

TOWN OF GLASTONBURY

GL-2015-17

Window and Door Replacement - Gideon Welles School

ADDENDUM NO. 4

01/30/15

Bid Due Date: 02/03/15 @ 2:00 P.M.

The attention of bidders submitting proposals for the above-referenced project is called to the following Addendum to the specifications. The items set forth herein, whether of omission, addition, substitution or other change, are all to be included in and form a part of the proposed Contract Documents for the work. Bidders shall acknowledge this Addendum in the Bid Proposal by inserting its number on Page BP-1.

Question 1: There is no opening mechanism in Hardware Set HW-3. Does Hardware Set HW-3 include panic release latches?

Answer: Yes. Door Hardware Set HW-3 has been revised to include panic release latches.

SUMMARY OF REVISED SPECIFICATION SECTIONS

1. Delete Section 08710 "Door Hardware" in its entirety and replace with revised Section 08710 "Door Hardware" attached to end of this Addendum.

Note: This addendum consists of 16 pages including the above text.

END OF TEXT

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes:

- 1. Mechanical door hardware for the following:

- a. Swinging doors.

- B. Related Sections:

- 1. Section 08410 "Aluminum Entrances and Storefront Framing" for aluminum doors to receive hardware.

1.3 ACTION SUBMITTALS

- A. Product Data: For each type of product indicated. Include construction and installation details, material descriptions, dimensions of individual components and profiles, and finishes.

- B. Shop Drawings: Details of door hardware.

- C. Other Action Submittals:

- 1. Door Hardware Schedule: Prepared by or under the supervision of Installer, detailing fabrication and assembly of door hardware, as well as installation procedures and diagrams. Coordinate final door hardware schedule with doors, frames, and related work to ensure proper size, thickness, hand, function, and finish of door hardware.

- a. Submittal Sequence: Submit door hardware schedule concurrent with submissions of Product Data. Coordinate submission of door hardware schedule with scheduling requirements of other work to facilitate the fabrication of other work that is critical in Project construction schedule.

- b. Format: Use same scheduling sequence and format and use same door numbers as in the Contract Documents.

- c. Content: Include the following information:

- 1) Identification number, location, hand, fire rating, size, and material of each door and frame.
- 2) Locations of each door hardware set, cross-referenced to Drawings on floor plans and to door and frame schedule.
- 3) Complete designations, including name and manufacturer, type, style, function, size, quantity, function, and finish of each door hardware product.
- 4) Fastenings and other pertinent information.

- 5) Explanation of abbreviations, symbols, and codes contained in schedule.
 - 6) Mounting locations for door hardware.
 - 7) List of related door devices specified in other Sections for each door and frame.
2. Keying Schedule: Prepared by or under the supervision of Installer, detailing Owner's final keying instructions for locks. Include schematic keying diagram and index each key set to unique door designations that are coordinated with the Contract Documents.
- 1.4 INFORMATIONAL SUBMITTALS
- A. Qualification Data: For Installer.
 - B. Product Certificates: For electrified door hardware, from the manufacturer.
 1. Certify that door hardware approved for use on types and sizes of labeled fire-rated doors complies with listed fire-rated door assemblies.
 - C. Product Test Reports: For compliance with accessibility requirements, based on evaluation of comprehensive tests performed by manufacturer and witnessed by a qualified testing agency, for door hardware on doors located in accessible routes.
 - D. Warranty: Special warranty specified in this Section.
- 1.5 CLOSEOUT SUBMITTALS
- A. Maintenance Data: For each type of door hardware to include in maintenance manuals. Include final hardware and keying schedule.
- 1.6 QUALITY ASSURANCE
- A. Installer Qualifications: Supplier of products and an employer of workers trained and approved by product manufacturers who is available during the course of the Work to consult with Contractor, Architect, and Owner about door hardware and keying.
 1. Warehousing Facilities: In Project's vicinity.
 2. Scheduling Responsibility: Preparation of door hardware and keying schedules.
 3. Engineering Responsibility: Preparation of data for electrified door hardware, including Shop Drawings, based on testing and engineering analysis of manufacturer's standard units in assemblies similar to those indicated for this Project.
 - B. Source Limitations: Obtain each type of door hardware from a single manufacturer.
 - C. Fire-Rated Door Assemblies: Where fire-rated door assemblies are indicated, provide door hardware rated for use in assemblies complying with NFPA 80 that are listed and labeled by a qualified testing agency, for fire-protection ratings indicated, based on testing at positive pressure according to NFPA 252 or UL 10C, unless otherwise indicated.
 - D. Smoke- and Draft-Control Door Assemblies: Where smoke- and draft-control door assemblies are required, provide door hardware that meet requirements of assemblies tested according to UL 1784 and installed in compliance with NFPA 105.

