardized plug connectors and sufficient number of concealed wires (up to 12) to accommodate the electrified functions specified in the Door Hardware Sets. Connectors plug directly to through-door wiring harnesses for connection to electric locking devices and power supplies. Wire nut connections are not acceptable.

1. Manufacturers:

- a. Architectural Builders Hardware (AH) - PT1000-EZ Series.
- b. Pemko (PE) - EL-CEPT Series.
- c. Securitron (SU) - EL-CEPT Series.

- C. Electric Door Wire Harnesses: Provide electric/data transfer wiring harnesses with standardized plug connectors to accommodate up to twelve (12) wires. Connectors plug directly to through-door wiring harnesses for connection to electric locking devices and power supplies. Provide sufficient number and type of concealed wires to accommodate electric function of specified hardware. Provide a connector for through-door electronic locking devices and from hinge to junction box above the opening. Wire nut connections are not acceptable. Determine the length required for each electrified hardware component for the door type, size and construction, minimum of two per electrified opening.

1. Provide one each of the following tools as part of the base bid contract:

- a. McKinney (MK) - Electrical Connecting Kit: QC-R001.
- b. McKinney (MK) - Connector Hand Tool: QC-R003.

2. Manufacturers:

- a. McKinney (MK) - QC-C Series.
- b. Schlage (SC) - Connect.
- c. Dormakaba Best (ST) - WH Series.

## 2.4 DOOR OPERATING TRIM

- A. Flush Bolts and Surface Bolts: Provide products conforming to ANSI/BHMA A156.3 and A156.16, Grade 1.

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 labeled 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. Burns Manufacturing (BU).
    - b. Rockwood (RO).
    - c. Trimco (TC).
- B. Door Push Plates and Pulls: ANSI/BHMA A156.6 door pushes and pull units of type and design specified in the Hardware Sets. Coordinate and provide proper width and height as required where conflicting hardware dictates.
1. Push/Pull Plates: 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.
  4. Fasteners: Provide manufacturer's designated fastener type as indicated in Hardware Sets.
  5. Manufacturers:
    - a. Hiawatha, Inc. (HI).
    - b. Rockwood (RO).
    - c. Trimco (TC).

## 2.5 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.
1. Manufacturers:
    - a. Sargent Manufacturing (SA).
- B. Cylinder Types: Original manufacturer cylinders able to supply the following cylinder formats and types:
1. Threaded mortise cylinders with rings and cams to suit hardware application.
  2. Rim cylinders with back plate, flat-type vertical or horizontal tailpiece, and raised trim ring.
  3. Bored or cylindrical lock cylinders with tailpieces as required to suit locks.
  4. Tubular deadlocks and other auxiliary locks.

5. Mortise and rim cylinder collars to be solid and recessed to allow the cylinder face to be flush and be free spinning with matching finishes.
  6. Keyway: Manufacturer's Standard.
- C. Large Format Interchangeable Cores: Provide removable cores (LFIC) as specified, core insert, removable by use of a special key, and for use with only the core manufacturer's cylinder and door hardware.
- D. Patented Cylinders: ANSI/BHMA A156.5, Grade 1 Certified Products Directory (CPD) listed cylinders employing a utility patented and restricted keyway requiring the use of a patented key. Cylinders are to be protected from unauthorized manufacture and distribution by manufacturer's United States patents. Cylinders are to be factory keyed with owner having the ability for on-site original key cutting.
1. Patented key systems shall not be established with products that have an expired patent. Expired systems shall only be specified and supplied to support existing systems.
  2. Manufacturers:
    - a. Corbin Russwin (RU) - Access 3 AP.
    - b. Sargent (SA) - Degree DG1.
- E. Keying System: Each type of lock and cylinders to be factory keyed.
1. Supplier shall conduct a "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.
- F. 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).
  4. Construction Control Keys (where required): Two (2).
  5. Permanent Control Keys (where required): Two (2).
- G. Construction Keying: Provide construction master keyed cylinders.
- H. Construction Keying: Provide temporary keyed construction cores.
- I. 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.

## 2.6 KEY CONTROL

- A. 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. Telkee (TK).
  - P. Electronic Key Management System: Provide an electronic key control system with Stand-alone Plug and Play features including advanced RFID technology. Touchscreen interface with PIN access for keys individually locked in place. Minimum 1,000 system users and 21 iFobs for locking receptors. System shall have a minimum 250,000 audit events screen displayed or ability to be exported via USB port.
    1. Manufacturers:
      - a. Medeco (MC).
      - b. Traka (TA).

## 2.7 MECHANICAL LOCKS AND LATCHING DEVICES

- A. Mortise Locksets, Grade 1 (Heavy Duty): ANSI/BHMA A156.13, Series 1000, Operational Grade 1 Certified Products Directory (CPD) listed. Locksets are to be manufactured with a corrosion resistant steel case and be field-reversible for handing without disassembly of the lock body.
1. Heavy duty mortise locks shall have a ten-year warranty.
  2. Where specified, provide status indicators with highly reflective color and wording for “locked/unlocked” or “vacant/occupied” with custom wording options if required. Indicator to be located above the cylinder with the inside thumb-turn not blocking the visibility of the indicator status. Indicator window size to be a minimum of 2.1” x 0.6” with a curved design allowing a 180-degree viewing angle with protective covering to prevent tampering.
  3. Manufacturers:
    - a. Corbin Russwin Hardware (RU) - ML2000 Series.
    - b. Sargent Manufacturing (SA) - 8200 Series.
    - c. ASSA ABLOY ACCENTRA (YA) - 8800FL Series.

## 2.8 ELECTROMECHANICAL LOCKING DEVICES

- A. Electromechanical Mortise Locksets, Grade 1 (Heavy Duty, High Security Monitoring): ANSI/BHMA A156.13, Series 1000, Operational Grade 1 Certified Products Directory (CPD) listed, subject to same compliance standards and requirements as mechanical mortise locksets, electrified locksets to be of type and design as specified below.
1. Electrified Lock Options: Where indicated in the Hardware Sets, provide electrified options including: outside door lock/unlock trim control, latchbolt and lock/unlock status monitoring, deadbolt monitoring, and request-to-exit signaling. Support end-of-line resistors contained within the lock case. Unless otherwise indicated, provide electrified locksets standard as fail secure.
  2. High Security Monitoring: Provide lock bodies which have built-in request to exit monitoring and are provided with accompanying door position switches. Provide a resistor configuration which is compatible with the access control system.
  3. Manufacturers:
    - a. Corbin Russwin Hardware (RU) - ML20600 NAC Series.
    - b. Sargent Manufacturing (SA) - NAC 8200 Series.
- B. Electromechanical Mortise Locksets, Grade 1 (Commercial Duty): ANSI/BHMA A156.13, Series 1000, Operational Grade 1 Certified Products Directory (CPD) listed, subject to same compliance standards and requirements as mechanical mortise locksets, electrified locksets to be of type and design as specified below.
1. Electrified Lock Options: Where indicated in the Hardware Sets, provide electrified options including: outside door lock/unlock trim control, latchbolt and lock/unlock status monitoring, deadbolt monitoring, and request-to-exit signaling. Support end-of-line resistors contained within the lock case. Unless otherwise indicated, provide electrified locksets standard as fail secure.
  2. Manufacturers:

## 2.9 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 antifriction latchbolts, as recommended by manufacturer.
  2. Extra-Long-Lip Strikes: For locks used on frames with applied wood casing trim.
  3. Aluminum-Frame Strike Box: Provide manufacturer's special strike box fabricated for aluminum framing.
  4. Double-lipped strikes: For locks at double acting doors. Furnish with retractable stop for rescue hardware applications.
- B. Standards: 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.

## 2.10 CONVENTIONAL EXIT DEVICES

### A. General Requirements: All exit devices specified herein shall meet or exceed the following criteria:

1. Exit devices shall have a five-year warranty.
2. At 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.
3. 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.
4. 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 cylinder dogging on devices where specified in Hardware Sets.
5. 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.
6. 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.
7. Lever Operating Trim: Where exit devices require lever trim, furnish manufacturer's heavy duty escutcheon 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.
8. Vertical Rod Exit Devices: Where surface or concealed vertical rod exit devices are used at interior openings, provide as less bottom rod (LBR) unless otherwise indicated. Provide dust proof strikes where thermal pins are required to project into the floor.
9. Narrow Stile Applications: At doors constructed with narrow stiles, or as specified in Hardware Sets, provide devices designed for maximum 2" wide stiles.
10. Dummy Push Bar: Nonfunctioning push bar matching functional push bar.

11. Rail Sizing: Provide exit device rails factory sized for proper door width application.

12. Through Bolt Installation: For exit devices and trim as indicated in Door Hardware Sets.

B. Conventional Push Rail Exit Devices (Heavy Duty): ANSI/BHMA A156.3, Grade 1 Certified Products Directory (CPD) listed 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.
- c. ASSA ABLOY ACCENTRA (YA) - 7000 Series.

