



## ADDENDUM NO. 02

### GENERAL CONTRACT FOR

|                           |   |
|---------------------------|---|
| <b>PROJECT NAME</b>       | Replace Exterior Doors Sioux Falls RTI / UTES         |
| <b>FEH PROJECT NUMBER</b> | 2023027   |
| <b>CFMO NUMBER</b>        | 466527 & 467009                                       |
| <b>PROJECT ADDRESS</b>    | RTI – 803 W National Guard Dr., Sioux Falls, SD 57104 |
|                           | UTES – 3800 E Benson Rd, Sioux Falls, SD 57104        |

|                        |                                       |
|------------------------|---------------------------------------|
| <b>COMPANY ISSUING</b> | FEH Design                            |
| <b>ADDRESS</b>         | 1201 4 <sup>th</sup> Steet, Suite 201 |
|                        | Sioux City, IA 51101                  |

**ADDENDUM ISSUE DATE** February 23, 2024

**BID DATE** February 29, 2024 @ 2:00 p.m. Central time.

### TO ALL BIDDING DOCUMENT HOLDERS OF RECORD:

This Addendum is issued to all registered plan holders pursuant to the Instructions to Bidders and Conditions of the Contract. This Addendum serves to clarify, revise and supersede information in the Project Manual, Drawings, and any previously issued Addendums. Portions of the Addendum affecting the Contract Documents will be incorporated into the Contract by enumeration of the Addenda in the Owner/Contractor Agreement.

Acknowledge receipt of this Addendum in the space provided on the Bid Form. Failure to do so may subject Bidder to disqualification. This Addendum forms a part of the Bidding Documents.

### GENERAL AND ADMINISTRATIVE ITEMS

1. PRE-BID MEETING: Sign-in sheet for the Pre-Bid Conference held on February 22, 2024 is attached.

### REFER TO PROJECT MANUAL

1. 00 00 07 13.1.4 Builders Risk Clarification – Contractor is to carry the builders risk value for the contract value of this project. Not risk for the value of the existing buildings.
2. SECTION 08 71 00- DOOR HARDWARE – Add this section in its entirety.
  - a) Security coordination is with the State.
  - b) Attached is a diagram of the existing security door detail. The intent is to use as much of the existing wiring as possible and contractor is to supply new only where required. New wiring only needs to go to and connect into the existing junction box located above the doors as shown in diagram.
  - c) Intent is that all hardware connections are hidden within the frame. If any connections are not able to be within the door frame, coordinate with Owner the location of the painted conduit. No free wire will be accepted.



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## PRODUCT APPROVALS

Subject to compliance with requirements of the specifications and drawings, the following manufacturers are approved for use. All approved manufacturers must provide that each item and piece of equipment conforms to the design, quality and requirements of the specifications and drawings.

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1. SECTION 08 43 43 – Aluminum Framed Storefronts – 400CW Forcefront Blast Series Curtainwall – Tubelite
  2. SECTION 08 43 43 – Aluminum Framed Storefronts – TU24650 Ultra Thermal Storefront – Tubelite
  3. SECTION 08 43 43 – Aluminum Framed Storefronts Door – ForceFront Blast Wide Stile Door Monumental – Tubelite
  4. SECTION 08 43 43 – Aluminum Framed Storefronts Door – Thermal=Block Wide Stile Door – Tubelite
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## REFER TO DRAWINGS

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1. Sheet A-104
    - a) Door Schedule Number 20 – Add Comment (10)
    - b) Door Schedule Legend – Comments/Notes add  
(10) FRAME IS TO BE GROUTED SOLID.
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## ATTACHMENTS

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- |                                     |            |
|-------------------------------------|------------|
| 1. Pre-Bid Meeting Attendance Sheet | (2 Pages)  |
| 2. 08 71 00 Door Hardware           | (20 Pages) |
| 3. Door Diagram                     | (1 Page)   |



## ATTENDANCE SHEET

### MEETING INFORMATION

|                    |  |                  |                 |
|--------------------|--|------------------|-----------------|
| MEETING DATE       | Pre-bid Conference                                   | MEETING TIME     | 11:00am         |
| MEETING NAME       | 2-22-2024  | MEETING LOCATION | Sioux Falls RTI |
| PROJECT NAME       | Replace Exterior Doors Sioux Falls RTI / UTES        |                  |                 |
| FEH PROJECT NUMBER | 2023027  |                  |                 |
| PROJECT ADDRESS    | RTI – 803 W National Guard Dr. Sioux Falls, SD 57104 |                  |                 |
|                    | UTES – 3800 E Benson Rd Sioux Falls, SD 57104        |                  |                 |

**NAME****COMPANY****PHONE #****EMAIL**

|                 |                       |  |
|-----------------|-----------------------|--|
| Zach Zingmark   | Hegg Construction     | ZZingmark@heggconstruction.com<br>605-270-7718         |
| Ryan Olson      | BHI Construction      | ryan@bhi-construction.com<br>605-201-4968              |
| Jared Hettinger | Muth Electric         | jhettinger@muthelectric.com<br>605-999-9529            |
| Alex Blackwell  | Sun Kota Construction | alex.blackwell@sunkotaconstruction.com<br>763-269-2537 |
| Chris Rans      | Sun Kota Const.       | Chris@sunkotaconstruction.com<br>(605) 338-9110        |
| Ben Schuler     | Cosand Construction   | ben@cosandconstruction.com<br>605-359-4999             |
| Kyle Cosand     | Cosand Const          | kyle@cosandconstruction.com<br>615-266-1560            |
| Matt Thompson   | Puetz Design + Build  | 641-990-1350<br>Thompsonm@puetzdesignbuild.co          |



# FEH DESIGN

ARCHITECTURE / ENGINEERING / INTERIORS

1201 4TH STREET, SUITE 201  
SIOUX CITY, IOWA 51101  
712 252 3889

NAME

COMPANY

PHONE #

EMAIL

Doug McLane Pretz Design Build (605) 630-1475  
mccuned@pretzdesignbuild.com

Paul Williams Pretz Design Build (605) 770-4759

williams.p@pretzdesignbuild.com

Robert Brantkecke crvo

robby.g.brantkecke.ny@cravv.com

Nate Girsbad CIW

737-6273

Kelly Extreme SD DOM

kelly.extreme@state.sd.us

**08 71 00**  
**DOOR HARDWARE**

**PART 1 - GENERAL**

**1.1 DESCRIPTION**

- A. Door hardware and related items necessary for complete installation and operation of doors.

**1.2 GENERAL**

- A. All hardware shall comply with UFAS, (Uniform Federal Accessible Standards) unless specified otherwise.
- B. Provide rated door hardware assemblies where required by most current version of the International Building Code (IBC).
- C. Hardware for Labeled Fire Doors and Exit Doors: Conform to requirements of NFPA 80 for labeled fire doors and to NFPA 101 for exit doors, as well as to other requirements specified. Provide hardware listed by UL, except where heavier materials, large size, or better grades are specified herein under paragraph HARDWARE SETS. In lieu of UL labeling and listing, test reports from a nationally recognized testing agency may be submitted showing that hardware has been tested in accordance with UL test methods and that it conforms to NFPA requirements.
- D. Hardware for application on metal and wood doors and frames shall be made to standard templates. Furnish templates to the fabricator of these items in sufficient time so as not to delay the construction.
- E. The following items shall be of the same manufacturer, except as otherwise specified:
1. Mortise locksets.
  2. Hinges for hollow metal and wood doors.
  3. Surface applied overhead door closers.
  4. Exit devices.
  5. Floor closers.

**1.3 SUBMITTALS**

- A. Hardware Schedule: Prepare and submit hardware schedule in the following form:

| Hardware Item | Quantity | Size | Reference Publication Type No. | Finish | Mfr. Name and Catalog No. | Key Control Symbols | UL Mark (if fire rated and listed) | ANSI/BHMA Finish Designation |
|---------------|----------|------|--------------------------------|--------|---------------------------|---------------------|------------------------------------|------------------------------|
|               |          |      |                                |        |                           |                     |                                    |                              |
|               |          |      |                                |        |                           |                     |                                    |                              |
|               |          |      |                                |        |                           |                     |                                    |                              |

- B. Samples and Manufacturers' Literature:
1. Samples: All hardware items (proposed for the project) that have not been previously approved by Builders Hardware Manufacturers Association shall be submitted for approval. Tag and mark all items with manufacturer's name, catalog number and project number.
  2. Samples are not required for hardware listed in the specifications by manufacturer's catalog number, if the contractor proposes to use the manufacturer's product specified.
- C. Certificate of Compliance and Test Reports: Submit certificates that hardware conforms to the requirements specified herein. Certificates shall be accompanied by copies of reports as referenced. The testing shall have been conducted either in the manufacturer's plant and certified by an independent testing laboratory or conducted in an independent laboratory, within four years of submittal of reports for approval.
- C. Keying Schedule

**1.4 DELIVERY AND MARKING**

- A. Deliver items of hardware to job site in their original containers, complete with necessary appurtenances including screws, keys, and instructions. Tag one of each different item of hardware and deliver to AE for reference purposes. Tag shall identify items by Project Specification number and manufacturer's catalog number. These items shall remain on file in AE's office until all other similar items have been installed in project, at which time the AE will deliver items on file to Contractor for installation in predetermined locations on the project.

**1.5 APPLICABLE PUBLICATIONS**

- A. The publications listed below form a part of this specification to the extent referenced. The publications are referenced in the text by the basic designation only. In text, hardware items are referred to by series, types, etc., listed in such specifications and standards, except as otherwise specified.

