SECTION 000002 – ADDENDUM NUMBER 2

DATE: **December 23, 2014**

TO: **ALL BIDDERS**

FROM: **CLARK C. BURRITT, PRINCIPAL ARCHITECT**
CITY OF WORCESTER
DEPARTMENT OF PUBLIC WORKS AND PARKS
50 SKYLINE DRIVE
WORCESTER, MA 01605

RE: **REGIONAL EMERGENCY COMMUNICATIONS CENTER**
2 COPPAGE DRIVE, WORCESTER, MA 01603

THIS ADDENDUM FORMS A PART OF THE CONTRACT AND MODIFIES THE ORIGINAL DOCUMENTS DATED DECEMBER 11, 2014.

PART 1 - GENERAL

1.1 This addendum must be returned with plans and specifications (if not already returned) to have your deposit returned.

1.2 This addendum modifies, amends, and supplements the Contract Documents for the above referenced project. This addendum is hereby made a part of the Contract Documents by reference and shall be as binding as though inserted in locations designated hereunder.

1.3 Each general bidder shall be responsible for notifying all his non-filed sub-bidders and suppliers of the content of this addendum. No claim for additional compensation will be considered because of lack of knowledge of changes or modifications contained in this addenda.

1.4 Questions or requests for clarification shall be in writing, addressed to Jeremy C. Flansburg at **DEPARTMENT OF PUBLIC WORKS AND PARKS**, **ARCHITECTURAL DIVISION,** and may be sent to fax number: (508) 799–8188. Please include your name, phone number, and fax number with your fax.

1.5 Requests for additional walk-thru inspections or time to investigate the existing conditions of the building can be arranged on an individual basis. Please call the Department of Public Works and Parks at (508) 799 – 8588 to confirm.

1.6 Part 2 of this addendum indicates revisions to the Project Manual.

1.7 Part 3 of this addendum indicates revisions to the Drawings.

1.8 Part 4 of this addendum indicates clarification to Contractors Questions.

PART 2 - SPECIFICATION

2.1 SPECIFICATION SECTION 010100– SUMMARY OF WORK, REVISE Article 1.3 SUBSTANTIAL COMPLETION, paragraph A.1. to read as follows: "1. The Date of Substantial Completion applies to Base Bid work only. Work of alternates shall be completed within an additional sixty (60) days."

2.2 SPECIFICATION SECTION 010100– SUMMARY OF WORK, ADD Article 1.4 PROJECT DESCRIPTION, paragraph D to read as follows:

D. All demolition work associated with Mechanical, Plumbing and Electrical systems shall be by demolition contractor. All respective trades shall disconnect and make safe all systems at the main service entrances for removal by demolition contractor. Demolition contractor shall not start any work until all trades have ensured the systems are safe for removal.

Main Electrical service shall remain active during construction to be used as temporary service (1- 480/277V panel and 1-102/208V panel along with service main). Electrical Contractor shall disconnect all branch circuits in panels to remain in use during construction. Electrical contractor shall disconnect all feeders for panels to be removed by demolition contractor.

2.3 SPECIFICATION SECTION 024119– SELECTIVE DEMOLITION, ADD new Section 024119 – SELECTIVE DEMOPLITION, attached.

2.4 SPECIFICATION SECTION 084126-ALL-GLASS ENTRANCES AND STOREFRONTS, ADD new Section 084126-ALL-GLASS ENTRANCES AND STOREFRONTS, attached.

2.5 SPECIFICATION SECTION 087100 DOOR HARDWARE, ADD new Section 087100 DOOR HARDWARE, attached.

PART 3 - DRAWINGS

3.1 SKETCHES

A. The following sketches (attached) revise or supplement currently issued drawings:

1. SKA-04 Revised Door Schedule

PART 4 - CONTRACTOR QUESTIONS

4.1 QUESTION: Per drawing C 4.2 Site Plan Alternate, the drawings call out for a 25' flag pole yet there is no specification on the flag pole. Could you please provide.
ANSWER: ***This will be issued in a future addendum, the electrical contractor is to provide an exterior light @column 6 to provide lighting on the flag.***

4.2 QUESTION: Per addendum #1, earthwork, they call out for guard rail and fencing. Could you please provide a guard rail spec and fencing spec.
ANSWER: ***This information will be provided in a future addendum.***

4.3 QUESTION: Could you please provide guard rail and fencing detail. There are none to be referenced to on the drawings.
ANSWER: ***This information will be provided in a future addendum.***

4.4 QUESTION: Per drawing A8.1 under Room Finish Schedule, it calls out for carpet in some of the rooms. Could you please provide the carpet specification.

ANSWER: ***This information will be provided in a future addendum.***

4.5 QUESTION: Per drawing A8.1 under Room Finish Schedule, it calls out for laminated access flooring . Could you please provide the laminated access flooring specification. Also, will the flooring be factory applied?

ANSWER: ***This information will be provided in a future addendum.***

4.6 QUESTION: Per drawing A8.1, under Room Finish Schedule, it calls out for Sealed Concrete. Could you please provide the sealed concrete spec.

ANSWER: ***See specification sections 033000 and 033543***

4.7 QUESTION: Per drawing A1.2, It calls out for an AP wall type in the EOC Operation and Training Room. Can you please provide a detail or describe the AP Wall.
ANSWER:***This wall type will include wall type A with ¾" plywood on one side extend to underside of roof.***

4.8 QUESTION: Are there any acoustical wall panels on this project?
ANSWER: ***No***

4.9 QUESTION: Due to the short time frame of bidding, and many contractors and suppliers taking time away from the office this time of year, is any extension to the bid date expected?

