NEW YORK STATE OF OPPORTUNITY. Office of General Services

DESIGN & CONSTRUCTION GROUP
THE GOVERNOR NELSON A. ROCKEFELLER
EMPIRE STATE PLAZA
ALBANY, NY 12242

ADDENDUM NO. 3 TO PROJECT NO. 47139

CONSTRUCTION, HVAC, PLUMBING AND ELECTRICAL WORK
CONSTRUCT SOEK STORAGE FACILITY
WASHINGTON CORRECTIONAL ANNEX BUILDING
72 LOCK 11 LANE
COMSTOCK, NY

August 26, 2021

NOTE: This Addendum forms a part of the Contract Documents. Insert it in the Project Manual. Acknowledge receipt of this Addendum in the space provided on the Bid Form.

CONSTRUCTION WORK SPECIFICATIONS

1. SECTION 087100 FINISH HARDWARE: Discard the Section bound in the Project Manual and substitute the accompanying Section (pages 087100-1 thru 087100-16) noted "Addendum 3".

ELECTRICAL WORK SPECIFICATIONS

2. SECTION 260543 UNDERGROUND CONDUIT SYSTEM: Discard the Section bound in the Project Manual and substitute the accompanying Section (pages 260543-1 thru 260543-4) noted "Revised 8/24/21".

ELECTRICAL WORK DRAWINGS

3. Drawing No. E-001:
   a. Delete Fire Alarm Symbol for smoke detector with a "C" Designation which indicates combination smoke/carbon monoxide detector. All smoke detectors in building will be smoke only type detectors.

4. Drawing No. E-301:
   a. Disregard the letter "C" next to each smoke detector shown on Drawing E-301.

5. Drawing No. E-601:
   a. Detail 3, Note 1: CHANGE "Panel MPL shall have built-in meter" to "Panel MDP shall have built-in meter".

6. Drawing No. E-701:
   a. Detail 1, Note 1: CHANGE "Door Hardware, Wiring, Access Controller and associated devices provided under allowance specification Section 012100" to "Door Position Switches, Door Strikes and Request to Exit Devices provided under Finish Hardware Specification 087100. Boxes, Conduit & Wiring provided by E Contract".

   b. Detail 1: Remove reference to Magnetic Lock since Magnetic Locks are not being provided as part of this project.

7. Drawing No. E-702:
   a. Detail 1, Note 7: CHANGE "Transition RGS conduit to Schedule 80 PVC" to "Continue as Rigid Galvanized Steel conduit".

   b. Detail 3: DELETE Note 2 in its entirety. Conduit to be 30" below grade to top of conduit as shown.

8. Card Access Scope Clarification: All door position switches, requests to exit and door strikes will be furnished with the door as indicated in the Finish Hardware Specification 087100.

   Honeywell as part of the allowance will furnish one access controller, (3) Three card readers for doors 127,104A & 101, also the integration of (2) pushbuttons, pushbuttons provided by Electrical Contractor. Allowance to also include labor for programming, integration, and commissioning of system.

   Electrical Contractor will provide all required boxes, conduit, conductors for power to controller as well as wiring to door control devices and card reader. All wiring shall be terminated to devices and tested.

END OF ADDENDUM

Erik T. Deyoe, P.E.
Director, Division of Design
Design & Construction

SECTION 087100

FINISH HARDWARE

PART 1 GENERAL

1.01 REFERENCES

A. NFPA 101 Life Safety Code (2018).

B. Building Code of New York State (2020).

C. ICC/ANSI A117.1-2009 Accessible and Usable Buildings and Facilities.

D. ANSI/BHMA Standard A156.1 Butts and Hinges (2006).

E ANSI/BHMA Standard A156.4 Door Controls – Closers (2008).

F. ANSI/BHMA Standard A156.6 Architectural Door Trim (2005).

G. ANSI/BHMA Standard A156.7 Template Hinge Dimensions (2009).

H. ANSI/BHMA Standard A156.8 Door Controls – Overhead Stops and Holders (2005).

I. ANSI/BHMA Standard A156.13 Mortise Locks and Latches Series 1000 (2005).

J. ANSI/BHMA Standard A156.16 Auxiliary Hardware (2008).

K. ANSI/BHMA Standard A156.18 Materials and Finishes (2006).

L. ANSI/BHMA Standard A156.22 Door Gasketing Systems (2005).

M. DHI - Door and Hardware Institute.

N. NAAM Standard HMMA 800-96- Hollow Metal Manufacturers Association.

O. NAAM Standard HMMA 831-97 Recommended Hardware Locations for Custom Hollow Metal Doors and Frames.

P. 2010 Standards for State and Local Government Facilities: Title II.

1.02 DEFINITIONS

A. Architectural Hardware Consultant (AHC): A Door and Hardware Institute certified expert in complex architectural openings requiring advanced knowledge of model building codes and safety standards, ADA requirements, access control knowledge and installation expertise.

B. Architectural Hardware Distributor: A company that regularly purchases architectural hardware from manufacturers and specializes in the sale, service and support of that hardware to contractors and/or end users.

C. Company Field Advisor(s): Hardware manufacturers' representatives who are certified in writing by manufacturer to be technically qualified in design, installation, and servicing of products.

D. Installation Supervisor: Designated supervisor/installer, who has a minimum three years experience in finish hardware installation, and is qualified and responsible to ensure approved finish hardware is installed, adjusted, and operates properly.