## 2.11 ELECTROMECHANICAL EXIT DEVICES

A. Electromechanical Push Rail Exit Devices (Heavy Duty): ANSI/BHMA A156.3, Grade 1 Certified Products Directory (CPD) listed panic and fire exit hardware devices subject to same compliance standards and requirements as mechanical exit devices. Electrified exit devices to be of type and design as specified below and in the hardware sets.

1. Where conventional power supplies are not sufficient, include any specific controllers required to provide the proper inrush current.

2. Motorized Electric Latch Retraction: Devices with an electric latch retraction feature must use motors which have a maximum current draw of 600mA. Solenoid driven latch retraction is not acceptable.

3. Manufacturers:

- a. Corbin Russwin Hardware (RU) - ED5000 Series.
- b. Sargent Manufacturing (SA) - 80 Series.
- c. ASSA ABLOY ACCENTRA (YA) - 7000 Series.

## 2.12 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.

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. 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 Americans with Disabilities Act, provide units complying with ANSI ICC/A117.1.

4. Closer Arms: Provide heavy duty, forged steel closer arms unless otherwise indicated in Hardware Sets.
  5. Closers shall not be installed on exterior or corridor side of doors; where possible install closers on door for optimum aesthetics.
  6. Closer Accessories: Provide door closer accessories including custom templates, special mounting brackets, spacers and drop plates as required for proper installation. Provide through-bolt and security type fasteners as specified in the hardware sets.
- B. Door Closers, Surface Mounted (Heavy Duty): ANSI/BHMA A156.4, Grade 1 Certified Products Directory (CPD) listed surface mounted, heavy duty door closers with complete spring power adjustment, sizes 1 thru 6; and fully operational adjustable according to door size, frequency of use, and opening force. Closers to be rack and pinion type, one piece cast iron or aluminum alloy body construction, with adjustable backcheck and separate non-critical valves for closing sweep and latch speed control. Provide non-handed units standard.
1. Heavy duty surface mounted door closers shall have a 25-year warranty.
  2. Manufacturers:
    - a. Corbin Russwin Hardware (RU) - DC6000 Series.
    - b. Norton Rixson (NO) - 7500 Series.
    - c. Sargent Manufacturing (SA) - 351 Series.

## 2.13 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: Fabricate protection plates (kick, armor, or mop) not more than 2" less than door width (LDW) on stop side of single doors and 1" LDW on stop side of pairs of doors, and not more than 1" less than door width on pull side. Coordinate and provide proper width and height as required 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 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. Burns Manufacturing (BU).
  - b. Rockwood (RO).
  - c. Trimco (TC).

## 2.14 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 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. Burns Manufacturing (BU).
    - b. Rockwood (RO).
    - c. Trimco (TC).
- C. Overhead Door Stops and Holders: ANSI/BHMA A156.8, Grade 1 Certified Products Directory (CPD) listed 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. Norton Rixson (RF).
    - b. Rockwood (RO).
    - c. Sargent Manufacturing (SA).

## 2.15 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 NPFA 252, Standard Methods of Fire Tests of Door Assemblies.
- 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. Manufacturers:
  1. Pemko (PE).
  2. Reese Enterprises, Inc. (RE).
  3. Zero (ZE).

## 2.16 ELECTRONIC ACCESSORIES

- A. Door Position Switches: Door position magnetic reed contact switches specifically designed for use in commercial door applications. On recessed models the contact and magnetic housing snap-lock into a 1" diameter hole. Surface mounted models include wide gap distance design complete with armored flex cabling. Provide SPDT, N/O switches with optional Rare Earth Magnet installation on steel doors with flush top channels.
  1. Manufacturers:
    - a. Sargent Manufacturing (SA) - 3280 Series.
    - b. Securitron (SU) - DPS Series.
- B. Switching Power Supplies: Provide power supplies with either single or dual voltage configurations at 12 or 24VDC. Power supplies shall have battery backup function with an integrated battery charging circuit and shall provide capability for power distribution, direct lock control and Fire Alarm Interface (FAI) through add on modules. Power supplies shall be expandable up to 16 individually protected outputs. Output modules shall provide individually protected, continuous outputs and/or individually protected, relay controlled outputs.
  1. Manufacturers:
    - a. Securitron (SU) - AQD Series.
    - b. Altronix (AS) - Maximal 3.

## 2.17 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.

## 2.18 FINISHES

- A. Standard: Designations used in the Hardware Sets and elsewhere indicate hardware finishes complying with ANSI/BHMA A156.18, including coordination with traditional U.S. finishes indicated by certain manufacturers for their products.
- B. Provide quality of 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.

## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Examine scheduled openings, with Installer present, for compliance with requirements for installation tolerances, labeled 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. DHI TDH-007-20: Installation Guide for Doors and Hardware.
  - 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. Retrofitting: 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 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.

### 3.5 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.

### 3.6 DEMONSTRATION

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

### 3.7 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.
  - 1. Quantities listed are for each pair of doors, or for each single door.
  - 2. The supplier is responsible for handing and sizing all products.
  - 3. Where multiple options for a piece of hardware are given in a single line item, the supplier shall provide the appropriate application for the opening.
- B. Manufacturer's Abbreviations:

- 1. MK - McKinney
- 2. SO - SOSS Invisible Hinges
- 3. PE - Pemko
- 4. SU - Securitron
- 5. RO - Rockwood
- 6. SA - SARGENT
- 7. OT - Other
- 8. EM - Emtek
- 9. RU - Corbin Russwin
- 10. RF - Rixson
- 11. NO - Norton

#### **Hardware Sets**

##### **Set: 1.0**

Doors: A154, C100

1 Continuous Hinge

CFM\_SLF-HD1 x Length Required

PE 087100

1	Narrow Rim Exit Device (STRM, CD)	DG164 16 43 8504 ETE (Cyl. Dogging)	US32D	SA	087100
1	LFIC Core	Large Format Interchangeable Core - Keyed as directed by Owner	US15	SA	087100
1	Surface Closer	351 CPS (HD Cush STP Arm)	EN	SA	087100
1	Drop Plate	351D (as required)	EN	SA	087100
1	Blade Stop Spacer Kit	581-1 or 2 (as required)	EN	SA	087100
1	Threshold	273x224AFGT MSES25SS x Length Required		PE	087100
1	Gasketing	Provided By Door/Frame Supplier		OT	
1	Sweep	3452CNB x Length Required		PE	087100

Notes: Perimeter Weatherstrip and astragals by the Aluminum Door Manufacturer.

**Set: 2.0**

Doors: B132, B133, C030, C031

1	Continuous Hinge	CFM_SLF-HD1 x Length Required		PE	087100
1	Rim Exit Device (NL, CD)	16 8804 Less Pull (Cyl. Dogging)	US32D	SA	087100
1	Surface Closer	351 CPS (HD Cush STP Arm)	EN	SA	087100
1	Drop Plate	351D (as required)	EN	SA	087100
1	Blade Stop Spacer Kit	581-1 or 2 (as required)	EN	SA	087100
1	Threshold	273x224AFGT MSES25SS x Length Required		PE	087100
1	Rain Guard	346C x Width of Frame Head		PE	087100
1	Gasketing	Provided By Door/Frame Supplier		OT	
1	Sweep	3452CNB x Length Required		PE	087100
1	Position Switch	DPS2 - M / W-BK		SU	087100

Notes: Weatherstrip by Aluminum Door Manufacturer.

System Operational Narrative:

- Door normally closed and secure.
- Door position switch provides open/closed monitoring to both access control system and intrusion alarm service.

**Set: 3.0**

Doors: A136

2	Continuous Hinge	CFM_SLF-HD1 x Length Required		PE	087100
2	Narrow CVR Exit Device (CLRM, CD)	DG164 16 43 AD8413 ETE (Cyl. Dogging)	US32D	SA	087100

4 LFIC Cylinder	type as required	US32D	SA	087100
2 Surface Closer	351 CPS (HD Cush STP Arm)	EN	SA	087100
2 Drop Plate	351D (as required)	EN	SA	087100
2 Blade Stop Spacer Kit	581-1 or 2 (as required)	EN	SA	087100
1 Threshold	273x224AFGT MSES25SS x Length Required		PE	087100
1 Gasketing	Provided By Door/Frame Supplier		OT	
2 Sweep	3452CNB x Length Required		PE	087100

Notes: Perimeter Weatherstrip and astragals by the Aluminum Door Manufacturer.

**Set: 4.0**

Doors: A130A

2 Continuous Hinge	CFM_SLF-HD1 x Length Required		PE	087100
2 Narrow CVR Exit Device (PASS)	DG164 43 AD8415 ETE	US32D	SA	087100
2 Surface Closer	351 CPS (HD Cush STP Arm)	EN	SA	087100
2 Drop Plate	351D (as required)	EN	SA	087100
2 Blade Stop Spacer Kit	581-1 or 2 (as required)	EN	SA	087100
1 Threshold	273x224AFGT MSES25SS x Length Required		PE	087100
1 Gasketing	Provided By Door/Frame Supplier		OT	
2 Sweep	3452CNB x Length Required		PE	087100

Notes: Perimeter Weatherstrip and astragals by the Aluminum Door Manufacturer.