- B. American Society for Testing and Materials (ASTM):
  - F883-04 ..... Padlocks
  - E2180-07 ..... Standard Test Method for Determining the Activity of Incorporated Antimicrobial Agent(s) In Polymeric or Hydrophobic Materials
- C. American National Standards Institute/Builders Hardware Manufacturers Association (ANSI/BHMA):
  - A156.1-06 ..... Butts and Hinges
  - A156.2-03 ..... Bored and Pre-assembled Locks and Latches
  - A156.3-08 ..... Exit Devices, Coordinators, and Auto Flush Bolts
  - A156.4-08 ..... Door Controls (Closers)
  - A156.5-14 ..... Cylinders and Input Devices for Locks
  - A156.6-05 ..... Architectural Door Trim
  - A156.8-05 ..... Door Controls-Overhead Stops and Holders
  - A156.11-14 ..... Cabinet Locks
  - A156.12-05 ..... Interconnected Locks and Latches
  - A156.13-05 ..... Mortise Locks and Latches Series 1000
  - A156.14-07 ..... Sliding and Folding Door Hardware
  - A156.15-06 ..... Release Devices-Closer Holder, Electromagnetic and Electromechanical
  - A156.16-08 ..... Auxiliary Hardware
  - A156.17-04 ..... Self-Closing Hinges and Pivots
  - A156.18-06 ..... Materials and Finishes
  - A156.20-06 ..... Strap and Tee Hinges, and Hasps
  - A156.21-09 ..... Thresholds
  - A156.22-05 ..... Door Gasketing and Edge Seal Systems
  - A156.23-04 ..... Electromagnetic Locks
  - A156.24-03 ..... Delayed Egress Locking Systems
  - A156.25-07 ..... Electrified Locking Devices
  - A156.26-06 ..... Continuous Hinges
  - A156.28-07 ..... Master Keying Systems
  - A156.29-07 ..... Exit Locks and Alarms
  - A156.30-03 ..... High Security Cylinders
  - A156.31-07 ..... Electric Strikes and Frame Mounted Actuators
  - A156.36-10 ..... Auxiliary Locks
  - A250.8-03 ..... Standard Steel Doors and Frames
- D. National Fire Protection Association (NFPA):
  - 80..... Fire Doors and Other Opening Protectives
  - 101 ..... Life Safety Code
- E. Underwriters Laboratories, Inc. (UL): Building Materials Directory

## **PART 2 - PRODUCTS**

### **2.1 LABEL DOORS AND FRAMES**

- A. After approval of hardware schedule, deliver hardware templates and/or physical hardware, as required, to door and frame manufacturers.
- B. All hardware for label shall be UL listed for individual door manufacturers label procedure.
- C. Provide coordinator on all pairs of doors with astragal.

### **2.2 BUTT HINGES**

- A. ANSI A156.1. Provide only three-knuckle hinges, except five-knuckle where the required hinge type is not available in a three-knuckle version (e.g., some types of swing-clear hinges). The following types of butt hinges shall be used for the types of doors listed, except where otherwise specified:
  - 1. Exterior Doors: Type A2112/A5112 for doors 3 feet wide or less and Type A2111/A5111 for doors over 3 feet wide. Hinges for exterior outswing doors shall have non-removable pins. Hinges for exterior fire-rated doors shall be of stainless steel material.
  - 2. Interior Doors: Type A8112/A5112 for doors 3 feet wide or less and Type A8111/A5111 for doors over 3 feet wide. Hinges for doors exposed to high humidity areas (shower rooms, toilet rooms, kitchens, janitor rooms, etc.) shall be of stainless steel material.
- B. Provide quantity and size of hinges per door leaf as follows:
  - 1. Doors up to 4 feet high: 2 hinges.

2. Doors 4 feet to 7 feet 5 inches high: 3 hinges minimum.
  3. Doors greater than 7 feet 5 inches high: 4 hinges.
  4. Doors up to 3 feet wide, standard weight: 4-1/2 inches x 4-1/2 inches hinges.
  5. Doors over 3 feet to 3 feet 6 inches wide, standard weight: 5 inches x 4-1/2 inches.
  6. Doors over 3 feet 6 inches to 4 feet, heavy weight: 5 inches x 4-1/2 inches.
  7. Provide heavy-weight hinges where specified.
  8. At doors weighing 150 lbs. or more, furnish 5 inch high hinges.
- C. Provide proper hinge width to clear trim and allow full 180° door swing.

### 2.3 CONTINUOUS HINGES

- A. ANSI/BHMA A156.26, Grade 1-600.
1. Listed under Category N in BHMA's "Certified Product Directory."
- B. General: 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
- C. Continuous, Barrel-Type Hinges: Hinge with knuckles formed around a Teflon-coated 0.25-inch minimum diameter pin that extends entire length of hinge.
1. Base Metal for Exterior Hinges: Stainless steel
  2. Base Metal for Interior Hinges: Stainless steel
  3. Base Metal for Hinges for Fire-Rated Assemblies: Stainless steel
  4. Provide with non-removable pin (hospital tip option) at lockable outswing doors.
  5. Where required to clear adjacent casing, trim, and wall conditions and allow full door swing, provide wide throw hinges of minimum width required.
  6. Provide with manufacturer's cut-outs for separate mortised power transfers and/or mortised automatic door bottoms where they occur.
  7. Where thru-wire power transfers are integral to the hinge, provide hinge with easily removable portion to allow easy access to wiring connections.
  8. Where models are specified that provide an integral wrap-around edge guard for the hinge edge of the door, provide manufacturer's adjustable threaded stud and machine screw mechanism to allow the door to be adjusted within the wrap-around edge guard.

### 2.4 DOORS CLOSERS

- A. Conform to ANSI A156.4, Grade 1.
- B. Closers shall conform to the following:
1. The closer shall have minimum 50 percent adjustable closing force over minimum value for that closer and have adjustable hydraulic back check effective between 60 degrees and 85 degrees of door opening.
  2. Where specified, closer shall have hold-open feature.
  3. Size Requirements: Provide multi-size closers, sizes 1 through 6, except where multi-size closer is not available for the required application.
  4. Material of closer body shall be forged or cast.
  5. Arm and brackets for closers shall be steel, malleable iron or high strength ductile cast iron.
  6. Where closers are exposed to the exterior or are mounted in rooms that experience high humidity, provide closer body and arm assembly of stainless steel material.
  7. Closers shall have full size metal cover; plastic covers will not be accepted.
  8. Closers shall have adjustable hydraulic back-check, separate valves for closing and latching speed, adjustable back-check positioning valve, and adjustable delayed action valve.
  9. Provide closers with any accessories required for the mounting application, including (but not limited to) drop plates, special soffit plates, spacers for heavy-duty parallel arm fifth screws, bull-nose or other regular arm brackets, longer or shorter arm assemblies, and special factory templating. Provide special arms, drop plates, and templating as needed to allow mounting at doors with overhead stops and/or holders.
  10. Closer arms or backcheck valve shall not be used to stop the door from overswing, except in applications where a separate wall, floor, or overhead stop cannot be used.
  11. Provide parallel arm closers with heavy duty rigid arm.
  12. Where closers are to be installed on the push side of the door, provide parallel arm type except where conditions require use of top jamb arm.
  13. Provide all surface closers with the same body attachment screw pattern for ease of replacement and maintenance.

14. All closers shall have a 1 1/2" minimum piston diameter.

## **2.5 EXIT DEVICES**

- A. Conform to ANSI Standard A156.3. Exit devices shall be Grade 1; type and function are specified in hardware sets. Provide flush with finished floor strikes for vertical rod exit devices in interior of building. Trim shall have cast satin stainless steel lever handles of design similar to locksets, unless otherwise specified. Provide key cylinders for keyed operating trim and, where specified, cylinder dogging.
- B. Surface vertical rod panics shall only be provided less bottom rod; provide fire pins as required by exit device and door fire labels. Do not provide surface vertical rod panics at exterior doors.
- C. Concealed vertical rod panics shall be provided less bottom rod at interior doors, unless lockable or otherwise specified; provide fire pins as required by exit device and door fire labels. Where concealed vertical rod panics are specified at exterior doors, provide with both top and bottom rods.
- D. Where removable mullions are specified at pairs with rim panic devices, provide mullion with key-removable feature.
- E. At non-rated openings with panic hardware, provide panic hardware with key cylinder dogging feature.
- F. Exit devices for fire doors shall comply with Underwriters Laboratories, Inc., requirements for Fire Exit Hardware. Submit proof of compliance.