ANSWER: ***No***

4.10 QUESTION: The UPS spec mentions a 3 phase UPS while the riser and panel schedules talk about a single phase (2 pole) UPS. Please confirm which is required.
ANSWER: ***Single phase UPS's are required.***

4.11 QUESTION: The UPS spec does not make any mention of battery run. Please provide information on what is required.
ANSWER: ***90 minutes minimum.***

4.12 QUESTION: Please confirm electrical permit fees will need to be paid for this project. I see permit fees listed in the spec, but non for electrical inspections.
ANSWER: ***Yes electrical permit fees are required and shall be paid by the electrical contractor.***

4.13 QUESTION: Because the building is going to be torn down.. Shouldn't the demolition contractor include the demolition and removal of the ductwork and the hvac equipment and have the mechanical contractor make safe and recover any refrigerant in the existing equipment ?
ANSWER: ***This is covered in the Addendum 2. There is no refrigerant due to vandalism of the outside units. All the copper is gone. This is in Selective Demo..***

END OF ADDENDUM NUMBER 2

SECTION 024119 - SELECTIVE DEMOLITION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

1. Demolition and removal of selected portions of building or structure.
2. Demolition and removal of selected site elements.
3. Salvage of existing items to be reused or recycled.
4. Preparation of construction that remains to facilitate new construction.

B. Scope of Selective Demolition:

1. Demolish existing site elements to the extent indicated as work of the Base Bid.
2. Demolish existing site elements to the extent indicated as work of Alternate 1 if included in the Contract.
3. Demolish all existing building construction above the slab-on-grade including adhered floor finishes that can be readily removed without grinding or chemical stripping.
4. Demolition of existing fire protection, water, sewer, gas, electric and communications utilities and elements is work of the General Contractor.
5. DO NOT demolish existing concrete foundations and slab-on grade. Modify to facilitate new construction.

1.3 DEFINITIONS

A. Remove: Detach items from existing construction and dispose of them off-site unless indicated to be salvaged or reinstalled.

B. Remove and Salvage: Detach items from existing construction, in a manner to prevent damage, and deliver to Owner.

C. Remove and Reinstall: Detach items from existing construction, in a manner to prevent damage, prepare for reuse, and reinstall where indicated.

D. Existing to Remain: Leave existing items that are not to be removed and that are not otherwise indicated to be salvaged or reinstalled.

E. Dismantle: To remove by disassembling or detaching an item from a surface, using gentle methods and equipment to prevent damage to the item and surfaces; disposing of items unless indicated to be salvaged or reinstalled.

1.4 MATERIALS OWNERSHIP

A. Unless otherwise indicated, demolition waste becomes property of Contractor.

B. Historic items, relics, antiques, and similar objects including, but not limited to, cornerstones and their contents, commemorative plaques and tablets, and other items of interest or value to Owner that may be uncovered during demolition remain the property of Owner.

1. Carefully salvage in a manner to prevent damage and promptly return to Owner.

1.5 PREINSTALLATION MEETINGS

A. Predemolition Conference: Conduct conference at Project site.

1. Inspect and discuss condition of construction to be selectively demolished.
2. Review structural load limitations of existing structure.
3. Review and finalize demolition schedule and verify availability of materials, demolition personnel, equipment, and facilities needed to make progress and avoid delays.
4. Review requirements of work performed by other trades that rely on substrates exposed by demolition operations.
5. Review areas where existing construction is to remain and requires protection.

1.6 INFORMATIONAL SUBMITTALS

A. Schedule of Selective Demolition Activities: Indicate the following:

1. Detailed sequence of demolition and removal work, with starting and ending dates for each activity.
2. Coordination for shutoff, capping, and continuation of utility services.

1.7 CLOSEOUT SUBMITTALS

A. Survey of Existing Conditions: Submit electronic photographs in .pdf format.

1.8 FIELD CONDITIONS

A. Conditions existing at time of inspection for bidding purpose will be maintained by Owner as far as practical.

B. Existing building is unoccupied.

C. Existing HVAC equipment does not contain refrigerant.

D. Notify Architect of discrepancies between existing conditions and Drawings before proceeding with demolition.

E. Hazardous Materials: Hazardous materials are being removed from the building by the Owner under a separate contract immediately prior to the start of Work under this contract.

1. If suspected hazardous materials are encountered, do not disturb; immediately notify Architect and Owner. Hazardous materials will be removed by Owner under a separate contract.

F. Storage or sale of removed items or materials on-site is not permitted.

G. Utility Service: Maintain existing water and electric utilities in temporary service and protect them against damage during demolition operations. Schedule and coordinate the following:

1. Disconnection of electric service. Electric service is currently live.
2. Disconnection of water and fire-protection service. Water service is currently shut off at the street.
3. Disconnection of gas service. Gas service shall be disconnected by the utility company prior to start of construction for reconnection when requested by the Contractor.
4. Contractor shall confirm existing conditions of utility services prior to any construction operations.

H. Protect new electric switchgear and transformer at southeast corner of property.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

A. Regulatory Requirements: Comply with governing EPA notification regulations before beginning demolition. Comply with hauling and disposal regulations of authorities having jurisdiction.

B. Standards: Comply with ASSE A10.6 and NFPA 241.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Verify that utilities have been disconnected and capped or protected for temporary use before starting demolition operations.

B. Review Project Record Documents of existing construction or other existing condition and hazardous material information provided by Owner. Owner does not guarantee that existing conditions are same as those indicated in Project Record Documents.

C. Perform an engineering survey of condition of building to determine whether removing any element might result in structural deficiency or unplanned collapse of any portion of structure or adjacent structures during selective building demolition operations.

