Addendum NO. 2

June 8, 2011

Revised Specifications

FORENSICS & BIO-TECHNOLOGY CENTER LABORATORY RENOVATION

CUNY MC385X

SPECIFICATIONS CHANGES

1. Table of Contents: General revisions

2. Section S01010, Summary of Work:
   a. 1.01, D. Summary of Work – plumbing, Art. 6.
   Delete words “computer room”, replace with “Imaging Room”.
   b. Add Section 1.06, Work Hours.

3. Section 08710, Finish Hardware:
   General revisions are made to reflect the most updated product data. Hardware
   schedule revised.

4. Delete Section 09650, Resilient Flooring.

5. Delete Section 12346, Plastic Laminate Case Work.

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**FIRE ALARM**

**END OF LIST OF DRAWINGS**
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1.01 WORK UNDER THE CONTRACT

A. The Project consists of existing North Science Laboratories; Computer Room, Forensics & Bio-Technology Laboratory and Engineering and Physics Core.

B. The project is located on Sixth Floor, at 199 Chamber Street, New York, NY 10007 in Rooms: N644, N676, N678, N680 and N682.

C. Summary of Work – General

1. Remove doors, and remove and properly dispose of partitions, and flooring at locations indicated on drawings.

2. Remove and properly dispose of one side of sheetrock from existing partitions at locations indicated on drawings, install wood blockings or similar supporting materials in studs for mounting casework and other accessories, and provide new sheetrock on existing studs.

3. Remove all existing Room Plates including room numbers, names and signs, etc. turn over to the College.

4. Remove and properly dispose of all existing ceiling system including but not limited to acoustical ceiling system, associated lighting fixtures, diffusers and grilles.

5. Remove and properly dispose of all built-in cabinets and turn over to the College.

6. Carefully remove and store existing acoustical ceiling system in corridors for later reinstallation for MEP work.

7. Provide partitions, doors, side lights and flooring at locations indicated on drawings.

8. Provide new ceiling system including acoustical tiles, suspension system, light fixtures and HVAC grilles.

9. Provide new Room Plates (Room Numbers) on all new doors.

10. Provide coat hooks at locations indicated on drawings.

11. Provide new laboratory benches, cabinets, counters and sinks at locations indicated on drawings.

12. Provide new expansion joint covers at locations indicated on drawings.
13. Paint all existing and new partitions.

14. Final Cleanup: Employ experienced workers or professional cleaners for final cleaning. Clean each surface or unit to the condition expected in a normal, commercial building cleaning and maintenance program.

D. Summary of Work – Plumbing

1. New plumbing fixtures, including laboratory sinks, accessible Sink/ADA with associated cold water, hot water, acid waste and vent branch pipes with connections to existing plumbing piping.

2. New CO2 and N2 cylinders and associated piping.

3. New distilled water piping

4. Sprinkler work:

5. New wet-type sprinkler systems within area of work with connection to existing sprinkler pipes. New sprinkler control valve, new inspector test fitting, new sprinklers and sprinkler branch pipes.

6. New dry-pipe sprinkler preaction system in computer room. Imaging Room. New deluge valve, control panel with connection to building fire alarm system.

E. Summary of Work – HVAC

The work includes the removals, additions and alterations to the existing heating, ventilation and Air Conditioning Systems, equipment and services, including but not limited to:

1. Removal of existing ductwork

2. Removal of existing variable air volume boxes

3. Removal of existing air outlets and inlets

4. Alterations to existing ductwork

5. New variable air volume boxes with electrical heating coils


7. New air outlets and inlets

8. Removal of existing instruments and controls

9. New instruments and controls
10. Rebalance the two [2] affected air supply systems
11. Rebalance the two [2] return air systems

12. Adjusting the air distribution pattern of the new ceiling diffusers

13. Removal of fan coil units: Their piping, ductwork, piping and controls

F. Summary of Work - Electrical

The work includes the removals, additions and alterations to the existing electrical systems including but not limited to:

1. Remove receptacles with associated conduit and wiring.
2. Remove Lighting fixtures with associated controls including ceiling mounted occupancy sensors.
3. Remove telephone and data connections.
4. Remove conduit and wiring associated with existing mechanical equipment to be removed.
5. Provide convenience and dedicated receptacles to serve lab equipment.
6. Provide power, data/telephone outlets to serve each lab bench with local raceway run from ceiling below.
7. Provide panel fed from building busway via step-down 480-208/120V transformer for normal power to lab equipment.
8. Provide emergency panel fed from 7th Floor emergency 480/277V panel via step-down 480-208/120V transformer to serve selected lab equipment.
9. Provide lighting fixtures as per new layout with associated controls including ceiling mounted occupancy sensors.
10. Connect all new lighting fixtures to existing 277V circuit made available after removal of existing lighting fixtures in the lab area.
11. Telephone patch panels will be modified to serve additional devices.
12. Modify fire alarm system to accommodate additional fire alarm devices and pre-action control panel.
1.02 ITEMS NOT INCLUDED