## **2.6 ARMOR PLATES, KICK PLATES, MOP PLATES AND DOOR EDGING**

- A. Conform to ANSI Standard A156.6.
- B. Provide protective plates and door edging as specified below:
  - 1. Kick plates, mop plates and armor plates of metal, Type J100 series.
  - 2. Provide kick plates and mop plates where specified. Kick plates shall be 10 inches or 12 inches high. Mop plates shall be 6 inches high. Both kick and mop plates shall be minimum 0.050 inches thick. Provide kick and mop plates beveled on all 4 edges (B4E). On push side of doors where jamb stop extends to floor, make kick plates 1-1/2 inches less than width of door, except pairs of metal doors which shall have plates 1 inch less than width of each door. Extend all other kick and mop plates to within 1/4 inch of each edge of doors. Kick and mop plates shall butt astragals. For jamb stop requirements, see specification sections pertaining to door frames.
  - 3. Kick plates and/or mop plates are not required on following door sides:
    - a. Armor plate side of doors;
    - b. Exterior side of exterior doors;
    - c. Closet side of closet doors;
    - d. Both sides of aluminum entrance doors.
  - 4. Armor plates for doors are listed under Article "Hardware Sets". Armor plates shall be thickness as noted in the hardware set, 35 inches high and 1-1/2 inches less than width of doors, except on pairs of metal doors. Provide armor plates beveled on all 4 edges (B4E). Plates on pairs of metal doors shall be 1 inch less than width of each door. Where top of intermediate rail of door is less than 35 inches from door bottom, extend armor plates to within 1/2 inch of top of intermediate rail. On doors equipped with panic devices, extend armor plates to within 1/2 inch of panic bolt push bar.
  - 5. Where louver or grille occurs in lower portion of doors, substitute stretcher plate and kick plate in place of armor plate. Size of stretcher plate and kick plate shall be 10 inches high.
  - 6. Provide stainless steel edge guards where so specified at wood doors. Provide mortised type instead of surface type except where door construction and/or ratings will not allow. Provide edge guards of bevel and thickness to match wood door. Provide edge guards with factory cut-outs for door hardware that must be installed through or extend through the edge guard. Provide full-height edge guards except where door rating does not allow; in such cases, provide edge guards to height of bottom of typical lockset armor front. Forward edge guards to wood door manufacturer for factory installation on doors.

## **2.7 DOOR STOPS**

- A. Conform to ANSI A156.16.
- B. Provide door stops wherever an opened door or any item of hardware thereon would strike a wall, column, equipment or other parts of building construction. For concrete, masonry or quarry tile construction, use lead expansion shields for mounting door stops.
- C. Where cylindrical locks with turn pieces or pushbuttons occur, equip wall bumpers Type L02251 (rubber pads having concave face) to receive turn piece or button.
- D. Provide floor stops (Type L02141 or L02161 in office areas; Type L02121 x 3 screws into floor elsewhere. Wall bumpers, where used, must be installed to impact the trim or the door within the leading half of its width.



Floor stops, where used, must be installed within 4-inches of the wall face and impact the door within the leading half of its width.

- E. Where drywall partitions occur, use floor stops, Type L02141 or L02161 in office areas, Type L02121 elsewhere.
- F. Provide stop Type L02011, as applicable for exterior doors. At outswing doors where stop can be installed in concrete, provide stop mated to concrete anchor set in 3-inch core-drilled hole and filled with quick-setting cement.
- G. Omit stops where floor mounted door holders are required and where automatic operated doors occur.
- H. Provide appropriate roller bumper for each set of doors (except where closet doors occur) where two doors would interfere with each other in swinging.
- I. Provide appropriate door mounted stop on doors in individual toilets where floor or wall mounted stops cannot be used.
- J. Provide overhead surface applied stop Type C02541, ANSI A156.8 on patient toilet doors in bedrooms where toilet door could come in contact with the bedroom door.
- K. Provide door stops on doors where combination closer magnetic holders are specified, except where wall stops cannot be used or where floor stops cannot be installed within 4-inches of the wall.
- L. Where the specified wall or floor stop cannot be used, provide concealed overhead stops (surface-mounted where concealed cannot be used).

## **2.8 OVERHEAD DOOR STOPS AND HOLDERS**

- A. Conform to ANSI Standard A156.8. Overhead holders shall be of sizes recommended by holder manufacturer for each width of door. Set overhead holders for 110 degree opening, unless limited by building construction or equipment. Provide Grade 1 overhead concealed slide type: stop-only at rated doors and security doors, hold-open type with exposed hold-open on/off control at all other doors requiring overhead door stops.

## **2.9 PUSH-BUTTON COMBINATION LOCKS**

- A. ANSI/BHMA A156.5, Grade 1. Battery operated pushbutton entry.
- B. Construction: Heavy duty mortise lock housing conforming to ANSI/BHMA A156.13, Grade 1. Lever handles and operating components in compliance with the UFAS and the ADA Accessibility Guidelines. Match lever handles of locks and latchsets on adjacent doors.
- C. Special Features: Key override to permit a master keyed security system and a pushbutton security code activated passage feature to allow access without using the entry code.

## **2.10 CYLINDERS AND KEYS**

- A. New cylinders are not to integrate into existing system. New doors will be independent from interior cores.
- B. Approved Manufacturer:
  - 1. Marks High Security**
- C. Lock cylinders shall have not less than seven pins.
- D. Cylinders for all locksets shall be removable core type. Cylinder shall be removable by special key or tool.
- E. Disassembly of lever or lockset shall not be required to remove core from lockset.
- F. Construct all cores so that they will be interchangeable into the core housings of all mortise locks, rim locks, cylindrical locks, and any other type lock.
- G. Keys:
  - 1. Provide Original Key and 5 Copies for each lock.
  - 2. Maintenance Keys
    - a. A key that will enable access to all locks within the facility
    - b. Provide Original Key and 5 Copies
- H. Keying:
  - 1. Keying Conference: Conduct conference to comply with requirements in Division 01. Keying conference to incorporate the following criteria into the final keying schedule document:
    - a. Function of building, purpose of each area and degree of security required.
    - b. Plans for existing and future key system expansion.
    - c. Requirement for key control storage and software.
    - d. Installation of permanent keys, cylinder cores and software.
    - e. Address and requirements for delivery of keys.
  - 2. 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 ordering of permanent cylinders/cores.

## **2.11 LOCK SETS AND LATCH SETS**

- A. Cylindrical Lock and Latch Sets: levers shall meet ADA (Americans with Disabilities Act) requirements.
- B. All new lock sets and latch sets shall match the type and brand of existing.
- C. If no lock sets and latch sets are existing and unless otherwise indicated, all locks and latches shall be Sargent 8200 Series LNL lever design.
- D. The following table indicates acceptable manufacturers and approved series:
  - 1. Sargent 8200 Series
  - 2. Corbin-Russwin ML2000 Series
  - 3. Substitutions of equality must be submitted for review and approval prior to bid.
- E. All lock sets, latch sets, trim and cylinders shall be the products of one manufacturer.
- F. Conform to ANSI A156.2.
- G. Locks and latches for doors 1-3/4 inch thick or over shall have beveled fronts.
- H. All locksets or latches on double doors with fire label shall have latch bolt with 3/4 inch throw, unless shorter throw allowed by the door manufacturer's fire label
- I. Provide strikes with proper lip length to protect trim but not to provide more than 1/8" beyond trim, frame or inactive leaf. Where required, provide open back protected back strikes to allow practical and secure operation.
- J. Lock functions shall be listed in hardware groups.

## **2.12 DOOR PULLS WITH PLATES**

- A. Conform to ANSI A156.6. Pull Type J401, 6 inches CTC length by 3/4 inches diameter minimum with plate Type J302, 3-1/2 inches by 15 inches, unless otherwise specified. Provide pull with projection of 2 1/4 inches minimum and a clearance of 1 1/2 inches minimum. Cut plates of door pull plate for cylinders, or turn pieces where required.

## **2.13 PUSH PLATES**

- A. Conform to ANSI A156.6. Metal, Type J302, 8 inches wide by 16 inches high. Provide metal Type J302 plates 4 inches wide by 16 inches high where push plates are specified for doors with stiles less than 8 inches wide. Cut plates for cylinders, and turn pieces where required.

## **2.14 COMBINATION PUSH AND PULL PLATES**

- A. Conform to ANSI 156.6. Type J303, stainless steel 1/8 inch thick, 3-1/3 inches wide by 16 inches high), top and bottom edges shall be rounded. Secure plates to wood doors with 1-1/2 inch long No. 12 wood screws. Cut plates for turn pieces, and cylinders where required. Pull shall be mounted down.

## **2.15 FLUSH BOLTS (LEVER EXTENSION)**

- A. Conform to ANSI A156.16. Flush bolts shall be Type L24081 unless otherwise specified. Furnish proper dustproof strikes conforming to ANSI A156.16, for flush bolts required on lower part of doors.
- B. Lever extension manual flush bolts shall only be used at non-fire-rated pairs for rooms only accessed by maintenance personnel.
- C. Face plates for cylindrical strikes shall be rectangular and not less than 1 inch by 2-1/2 inches.
- D. Friction-fit cylindrical dustproof strikes with circular face plate may be used only where metal thresholds occur.
- E. Provide extension rods for top bolt where door height exceeds 7 feet 2 inches.

## **2.16 FLUSH BOLTS (AUTOMATIC)**

- A. Conform to ANSI A156.3. Dimension of flush bolts shall conform to ANSI A115. Bolts shall conform to Underwriters Laboratories, Inc., requirements for fire door hardware. Flush bolts shall automatically latch and unlatch. Furnish dustproof strikes conforming to ANSI A156.16 for bottom flushbolt. Face plates for dustproof strike shall be rectangular and not less than 1-1/2 by 3-1/2 inches.
- B. At interior doors, provide auto flush bolts less bottom bolt, unless otherwise specified, except at wood pairs with fire-rating greater than 20 minutes; provide fire pins as required by auto flush bolt and door fire labels.

## **2.17 COORDINATORS**

- A. Conform to ANSI A156.16. Coordinators, when specified for fire doors, shall comply with Underwriters Laboratories, Inc., requirements for fire door hardware. Coordinator may be omitted on exterior pairs of doors

where either door will close independently regardless of the position of the other door. Coordinator may be omitted on interior pairs of non-labeled open where open back strike is used. Open back strike shall not be used on labeled doors. Paint coordinators to match door frames, unless coordinators are plated. Provide bar type coordinators, except where gravity coordinators are required at acoustic pairs. For bar type coordinators, provide filler bars for full width and, as required, brackets for push-side surface mounted closers, overhead stops, and vertical rod panic strikes.