1. Perform surveys as the Work progresses to detect hazards resulting from demolition activities.

D. Verify that hazardous materials have been remediated before proceeding with building demolition operations.

E. Survey of Existing Conditions: Record existing conditions by use of preconstruction photographs.

3.2 UTILITY SERVICES AND MECHANICAL/ELECTRICAL SYSTEMS

A. Existing Services/Systems to Remain: Maintain services/systems indicated to remain and protect them against damage, including:

1. Existing water service.
2. Existing gas service and meter.
3. New electric switchgear and transformer at southeastern corner of property.

B. Existing Services to Be Removed, Relocated, or Abandoned: Locate, identify, disconnect, and seal or cap off utility services serving construction to be demolished.

1. Existing water and electric services are available to the Contactor for temporary service.
2. Arrange to shut off utilities with utility companies when no longer required for temporary service.
3. Disconnect, demolish, and remove all fire-suppression, plumbing and gas, HVAC and electrical systems and equipment indicated on Drawings for each trade.

a. Piping to Be Removed: Remove portion of piping indicated to be removed and cap or plug remaining piping with same or compatible piping material.
b. Piping to Be Abandoned in Place: Drain piping and cap or plug piping with same or compatible piping material and leave in place.
c. Equipment to Be Removed: Disconnect and cap services and remove equipment.

3.3 PROTECTION

A. Temporary Protection: Provide temporary barricades and other protection required to prevent injury to people and damage to adjacent buildings and facilities to remain.

1. Provide protection to ensure safe passage of people around demolition.

2. Protect existing concrete foundations, slab-on-grade, water, sewer and gas services near the building or under the slab that are to remain or that are exposed during demolition operations.
3. Use water mist and other suitable methods to limit spread of dust and dirt. Comply with governing environmental-protection regulations. Do not use water when it may damage adjacent construction or create hazardous or objectionable conditions, such as ice, flooding, and pollution.

B. Temporary Shoring: Design, provide, and maintain shoring, bracing, and structural supports as required to prevent unexpected or uncontrolled movement or collapse of construction being demolished.

1. Strengthen or add new supports when required during progress of demolition.

C. Remove temporary barricades and protections where hazards no longer exist.

3.4 SELECTIVE DEMOLITION, GENERAL

A. General: Demolish and remove existing construction only to the extent required by new construction and as indicated. Use methods required to complete the Work within limitations of governing regulations and as follows:

1. Proceed with demolition systematically, from higher to lower level.
2. Do not use cutting torches until work area is cleared of flammable materials. At concealed spaces, such as duct and pipe interiors, verify condition and contents of hidden space before starting flame-cutting operations. Maintain portable fire-suppression devices during flame-cutting operations.
3. Maintain adequate ventilation when using cutting torches.
4. Remove decayed, vermin-infested, or otherwise dangerous or unsuitable materials and promptly dispose of off-site.
5. Remove structural framing members and lower to ground by method suitable to avoid free fall and to prevent ground impact or dust generation.
6. Locate demolition equipment and remove debris and materials so as not to impose excessive loads on supporting walls, floors, or framing.
7. Dispose of or recycle demolished items and materials promptly.

B. Site Access and Temporary Controls: Conduct demolition and debris-removal operations to ensure minimum interference with roads, streets, walks, walkways, and other adjacent occupied and used facilities.

C. Existing Items to Remain: Protect construction indicated to remain against damage during demolition.

3.5 SELECTIVE DEMOLITION PROCEDURES FOR SPECIFIC MATERIALS

A. Concrete: Cut and remove only those portions of concrete foundations, walls and slabs to facilitate new work on foundations, sanitary drainage and utility service entrances.

1. Foundations and Walls: Demolish in small sections. Using power-driven saw, cut concrete to a depth of at least 3/4 inch at junctures with construction to remain. Dislodge concrete from reinforcement leaving reinforcement intact to be incorporated in the new work or removed if not needed.
2. Slabs-on-Grade: Saw-cut perimeter of area to be demolished, and then break up and remove.
3. Anchor Bolts: Cut off exposed anchor bolts flush with the concrete surface.

B. Masonry: Demolish independently from supporting wall construction in order to control dusting.

C. Resilient Floor Coverings: Remove floor coverings and adhesive according to recommendations in RFCI's "Recommended Work Practices for the Removal of Resilient Floor Coverings." Do not use methods requiring solvent-based adhesive strippers.

D. Fire Protection, Plumbing and Gas, HVAC and Electrical Construction: The respective filed subcontractor shall disconnect, cap and make-safe these services prior to demolition by the General Contractor.

3.6 DISPOSAL OF DEMOLISHED MATERIALS

A. Recycle metallic demolition waste material to the extent practicable.

B. Remove remaining demolition waste materials from Project site and dispose of them in an EPA-approved construction and demolition waste landfill acceptable to authorities having jurisdiction.

C. Do not allow demolished materials to accumulate on-site.

D. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.

E. Burning: Do not burn demolished materials.

3.7 CLEANING

A. Clean adjacent structures and improvements of dust, dirt, and debris caused by demolition operations. Return adjacent areas to condition existing before demolition operations began.

END OF SECTION 024119

SECTION 084126 - ALL-GLASS ENTRANCES AND STOREFRONTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 TIME, MANNER AND REQUIREMENTS FOR SUBMITTING SUB-BIDS

A. Work of this Section shall be included in the Work of Section 088000 "Glazing."

1. See Section 088000 "Glazing" for filed sub-bidding requirements.

1.3 SUMMARY

A. Section Includes:

1. Interior all-glass storefronts.

B. Related Requirements:

1. Section 055000 "Metal Fabrications" for overhead-steel support for all-glass systems.

1.4 ACTION SUBMITTALS

A. Product Data: For each type of product.

1. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes for all-glass system.