**Set: 5.0**

Doors: P108, P109, P220, P255, P262, P263

1 Continuous Hinge	CFM_SLF-HD1 x Length Required		PE	087100
1 Narrow Rim Exit Device (PASS)	43 8515 ETE	US32D	SA	087100
1 Surface Closer (TRI-PACK)	351 UO (RA or PA Arm as Required)	EN	SA	087100
1 Drop Plate	351D (as required)	EN	SA	087100
1 Blade Stop Spacer Kit	581-1 or 2 (as required)	EN	SA	087100
1 Wall Stop	403 (or) 441CU (As Required)	US26D	RO	087100
1 Threshold	273x224AFGT MSES25SS x Length Required		PE	087100
1 Gasketing	Provided By Door/Frame Supplier		OT	
1 Sweep	3452CNB x Length Required		PE	087100

Notes: Perimeter Weatherstrip by the Aluminum Door Manufacturer.

**Set: 6.0**

1 Continuous Hinge	CFM_SLF-HD1 x Length Required	PE	087100
1 Narrow Rim Exit Device (PASS)	43 8515 ETE	US32D SA	087100
1 Surface Closer	351 CPS (HD Cush STP Arm)	EN SA	087100
1 Drop Plate	351D (as required)	EN SA	087100
1 Blade Stop Spacer Kit	581-1 or 2 (as required)	EN SA	087100
1 Threshold	273x224AFGT MSES25SS x Length Required	PE	087100
1 Gasketing	Provided By Door/Frame Supplier	OT	
1 Sweep	3452CNB x Length Required	PE	087100

Notes: Perimeter Weatherstrip and astragals by the Aluminum Door Manufacturer.

**Set: 7.0**

Doors: B130, B134, P271B

1 Hinge, Full Mortise, Hvy Wt (PWR TRNS)	T4A3386 QCX (# of Wires and Size as Required)	US32D MK	087100
3 Hinge, Full Mortise, Hvy Wt	T4A3386 (NRP and size as required)	US32D MK	087100
1 RIM Exit Device (STRM, EL TRIM-Fail Sec., RX, CD)	DG164 16 43 55 8876-24v ETE (Cyl. Dogging)	US32D SA	087100
2 LFIC Core	Large Format Interchangeable Core - Keyed as directed by Owner	US15 SA	087100
1 Surface Closer (TRI-PACK)	351 UO (RA or PA Arm as Required)	EN SA	087100
1 Kick Plate	K1050 10" high CSK BEV	US32D RO	087100
1 Wall Stop	403 (or) 441CU (As Required)	US26D RO	087100
1 Threshold	273x224AFGT MSES25SS x Length Required	PE	087100
1 Gasketing	303AS (Head & Jambs)	PE	087100
1 Rain Guard	346C x Width of Frame Head	PE	087100
1 Sweep	3452CNB x Length Required	PE	087100
1 Card Reader	Latch R Series Card Reader (By Access Control Contractor)	OT	281500
1 Harness Adaptor	52-2946	SA	
2 ElectroLynx Harness	QC-C**** x Length Required	MK	087100
1 ElectroLynx Harness (Frame)	QC-C3000P	MK	087100
1 Position Switch	DPS - M / W-BK (SPDT)	SU	087100
1 Power Supply	AQD (Size and Options as required)	SU	087100

1 Wiring Diagram Elevation and Point to Point as Specified OT

Notes: System Operational Narrative:

- Door normally closed and secure.
- Access by valid credential presentation releasing the exit trim lever for a pre-determined time limit and then relocking.
- Egress always free for immediate exit. Request-to-Exit sensor allows exit without alarm condition.
- Door position switch provides open/closed monitoring to both access control system and intrusion alarm service.
- Exit Trim remains locked (fail secure) in event of power loss. Key override cylinder for emergency access.

**Set: 8.0**

Doors: C010

8 Hinge, Full Mortise, Hvy Wt	T4A3386 (NRP and size as required)	US32D	MK	087100
1 Removable Mullion	L980S / L980A (As Required) x Length Required	PC	SA	087100
1 Rim Exit Device (STRM, CD)	DG164 16 43 8804 ETE (Cyl. Dogging)	US32D	SA	087100
1 Rim Exit Device (EO, CD)	16 43 8810 EO (Cyl. Dogging)	US32D	SA	087100
1 Removable Mullion Cylinder w/Kit	DG164 980C1	US26D	SA	087100
4 LFIC Core	Large Format Interchangeable Core - Keyed as directed by Owner	US15	SA	087100
2 Surface Closer	351 CPS (HD Cush STP Arm)	EN	SA	087100
2 Kick Plate	K1050 10" high CSK BEV	US32D	RO	087100
2 Threshold	273x224AFGT MSES25SS x Length Required		PE	087100
1 Gasketing	303AS (Head & Jambs)		PE	087100
1 Mullion Gasket	5110BL x Mullion Height		PE	087100
2 Sweep	3452CNB x Length Required		PE	087100
2 Astragal	29324CNB x Door Height		PE	087100

**Set: 9.0**

Doors: A152

4 Hinge, Full Mortise, Hvy Wt	T4A3386 (NRP and size as required)	US32D	MK	087100
1 Rim Exit Device (STRM, CD)	DG164 16 43 8804 ETE (Cyl. Dogging)	US32D	SA	087100
2 LFIC Core	Large Format Interchangeable Core - Keyed as directed by Owner	US15	SA	087100
1 Surface Closer (TRI-PACK)	351 UO (RA or PA Arm as Required)	EN	SA	087100



1 Kick Plate	K1050 10" high CSK BEV	US32D	RO	087100
1 Wall Stop	403 (or) 441CU (As Required)	US26D	RO	087100
1 Threshold	273x224AFGT MSES25SS x Length Required		PE	087100
1 Gasketing	303AS (Head & Jambs)		PE	087100
1 Rain Guard	346C x Width of Frame Head		PE	087100
1 Sweep	3452CNB x Length Required		PE	087100

**Set: 10.0**

Doors: P255, P257

8 Hinge, Full Mortise, Hvy Wt	T4A3386 (NRP and size as required)	US32D	MK	087100
1 Removable Mullion	L980S / L980A (As Required) x Length Required	PC	SA	087100
1 Fire Rated Rim Exit Device (STRM)	DG164 12 43 8804 ETE	US32D	SA	087100
1 Fire Rated Rim Exit Device (EO)	12 43 8810 EO	US32D	SA	087100
1 Removable Mullion Cylinder w/Kit	DG164 980C1	US26D	SA	087100
1 LFIC Core	Large Format Interchangeable Core - Keyed as directed by Owner	US15	SA	087100
2 Surface Closer	351 CPS (HD Cush STP Arm)	EN	SA	087100
2 Kick Plate	K1050 10" high CSK BEV	US32D	RO	087100
1 Threshold	273x224AFGT MSES25SS x Length Required		PE	087100
1 Gasketing	303AS (Head & Jambs)		PE	087100
1 Mullion Gasket	5110BL x Mullion Height		PE	087100
2 Sweep	3452CNB x Length Required		PE	087100
1 Astragal	29324CNB x Door Height		PE	087100

**Set: 11.0**

Doors: P107, P254

4 Hinge, Full Mortise, Hvy Wt	T4A3786 (NRP and size as required)	US26D	MK	087100
1 Fire Rated Rim Exit Device (STRM)	DG164 12 43 8806 ETE	US32D	SA	087100
1 LFIC Core	Large Format Interchangeable Core - Keyed as directed by Owner	US15	SA	087100
1 Surface Closer	351 CPS (HD Cush STP Arm)	EN	SA	087100
1 Kick Plate	K1050 10" high CSK BEV	US32D	RO	087100
1 Threshold	273x224AFGT MSES25SS x Length Required		PE	087100
1 Gasketing	303AS (Head & Jambs)		PE	087100
1 Sweep	3452CNB x Length Required		PE	087100

**Set: 12.0**

Doors: **B131**

4 Hinge, Full Mortise, Hvy Wt	T4A3386 (NRP and size as required)	US32D	MK	087100
1 Rim Exit Device (EO, CD)	16 43 8810 EO (Cyl. Dogging)	US32D	SA	087100
1 LFIC Core	Large Format Interchangeable Core - Keyed as directed by Owner	US15	SA	087100
1 Surface Closer	351 CPS (HD Cush STP Arm)	EN	SA	087100
1 Kick Plate	K1050 10" high CSK BEV	US32D	RO	087100
1 Threshold	273x224AFGT MSES25SS x Length Required		PE	087100
1 Gasketing	303AS (Head & Jambs)		PE	087100
1 Rain Guard	346C x Width of Frame Head		PE	087100
1 Sweep	3452CNB x Length Required		PE	087100