E. Benchmark: Finish hardware installed on full size door and frame assembly that is constructed on-site. Benchmarks are constructed to verify qualities of materials and execution; to review coordination between frames, doors, and architectural hardware; to show interface between partitions and frames; and to demonstrate compliance with specified installation tolerances. Benchmarks are not samples. Unless otherwise indicated, approved benchmarks establish the standard by which the Work will be judged. The approved benchmark may be incorporated into the work of this section.

1.03 SUBMITTALS

A. Waiver of Submittals: The Waiver of Certain Submittal Requirements in Section 013300 does not apply to this Section.

B. Re-Evaluation Fee: In accordance with the General Conditions 07213 Article 4.7.

C. Submittal Package Cover Sheets: The Hardware Distributor shall provide a cover sheet, which identifies each package by:

1. OGS project number.
2. Project name.
3. Facility name and location.
4. Submittal Package name.
5. Specification section name and number.
6. Construction Contractor's company name, address, e-mail address, and telephone number.
7. Finish Hardware Distributor's company name, address, e-mail address, and telephone number.
8. Certified Architectural Hardware Consultant's name, company name, address, e-mail address, and telephone number.
9. Submittal Date.

D. Submittal Packages

1. Quality Control Package: Do not submit balance of packages until this package is approved.
    a. Architectural Hardware Consultant Data:
        1) Provide name, business address, and telephone number of DHI certified Architectural Hardware Consultant.
        2) Submit photocopy of Door and Hardware Institute's certificate demonstrating individual is an Architectural Hardware Consultant.
        3) Affix Consultants Certification stamp to all submittals.
    b. Company Field Advisor Data:
        1) Provide name, business address, and telephone number of Company Field Advisor(s) for continuous hinges, door bolts, locksets, overhead stops, door closers, and gaskets.
        2) List services and products for which company field advisor(s) is/are certified by manufacturer. Provide written certifications.
    c. Hardware Distributor's Qualification Data:
        1) Provide the Finish Hardware Distributor's company name, address, e-mail address, and telephone number.
        2) Provide the hardware distributor's company history, including number of years in the hardware distribution business, the number of AHC's employed, and the number of employees. Describe the distributor's major market.
        3) Include the names and contact information of physical plant managers for 3 facilities, similar to this project, for which the distributor has furnished architectural hardware within the past 2 years.
    d. Supervisor's/Installer's Qualification Data:
        1) Name of Supervisor and each installer performing Work, and employer's name, business address and telephone number.
        2) Names and addresses, and contact information of physical plant managers for 3 facilities, similar to this project, on which each installer has worked on during past 2 years.
2. Finish Hardware Package:
    a. Finish Hardware Schedule: Use vertical format and indicate finish hardware items, both mechanical and electrical in one document, required to complete Work of this section. Submit Hardware Schedule that includes complete hardware sets for each door and frame shown on Door Schedule.
        1) Preface schedule with following:
            a) Certified Architectural Hardware Consultant's statement of preparation of/or certification of, Finish Hardware Schedule.
            b) Index.
            c) List of manufacturers.
            d) List of finishes.
            e) Explanation of abbreviations.
            f) Keying instructions and key schedule.

2) Create hardware groups, each group consisting of similar doors and hardware. Do not combine labeled and non-labeled openings. Do not combine doors and frames with dissimilar door sizes and/or materials.

3) For each opening include the following:
   a) Door and frame materials and dimensions.
   b) Fire rating.
   c) Door number, location and handing.
   d) Degree of opening required for closer and/or overhead stop.
   e) Installation and detailing notes.

4) Under each group heading, list hardware items in detail, required for ordering. For each hardware item include:
   a) Type (Hinges).
   b) Quantity (Hinges 3ea).
   c) Manufacturers' name (Hinges 3ea Stanley).
   d) Catalog number (Hinges 3ea Stanley FBB199).
   e) Size (Hinges 3ea Stanley FBB199 4 ½ x 4 ½).
   f) Options or accessories (Hinges HTFBB199 4 ½ x 4 ½).
   g) Finish (Hinges HTFBB199 4 ½ x 4 ½ x 630).
   h) Fasteners (Hinges HTFBB199 4 ½ x 4 ½ x 630 x torx with center security pin).
   i) Indicate location of protection plates: Push side or pull side.
   j) Installation Notes, as written in this section, for each hardware group.

5) Use a separate hardware group in Hardware Schedule that lists attic stock hardware items, key cabinets, key control system, special tools required to install hardware, lubricants, and Operations and Maintenance Manuals.

b. Product Data: Furnish six copies of manufacturers' catalog sheets, specifications, sizing charts, and installation instructions, for each item specified. Highlight information pertaining specifically to product (s) submitted.

c. Submit samples as requested.

3. Closeout Submittals Package: Submit as a complete package.

a. Operation and Maintenance Manuals: Furnish 2 hardcover three ring binders with the project name and number displayed on the front cover and spine. Include:
   1) List of Manufacturers.
   2) Approved Finish Hardware Schedule.
   3) Approved Manufacturers' Product Data Sheets.
   4) Manufacturer's operation, installation, maintenance, and repair instructions for each type of hardware furnished.
   5) Templates for kind of hardware furnished.
   6) Parts List for each type of finish hardware furnished.
   7) Manufacturers' dated written warranty for each type of finish hardware furnished.

