

Date: 4-15-2021

Amendment Number 2

**Project: General Contractors Request for Bids
Issued by Salt Lake County
Project: Eccles Theater Door Replacement
Project #: ART75191-1
Closing date: April 20, 2021 by 2:00 pm**

This amendment represents clarifications and additions to the Request for Bids (RFB) and any of its respective parts. These changes are to be considered part of said documents as though they were included in the original documents. Any terms or conditions of said documents not modified by Amendment No. 1 shall remain unchanged.

1. Slight change to project number. Any mention to ART75191 is to show ART75191-1
2. Revising Section 08-7100 per the attached.



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ISSUE DATE: April 15, 2021
PROJECT: **Eccles Theater Door Replacement**
131 S Main St.
Salt Lake City, UT 84111
OWNER: **Salt Lake County**
2001 S State St.
Salt Lake City, UT 84190
PAGES: 1 + Attachments (18) = 19

RESPONSE TO: Architect Clarification
OWNER'S PROJECT #: ART75191-1
ARCHITECT'S PROJECT #: 20078.00
CONTRACTOR: TBD

This Addendum forms a part of the Contract Documents and modifies the original Bid Documents as noted below. Acknowledge receipt of this Addendum in the space provided on the Bid Form. Failure to do so may subject the Bidder to disqualification. This Addendum includes all attachments noted, included herein by reference.

SPECIFICATION AMENDMENTS:**S1. Architectural:**

<u>Item #</u>	<u>Section</u>	<u>Amendment</u>
S2.01	08 7100	Revised door numbers in hardware sets to align with the door schedule in the drawings.

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Date 4/15/21

SECTION 08 7100 - DOOR HARDWARE

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. This Section includes the following:
 - 1. Commercial door hardware for the following:
 - a. Swinging doors.
 - b. Fire-rated swinging doors.
 - 2. Electrified door hardware.
- B. Related Sections include the following:
 - 1. Division 08 Section "Hollow Metal Doors and Frames"
 - 2. Division 08 Section "Flush Wood Doors"
 - 3. Division 26 Sections for connections to electrical power system and for low-voltage wiring work.
- C. Products furnished, but not installed, under this Section include the following. Coordinating, purchasing, delivering, and scheduling remain requirements of this Section.
 - 1. Thresholds, weather stripping, and cylinders for locks specified in other Sections.

1.3 REFERENCED STANDARDS

- A. Provide hardware in accordance with the following standards in addition to those specified in Division 01 Section "References".
 - 1. American National Standards Institute (ANSI), A117.1: Accessible and Usable Buildings and Facilities, edition as adopted by local Authority Having Jurisdiction (AHJ).
 - 2. Builders Hardware Manufacturer's Association (BHMA)
 - a. ANSI/BHMA A156.3: Exit Devices, 2008 edition
 - b. ANSI/BHMA A156.4: Door Controls - Closers, 2008 edition
 - c. ANSI/BHMA A156.18: Materials and Finishes, 2006 edition
 - 3. Door and Hardware Institute (DHI)

- a. Recommended Locations for Architectural Hardware for Flush Wood Doors, 1993 edition
 - b. Recommended Locations for Architectural Hardware for Standard Steel Doors and Frames, 2004 edition
 - c. Installation Guide for Doors and Hardware, 1994 edition
 - d. Keying Systems and Nomenclature, 2003 edition
 - e. Sequence and Format for the Hardware Schedule, 2001 edition
4. National Fire Protection Association (NFPA)
- a. NFPA 70: National Electrical Code, edition as adopted by local AHJ.