## **2.18 THRESHOLDS**

- A. Conform to ANSI A156.21, mill finish extruded aluminum, except as otherwise specified. In existing construction, thresholds shall be installed in a bed of sealant with ¼-20 stainless steel machine screws and expansion shields. In new construction, embed aluminum anchors coated with epoxy in concrete to secure thresholds. Furnish thresholds for the full width of the openings.
- B. For thresholds at elevators entrances see other sections of specifications.
- C. At exterior doors and any interior doors exposed to moisture, provide threshold with non-slip abrasive finish.
- D. Provide with miter returns where threshold extends more than 0.5 inch beyond face of frame.

## **2.19 WEATHERSTRIPS (FOR EXTERIOR DOORS)**

- A. Conform to ANSI A156.22. Air leakage shall not to exceed 0.50 CFM per foot of crack length.

## **2.20 MISCELLANEOUS HARDWARE**

- A. Access Doors (including Sheet Metal, Screen and Woven Wire Mesh Types): Except for fire-rated doors and doors to Temperature Control Cabinets, equip each single or double metal access door with Lock Type E07213, conforming to ANSI A156.11. Key locks as directed. Ship lock prepaid to the door manufacturer. Hinges shall be provided by door manufacturer.
- B. Cylinders for Various Partitions and Doors: Key cylinders same as entrance doors of area in which partitions and door occur, except as otherwise specified. Provide cylinders to operate locking devices where specified for following partitions and doors:
  - 1. Folding doors and partitions.
  - 2. Wicket door (in roll-up door assemblies).
  - 3. Slide-up doors.
  - 4. Swing-up doors.
  - 5. Fire-rated access doors-Engineer's key set.
  - 6. Doors from corridor to electromagnetic shielded room.
- C. Mutes: Conform to ANSI A156.16. Provide door mutes or door silencers Type L03011 or L03021, depending on frame material, of white or light gray color, on each steel or wood door frame, except at fire-rated frames, lead-lined frames and frames for sound-resistant, lightproof and electromagnetically shielded doors. Furnish 3 mutes for single doors and 2 mutes for each pair of doors, except double-acting doors. Provide 4 mutes or silencers for frames for each Dutch type door. Provide 2 mutes for each edge of sliding door which would contact door frame.

## **2.21 FINISHES**

- A. Exposed surfaces of hardware shall have ANSI A156.18, finishes as specified below. Finishes on all hinges, pivots, closers, thresholds, etc., shall be as specified below under "Miscellaneous Finishes." For field painting (final coat) of ferrous hardware, see Section 09 91 00, PAINTING.
- B. Apply specified U.S. Standard finishes on different base metals as following:

| Finish | Base Metal      |
|--------|-----------------|
| 652    | Steel           |
| 626    | Brass or bronze |
| 630    | Stainless steel |

- C. 626 or 630: All surfaces on exterior and interior of buildings, except where other finishes are specified.
- D. Miscellaneous Finishes:
  - 1. Hinges --exterior doors: 630.
  - 2. Hinges --interior doors: 652 or 630.
  - 3. Pivots: Match door trim.
  - 4. Door Closers: Factory applied paint finish. Dull or Satin Aluminum color.
  - 5. Thresholds: Mill finish aluminum.
  - 6. Cover plates for floor hinges and pivots: 630.
  - 7. Other primed steel hardware: 600.

- E. Hardware Finishes for Existing Buildings: U.S. Standard finishes shall match finishes of hardware in (similar) existing spaces except where otherwise specified.
- F. Special Finish: Exposed surfaces of hardware for dark bronze anodized aluminum doors shall have oxidized oil rubbed bronze finish (dark bronze) finish on door closers shall closely match doors.

## **PART 3 - EXECUTION**

### **3.1 INSTALLATION**

- A. Mount hardware units at heights indicated in "Recommended Locations for Builders Hardware" for Standard Steel Doors and Frames" by the Door and Hardware Institute, except as specifically indicated or required to comply with governing regulations, and except as may be otherwise directed by Owner.
- B. Install each hardware item in compliance with the manufacturer's instructions and recommendations. Do not install surface-mounted items until finishes have been completed on the substrate.
- C. Set units level, plumb and true to line and location. Adjust and reinforce the attachment substrate as necessary for proper installation and operation.
- D. Drill and countersink units which are not factory-prepared for anchorage fasteners. Space fasteners and anchors in accordance with industry standards.
- E. Set thresholds for exterior doors in full bed of butyl-rubber or polyisobutylene mastic sealant.
- F. Closer devices, including those with hold-open features, shall be equipped and mounted to provide maximum door opening permitted by building construction or equipment. Closers shall be mounted on side of door inside rooms, inside stairs, and away from corridors. At exterior doors, closers shall be mounted on interior side. Where closers are mounted on doors they shall be mounted with sex nuts and bolts; foot shall be fastened to frame with machine screws.
- G. Hinge leaves shall be sufficiently wide to allow doors to swing clear of door frame trim and surrounding conditions.
- H. Where new hinges are specified for new doors in existing frames or existing doors in new frames, sizes of new hinges shall match sizes of existing hinges; or, contractor may reuse existing hinges provided hinges are restored to satisfactory operating condition as approved by AE. Existing hinges shall not be reused on door openings having new doors and new frames. Coordinate preparation for hinge cut-outs and screw-hole locations on doors and frames.
- I. Fastenings: Suitable size and type and shall harmonize with hardware as to material and finish. Provide machine screws and lead expansion shields to secure hardware to concrete, ceramic or quarry floor tile, or solid masonry. Fiber or rawl plugs and adhesives are not permitted. All fastenings exposed to weather shall be of nonferrous metal.
- J. After locks have been installed; show in presence of AE that keys operate their respective locks in accordance with keying requirements. Installation of locks which do not meet specified keying requirements shall be considered sufficient justification for rejection and replacement of all locks installed on project.

### **3.2 HARDWARE HEIGHTS**

- A. For existing buildings locate hardware on doors at heights to match existing hardware. The Contractor shall visit the site, verify location of existing hardware and submit locations to AE for approval.
- B. For new buildings locate hardware on doors at heights specified below, with all hand-operated hardware centered within 34 inches to 48 inches, unless otherwise noted.
- C. Hardware Heights from Finished Floor:
  - 1. Comply with current ADA (Americans with Disabilities Act) requirements.
  - 2. Exit devices centerline of strike (where applicable) 40-5/16 inches.
  - 3. Locksets and latch sets centerline of strike 40-5/16 inches.
  - 4. Deadlocks centerline of strike 48 inches.
  - 5. Centerline of door pulls to be 40 inches.
  - 6. Push plates and push-pull shall be 50 inches to top of plate.
    - a. 1/2" from edge of pair doors
    - b. 1" from edge of single doors
    - c. 44" to centerline
  - 7. Push-pull latch to be 40-5/16 inches to centerline of strike.
  - 8. Door Pulls
    - a. 43" to centerline
    - b. Backset at 4"
  - 9. Kick Plates & Armor Plates: Bottom within 1/8" of door bottom.

10. Locate other hardware at standard commercial heights. Locate push and pull plates to prevent conflict with other hardware.

### 3.3 FINAL INSPECTION

- A. Installer to provide letter to AE that upon completion, installer has visited the Project and has accomplished the following:
  1. Re-adjust hardware.
  2. Evaluate maintenance procedures and recommend changes or additions, and instruct personnel.
  3. Identify items that have deteriorated or failed.
  4. Submit written report identifying problems.

### 3.4 TURNOVER

- A. Provide a memorandum of property transfer for all sets of keys and extra hardware. All materials being turned over shall be listed on the memorandum of property transfer. Memorandum and all items listed shall be transferred to the South Dakota Department of Military Project Manager.
- B. All keys shall be stamped with a designated identifier number to be supplied by the South Dakota Department of the Military Project Manager.

### 3.5 ADJUST AND CLEAN

- A. Adjust and check each operating item of hardware and each door, to ensure proper operation or function of every unit. Replace which cannot be adjusted to operate freely and smoothly as intended for the application made.
- B. Clean adjacent surfaces soiled by hardware installation.
- C. Final Adjustment: Wherever hardware installation is made more than one month prior to acceptance or occupancy of a space or area, return to the work during the week prior to acceptance or occupancy, and make final check and adjustment of all hardware items in such space or area. Clean operating items as necessary to restore proper function and finish of hardware and doors. Adjust door control devices to compensate for final operation of heating and ventilating equipment.

#### Manufacturer's Abbreviations:

1. MK - McKinney
2. PE - Pemko
3. SU - Securitron
4. RO - Rockwood
5. SA - SARGENT
6. RF - Rixson
7. NO - Norton
8. NG - National Guard

#### Hardware Sets

Comply with BABA agreement Waivers may be required\*

#### Set: 1.0

Doors: 14, 15

Description: EXTERIOR ALD RIM EXIT CPS CLOSER

|  |                     |          |        |
|--|---------------------|----------|--------|
| 1 Continuous Hinge (A31031G)               | CFM (height)SLF-HD1 | PE       | 087100 |
| 1 Rim Exit Device, Classroom (Type 1, 08)* | BAA (72) 8813 ETL   | US32D SA | 087100 |
| 1 Interchangeable Core*                    | TYPE AS REQUIRED    |          | 087100 |
| 1 Cylinder*                                | TYPE AS REQUIRED    | 626      | 087100 |
| 1 Surface Closer (C02021-PT4G)*            | CPS7500             | 689 NO   | 087100 |

|                      |       |     |    |        |
|----------------------|-------|-----|----|--------|
| 1 Blade Stop         | 6891  | 689 | NO | 087100 |
| 1 Drop Plate         | 7788  | 689 | NO | 087100 |
| 1 Sweep (R3D534)     | 345AV |     | PE | 087100 |
| 1 Threshold (J32100) | 172A  |     | PE | 087100 |
| 1 Ramp               | 259A  |     | PE | 087100 |

Notes: SEALS BY DOOR MANUFACTURER.