8) Certifications: Written certification from Company Field Advisors that their products are installed according to manufacturers' printed installation instructions, are operating properly, and manufacturers' written warranty will be in effect upon physical completion of the Work.

9) Special Tools: List of special tools required to install hardware, and their purpose.

b. Special Tools:

1) At conclusion of finish hardware installation, turn over to Director's Representative 2 of each special tool required to install hardware together with a list of these tools and their purpose.

1.04 TEMPLATES

A. After receipt of approved submittals, furnish templates to affected trades, to enable fabricators to make provision for finish hardware without delaying the Work of the Project.

1.05 DELIVERY AND STORAGE

A. Coordinate delivery to avoid delay.

B. Clearly label each item for identification and installation location as it corresponds to the approved Finish Hardware Schedule and subsequent information bulletins.

C. Deliver hardware to the jobsite in the manufacturers' original packages complete with fasteners, parts, installation instructions, and templates required for proper installation.

D. Inventory hardware at jobsite to identify shortages or backorders. Resolve delivery shortages and damaged items prior to installing hardware.

E. Store finish hardware where directed by Director's Representative. Provide locked, dry storage for finish hardware.

1.06 QUALITY ASSURANCE

A. Hardware Distributor's Qualification:

1. Hardware Distributor who has been in the business of furnishing, and/ or installing finish hardware for a minimum of three years.
2. Hardware Distributor shall have the DHI certified Architectural Hardware Consultant prepare or certify the Finish Hardware Submittal meets specification requirements, and the schedule is written accurately and in accordance with DHI recommendations, and requirements of this specification.

B. Company Field Advisors: Employ advisor(s) for continuous hinges, door bolts, mortise locksets, surface overhead stops, door closers, and gaskets.

C. Installation Supervisor: Employ a qualified Installation Supervisor who will be responsible to ensure approved finished hardware is installed, adjusted and operates properly.

D. Installers: Employ experienced finish hardware installers who have been regularly employed by a Company installing finish hardware for a minimum of 5 years.

E. Pre-submittal Conference: Before Finish Hardware Submittals are written for submission, the Director's Representative may call a teleconference to review Finish Hardware Submittal requirements including but not limited to format, cover sheet, headings, hardware sets, level of detail, installation notes, description of operation, keying, and product data sheets. The Contractor, the Finish Hardware Distributor, the Finish Hardware Detailer, and consulting hardware designer, and OGS Designers shall attend. The OGS Finish Hardware Reviewer shall conduct the conference.

F. On Site Pre-Installation Conference: Before finish hardware installation begins, the Director's Representative will call a conference at the site to review Finish Hardware Specifications, approved Finish Hardware Submittals, and to discuss requirements for the Work including:
1. Hardware delivery and storage.
2. Hardware labeling by door number.
3. Hardware locations.
4. Potential location conflicts.
5. Hardware installation sequence and responsibility.
6. Required accessories and fasteners.
7. Continuous hinge installation.
8. Surface overhead stops and closer template and adjustments.
9. Special tools and maintenance items.
10. Hardware Closeout requirements.
11. Hardware Warranties.

G. Pre-Installation Conference Attendance: The Construction Contractor, Company Field Advisors, authorized Finish Hardware Installers, and the Finish Hardware Distributor's Architectural Hardware Consultant shall attend the conference. OGS designers and facility personnel may attend. The Company Field Advisors will present installation instruction and advice.

H. Pre-Benchmark-Construction Meeting: Prior to the construction of the mock-up, a meeting will be held at the site to review the requirements and discuss the intent of the mock-up. The meeting will be scheduled by the Director's Representative and conducted by the Hardware Designer. The meeting shall be attended by the Director's Representative, the Hardware Designer, the Contractor's onsite foreman, the person supervising this phase of the Work (if different), and the person (people) who will be performing the work.

I. Construction of Benchmark: Before installing portions of the Work requiring benchmarks, install benchmarks for each form of construction required to comply with the following requirements, using materials indicated for the completed Work.

1. Build hardware benchmark including the full door and frame assembly, in location as directed. Include hinges, locksets, closers, gaskets and all electronic components. Demonstrate full operability of opening.
   a. Benchmark Door: Door 100, both leaves.
2. Notify the Director's Representative in advance of dates and times when benchmark will be constructed.
3. Install benchmark with supervisor oversight and workers who will be employed during the construction of the Work.
4. Construct benchmarks using the exact materials, products, methods, and workmanship that were approved for the Work.
5. Obtain Director's Representative's approval of benchmarks before starting work, fabrication, or construction.
6. Maintain benchmarks during construction in an undisturbed condition as a standard for judging the completed Work.
7. Failure to maintain this standard of quality will be cause for rejection of the Work.
8. Benchmark may be used in the Work unless otherwise indicated.

J. Uniformity of Hardware and Single Source Responsibility: For each kind of hardware provide product(s) of a single manufacturer.

K. Size Variations: Manufacturers' products may vary slightly from sizes specified except where minimum size or thickness is specified.

1.07 WARRANTY

A. Manufacturer's Warranty: Ten year minimum warranty for door closers.

B. Manufacturer's Warranty: Three year minimum for locksets.

1.08 MAINTENANCE

A. Special Tools: At the conclusion of finish hardware installation, turn over to Owner's Representative 2 sets of each special tools required for proper installation and adjustment of hardware, together with a list of these tools and their purpose.