The following items shown on the Drawings are not included in the Work:

A. Items indicated "By Others".

B. Items indicated "N.I.C." (Not in Contract).

C. Existing construction not indicated or specified to be removed, replaced or altered.

1.03 PRODUCT SUBSTITUTIONS

A. Products, materials, systems and equipment (collectively called "products") specified within the technical sections (Divisions 2 through 16) and Drawings shall be used for this Project unless approval for submitted "or Equal" or "Approved Equal" substitutions is obtained from the CUNY.

B. Basis of Design: "Products" specifically designated on the drawings by manufacturer and model numbers are the Basis of Design (e.g. mechanical equipment such as roof top units, boilers, etc.). Use of "products" of other manufacturers meeting the requirements of the specification, including those manufacturers and products listed in the specification, shall be considered an "Or Equal" or "Approved Equal" substitution. Factors for consideration shall include function, dimension, in-service performance, physical properties, appearance, and other characteristics. If an "Or Equal" product will not fit into the location designed without reconfiguring the space, the "product" is not to be submitted.

C. The Contractor’s request for substitutions with "alternate" "products" (those that vary from the Contract Documents, i.e. not an "or Equal") will be evaluated on a case-by-case basis within the sole discretion of the CUNY.

1.04 CUTTING, PATCHING AND REMOVALS

A. Contractor shall do all cutting and patching, painting and finishing of existing work which is disturbed while performing the Work. Contractor shall be responsible for restoring new work which is damaged. All work shall be restored to provide a new appearance and to be structurally sound.

B. The work shall be done by competent workmen skilled in the trade required by the restoration.

C. As soon as practicable after the commencement of work and prior to any imminent placing of structural concrete, structural steel, and masonry, the Contractor shall submit to the CUNY a sketch indicating the location and size of all penetrations, including, but not limited to, sleeves and ducts, which will be required to accommodate the respective trades in order that it may be
determined if such penetrations will materially weaken the building structure. The sketch will be stamped and returned if approved. If not approved, reasons will be stated and submitted to the Contractor. The Contractor shall continue to submit sketches as the work progresses and shall not proceed with portions of Work having penetrations until such penetrations are approved.

D. Examination:

1. Prior to cutting, drilling, or removal, investigate both sides of the surface involved. Determine the exact location of structural members.

2. If unforeseen obstructions are encountered, take precautions necessary to prevent damage and obtain instructions from the CUNY before proceeding with the Work.

E. Preparation:

1. Provide temporary shoring and other supports necessary to prevent settlement or other damage to existing construction which is to remain.

2. Prepare existing surfaces properly to receive, and where required, to bond with the Work.

F. Removals, Cutting, Altering:

1. In addition to items indicated on Drawings to be removed, remove existing construction superseded by the Work except items such as pipes, conduits, recessed boxes, and ducts which are built into existing construction that is to remain. Cut off and conceal such items at face of remaining construction. Provide cover plates on recessed boxes.

2. Remove and alter existing construction as required to install and connect the Work to adjacent construction in an approved manner.

3. Cut and alter existing materials as required to perform the Work. Limit the cutting to the smallest amount necessary. Core drill around holes and saw-cut other openings where possible.

4. Perform cutting, drilling, and removals in a manner that will prevent damage to construction that is to remain.

G. Patching:

1. Patch existing construction and finishes defaced, damaged, or left incomplete due to alterations or removals. Patching, except as otherwise indicated, shall be limited to the areas which have been cut or altered; match materials, finishes, underlying construction, and quality of area patched. Extend restoration of finish paint from the point of the patch feathering into the existing.
H. Existing Premises Work: in addition to Work described above for cutting and patching, perform the following:

1. Remove portions of existing slabs, beams, walls and partitions; cut new openings in slabs, walls and partitions for new chases, doors, equipment, steel beams, columns, lintels, and other items, do all cutting and removal of existing work required by the Drawings and the Specifications, or as may be required for the proper installation of the new Work. Block up and patch slabs, walls, partitions, ceilings, and other areas and surfaces, with materials indicated on the Drawings or specified herein. If type of material for patching is not indicated, match existing.