1.4 SUBMITTALS

- A. Product Data: Include construction and installation details, material descriptions, dimensions of individual components and profiles, and finishes.
- B. Shop Drawings: Details of electrified door hardware, indicating the following:
 1. Wiring Diagrams: Power, signal, and control wiring. Include the following:
 - a. System schematic.
 - b. Point-to-point wiring diagram.
 - c. Riser diagram.
 - d. Elevation of each door.
 2. Detail interface between electrified door hardware and fire alarm, access control, security, building control system.
 3. Operation Narrative: Describe the operation of doors controlled by electrified door hardware.
- C. Samples for Verification: For exposed door hardware of each type, in specified finish, full size. Tag with full description for coordination with the door hardware sets. Submit Samples before, or concurrent with, submission of the final door hardware sets, if requested.
 1. Samples will be returned to Contractor. Units that are acceptable and remain undamaged through submittal, review, and field comparison process may, after final check of operation, be incorporated into the Work, within limitations of keying requirements.
- D. Qualification Data: For Installer
- E. Product Test Reports: Based on evaluation of comprehensive tests performed by manufacturer and witnessed by a qualified testing agency, for locks, latches, and closers as requested.
- F. Maintenance Data: For each type of door hardware to include in maintenance manuals. Include final hardware and keying schedule.
- G. Warranty: Special warranty specified in this Section.
- H. Door Hardware Sets: Prepared by or under the supervision of Architectural Hardware Consultant, detailing fabrication and assembly of door hardware, as well as procedures and

diagrams. Coordinate the final door hardware sets with doors, frames, and related work to ensure proper size, thickness, hand, function, and finish of door hardware.

1. Format: Use same scheduling sequence and format and use same door numbers as in the Contract Documents.
 2. Content: Include the following information:
 - a. Identification number, location, hand, fire rating, and material of each door and frame.
 - b. Type, style, function, size, quantity, and finish of each door hardware item.
 - c. Complete designations of every item required for each door or opening including name and manufacturer.
 - d. Fastenings and other pertinent information.
 - e. Location of each door hardware set, cross-referenced to Drawings, both on floor plans and in door and frame schedule.
 - f. Explanation of abbreviations, symbols, and codes contained in schedule.
 - g. Mounting locations for door hardware.
 - h. Door and frame sizes and materials.
 - i. Description of each electrified door hardware function, including location, sequence of operation, and interface with other building control systems.
 - j. Sequence of Operation: Include description of component functions that occur in the following situations: authorized person wants to enter; authorized person wants to exit; unauthorized person wants to enter; unauthorized person wants to exit.
 - k. List of related door devices specified in other Sections for each door and frame.
 3. Submittal Sequence: Submit the final door hardware sets at earliest possible date, particularly where approval of the door hardware sets must precede fabrication of other work that is critical in 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 sets.
- I. Keying Schedule: Prepared by or under the supervision of Architectural Hardware Consultant, detailing Owner's final keying instructions for locks. Include schematic keying diagram and index each key set to unique door designations.

1.5 QUALITY ASSURANCE

- A. Installer Qualifications: An employer of workers trained and approved by lock manufacturer.
1. Installer's responsibilities include supplying and installing door hardware and providing a qualified Architectural Hardware Consultant available during the course of the Work to consult with Contractor, Architect, and Owner about door hardware and keying.
 2. Installer shall have warehousing facilities in Project's vicinity.
 3. Scheduling Responsibility: Preparation of door hardware and keying schedules.
 4. 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. Architectural Hardware Consultant Qualifications: A person who is currently certified by DHI as an Architectural Hardware Consultant and who is experienced in providing consulting

services for door hardware installations that are comparable in material, design, and extent to that indicated for this Project.

- C. Source Limitations: Obtain each type and variety of door hardware from a single manufacturer, unless otherwise indicated.
 - 1. Provide electrified door hardware from same manufacturer as mechanical door hardware, unless otherwise indicated. Manufacturers that perform electrical modifications and that are listed by a testing and inspecting agency acceptable to authorities having jurisdiction are acceptable.
- D. Fire-Rated Door Assemblies: 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 NFPA 252 and UBC Standard 7-2.
 - 1. Test Pressure: After 5 minutes into the test, neutral pressure level in furnace shall be established at 40 inches (1016 mm) or less above the sill.
- E. Electrified Door Hardware: Listed and labeled as defined in NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.
- F. Keying Conference: Conduct conference at Project site to comply with requirements in Division 01 Section "Project Management and Coordination." In addition to Owner, Construction Manager, Contractor, and Architect, conference participants shall also include Installer's Architectural Hardware Consultant and Owner's Security 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. Address for delivery of keys.
- G. Pre-installation Conference: Conduct conference at Project site to comply with requirements in Division 01 Section "Project Management and Coordination."