**Set: 13.0**

Doors: **C004**

3 Hinge, Full Mortise, Hvy Wt	T4A3386 (NRP and size as required)	US32D	MK	087100
1 Fire Rated Rim Exit Device (CLRM)	DG164 12 43 8813 ETE	US32D	SA	087100
1 LFIC Core	Large Format Interchangeable Core - Keyed as directed by Owner	US15	SA	087100
1 Surface Closer (TRI-PACK)	351 UO (RA or PA Arm as Required)	EN	SA	087100
1 Kick Plate	K1050 10" high CSK BEV	US32D	RO	087100
1 Wall Stop	403 (or) 441CU (As Required)	US26D	RO	087100
1 Threshold	273x224AFGT MSES25SS x Length Required		PE	087100
1 Gasketing	303AS (Head & Jambs)		PE	087100
1 Rain Guard	346C x Width of Frame Head		PE	087100
1 Sweep	3452CNB x Length Required		PE	087100

**Set: 14.0**

Doors: **C001A**

4 Hinge, Full Mortise, Hvy Wt	T4A3386 (NRP and size as required)	US32D	MK	087100
1 Rim Exit Device (PASS)	43 8815 ETE	US32D	SA	087100
1 Surface Closer (TRI-PACK)	351 UO (RA or PA Arm as Required)	EN	SA	087100
1 Kick Plate	K1050 10" high CSK BEV	US32D	RO	087100
1 Wall Stop	403 (or) 441CU (As Required)	US26D	RO	087100
1 Gasketing	303AS (Head & Jambs)		PE	087100

1 Sweep 3452CNB x Length Required PE 087100

**Set: 15.0**

Doors: A138, P103

1 Hinge, Full Mortise, Hvy Wt (PWR TRNS)	T4A3386 QCX (# of Wires and Size as Required)	US32D	MK	087100
3 Hinge, Full Mortise, Hvy Wt	T4A3386 (NRP and size as required)	US32D	MK	087100
1 Electrified Mortise Lock (Fail Sec., RX - EXT)	3 DG164 NAC-82271-24v LNE	US32D	SA	087100
1 LFIC Core	Large Format Interchangeable Core - Keyed as directed by Owner	US15	SA	087100
1 Surface Closer (TRI-PACK)	351 UO (RA or PA Arm as Required)	EN	SA	087100
1 Kick Plate	K1050 10" high CSK BEV	US32D	RO	087100
1 Wall Stop	403 (or) 441CU (As Required)	US26D	RO	087100
1 Threshold	171A MSES25SS x Length Required		PE	087100
1 Gasketing	303AS (Head & Jambs)		PE	087100
1 Auto Door Bottom	4131CPK x Length Required		PE	087100
1 Card Reader	Latch R Series Card Reader (By Access Control Contractor)		OT	281500
1 ElectroLynx Harness	QC-C**** x Length Required		MK	087100
1 ElectroLynx Harness (Frame)	QC-C3000P		MK	087100
1 Position Switch	DPS - M / W-BK (SPDT)		SU	087100
1 Power Supply	AQD (Size and Options as required)		SU	087100
1 Wiring Diagram	Elevation and Point to Point as Specified		OT	

Notes: System Operational Narrative:

- Door is normally closed and secure.
- When a proper credential is presented to the Card Reader (by Others) the lever on the secure side of the opening will be momentarily released to allow entry.
- The lever on the unsecured side is free at all times for egress. Request-to-Exit sensor allows exit without alarm condition.
- Key outside retracts latch.
- Lock is Fail Secure and will remain locked in the event of a fire emergency or power outage.

**Set: 16.0**

Doors: P105, P239, P260

8 Hinge, Full Mortise, Hvy Wt	T4A3386 (NRP and size as required)	US32D	MK	087100
1 Self Latching Flush Bolt Set	2845 / 2945 (as required)	US26D	RO	087100
1 Dust Proof Strike	570	US26D	RO	087100

1 Storeroom/Closet Lock	DG164 8204 LNE	US32D	SA	087100
1 LFIC Core	Large Format Interchangeable Core - Keyed as directed by Owner	US15	SA	087100
2 Surf Overhead Stop	10-X36	630	RF	087100
2 Surface Closer (TRI-PACK)	351 UO (RA or PA Arm as Required)	EN	SA	087100
2 Kick Plate	K1050 10" high CSK BEV	US32D	RO	087100
1 Threshold	171A MSES25SS x Length Required		PE	087100
1 Gasketing	303AS (Head & Jambs)		PE	087100
2 Auto Door Bottom	4131CPK x Length Required		PE	087100
1 Flat Astragal	357C x Door Height		PE	087100

**Set: 17.0**

Doors: [A153](#)

4 Hinge, Full Mortise, Hvy Wt	T4A3386 (NRP and size as required)	US32D	MK	087100
1 Storeroom/Closet Lock	DG164 8204 LNE	US32D	SA	087100
1 LFIC Core	Large Format Interchangeable Core - Keyed as directed by Owner	US15	SA	087100
1 Surface Closer (TRI-PACK)	351 UO (RA or PA Arm as Required)	EN	SA	087100
1 Kick Plate	K1050 10" high CSK BEV	US32D	RO	087100
1 Wall Stop	403 (or) 441CU (As Required)	US26D	RO	087100
1 Threshold	171A MSES25SS x Length Required		PE	087100
1 Gasketing	303AS (Head & Jambs)		PE	087100
1 Sweep	3452CNB x Length Required		PE	087100

**Set: 18.0**

Doors: [C007](#), [C019A](#), [C020](#), [C042](#), [P201A](#)

3 Hinge, Full Mortise, Hvy Wt	T4A3386 (NRP and size as required)	US32D	MK	087100
1 Storeroom/Closet Lock	3 8204 LNE	US32D	SA	087100
1 LFIC Core	Large Format Interchangeable Core - Keyed as directed by Owner	US15	SA	087100
1 Surface Closer	UNI7500	689	NO	087100
1 Kick Plate	K1050 10" high CSK BEV	US32D	RO	087100
1 Threshold	273x224AFGT MSES25SS x Length Required		PE	087100
1 Gasketing	303AS (Head & Jambs)		PE	087100
1 Rain Guard	346C x Width of Frame Head		PE	087100
1 Sweep	3452CNB x Length Required		PE	087100
1 Position Switch	DPS - M / W-BK (SPDT)		SU	087100

**Set: 18.1**

Doors: [A139](#), [C018](#), [C022](#), [C024](#)

4 Hinge, Full Mortise, Hvy Wt	<a href="#">T4A3386 (NRP and size as required)</a>	US32D	MK	087100
1 Storeroom/Closet Lock	<a href="#">3 8204 LNE</a>	US32D	SA	087100
1 LFIC Core	<a href="#">Large Format Interchangeable Core - Keyed as directed by Owner</a>	US15	SA	087100
1 Surface Closer	<a href="#">UNI7500</a>	689	NO	087100
1 Kick Plate	<a href="#">K1050 10" high CSK BEV</a>	US32D	RO	087100
1 Threshold	<a href="#">273x224AFGT MSES25SS x Length Required</a>		PE	087100
1 Gasketing	<a href="#">303AS (Head &amp; Jambs)</a>		PE	087100
1 Rain Guard	<a href="#">346C x Width of Frame Head</a>		PE	087100
1 Sweep	<a href="#">3452CNB x Length Required</a>		PE	087100
1 Position Switch	<a href="#">DPS - M / W-BK (SPDT)</a>		SU	087100

**Set: 19.0**

Doors: [P236](#)

4 Hinge, Full Mortise, Hvy Wt	<a href="#">T4A3386 (NRP and size as required)</a>	US32D	MK	087100
1 Storeroom/Closet Lock	<a href="#">DG164 8204 LNE</a>	US32D	SA	087100
1 LFIC Core	<a href="#">Large Format Interchangeable Core - Keyed as directed by Owner</a>	US15	SA	087100
1 Surf Overhead Stop	<a href="#">10-X36</a>	630	RF	087100
1 Surface Closer (TRI-PACK)	<a href="#">351 UO (RA or PA Arm as Required)</a>	EN	SA	087100
1 Kick Plate	<a href="#">K1050 10" high CSK BEV</a>	US32D	RO	087100
1 Threshold	<a href="#">171A MSES25SS x Length Required</a>		PE	087100
1 Gasketing	<a href="#">303AS (Head &amp; Jambs)</a>		PE	087100
1 Auto Door Bottom	<a href="#">4131CPK x Length Required</a>		PE	087100

**Set: 20.0**

Doors: [C031A](#)

3 Hinge, Full Mortise, Hvy Wt	<a href="#">T4A3386 (NRP and size as required)</a>	US32D	MK	087100
1 Passage Latch	<a href="#">8215 LNE</a>	US32D	SA	087100
1 Surface Closer (TRI-PACK)	<a href="#">351 UO (RA or PA Arm as Required)</a>	EN	SA	087100
1 Kick Plate	<a href="#">K1050 10" high CSK BEV</a>	US32D	RO	087100
1 Wall Stop	<a href="#">403 (or) 441CU (As Required)</a>	US26D	RO	087100
1 Threshold	<a href="#">171A MSES25SS x Length Required</a>		PE	087100
1 Gasketing	<a href="#">303AS (Head &amp; Jambs)</a>		PE	087100