1. Air Leakage Rate: Maximum air leakage of 0.3 cfm/sq. ft. at the tested pressure differential of 0.3-inch wg of water.
 - E. Means of Egress Doors: Latches do not require more than 15 lbf to release the latch. Locks do not require use of a key, tool, or special knowledge for operation.
 - F. Accessibility Requirements: For door hardware on doors in an accessible route, comply with the U.S. Architectural & Transportation Barriers Compliance Board's ADA-ABA Accessibility Guidelines and ICC/ANSI A117.1.
 1. Provide operating devices that do not require tight grasping, pinching, or twisting of the wrist and that operate with a force of not more than 5 lbf.
 2. Comply with the following maximum opening-force requirements:
 - a. Interior, Non-Fire-Rated Hinged Doors: 5 lbf applied perpendicular to door.
 - b. Fire Doors: Minimum opening force allowable by authorities having jurisdiction.
 3. Bevel raised thresholds with a slope of not more than 1:2. Provide thresholds not more than ½ inch high.
 4. Adjust door closer sweep periods so that, from an open position of 70 degrees, the door will take at least three (3) seconds to move to a point 3 inches from the latch, measured to the leading edge of the door.
 - G. Keying Conference: Conduct conference at Project site." In addition to Owner, Contractor, and Architect, conference participants shall also include Installer's Architectural Hardware Consultant. Incorporate keying conference decisions into final keying schedule after reviewing door hardware keying system including, but not limited to, the following:
 1. Function of building, flow of traffic, purpose of each area, degree of security required, and plans for future expansion.
 2. Preliminary key system schematic diagram.
 3. Requirements for key control system.
 4. Requirements for access control.
 5. Address for delivery of keys.
 - H. Preinstallation Conference: Conduct conference at Project site.
 1. Review and finalize construction schedule and verify availability of materials, Installer's personnel, equipment, and facilities needed to make progress and avoid delays.
 2. Inspect and discuss preparatory work performed by other trades.
 3. Review required testing, inspecting, and certifying procedures.
- 1.7 DELIVERY, STORAGE, AND HANDLING
- A. Inventory door hardware on receipt and provide secure lock-up for door hardware delivered to Project site.
 - B. Tag each item or package separately with identification coordinated with the final door hardware schedule, and include installation instructions, templates, and necessary fasteners with each item or package.

- C. Deliver keys to Owner by registered mail or overnight package service.

1.8 COORDINATION

- A. Installation Templates: Distribute for doors, frames, and other work specified to be factory prepared. Check Shop Drawings of other work to confirm that adequate provisions are made for locating and installing door hardware to comply with indicated requirements.
- B. Security: Coordinate installation of door hardware, keying, and access control with Owner's security consultant.
- C. Existing Openings: Where hardware components are scheduled for application to existing construction or where modifications to existing door hardware are required, field verify existing conditions and coordinate installation of door hardware to suit opening conditions and to provide proper door operation.

1.9 WARRANTY

- A. Special Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace components of door hardware that fail in materials or workmanship within specified warranty period.
 - 1. Failures include, but are not limited to, the following:
 - a. Structural failures including excessive deflection, cracking, or breakage.
 - b. Faulty operation of doors and door hardware.
 - c. Deterioration of metals, metal finishes, and other materials beyond normal weathering and use.
 - 2. Warranty Period: Three (3) years from date of Substantial Completion, unless otherwise indicated.
 - a. Exit Devices: Two (2) years from date of Substantial Completion.
 - b. Manual Closers: Ten (10) years from date of Substantial Completion.

