



## **R G Architects, LLC**

200 West Main Street  
Middletown, DE 19709  
302.376.8100  
302.376.9851 fax  
www.rgarchitects.net

RG A No. 15042  
OMB/DFM Contract No. MC4506000058  
21 March 2016

### **ADDENDUM NO. 2**

STATE OF DELAWARE OMB/DFM  
Troop One Exterior Concrete Renovations  
603 Philadelphia Pike  
Wilmington, DE 19809

R G Architects  
200 West Main Street  
Middletown, DE 19709  
Phone: 302-376-8100 (phone)  
Fax: 302-376-9851 (fax)  
Email: chris@rgarchitects.net

BIDS DUE:

**Thursday, March 24, 2016 at 2:00 p.m.**

LOCATION:

**THOMAS COLLINS BUILDING  
Division of Facilities Management Office  
540 S. DuPont Highway, Suite 1 (Third Floor)  
Dover, Delaware 19901  
Attn: Chip Lieber**

### **NOTICE TO ALL BIDDERS**

#### **1.0 GENERAL NOTES:**

- 1.1 Bidders are hereby notified that this Addendum shall be and hereby becomes part of their Contract Documents, and shall be attached to the Project Manual for this project.
- 1.2 The following items are intended to revise and clarify the Drawings and Project Manual, and shall be included by the Bidder in their proposal.
- 1.3 Bidders shall verify that their Sub-bidders are in full receipt of the information contained herein.
- 1.4 A copy of the current bid set register is available upon request indicating individuals that have purchased project documents from R G architects.

**ADDENDUM # 2**

**2.0 Revisions to the SPECIFICATIONS**

- 2.1 Addendum No.1: Paragraph 2.1.I; Delete in its entirety.
- 2.2 Add specification section 08 71 10 – DOOR HARDWARE.
- 2.3 Revise specification section 01 22 00 Unit Prices; 3.1.A.1 to read as follows;
  - 2.3.1 “Description: A price per square foot for all material and labor associated with the demolition and replacement of new 4” reinforced concrete slab as detailed in the contract documents 3, 4, 5/A30-1.”
- 2.4 Revise specification section 01 50 00 Temporary Facilities and Controls; 3.2.E. Delete subsection 1 “Toilets” in its entirety. Contractor to provide temporary toilets as described in section 3.2.E.
- 2.5 Revise specification section 01 78 39; 1.3 Submittals, A.1.b.1 shall read as follows;
  - 2.5.1 “Electronic Media: CD-R Gold Label”
- 2.6 Revise specification section 32 13 00 Rehabilitation of Site Concrete; Part 2-Products, 2.2.A. shall read as follows;
  - 2.6.1 “Cementitious Protective Coating: Two-component, polymer-modified, waterproof, cement-based coating system. Product shall not form a vapor barrier and shall be resistant to pedestrian foot traffic.”

**3.0 Revisions to the DRAWINGS**

- 3.1 D11-1; Revised demolition note for foundation under existing stair tread. See Sketch AD2-SK1.
- 3.2 A11-2; Revised Door Frame note for Door D-1 to read as follows; “NEW 14GA. FULLY WELDED GALV. HOLLOW METAL FRAME, PRIMED AND PAINTED. FURNISH WITH EXISTING WALL ANCHORS.”
- 3.3 A11-2; Revised Door Hardware for Door D-1. See attached specification section 08 71 10.
- 3.4 A30-2; Revised scope of work for infilling existing post sleeve embedment’s. See attached Sketch AD2-SK2.
- 3.5 A30-2; Added maximum tread height and depth. See attached Sketch AD2-SK3.

**5.0 Questions**

- Q.1 Will the new door and frame require prime and painting as well?
  - A.1 Yes, the new door and frame will also be required to be primed and painted.
- Q.2 Please clarify the number and size of the proposed sign’s required.
  - A.2 There will be 1 sign for this project, “Public Notice Sign” (approx.. 4’x8’) provided and installed by G.C.. Coordinate public notice announcement to be printed on Public Notice Sign. All requirements noted in specification section 01 50 00 apply.

