Trudeau Building Rehabilitation

Addendum #4:
Historic Saranac Lake – Trudeau Building Rehabilitation

PROJECT LOCATION: Reconstruction at 118 Main Street, Saranac Lake, NY 12983

Issue Date: February 16th, 2023

Distribution via email and posted on Historic Saranac Lake’s website (https://www.historicsaranaclake.org/)

To: Bidding Contractors

Please be advised of the changes noted below to the Bidding documents and responses/answers to requests for information and questions received to date during the bidding period.

Please note the following additional changes to the bid schedule:

Due to the shifted bid due date referenced above, the Project Award/Contract Execution and earliest construction start dates will also be shifted by 1 week, so Project Award is anticipated to be 3/8/23 and the earliest construction start date would be 3/22/23 respectively.

Modifications to Drawings:

Sheets: A5.3 Finish Schedule:
  a. Video Room 111B – delete Type 3A flooring as 111B will have Type 6 flooring (carpet tile)
  b. Offices 118, 122 & 124 – delete Type 5A flooring as they will all have Type 6 flooring (carpet tile)
  c. Exhibit Rom 207 – delete Type 3A flooring as 207 will have Type 5A (resilient sheet flooring)
  d. Floor Finish Type 5A shall be revised to Resilient Sheet (linoleum) flooring, instead of tile.

Sheets: MD1.1, MD1.2, M1.0 & PD1.0 – see QEC Addendum 04 for additional information.

Modifications to Project Manual:

The following have been edited in the Project Manual: (included in this Addendum)

The following will amend Section 3.7 “Door Hardware Sets, in “Door Hardware – 087100”:
  a. Set 2A (Doors 111D, 114B), replace 2 Porcelain Knobs with 1 Office Lock Set ML2051 ZSL CT6SB 606 (Satin Brass finish) RU (Corbin Russwin) 087100.
  b. Set 1C (Door 209D), add 1 Porcelain Knob RS-01NW-702189 (Single Dummy function, antique Brass finish)
  c. Set 1Cx2 (Doors 108D, 111A), add 2 Porcelain Knobs RS-01NW-702194 (Double Dummy function, antique Brass finish).
Responses/Answers to information inquiries:

Questions 1-13 are answered below – please also consult Quantum Engineering “Addendum 04” included in this Addendum.

Q1: Spec section 238415 – STEAM HUMIDIFIERS: I don’t see humidifiers on the Mech Equip. Schedules (M6.1). I also can’t seem to locate them on any plan. Please identify the humidifiers.

A1: Please note this spec. section is being omitted, as there are no humidifiers required for this project.

Q2: Section 221006, Part 3, 3.1 E: This section requests a BACKFLOW PREVENTER TEST KIT... This unit is about $2,000 and is only supposed to be used to certify the function of a backflow preventer by someone who is trained/ certified by NYS to do so. Does the museum really need this item? Typically, the client would request an outside vendor to perform annual certifications of BFP’s. Those trained BFP certification technicians bring their own calibrated meters.

A2: Please omit this request for the test kit.

Q3: Section 221006, 2.10 SUMPS -versus- dwg P0.0 SUMP PUMP SCHEDULE -versus- Section 223000 The pump specified in 221006 is a sewage effluent pump but one is not shown in plan. The scheduled pump on P0.0 is a commonly used pump for an elevator, but the controls for that packaged pump set up doesn’t reflect what is specified in 223000 2.3 I. It is suggested that 221006 2.10 and 223000 2.3 F, H, and I be eliminated.

A3: We concur. Please eliminate specification section paragraph 221006.2.10 and paragraphs 223000 2.3 F, H and I.

Q4: Detail 3 P0.0 What material is desired to construct the surge tank? Keep with specified pipe material of hub-less cast iron or would PVC be acceptable? Or do you have something else in mind?

A4: A 4’ long section of 6” PVC SCHEDULE 40 pipe is sufficient for the surge chamber.

Q5: There is a reference to humidifier control in section 230993 3.2. Please clarify.

A5: Please omit references to humidifiers. There are no humidifiers required.

Q6: Section 232114, 1.2 B references a section 232500 HVAC WATER TREATMENT. 1.4 G. references turnover of 1 gallon of glycol. Is the existing heating system glycol based?

A6: Please omit references to 232500 HVAC water treatment and glycol.