1 Auto Door Bottom 4131CPK x Length Required PE 087100

**Set: 21.0**

Doors: A119, A120, A130B

2 Continuous Hinge	CFM_SLF-HD1 PT x Length Required		PE	087100
2 Electric Power Transfer	EL-CEPT	630	SU	087100
1 Narrow CVR Exit Device w/ Pull (NL, RX, ELR, CD)	16 43 55 56 DG164 AD8410 106 x 862 (Cyl. Dogging)	US32D	SA	087100
1 Narrow CVR Exit Device w/Pull (EO, RX, ELR, CD)	16 43 55 56 AD8410 862 (Cyl. Dogging)	US32D	SA	087100
3 LFIC Core	Large Format Interchangeable Core - Keyed as directed by Owner	US15	SA	087100
2 Surface Closer	351 CPS (HD Cush STP Arm)	EN	SA	087100
2 Drop Plate	351D (as required)	EN	SA	087100
2 Blade Stop Spacer Kit	581-1 or 2 (as required)	EN	SA	087100
1 Gasketing	Provided By Door/Frame Supplier		OT	
1 Card Reader	Latch R Series Card Reader (By Access Control Contractor)		OT	281500
2 Harness Adaptor	52-2946		SA	
2 ElectroLynx Harness	QC-C**** x Length Required		MK	087100
2 ElectroLynx Harness (Frame)	QC-C3000P		MK	087100
2 Position Switch	DPS - M / W-BK (SPDT)		SU	087100
1 Power Supply	AQD (Size and Options as required)		SU	087100
1 Wiring Diagram	Elevation and Point to Point as Specified		OT	

Notes: Perimeter Weatherstrip and astragals by the Aluminum Door Manufacturer.

System Operational Narrative:

- Doors are normally closed and latched.
- Active leaf Exit Device has Nightlatch Function (Key will retract the exit device latch, door is latched when the key is removed).
- When an authorized card read is detected on the secured side of the door the access control system will momentarily retract the exit device latch to allow authorized access.
- Manual egress is always available by pressing either exit device push bar of the pair. Request-to-Exit sensor allows exit without alarm condition.
- The exit device is fail secure and will latch in the absence of power.
- Door position switches at each leaf will signal the doors OPEN/CLOSED status to the access control panel.

**Set: 22.0**

Doors: C001B

1 Continuous Hinge	CFM_SLF-HD1 x Length Required	PE	087100
1 Narrow Rim Exit Device (PASS)	43 8515 ETE	US32D SA	087100
1 Surface Closer (TRI-PACK)	351 UO (RA or PA Arm as Required)	EN SA	087100
1 Drop Plate	351D (as required)	EN SA	087100
1 Blade Stop Spacer Kit	581-1 or 2 (as required)	EN SA	087100
1 Wall Stop	403 (or) 441CU (As Required)	US26D RO	087100
1 Gasketing	Provided By Door/Frame Supplier	OT	

Notes: Perimeter Weatherstrip and astragals by the Aluminum Door Manufacturer.

**Set: 23.0**

Doors: A107

2 Continuous Hinge	CFM_SLF-HD1 x Length Required	PE	087100
2 Push Bar & Pull	BF15847 Mtg-Type 5 (Back-to-Back)	US32D RO	087100
2 Surface Closer	351 CPS (HD Cush STP Arm)	EN SA	087100
2 Drop Plate	351D (as required)	EN SA	087100
2 Blade Stop Spacer Kit	581-1 or 2 (as required)	EN SA	087100
1 Gasketing	Provided By Door/Frame Supplier	OT	

Notes: Perimeter and meeting stile gasket by door / frame manufacturer.

**Set: 24.0**

Doors: C111

3 Hinge, Full Mortise, Hvy Wt	T4A3786 (NRP and size as required)	US26D MK	087100
1 Hinge, Full Mortised, Hvy Wt (PWR TRNS)	T4A3786 QCx (# of Wires as Required)	US26D MK	087100
1 RIM Exit Device (STRM, EL TRIM-Fail Sec., RX, CD)	DG164 16 43 55 8876-24v ETE (Cyl. Dogging)	US32D SA	087100
1 LFIC Core	Large Format Interchangeable Core - Keyed as directed by Owner	US15 SA	087100
1 Surface Closer	351 CPS (HD Cush STP Arm)	EN SA	087100
1 Kick Plate	K1050 10" high CSK BEV	US32D RO	087100
3 Silencer	608	RO	087100
1 Card Reader	Latch R Series Card Reader (By Access Control Contractor)	OT	281500

1 Harness Adaptor	52-2946	SA
1 ElectroLynx Harness	QC-C**** x Length Required	MK 087100
1 ElectroLynx Harness (Frame)	QC-C3000P	MK 087100
1 Position Switch	DPS - M / W-BK (SPDT)	SU 087100
1 Power Supply	AQD (Size and Options as required)	SU 087100
1 Wiring Diagram	Elevation and Point to Point as Specified	OT

Notes: System Operational Narrative:

- Door normally closed and secure.
- Access by valid credential presentation unlocking lever trim for a pre-determined time limit and then relocking.
- Egress always free for immediate exit. Request-to-Exit sensor allows exit without alarm condition.
- Door position switch provides open/closed monitoring to both access control system and intrusion alarm service.
- Outside lever trim remains locked (fail secure) in event of power loss. Key override cylinder for emergency access.

**Set: 25.0**

Doors: [A141](#), [A142](#)

3 Hinge, Full Mortise, Hvy Wt	T4A3786 (NRP and size as required)	US26D	MK 087100
1 Hinge, Full Mortised, Hvy Wt (PWR TRNS)	T4A3786 QCx (# of Wires as Required)	US26D	MK 087100
1 Fire Rated Rim Exit Device (STRM, EL TRIM (Fail Sec.), RX)	DG164 12 43 55 8876-24v ETE	US32D	SA 087100
1 LFIC Core	Large Format Interchangeable Core - Keyed as directed by Owner	US15	SA 087100
1 Surface Closer (TRI-PACK)	351 UO (RA or PA Arm as Required)	EN	SA 087100
1 Kick Plate	K1050 10" high CSK BEV	US32D	RO 087100
1 Wall Stop	403 (or) 441CU (As Required)	US26D	RO 087100
1 Gasketing	S88BL (Head & Jambs)	PE	087100
1 Card Reader	Latch R Series Card Reader (By Access Control Contractor)	OT	281500
1 Harness Adaptor	52-2946	SA	
2 ElectroLynx Harness	QC-C**** x Length Required	MK	087100
1 ElectroLynx Harness (Frame)	QC-C3000P	MK	087100
1 Position Switch	DPS - M / W-BK (SPDT)	SU	087100
1 Power Supply	AQD (Size and Options as required)	SU	087100
1 Wiring Diagram	Elevation and Point to Point as Specified	OT	



Notes: System Operational Narrative:

- Door normally closed and secure.
- Access by valid credential presentation unlocking lever trim for a pre-determined time limit and then relocking.
- Egress always free for immediate exit. Request-to-Exit sensor allows exit without alarm condition.
- Door position switch provides open/closed monitoring to both access control system and intrusion alarm service.
- Outside lever trim remains locked (fail secure) in event of power loss. Key override cylinder for emergency access.

**Set: 26.0**

Doors: [A143](#)

3 Hinge, Full Mortise, Hvy Wt	<a href="#">T4A3786 (NRP and size as required)</a>	US26D	MK	087100
1 Hinge, Full Mortised, Hvy Wt (PWR TRNS)	<a href="#">T4A3786 QCx (# of Wires as Required)</a>	US26D	MK	087100
1 Fire Rated Rim Exit Device (STRM, EL TRIM (Fail Sec.), RX)	<a href="#">DG164 12 43 55 8876-24v ETE</a>	US32D	SA	087100
1 LFIC Core	<a href="#">Large Format Interchangeable Core - Keyed as directed by Owner</a>	US15	SA	087100
1 Surface Closer	<a href="#">351 CPS (HD Cush STP Arm)</a>	EN	SA	087100
1 Kick Plate	<a href="#">K1050 10" high CSK BEV</a>	US32D	RO	087100
1 Gasketing	<a href="#">S88BL (Head &amp; Jambs)</a>		PE	087100
1 Card Reader	Latch R Series Card Reader (By Access Control Contractor)		OT	281500
1 Harness Adaptor	52-2946		SA	
1 ElectroLynx Harness	<a href="#">QC-C**** x Length Required</a>		MK	087100
1 ElectroLynx Harness (Frame)	<a href="#">QC-C3000P</a>		MK	087100
1 Position Switch	<a href="#">DPS - M / W-BK (SPDT)</a>		SU	087100
1 Power Supply	<a href="#">AQD (Size and Options as required)</a>		SU	087100
1 Wiring Diagram	Elevation and Point to Point as Specified		OT	

Notes: System Operational Narrative:

- Door normally closed and secure.
- Access by valid credential presentation unlocking lever trim for a pre-determined time limit and then relocking.
- Egress always free for immediate exit. Request-to-Exit sensor allows exit without alarm condition.
- Door position switch provides open/closed monitoring to both access control system and intrusion alarm service.
- Outside lever trim remains locked (fail secure) in event of power loss. Key override cylinder for emergency access.