#### Set: 2.0

Doors: 16

Description: INTERIOR ALD RIM EXIT ELR AIPHONE COMMUNICATION DOOR PROP ALARM

|  |                        |       |    |        |   |
|--|------------------------|-------|----|--------|---|
| 1 Continuous Hinge (A31331G)                         | CFM (height)SLF-HD1 PT |       | PE | 087100 |   |
| 1 Electric Power Transfer*                           | EL-CEPT                | 630   | SU | 087100 | ⚡ |
| 1 Rim Exit Device, Storeroom (Type 1, 03, E01, E04)* | 55 56 (72) 8804 ETL    | US32D | SA | 087100 | ⚡ |
| 1 Interchangeable Core*                              | TYPE AS REQUIRED       |       |    | 087100 |   |
| 1 Cylinder*  | TYPE AS REQUIRED       | 626   |    | 087100 |   |
| 1 Surface Closer (C02021-PT4G)*                      | CPS7500                | 689   | NO | 087100 |   |
| 1 Blade Stop   | 6891                   | 689   | NO | 087100 |   |
| 1 Drop Plate   | 7788                   | 689   | NO | 087100 |   |
| 1 Frame Harness                                      | QC-C1500P              |       | MK | 087100 | ⚡ |
| 1 Door Harness                                       | QC-C___                |       | MK | 087100 | ⚡ |
| 1 Door Alarm   | PZ1                    |       | SU |        |   |
| 1 Key Switch   | MKA                    |       | SU |        |   |
| 1 Position Switch (E08)                              | DPS-M-BK               |       | SU | 087100 | ⚡ |
| 1 Power Supply*                                      | AQDxx (TO SUIT)        |       | SU | 087100 | ⚡ |

Notes: ACCESS BY AUTHORIZED CARD CREDENTIAL, AI PHONE, OR MANUAL KEY. ALWAYS FREE EGRESS. RE-USE SALVAGED CARD READER. AIPHONE COMMUNICATION PROVIDED BY ACCESS CONTROL PROVIDER. DOOR ALARM TO SOUND WHEN DOOR IS OPENED FOR SPECIFIC AMOUNT OF TIME DETERMINED BY ACCESS CONTROL SYSTEM AND SHUNT WHEN DOOR IS CLOSED.

SEALS BY DOOR MANUFACTURER.

#### Set: 3.0

Doors: 17

Description: INTERIOR ALD RIM EXIT ELR DOOR PROP ALARM

|  |                        |       |    |        |   |
|--|------------------------|-------|----|--------|---|
| 1 Continuous Hinge (A31331G)                         | CFM (height)SLF-HD1 PT |       | PE | 087100 |   |
| 1 Electric Power Transfer*                           | EL-CEPT                | 630   | SU | 087100 | ⚡ |
| 1 Rim Exit Device, Storeroom (Type 1, 03, E01, E04)* | 55 56 (72) 8804 ETL    | US32D | SA | 087100 | ⚡ |
| 1 Interchangeable Core*                              | TYPE AS REQUIRED       |       |    | 087100 |   |
| 1 Cylinder*  | TYPE AS REQUIRED       | 626   |    | 087100 |   |
| 1 Surface Closer (C02021-PT4G)*                      | CPS7500                | 689   | NO | 087100 |   |
| 1 Blade Stop   | 6891                   | 689   | NO | 087100 |   |
| 1 Drop Plate   | 7788                   | 689   | NO | 087100 |   |
| 1 Frame Harness                                      | QC-C1500P              |       | MK | 087100 | ⚡ |

|                         |                 |    |        |   |
|-------------------------|-----------------|----|--------|---|
| 1 Door Harness          | QC-C___         | MK | 087100 | ⚡ |
| 1 Position Switch (E08) | DPS-M-BK        | SU | 087100 | ⚡ |
| 1 Door Alarm            | PZ1             | SU |        |   |
| 1 Key Switch            | MKA             | SU |        |   |
| 1 Door King Pin Pad     | 1506            | DK |        |   |
| 1 Power Supply*         | AQDxx (TO SUIT) | SU | 087100 | ⚡ |

Notes: ACCESS BY AUTHORIZED PIN CODE OR MANUAL KEY. ALWAYS FREE EGRESS. DOOR ALARM TO SOUND WHEN DOOR IS OPENED FOR SPECIFIC AMOUNT OF TIME DETERMINED BY ACCESS CONTROL SYSTEM AND SHUNT WHEN DOOR IS CLOSED.

SEALS BY DOOR MANUFACTURER.

#### Set: 4.0

Doors: 22

Description: EXTERIOR PAIR ALD STOREROOM RIM EXIT KEY REMOVABLE MULLION PR CLOSER

|                                |                     |       |        |        |
|--------------------------------|---------------------|-------|--------|--------|
| 2 Continuous Hinge (A31031G)   | CFM (height)SLF-HD1 | PE    | 087100 |        |
| 1 Removable Mullion (Type 22)* | L980S               | PC    | SA     | 087100 |
| 2 Exit Device (Type 1, 03)*    | 16 (72) BAA 8804    | US32D | SA     | 087100 |
| 3 Interchangeable Core*        | TYPE AS REQUIRED    |       |        | 087100 |
| 2 Cylinder*                    | TYPE AS REQUIRED    | 626   |        | 087100 |
| 1 Mullion Cylinder (E09251)*   | (72) 980C1          | US26D | SA     | 087100 |
| 2 Blade Stop                   | 6891                | 689   | NO     | 087100 |
| 2 Drop Plate                   | 7788                | 689   | NO     | 087100 |
| 2 Surface Closer (C02021)*     | PR7500              | 689   | NO     | 087100 |
| 2 Door Stop (L02141)*          | 441                 | US26D | RO     | 087100 |
| 2 Sweep (R3D534)               | 345AV               | PE    |        | 087100 |
| 1 Threshold (J32100)           | 172A                | PE    |        | 087100 |
| 1 Threshold                    | 184AT               | PE    |        | 087100 |

Notes: SEALS BY DOOR MANUFACTURER.

#### Set: 5.0

Doors: 23

Description: INTERIOR PAIR ALD STOREROOM RIM EXIT KEY REMOVABLE MULLION PR CLOSER

|                                |                  |       |        |        |
|--------------------------------|------------------|-------|--------|--------|
| 2 Continuous Hinge (A31031G)   | CFMSLF-HD1 PT    | PE    | 087100 |        |
| 1 Removable Mullion (Type 22)* | L980S            | PC    | SA     | 087100 |
| 2 Exit Device (Type 1, 03)*    | 16 (72) BAA 8804 | US32D | SA     | 087100 |
| 3 Interchangeable Core*        | TYPE AS REQUIRED |       |        | 087100 |
| 2 Cylinder*                    | TYPE AS REQUIRED | 626   |        | 087100 |
| 1 Mullion Cylinder (E09251)*   | (72) 980C1       | US26D | SA     | 087100 |
| 2 Blade Stop                   | 6891             | 689   | NO     | 087100 |
| 2 Drop Plate                   | 7788             | 689   | NO     | 087100 |
| 2 Surface Closer (C02021)*     | PR7500           | 689   | NO     | 087100 |
| 2 Door Stop (L02141)*          | 441              | US26D | RO     | 087100 |

**Set: 6.0**Doors: [1](#)

Description: EXTERIOR PAIR HMD RIM EXIT STOREROOM X EXIT ONLY REMOVABLE MULLION CLP HO CLOSER

|  |                     |       |    |        |   |
|--|---------------------|-------|----|--------|---|
| 1 Continuous Hinge (A31031G)                         | CFM (height) HD1    |       | PE | 087100 |   |
| 1 Continuous Hinge (A31331G)                         | CFM (height) HD1 PT |       | PE | 087100 |   |
| 1 Electric Power Transfer*                           | EL-CEPT             | 630   | SU | 087100 | ⚡ |
| 1 Removable Mullion (Type 22)                        | L980A               | US28  | SA | 087100 |   |
| 1 Exit Device (Type 1, 01)*                          | BAA 8810 EO         | US32D | SA | 087100 |   |
| 1 Rim Exit Device, Storeroom (Type 1, 03, E01, E04)* | 55 56 (72) 8804 ETL | US32D | SA | 087100 | ⚡ |
| 3 Interchangeable Core*                              | TYPE AS REQUIRED    |       |    | 087100 |   |
| 2 Cylinder*  | TYPE AS REQUIRED    | 626   |    | 087100 |   |
| 1 Mullion Cylinder (E09251)*                         | (72) 980C1          | US26D | SA | 087100 |   |
| 2 Surface Closer HO (C02061)*                        | CLP7500R            | 689   | NO | 087100 |   |
| 2 Armor Plate (J101)                                 | K1050 35" CSK       | US32D | RO | 087100 |   |
| 2 Adhesive Gasketing (ROY154)                        | S88BL               |       | PE | 087100 |   |
| 1 Rain Guard (ROY976)                                | 346C                |       | PE | 087100 |   |
| 2 Sweep (R3D534)                                     | 345AV               |       | PE | 087100 |   |
| 1 Threshold (J32100)                                 | 172A                |       | PE | 087100 |   |
| 1 Ramp   | 259A                |       | PE | 087100 |   |
| 1 Frame Harness                                      | QC-C1500P           |       | MK | 087100 | ⚡ |
| 1 Door Harness                                       | QC-C___             |       | MK | 087100 | ⚡ |
| 2 Position Switch (E08)                              | DPS-M-BK            |       | SU | 087100 | ⚡ |
| 1 Power Supply*                                      | AQDxx (TO SUIT)     |       | SU | 087100 | ⚡ |

Notes: ACCESS BY AUTHORIZED CARD CREDENTIAL OR MANUAL KEY. ALWAYS FREE EGRESS. RE-USE EXISTING CARD READER AT THIS LOCATION.