1.6 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 related to the final door hardware sets, and include basic installation instructions, templates, and necessary fasteners with each item or package.
- C. Deliver keys to Owner's Representative by registered mail or overnight package service.

1.7 COORDINATION

- A. Coordinate layout and installation of recessed hardware with floor construction. Cast anchoring inserts into concrete. Concrete, reinforcement, and formwork requirements are specified in Division 03.
- B. Templates: Distribute door hardware templates for doors, frames, and other work specified to be factory prepared for installing door hardware. Check Shop Drawings of other work to confirm that adequate provisions are made for locating and installing door hardware to comply with indicated requirements.
- C. Electrical System Roughing-in: Coordinate layout and installation of electrified door hardware with connections to power supplies, fire alarm system and detection devices, access control system, security system, and building control system.
- D. Existing Openings: Where new 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 for proper operation.

1.8 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 operators 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, except as follows:
 - a. Continuous Hinges: Lifetime of Building
 - b. Grade 1
Locks: Seven (7) years from date of Substantial Completion.
 - c. Exit Devices: Three (3) years from date of Substantial Completion.
 - d. Manual Closers: Thirty (30) years from date of Substantial Completion.
 - e. Automatic Operators: Two (2) years from date of Substantial Completion.
 - f. Electrified Hardware Items: One (1) year from date of Substantial Completion.

1.9 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.
- 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 hardware operation. Provide parts and supplies same as those used in the manufacture and installation of original products.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Manufacturers: Subject to compliance with requirements, provide products by the following:

- | | |
|------------------------------|----------------|
| 1. Hinges: | Ives |
| 2. Continuous Hinges: | Ives |
| 3. Cylinders and Cores: | Match Existing |
| 4. Exit Devices: | Von Duprin |
| 5. Electrical Door Closers: | LCN |
| 6. Accessories and Trim: | Ives |
| 7. Weather Strip and Gasket: | Zero |

2.2 SCHEDULED HARDWARE

A. Requirements for design, grade, function, finish, size, and other distinctive qualities of each type of finish hardware are indicated in the "Hardware Schedule" at the end of this Section. Products are identified by using hardware designation numbers of the following:

1. Manufacturer's Product Designations: The product designation and name of one manufacturer are listed for each hardware type required for the purpose of establishing minimum requirements. Provide either the product designated or, where more than one manufacturer is specified under the Article "Manufacturers" in Part 2 for each hardware type, the comparable product of one of the other manufacturers that complies with requirements.

2.3 MATERIALS AND FABRICATION

A. General

1. Manufacturer's Name Plate: Do not use manufacturers' products that have manufacturer's name or trade name displayed in a visible location (omit removable nameplates) except in conjunction with required fire-rated labels and as otherwise acceptable to Architect.
 - a. Manufacturer's identification will be permitted on rim of lock cylinders only.
2. Base Metals: Produce hardware units of basic metal and forming method indicated using manufacturer's standard metal alloy, composition, temper, and hardness, but in no case of lesser (commercially recognized) quality than specified for applicable hardware units for finish designations indicated.
3. Provide hardware manufactured to conform to published templates generally prepared for machine screw installation. Do not provide hardware that has been prepared for self-tapping sheet metal screws, except as specifically indicated.

B. Fasteners

1. Furnish screws for installation with each hardware item. Provide Phillips flat-head screws except as otherwise indicated. Furnish stainless steel (exposed under any condition) screws to match hardware finish or, if exposed in surfaces of other work, to match finish of this other work as closely as possible including "prepared for paint" surfaces to receive painted finish.
2. Provide concealed fasteners for hardware units that are exposed when door is closed except to the extent no standard units of type specified are available with concealed fasteners. Use through bolts only as indicated in this section unless their use is the only means of reinforcing the work adequately to fasten the hardware securely. Where thru-bolts are used as a means of reinforcing the work, provide sleeves for each thru-bolt or use sex screw fasteners.