Q7: Section 238129 2.3 G. 1. states “Provide three-pipe refrigerant system...” This statement conflicts with the equipment and VRF system designed which is a heat pump system – two pipe only.

A7: Delete paragraph 2.3.G.1 referring 3 pipe -refrigeration system. It is confirmed that the proposed system is a 2-pipe refrigeration system.

Q8: Will the owner retain the thru wall AC units after removal? If no, what is to be done with them?

A8: The self-contained air conditioning units shall be removed by the contractor and disposed of by the contractor in accordance with state and federal regulations with respect to regulated refrigerants.
Q9: M1.0 illustrates ¾” hot water lines to new unit heater (new ZONE #6). M4.1 shows schematic of these same lines a ½”. Please confirm what size is required?

A9: The heating pipes serving zone 6 (UH-1) shall be ½”, not ¾”.

Q10: Reference Drawing M1.0: Refrigeration lines leaving ODU-2 and ODU-3 in Mech Vault 04 (under South porch) (ARCHIVAL WING) are illustrated heading east to CRAWLSPACE 02 (TENANT WING)…. What is the plan for this approach? You have nothing noted or detailed for these lines. Buried or above grade? Please provide clarification and construction details.

A10: The refrigeration lines running between the tenant wing Crawl Space 02 and Mech vault 04 shall be run through the basement. They shall not run in a trench or a sleeve.

Q11: There are some hot water cast iron radiators being removed, some to remain in place, and some relocated. Does detail 9/M5.1 apply to all radiators or only to those being relocated? Will removed and turned over radiators need to be flushed? Do the ‘existing to remain’ radiators need to be flushed? Do the ‘existing to remain’ radiators require new components as illustrated in this detail?

A11: 1. Radiators that get removed and turned over to the owner do not need to be flushed nor be pressure tested per detail 9/M5.1.
2. Radiators that get removed and reused shall be piped per detail 9/M5.1 and shall be flushed.
3. Radiators that remain in place shall be not flushed, nor pressure tested nor receive new valves per detail 9/M5.1

Q12: Reference drawing PD1.0: Page lower left – this detail is labeled the same as page left top detail - 1/PD1.0 PLUMBING CELLAR DEMO PLAN. Please clarify that the bottom left detail is for the SECOND Floor.

A12: Detail 1/PD1.0 shall be titled “PLUMBING SECOND FLOOR DEMO PLAN.”

Q13: Detail 1 / P0.09 illustrates a new combined water/sprinkler service as 2.5”. Drawing P1.0 illustrates a combined service line of 4”. Drawing FP1.0 illustrates a 4” fire line. Please clarify and verify the desired service entrance size to be 4”.

A13: The water service entrance shall be 4”.

Q14: Is finish floor type 5A resilient rubber tile or resilient linoleum sheet flooring?

A14: Flooring finish Type 5A is intended to be resilient (linoleum) sheet flooring with welded seams as specified in the Project Manual Section 096516 – Resilient Sheet Flooring.

Q15: In addenda #2 the last paragraph, “Additional Clarifications mentioned during the Pre-Bid Meeting include:” it is noted the project schedule intends for doors and windows to be manufactured by mid-summer to satisfy a grant deadline. Can this be clarified more, in terms of when and what openings? Stile and Rail doors are 20+ weeks currently from one of the specified manufacturer Eggers.

A14: There are approximately 45 exterior wood storm windows that need to be fabricated and five window openings to receive custom wood sash. There are three large cure porch windows to be restored; four existing historic exterior doors to be refurbished; and 15 interior doors are existing to be refurbished. The intent of the schedule is to have the existing historic windows and doors, and the custom storms and sash underway with a target date of July 31, 2023, in order to satisfy the Grant. The new doors and windows are not part of the grant. Full and final installation is not a
necessity for the grant, but a large extent of labor and materials is. The Basis of Design and the allowance for the storm window sash is based on a SpencerWorks (www.spencerworks.com) true-divided storm window which has been quoted as a 12-16 week lead time. It would be expected that measurements and an order would be conducted at the start of the project for this work.

Q16: In Specification Section 087100 “Door Hardware”, Set 1C under Hardware Sets (p. 14), specifies Porcelain Knob. This is in other spots as well. Could we get a model number for this?