**Set: 7.0**Doors: 7, [21](#)

Description: EXTERIOR PAIR HMD RIM EXIT STOREROOM X EXIT ONLY REMOVABLE MULLION CPS CLOSER DOOR PROP ALARM

|  |                     |       |    |        |   |
|--|---------------------|-------|----|--------|---|
| 1 Continuous Hinge (A31031G)                         | CFM (height) HD1    |       | PE | 087100 |   |
| 1 Continuous Hinge (A31331G)                         | CFM (height) HD1 PT |       | PE | 087100 |   |
| 1 Electric Power Transfer*                           | EL-CEPT             | 630   | SU | 087100 | ⚡ |
| 1 Removable Mullion (Type 22)                        | L980A               | US28  | SA | 087100 |   |
| 1 Exit Device (Type 1, 01)*                          | BAA 8810 EO         | US32D | SA | 087100 |   |
| 1 Rim Exit Device, Storeroom (Type 1, 03, E01, E04)* | 55 56 (72) 8804 ETL | US32D | SA | 087100 | ⚡ |
| 3 Interchangeable Core*                              | TYPE AS REQUIRED    |       |    | 087100 |   |
| 2 Cylinder*  | TYPE AS REQUIRED    | 626   |    | 087100 |   |
| 1 Mullion Cylinder (E09251)*                         | (72) 980C1          | US26D | SA | 087100 |   |
| 2 Surface Closer (C02021-PT4G)*                      | CPS7500             | 689   | NO | 087100 |   |
| 2 Armor Plate (J101)                                 | K1050 35" CSK       | US32D | RO | 087100 |   |
| 2 Adhesive Gasketing (ROY154)                        | S88BL               |       | PE | 087100 |   |
| 1 Rain Guard (ROY976)                                | 346C                |       | PE | 087100 |   |



|                         |                 |    |        |   |
|-------------------------|-----------------|----|--------|---|
| 2 Sweep (R3D534)        | 345AV           | PE | 087100 |   |
| 1 Threshold (J32100)    | 172A            | PE | 087100 |   |
| 1 Ramp @ Door 7 Only    | 259A            | PE | 087100 |   |
| 1 Frame Harness         | QC-C1500P       | MK | 087100 | ⚡ |
| 1 Door Harness          | QC-C____        | MK | 087100 | ⚡ |
| 1 Door Alarm            | PZ1             | SU |        |   |
| 1 Key Switch            | MKA             | SU |        |   |
| 2 Position Switch (E08) | DPS-M-BK        | SU | 087100 | ⚡ |
| 1 Door King Pin Pad     | 1506            | DK |        |   |
| 1 Power Supply*         | AQDxx (TO SUIT) | SU | 087100 | ⚡ |

Notes: ACCESS BY AUTHORIZED CARD CREDENTIAL OR MANUAL KEY. ALWAYS FREE EGRESS. DOOR ALARM TO SOUND WHEN DOOR IS OPENED FOR SPECIFIC AMOUNT OF TIME DETERMINED BY ACCESS CONTROL SYSTEM AND SHUNT WHEN DOOR IS CLOSED.

### Set: 8.0

Doors: [12](#)

Description: EXTERIOR PAIR HMD RIM EXIT STOREROOM X EXIT ONLY REMOVABLE MULLION CPS CLOSER DOOR PROP ALARM

|  |                     |       |        |          |
|--|---------------------|-------|--------|----------|
| 1 Continuous Hinge (A31031G)                         | CFM (height) HD1    | PE    | 087100 |          |
| 1 Continuous Hinge (A31331G)                         | CFM (height) HD1 PT | PE    | 087100 |          |
| 1 Electric Power Transfer*                           | EL-CEPT             | 630   | SU     | 087100 ⚡ |
| 1 Removable Mullion (Type 22)                        | L980A               | US28  | SA     | 087100   |
| 1 Exit Device (Type 1, 01)*                          | BAA 8810 EO         | US32D | SA     | 087100   |
| 1 Rim Exit Device, Storeroom (Type 1, 03, E01, E04)* | 55 56 (72) 8804 ETL | US32D | SA     | 087100 ⚡ |
| 3 Interchangeable Core*                              | TYPE AS REQUIRED    |       |        | 087100   |
| 2 Cylinder*  | TYPE AS REQUIRED    | 626   |        | 087100   |
| 1 Mullion Cylinder (E09251)*                         | (72) 980C1          | US26D | SA     | 087100   |
| 2 Surface Closer (C02021-PT4G)*                      | CPS7500             | 689   | NO     | 087100   |
| 2 Armor Plate (J101)                                 | K1050 35" CSK       | US32D | RO     | 087100   |
| 2 Adhesive Gasketing (R0Y154)                        | S88BL               | PE    | 087100 |          |
| 1 Rain Guard (R0Y976)                                | 346C                | PE    | 087100 |          |
| 2 Sweep (R3D534)                                     | 345AV               | PE    | 087100 |          |
| 1 Threshold (J32100)                                 | 172A                | PE    | 087100 |          |
| 1 Ramp   | 259A                | PE    | 087100 |          |
| 1 Frame Harness                                      | QC-C1500P           | MK    | 087100 | ⚡        |
| 1 Door Harness                                       | QC-C____            | MK    | 087100 | ⚡        |
| 1 Door Alarm   | PZ1                 | SU    |        |          |
| 1 Key Switch   | MKA                 | SU    |        |          |
| 4 Position Switch (E08)                              | DPS-M-BK            | SU    | 087100 | ⚡        |
| 1 Power Supply*                                      | AQDxx (TO SUIT)     | SU    | 087100 | ⚡        |

Notes: ACCESS BY AUTHORIZED CARD CREDENTIAL OR MANUAL KEY. ALWAYS FREE EGRESS. DOOR ALARM TO SOUND WHEN DOOR IS OPENED FOR SPECIFIC AMOUNT OF TIME DETERMINED BY ACCESS CONTROL SYSTEM AND SHUNT WHEN DOOR IS CLOSED. RE-USE EXISTING CARD READER.

**Set: 9.0**

Doors: 20

Description: INTERIOR HMD RATED SVR LBR EXIT ELR AP PR CLOSER

|  |                                    |       |    |        |   |
|--|------------------------------------|-------|----|--------|---|
| 1 Continuous Hinge (A31031G)                       | CFM (height) HD1                   |       | PE | 087100 |   |
| 1 Continuous Hinge (A31331G)                       | CFM (height) HD1 PT                |       | PE | 087100 |   |
| 1 Electric Power Transfer*                         | EL-CEPT                            | 630   | SU | 087100 | ⚡ |
| 1 Concealed Vert Rod Exit (Type 8 , 09, E01, E04)* | BAA 12 55 56 (72) NB<br>MD8606 ETL | US32D | SA | 087100 | ⚡ |
| 1 Concealed Vert Rod Exit (Type 8, 09)*            | BAA 12 (72) NB MD806<br>ETL        | US32D | SA | 087100 |   |
| 2 Interchangeable Core*                            | TYPE AS REQUIRED                   |       |    | 087100 |   |
| 2 Cylinder*  | TYPE AS REQUIRED                   | 626   |    | 087100 |   |
| 2 Surface Closer (C02021)*                         | PR7500                             | 689   | NO | 087100 |   |
| 2 Armor Plate (J101)                               | K1050 35" CSK                      | US32D | RO | 087100 |   |
| 2 Door Stop (L02251 / L02121)*                     | 403/470                            | US26D | RO | 087100 |   |
| 2 Astragal (R3E734)*                               | 29310CS                            |       | PE | 087100 |   |
| 1 Adhesive Gasketing (ROY154)                      | S88BL                              |       | PE | 087100 |   |
| 1 Frame Harness                                    | QC-C1500P                          |       | MK | 087100 | ⚡ |
| 1 Door Harness                                     | QC-C____                           |       | MK | 087100 | ⚡ |
| 2 Position Switch (E08)                            | DPS-M-BK                           |       | SU | 087100 | ⚡ |
| 1 Card Reader*                                     | BY SECURITY INTEGRATOR             |       |    |        |   |
| 1 Power Supply*                                    | AQDxx (TO SUIT)                    |       | SU | 087100 | ⚡ |

Notes: ACCESS BY AUTHORIZED CARD CREDENTIAL OR MANUAL KEY. ALWAYS FREE EGRESS.