**6.0 ATTACHMENT LIST:**

- A. Bid Register
- B. Sketch AD2-SK1
- C. Sketch AD2-SK2
- D. Sketch AD2-SK3
- E. 08 71 10 – DOOR HARDWARE

PLEASE PRINT CLEARLY

State of Delaware

Troop One Exterior Concrete Renovations

MC4506000058

Bids Due: Thursday, March 24, 2016 at 2:00 pm

Facilities Management Office, Thomas Collins Building

540 S. DuPont Highway, Suite 1 (Third Floor)

Dover, DE 19901



RGA # 15042

BID DOCUMENTS REGISTER

PLEASE PRINT CLEARLY

\$ 100.00 per set

<b>#01</b>	Name of Company: <u>Amakor, Inc.</u> Physical Address: <u>P.O. Box 636</u> City, State: <u>Delaware City, DE 19706</u> Contact: <u>Stacey Bush</u> GC: YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> EMAIL: <u>Amakor@aol.com</u> Fax <u>302-834-8681</u> Phone: <u>302-834-8664</u> Date: <u>3/9/2016</u>
<b>#02</b>	Name of Company: <u>Kent Construction Co.</u> Physical Address: <u>2 Big Oak Road</u> City, State: <u>Smyrna, DE 19977</u> Contact: <u>Pete Ksenich</u> GC: YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> EMAIL: <u>Estimator2@Kentconstructionco.com</u> Fax <u>302-653-2108</u> Phone: <u>302-653-6469</u> Date: <u>3/9/2016</u>
<b>#03</b>	Name of Company: <u>Diamond Hill Inc.</u> Physical Address: <u>34 Industrial Blvd. Ste 104</u> City, State: <u>New Castle, DE 19720</u> Contact: <u>Mike Sheehan</u> GC: YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> EMAIL: <u>msheehan@diamondhillinc.com</u> Fax <u>302-999-0302</u> Phone: <u>302-999-0801</u> Date: <u>3/9/2016</u>
<b>#04</b>	Name of Company: <u>Deldeo Builders</u> Physical Address: <u>100 Naamans Rd Suite 3E</u> City, State: <u>Claymont, DE 19703</u> Contact: <u>Lou Deldeo</u> GC: YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> EMAIL: <u>loudeldeo@comcast.net</u> Fax <u>302-791-0245</u> Phone: <u>302-791-0243</u> Date: <u>3/9/2016</u>

PLEASE PRINT CLEARLY

State of Delaware  
Troop One Exterior Concrete Renovations  
MC4506000058

Bids Due: Thursday, March 24, 2016 at 2:00 pm  
Facilities Management Office, Thomas Collins Building  
540 S. DuPont Highway, Suite 1 (Third Floor)  
Dover, DE 19901



BID DOCUMENTS REGISTER

PLEASE PRINT CLEARLY

<p><b>#05</b></p>	<p>Name of Company: <u>Harbor Stone Construction Company</u> Physical Address: <u>100 Elizabeth Way</u> City, State: <u>Oxford, PA 19363</u></p> <p>Contact: <u>John Rozich</u> GC: YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> EMAIL: <u>jrozich@harborstonecc.com</u> Fax: <u>610-467-0692</u> Phone: <u>610-467-0872</u> Date: <u>3/9/2016</u></p>
<p><b>#06</b></p>	<p>Name of Company: <u>PHB Inc.</u> Physical Address: <u>110 W Green St</u> City, State: <u>Middletown, DE 19709</u></p> <p>Contact: <u>Joe Di Francesco</u> GC: YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> EMAIL: <u>joe@phb-inc.com</u> Fax: <u>302-378-2087</u> Phone: <u>302-378-9693 / 302-428-7009</u> Date: <u>3/9/16</u></p>
<p><b>#07</b></p>	<p>Name of Company: <u>ENTERPRISE MASARYK CORPORATION</u> Physical Address: <u>3010 BELLEVUE AVE</u> City, State: <u>WILMINGTON, DE 19802</u></p> <p>Contact: <u>GREGORY FURTAW</u> GC: YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> EMAIL: <u>GUFURTAW@EMCBRICK.COM</u> Fax: <u>302-764-6859</u> Phone: <u>302-764-6858</u> Date: <u>3/9/16</u></p>
<p><b>#08</b></p>	<p>Name of Company: <u>COMMONWEALTH CONSTRUCTION COMPANY</u> Physical Address: <u>P.O. Box 918</u> City, State: <u>WILMINGTON, DE 19899</u></p> <p>Contact: <u>Bill Booth</u> GC: YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> EMAIL: <u>BBOOTH@ITSCOMMONWEALTH.COM</u> Fax: <u>302-654-2604</u> Phone: <u>302-654-6611</u> Date: <u>3/10/16</u></p>