B. Lubricants: Provide manufacturer's recommended lubricants for locksets and closers sufficient for 1 year of maintenance. Turn over to Director's Representative.

PART 2 PRODUCTS

2.01 ACCESSORIES

A. Provide brackets, plates, arms, spacers, and special templates to mount door closers in combination with overhead stops and coordinators, on narrow top rails and for special ceiling and jamb conditions.

B. Provide curved lip strikes, with wrought boxes, specific to individual lock functions. Universal strikes that fit a variety of lock functions are not acceptable.

2.02 FASTENINGS

A. Provide fasteners that harmonize with finish hardware material and finish.

B. Provide torx center pin security fasteners for exposed hardware, including full mortise hinges.

C. Provide machine screws for hardware secured to metal; and machine screws and metal expansion shields for attachment to masonry substrates. Self-tapping or self-drilling screws are not acceptable.

D. Provide undercut shallow head torx center pin security fasteners where necessary for proper seating.

E. Attach door closers and overhead stops with sex bolts.

2.03 MATERIALS AND FINISHES

A. General: Requirements for design, grade, function, finish, size, and other distinctive qualities of each type of finish hardware are indicated in this section and in the Hardware Groups.

B. Hanging Devices
   1. Hinges: ANSI/BHMA A156.1 certified, full mortise 5 knuckle butt hinges.
      a. Size: 4-1/2” by 4-1/2”.
      b. Weight and Base Metal:
         1) Exterior Doors: Heavy weight stainless steel.
         2) Interior Doors: Standard weight plated steel.
      c. Provide ball bearing or oil impregnated bearing hinges throughout.
      d. Options: Provide non-removable pin option for all exterior doors. Pins fixed with set screw in hinge barrel that, when tightened into the hinge pin, prevents removal of pin while door is closed.
      e. Quantity: Provide (3) hinges per door leaf.
   2. Electric Transfer Hinges: ANSI/BHMA A156.1. Match standard hinge construction and finish. Locate at center hinge position.
      a. Provide (10) conductor concealed transfer circuiting with (2) 18AWG wires and (8) 28AWG wires.

C. Mechanical Locks, Latches and Bolts

1. Mortise Locksets, Grade 1 (Heavy Duty): ANSI/BHMA A156.13, Series 1000, Operational Grade 1 certified locksets. Locksets manufactured with corrosion resistant, stamped 12-gauge minimum formed steel case and field-reversible for handing without disassembly of the lock body.
    a. Lockset trim (including lever and escutcheon/rose) to be product of a single manufacturer.
    b. Furnish with standard 2-3/4" backset, ¾" throw anti-friction stainless steel latchbolt and a full 1" throw stainless steel bolt for deadbolt function.
    c. Provide function as specified in the Hardware Sets.
    d. Provide 24VDC, electronic un-locking operation with all associated control wiring and power supply components as specified in the Hardware Sets.
2. Narrow Stile Mortise Lockset, Grade 1 (Heavy Duty):
    a. Lever design to match standard mortise lockset hardware.
    b. 24VDC latch retraction function with all associated control wiring and power supply components as specified in the Hardware Sets.
3. Bored Locksets Grade 1 (Heavy Duty): ANSI/BHMA A156.13, Series 4000, Grade 1 certified locksets.
    a. Furnish with standard 2-3/4" backset and 1/2" latchbolt throw.
    b. Provide function as specified in the Hardware Sets.
4. Cylinders: Provide small format IC cores. Coordinate keying with Owner requirements discussed during the Pre-Submittal and Keying Conferences.

D. Door Operating Trim

1. Door Push Plates and Pulls: ANSI/BHMA A156.6 certified door pushes and pulls of type and design specified below.
    a. Push Plate Design: Minimum 0.050" thick by 4" wide by 16" with beveled edges, secured with exposed fasteners.
    b. Pull with Plate Design: 1" diameter by 8" CTC tubular pull with 2-1/2" clearance from face of door. Provide plate backing as specified above.
    c. Material: Stainless steel, #4 finish.
    d. Fasteners: Provide manufacturer's designated fastener type with matching finish.

E. Closers and Door Control Devices

1. Door Closer, Surface Mounted (Cam Action): ANSI/BHMA 156.4, Grade 1 certified surface mounted, high efficiency closers with complete spring power adjustment (sizes 1 thru 6); based on door size, frequency of use and opening force. Closers to be of the cam and roller design, one piece cast aluminum silicon alloy body with adjustable backcheck and independently controlled valves for closing sweep and latch speed.
2. Closer Bodies: Provide closer bodies with the same hole template pattern regardless of type or application.
3. Closer Arms: Provide heavy duty, non-handed, forged steel closer arm and slide track assemblies.
4. Provide all-weather fluid to eliminate seasonal closer speed adjustment.
5. Provide all accessories as required for proper mounting.
6. Powder coat closer body, arm, and adapter plate.

F. Door Stops and Holders
1. ANSI/BHMA A156.6, Grade 1 certified door stops/bumpers.
2. Design: Wall mounted stainless steel stops with concave resilient insert.

G. Accessories for Pairs of Doors
1. ANSI/BHMA A156.3, Type 21 consisting of active-leaf, hold-open lever and inactive leaf release trigger, fabricated from cast brass with resilient hold open contact.