2.4 HINGES

A. Acceptable Products:

1. Ives: 5BB1HW

B. Requirements:

1. Quantity: Provide the following, unless otherwise indicated:
 - a. Two Hinges: For doors with heights up to 60 inches.
 - b. Three Hinges: For doors with heights 61 to 90 inches.
2. Template Requirements: Except for hinges and pivots to be installed entirely (both leaves) into wood doors and frames, provide only template-produced units.
3. Hinge Weight: As indicated in hardware sets.
4. Hinge Base Metal: Unless otherwise indicated, provide the following:
 - a. Exterior Hinges: Stainless steel with stainless-steel pin.
 - b. Interior Hinges: Steel with steel pin.
 - c. Hinges for Fire-Rated Assemblies: Steel with steel pin.
5. Hinge Options: Where indicated in door hardware sets or on Drawings:
 - a. Safety Stud: Designed for stud in one leaf to engage hole in opposing leaf.
 - b. Non-removable Pins: Provide set screw in hinge barrel that, when tightened into a groove in hinge pin, prevents removal of pin while door is closed; for out-swinging doors.
 - c. Corners: Square.
6. Fasteners: Comply with the following:
 - a. Machine Screws: For metal doors and frames. Install into drilled and tapped holes.
 - b. Wood Screws: For wood doors and frames.
 - c. Threaded-to-the-Head Wood Screws: For fire-rated wood doors.

2.5 CONTINUOUS HINGES

A. Acceptable Products:

1. Ives: 224HD

B. Requirements:

1. Geared Continuous Hinges: Shall utilize a single gear section for the door leaf and a separate gear section for the frame side of the door. Provide full mortise or surface applied hinge as scheduled in each set. Geared hinges are to be UL 10C tested and approved for 90 minutes.

2.6 CYLINDERS AND CORES

A. Acceptable Products:

1. Match existing facility standard

B. Requirements:

- a. Temporary Construction Keying: Provide each cylinder housing and/or lock lever with keyed construction core during the construction period. Cores will remain property of the contractor and will be returned upon installation of owner's permanent key system.
- b. Permanent Cores: Match existing. At substantial completion, accompany the owner's representative while replacing temporary construction cores with the owner's permanent key system.

2. Keys: Provide cylinder manufacturer's standard keys. Keys shall be shipped separate from cores directly to owner's representative. For estimating purposes, provide keys in the following quantities:

- | | | |
|-------------------------------|----|----------|
| a. Construction Control Keys: | 2 | each |
| b. Construction Change Keys: | 12 | each |
| c. Permanent Control Keys: | 2 | each |
| d. Split Key Voiding Keys: | 2 | each |
| e. Permanent Master Keys: | 2 | each |
| f. Permanent Change Keys: | 4 | per core |

2.7 EXIT DEVICES

A. Acceptable Products:

1. Von Duprin: 98 Series

B. Requirements:

1. ANSI Grade: BHMA/ANSI A156.3, Grade 1.
2. Device Construction:
 - a. Exit device(s) shall have a mechanism case constructed of extruded aluminum or wrought stainless steel, base plates constructed of cold rolled or cast steel, push