2. Provide all supports, shoring, bracing, and other means, required for existing beams, columns, lintels, walls, and other components, at locations where alterations occur.

3. Remove portions of existing walls, slabs, fireproofing and ceilings where required to provide for connections and reinforcing of existing steel and installation of new steel. See framing details on Drawings.

4. Existing unfinished, unexposed walls and ceilings that become exposed walls and ceilings of finished rooms and other locations due to the Work of this Contract, shall be finished to match the adjoining wall and ceiling finish, unless otherwise specified.

5. Existing masonry walls and partitions that are to be finished with plaster, or tile, shall have all existing paint, tile, plaster and other finishes removed, joints raked out to a depth of 1/2", and the wall surfaces hacked and roughened to provide a proper bond for new materials.

6. The option of installing self-furring metal lath secured in place with hardened spiral steel nails, may be used on walls and partitions referred to in preceding Paragraph in place of raking joints and hacking wall surfaces as specified, provided all required adjustments are made to suit conditions.

7. All holes in existing slabs and floors due to removal of piping, enclosures, duct enclosures, and other items, shall be filled with new reinforced concrete before any floor finishes are installed.

8. Avoid damaging existing electric conduits in floor fill and slabs when cutting holes through slabs or removing floor fill; verify conditions at the building.

9. Where partitions are indicated to be removed, they shall be removed down to the structural slab or supporting structural members. Where new partitions are to be installed, remove floor finishes down to solid concrete fill or existing slabs.
10. Remove existing floors or portions of floors as required to install new floor or extend existing floors.

11. Where alterations occur in rooms and no new finish floor is indicated or specified, the existing floor shall be carefully protected and after alteration Work is completed, do all patching, repairing and replacing that may be required to provide a complete finished floor.

12. Remove hung and furred ceilings or portions of ceilings as indicated on the Drawings, or herein specified, or required for proper installation of new Work.

13. In rooms and locations where doors are removed, also remove the door stops and blocks thereof secured to wall or floors.

14. Remove saddles at door openings where no longer required.

15. Remove existing door numbers on doors where room use changes.

16. Remove cabinets, wardrobes, and built-in equipment in all locations where indicated on Drawings, where required for installation of new work, or as may be required to suit new conditions. If these objects are known or assumed to be coated with lead-based paint, they shall be completely sealed in 6-mil polyethylene prior to transport from the work area, and they shall be disposed of, in compliance with New York City, New York State, and Federal regulations. No painted debris coated with known or assumed lead-based paint shall be transported in open containers at any time during the project.

17. Where doors are to be removed, also remove all trim, frames, bucks, blocking, and other miscellaneous components, unless otherwise indicated on Drawings. If these objects are known or assumed, they shall be completely sealed in 6-mil polyethylene prior to transport from the work area, and they shall be disposed of, in compliance with New York City, New York State, and Federal regulations. No painted debris coated with known or assumed lead-based paint shall be transported in open containers at any time during the project.

18. Remove exposed bolts, supports, brackets, cleats, grounds, and other items, that are no longer required for the purpose for which they were originally installed.

19. Cut new openings in exterior walls, if and where indicated on the Drawings, floor to ceiling, for passage to new addition, at all floors.

20. Where new vinyl composition tile floors are indicated on the Drawings at locations where existing finish floor is asphalt tile the existing finish floor and adhesive shall be entirely removed. The use of solvents which would prevent proper bonding of new flooring is prohibited.
21. All existing work damaged or lost as a result of performing the required new Work, shall be patched, repaired or replaced with new, and finished to match the new Work.

22. Where existing work required to be removed and replaced is found to be defective in any way, it shall be reported to the CUNY before it is disturbed.

23. Certain items, equipment, and materials indicated to be removed shall be salvaged and delivered to CUNY or other location as indicated in Section 02070 - Selective Removals and Demolition.

1.05 NEW YORK CITY CONSTRUCTION CODE OF 2008 IMPLEMENTATION

A. Beginning July 1, 2008, Chapters 17 and 33 of the New York City Construction Code go into effect. These two chapters supersede the Special Inspections requirements contained in the 1968 Building Code, and Chapter 19 of the 1968 Building Code that deals with protection of the public.

1. References to “Special Inspections” and applicable code sections and “Special Inspector” referenced in the Contract Documents shall mean the equivalent “Special Inspection” and “Special Inspector” in accordance with the 2008 NYC Construction Code. It shall be noted that some individual “Special Inspection” items have been combined into one “Special Inspection” category.