1.10 MAINTENANCE SERVICE

- A. Maintenance Tools and Instructions: Furnish a complete set of specialized tools and maintenance instructions for Owner's continued adjustment, maintenance, and removal and replacement of door hardware.
- B. Maintenance Service: Beginning at Substantial Completion, provide six (6) months' full maintenance by skilled employees of door hardware Installer. Include quarterly preventive maintenance, repair or replacement of worn or defective components, lubrication, cleaning, and adjusting as required for proper door and door hardware operation. Provide parts and supplies that are the same as those used in the manufacture and installation of original products.

PART 2 - PRODUCTS

2.1 SCHEDULED DOOR HARDWARE

- A. Provide door hardware for each door as scheduled in Part 3 "Door Hardware Schedule" Article to comply with requirements in this Section.
 - 1. Door Hardware Sets: Provide quantity, item, size, finish or color indicated, and products equivalent in function and comparable in quality to named products, where allowed.
 - 2. Sequence of Operation: Provide electrified door hardware function, sequence of operation, and interface with other building control systems indicated.
- B. Designations: Requirements for design, grade, function, finish, size, and other distinctive qualities of each type of door hardware are indicated in Part 3 "Door Hardware Schedule" Article. Products are identified by using door hardware designations, as follows:
 - 1. Named Manufacturers' Products: Manufacturer and product designation are listed for each door hardware type required for the purpose of establishing minimum requirements. Manufacturers' names are abbreviated in Part 3 "Door Hardware Schedule" Article.

2.2 HINGES

- A. Hinges: BHMA A156.1. Provide template-produced hinges for hinges installed on aluminum storefront doors and hollow-metal frames.

2.3 CONTINUOUS HINGES

- A. Continuous Hinges: BHMA A156.26; minimum 0.120-inch-thick, hinge leaves with minimum overall width of 4 inches; fabricated to full height of door and frame and to template screw locations; with components finished after milling and drilling are complete.
 - 1. Basis of Design:
 - a. Markar; Div. of Assa Abloy; FM 300.
 - 2. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
 - a. Hager Companies.
 - b. McKinney Products Company; an ASSA ABLOY Group company.
 - c. Substitutions: Under provisions of Section 016000 "Material and Equipment".
- B. Continuous Electrified Hinges: BHMA A156.26; minimum 0.120-inch-thick, hinge leaves with minimum overall width of 4 inches; fabricated to full height of door and frame and to template screw locations; with components finished after milling and drilling are complete.

2.4 BUTT HINGES (NOT USED)

- A. Provide five-knuckle, ball bearing hinges.

1. Manufacturers and Products:
 - a. Scheduled Manufacturer and Product:
 - 1) Ives 5BB series.
 - b. Acceptable Manufacturers and Products:
 - 1) Bommer BB5000 series.
 - 2) McKinney TA/T4A series.

2.5 MECHANICAL LOCKS AND LATCHES

- A. Lock Functions: As indicated in Part 3 “Door Hardware Schedule”.
- B. Lock Throw: Comply with testing requirements for length of bolts required for labeled fire doors, and as follows:
 1. Bored Locks (**NOT USED**): Minimum ½-inch latchbolt throw.
 2. Mortise Locks: Minimum ¾-inch latchbolt throw.
- C. Lock Backset: 2¾ inches, unless otherwise indicated.
- D. Lock Trim:
 1. Levers: Cast.
 2. Escutcheons (Roses): Wrought.
 3. Dummy Trim: Match lever lock trim and escutcheons.
 4. Operating Device: Lever with escutcheons (roses).
- E. Strikes: Provide manufacturer's standard strike for each lock bolt or latchbolt complying with requirements indicated for applicable lock or latch and with strike box and curved lip extended to protect frame; finished to match lock or latch.
 1. Flat-Lip Strikes: For locks with three-piece antifriction latchbolts, as recommended by manufacturer.
 2. Aluminum-Frame Strike Box: Manufacturer's special strike box fabricated for aluminum framing.
- F. Bored Locks (**NOT USED**): BHMA A156.2; Grade 1; Series 4000.
 1. Basis of Design:
 - a. Schlage Commercial Lock Division; an Ingersoll-Rand company; **ND Series – Rhodes, Vandlgard** functions
 2. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. Corbin Russwin Architectural Hardware; n ASSA ABLOY Group Company.
 - b. Medeco Security Locks, Inc.; an ASSA ABLOY Group company.
 - c. Substitutions: Under provisions of Section 016000 “Material and Equipment”.
- G. Mortise Locks: BHMA A156.13; [**Operational**] and [**Security**] Grade [**1**]; stamped steel case with steel or brass parts; Series 1000.