- pad of extruded aluminum with stainless steel covering or wrought stainless steel, and end caps with flush mounted, sloped design. At full-glass doors, provide exit devices with no exposed fasteners or rivets visible through glass. Where required by stile width, provide narrow-stile type device.
- b. Latchbolt: Provide Pullman-type deadlocking latch bolts constructed of stainless steel. Where specified provide high security Pullman-type latchbolt that collapses to be square faced under high pull forces. Latch return springs shall be compression type. Tension and Torsion latch return springs are not acceptable.
 - c. Dogging Mechanism: where dogging or latch-retraction options are not specifically scheduled for non-fire rated doors, provide device with a hex-key activated hook-type dogging mechanism constructed of steel.
 - d. Plastic or nylon used for the push pad, or parts in the dogging mechanism or latchbolt mechanism are unacceptable.
 - e. Sound Dampening: Device shall be provided with factory-installed sound dampening materials.
 - f. Provide device type, function, and trim style as indicated in hardware schedules.
3. Where exit device(s) are provided for fire rated door, provide with fire listing and label indicating "Fire Exit Hardware". If device is mounted on wood doors, provide sex nuts and bolts.
 4. Provide shim kits, filler plates, and other accessories as required for each opening.
 5. Unless otherwise indicated in the sets, provide device with roller-type strike.
 6. Where scheduled, provide removable mullions by same manufacturer as provided exit devices. Provide mullion stabilizers, key removable option, strike preps, and fire rating as indicated in sets.

2.8 ELECTRO-MECHANICAL DOOR CLOSERS

A. Acceptable Products:

1. LCN: 4040SE
2. Requirements:
 - a. Provide single-point hold-open electro-mechanical closer/holders as specified. Coordinate voltage requirements and provide transformer if necessary.
 - b. Provide multi-point electro-mechanical closer/holders with swing free arms.
 - c. Provide closer/holders that function as full rack and pinion door closer when current is interrupted or continuous hold-open is not engaged.
 - d. Pressure Relief Valve (PRV) Technology is not permitted.
 - e. Provide special templates, drop plates, mounting brackets, or adapters for arms as required for details, overhead stops, and other door hardware items interfering with closer mounting.

2.9 ARCHITECTURAL DOOR TRIM

A. Protection Plates and Edge Guards

1. Acceptable Products:

- a. Ives: 8400 Series
- 2. Requirements:
 - a. Provide .050 inch thick stainless steel protection plates with height as scheduled. Plate shall have four beveled edges and countersunk screws. Provide plate with width as follows:
 - 1) Pairs of Doors: Provide plate to be 1 inch less door width.
 - 2) Single Doors: Provide plate to be 2 inches less door width on push side, pull side mounted plates to be 1 inch less door width.
- B. Door Stops and Holders
 - 1. Acceptable Products:
 - a. Ives: WS406/407 FS410
 - 2. Requirements:
 - a. Provide stops and holders as indicated in the hardware sets.
 - b. Where wall bumpers are scheduled, provide concave rubber bumper where the adjacent lever trim incorporates a push-button. Otherwise, provide convex rubber bumpers.

2.10 WEATHERSTRIP AND GASKET

- A. General:
 - 1. Provide weather strip and gasketing as scheduled.
 - 2. Size weather strip and gasket to provide a continuous seal around opening and at meeting stiles.
- B. Perimeter Seals
 - 1. Acceptable Products:
 - a. Zero: 488S-BK
- C. Door Bottoms
 - 1. Acceptable Products:
 - a. NGP: 312V

2.11 MISCELLANEOUS HARDWARE

- A. Silencers
 - 1. Acceptable Products:
 - a. Ives: SR64

2. Requirements:

- a. Where indicated on single openings, provide 3 each rubber silencers on lock jamb.
- b. Where indicated on paired openings, provide 2 each rubber silencers on header.

2.12 FINISHES

- A. Match items to the manufacturer's standard color and texture finish for the latch and locksets (or push-pull units if no latch or locksets).
- 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. The designations used in schedules and elsewhere to indicate hardware finishes are those listed in ANSI/BHMA A156.18, "Materials and Finishes," including coordination with the traditional U.S. finishes shown by certain manufacturers for their products.
- D. The designations used in schedules and elsewhere to indicate hardware finishes are the industry-recognized standard commercial finishes, except as otherwise noted.
 1. Brushed Chrome and/or Stainless Steel Appearance
 - a. Brushed Stainless Steel, no coating: ANSI 630.
 - b. Satin Chrome, Clear Coated: ANSI 626, ANSI 652.
 - c. Powder Coated Aluminum finish: ANSI 689.
 - d. Saddle and Panic Thresholds: Mill Aluminum finish.
 - e. Weatherstrip and Gasket: Clear Anodized Aluminum finish.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine doors and frames, 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. Examine roughing-in for electrical power systems to verify actual locations of wiring connections before electrified door hardware installation.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Steel Doors and Frames: Comply with DHI A115 Series.
 1. Surface-Applied Door Hardware: Drill and tap doors and frames according to ANSI A250.6.