H. Metal Protective Trim Units
1. ANSI/BHMA A156.6, fabricated from 0.050" thick stainless-steel plate with beveled edge (4) sides (BWE) and countersunk fastener holes.
2. Size: 30" high by 2" LWOD.
3. Material: 300 Series, stainless steel, #4 finish.
4. Fasteners: Provide manufacturer's designated fastener type with matching finish.

I. Seals, Weatherstripping and Thresholds
1. General: Provide continuous trim that seals the entire door perimeter against air, water and light intrusion. Provide non-corrosive fasteners for attaching all trim.
2. Seals: Provide interior seals as indicated in Hardware Sets.
3. Weatherstripping: Provide exterior weatherstripping with aluminum frame and easily replaceable resilient seal strips.
   a. Provide overlapping astragal weatherstripping at meeting rail.
4. Thresholds: Provide extruded aluminum thresholds in profile as indicated in Hardware Sets.
5. Finish: Clear anodized aluminum.

J. Miscellaneous Hardware Items
1. Automatic Flush Bolts: ANSI/BHMA A156.3, Type 25, minimum 3/4" throw, with dust-proof strike, designed for mortising into door edge. Opening and closing active leaf automatically retracts and extends top and bottom bolts. Satin stainless-steel finish.
2. Manual Flush Bolts: ANSI/BHMA A156.16, minimum 3/4" throw designed for mortising into door edge. Satin stainless-steel finish.
3. Silencers: ANSI/BHMA A156.16, round resilient inserts.

K. Door Position Switches (Addendum 3)
1. Schlage door position switches; for hollow metal doors and frames, 0.3 Amps @ 30 VDC, UL10C/CAN-ULC-S104, Model 679-05HM.

2.04 KEYING

A. Key system to coordinate with that established for Facility.
1. Stamp key symbol on one side of key and "Do Not Duplicate" on opposite side of key.
2. Furnish one copy of factory bitting list to facility.
3. Factory key cylinders.

4. Furnish 3 cut keys for each master key and 7 for each keyed lockset.
5. When lockset and cylinder are by different manufacturers, identify and furnish correct cylinder cam to operate lockset.
6. Provide compression rings and spacers to achieve proper spacing relationship between cylinder and face of door.

B. Keying Conference

1. Immediately following contract award, Director's Representative will schedule a keying conference to develop a written key schedule that reflects Facility's specific keying requirements.

Facility Representative(s), Hardware Distributor, Consulting Hardware Designer, and OGS's Hardware Designer will attend.

2. Incorporate this schedule in Finish Hardware Submittals for approval.
3. Cut key quantities as noted above are for bidding purposes only. Actual number of cut keys required will be determined at keying conference.

2.05 FINISH HARDWARE SCHEDULE

A. Group 1: Door 100 (Exterior Door, Current Controlled Access):

1. 5 Hinges – McKinney, T4A3386, (NRP) 4-1/2"x4-1/2" - US32D.
2. 1 Electric Hinge (active leaf) – McKinney, T4A3386-CC18. (Match standard hinges).
3. 2 Closers (push side) – Norton, PS2800ST - white powder coat finish.
4. 1 Coordinator - Rockwood 576 gravity door coordinator - white powder coat finish.
5. 1 Mortised Lockset (active leaf) - Electric un-locking (Storeroom function), fail secure – Sargent, 70-8271 LNL – US26D.
6. 1 pair Automatic Flush Bolts (inactive leaf) – Rockwood, 2842 top and bottom bolt set with No. 570 dust proof strike.
7. Weatherstripping - Head, jamb, meeting rail and sill. Pemko 2891APK, 355CPK (meeting rail) and 3452CPK (sill).
8. Threshold – Pemko, 1715 heavy duty saddle. Mill finish.
9. Door Position Switch: Schlage 679-05HM. (Addendum 3)

Theory of Operation: Door always locked from exterior. Active leaf latch retracted by use of exterior cylinder. Push button control at Evidence Desk temporarily unlocks door for opening from exterior. Interior always unlocked. Inactive leaf can only be opened when active leaf is open.

B. Group 2: Door 101 (Exterior Door, Future Controlled Access):

1. 2 Hinges – McKinney, T4A3386, (NRP) 4-1/2"x4-1/2" - US32D.
2. 1 Electric Hinge – McKinney, T4A3386-CC18. (Match standard hinges).
3. Closer (push side) – Norton, PS2800ST - white powder coat finish.
4. Mortised Lockset - Electric un-locking (Storeroom function), fail secure – Sargent, 70-8271 LNL – US26D.
5. Weatherstripping – Head, jamb and sill. Pemko 2891APK and 3452CPK.
6. Threshold – Pemko, 253x3AFG thermal break saddle. Mill finish.
7. Door Position Switch: Schlage 679-05HM. (Addendum 3)

Theory of Operation: Door always locked from exterior. Latch retracted by use of exterior cylinder. Future access control device provided under separate

contract will temporarily unlock door for entry from exterior. Interior always unlocked.