2. References to public protective and code sections included in Chapter 19 of the 1968 code referenced in the Contract Documents shall mean those equivalent Sections contained in Chapter 33 of the NYC Construction Code. The Contractor shall be responsible for complying with all provisions of Chapter 33 of the NYC Construction Code.

1.06 WORK HOURS

A. The college’s regular hours of operation are:
   - Mon through Friday 7am to 11pm
   - Saturday 7am to 9pm
   - Sunday 7am to 8pm

B. Grinding welding and other fume generating operations should be done after hours and "smoke eaters" should be used during the work.

END OF SECTION
PART 1 - GENERAL

1.01 DESCRIPTION OF WORK

A. Provide finish hardware as indicated on Drawings, as specified herein and as needed for complete hardware requirements.

1.02 REFERENCES

A. References and industry standards listed in this Section are applicable to the Work. Unless more restrictive criteria or differing requirements are explicitly stated in the Specifications, or mandated by governing codes or regulations, the recommendations, suggestions, and requirements described in the referenced standards shall be deemed mandatory and applicable to the Work.

1. Federal Specifications (FS).
4. Door and Hardware Institute (DHI).
5. Underwriters Laboratories (UL).

1.03 SUBMITTALS

A. Manufacturer's Technical Product Data: Submit for each hardware item type, including cuts, specifications and characteristics, instructions for installation, operation, and maintenance.

B. Samples: Prior to submittal of the final hardware schedule and prior to delivery of hardware, submit one (1) sample of each typical exposed lockset unit. The sample will be reviewed by the CUNY for design, color and texture only. Compliance with other requirements is the exclusive responsibility of the Contractor. Samples approved by the CUNY shall be turned over to the College for attic stock.

C. Hardware Schedule

NOTE: Provide Schedule for entire Project in one submittal, unless otherwise directed. Submit Hardware Schedule in book form (8-1/2" x 11" pages), indicating the following for each item. No continuous computer printout permitted.
1. Locations of hardware, with cross-reference to schedules and other indications on Drawings.

2. Name, manufacturer, type, style, size, function, and finish.

3. Information for fastenings.


5. Materials and sizes of doors and frames.

6. Explanation of abbreviations and symbols.

At time of submittal of Hardware Schedule, furnish hardware templates to fabricators of other factory-prepared work necessary for installation of hardware.

E. Key Schedule

1. Consult with the College prior to preparing a keying schedule in order to confirm the required keying scheme.

2. Submit Hardware Key Schedule, prepared by hardware supplier, to the College within forty-five (45) days after starting date of Contract.

3. Stamp top face of each key with letter and number starting with A1 to Z1 and continuing the series of letters and numbers to the maximum number of keys furnished. Tag each series of keys.

4. Stamp face of each cylinder with the same corresponding letters and numbers.

5. Locks shall be made up on combinations as specified.

Furnish schedule of keys in quadruple indicating letter and number of each key and number of rooms, cases, lockers, and other locations for which the keys are intended. Submit schedule for approval before making keys.

F. Deliver to the College the required number of keys for each lock, properly marked.

G. Key Cabinet Schedules

H. Key Machine, Key Blanks and Attic Stock

Furnish the following:

1. Automatic key cutting machine.
2. 300 of each manufacturer's cylinder key blanks.

3. 10% attic stock of manufacturer's cylinders with keys.

I. Warranties

Furnish Warranties as specified in Article 1.08

1.04 QUALITY ASSURANCE

A. Hardware Supplier

Finish hardware shall be furnished by those having a minimum 5 years of builders hardware experience and shall have in their employ at least one certified Architectural Hardware Consultants (AHC) to correctly interpret the plans, detailed drawings and specifications.

B. Manufacturer

Obtain each hardware type from a single manufacturer.

C. Minimum Quality Requirements

The manufacturer shall certify that the Hardware items to be furnished shall be of quality specified herein, and meet the requirements of the applicable ANSI A156 Grade 1 standard for each item.

D. Fire-rated Openings

Provide hardware in compliance with NFPA Standard No. 80 and NYC Building Code requirements, tested and listed by UL for types and sizes of doors, and in compliance with requirements of door frame and door labels.

1.05 SHIPPING, STORAGE, AND HANDLING

A. Package and ship hardware to prevent damage. Properly identify and tag each item. Sort, package and mark hardware with set numbers.