**Set: 27.0**

Doors: [C802](#)

4 Hinge, Full Mortise, Hvy Wt	<a href="#">T4A3786 (NRP and size as required)</a>	US26D	MK	087100
1 Fire Rated Rim Exit Device (STRM)	<a href="#">DG164 12 43 8806 ETE</a>	US32D	SA	087100
1 LFIC Core	<a href="#">Large Format Interchangeable Core - Keyed as directed by Owner</a>	US15	SA	087100
1 Surface Closer	<a href="#">351 CPS (HD Cush STP Arm)</a>	EN	SA	087100
1 Kick Plate	<a href="#">K1050 10" high CSK BEV</a>	US32D	RO	087100
1 Gasketing	<a href="#">S88BL (Head &amp; Jambs)</a>		PE	087100

**Set: 28.0**

Doors: [B107](#)

3 Hinge, Full Mortise, Hvy Wt	<a href="#">T4A3786 (NRP and size as required)</a>	US26D	MK	087100
1 Rim Exit Device (PASS)	<a href="#">43 8815 ETE</a>	US32D	SA	087100
1 Surface Closer (TRI-PACK)	<a href="#">351 UO (RA or PA Arm as Required)</a>	EN	SA	087100
1 Kick Plate	<a href="#">K1050 10" high CSK BEV</a>	US32D	RO	087100
1 Wall Stop	<a href="#">403 (or) 441CU (As Required)</a>	US26D	RO	087100
3 Silencer	<a href="#">608</a>		RO	087100

**Set: 29.0**

Doors: [P104](#)

3 Hinge, Full Mortise, Hvy Wt	<a href="#">T4A3786 (NRP and size as required)</a>	US26D	MK	087100
1 Rim Exit Device, Passage	<a href="#">12 8815 ETNJ</a>	US32D	SA	087100
1 Surface Closer	<a href="#">PR7500</a>	689	NO	087100
1 Kick Plate	<a href="#">K1050 10" high CSK BEV</a>	US32D	RO	087100
1 Wall Stop	<a href="#">403 (or) 441CU (As Required)</a>	US26D	RO	087100
1 Gasketing	<a href="#">S88BL (Head &amp; Jambs)</a>		PE	087100

**Set: 29.1**

Doors: [A030, A031, A140, A201, A202, A204, A205, A301, A302, A304, A305, A401, A402, A404, A405, A501, A502, A504, A505, A604, A605, B002, B003, B101A, B101B, B102, B103, B201, B202, B204, B205, B301, B302, B304, B305, B401, B402, B404, B405, B501, B502, B504, B505, B601, B602, B604, B605, B701, B704, B705, C040, C140, C240, C840, C841, C850, P112, P113, P270, P271A, P272, P273](#)

4 Hinge, Full Mortise, Hvy Wt	<a href="#">T4A3786 (NRP and size as required)</a>	US26D	MK	087100
1 Rim Exit Device, Passage	<a href="#">12 8815 ETNJ</a>	US32D	SA	087100
1 Surface Closer	<a href="#">PR7500</a>	689	NO	087100

1 Kick Plate	K1050 10" high CSK BEV	US32D	RO	087100
1 Wall Stop	403 (or) 441CU (As Required)	US26D	RO	087100
1 Gasketing	S88BL (Head & Jambs)		PE	087100

**Set: 30.0**

Doors: B104, C050, C150

3 Hinge, Full Mortise, Hvy Wt	T4A3786 (NRP and size as required)	US26D	MK	087100
1 Rim Exit Device, Passage	12 8815 ETNJ	US32D	SA	087100
1 Surface Closer	CLP7500 (HD PA Stp Arm)	689	NO	087100
1 Kick Plate	K1050 10" high CSK BEV	US32D	RO	087100
1 Gasketing	S88BL (Head & Jambs)		PE	087100

**Set: 31.0**

Doors: A113, C107, C108, C111A

3 Hinge, Full Mortise, Hvy Wt	T4A3786 (NRP and size as required)	US26D	MK	087100
1 Hinge, Full Mortised, Hvy Wt (PWR TRNS)	T4A3786 QCx (# of Wires as Required)	US26D	MK	087100
1 Electrified Mortise Lock (Fail Sec., RX - EXT)	3 DG164 NAC-82271-24v LNE	US32D	SA	087100
1 LFIC Core	Large Format Interchangeable Core - Keyed as directed by Owner	US15	SA	087100
1 Surface Closer (TRI-PACK)	351 UO (RA or PA Arm as Required)	EN	SA	087100
1 Kick Plate	K1050 10" high CSK BEV	US32D	RO	087100
1 Wall Stop	403 (or) 441CU (As Required)	US26D	RO	087100
3 Silencer	608		RO	087100
1 Card Reader	Latch R Series Card Reader (By Access Control Contractor)		OT	281500
1 ElectroLynx Harness	QC-C**** x Length Required		MK	087100
1 ElectroLynx Harness (Frame)	QC-C3000P		MK	087100
1 Position Switch	DPS - M / W-BK (SPDT)		SU	087100
1 Power Supply	AQD (Size and Options as required)		SU	087100
1 Wiring Diagram	Elevation and Point to Point as Specified		OT	

Notes: System Operational Narrative:

- Door is normally closed and secure.
- When a proper credential is presented to the Card Reader (by Others) the lever on the secure side of the opening will be momentarily released to allow entry.
- The lever on the unsecured side is free at all times for egress. Request-to-Exit sensor allows exit without alarm condition.

- Key outside retracts latch.
- Lock is Fail Secure and will remain locked in the event of a fire emergency or power outage.

**Set: 32.0**

Doors: [A033](#)

4 Hinge, Full Mortise, Hvy Wt	<a href="#">T4A3786 (NRP and size as required)</a>	US26D	MK	087100
1 Access Control Mortised Lockset	LATCH M-Series Mortised Lockset	BLACK	OT	281500
1 Surface Closer	<a href="#">351 CPS (HD Cush STP Arm)</a>	EN	SA	087100
1 Kick Plate	<a href="#">K1050 10" high CSK BEV</a>	US32D	RO	087100
3 Silencer	<a href="#">608</a>		RO	087100

Notes: System Operational Narrative:

- Door is normally closed and secure.
- When a proper credential is presented to the Card Reader Integrated in the lockset escutcheon, the lever on the secure side of the opening will be momentarily released to allow entry.
- The lever on the unsecured side is free at all times for egress.
- Key outside retracts latch.
- Lock is Fail Secure and will remain locked in the event of power failure, (Lock is Battery Powered).

**Set: 33.0**

Doors: [B121](#)

4 Hinge, Full Mortise, Hvy Wt	<a href="#">T4A3786 (NRP and size as required)</a>	US26D	MK	087100
1 Access Control Mortised Lockset	LATCH M-Series Mortised Lockset	BLACK	OT	281500
1 Surf Overhead Stop	<a href="#">10-X36</a>	630	RF	087100
1 Surface Closer (TRI-PACK)	<a href="#">351 UO (RA or PA Arm as Required)</a>	EN	SA	087100
1 Kick Plate	<a href="#">K1050 10" high CSK BEV</a>	US32D	RO	087100
3 Silencer	<a href="#">608</a>		RO	087100

Notes: System Operational Narrative:

- Door is normally closed and secure.
- When a proper credential is presented to the Card Reader Integrated in the lockset escutcheon, the lever on the secure side of the opening will be momentarily released to allow entry.
- The lever on the unsecured side is free at all times for egress.
- Key outside retracts latch.
- Lock is Fail Secure and will remain locked in the event of power failure, (Lock is Battery Powered).

**Set: 34.0**

Doors: [B001A](#), [B001B](#)

8 Hinge, Full Mortise, Hvy Wt	<a href="#">T4A3786 (NRP and size as required)</a>	US26D	MK	087100
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1 Self Latching Flush Bolt Set	2845 / 2945 (as required)	US26D	RO	087100
1 Dust Proof Strike	570	US26D	RO	087100
1 Storeroom/Closet Lock	DG164 8204 LNE	US32D	SA	087100
1 LFIC Core	Large Format Interchangeable Core - Keyed as directed by Owner	US15	SA	087100
2 Surface Closer (TRI-PACK)	351 UO (RA or PA Arm as Required)	EN	SA	087100
2 Kick Plate	K1050 10" high CSK BEV	US32D	RO	087100
2 Wall Stop	403 (or) 441CU (As Required)	US26D	RO	087100
2 Silencer	608		RO	087100

**Set: 35.0**

Doors: [A034](#)

4 Hinge, Full Mortise, Hvy Wt	T4A3786 (NRP and size as required)	US26D	MK	087100
1 Storeroom/Closet Lock	DG164 8204 LNE	US32D	SA	087100
1 LFIC Core	Large Format Interchangeable Core - Keyed as directed by Owner	US15	SA	087100
1 Surf Overhead Stop	10-X36	630	RF	087100
3 Silencer	608		RO	087100

**Set: 36.0**

Doors: [A012](#), [P115](#), [P116](#)