C. Group 3: Door 127 (Exterior Aluminum Door, Future Controlled Access):
1. 2 Hinges – McKinney, T4A3386, (NRP) 4-1/2"x4-1/2" - US32D.
2. 1 Electric Hinge – McKinney, T4A3386-CC18. (Match standard hinges).
3. Closer (push side) – Norton, PS2800ST - white powder coat finish.
4. Mortised Narrow Stile Lockset - Electric latch retraction (Storeroom function), fail secure - Adams Rite, Steel Hawk 4300 electrified deadlatch with lever operation interior side and pull outside – US26D.
5. Weatherstripping – Head, jamb and sill. Pemko 2891APK and 3452CPK.
6. Threshold – Pemko, 253x3AFG thermal break saddle. Mill finish.
7. Door Position Switch: Schlage 679-05HM. (Addendum 3)

Theory of Operation: Door always locked from exterior. Latch retracted by use of exterior cylinder. Future access control device provided under separate contract will also retract latch for entry from exterior. Interior always unlocked.

D. Group 4: Door 104B and 104C (Exterior Doors):
1. 3 Hinges – McKinney, T4A3386, (NRP) 4-1/2"x4-1/2" - US32D.
2. Closer (push side) – Norton, PS2800ST – aluminum powder coat finish.
3. Mortised Lockset – Sargent, 70-8204 LNL (Storeroom function) US26D.
4. Weatherstripping – Head, jamb and sill. Pemko 2891APK and 3452CPK.
5. Threshold - Pemko, 253x3AFG thermal break saddle. Mill finish.

E. Group 5: Door 102A (Current Controlled Access Door):
1. 2 Hinges – McKinney, TA2714, 4-1/2"x4-1/2" – US26D.
2. 1 Electric Hinge (active leaf) – McKinney, TA2714-CC18. (Match standard hinges).
3. Closer (push side) – Norton, PS2800ST - aluminum powder coat finish.
4. Mortised Lockset - Electric un-locking (Storeroom function), fail secure – Sargent, 70-8271 LNL – US26D.
5. Wall Stop – Rockwood 406 – US32D.
6. 3 Silencers.
7. Door Position Switch: Schlage 679-05HM. (Addendum 3)

Door always locked from exterior. Latch retracted by use of exterior cylinder. Push button control at Evidence Desk temporarily unlocks door for opening from exterior. Interior always unlocked.

F. Group 6: Door 104A (Future Controlled Access Door):
1. 2 Hinges – McKinney, TA2714, (NRP) 4-1/2"x4-1/2" – US26D.
2. 1 Electric Hinge (active leaf) – McKinney, TA2714-CC18. (Match standard hinges).
3. Closer (push side) – Norton, PS2800ST - aluminum powder coat finish.
4. Mortised Lockset - Electric un-locking (Storeroom function), fail secure – Sargent, 70-8271 LNL – US26D.
5. Armor Plate - Rockwood K1050 x 36" high, 4BE – US32D.
6. Wall Stop – Rockwood 406 – US32D.
7. Weatherstripping – Head, jamb and sill. Pemko 2891APK and 3452CPK.

8. Door Position Switch: Schlage 679-05HM. (Addendum 3)

Theory of Operation: Door always locked from exterior. Latch retracted by use of exterior cylinder. Future access control device provided under separate contract will temporarily unlock door for entry from exterior. Interior always unlocked.

G. Group 7: Door 102B and 126 (Interior Vestibule Doors):
1. 3 Hinges – McKinney, TA2714, 4-1/2”x4-1/2” – US26D.
2. Closer (push side) - Norton, PS2800ST – aluminum powder coat finish.
3. Push/Pull Hardware – Rockwood BF 110x70C pull with plate and 70C push plate – US32D.
4. Weatherstripping – Head and jambs. Pemko 2891APK.
5. Wall Stop - Rockwood 406 – US32D.

H. Group 8: Door 105A:
1. 6 Hinges — McKinney, TA2714, 4-1/2”x4-1/2” – US26D.
2. 2 Closers (pull side) - Norton, PS2800ST – aluminum powder coat finish
3. Cylinder Lockset (Classroom function) – Sargent 70-1137 OL – US26D.
4. Flush Bolts (inactive leaf) – Rockwood, 555 top and bottom bolt set with No. 570 dust proof strike.
5. 2 Armor Plates - Rockwood K1050 x 36” high, 4BE – US32D.
6. 2 Wall Stops – Rockwood 406 – US32D.
7. 2 Silencers.

I. Group 9: Door 109 and 110 (Toilet Room Doors):
1. 3 Hinges – McKinney, TA2714, 4-1/2”x4-1/2” – US26D.
2. Closer (pull side) - Norton, PS2800ST – aluminum powder coat finish.
3. Push/Pull Hardware – Rockwood BF 110x70C pull with plate and 70C push plate – US32D.
4. Wall Stop – Rockwood 406 – US32D.
5. 3 Silencers.

J. Group 10: Door 103, 106, 107, 108, 113, 116, 119, 123, 124 and 125:
1. 3 Hinges – McKinney, TA2714, 4-1/2”x4-1/2” – US26D.
2. Cylinder Lockset (Classroom function) - Sargent 70-1137 OL – US26D.
3. Wall Stop – Rockwood 406 – US32D.
4. 3 Silencers.

K. Group 11: Door 111, 117 and 121:
1. 3 Hinges – McKinney, TA2714, 4-1/2”x4-1/2” – US26D.
2. Cylinder Lockset (Passage function) – Sargent 1115 OL – US26D.
3. Wall Stop – Rockwood 406 – US32D.