B. Inventory hardware immediately upon delivery.

C. Provide secure (locked) storage area for hardware until installed.

1.06 PROJECT CONDITIONS

A. Coordinate hardware with other work. Tag each item or package separately, with identification related to the final hardware schedule and include basic installation instructions in the package. Furnish hardware items of proper design for use on doors and frames of the thickness, profile, swing, security and similar
requirements indicated and as necessary for proper installation and functions. Deliver packaged hardware items to the proper locations for installation.

B. Furnish hardware templates to each fabricator of doors, frames and other work to be factory prepared for the installation of hardware.

1.07 CONSTRUCTION KEYING

A. All new buildings or phased modernization projects must utilize a Construction Master Key System. This system is to insure the integrity of the keys and the security of the building. This system must be utilized throughout the construction period. Such key system shall be voided by use of a special "Knock-out" key upon acceptance of Project by the College.

1.08 WARRANTIES

A. The hardware manufacturers shall provide full replacement warranty as listed below. Replacement warranty shall include material and labor cost.

- Exit Devices 3 years.
- Locksets, etc. 1 year.
- Hinges 5 years.
- Balance of hardware 1 year.

B. Closers shall be warranted to properly operate door, free from mechanical defects for ten years from date of substantial completion of the Work. Closers which fail to meet specified requirements shall be replaced or repaired and made to operate properly by Contractor without additional expense to the College.

PART 2 - PRODUCTS

2.01 SCHEDULED DOOR HARDWARE

A. General: Provide door hardware for each door to comply with requirements in Door Hardware Sets and each referenced section that products are to be supplied under.

1. Designations: Requirements for quantity, item, size, finish or color, grade, function, and other distinctive qualities of each type of door hardware are indicated in the Door Hardware Sets at the end of Part 3. Products are identified by using door hardware designations, as follows:

a. Named Manufacturer’s Products: Product designation and manufacturer are listed for each door hardware type required for the purpose of establishing requirements. Manufacturers’ names are abbreviated in the Door Hardware Schedule (Source manufacturer listed in boldface).
2. Products furnished, but not installed, under this Section include the following. Coordinating, purchasing, delivering, and scheduling remain requirements of this Section.

B. Substitutions: Requests for substitution and product approval for inclusive mechanical and electromechanical door hardware in compliance with the specifications must be submitted in writing and in accordance with the procedures and time frames outlined in S01010, Substitution Procedures. Approval of requests is at the discretion of the architect, CUNY, and their designated consultants.

2.02 HANGING DEVICES

A. Hinges: ANSI/BHMA A156.1 certified butt hinges with number of hinge knuckles as specified in the Door Hardware Sets.
   1. Quantity: Provide the following hinge quantity, unless otherwise indicated:
      a. Two Hinges: For doors with heights up to 60 inches.
      b. Three Hinges: For doors with heights 61 to 90 inches.
      c. Four Hinges: For doors with heights 91 to 120 inches.
      d. For doors with heights more than 120 inches, provide 4 hinges, plus 1 hinge for every 30 inches of door height greater than 120 inches.
   2. Hinge Size: Provide the following, unless otherwise indicated, with hinge widths sized for door thickness and clearances required:
      a. Widths up to 3'0": 4-1/2" standard or heavy weight as specified.
      b. Sizes from 3'1" to 4'0": 5" standard or heavy weight as specified.
   3. Hinge Weight and Base Material: Unless otherwise indicated, provide the following:
      a. Exterior Doors: Heavy weight, non-ferrous, ball bearing hinges unless Hardware Sets indicate standard weight.
      b. Interior Doors: Standard weight, steel, ball bearing hinges unless Hardware Sets indicate heavy weight.
   4. Hinge Options: Comply with the following where indicated in the Hardware Sets or on Drawings:
      a. Non-removable Pins: Provide set screw in hinge barrel that, when tightened into a groove in hinge pin, prevents removal of pin while door is closed; for the following applications:
         1) Out-swinging exterior doors.
         2) Out-swinging access controlled doors.
   5. Acceptable Manufacturers:
      a. Hager Companies (HA).
      b. McKinney Products (MK).
      c. Stanley Hardware (ST).
2.03 CYLINDERS AND KEYING

A. General: Cylinder manufacturer to have minimum (10) years experience designing secured master key systems and have on record a published security keying system policy.

B. Source Limitations: Obtain each type of keyed cylinder and keys from the same source manufacturer as locksets and exit devices, unless otherwise indicated.