- B. Wood Doors: Comply with DHI A115-W Series.

3.3 INSTALLATION

- A. Pre-installation conference shall be conducted prior to installation of hardware at Project site. Meet with the, Owner, Contractor, installer, and manufacturer's representatives. A separate pre-installation conference shall be conducted prior to the installation of electronic security hardware with the electrical contractor Review catalogs, brochures, templates, installation instructions, and the approved hardware schedule. Survey installation procedures and workmanship, with special emphasis on unusual conditions, as to ensure correct technique of installation, and coordination with other work. Notify participants at least ten, 10 working days before conference.
- B. Hardware Installers must have a minimum of five (5) years' experience in installation of hardware. Provide verification of installer's qualification to Consultant for approval. All installers to attend review meetings with the hardware distributor.
- C. Install hardware using only manufacturer supplied and approved fasteners in strict adherence with manufacturers published installation instructions.
- D. Install head seal prior to installation of "PA"-parallel arm mounted door closers and push side mounted door stops/holders. Trim, cut and notch thresholds and saddles neatly to minimally fit the profile of the door frame. Install thresholds and saddles in a bed of caulking completely sealing the underside from water and air penetration.
- E. Counter sink through bolt of door pull under push plate during installation.
- F. Mounting Heights: Mount door hardware units at heights indicated, as follows, unless otherwise 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. Custom Steel Doors and Frames: DHI's "Recommended Locations for Builders' Hardware for Custom Steel Doors and Frames."
 - 3. Wood Doors: DHI WDHS.3, "Recommended Locations for Architectural Hardware for Wood Flush Doors."
- G. Install each door hardware item to comply with manufacturer's written instructions. Where cutting and fitting are required to install door hardware onto or into surfaces that are later to be painted or finished in another way, coordinate removal, storage, and reinstallation of surface protective trim units with finishing work specified in Division 09 Sections. 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.
- H. Furnish wiring diagrams to electrical contractor for use in installing electrical hardware products.

1. Electrical contractor to run all wiring and make all final connections for electrified hardware. Hardware supplier shall be responsible to furnish all wiring diagrams to operate electrified hardware. Access control material and electrified hardware to interface at junction boxes.

- I. Thresholds: Set thresholds for exterior and acoustical doors in full bed of sealant complying with requirements specified in Division 07 Section "Joint Sealants."

3.4 FIELD QUALITY CONTROL

- A. Architectural Hardware Consultant: Architect shall engage a qualified Architectural Hardware Consultant to perform inspections and to prepare inspection reports.
- B. Architectural Hardware Consultant shall inspect door hardware and state in each report whether installed work complies with or deviates from requirements, including whether door hardware is properly installed and adjusted.

3.5 ADJUSTING

- A. Initial Adjustment: Adjust and check each operating item of door hardware and each door to ensure proper operation or function of every unit. Replace units that cannot be adjusted to operate as intended. Adjust door control devices to compensate for final operation of heating and ventilating equipment and to comply with referenced accessibility requirements.
 1. Door Closers: Unless otherwise required by authorities having jurisdiction, adjust sweep period so that, from an open position of 70 degrees, the door will take at least 3 seconds to move to a point 3 inches (75 mm) from the latch, measured to the leading edge of the door.
- B. Occupancy Adjustment: Approximately six months after date of Substantial Completion, Installer's Architectural Hardware Consultant shall examine and readjust, including adjusting operating forces, each item of door hardware as necessary to ensure function of doors, door hardware, and electrified door hardware.

3.6 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.