PLEASE PRINT CLEARLY

State of Delaware  
 Troop One Exterior Concrete Renovations  
 MC450600058

Bids Due: Thursday, March 24, 2016 at 2:00 pm  
 Facilities Management Office, Thomas Collins Building  
 540 S. DuPont Highway, Suite 1 (Third Floor)  
 Dover, DE 19901



BID DOCUMENTS REGISTER

PLEASE PRINT CLEARLY

<p><b>#09</b></p>	<p>Name of Company: <u>Ment Construction Engineers</u>                  Physical Address: <u>5700 Kirkwood Hwy, Suite 201</u>                  City, State: <u>Wilmington DE 19808</u>                  Contact: <u>Vince Dills</u> GC: YES <input type="checkbox"/> NO <input type="checkbox"/>                  EMAIL: <u>vinced@mce86.com</u>                  Fax: _____                  Phone: <u>302-992-9810</u> Date: <u>3-10-16</u></p>
<p><b>#10</b></p>	<p>Name of Company: <u>DODGE DATA &amp; ANALYTICS</u>                  Physical Address: <u>3315 CENTRAL AVENUE</u>                  City, State: <u>HOT SPRINGS, AR 71913</u>                  Contact: <u>MICHELLE MERGEL</u> GC: YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>                  EMAIL: <u>MICHELLE.MERGEL@CONSTRUCTION.COM</u>                  Fax: _____                  Phone: <u>609-426-7381</u> Date: <u>3-10-16</u></p>
<p><b>#11</b></p>	<p>Name of Company: _____                  Physical Address: _____                  City, State: _____                  Contact: _____ GC: YES <input type="checkbox"/> NO <input type="checkbox"/>                  EMAIL: _____                  Fax: _____                  Phone: _____ Date: _____</p>
<p><b>#12</b></p>	<p>Name of Company: _____                  Physical Address: _____                  City, State: _____                  Contact: _____ GC: YES <input type="checkbox"/> NO <input type="checkbox"/>                  EMAIL: _____                  Fax: _____                  Phone: _____ Date: _____</p>

## SECTION 08 71 10 – DOOR HARDWARE

## PART 1 - GENERAL

## 1.1 RELATED DOCUMENTS

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

## 1.2 SUMMARY

- A. This Section includes the following:
  - 1. Commercial door hardware for the following:
    - a. Swinging doors.
- B. Related Sections include the following:
  - 1. Division 8 Section "Steel Doors and Frames"

## 1.3 SUBMITTALS

- A. Product Data: Include installation details, material descriptions, dimensions of individual components and profiles, and finishes.
- B. Door Hardware Schedule: Prepared by or under the supervision of supplier, detailing fabrication and assembly of door hardware, as well as procedures and diagrams. Coordinate the final Door Hardware Schedule with doors, frames, and related work to ensure proper size, thickness, hand, function, and finish of door hardware.
  - 1. Format: Comply with scheduling sequence and vertical format in DHI's "Sequence and Format for the Hardware Schedule."
  - 2. Organization: Organize the Door Hardware Schedule into door hardware sets indicating complete designations of every item required for each door or opening.
    - a. Organize door hardware sets in same order as in the Door Hardware Schedule at the end of Part 3.
  - 3. Content: Include the following information:
    - a. Type, style, function, size, label, hand, and finish of each door hardware item.
    - b. Manufacturer of each item.
    - c. Fastenings and other pertinent information.
    - d. Location of each door hardware set, cross-referenced to Drawings, both on floor plans and in door and frame schedule.
    - e. Explanation of abbreviations, symbols, and codes contained in schedule.
    - f. Mounting locations for door hardware.
    - g. Door and frame sizes and materials.