C. Cylinders: Original manufacturer cylinders complying with the following:
   1. Mortise Type: Threaded cylinders with rings and straight- or clover-type cam.
   2. Rim Type: Cylinders with back plate, flat-type vertical or horizontal tailpiece, and raised trim ring.
   3. Bored-Lock Type: Cylinders with tailpieces to suit locks.
   4. Mortise and rim cylinder collars to be solid and recessed to allow the cylinder face to be flush and be free spinning with matching finishes.

D. Keying System: Each type of lock and cylinders to be factory keyed. Conduct specified "Keying Conference" to define and document keying system instructions and requirements. Furnish factory cut, nickel-silver large bow permanently inscribed with a visual key control number as directed by CUNY. Incorporate decisions made in keying conference, and as follows:
   1. Master Key System: Cylinders are operated by a change key and a master key.
   2. Grand Master Key System: Cylinders are operated by a change key, a master key, and a grand master key.
   3. Great-Grand Master Key System: Cylinders are operated by a change key, a master key, a grand master key, and a great-grand master key.
   4. Existing System: Master key or grand master key locks to College's existing system.
   5. Keyed Alike: Key all cylinders to same change key.

E. Key Quantity: Provide the following keys:
   1. Top Master Key: One (1)
   2. Change Keys per Cylinder: Two (2)
   3. Master Keys (per Master Key Group): Two (2)
   4. Grand Master Keys (per Grand Master Key Group): Two (2)
   5. Construction Control Keys (where required): Two (2)
   6. Permanent Control Keys (where required): Two (2)

F. Construction Keying: Provide construction master keyed cylinders or temporary keyed construction cores where specified. Provide construction master keys in quantity as required by project Contractor. Replace construction cores with permanent cores. Furnish permanent cores for installation as directed under specified "Keying Conference".

G. Key Registration List: Provide keying transcript list to College's representative in the proper format for importing into key control software.
H. Key Control Software: Provide one network version of "Key Wizard" branded key management software package that includes one year of technical support and upgrades to software at no charge.

2.04 INTEGRATED WIEGAND OUTPUT ACCESS CONTROL LOCKING DEVICES

A. Integrated Wiegand Output Cylindrical Locks: Wiegand output ANSI A156.2, Grade 1, Cylindrical Lockset with integrated proximity card reader and request-to-exit signaling in one complete unit. Hard wired, solenoid driven locking/unlocking control of the lever handle trim with 1/2" deadlocking stainless steel latch. Lock is U.L listed and labeled for use on up to 3 hour fire rated openings.

1. Open architecture, hard wired platform supports centralized control of locking units with new or existing Wiegand compatible access control systems. Inside lever handle (request-to-exit) signaling standard with door position (open/closed status) monitoring (via separately connected DPS).

2. Reader supports either HID 125 kHz proximity (up to 39 bits, including Corporate 1000) or 13.56 MHz (2K-32K) iClass® credentials.

3. 12VDC external power supply required for reader and lock, with optional 24VDC operation available with iClass® reader (125 kHz reader is always 12VDC). Fail safe or fail secure options.

4. Installation requires only one cable run from the lock to the access control panel without requirements for additional proprietary lock panel interface boards or modules.

5. Installation to include manufacturer's access control panel interface board or module where required for Wiegand output protocol.

a. Acceptable Manufacturers:
   1) Schlage (SC) - AD300 Series.

2.05 DOOR CLOSERS

A. All door closers specified herein shall meet or exceed the following criteria:

1. General: Door closers to be from one manufacturer, matching in design and style, with the same type door preparations and templates regardless of application or spring size. Closers to be non-handed with full sized covers including installation and adjusting information on inside of cover.

2. Standards: Closers to comply with UL-10C and UBC 7-2 for Positive Pressure Fire Test and be U.L. listed for use of fire rated doors.

3. Size of Units: Comply with manufacturer's written recommendations for sizing of door closers depending on size of door, exposure to weather, and anticipated frequency of use. Where closers are indicated for doors required to be accessible to the physically handicapped, provide units complying with ANSI ICC/A117.1 provisions for door opening force and delayed action closing.

4. Closer Arms: Provide heavy duty, forged steel closer arms unless otherwise indicated in Hardware Sets.
a. Where closers are indicated to have mechanical dead-stop, provide heavy duty arms and brackets with an integral positive stop.
b. Where closers are indicated to have mechanical hold open, provide heavy duty units with an additional built-in mechanical holder assembly designed to hold open against normal wind and traffic conditions. Holder to be manually selectable to on-off position.
c. Where closers are indicated to have a cushion-type stop, provide heavy duty arms and brackets with spring stop mechanism to cushion door when opened to maximum degree.