3.7 DEMONSTRATION

- A. Engage a factory-authorized service representative to train Owner's maintenance personnel to adjust, operate, and maintain door hardware and door hardware finishes. Refer to Division 01 Section "Demonstration and Training."

3.8 DOOR HARDWARE SETS

- A. The following schedule of hardware sets shall be considered a guide and the supplier is cautioned to refer to general conditions, special conditions, and the full requirements of this section. It shall be the hardware supplier's responsibility to furnish all required hardware.
- B. Where items of hardware are not definitely or correctly specified and are required for completion of the Work, a written statement of such omission, error, conflict, or other discrepancy shall be sent to the Architect, prior to date specified for receipt of bids, for clarification by addendum.
- C. Adjustments to the Contract Sum will not be allowed for omissions or items of hardware not clarified prior to bid opening.

HW SET: 01

DOOR NUMBER: (INCLUDES BUT IS NOT LIMITED TO THE FOLLOWING DOORS)

127A	132A	B10	B23	223A	225A
2	EA	CONT. HINGE	224HD	628	IVE
2	EA	FIRE EXIT HARDWARE	9827-L-F-LBR-06-499F	626	VON
2	EA	RIM CYLINDER	MATCH EXISTING KEY SYSTEM	630	TBD
2	EA	FIRE/LIFE CLOSER	4040SE WMS 24V AC/DC	689	LCN
2	EA	KICK PLATE	8400 10" X 2" LDW B-CS	630	IVE
2	EA	FLOOR STOP	FS410 (LOCATE NO MORE THAN 10" FROM HINGE)	626	IVE
1	EA	GASKETING	488SBK PSA	BK	ZER
2	EA	DOOR SHOE	312V		NGP

COORDINATE LOCATION OF FLOOR STOP WITH ARCHITECT BEFORE INSTALLATION.

HW SET: 02

DOOR NUMBER: (INCLUDES BUT IS NOT LIMITED TO THE FOLLOWING DOORS)

314					
8	EA	HINGE	5BB1HW 4.5 X 4.5 NRP	652	IVE
2	EA	FIRE EXIT HARDWARE	9827-L-F-06	626	VON
2	EA	RIM CYLINDER	MATCH EXISTING KEY SYSTEM	630	TBD
2	EA	FIRE/LIFE CLOSER	4040SE WMS 24V AC/DC	689	LCN
2	EA	KICK PLATE	8400 10" X 2" LDW B-CS	630	IVE
2	EA	FLOOR STOP	FS410 (LOCATE NO MORE THAN 10" FROM HINGE)	626	IVE
1	EA	GASKETING	488SBK PSA	BK	ZER
2	EA	DOOR SHOE	312V		NGP

COORDINATE LOCATION OF FLOOR STOP WITH ARCHITECT BEFORE INSTALLATION.

HW SET: 03

DOOR NUMBER: (INCLUDES BUT IS NOT LIMITED TO THE FOLLOWING DOORS)

124A	223A	225A	135A	221A	227A
1	EA	CONT. HINGE	224HD	628	IVE
1	EA	FIRE EXIT HARDWARE	98-L-F-06	626	VON
1	EA	RIM CYLINDER	MATCH EXISTING KEY SYSTEM	630	TBD
1	EA	FIRE/LIFE CLOSER	4040SE WMS 24V AC/DC	689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW B-CS	630	IVE
1	EA	FLOOR STOP	FS410 (LOCATE NO MORE THAN 10" FROM HINGE)	626	IVE
1	EA	GASKETING	488SBK PSA	BK	ZER
1	EA	DOOR SHOE	312V		NGP

COORDINATE LOCATION OF FLOOR STOP WITH ARCHITECT BEFORE INSTALLATION.