B. Sustainable Design Submittals:

1. Product Data: For sealants, indicating VOC content.

C. Shop Drawings: For all-glass entrances and storefronts.

1. Include plans, elevations, and sections.
2. Include details of fittings and glazing.

D. Samples for Verification: For each type of exposed finish indicated, prepared on Samples of size indicated below.

1. Metal Finishes: 6-inch-long sections of, accessory fittings, and other items.
2. Glass: 6 inches square, showing exposed-edge finish.

1.5 INFORMATIONAL SUBMITTALS

A. Qualification Data: For Installer.

B. Product Test Reports: For all-glass systems, for tests performed by manufacturer and witnessed by a qualified testing agency.

1.6 QUALITY ASSURANCE

A. Installer Qualifications: Manufacturer's authorized representative who is trained and approved for installation of units required for this Project.

B. Product Options: Information on Drawings and in Specifications establishes requirements for aesthetic effects and performance characteristics of assemblies. Aesthetic effects are indicated by dimensions, arrangements, alignment, and profiles of components and assemblies as they relate to sightlines, to one another, and to adjoining construction.

1. Do not change intended aesthetic effects, as judged solely by Architect, except with Architect's approval. If changes are proposed, submit comprehensive explanatory data to Architect for review.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

A. General Performance: Comply with performance requirements specified, as determined by testing of all-glass entrances and storefronts representing those indicated for this Project without failure due to defective manufacture, fabrication, installation, or other defects in construction.

B. Structural Loads:

1. Interior Partition Design Load: 5 lbs. per sq. ft., normal to glazing plane.
2. Deflection Limits: Deflection normal to glazing plane is limited to 1/175 of clear span or 3/4 inch, whichever is smaller.

C. Seismic Performance: All-glass entrances and storefronts shall withstand the effects of earthquake motions determined according to ASCE/SEI 7.

2.2 MANUFACTURERS

A. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to the following:

1. Avanti Systems, Inc.
2. Blumcraft of Pittsburgh; C.R. Laurence Co, Inc.

3. Trulite Glass & Aluminum Solutions, LLC.

2.3 METAL COMPONENTS

A. Fitting Configuration:

1. All-Glass Storefronts: Configuration as indicated.

2. Material: Aluminum.

3. End Caps: Manufacturer's standard precision-fit end caps for rail fittings.

B. Materials:

1. Aluminum: ASTM B 221, with strength and durability characteristics of not less than Alloy 6063-T5.

a. Color: As selected by Architect from manufacturer’s full range.

2.4 GLASS

A. Glass: ASTM C 1048, Kind FT (fully tempered), Condition A (uncoated surfaces), Type I (transparent), tested for surface and edge compression per ASTM C 1048 and for impact strength per 16 CFR 1201 for Category II materials.

1. Class 1: Clear monolithic.

a. Thickness: 1/2 inch.
b. Locations: As indicated.

2. Exposed Edges: Machine ground and flat polished.
3. Butt Edges: Flat ground.
4. Corner Edges: Miter corners with exposed edges polished.

2.5 BUTT-GLAZING SEALANTS

A. Single-Component, Nonsag, Acid-Curing Silicone Joint Sealant: ASTM C 920, Type S, Grade NS, Class 25, for Uses NT, G, and A.

1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to the following:

a. Dow Corning Corporation.
b. GE Construction Sealants; Momentive Performance Materials Inc.
c. Pecora Corporation.

2. Sealant shall have a VOC content of 250 g/L or less.

2.6 FABRICATION

A. Provide holes and cutouts in glass to receive hardware, fittings, and accessory fittings before tempering glass. Do not cut, drill, or make other alterations to glass after tempering.

1. Fully temper glass using horizontal (roller-hearth) process, and fabricate so that when glass is installed, roll-wave distortion is parallel with bottom edge of door or lite.

B. Factory assemble components and factory install hardware and fittings to greatest extent possible.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine areas and conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.

B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

A. Install all-glass systems and associated components according to manufacturer's written instructions and approved submittals.

B. Set units level, plumb, and true to line, with uniform joints.

C. Maintain uniform clearances between adjacent components.

D. Install butt-joint sealants according to manufacturer's instructions.

3.3 ADJUSTING AND CLEANING

A. Remove excess sealant and glazing compounds and dirt from surfaces.

END OF SECTION 084126

SECTION 087100 - 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, are hereby made part of this Section.

1.2 SUMMARY

A. This Section includes the following:

1. Mechanical door hardware for the following:

a. Swinging doors.

2. Cylinders for door hardware specified in other Sections.
3. Electrified door hardware.

B. Related Sections include the following:

1. Section 133419 "Metal Building Systems" for door hardware, except cylinders.

1.3 SUBMITTALS

A. Product Data: Include installation details, material descriptions, dimensions of individual components and profiles, and finishes.

B. Shop Drawings: Details of electrified door hardware, indicating the following:

1. Wiring Diagrams: For power, signal, and control wiring and including the following:

a. Details of interface of electrified door hardware and building safety and security systems.

2. Operation Narrative: Describe the operation of doors controlled by electrified door hardware.

C. 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.
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.
    h. Description of each electrified door hardware function, including location, sequence of operation, and interface with other building control systems.

D. Keying Schedule: Prepared by or under the supervision of supplier, detailing Owner's final keying instructions for locks. This may be included with the Door Hardware Schedule.

E. Product Certificates: Signed by manufacturers of electrified door hardware certifying that products furnished comply with requirements.