5. Closer Accessories: Provide door closer accessories including custom templates, special mounting brackets, spacers and drop plates, and through-bolt or security type fasteners as specified in the door Hardware Sets.

B. Door Closers, Surface Mounted (Heavy Duty): ANSI/BHMA A156.4, Grade 1 surface mounted, heavy duty door closers with complete spring power adjustment, sizes 1 thru 6; and fully operational adjustable according to door size, frequency of use, and opening force. Closers to be rack and pinion type, one piece cast iron or aluminum alloy body construction, with adjustable backcheck and separate non-critical valves for closing sweep and latch speed control. Provide non-handed units and high impact, non-corrosive plastic covers standard.

1. Acceptable Manufacturers:
   a. Corbin Russwin Hardware (RU) - DC8000 Series.
   b. Sargent Manufacturing (SA) - 351 Series.
   c. Norton Door Controls (NO) - 7500 Series.
   d. Yale Commercial Hardware (YA) - 4400 Series.

2.06 ARCHITECTURAL TRIM

A. Door Protective Trim
1. General: Door protective trim units to be of type and design as specified below or in the Hardware Sets.
2. Size: Fabricate protection plates (kick, armor, or mop) not more than 2" less than door width (LDW) on stop side and not more than 1" less than door width on pull side. Coordinate and provide proper width and height as required where conflicting hardware dictates. Height to be as specified in the Hardware Sets.
3. Metal Protection Plates: ANSI/BHMA A156.6 certified metal protection plates (kick, armor, or mop), beveled on four edges (B4E), fabricated from the following.
   a. Stainless Steel: 050-inch thick, with countersunk screw holes (CSK).
   b. Brass or Bronze: 050-inch thick, with countersunk screw holes (CSK).
   c. Laminate Plastic or Acrylic: 1/8-inch thick, with countersunk screw holes (CSK).
4. Fasteners: Provide manufacturer's designated fastener type as specified in the Hardware Sets.
5. Metal Door Edging: Door protection edging fabricated from a minimum .050-inch thick metal sheet, formed into an angle or "U" cap shapes, surface or mortised mounted onto edge of door. Provide appropriate leg overlap to account for protection plates as required. Height to be as specified in the Hardware Sets.

6. Acceptable Manufacturers:
   b. Rockwood Manufacturing (RO).

2.07 DOOR STOPS AND HOLDERS

A. General: Door stops and holders to be of type and design as specified below or in the Hardware Sets.

B. Door Stops and Bumpers: ANSI/BHMA A156.16, Grade 1 certified door stops and wall bumpers. Provide wall bumpers, either convex or concave types with anchorage as indicated, unless floor or other types of door stops are specified in Hardware Sets. Do not mount floor stops where they will impede traffic. Where floor or wall bumpers are not appropriate, provide overhead type stops and holders.
   1. Acceptable Manufacturers:
      b. Rockwood Manufacturing (RO).

2.08 ARCHITECTURAL SEALS

A. General: Thresholds, weatherstripping, and gasket seals to be of type and design as specified below or in the Hardware Sets. Provide continuous weatherstrip gasketing on exterior doors and provide smoke, light, or sound gasketing on interior doors where indicated. At exterior applications provide non-corrosive fasteners and elsewhere where indicated.

B. Smoke Labeled Gasketing: Assemblies complying with NFPA 105 that are listed and labeled by a testing and inspecting agency acceptable to authorities having jurisdiction, for smoke control ratings indicated, based on testing according to UL 1784.
   1. Provide smoke labeled perimeter gasketing at all smoke labeled openings.

C. Fire Labeled Gasketing: 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 UL-10C.
   1. Provide intumescent seals as indicated to meet UL 10C Standard for Positive Pressure Fire Tests of Door Assemblies, and UBC 7-2, Fire Tests of Door Assemblies.
D. Sound-Rated Gasketing: Assemblies that are listed and labeled by a testing and inspecting agency, for sound ratings indicated, based on testing according to ASTM E 1408.

E. Replaceable Seal Strips: Provide only those units where resilient or flexible seal strips are easily replaceable and readily available from stocks maintained by manufacturer.

F. Acceptable Manufacturers:
   1. McKinney Weatherstripping Products (MW).
   2. Pemko Manufacturing (PE).

2.09 FABRICATION

A. Fasteners: Provide door hardware manufactured to comply with published templates generally prepared for machine, wood, and sheet metal screws. Provide screws according to manufacturers recognized installation standards for application intended.