L. Access Control Accessories provided as part of doors scheduled for current and future controlled access operation.
1. Power Supply – Minimum number capable of operating all controlled access doors. Locate as indicated on plans.
2. Internal Wiring – Manufacturer’s standard (10) conductor control wiring with clip connectors at either end as necessary to extend pathway from lockset to above the adjacent accessible ceiling at each door scheduled for access control.

M. Miscellaneous Hardware Items: Furnish the following:

1. 50 Key Blanks to match existing key system.
2. 1 set Special Tools: See paragraph 1.09 A.
3. Lubricants: See paragraph 1.09 B.
4. 2ea Maintenance and Operations Manuals.

PART 3 EXECUTION

3.01 EXAMINATION

A. Examine doors and frames and related items for conditions such as, but not limited to, incorrect handing, hardware preparation, misaligned lock and strike preparations, that would prevent proper application of finish hardware. Do not proceed until defects are corrected.

B. Report conditions or hardware applications that are incorrect to the Director's Representative.

3.02 INSTALLATION

A. Do not proceed with installation of finish hardware prior to attending referenced pre-installation conference.

B. Installation Sequence: Use proper installation sequence, i.e., install coordinators, and overhead stops and holders before surface mounted door closers.

C. Install hardware in accordance with manufacturer's printed installation instructions, and adjust for smooth operation, free of sticking, binding or rattling.
1. Template surface overhead stops and holders for proper operation
2. Template and adjust closers for proper operation.

D. Use proper tools and methods to prevent scratches, burrs or other defacement.

E. Threshold Installation:
1. Drill holes 3 inches from each end of threshold and intermediate holes 12 inches maximum o.c. for required fasteners. Prepare holes for countersunk fasteners.
2. Level and align thresholds with frames and doors. Where required, use non-corrosive shims.
3. Exterior Doors: Set thresholds in a solid bed of Type 3 sealant.
4. Secure thresholds to substrate with stainless steel countersunk fasteners.

F. Door Bottom Installation:
1. Mount sweep type door bottom protection on exterior side of doors.
2. Before mounting apply Type 2 sealant on the back side of bearing surface. Secure to door with required fasteners.

G. Gasket Installation:
1. Install continuous stripping at each opening without unnecessary interruptions.
2. Where fasteners are required, secure fasteners for stripping and seals so they will not work loose during door operation. Exposed heads of fasteners shall be free of sharp edges.
3. Coordinate meeting stile gasket with hardware before installation.
4. Install units plumb and level at the optimum location to maintain a permanent effective seal.

3.03 LOCATIONS

A. Locate hardware as follows:
   1. Door Closers: Template for maximum door swing allowed by wall placement and jamb conditions. Where overhead stop prevents door from swinging to wall, template the closer to exceed degree of opening allowed by overhead stop.
   2. Protection Plates: 1/8 inch from door bottom.
   3. Wall Stops: Centerline of bumper to match centerline of locking trim.

B. After installation, cover and protect hardware to prevent damage during remaining construction. Remove protection upon completion of construction.

3.04 FIELD QUALITY CONTROL

A. Post Installation Review: After hardware is adjusted for proper operation, Director's Representative will hold a Post-Installation Review with the Contractor, Hardware Designer, Company Field Advisors, Hardware Distributor and Hardware Installers.
   1. Physically inspect to verify proper application, installation, adjustment and operation of finish hardware, and in particular that:
      a) Latches engage freely without binding. Filing of strike plates to relieve latch bind is not acceptable.
      b) Closers are adjusted for proper spring power; sweep speed, latching speed; and hydraulic back check.
      c) Locations and proper attachment of installed protective hardware are as specified.
      d) There is no field modification of fasteners.
      e) Damaged fasteners are replaced.
   2. Defective hardware is repaired or replaced.
   3. Hardware is to be left clean and free from disfigurement.

B. Turn referenced Operations and Maintenance Manuals over to Facility through Director's Representative.

END OF SECTION

SECTION 260543

UNDERGROUND CONDUIT SYSTEM

PART 1 GENERAL

1.01 RELATED WORK SPECIFIED ELSEWHERE

A. Earthwork: Section 310000.

1.02 SUBMITTALS

A. Product Data: Catalog sheets, specifications and installation instructions.

PART 2 PRODUCTS

2.01 MATERIALS

A. Rigid Ferrous Metal Conduit: Steel, galvanized on the outside and inside (conduit enameled on the inside will not be accepted), UL categorized as Rigid Ferrous Metal Conduit (identified on UL Listing Mark as Rigid Metal Conduit-Steel or Rigid Steel Conduit), as manufactured by Allied Tube & Conduit Corp., LTV Steel Tubular Products Co., Triangle Wire & Cable Inc., or Wheatland Tube Co.

B. Plastic Coated Rigid Metal Conduit, Fittings and Accessories: Rigid ferrous metal conduit, fittings and accessories coated with 40 mils thick polyvinylchloride coating; Occidental Coating Co.'s Ocal 40, Protective Coatings Developments Inc.'s Kor-Kap, or Robroy Industries' Plastibond System.

C. Conduit Spacers and Levelers: Commercially manufactured type to suit conduit, installation and spacing requirements.

D. Duct Seal: Appleton Electric Co.'s DUC Weatherproof Compound, Manville Corp.'s Duxseal, OZ/Gedney Co.'s DUX, or Thomas & Betts Corp.'s DX.