F. Qualification Data: For firms and persons specified in "Quality Assurance" Article.

G. Product Test Reports: Based on evaluation of comprehensive tests performed by manufacturer and witnessed by a qualified testing agency, indicating current products comply with requirements.

H. Maintenance Data: For each type of door hardware to include in maintenance manuals specified in Division 1.

I. 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.

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 perform electrical modifications and that are listed by a testing and inspecting agency acceptable to authorities having jurisdiction are acceptable.

E. Hardware Standard: Comply with the requirements of BHMA for fabrication, function and finish.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Inventory door hardware on receipt and provide secure lock-up for door hardware delivered to Project site.

B. Tag each item or package separately with identification related to the final Door Hardware Schedule, and include basic installation instructions with each item or package.

C. Deliver keys and permanent cores to Owner by registered mail or overnight package service.

1.6 COORDINATION

A. Installation Templates: Distribute for doors, frames, and other work specified to be factory prepared. Check Shop Drawings of other work to confirm that adequate provisions are made for locating and installing door hardware to comply with indicated requirements.

B. Security: Coordinate installation of door hardware, keying, and access control with Owner's security consultant.

C. Electrical System Roughing-In: Coordinate layout and installation of electrified door hardware with connections to power supplies and building safety and security systems.

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. Special Warranty: Written warranty, executed by manufacturer agreeing to repair or replace components of door hardware that fail in materials or workmanship within specified warranty period. Failures include, but are not limited to, the following:

1. Structural failures including excessive deflection, cracking, or breakage.
2. Faulty operation of operators and door hardware.
3. Deterioration of metals, metal finishes, and other materials beyond normal weathering.
4. Warranty Period: 5 years from date of Substantial Completion, unless otherwise indicated.
5. Warranty Period for Manual Closers: 10 years from date of Substantial Completion.

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.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

A. Fire-Rated Door Assemblies: Where fire-rated doors are indicated, provide door hardware complying with NFPA 80 that is listed and labeled by a qualified testing agency, for fire-protection ratings indicated, based on testing at positive pressure according to NFPA 252 or UL 10C.

B. Smoke- and Draft-Control Door Assemblies: Where smoke- and draft-control door assemblies are required, provide door hardware that complies with requirements of assemblies tested according to UL 1784 and installed in compliance with NFPA 105.

1. Air Leakage Rate: Maximum air leakage of 0.3 cfm/sq. ft. at the tested pressure differential of 0.3-inch wg of water.

C. Electrified Door Hardware: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.

D. Means of Egress Doors: Latches do not require more than 15 lbf to release the latch. Locks do not require use of a key, tool, or special knowledge for operation.

E. Accessibility Requirements: For door hardware on doors in an accessible route, comply with the DOJ's "2010 ADA Standards for Accessible Design" and the Regulations of the Massachusetts Architectural Access Board.

1. Provide operating devices that do not require tight grasping, pinching, or twisting of the wrist and that operate with a force of not more than 5 lbf.
2. Comply with the following maximum opening-force requirements:

a. Interior, Non-Fire-Rated Hinged Doors: 5 lbf applied perpendicular to door.
b. Sliding or Folding Doors: 5 lbf applied parallel to door at latch.
c. Fire Doors: Minimum opening force allowable by authorities having jurisdiction.

3. Bevel raised thresholds with a slope of not more than 1:2. Provide thresholds not more than 1/2 inch high.
4. Adjust door closer sweep periods so that, from an open position of 90 degrees, the door will take at least 5 seconds to move to a position of 12 degrees from the latch.
5. Adjust spring hinges so that, from an open position of 70 degrees, the door will take at least 1.5 seconds to move to the closed position.

2.2 SCHEDULED DOOR HARDWARE

A. Provide door hardware for each door as scheduled in Part 3 "Door Hardware Sets" Article and on Drawings to comply with requirements in this Section.

B. Designations: Requirements for design, grade, function, finish, size, and other distinctive qualities of each type of door hardware are designated in Part 2 product descriptions.

2.3 HINGES

A. Hinges: BHMA A156.1. Provide template-produced hinges for hinges installed on hollow-metal doors and hollow-metal frames.

1. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

a. Hager Companies.
b. McKinney Products Company; an ASSA ABLOY Group company.
c. Stanley Commercial Hardware; Div. of The Stanley Works.

B. Antifriction-Bearing Hinges:

1. Mounting: Full mortise (butts).
2. Bearing Material: Ball bearing.
3. Grade: Grade 1 (heavy weight).
4. Base and Pin Metal:

a. Exterior Hinges: Stainless steel with stainless-steel pin.
b. Interior Hinges: Stainless steel with stainless-steel pin.
c. Hinges for Fire-Rated Assemblies: Stainless steel with stainless-steel pin.

5. Pins: Non-rising loose unless otherwise indicated.

a. Outswinging Exterior Doors: Maximum security.
b. Outswinging Corridor Doors with Locks: Nonremovable.

6. Tips: Flat button.
7. Corners: Square.

2.4 MECHANICAL LOCKS AND LATCHES

A. Bored Locks: BHMA A156.2; Grade 1; Series 4000.

1. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

a. Corbin Russwin Architectural Hardware.

b. Sargent Manufacturing Company.
c. Schlage Lock Company.

B. Lock Functions: As indicated in the submitted Door Hardware Schedule.

C. Lock Throw: Comply with testing requirements for length of bolts to comply with labeled fire door requirements, and as follows:

1. Bored Locks: Minimum 1/2-inch latchbolt throw.
2. Mortise Locks: Minimum 3/4-inch latchbolt throw.
3. Deadbolts: Minimum 1-inchbolt throw.