4. Submittal Sequence: Submit the final Door Hardware Schedule at earliest possible date, particularly where approval of the Door Hardware Schedule must precede fabrication of other work that is critical in the Project construction schedule. Include Product Data, Samples, Shop Drawings of other work affected by door hardware, and other information essential to the coordinated review of the Door Hardware Schedule.
  5. Submittal Sequence: Submit initial draft of final schedule along with essential Product Data to facilitate the fabrication of other work that is critical in the Project construction schedule. Submit the final Door Hardware Schedule after Samples, Product Data, coordination with Shop Drawings of other work, delivery schedules, and similar information has been completed and accepted.
- C. Keying Schedule: Prepared by or under the supervision of supplier, detailing Owner's final keying instructions for locks. Include schematic keying diagram and index each key set to unique door designations.
- D. Product Certificates: Signed by manufacturers of electrified door hardware certifying that products furnished comply with requirements.
1. Certify that door hardware approved for use on types and sizes of labeled fire doors complies with listed fire door assemblies.
- E. Maintenance Data: For each type of door hardware to include in maintenance manuals specified in Division 1.
- F. Warranties: Special warranties specified in this Section.

#### 1.4 QUALITY ASSURANCE

- A. Installer Qualifications: An experienced installer who has completed door hardware similar in material, design, and extent to that indicated for this Project and whose work has resulted in construction with a record of successful in-service performance.
- B. Supplier Qualifications: Door hardware supplier with warehousing facilities in Project's vicinity and who is or employs a qualified Architectural Hardware Consultant, available during the course of the Work to consult with Contractor, Architect, and Owner about door hardware and keying.
1. Electrified Door Hardware Supplier Qualifications: An experienced door hardware supplier who has completed projects with electrified door hardware similar in material, design, and extent to that indicated for this Project, whose work has resulted in construction with a record of successful in-service performance, and who is acceptable to manufacturer of primary materials.
    - a. Engineering Responsibility: Prepare 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.

2. Scheduling Responsibility: Preparation of door hardware and keying schedules.
- 
- C. Architectural Hardware Consultant Qualifications: A person who is currently certified by the Door and Hardware Institute 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.
  - D. 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 are listed to perform electrical modifications, by a testing and inspecting agency acceptable to authorities having jurisdiction, are acceptable.
  - E. Regulatory Requirements: Comply with provisions of the following:
    1. Where indicated to comply with accessibility requirements, comply with Americans with Disabilities Act (ADA), "Accessibility Guidelines for Buildings and Facilities (ADAAG)," ANSI A117.1, FED-STD-795, "Uniform Federal Accessibility Standards," as follows:
      - a. Handles, Pulls, Latches, Locks, and other Operating Devices: Shape that is easy to grasp with one hand and does not require tight grasping, tight pinching, or twisting of the wrist.
      - b. Door Closers: Comply with the following maximum opening-force requirements indicated:
        - 1) Interior Hinged Doors: 5 lbf (22.2 N) applied perpendicular to door.
        - 2) Sliding or Folding Doors: 5 lbf (22.2 N) applied parallel to door at latch.
        - 3) Fire Doors: Minimum opening force allowable by authorities having jurisdiction.
      - c. Thresholds: Not more than 1/2 inch (13 mm) high, Not more than 3/4 inch (19 mm) high for exterior sliding doors. Bevel raised thresholds with a slope of not more than 1:2.
    2. NFPA 101: Comply with the following for means of egress doors:
      - a. Latches, Locks, and Exit Devices: Not more than 15 lbf (67 N) to release the latch. Locks shall not require the use of a key, tool, or special knowledge for operation.
      - b. Delayed-Egress Locks: Lock releases within 15 seconds after applying a force not more than 15 lbf (67 N) for not more than 3 seconds.
      - c. Door Closers: Not more than 30 lbf (133 N) to set door in motion and not more than 15 lbf (67 N) to open door to minimum required width.
      - d. Thresholds: Not more than 1/2 inch (13 mm) high.

- F. Fire-Rated Door Assemblies: Provide door hardware for 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.
  - 1. Test Pressure: Test at atmospheric pressure.
- G. Keying Conference: Conduct meeting with the owner for final keying.

#### 1.5 DELIVERY, STORAGE, AND HANDLING

- A. Tag each item with Door Number related to the final Approved Door Hardware Schedule, and include basic installation instructions with each item or package.
- B. Deliver keys to manufacturer of key control system, or Owner as Directed.

#### 1.6 COORDINATION

- A. Templates: Obtain and distribute to the parties involved templates for doors, frames, and other work specified to be factory prepared for installing 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.