2.10 FINISHES

A. Standard: Designations used in the Hardware Sets and elsewhere indicate hardware finishes complying with ANSI/BHMA A156.18, including coordination with traditional U.S. finishes indicated by certain manufacturers for their products.

B. Provide quality of finish, including thickness of plating or coating (if any), composition, hardness, and other qualities complying with manufacturer's standards, but in no case less than specified by referenced standards for the applicable units of hardware.

C. Protect mechanical finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.

D. Antimicrobial Finishes: Where specified, finishes on locksets, latchsets, exit devices and push/pull trim to incorporate an FDA recognized. Silver Ion, antimicrobial coating (MicroShield™) listed for use on equipment as a suppressant to the growth and spread of a broad range of bacteria, algae, fungus, mold and mildew.

PART 3 - EXECUTION

3.01 INSTALLATION

A. Provide complete installation of finish hardware items as indicated on Drawings and as specified herein.
B. Mount hardware as recommended by respective manufacturer.

C. Mount door (room) hardware items at heights and locations on doors and frames in accordance with "Recommended Locations for Builders Hardware for Standard Steel Doors and Frames" by Door and Hardware Institute, except where specifically indicated otherwise.

D. Set hardware items plumb and level and secure with proper fasteners.

3.02 TRAINING

A. After delivery of, but before installation of the hardware, the Contractor shall coordinate and schedule hardware installation training. The training will be conducted on the installation of locksets, door closers, exit devices, overhead stops and electromechanical hardware conducted by the manufacturer's representative for each of the product categories. The training shall be conducted on the job site with the installers of wood, hollow metal and aluminum doors in attendance. Any installer working with low voltage wiring of electromechanical hardware shall be in attendance.

3.03 APPLYING HARDWARE

A. Hardware specified in this Section shall be fitted, installed and adjusted.

B. Use screws and/or bolts furnished by the manufacturer of the hardware item and install in accordance with the manufacturer's instructions and templates and as required. Install full complement of screws and/or bolts.

C. Self-tapping or TEK screws are not permitted.

D. At completion of Project, leave hardware in perfect condition, free from stains, varnish, scratches and mars. Half-surface butts shall be bolted on doors with nuts on hinge side of doors.

E. No surface hardware, except butts and pivots, shall be installed before final coat of paint or varnish has been applied.

3.04 CLEANING AND ADJUSTING

A. Clean hardware items thoroughly and adjust for proper operation.

3.05 KEY OPERATION AND INSPECTION

A. Upon completion of the building and after locks have been secured in proper positions, keys belonging thereto shall be fitted and made to work freely in respective locks in the presence of a College's Representative. The required number of keys for each lock, properly marked, shall be delivered to the College, who will give a receipt therefor.
3.06 **EXISTING BUILDING MODIFICATION**

A. **Removals**

1. Where doors are designated to be removed as part of Contract, locksets, knobs, closers, butts and other hardware shall be removed from the doors and shall remain the property of the College.

2. Removed hardware shall be delivered to the College.

B. Contractor shall furnish the College with an itemized breakdown of removed hardware. A signed receipt shall be obtained from the College shall be submitted with request for final payment.

**PART 4 – SCHEDULES AND KEYING**

4.01 **FINISH HARDWARE SCHEDULE**

A. Manufacturer's names and product designations for hardware types are listed for the purpose of establishing minimum requirements. Provide the product specified or comparable product of other manufacturer's listed in Art. 2.01 for each hardware type.

B. Manufacturer's Abbreviations:

1. MK - McKinney
2. SH - Schlage Electronic Security
3. MC - Medeco
4. NO - Norton
5. RO - Rockwood
6. PE - Pemko
## Hardware Schedule

### Set: 1.0

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<th>Model/Specification</th>
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<tr>
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Doors: 600C, 600D, 600E, 600G, 600H, 600J, 600K

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Doors: 600B
4.02  **KEYING**

A. Proximity Reader

1. Frequency: 125 kHz

2. Maximum Read Range: Up to 1.25'

3. Compatibility: Schlage, XceedID, HID, GE/CASI ProxLite and AWID.

4. Compatible Schlage Credentials: 125 kHz Clamshell, (SXF7410), 125 kHz ISO Card (SXF7510), 125 kHz ISO Card w/ Magnetic Stripe (SXF7510MS)


**END OF SECTION**
# LIST OF SUBMITTALS

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<th>DATE APPROVED</th>
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<td>that hardware is of quality specified and meets the ANSI A156 Grade 1 Standard</td>
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FINISH HARDWARE

CUNY MC385X

WASA 60084