A16: The porcelain knobs have been specified for existing historic doors intended to be fixed in place. Therefore the basis of design for porcelain knobs are either single or double knob sets (with dummy function) and antique brass round escutcheons. Basis of Design from House of Antique Hardware or equivalent. Model numbers include:
   Item #: RS-01NW-702189 – Single Dummy function
   Item #: RS-01NW-702194 – Double Dummy function

Q17: Requested additional information regarding fire extinguisher locations, baby changing stations and coat hooks.

A17: Fire extinguisher locations shall be as follows:
   1. Foyer 107 on north side of partition between 107 and 107B.
   2. Kitchenette 119 on east side of short partition wall at east end of countertop.
   3. Hall 208 on east side of west wall between Opening 209C and Door 210A
   4. Breakroom 201 on east wall north of Window E16.

   All extinguishers shall be located within new semi-recessed cabinets with the exception of Room 201 where it shall be a wall mounted extinguisher without a cabinet. Cabinet basis of design is as follows: Semi-recessed cabinet, Model #: KF9732-C by Kidde Corporation of dimensions 9” wide x 24” tall x 6” deep to accommodate a 10 lb. dry chemical fire extinguisher. Cabinet specification sheet attached with highlighted model.

   Regarding toilet room accessories, add or edit the following:
   **ADD:** Type Q: Model “KB300” Horizontal-mounted baby changing table by Koala Kare. Mount one table in Toilet Room 105 on south wall. Locate at height such that opened table shall be no higher than 34” above finished floor and allow a minimum of 27” below table for knee space.
   **EDIT:** Type P Coat hooks (indicated on A5.4 as Type P) shall be fastened to the toilet room sides of the following doors: 105A, 105B, & 120A.

Thank you.
ADDENDUM 04

The following Specifications sections within the Project Manual prepared by Quantum Engineering Co., P.C., have been edited as follows and shall be made part of the Contract Documents:

SPECIFICATION SECTION 238415 – STEAM HUMIDIFIERS
1. Please omit this section.

SPECIFICATION SECTION 232114 – HYDRONIC SPECIALTIES
1. Delete paragraph 1.4 G referring to turning over 1 gallon of glycol.
2. Delete paragraph 1.2 B referring to specification 232500 HVAC WATER TREATMENT

SPECIFICATION SECTION 2328129 – VARIABLE REFRIGERANT FLOW HVAC SYSTEM
1. Delete paragraph 2.3.G.1 referring 3 pipe-refrigeration system. The proposed system is a 2-pipe refrigeration system.

The following Drawings prepared by Quantum Engineering Co., P.C., dated February 03, 2023, have been updated and shall be made part of the Contract Documents:

MD1.1 AND MD1.2 MECHANICAL FIRST AND SECOND FLOOR DEMO PLANS
1. The self-contained air conditioning units shall be removed by the contractor and disposed of by the contractor in accordance with state and federal regulations with respect to regulated refrigerants.
2. Radiators that get removed and turned over to the owner do not need to be flushed nor be pressure tested per detail 9/M5.1
3. Radiators that get removed and reused shall be piped per detail 9/M5.1 and shall be flushed.
4. Radiators that remain in place shall be not flushed, nor pressure tested nor receive new valves per detail 9/M5.1

M1.0 MECHANICAL CELLAR PLAN
1. The heating pipes serving zone 6 (UH-1) shall be ½”, not ¾”.
2. The refrigeration lines running between the tenant wing Crawl Space 02 and MECH vault 04 shall be run through the basement. They shall not run in a trench or a sleeve.

PD1. PLUMBING CELLAR DEMO PLAN
1. Detail 1/PD1.0 shall be titled PLUMBING SECOND FLOOR DEMO PLAN.

Distribution:

cc: Jack Alvarez   (Landmark Consulting) via e-mail
     Kim Alvarez   (Landmark Consulting) via e-mail
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, apply to this Section.