3 Hinge, Full Mortise	TA2714 (NRP and size as required)	US26D	MK	087100
1 Storeroom/Closet Lock	DG164 8204 LNE	US32D	SA	087100
1 LFIC Core	Large Format Interchangeable Core - Keyed as directed by Owner	US15	SA	087100
1 Surface Closer (TRI-PACK)	351 UO (RA or PA Arm as Required)	EN	SA	087100
1 Kick Plate	K1050 10" high CSK BEV	US32D	RO	087100
1 Wall Stop	403 (or) 441CU (As Required)	US26D	RO	087100
3 Silencer	608		RO	087100

**Set: 37.0**

Doors: [A015](#), [A017](#), [A019](#), [A022](#), [A035](#), [A036](#), [A110](#), [A114](#), [A125](#), [A132](#), [A135](#), [A601](#), [A602](#), [B005](#), [B006](#), [B007](#), [B008](#), [B010](#), [B013](#), [B123](#), [C105](#), [C106](#), [C107A](#), [C108A](#), [C108B](#), [C109](#), [C110](#), [C112](#), [C842](#), [C852](#), [P102](#), [P106](#), [P110](#), [P111](#), [P213](#), [P214](#), [P215](#), [P222A](#), [P223A](#), [P244](#), [P250](#), [P252](#), [P253](#), [P256](#), [P257](#), [P258](#), [P259](#), [P274](#)

4 Hinge, Full Mortise, Hvy Wt	T4A3786 (NRP and size as required)	US26D	MK	087100
1 Storeroom/Closet Lock	DG164 8204 LNE	US32D	SA	087100
1 LFIC Core	Large Format Interchangeable Core -	US15	SA	087100

	Keyed as directed by Owner			
1 Surface Closer (TRI-PACK)	351 UO (RA or PA Arm as Required)	EN	SA	087100
1 Kick Plate	K1050 10" high CSK BEV	US32D	RO	087100
1 Wall Stop	403 (or) 441CU (As Required)	US26D	RO	087100
3 Silencer	608		RO	087100

**Set: 38.0**

Doors: [A126](#), [B016](#), [B122](#)

4 Hinge, Full Mortise, Hvy Wt	T4A3786 (NRP and size as required)	US26D	MK	087100
1 Storeroom/Closet Lock	DG164 8204 LNE	US32D	SA	087100
1 LFIC Core	Large Format Interchangeable Core - Keyed as directed by Owner	US15	SA	087100
1 Surface Closer	351 CPS (HD Cush STP Arm)	EN	SA	087100
1 Kick Plate	K1050 10" high CSK BEV	US32D	RO	087100
3 Silencer	608		RO	087100

**Set: 39.0**

Doors: [A124](#), [C021](#), [C801](#)

4 Hinge, Full Mortise, Hvy Wt	T4A3786 (NRP and size as required)	US26D	MK	087100
1 Storeroom/Closet Lock	DG164 8204 LNE	US32D	SA	087100
1 LFIC Core	Large Format Interchangeable Core - Keyed as directed by Owner	US15	SA	087100
1 Surf Overhead Stop	10-X36	630	RF	087100
1 Surface Closer (TRI-PACK)	351 UO (RA or PA Arm as Required)	EN	SA	087100
1 Kick Plate	K1050 10" high CSK BEV	US32D	RO	087100
3 Silencer	608		RO	087100

**Set: 40.0**

Doors: [B703](#), [B706](#)

4 Hinge, Full Mortise, Hvy Wt	T4A3786 (NRP and size as required)	US26D	MK	087100
1 Storeroom/Closet Lock	DG164 8204 LNE	US32D	SA	087100
1 LFIC Core	Large Format Interchangeable Core - Keyed as directed by Owner	US15	SA	087100
1 Surface Closer (TRI-PACK)	351 UO (RA or PA Arm as Required)	EN	SA	087100
1 Kick Plate	K1050 10" high CSK BEV	US32D	RO	087100
1 Wall Stop	403 (or) 441CU (As Required)	US26D	RO	087100
1 Gasketing	S88BL (Head & Jambs)		PE	087100

**Set: 41.0**

Doors: [B707](#), [C803](#)

4 Hinge, Full Mortise, Hvy Wt	<a href="#">T4A3786 (NRP and size as required)</a>	US26D	MK	087100
1 Storeroom/Closet Lock	<a href="#">DG164 8204 LNE</a>	US32D	SA	087100
1 LFIC Core	<a href="#">Large Format Interchangeable Core - Keyed as directed by Owner</a>	US15	SA	087100
1 Surface Closer	<a href="#">351 CPS (HD Cush STP Arm)</a>	EN	SA	087100
1 Kick Plate	<a href="#">K1050 10" high CSK BEV</a>	US32D	RO	087100
1 Gasketing	<a href="#">S88BL (Head &amp; Jambs)</a>		PE	087100

**Set: 42.0**

Doors: [A104](#), [A115](#), [B106](#), [B111](#)

4 Hinge, Full Mortise, Hvy Wt	<a href="#">T4A3786 (NRP and size as required)</a>	US26D	MK	087100
1 Office/Entry Lock	<a href="#">DG164 8205 LNE</a>	US32D	SA	087100
1 LFIC Core	<a href="#">Large Format Interchangeable Core - Keyed as directed by Owner</a>	US15	SA	087100
1 Wall Stop	<a href="#">403 (or) 441CU (As Required)</a>	US26D	RO	087100
1 Silencer	<a href="#">608</a>		RO	087100

**Set: 43.0**

Doors: [A133](#), [B105](#)

4 Hinge, Full Mortise	<a href="#">TA2714 (NRP and size as required)</a>	US26D	MK	087100
1 Office/Entry Lock	<a href="#">DG164 8205 LNE</a>	US32D	SA	087100
1 LFIC Core	<a href="#">Large Format Interchangeable Core - Keyed as directed by Owner</a>	US15	SA	087100
1 Surface Closer (TRI-PACK)	<a href="#">351 UO (RA or PA Arm as Required)</a>	EN	SA	087100
1 Kick Plate	<a href="#">K1050 10" high CSK BEV</a>	US32D	RO	087100
1 Wall Stop	<a href="#">403 (or) 441CU (As Required)</a>	US26D	RO	087100
1 Silencer	<a href="#">608</a>		RO	087100

**Set: 44.0**

Doors: [A001](#), [B004A](#), [B004B](#)

3 Hinge, Full Mortise	<a href="#">TA2714 (NRP and size as required)</a>	US26D	MK	087100
1 Classroom Lock	<a href="#">DG164 8237 LNE</a>	US32D	SA	087100
1 LFIC Core	<a href="#">Large Format Interchangeable Core - Keyed as directed by Owner</a>	US15	SA	087100

1 Surface Closer (TRI-PACK)	351 UO (RA or PA Arm as Required)	EN	SA	087100
1 Kick Plate	K1050 10" high CSK BEV	US32D	RO	087100
1 Wall Stop	403 (or) 441CU (As Required)	US26D	RO	087100
1 Silencer	608		RO	087100

**Set: 45.0**

Doors: A010, A011, A016, A021A, A108a, A108b, A108c, A109a, A109b, A109c, A117, A122b, A122e, A122g, A123b, A123c, A123d

4 Hinge, Full Mortise	TA2714 (NRP and size as required)	US26D	MK	087100
1 Privacy Lock	V21 8265 LNE	US32D	SA	087100
1 Kick Plate	K1050 10" high CSK BEV	US32D	RO	087100
1 Wall Stop	403 (or) 441CU (As Required)	US26D	RO	087100
1 Silencer	608		RO	087100
1 Coat Hook	RM801	US26D	RO	087100

**Set: 46.0**

Doors: A009, A021B, A021C, A023A, A023B, A122c, A122d, A123e, A123f

3 Hinge, Full Mortise	TA2714 (NRP and size as required)	US26D	MK	087100
1 Privacy Lock	V21 8265 LNE	US32D	SA	087100
1 Surf Overhead Stop	10-X36	630	RF	087100
1 Kick Plate	K1050 10" high CSK BEV	US32D	RO	087100
1 Silencer	608		RO	087100
1 Coat Hook	RM801	US26D	RO	087100

**Set: 47.0**

Doors: A106, A116, B012, B015, B116, B117, B118, C103, C104

3 Hinge, Full Mortise	TA2714 (NRP and size as required)	US26D	MK	087100
1 Privacy Lock	V21 8265 LNE	US32D	SA	087100
1 Surface Closer (TRI-PACK)	351 UO (RA or PA Arm as Required)	EN	SA	087100
1 Kick Plate	K1050 10" high CSK BEV	US32D	RO	087100
1 Wall Stop	403 (or) 441CU (As Required)	US26D	RO	087100
1 Gasketing	S88BL (Head & Jambs)		PE	087100
1 Coat Hook	RM801	US26D	RO	087100



**Set: 48.0**

Doors: [A014](#), [A018](#), [B109](#), [C109A](#), [C110A](#)