D. Lock Backset: 2-3/4 inches unless otherwise indicated.

E. Lock Trim:

1. Levers: Cast.

a. Tubular design.
b. Knurled or milled tactile texture where warning is required by code.

2. Escutcheons (Roses): Wrought.

F. Strikes: Provide manufacturer's standard strike with strike box for each latch or lock bolt, with curved lip extended to protect frame, finished to match door hardware set, unless otherwise indicated.

2.5 ELECTRIC STRIKES

A. Electric Strikes: BHMA A156.31; Grade 1; with faceplate to suit lock and frame.

1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

a. Adams Rite Manufacturing Co.
b. Dortronics Systems, Inc.
c. DynaLock Corp.
d. Folger Adam Electric Door Controls.
e. HES, Inc.
f. Rutherford Controls Int'l. Corp.
g. Security Door Controls.
h. Trine Access Technology.
i. Von Duprin, Inc.

2. Material: Stainless steel.
3. Mounting: Mortised or Rim mounted to match latch.

2.6 EXIT DEVICES AND AUXILIARY ITEMS

A. Exit Devices and Auxiliary Items: BHMA A156.3.

1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to the following:

a. Corbin Russwin Architectural Hardware.
b. Sargent Manufacturing Company.
c. Von Duprin, Inc.

B. Rim Exit Devices: Grade 1.

1. Type: 1, rim.
2. Actuating Bar: Cross bar.
3. Material: Aluminum.
4. Electrified Features:

a. Electric locking and unlocking.
b. Fail-secure electric latch retraction (dogging) that engages latch when fire-alarm system is activated.

C. Exit Device Outside Trim: Lever with cylinder; material and finish to match locksets unless otherwise indicated.

1. Match design for lock trim unless otherwise indicated.

2.7 LOCK CYLINDERS AND KEYING

A. Provide cylinders for the following:

1. Locksets specified in this Section.
2. Locks for hardware specified in Division 13 Section "Metal Building Systems."

B. Lock Cylinders: BHMA A156.5; Grade 1; tumbler type, constructed from brass or bronze, stainless steel, or nickel silver; permanent cores that are interchangeable; face finished to match lockset.

1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

a. Corbin Russwin Architectural Hardware.
b. Sargent Manufacturing Company.
c. Schlage Commercial Lock Division.

2. Construction Cores: Provide construction cores that are replaceable by permanent cores.

a. Provide 10 construction master keys.

3. Permanent Cores: Provide permanent cores.

    a. Provide 10 permanent master keys.
    b. Provide 5 of each permanent change key.

C. Keying: Coordinate keying with Owner's representative.

D. Keys: Provide nickel-silver keys complying with the following:

1. Stamping: Permanently inscribe each key with its respective key set number and the notation "DO NOT DUPLICATE."
2. Do not stamp any keys with the factory key change number.
3. Provide (2) two change keys for each cylinder.

2.8 MANUAL FLUSH BOLTS

A. Manual Flush Bolts: BHMA A156.16; minimum 3/4-inch throw; designed for mortising into door edge.

2.9 CLOSERS

A. Surface Closers: BHMA A156.4; rack-and-pinion hydraulic type with adjustable sweep and latch speeds controlled by key-operated valves and forged-steel main arm. 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.

1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

    a. Corbin Russwin Architectural Hardware.
    b. LCN Closers.
    c. Sargent Manufacturing Company.

B. Surface Closer with Cover: Grade 1; Modern Type with mechanism enclosed in cover.

1. Mounting: Parallel arm.
2. Type: Hold open, typical.

    a. Regular arm on fire-rated doors.

3. Backcheck: Adjustable, effective between 60 and 85 degrees of door opening.
4. Cover Material: Aluminum.

2.10 OPERATING TRIM

A. Operating Trim: BHMA A156.6; stainless steel unless otherwise indicated.

1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to the following:

    a. Hager Companies.
    b. Hiawatha, Inc; a division of the Activar Construction Products Group.
    c. Rockwood Manufacturing Company; an ASSA ABLOY Group company.

B. Flat Push/Pull Plates: With square corners and beveled edges; secured with back-to-back sex bolts.

1. Thickness: 0.050 inch.
2. Size: 8 inches wide by 16 inches high.

C. Straight Door Pulls:

1. Type: 3/4-inch constant-diameter pull.
2. Mounting: Surface applied with concealed fasteners.
3. Minimum Clearance: 1-1/2 inches from face of door.
4. Overall Length: 9 inches.

D. Metal Protective Trim Units: BHMA A156.6; fabricated from 0.050-inch-thick stainless steel; with manufacturer's standard machine or self-tapping screw fasteners.

1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to the following:

    a. Burns Manufacturing Incorporated.
    b. Hiawatha, Inc.
    c. Rockwood Manufacturing Company.

E. Kick Plates: Provide units on the push side of doors with closers.

1. Size: 2 inches less than door width, 12 inches high, 0.050 inches thick.
2. Beveled three sides.
3. Mount flush to bottom of door, screw-applied.

F. Material and Finish: Stainless steel, satin finish (BHMA 630).

2.11 STOPS AND HOLDERS

A. Wall- and Floor-Mounted Stops: BHMA A156.16; polished cast brass, bronze, or aluminum base metal.

1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

    a. Burns Manufacturing Incorporated.

b. Glynn-Johnson; an Ingersoll-Rand Company.
c. Rockwood Manufacturing Company.

B. Floor Stops: Do not mount floor stops where they will impede traffic.

C. Wall Bumper: Coordinate shape of bumper insert with door lock button.

D. Silencers for Steel Door Frames: BHMA Grade 1; neoprene or rubber, fabricated for insertion in pre-drilled holes in frame.