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. Adams Rite Manufacturing Co; an ASSA ABLOY Group company.
 - b. Arrow USA; an ASSA ABLOY Group company.
 - c. Corbin Russwin, Inc.; an ASSA ABLOY Group company.

2.6 MANUAL FLUSH BOLTS (**NOT USED**)

- A. Manual Flush Bolts: BHMA A156.16; minimum ¾-inch throw.
 1. Basis-of-Design Product:
 - a. Door Controls International, Inc.; **790F**, designed for mortising into door edge.
 2. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
 - a. Glynn-Johnson; an Ingersoll-Rand company.
 - b. IVES Hardware; an Ingersoll-Rand company.
 - c. Substitutions: Under provisions of Section 016000 “Material and Equipment”.

2.7 EXIT DEVICES AND AUXILIARY ITEMS

- A. Exit Devices and Auxiliary Items: BHMA A156.3.
 1. Basis-of-Design Product:
 - a. Corbin Russwin; a Corbin Russwin company; **Series ED5000.**
 - b. No substitutions.
- B. Coordinate exit device operation with cylinder locks and electrified latching where specified.
- C. All exit devices shall be provided with cylinder dogging hardware for manual keying.
- D. All exit devices shall be provided with concealed vertical rod, top only, **ED5800.**
- E. All exit devices shall be provided with electric latch pullback.
- F. All exit devices shall be provided with sex nuts and bolts.

2.8 LOCK CYLINDERS

- A. Lock Cylinders: Tumbler type, constructed from brass or bronze, stainless steel, or nickel silver.
 1. Manufacturer: Same manufacturer as for locking devices.
- B. Standard Lock Cylinders: BHMA A156.5; Grade 1; permanent cores that are removable; face finished to match lockset.

- C. Construction Cores: Provide construction cores that are replaceable by permanent cores. Provide ten (10) construction master keys.

2.9 KEYING

- A. Keying System: Factory registered, complying with guidelines in BHMA A156.28, Appendix A. Incorporate decisions made in keying conference.
 - 1. Great-Grand Master Key System: Change keys, a master key, a grand master key, and a great-grand master key operate cylinders.
- B. Keys: Brass.
 - 1. Stamping: Permanently inscribe each key with a visual key control number and include the following notation:
 - a. Notation: "DO NOT DUPLICATE."
 - 2. Quantity: In addition to one (1) extra key blank for each lock, provide the following:
 - a. Great-Grand Master Keys: Five (5).

2.10 KEY CONTROL SYSTEM

- A. Key Control Cabinet: BHMA A156.5; metal cabinet with baked-enamel finish; containing key-holding hooks, labels, two (2) sets of key tags with self-locking key holders, key-gathering envelopes, and temporary and permanent markers; with key capacity of one hundred fifty percent (150%) of the number of locks.
 - 1. Manufacturers: Subject to compliance with requirements, provide products by one of the the following:
 - a. American Key Boxes and Cabinets.
 - b. GE Security, Inc.
 - c. Lund Equipment Co., Inc.
 - d. Substitutions: Under provisions of Section 016000 "Material and Equipment".
 - 2. Wall-Mounted Cabinet: Cabinet with hinged-panel door equipped with key-holding panels and pin-tumbler cylinder door lock.