#### 1.7 WARRANTY

- A. General Warranty: Special warranties specified in this Article shall not deprive Owner of other rights Owner may have under other provisions of the Contract Documents and shall be in addition to, and run concurrent with, other warranties made by Contractor under requirements of the Contract Documents.
- B. Warranty Period for Locksets: Three, (3) years from date of Substantial Completion, unless otherwise indicated.
- C. Warranty Period for Manual Closers: Ten, (10) years from date of Substantial Completion, unless otherwise indicated.
- D. Warranty Period for Exit Devices: Three, (3) years from date of Substantial Completion, unless otherwise indicated.

#### 1.8 MAINTENANCE SERVICE

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

- B. Maintenance Service: Beginning at Substantial Completion, provide six 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 as used in the manufacture and installation of original products.
- C. Engage a factory authorized service representative to train Owner's maintenance personnel to adjust, operate, and maintain door hardware and door hardware finishes.

PART 2 - PRODUCTS

2.1 SCHEDULED DOOR HARDWARE

- A. General: Provide door hardware for each door to comply with requirements in this Section, door hardware sets indicated in door and frame schedule, and the Door Hardware Schedule at the end of Part 3.
  - 1. Door Hardware Sets: Provide quantity, item, size, finish or color indicated, and named manufacturer's products. Retain subparagraph below for electrified door hardware.
  - 2. Sequence of Operation: Provide electrified door hardware function, sequence of operation, and interface with other building control systems indicated.
- B. Designations: Requirements for design, grade, function, finish, size, and other distinctive qualities of each type of door hardware are indicated in the Door Hardware Schedule at the end of Part 3. Products are identified by using door hardware designations, as follows:
  - 1. Named Manufacturer's Products: Product designation and manufacturer are listed for each door hardware type required for the purpose of establishing minimum requirements. Manufacturers' names are abbreviated in the Door Hardware Schedule.
  - 2. References to BHMA Standards: Provide products complying with these standards and requirements for description, quality, and function.

2.2 HINGES

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
  - 1. Butt Hinges:
    - a. Stanley Commercial Hardware
    - b. Bommer Industries

c. Hager Hinge Co.

- B. Standards: Comply with the following:
1. Hinges ANSI/BHMA Standard A156.1 Grade 1
  2. Continuous Hinges ANSI/BHMA Standard A156.26 Grade 1
- C. Template Requirements: Except for hinges and pivots to be installed entirely (both leaves) into wood doors and frames, provide only template-produced units.
- D. Hinge Weight: Unless otherwise indicated, provide the following:
1. Supports weights up to 600lbs.
- E. Hinge Base Metal: Unless otherwise indicated, provide the following:
1. Exterior Continuous Hinges: Stainless steel, with stainless-steel pin,
- F. Hinge Options: Comply with the following where indicated in the Door Hardware Schedule or on Drawings:
1. Nonremovable Pins: Provide set screw in hinge barrel that, when tightened into a groove in hinge pin, prevents removal of pin while door is closed; for the following applications:
    - a. Outswinging exterior doors.
- G. Fasteners: Comply with the following:
1. Machine Screws: For metal doors and frames. Install into drilled and tapped holes.
  2. Wood Screws: For wood doors and frames.
  3. Threaded-to-the-Head Wood Screws: For fire-rated wood doors.
  4. Screws: Phillips flat-head screws; machine screws drilled and tapped holes for metal doors, wood screws for wood doors and frames. Finish screw heads to match surface of hinges.

## 2.3 EXIT DEVICES

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
1. Precision Hardware, Inc.
  2. Equals Reviewed & Approved 14-Days Prior to Bid
- B. Standard: BHMA A156.3.
1. BHMA Grade: Grade 1