2.12 AUXILIARY ELECTRIFIED DOOR HARDWARE

A. Auxiliary Electrified Door Hardware:

1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

a. DynaLock Corp.
b. GE Security, Inc.
c. SARGENT Manufacturing Company; an ASSA ABLOY Group company.
d. Schlage Commercial Lock Division; an Ingersoll-Rand company.
e. Securitron Magnalock Corporation; an ASSA ABLOY Group company.
f. Security Door Controls.

B. Boxed Power Supplies: Modular unit in NEMA ICS 6, Type 4 enclosure; filtered and regulated; voltage rating and type matching requirements of door hardware served; listed and labeled for use with fire alarm systems.

2.13 FABRICATION

A. Manufacturer's Nameplate: Do not provide products that have manufacturer's name or trade name displayed in a visible location except in conjunction with required fire-rated labels and as otherwise approved by Architect.

1. Manufacturer's identification is permitted on rim of lock cylinders only.

B. Base Metals: Produce door hardware units of base metal indicated, 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.

C. Fasteners: Provide door hardware manufactured to comply with published templates prepared for machine, wood, and sheet metal screws. Provide screws that comply with commercially recognized industry standards for application intended, except aluminum fasteners are not permitted. 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. Spacers or Sex Bolts: For through bolting of hollow-metal doors.
3. Gasketing Fasteners: Provide noncorrosive fasteners for exterior applications and elsewhere as indicated.

2.14 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: Noticeable variations within the same piece are not acceptable. Noticeable variations between like pieces are not acceptable. Variations in appearance of other components are acceptable if they are assembled or installed to minimize contrast.

D. Unless otherwise indicated, comply with base material and finish requirements indicated by the following:

1. BHMA 685: Black chromium satin over nickel, over brass or bronze base metal.
2. BHMA 687: Black chromium satin over steel base metal.

3. BHMA 693: Black painted satin over aluminum base metal.
4. BHMA 630: Stainless steel, satin finish.
5. Exposed aluminum components shall be clear anodized, painted or plated to match primary finish, unless otherwise indicated, including:

a. Covers for closers.

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.

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."

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. Boxed Power Supplies: Locate power supplies as indicated or, if not indicated, in equipment room. Verify location with Architect.

1. Configuration: Provide least number of power supplies required to adequately serve doors with electrified door hardware.

3.4 ADJUSTING

A. Initial Adjustment: Adjust and check each operating item of door hardware and each door to ensure proper operation or function of every unit. Replace units that cannot be adjusted to operate as intended. Adjust door control devices to compensate for final operation of heating and ventilating equipment and to comply with referenced accessibility requirements.

1. Door Closers: 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 from the latch, measured to the leading edge of the door.

3.5 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.

3.6 DOOR HARDWARE SETS

A. Set No. 1: Metal Building Doors

1. Permanent cores.

B. Set No. 2: Entrance Function

1. Hinges.
2. Exit Device.
3. Closer.
4. Kickplate.
5. Stop.
6. Silencers.

C. Set No. 3: Classroom Function

1. Hinges.
2. Lockset.
3. Closer.
4. Kickplate.
5. Stop.
6. Silencers.
7. Smoke seals where indicated.

D. Set No. 4: Office Function

1. Hinges.
2. Lockset.
3. Stop.
4. Silencers.

E. Set No. 5: Storeroom Function

1. Hinges.
2. Lockset.
3. Stop.
4. Silencers.
5. Flush bolts at head for inactive leaves of door pairs.

F. Set No. 6: Utility Room Function

1. Hinges.
2. Lockset.
3. Closer.
4. Kickplate.
5. Stop.
6. Silencers.
7. Smoke seals where indicated.
8. Flush bolts at head, no closer for inactive leaves of door pairs.