2.11 OPERATING TRIM (**NOT USED**)

- A. Operating Trim: BHMA A156.6; stainless steel, unless otherwise indicated.
 - 1. Basis-of-Design Product:
 - a. Rockwood Manufacturing Company
 - 1) Push Plates(**NOT USED**): **70C 4x16**
 - 2) Pulls (**NOT USED**): **RM4410-12**

2. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. Burns Manufacturing Incorporated
 - b. IVES Hardware; an Ingersoll-Rand company
 - c. Substitutions: Under provisions of Section 016000 "Material and Equipment".

2.12 ACCESSORIES FOR PAIRS OF DOORS

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

2.13 SURFACE CLOSERS

- A. Surface Closers: BHMA A156.4; rack-and-pinion hydraulic type with adjustable sweep and latch speeds controlled by key-operated valves and forged-steel main arm. Comply with manufacturer's written recommendations for size of door closers depending on size of door, exposure to weather, and anticipated frequency of use. Provide factory-sized closers, adjustable to meet field conditions and requirements for opening force.

1. Basis-of-Design Product:

- a. LCN Closers; an Ingersoll-Rand company; **4040 Series**.
 - b. Norton Closers.
- B. Door closers, marked closer, shall be **Smoothee** series, with delayed action cylinder, sized to the door leaf size.
 - C. Door closers, marked closer/stop shall be **Cush-N-Stop** series, with delayed action cylinder, sized to the door leaf size.
 - D. Door closers are to be mounted on the least conspicuous side of the door. The hardware supplier shall consult with the Architect to verify applications, and note mounting locations on the hardware schedule.

2.14 MECHANICAL STOPS AND HOLDERS (**NOT USED**)

- A. Wall- and Floor-Mounted Stops: BHMA A156.16; polished cast brass, bronze, or aluminum base metal.

1. Basis-of-Design Product:

- a. IVES Hardware; an Ingersoll-Rand company; **407 and 436 or 438**

- 1) Provide wall bumpers wherever possible. Provide floor stops where the use of wall bumpers is not feasible, provided the location of the stop is not a stumbling hazard or would cause the door to rack at the hinges.
 2. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. Glynn-Johnson; an Ingersoll-Rand company.
 - b. Door Controls International, Inc.
 - c. Substitutions: In accordance with Section 016000 “Material and Equipment”.
- 2.15 OVERHEAD STOPS AND HOLDERS (**NOT USED**)
- A. Overhead Stops and Holders: BHMA A156.8.
1. Basis-of-Design Product:
 - a. Glynn-Johnson; an Ingersoll-Rand company; **90S**.
 2. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. Architectural Builders Hardware Mfg., Inc.
 - b. Rockwood Manufacturing Company.
 - c. SARGENT Manufacturing Company; an ASSA ABLOY Group company.
 - d. Substitutions: In accordance with Section 016000 “Material and Equipment”.
- 2.16 SMOKE SEALS FOR SMOKE AND FIRE RATED DOORS (**NOT USED**)
1. Basis-of-Design Product:
 - a. Pemko Manufacturing Co.; an ASSA ABLOY Group company
 - 1) Smoke Rated Doors: **S88D** at the jambs and heads.
 - 2) Fire Rated Doors: Provided by the door manufacturer.
 2. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. National Guard Products.
 - b. Zero International.
 - c. Substitutions: In accordance with Section 016000 “Material and Equipment”.
- 2.17 WEATHERSTRIPPING (DOOR GASKETING)
- A. Door Gasketing: BHMA A156.22; air leakage not to exceed 0.50 cfm per foot of crack length for gasketing other than for smoke control, as tested according to ASTM E 283; with resilient or flexible seal strips that are easily replaceable and readily available from stocks maintained by manufacturer.
1. Basis-of-Design Product:

- a. Zero International
 - 1) Head and Jamb: **#328AA**, solid neoprene in an extruded aluminum housing.
 - 2) Sill: **#339AA** with extruded aluminum housing, solid neoprene.
- 2. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. National Guard Products.
 - b. Pemko Manufacturing Co.; an ASSA ABLOY Group company.
 - c. Substitutions: In accordance with Section 016000 “Material and Equipment”.

2.18 THRESHOLDS

- A. Thresholds: BHMA A156.21; fabricated to full width of opening indicated.
 - 1. Basis-of-Design Product:
 - a. Pemko Manufacturing Co.; an ASSA ABLOY Group company; **2005AT**
 - 2. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. National Guard Products.
 - b. Zero International.
 - c. Substitutions: In accordance with Section 016000 “Material and Equipment”.