HW SET: 04

DOOR NUMBER: (INCLUDES BUT IS NOT LIMITED TO THE FOLLOWING DOORS)

236	313	330	332		
4	EA	HINGE	5BB1HW 5 X 4.5 NRP	652	IVE
1	EA	FIRE EXIT HARDWARE	98-L-F-06	626	VON
1	EA	RIM CYLINDER	MATCH EXISTING KEY SYSTEM	630	TBD
1	EA	FIRE/LIFE CLOSER	4040SE WMS 24V AC/DC	689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW B-CS	630	IVE
1	EA	WALL STOP	WS406/407CCV	630	IVE
1	EA	GASKETING	488SBK PSA	BK	ZER
1	EA	DOOR SHOE	312V		NGP

HW SET: 05

DOOR NUMBER: (INCLUDES BUT IS NOT LIMITED TO THE FOLLOWING DOORS)

321A	322A				
4	EA	HINGE	5BB1HW 4.5 X 4.5 NRP	652	IVE
1	EA	FIRE EXIT HARDWARE	98-L-F-06	626	VON
1	EA	RIM CYLINDER	MATCH EXISTING KEY SYSTEM	630	TBD
1	EA	FIRE/LIFE CLOSER	4040SE WMS 24V AC/DC	689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW B-CS	630	IVE
1	EA	FLOOR STOP	FS410 (LOCATE NO MORE THAN 10" FROM HINGE)	626	IVE
1	EA	GASKETING	488SBK PSA	BK	ZER
1	EA	DOOR SHOE	312V		NGP

COORDINATE LOCATION OF FLOOR STOP WITH ARCHITECT BEFORE INSTALLATION.

HW SET: 06

DOOR NUMBER: (INCLUDES BUT IS NOT LIMITED TO THE FOLLOWING DOORS)

1M10 221A 227A 320A 323A 420A
421A 1M10

4	EA	HINGE	5BB1HW 4.5 X 4.5 NRP	652	IVE
1	EA	FIRE EXIT HARDWARE	98-L-F-06	626	VON
1	EA	RIM CYLINDER	MATCH EXISTING KEY SYSTEM	630	TBD
1	EA	FIRE/LIFE CLOSER	4040SE WMS 24V AC/DC	689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW B-CS	630	IVE
1	EA	WALL STOP	WS406/407CCV	630	IVE
1	EA	GASKETING	488SBK PSA	BK	ZER
1	EA	DOOR SHOE	312V		NGP

HW SET: 07

DOOR NUMBER: (INCLUDES BUT IS NOT LIMITED TO THE FOLLOWING DOORS)

127A 132A B10 B23

6	EA	HINGE	5BB1HW 4.5 X 4.5 NRP	652	IVE
2	EA	FIRE EXIT HARDWARE	9827-L-F-LBR-06-499F	626	VON
2	EA	RIM CYLINDER	MATCH EXISTING KEY SYSTEM	630	TBD
2	EA	FIRE/LIFE CLOSER	4040SE WMS 24V AC/DC	689	LCN
2	EA	KICK PLATE	8400 10" X 2" LDW B-CS	630	IVE
2	EA	FLOOR STOP	FS410 (LOCATE NO MORE THAN 10" FROM HINGE)	626	IVE
1	EA	GASKETING	488SBK PSA	BK	ZER
2	EA	DOOR SHOE	312V		NGP

COORDINATE LOCATION OF FLOOR STOP WITH ARCHITECT BEFORE INSTALLATION.

HW SET: 08

DOOR NUMBER: (INCLUDES BUT IS NOT LIMITED TO THE FOLLOWING DOORS)

214

4	EA	HINGE	3CB1HW 5 X 4.5 NRP	652	IVE
1	EA	PANIC HARDWARE	98-L-06	626	VON
1	EA	RIM CYLINDER	MATCH EXISTING KEY SYSTEM	630	TBD
1	EA	FIRE/LIFE CLOSER	4040SE WMS 24V AC/DC	689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW B-CS	630	IVE
1	EA	FLOOR STOP	FS410 (LOCATE NO MORE THAN 10" FROM HINGE)	626	IVE
1	EA	GASKETING	488SBK PSA	BK	ZER
1	EA	DOOR SHOE	312V		NGP

COORDINATE LOCATION OF FLOOR STOP WITH ARCHITECT BEFORE INSTALLATION.

END OF SECTION 08 7100

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