G. Set No. 7: Non-latching

1. Hinges.
2. Pull handle with plates both sides.
3. Closer.
4. Kickplate.
5. Stop.
6. Silencers.

H. Set No. 8: Privacy Function

1. Hinges.
2. Lockset.
3. Closer.
4. Kickplate.
5. Stop.
6. Silencers.

I. Set No. 9: Passage Function

1. Hinges.
2. Lockset.
3. Closer.
4. Kickplate.
5. Stop.
6. Silencers.

END OF SECTION 087100

DOOR SCHEDULE

LEVEL	MARK	DOOR SIZE W	DOOR SIZE H	DOOR SIZE T	DOOR MATL	DOOR TYPE	DOOR GLAZ	DOOR LOUVER W	DOOR LOUVER H	FRAME TYPE	FRAME MATL	FRAME DETAIL HEAD	FRAME DETAIL JAMB	FIRE RATING	HARDWARE SET NO	HARDWARE KEYSIDE RM NO	NOTES
FIRST FLOOR	E1	3'-6"	7'-0"	1 3/4"	ALUM	E	YES				ALUM				1		PROVIDE FOB CONTROLLED ACCESS REMOTE RELEASE FROM ROOM O2 / IN CURTAIN WALL
	E2	3'-0"	7'-0"	1 3/4"	ALUM	F	YES			1	WHM				1		PROVIDE FOB CONTROLLED ACCESS
	E3	3'-0"	7'-0"	1 3/4"	STL	D	NO			1	WHM				1		
	E4	2(4'-0")	8'-0"	1 3/4"	ALUM	D	NO			1	WHM				1		
	E5	3'-0"	7'-0"	1 3/4"	STL	F	YES			1	WHM				1		
	E6	3'-0"	7'-0"	1 3/4"	STL	F	YES			1	WHM				1		
	E7	3'-0"	7'-0"	1 3/4"	STL	F	YES			1	WHM				1		
	E8	3'-0"	7'-0"	1 3/4"	STL	D	YES			1	WHM				1		LOFT TO EXTERIOR
	01C	3'-0"	7'-0"	1 3/4"	WD	A	NO			2	WHM				2		
	01J	3'-0"	7'-0"	1 3/4"	WD	A	NO			2	WHM				6		
	01M	3'-0"	7'-0"	1 3/4"	WD	A	NO			2	WHM				7		PROVIDE 1" UNDERCUT
	01MS	3'-0"	7'-0"	1 3/4"	WD	A	NO			2	WHM				8		PROVIDE 1" UNDERCUT
	01S	3'-0"	7'-0"	1 3/4"	WD	A	NO			2	WHM				5		
	01T	3'-0"	7'-0"	1 3/4"	WD	A	NO			2	WHM				8		
	01W	3'-0"	7'-0"	1 3/4"	WD	A	NO			2	WHM				7		PROVIDE 1" UNDERCUT
	01WS	3'-0"	7'-0"	1 3/4"	WD	A	NO			2	WHM				8		PROVIDE 1" UNDERCUT
	01E	3'-6"	7'-0"	1 3/4"	WD	C	YES			2	WHM				2		PROVIDE FOB CONTROLLED ACCESS REMOTE RELEASE FROM ROOM 02
	02	3'-0"	7'-0"	1 3/4"	WD	C	YES			2	WHM				4		
	03A	3'-0"	7'-0"	1 3/4"	WD	C	YES			2	WHM				3		PROVIDE FOB CONTROLLED ACCESS REMOTE RELEASE FROM ROOM 02
	4A	3'-0"	7'-0"	1 3/4"	WD	C	YES			2	WHM				4		
	4B	3'-0"	7'-0"	1 3/4"	WD	C	YES			2	WHM				4		
	05	3'-0"	7'-0"	1 3/4"	WD	A	NO			2	WHM				6		
	06A	3'-0"	7'-0"	1 3/4"	WD	C	YES			2	WHM				3		PROVIDE FOB CONTROLLED ACCESS
	06B	3'-0"	7'-0"	1 3/4"	WD	C	YES			2	WHM				3		PROVIDE FOB CONTROLLED ACCESS
	08	3'-0"	7'-0"	1 3/4"	WD	A	NO			2	WHM				6		
	09	3'-0"	7'-0"	1 3/4"	WD	B	YES			2	WHM				4		
	10	2(3'-0")	7'-0"	1 3/4"	WD	A	NO			2	WHM				6		
	11	3'-0"	7'-0"	1 3/4"	WD	B	YES			2	WHM				4		
	12	3'-0"	7'-0"	1 3/4"	WD	B	YES			2	WHM				4		
	13	3'-0"	7'-0"	1 3/4"	WD	B	YES			2	WHM				4		
	14A	3'-6"	7'-0"	1 3/4"	WD	C	YES			2	WHM				3		PROVIDE FOB CONTROLLED ACCESS
	14B	3'-0"	7'-0"	1 3/4"	WD	A	NO			2	WHM				5		
	14C	(2)4'-0"	7'-0"	1 3/4"	WD	A	NO			2	WHM				5		
	14D	(2)4'-0"	7'-0"	1 3/4"	WD	A	NO			2	WHM				5		
	14E	(2)4'-0"	7'-0"	1 3/4"	WD	A	NO			2	WHM				5		
	14F	(2)4'-0"	7'-0"	1 3/4"	WD	A	NO			2	WHM				5		
	15A	3'-6"	7'-0"	1 3/4"	WD	C	YES			2	WHM				3		PROVIDE FOB CONTROLLED ACCESS
	15B	3'-0"	7'-0"	1 3/4"	WD	C	YES			2	WHM				3		
	15C	3'-0"	7'-0"	1 3/4"	WD	C	YES			2	WHM				3		PROVIDE MAGNETIC HOLD OPEN & DOOR SEAL / OMIT HOLDER ON CLOSER
	16A	3'-6"	7'-0"	1 3/4"	WD	C	YES			2	WHM				3		PROVIDE FOB CONTROLLED ACCESS & DOOR SEAL
	16B	3'-0"	7'-0"	1 3/4"	WD	B	YES			2	WHM				4		
	16C	3'-0"	7'-0"	1 3/4"	WD	B	YES			2	WHM				4		
	16D	3'-0"	7'-0"	1 3/4"	WD	B	YES			2	WHM				4		
	16E	3'-0"	7'-0"	1 3/4"	WD	C	YES			2	WHM				9		PROVIDE MAGNETIC HOLD OPEN & DOOR SEAL/OMIT HOLDER ON CLOSER
	17	2(3'-0")	7'-0"	1 3/4"	WD	A	NO			2	WHM				6		PROVIDE DOOR SEAL
	20	3'-0"	7'-0"	1 3/4"	WD	A	NO			2	WHM				6		
	22	3'-0"	7'-0"	1 3/4"	WD	A	NO			2	WHM				6		
	23	3'-0"	7'-0"	1 3/4"	STL	A	NO			2	WHM				6		

CITY OF WORCESTER

DEPARTMENT OF PUBLIC WORKS AND PARKS
ARCHITECTURAL SERVICES DIVISION
50 SKYLINE DRIVE, WORCESTER, MA 01605

SCALE: 1/4" =1'-0"
DATE: 12/23/14
REMARKS:
ISSUED VIA ADDENDUM #2

PROJECT TITLE:
REGIONAL EMERGENCY COMMUNICATIONS CENTER
2 Coppage Drive, Worcester, MA 01603

DRAWING TITLE:
REVISED DOOR SCHEDULE

SHEET NUMBER:
SKA-04