- C. Certified Products: Provide exit devices listed in BHMA's "Directory of Certified Exit Devices."
- D. Panic Exit Devices: Listed and labeled by a testing and inspecting agency acceptable to authorities having jurisdiction, for panic protection, based on testing according to UL 305.
- E. Fire Exit Devices: Complying with NFPA 80 that are listed and labeled by a testing and inspecting agency acceptable to authorities having jurisdiction, for fire and panic protection, based on testing according to UL 305 and NFPA 252.
- F. Warranty: Exit device to have published Five (5) Year Warranty.
- G. Exit device shall be "touch pad" type with a touch pad that shall extend a minimum of one half (1/2) of the door width.
- H. Exit device shall have a one-quarter (1/4) gap between the face of the door and the touch bar channel eliminating the need for shims or cutting away the glass molding.
- I. Exit device lock stile chassis shall be investment cast steel. Stamped steel units will not be accepted. All device latch bolts shall be stainless steel and shall be deadlocking type.
- J. Exit device strikes shall be adjustable type investment cast stainless steel.
- K. Exit device shall include sound reduction dampening for both depression and extension of the touch pad.
- L. Exit device end cap shall be all metal and secured with a bracket that interlocks both at the touch bar channel base and hinge side filler to prevent end cap "peel-back".
- M. All exposed surfaces of the exit device housing shall be no less than 14 gauge brass or bronze; or no less than 16 gauge stainless steel. Aluminum housing type exit devices are not acceptable.
- N. Outside Trim: Vandal resistant lever.

2.4 CYLINDERS AND KEYING

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
  - 1. Cylinders:
    - a. Best Lock Corporation, No Substitution, Owner's Standard (Existing)
    - b. All cylinders shall be Best Patented Cormax, 7-pin interchangeable cores.
- B. Permanent Cores: Manufacturer's standard; finish face to match lockset; complying with the following:
  - 1. Removable Cores: Core insert, removable by use of a special key, and for use with only the core manufacturer's locksets.
- C. Construction Keying: Comply with the following:
  - 1. Construction Cores: Provide Brass construction cores in all locksets and cylinders that are replaceable by permanent cores.
    - a. Replace Brass construction cores with permanent cores, as indicated in keying schedule

- D. Keys: Provide nickel-silver keys complying with the following:
1. Stamping: Permanently inscribe each key with a visual key control number and include the following notation:
    - a. Notation: **"DO NOT DUPLICATE."**
  2. Quantity: As directed by owner.

## 2.5 CLOSERS

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
1. Surface-Mounted Closers:
    - a. Stanley Commercial Hardware Model CLD 4550
    - b. Equals Reviewed & Approved 14-Days Prior to Bid
- B. Standards: Comply with the following:
1. Closers: BHMA A156.4.
- C. Surface Closers: BHMA Grade 1
- D. Certified Products: Provide door closers listed in BHMA's "Directory of Certified Door Closers."
- E. Size of Units: Unless otherwise indicated, comply with manufacturer's written recommendations for size of door closers depending on size of door, exposure to weather, and anticipated frequency of use. Provide factory-sized closers, adjustable to meet field conditions and requirements for opening force.

## 2.6 PROTECTIVE TRIM UNITS

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
1. Metal Protective Trim Units:
    - a. Burns Manufacturing Company, Inc.
    - b. Triangle Brass Manufacturing Company, Inc.
- B. Standard: Comply with BHMA A156.6.
- C. Materials: Fabricate protection plates from the following:
1. Stainless Steel: **0.050 inch (1.3 mm)** thick; beveled 4 sides.

- D. Fasteners: Provide manufacturer's standard exposed fasteners for door trim units consisting of either machine or self-tapping screws.
- E. Furnish protection plates sized 2” less than door width on push side and 1” less than door width on pull side, by height specified in Door Hardware Schedule.

2.7 DOOR WEATHER SEALS

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
  - 1. Door Gasketing:
    - a. Reese Manufacturing Co., Inc.
    - b. National Guard Products, Inc.
  - 2. Door Sweeps:
    - a. Reese Manufacturing Co., Inc.
    - b. National Guard Products
- B. Standard: Comply with BHMA A156.22.
- C. General: Provide continuous weather-strip on exterior doors Provide noncorrosive fasteners for exterior applications and elsewhere as indicated.
  - 1. Perimeter Gasketing: Apply to head and jamb, forming seal between door and frame.
  - 2. Do not notch weather seals for strike or door closer.
  - 3. Door Sweeps: Apply to bottom of door, forming seal with threshold when door is closed.
- D. Replaceable Seal Strips: Provide only those units where resilient or flexible seal strips are easily replaceable and readily available from stocks maintained by manufacturer.
- E. Gasketing Materials: Comply with ASTM D 2000 and AAMA 701/702.