**Set: 10.0**

Doors: 19

Description: EXTERIOR PAIR HMD RIM CLASSROOM EXIT REMOVABLE MULLION CLP HO CLOSER AP

|  |                   |       |    |        |  |
|--|-------------------|-------|----|--------|--|
| 2 Continuous Hinge (A31031G)               | CFM (height) HD1  |       | PE | 087100 |  |
| 1 Removable Mullion (Type 22)              | L980A             | US28  | SA | 087100 |  |
| 2 Rim Exit Device, Classroom (Type 1, 08)* | BAA (72) 8813 ETL | US32D | SA | 087100 |  |
| 3 Interchangeable Core*                    | TYPE AS REQUIRED  |       |    | 087100 |  |
| 2 Cylinder*                                | TYPE AS REQUIRED  | 626   |    | 087100 |  |
| 1 Mullion Cylinder (E09251)*               | (72) 980C1        | US26D | SA | 087100 |  |
| 2 Surface Closer HO (C02061)*              | CLP7500R          | 689   | NO | 087100 |  |
| 2 Armor Plate (J101)                       | K1050 35" CSK     | US32D | RO | 087100 |  |
| 2 Adhesive Gasketing (ROY154)              | S88BL             |       | PE | 087100 |  |
| 1 Rain Guard (ROY976)                      | 346C              |       | PE | 087100 |  |
| 2 Sweep (R3D534)                           | 345AV             |       | PE | 087100 |  |
| 1 Threshold (J32100)                       | 172A              |       | PE | 087100 |  |

**Set: 11.0**

Doors: 28

Description: EXTERIOR PAIR HMD CLASSROOM LOCK MFB CLP HO CLOSER AP

|                               |                                    |       |    |        |
|-------------------------------|------------------------------------|-------|----|--------|
| 6 Hinge (A5111)               | <a href="#">T4A3386 x USA</a>      | US32D | MK | 087100 |
| 2 Flush Bolt (L04251/L04261)* | <a href="#">555/557 (TO SUIT)</a>  | US26D | RO | 087100 |
| 1 Dust Proof Strike (L04021)* | <a href="#">570</a>                | US26D | RO | 087100 |
| 1 Classroom Lock (F05)        | <a href="#">BAA (72) 8237 LNL</a>  | US32D | SA | 087100 |
| 1 Interchangeable Core*       | TYPE AS REQUIRED                   |       |    | 087100 |
| 1 Cylinder*                   | TYPE AS REQUIRED                   | 626   |    | 087100 |
| 2 Surface Closer HO (C02061)* | <a href="#">CLP7500R</a>           | 689   | NO | 087100 |
| 2 Armor Plate (J101)          | <a href="#">K1050 35" CSK</a>      | US32D | RO | 087100 |
| 1 Astragal (R0Y634)*          | <a href="#">357SP</a>              |       | PE | 087100 |
| 1 Rain Guard (R0Y976)         | <a href="#">346C</a>               |       | PE | 087100 |
| 1 Gasketing (R3E164)          | <a href="#">303AS (HEAD/JAMBS)</a> |       | PE | 087100 |
| 2 Sweep (R3D534)              | <a href="#">345AV</a>              |       | PE | 087100 |
| 1 Threshold (J36100)          | <a href="#">2009APK</a>            |       | PE | 087100 |

Notes: COORDINATE IF OPEN BACK STRIKE IS REQUIRED.

#### **Set: 12.0**

Doors: [29](#)

Description: EXTERIOR PAIR HMD STOREROOM LOCK MFB CLP HO CLOSER AP

|  |                                   |       |    |        |
|--|-----------------------------------|-------|----|--------|
| 6 Hinge (A5111)                            | <a href="#">T4A3386 x USA</a>     |       | MK | 087100 |
| 1 Removable Mullion (Type 22)              | <a href="#">L980A</a>             | US28  | SA | 087100 |
| 2 Rim Exit Device, Classroom (Type 1, 03)* | <a href="#">BAA (72) 8804 ETL</a> | US32D | SA | 087100 |
| 3 Interchangeable Core*                    | TYPE AS REQUIRED                  |       |    | 087100 |
| 2 Cylinder*                                | TYPE AS REQUIRED                  | 626   |    | 087100 |
| 1 Mullion Cylinder (E09251)*               | <a href="#">(72) 980C1</a>        | US26D | SA | 087100 |
| 2 Surface Closer HO (C02061)*              | <a href="#">CLP7500R</a>          | 689   | NO | 087100 |
| 2 Armor Plate (J101)                       | <a href="#">K1050 35" CSK</a>     | US32D | RO | 087100 |
| 2 Adhesive Gasketing (R0Y154)              | <a href="#">S88BL</a>             |       | PE | 087100 |
| 1 Rain Guard (R0Y976)                      | <a href="#">346C</a>              |       | PE | 087100 |
| 2 Sweep (R3D534)                           | <a href="#">345AV</a>             |       | PE | 087100 |
| 1 Threshold (J32100)                       | <a href="#">172A</a>              |       | PE | 087100 |

#### **Set: 13.0**

Doors: [6](#)

Description: EXTERIOR PAIR HMD EXIT ONLY RIM EXIT REMOVABLE MULLION CPS CLOSER AP DPS

|                                 |                                  |       |    |        |
|---------------------------------|----------------------------------|-------|----|--------|
| 2 Continuous Hinge (A31031G)    | <a href="#">CFM (height) HD1</a> |       | PE | 087100 |
| 1 Removable Mullion (Type 22)   | <a href="#">L980A</a>            | US28  | SA | 087100 |
| 2 Exit Device (Type 1, 01)*     | <a href="#">BAA 8810 EO</a>      | US32D | SA | 087100 |
| 1 Interchangeable Core*         | TYPE AS REQUIRED                 |       |    | 087100 |
| 1 Mullion Cylinder (E09251)*    | <a href="#">(72) 980C1</a>       | US26D | SA | 087100 |
| 2 Surface Closer (C02021-PT4G)* | <a href="#">CPS7500</a>          | 689   | NO | 087100 |
| 2 Armor Plate (J101)            | <a href="#">K1050 35" CSK</a>    | US32D | RO | 087100 |
| 2 Adhesive Gasketing (R0Y154)   | <a href="#">S88BL</a>            |       | PE | 087100 |
| 1 Rain Guard (R0Y976)           | <a href="#">346C</a>             |       | PE | 087100 |

|                         |          |  |    |        |   |
|-------------------------|----------|--|----|--------|---|
| 2 Sweep (R3D534)        | 345AV    |  | PE | 087100 |   |
| 1 Threshold (J32100)    | 172A     |  | PE | 087100 |   |
| 2 Position Switch (E08) | DPS-M-BK |  | SU | 087100 | ⚡ |

**Set: 14.0**

Doors: 2

Description: INTERIOR HMD RIM EXIT ELR CPS CLOSER AP

|  |                     |       |    |        |   |
|--|---------------------|-------|----|--------|---|
| 1 Continuous Hinge (A31331G)                         | CFM (height) HD1 PT |       | PE | 087100 |   |
| 1 Electric Power Transfer*                           | EL-CEPT             | 630   | SU | 087100 | ⚡ |
| 1 Rim Exit Device, Storeroom (Type 1, 03, E01, E04)* | 55 56 (72) 8804 ETL | US32D | SA | 087100 | ⚡ |
| 1 Interchangeable Core*                              | TYPE AS REQUIRED    |       |    | 087100 |   |
| 1 Cylinder*  | TYPE AS REQUIRED    | 626   |    | 087100 |   |
| 1 Surface Closer (C02021-PT4G)*                      | CPS7500             | 689   | NO | 087100 |   |
| 1 Armor Plate (J101)                                 | K1050 35" CSK       | US32D | RO | 087100 |   |
| 1 Rain Guard (R0Y976)                                | 346C                |       | PE | 087100 |   |
| 1 Gasketing (R3E164)                                 | 303AS (HEAD/JAMBS)  |       | PE | 087100 |   |
| 1 Sweep (R3D534)                                     | 345AV               |       | PE | 087100 |   |
| 1 Threshold (J36100)                                 | 2009APK             |       | PE | 087100 |   |
| 1 Frame Harness                                      | QC-C1500P           |       | MK | 087100 | ⚡ |
| 1 Door Harness                                       | QC-C____            |       | MK | 087100 | ⚡ |
| 1 Position Switch (E08)                              | DPS-M-BK            |       | SU | 087100 | ⚡ |
| 1 Door King Pin Pad                                  | 1506                |       | DK |        |   |
| 1 Power Supply*                                      | AQDxx (TO SUIT)     |       | SU | 087100 | ⚡ |

Notes: ACCESS BY AUTHORIZED PIN CODE OR MANUAL KEY. ALWAYS FREE EGRESS.

**Set: 15.0**

Doors: 4

Description: INTERIOR HMD RIM EXIT ELR CLP HO CLOSER AP

|  |                     |       |    |        |   |
|--|---------------------|-------|----|--------|---|
| 1 Continuous Hinge (A31331G)                         | CFM (height) HD1 PT |       | PE | 087100 |   |
| 1 Electric Power Transfer*                           | EL-CEPT             | 630   | SU | 087100 | ⚡ |
| 1 Rim Exit Device, Storeroom (Type 1, 03, E01, E04)* | 55 56 (72) 8804 ETL | US32D | SA | 087100 | ⚡ |
| 1 Interchangeable Core*                              | TYPE AS REQUIRED    |       |    | 087100 |   |
| 1 Cylinder*  | TYPE AS REQUIRED    | 626   |    | 087100 |   |
| 1 Surface Closer HO (C02061)*                        | CLP7500R            | 689   | NO | 087100 |   |
| 1 Armor Plate (J101)                                 | K1050 35" CSK       | US32D | RO | 087100 |   |
| 1 Rain Guard (R0Y976)                                | 346C                |       | PE | 087100 |   |
| 1 Gasketing (R3E164)                                 | 303AS (HEAD/JAMBS)  |       | PE | 087100 |   |
| 1 Sweep (R3D534)                                     | 345AV               |       | PE | 087100 |   |
| 1 Threshold (J32100)                                 | 172A                |       | PE | 087100 |   |
| 1 Ramp   | 259A                |       | PE | 087100 |   |
| 1 Frame Harness                                      | QC-C1500P           |       | MK | 087100 | ⚡ |
| 1 Door Harness                                       | QC-C____            |       | MK | 087100 | ⚡ |
| 1 Position Switch (E08)                              | DPS-M-BK            |       | SU | 087100 | ⚡ |

|                     |                 |    |        |   |
|---------------------|-----------------|----|--------|---|
| 1 Door King Pin Pad | 1506            | DK |        |   |
| 1 Power Supply*     | AQDxx (TO SUIT) | SU | 087100 | ⚡ |

Notes: ACCESS BY AUTHORIZED PIN CODE OR MANUAL KEY. ALWAYS FREE EGRESS.