3 Hinge, Full Mortise	<a href="#">TA2714 (NRP and size as required)</a>	US26D	MK	087100
1 Passage Latch	<a href="#">8215 LNE</a>	US32D	SA	087100
1 Surface Closer (TRI-PACK)	<a href="#">351 UO (RA or PA Arm as Required)</a>	EN	SA	087100
1 Kick Plate	<a href="#">K1050 10" high CSK BEV</a>	US32D	RO	087100
1 Wall Stop	<a href="#">403 (or) 441CU (As Required)</a>	US26D	RO	087100
3 Silencer	<a href="#">608</a>		RO	087100

**Set: 49.0**

Doors: [B011](#), [P258A](#), [P268A](#)

3 Hinge, Full Mortise	<a href="#">TA2714 (NRP and size as required)</a>	US26D	MK	087100
1 Passage Latch	<a href="#">8215 LNE</a>	US32D	SA	087100
1 Surface Closer (TRI-PACK)	<a href="#">351 UO (RA or PA Arm as Required)</a>	EN	SA	087100
1 Kick Plate	<a href="#">K1050 10" high CSK BEV</a>	US32D	RO	087100
1 Wall Stop	<a href="#">403 (or) 441CU (As Required)</a>	US26D	RO	087100
1 Gasketing	<a href="#">S88BL (Head &amp; Jambs)</a>		PE	087100

**Set: 50.0**

Doors: [C026](#)

3 Hinge, Full Mortise	<a href="#">TA2714 (NRP and size as required)</a>	US26D	MK	087100
1 Passage Latch	<a href="#">8215 LNE</a>	US32D	SA	087100
1 Surface Closer	<a href="#">351 CPS (HD Cush STP Arm)</a>	EN	SA	087100
1 Kick Plate	<a href="#">K1050 10" high CSK BEV</a>	US32D	RO	087100
1 Gasketing	<a href="#">S88BL (Head &amp; Jambs)</a>		PE	087100

**Set: 51.0**

Doors: [A021](#), [A023](#), [A108](#), [A109](#), [A122a](#), [A122h](#), [A123a](#), [A123g](#), [B014](#)

3 Hinge, Full Mortise, Hvy Wt	<a href="#">T4A3786 (NRP and size as required)</a>	US26D	MK	087100
1 Push Plate	<a href="#">70C-RKW</a>	US32D	RO	087100
1 Pull	<a href="#">RM3020-12 Mtg-Type 12XHD</a>	US32-316	RO	087100
1 Surface Closer (TRI-PACK)	<a href="#">351 UO (RA or PA Arm as Required)</a>	EN	SA	087100
1 Kick Plate	<a href="#">K1050 10" high CSK BEV</a>	US32D	RO	087100
1 Wall Stop	<a href="#">403 (or) 441CU (As Required)</a>	US26D	RO	087100
1 Silencer	<a href="#">608</a>		RO	087100

**Set: 52.0**

Doors: U-02A, U-02A, U-02B, U-03B, U-04A

4 Hinge	BY PRE-HUNG DOOR SUPPLIER	613		
1 Passage Latch	Sun Valley Bronze (Coordinate style and finish with Architect)		OT	
1 Door Stop	505/528	US10B	RO	087100

Notes: PROVIDE HINGE PIN OR BASE STOP PER OPENING CONDITIONS.

**Set: 53.0**

Doors: U-02A, U-02B

3 Hinge	BY PRE-HUNG DOOR SUPPLIER	613		
1 Privacy Lock	Sun Valley Bronze (Coordinate Style and Finish with Architect)		OT	
1 Door Stop	505/528	US10B	RO	087100

Notes: PROVIDE HINGE PIN OR BASE STOP PER OPENING CONDITIONS.

**Set: 54.0**

Doors: B702, C251, C252, C340, C350, C440, C450, C540, C550, C640, C650, C740, C750, U-01A, U-01B, U-10A

6 Invisible Self Closing Hinge	218 IC Concealed Hinge (Rated Where Required)	IS10B	SO	
1 Access Control Mortised Lockset	LATCH M-Series Mortised Lockset	BLACK	OT	281500
1 Door Stop	519	US10B	RO	087100
1 Threshold	EV232BL		PE	087100
1 Gasketing	S88D		PE	087100
1 Door Bottom	2343AV		PE	087100
1 Viewer	622	ANT	RO	087100

Notes: PROVIDE SECOND DOOR VIEWER (622) AT BARRIER FREE UNITS.

System Operational Narrative:

- Door is normally closed and secure.
- When a proper credential is presented to the Card Reader Integrated in the lockset escutcheon, the lever on the secure side of the opening will be momentarily released to allow entry.

- The lever on the unsecured side is free at all times for egress.
- Key outside retracts latch.
- Lock is Fail Secure and will remain locked in the event of power failure, (Lock is Battery Powered).

**Set: 55.0**

Doors: U-05A, U-05B, U-05C, U-05E

1 Sliding Door Hdwe	PF28200A (Length as Required)		PE	087100
1 Pocket Door Latch (PASSAGE)	2114	US10B	EM	

**Set: 56.0**

Doors: U-02B, U-07A, U-07C

2 Sliding Door Hdwe	PF28200A (Length as Required)		PE	087100
1 Pocket Door Latch (PASSAGE)	2114	US10B	EM	

**Set: 57.0**

Doors: U-02B, U-05A, U-05F, U-06A

1 Sliding Door Hdwe	PF28200A (Length as Required)		PE	087100
1 Pocket Door Lock (PRIVACY)	2115	US10B	EM	

**Set: 58.0**

Doors: A107, A122f

1 Sliding Door Hdwe	PF28200A x Length Required		PE	087100
1 Pocket Door Lock (PRIVACY)	2115	US26	EM	

**Set: 59.0**

Doors: A111

2 Sliding Door Hdwe	PF28200A x Length Required		PE	087100
1 Pocket Door Lock (CLRM)	2113	US26	EM	
2 LFIC Mortise Cylinder Housing	Size and Cam as required	US32D	SA	087100
2 LFIC Core	Large Format Interchangeable Core - Keyed as directed by Owner	US15	SA	087100

Notes: Doors are intended to lock into each other. Lockset is mounted in one door, strike is mounted on the opposite door.

**Set: 60.0**

Doors: A101

1 Track	H800S-SW (Size to Fit Application)	PE	087100
1 Pocket Door Lock (CLRM)	2113	US26	EM
1 LFIC Mortise Cylinder Housing	Size and Cam as required	US32D	SA 087100
1 LFIC Core	Large Format Interchangeable Core - Keyed as directed by Owner	US15	SA 087100

Notes: This opening is intended to be an 7'11" single Pocket Door. Track Hardware is intended to be installed inside the wall assembly.  
Track assembly and door must be available at the time of the wall construction.

**Set: 61.0**

Doors: U-08A, U-08B, U-08C, U-08D

1 Sliding Door Hdwe	HBP200A	PE	087100
2 Flush Pull	94C	US10B	RO 087100

**Set: 62.0**

Doors: B004C

1 Sliding Door Hdwe	H200A/12-1418-2	PE	087100
2 Door Pull	BF 110 Back-To-Back Mounting	US32D	RO 087100

**Set: 63.0**

Doors: A657, U-09B

1 Barn Door Track System	W60D (Size as Required)	PE	087100
1 Door Pull	BF 110 Back-To-Back Mounting	10BE	RO 087100

**Set: 64.0**

Doors: U-09A

1 Sliding Door Hdwe	H200A/12-1418-2	PE	087100
1 Door Pull	BF 110 Back-To-Back Mounting	10BE	RO 087100

**Set: 65.0**

Doors: A137, A138, B120

1 LFIC Core	Large Format Interchangeable Core - Keyed as directed by Owner	US15	SA	087100
1 LFIC Cylinder	type as required	US32D	SA	087100
1	All Hardware Provided By Door Supplier			

**Set: 66.0**

Doors: A250, A251, A252, A253, A254, A350, A351, A352, A353, A354, A355, A356, A357, A358, A450, A451, A452, A453, A454, A455, A456, A457, A458, A550, A551, A552, A553, A554, A555, A556, A557, A558, A559, A650, A651, A652, A653, A654, A655, A656, B113, B134, B135, B136, B250, B251, B252, B253, B254, B255, B350, B351, B352, B353, B354, B355, B356, B357, B450, B451, B452, B453, B454, B455, B456, B457, B458, B550, B551, B552, B553, B554, B555, B556, B557, B558, B559, B650, B651, B652, B653, B654, B655, B656, B657, B666, B667, B750, B751, B752, B753, B754, B755, B756, B757, B758, B759, B760, C002A, C002B, C200, C201, C202, C203, C204, C205, C300, C301, C302, C303, C304, C305, C400, C401, C402, C403, C404, C500, C501, C502, C503, C504, C600, C601, C602, C603, C604, C700, C701, C702, C703, C704, C850, C851, C852, C853, C854, U-06C, U-06D, U-06E

1	All Hardware Provided By Door Supplier			
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Notes: BALANCE OF HARDWARE BY DOOR SUPPLIER

**Set: 67.0**

1 LFIC Core	Large Format Interchangeable Core - Keyed as directed by Owner	US15	SA	087100
1 LFIC Cylinder	type as required	US32D	SA	087100
1	All Hardware Provided By Door Supplier			

END OF SECTION 087100