2.19 METAL PROTECTIVE TRIM UNITS

- A. Metal Protective Trim Units: BHMA A156.6; fabricated from 0.050-inch-thick stainless steel; with manufacturer's standard machine or self-tapping screw fasteners.
 - 1. Basis-of-Design Product: Burns Manufacturing Incorporated.
 - a. Kick Plates: 16 inches high.
 - b. All plates are 2 inches less width of door on single doors, 1 inch less width of door on pairs.
 - 2. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. IVES Hardware; an Ingersoll-Rand company.
 - b. Rockwood Manufacturing Company.
 - c. Substitutions: In accordance with Section 016000 “Material and Equipment”.

2.20 AUXILIARY DOOR HARDWARE

- A. Auxiliary Hardware: BHMA A156.16.
 - 1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

- a. Hager Companies.
- b. Rockwood Manufacturing Company.
- c. Stanley Commercial Hardware; Div. of The Stanley Works.
- d. Substitutions: In accordance with Section 016000 "Material and Equipment".

2.21 FABRICATION

- A. Base Metals: Produce door hardware units of base metal indicated, fabricated by forming method indicated, using manufacturer's standard metal alloy, composition, temper, and hardness. Furnish metals of a quality equal to or greater than that of specified door hardware units and BHMA A156.18.
- B. Fasteners: Provide door hardware manufactured to comply with published templates prepared for machine, wood, and sheet metal screws. Provide screws that comply with commercially recognized industry standards for application intended, except aluminum fasteners are not permitted. Provide Phillips flat-head screws with finished heads to match surface of door hardware, unless otherwise indicated.
 1. Concealed Fasteners: For door hardware units that are exposed when door is closed, except for units already specified with concealed fasteners. Do not use through bolts for installation where bolt head or nut on opposite face is exposed unless it is the only means of securely attaching the door hardware. Where through bolts are used on hollow door and frame construction, provide sleeves for each through bolt.
 2. Fire-Rated Applications:
 - a. Wood or Machine Screws: For the following:
 - 1) Hinges mortised to doors or frames; use threaded-to-the-head wood screws for wood doors and frames.
 - 2) Strike plates to frames.
 - 3) Closers to doors and frames.
 - b. Steel Through Bolts: For the following unless door blocking is provided:
 - 1) Surface hinges to doors.
 - 2) Closers to doors and frames.
 - 3) Surface-mounted exit devices.
 3. Spacers or Sex Bolts: For through bolting of hollow-metal doors.
 4. Fasteners for Wood Doors: Comply with requirements in DHI WDHS.2, "Recommended Fasteners for Wood Doors."

2.22 FINISHES

- A. Provide finishes complying with BHMA A156.18 as indicated in door hardware schedule.
- B. Protect mechanical finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.

- C. Appearance of Finished Work: Variations in appearance of abutting or adjacent pieces are acceptable if they are within one-half of the range of approved Samples. Noticeable variations in the same piece are not acceptable. Variations in appearance of other components are acceptable if they are within the range of approved Samples and are assembled or installed to minimize contrast.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine doors and frames, with Installer present, for compliance with requirements for installation tolerances, labeled fire-rated door assembly construction, wall and floor construction, and other conditions affecting performance.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Steel Doors and Frames: For surface applied door hardware, drill and tap doors and frames according to ANSI/SDI A250.6.