E. Drag Line: Minimum 1/8 inch polypropylene monofilament utility rope; American Synthetic Ropes' Flotorope, Greenlee Tool Co.'s 2 ply Rope 431, or Thomas Industries/Jet Line Products' Rope 232.

F. Thru Wall Sealing Bushings:
   1. For Walls Which Have or Will Have Membrane Waterproofing:
      a. Cast-In-Place Installations: OZ/Gedney Co.'s Type FSK thruwall seal and Type FSKA membrane clamp adapter.
      b. Core Drilled or Sleeved Installations: OZ/Gedney Co.'s Type CSM and Type CSMC with membrane clamp adapter.
   2. For Walls Which Will Not Have Membrane Waterproofing:
      a. Cast-In-Place Installations: OZ/Gedney Co.'s Type FSK.

b. Core Drilled or Sleeved Installations: OZ/Gedney Co.'s Type CSM, or Thunderline Corp.'s Link-Seal.

G. End Bells:
1. For Rigid Ferrous Metal Conduit: OZ/Gedney Co.'s Type TNS.

H. Insulated Grounding Bushings: Appleton Electric Co.'s GIB-50 Series, Crouse Hinds GLL Series, OZ/Gedney Co.'s IBC-50L Series, Raco Inc.'s 1212 Series, or Thomas & Betts Corp.'s 3870 or BG Series.

PART 3 EXECUTION

3.01 PREPARATION

A. Before installing any Work, lay out the proposed course for the conduits, location of manholes, etc. and have same approved by the Director's Representative.

3.02 INSTALLATION

A. Spacing:
1. Arrangement for Power and Signal Service: Separate power system conduits from signal system conduits with minimum 6 inches thick concrete wall or 12 inches of earth.

B. Depth:
1. Existing Grade To Remain: Unless otherwise indicated or directed, install conduit more than 18 inches below existing finished grade.
2. Existing Grade To Be Altered: Unless otherwise indicated or directed, install conduit more than 18 inches below the existing grade where the finished grade is to be higher than the existing grade. Where the finished grade is to be lower than the existing grade, install conduit more than 18 inches below finished grade.
3. Under Roads and Parking Lots:
   a. Rigid Ferrous Metal Conduit: Unless otherwise indicated or directed, install rigid ferrous metal conduit more than 24 inches below top surface of roads and parking lots.
4. Crossing Obstructions: Use rigid ferrous metal conduit where top of conduit system is less than 18 inches below finished grade when crossing obstructions (heating tunnels, etc.).
5. In Rock:
   a. Unless otherwise indicated on the drawings install rigid ferrous metal conduit or concrete encased rigid nonmetallic conduit at depths previously specified. Backfill with suitable material in accordance with SECTION 310000 - EARTHWORK.
   b. Where conduit is indicated to be installed at lesser depths, use rigid ferrous metal conduit. Cover conduit with minimum 2 inches of concrete. In exposed rock area fill trench with concrete

to surface level of rock. Where rock is not exposed, complete backfill in accordance with SECTION 310000 - EARTHWORK.

C. Pitch:
1. Pitch conduit away from buildings.
2. Pitch conduit toward manhole a minimum of 12 inches per 100 feet. On runs where it is impossible to maintain the grade all one way, grade from center so that conduits pitch both directions down toward manholes.

D. Jacking Conduits: Rigid ferrous metal conduit may be jacked under roads, parking lots, etc. Submit jacking details for approval.

E. Conduits Entering Buildings and Manholes:
1. Seal conduit entrances into manholes watertight.
2. Seal conduit entrances into building walls watertight. Exception: Seal is not required in below grade foundation walls associated with slab on grade construction.
3. Install end bells at conduit entrances into manholes.
4. Install end bells at conduit entrances into buildings. Exceptions:
   a. Install insulated grounding bushing on conduit entrance stub up associated with slab on grade construction.
   b. Install insulated grounding bushing and 2 locknuts on conduit where conduit is terminated in cabinet, junction or pull box.

F. Cleaning Conduits: Take precautions to prevent foreign matter from entering conduits during installation. After installation clean conduits with tools designed for the purpose.

G. Conduit for Future Use (Spare Conduit and Empty Conduit): Demonstrate to the Director's Representative that conduits installed for future use are clear of obstructions (draw mandrel 1/2 inch less in diameter than conduit). Install a drag line in each conduit.

H. Sealing Ends of Conduits:
1. Occupied Conduits: Seal ends of conduits to be used for Work of this contract until cables are to be installed. After cable installation, seal conduits at building entrances and first manhole outside building. Seal with duct seal.
2. Conduits For Future Use: Seal the ends of spare and empty conduits at building entrances and manholes. Seal with plastic plugs or a contrasting color cement/sand mixture.

I. Using Existing Underground Conduits: Clean the conduits with tools designed for the purpose. The condition of conduits after cleaning may be determined with a mandrel 1/2 inch less in diameter than the conduit, with the sheath painted with black lacquer. Pull mandrel through conduit. Conduit is acceptable when there are no roller marks or scratches on the mandrel. Other methods may be used if approved. Report and demonstrate to the Director's Representative any defect found in the conduit system that cannot be eliminated. The Contractor is

held responsible for any damage to cables resulting from imperfections in the conduit.

II.

3.03 CONDUIT SCHEDULE - TYPES AND USE

A. Rigid Ferrous Metal Conduit: Install in all locations unless otherwise specified or indicated on the drawings.

END OF SECTION