2.8 THRESHOLDS

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
  - 1. Reese Manufacturing Co., Inc.
  - 2. National Guard Products, Inc.

- B. Standard: Comply with BHMA A156.21.

## 2.9 FABRICATION

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

## 2.10 FINISHES

- A. Standard: Comply with BHMA A156.18.
- B. Protect mechanical finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.
- C. Appearance of Finished Work: Variations in appearance of abutting or adjacent pieces are acceptable if they are within one-half of the range of approved Samples. Noticeable variations in the same piece are not acceptable. Variations in appearance of other components are acceptable if they are within the range of approved Samples and are assembled or installed to minimize contrast.
- D. BHMA Designations: Comply with base material and finish requirements indicated by the following:
  - 1. BHMA 626: Satin chromium plated over nickel, over brass or bronze base metal.
  - 2. BHMA 628: Satin aluminum, clear anodized, over aluminum base metal.
  - 3. BHMA 630: Satin stainless steel, over stainless steel base metal.
  - 4. BHMA 689: Aluminum painted, over any base metal.

## 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 SDI 107.
- B. Wood Doors: Comply with DHI A115-W series.

### 3.3 INSTALLATION

- A. Mounting Heights: Mount door hardware units at heights indicated in following applicable publications, unless specifically indicated or required to comply with governing regulations:
  - 1. Standard Steel Doors and Frames: DHI's "Recommended Locations for Architectural Hardware for Standard Steel Doors and Frames."
  - 2. 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."
- B. Install each door hardware item to comply with manufacturer's written instructions. Where cutting and fitting are required to install door hardware onto or into surfaces that are later to be painted or finished in another way, coordinate removal, storage, and reinstallation of surface protective trim units with finishing work specified in Division 9 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.
- C. Key Control System: Place keys on markers and hooks in key control system cabinet, as determined by final keying schedule. Supply key cabinet with 25% expansion. Factory install keys in cabinet or in field with owner's representative. Key cabinet to be supplied with a "Complete System" equal to the Telkee System.
- D. Boxed Power Supplies: Locate power supplies as indicated or, if not indicated, above accessible ceilings, in equipment room. Verify location with Architect.
  - 1. Configuration: Provide one power supply for each door opening.
  - 2. Configuration: Provide the least number of power supplies required to adequately serve doors with electrified door hardware.
- E. Thresholds: Set thresholds for exterior and acoustical doors in full bed of sealant complying with requirements specified in Division 7 Section "Joint Sealants."

### 3.4 FIELD QUALITY CONTROL

- A. Independent Architectural Hardware Consultant: Owner or Architect will engage a qualified independent Architectural Hardware Consultant to perform inspections and to prepare inspection reports.
  - 1. Independent Architectural Hardware Consultant will 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. Spring Hinges: Adjust to achieve positive latching when door is allowed to close freely from an open position of 30 degrees.
2. Electric Strikes: Adjust horizontal and vertical alignment of keeper to properly engage lock bolt.
3. Door Closers: 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. Six-Month Adjustment: Approximately six months after date of Substantial Completion, Installer shall perform the following:

1. Examine and readjust each item of door hardware as necessary to ensure function of doors, door hardware, and electrified door hardware.
2. Consult with and instruct Owner's personnel on recommended maintenance procedures.
3. Replace door hardware items that have deteriorated or failed due to faulty design, materials, or installation of door hardware units.

### 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 door hardware is without damage or deterioration at time of Substantial Completion.

### 3.7 DOOR HARDWARE SCHEDULE

#### Hardware Set 1

3ea	Hinges	FBB199 4 1/2 x 4 1/2 NRP	630	STN
1ea	Exit Device	2108 x V4908D S300	630	PRC
1ea	Rim Cylinder	12E-72 Patented	626	BST
1ea	Door Closer w/ Stop	CLC 4550CS	689	STH
1ea	Kick Plate	KO050 10" x 2" LDW	630	TRM
1ea	Threshold	896 SIA SSMS/EA	628	NGP
1set	Perimeter Weather Seals	700S	628	NGP
1ea	Door Sweep	101V	628	NGP
1ea	Rain Drip	16SS	630	NGP

Note: Adjust installation of exit device and door closer for perimeter weather seals.

DO NOT NOTCH WEATHER SEALS

END OF SECTION 08 70 00