3.3 INSTALLATION

- A. Mounting Heights: Mount door hardware units at heights to comply with the following unless otherwise indicated or required to comply with governing regulations.
 - 1. Standard Steel Doors and Frames: ANSI/SDI A250.8.
- B. Install each door hardware item to comply with manufacturer's written instructions. Where cutting and fitting are required to install door hardware onto or into surfaces that are later to be painted or finished in another way, coordinate removal, storage, and reinstallation of surface protective trim units with finishing. Do not install surface-mounted items until finishes have been completed on substrates involved.
 - 1. Set units level, plumb, and true to line and location. Adjust and reinforce attachment substrates as necessary for proper installation and operation.
 - 2. Drill and countersink units that are not factory prepared for anchorage fasteners. Space fasteners and anchors according to industry standards.
- C. Hinges: Install types and in quantities indicated in door hardware schedule but not fewer than the number recommended by manufacturer for application indicated or one (1) hinge for every 30 inches of door height, whichever is more stringent, unless other equivalent means of support for door, such as spring hinges or pivots, are provided.
- D. Lock Cylinders: Install construction cores to secure building and areas during construction period.
 - 1. Replace construction cores with removable cores as indicated in keying schedule.
 - 2. Furnish permanent cores to Owner for installation.

- E. Key Control System: Tag keys and place them on markers and hooks in key control system cabinet, as determined by final keying schedule.
- F. Thresholds: Set thresholds for doors indicated in full bed of sealant complying with requirements specified in Section 079200 "Joint Sealants."
- G. Perimeter Gasketing: Apply to head and jamb, forming seal between door and frame.
- H. Door Bottoms: Apply to bottom of door, forming seal with threshold when door is closed.

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.
 - 1. Door Closers: Adjust sweep period to comply with accessibility requirements and requirements of authorities having jurisdiction.

3.5 CLEANING AND PROTECTION

- A. Clean adjacent surfaces soiled by door hardware installation.
- B. Clean operating items as necessary to restore proper function and finish.
- C. Provide final protection and maintain conditions that ensure that door hardware is without damage or deterioration at time of Substantial Completion.

3.6 DOOR HARDWARE SCHEDULE

- A. Provide hardware as specified in the previous articles in sets according to the following schedule and as indicated in the Door Schedule on the Drawings.
- B. The hardware supplier shall meet with the Architect and/or Owner to determine lock functions and keying requirements.

HW-1: SINGLE LEAF DOORS 102, 117, 118, 119, 120.

EACH TO HAVE:

- 1 CONTINUOUS HINGE (ELECTRONIC AT 102, 117 ONLY)
- 1 MORTISE CYLINDER
- 1 LEVER
- 1 PANIC RELEASE LATCH
- 1 CLOSER
- 1 KICKPLATE
- 1 ACCESSIBLE THRESHOLD (102, 117 & 118 ONLY)
- SILENCERS

HW-2: DOUBLE LEAF DOORS 101, 104, 105, 112, 113, 121.

EACH TO HAVE:

- 2 CONTINUOUS HINGES (1 PER LEAF), (ELECTRONIC AT 104 & 112 ONLY)
- 1 MORTISE CYLINDER
- 1 LEVER
- 2 PANIC RELEASE LATCH (1 PER LEAF)
- 1 ASTRAGAL, CARRY OPEN BAR, COORDINATOR
- 2 CLOSER
- 2 KICKPLATE (1 PER LEAF)
- 2 ACCESSIBLE THRESHOLD (1 PER LEAF)
- SILENCERS

HW-3: DOUBLE LEAF DOORS 103, 106, 107, 108, 109, 110, 111, 114, 116.

EACH TO HAVE:

- 2 CONTINUOUS HINGES (1 PER LEAF)
- 1 MORTISE CYLINDER
- 2 PANIC RELEASE LATCH (1 PER LEAF)
- 3 ASTRAGAL, CARRY OPEN BAR, COORDINATOR
- 2 CLOSER (1 PER LEAF)
- 2 KICKPLATE (1 PER LEAF)
- 2 ACCESSIBLE THRESHOLD (1 PER LEAF)
- SILENCERS

HW-4: DOUBLE LEAF DOOR 115.

EACH TO HAVE:

- 2 CONTINUOUS HINGES (1 PER LEAF)
- 1 MORTISE CYLINDER
- 1 LEVER (INTERIOR)
- 1 LEVER (EXTERIOR)
- 1 ASTRAGAL, CARRY OPEN BAR, COORDINATOR
- 2 CLOSER (1 PER LEAF)
- 2 KICKPLATE (1 PER LEAF)
- 2 ACCESSIBLE THRESHOLD (1 PER LEAF)
- SILENCERS

END OF SECTION 087100