**Set: 16.0**

Doors: 3, 5, 10, 13, 18

Description: INTERIOR HMD RIM EXIT ELR CPS CLOSER

|  |                     |       |        |          |
|--|---------------------|-------|--------|----------|
| 1 Continuous Hinge (A31331G)                         | CFM (height) HD1 PT | PE    | 087100 |          |
| 1 Electric Power Transfer*                           | EL-CEPT             | 630   | SU     | 087100 ⚡ |
| 1 Rim Exit Device, Storeroom (Type 1, 03, E01, E04)* | 55 56 (72) 8804 ETL | US32D | SA     | 087100 ⚡ |
| 1 Interchangeable Core*                              | TYPE AS REQUIRED    |       |        | 087100   |
| 1 Cylinder*  | TYPE AS REQUIRED    | 626   |        | 087100   |
| 1 Surface Closer HO (C02061)*                        | CLP7500R            | 689   | NO     | 087100   |
| 1 Kick Plate (J102)                                  | K1050 10" CSK       | US32D | RO     | 087100   |
| 1 Rain Guard (ROY976)                                | 346C                |       | PE     | 087100   |
| 1 Gasketing (R3E164)                                 | 303AS (HEAD/JAMBS)  |       | PE     | 087100   |
| 1 Sweep (R3D534)                                     | 345AV               |       | PE     | 087100   |
| 1 Threshold (J32100)                                 | 172A                |       | PE     | 087100   |
| 1 Ramp   | 259A                |       | PE     | 087100   |
| 1 Frame Harness                                      | QC-C1500P           |       | MK     | 087100 ⚡ |
| 1 Door Harness                                       | QC-C____            |       | MK     | 087100 ⚡ |
| 1 Position Switch (E08)                              | DPS-M-BK            |       | SU     | 087100 ⚡ |
| 1 Power Supply*                                      | AQDxx (TO SUIT)     |       | SU     | 087100 ⚡ |

Notes: ACCESS BY AUTHORIZED CARD CREDENTIAL OR MANUAL KEY. ALWAYS FREE EGRESS. RE-USE EXISTING CARD READER AT THIS LOCATION.

OMIT 259A @ OPENING 3, 5, 18.

**Set: 17.0**

Doors: 8, 9, 30

Description: EXTERIOR HMD STOREROOM RIM EXIT CPS CLOSER

|                                 |                    |       |        |        |
|---------------------------------|--------------------|-------|--------|--------|
| 1 Continuous Hinge (A31031G)    | CFM (height) HD1   | PE    | 087100 |        |
| 1 Exit Device (Type 1, 03)*     | (72) BAA 8804 ETL  | US32D | SA     | 087100 |
| 1 Interchangeable Core*         | TYPE AS REQUIRED   |       |        | 087100 |
| 1 Cylinder*                     | TYPE AS REQUIRED   | 626   |        | 087100 |
| 1 Surface Closer (C02021-PT4G)* | CPS7500            | 689   | NO     | 087100 |
| 1 Kick Plate (J102)             | K1050 10" CSK      | US32D | RO     | 087100 |
| 1 Rain Guard (ROY976)           | 346C               |       | PE     | 087100 |
| 1 Gasketing (R3E164)            | 303AS (HEAD/JAMBS) |       | PE     | 087100 |
| 1 Sweep (R3D534)                | 345AV              |       | PE     | 087100 |
| 1 Threshold (J32100)            | 172A               |       | PE     | 087100 |
| 1 Ramp                          | 259A               |       | PE     | 087100 |

Notes: PR CLOSER W/WALL STOP @ 30.

**Set: 18.0**

Doors: 11

Description: EXTERIOR HMD STOREROOM RIM EXIT CPS CLOSER

|                                 |                    |       |    |        |
|---------------------------------|--------------------|-------|----|--------|
| 1 Continuous Hinge (A31031G)    | CFM (height) HD1   |       | PE | 087100 |
| 1 Exit Device (Type 1, 03)*     | (72) BAA 8804 ETL  | US32D | SA | 087100 |
| 1 Interchangeable Core*         | TYPE AS REQUIRED   |       |    | 087100 |
| 1 Cylinder*                     | TYPE AS REQUIRED   | 626   |    | 087100 |
| 1 Surface Closer (C02021-PT4G)* | CPS7500            | 689   | NO | 087100 |
| 1 Kick Plate (J102)             | K1050 10" CSK      | US32D | RO | 087100 |
| 1 Rain Guard (R0Y976)           | 346C               |       | PE | 087100 |
| 1 Gasketing (R3E164)            | 303AS (HEAD/JAMBS) |       | PE | 087100 |
| 1 Sweep (R3D534)                | 345AV              |       | PE | 087100 |
| 1 Threshold (J32100)            | 172A               |       | PE | 087100 |
| 1 Ramp                          | R1.25FMRA          |       | PE | 087100 |

**Set: 19.0**

Doors: 26

Description: EXTERIOR HMD CLASSROOM LOCK CPC SRI CPS CLOSER AP

|                              |                       |              |    |        |
|------------------------------|-----------------------|--------------|----|--------|
| 1 Continuous Hinge (A31031G) | CFM (height) HD1      |              | PE | 087100 |
| 1 Classroom Lock (F05)       | BAA CPC (72) 8237 LNL | US32D        | SA | 087100 |
| 1 Interchangeable Core*      | TYPE AS REQUIRED      |              |    | 087100 |
| 1 Cylinder*                  | TYPE AS REQUIRED m    | 626          |    | 087100 |
| 1 Conc Overhead Stop         | 1-336                 | 630          | RF | 087100 |
| 1 Surface Closer             | PRO9500 SN-134        | 600 x<br>689 | NO | 087100 |
| 1 Armor Plate (J101)         | K1050 35" CSK         | US32D        | RO | 087100 |
| 1 Rain Guard (R0Y976)        | 346C                  |              | PE | 087100 |
| 1 Gasketing (R3E164)         | 303AS (HEAD/JAMBS)    |              | PE | 087100 |
| 1 Sweep (R3D534)             | 345AV                 |              | PE | 087100 |

Notes: COORDINATE WIDTH OF THRESHOLD WITH A/E AND GC.

**Set: 20.0**

Doors: 24

Description: EXTERIOR HMD STOREROOM LOCK CPS CLOSER

|                                 |                    |       |    |        |
|---------------------------------|--------------------|-------|----|--------|
| 1 Continuous Hinge (A31031G)    | CFM (height) HD1   |       | PE | 087100 |
| 1 Exit Device                   | (72) BAA 8804 ETL  | US32D | SA | 087100 |
| 1 Interchangeable Core*         | TYPE AS REQUIRED   |       |    | 087100 |
| 1 Cylinder*                     | TYPE AS REQUIRED   | 626   |    | 087100 |
| 1 Surface Closer (C02021-PT4G)* | CPS7500            | 689   | NO | 087100 |
| 1 Rain Guard (R0Y976)           | 346C               |       | PE | 087100 |
| 1 Gasketing (R3E164)            | 303AS (HEAD/JAMBS) |       | PE | 087100 |

1 Sweep (R3D534)  
1 Threshold (J36100)

345AV  
2009APK

PE 087100  
PE 087100

**END OF SECTION 08 71 00**

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SECURITY FIELD WIRING CONNECTIONS  
BETWEEN FIELD CONTROL PANEL  
AND INTERFACE BY BEST.

TO ROOM 146

4" x 4" x 2.5" JUNCTION BOX  
BY ELECTRICAL CONTRACTOR

2A

3/4"

A,H

A

1/2"

SUSPENDED CEILING  
WHERE APPLICABLE

RECESSED MOUNTED MAGNETIC DOOR  
CONTACT W/EOL RESISTOR TO BE  
FURNISHED BY DOOR HARDWARE SUPPLIER,  
INSTALLED BY G.C.  
BEST TO PROVIDE CONNECTIONS TO  
PIGTAILS SUPPLIED WITH DOOR CONTACTS  
AND CONNECT TO SECURITY SYSTEM.

REX ONLY

ELECTRIC TRANSFER HINGE  
AS SUPPLIED BY  
DOOR HARDWARE CONTR.

FLOOR

|                          |  |
|--------------------------|--|
| DRAWN BY: <i>2082</i>    |  |
| SCALE: NONE              |  |
| REV: 08/09/01            |  |
| DRAWING NO. <b>SE-13</b> |  |
| JOB NO: SIOUX FALLS      |  |
| FILE: FOSTER/SDARNG      |  |
| DATE: 07/31/01           |  |

|  |  |
|--|--|
| TITLE: DOOR DETAIL                           |  |
| SDARNG                                       |  |
| CONSOLIDATED BARRACKS/<br>EDUCATION FACILITY |  |
| SIOUX FALLS, SD                              |  |