1.2 SUMMARY
A. This Section includes commercial door hardware for the following:
   1. Swinging doors.
B. Door hardware includes, but is not necessarily limited to, the following:
   1. Mechanical door hardware.
   2. Electromechanical door hardware.
C. Related Sections:
   1. Division 06 Section “Rough Carpentry”.
   2. Division 06 Section “Finish Carpentry”.
   3. Division 08 Section “Door Schedule”.
   4. Division 08 Section “Stile and Rail Wood Doors”.
   5. Division 28 Section “Access Control Hardware Devices”.
D. Codes and References: Comply with the version year adopted by the Authority Having Jurisdiction.
   6. NFPA 105 - Installation of Smoke Door Assemblies.
   7. State Building Codes, Local Amendments.
E. Standards: All hardware specified herein shall comply with the following industry standards as applicable. Any undated reference to a standard shall be interpreted as referring to the latest edition of that standard:
   1. ANSI/BHMA Certified Product Standards - A156 Series.
2. UL10C - Positive Pressure Fire Tests of Door Assemblies.
3. ANSI/UL 294 - Access Control System Units.

1.3 SUBMITTALS

A. Product Data: Manufacturer's product data sheets including installation details, material descriptions, dimensions of individual components and profiles, operational descriptions and finishes.

B. Door Hardware Schedule: Prepared by or under the supervision of supplier, detailing fabrication and assembly of door hardware, as well as procedures and diagrams. Coordinate the final Door Hardware Schedule with doors, frames, and related work to ensure proper size, thickness, hand, function, and finish of door hardware.

1. Format: Comply with scheduling sequence and vertical format in DHI's "Sequence and Format for the Hardware Schedule."

2. Organization: Organize the Door Hardware Schedule into door hardware sets indicating complete designations of every item required for each door or opening. Organize door hardware sets in same order as in the Door Hardware Sets at the end of Part 3. Submittals that do not follow the same format and order as the Door Hardware Sets will be rejected and subject to resubmission.

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 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. Warranty information for each product.

4. Submittal Sequence: Submit the final Door Hardware Schedule at earliest possible date, particularly where approval of the Door Hardware Schedule must precede fabrication of other work that is critical in the Project construction schedule. Include Product Data, Samples, Shop Drawings of other work affected by door hardware, and other information essential to the coordinated review of the Door Hardware Schedule.

C. Keying Schedule: After a keying meeting with the owner has taken place prepare a separate keying schedule detailing final instructions. Submit the keying schedule in electronic format. Include keying system explanation, door numbers, key set symbols, hardware set numbers and special instructions. Owner must approve submitted keying schedule prior to the ordering of permanent cylinders/cores.

D. Informational Submittals:
1. Product Test Reports: Indicating compliance with cycle testing requirements, based on evaluation of comprehensive tests performed by manufacturer and witnessed by a qualified independent testing agency.

E. Operating and Maintenance Manuals: Provide manufacturers operating and maintenance manuals for each item comprising the complete door hardware installation in quantity as required in Division 01, Closeout Procedures.

1.4 QUALITY ASSURANCE

A. Manufacturers Qualifications: Engage qualified manufacturers with a minimum 5 years of documented experience in producing hardware and equipment similar to that indicated for this Project and that have a proven record of successful in-service performance.

B. Certified Products: Where specified, products must maintain a current listing in the Builders Hardware Manufacturers Association (BHMA) Certified Products Directory (CPD).

C. Installer Qualifications: A minimum 3 years documented experience installing both standard and electrified 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.

D. Door Hardware Supplier Qualifications: Experienced commercial door hardware distributors with a minimum 5 years documented experience supplying both mechanical and electromechanical hardware installations comparable in material, design, and extent to that indicated for this Project. Supplier recognized as a factory direct distributor by the manufacturers of the primary materials with a warehousing facility in Project's vicinity. Supplier to have on staff a certified Architectural Hardware Consultant (AHC) available during the course of the Work to consult with Contractor, Architect, and Owner concerning both standard and electromechanical door hardware and keying.

E. Source Limitations: Obtain each type and variety of door hardware specified in this section from a single source unless otherwise indicated.

F. Each unit to bear third party permanent label demonstrating compliance with the referenced standards.

G. Keying Conference: Conduct conference to comply with requirements in Division 01 Section "Project Meetings." Keying conference to incorporate the following criteria into the final keying schedule document:

1. Function of building, purpose of each area and degree of security required.
2. Plans for existing and future key system expansion.
3. Requirements for key control storage and software.
4. Installation of permanent keys, cylinder cores and software.
5. Address and requirements for delivery of keys.

H. Pre-Submittal Conference: Conduct coordination conference in compliance with requirements in Division 01 Section "Project Meetings" with attendance by representatives of Supplier(s),
Installer(s), and Contractor(s) to review proper methods and the procedures for receiving, handling, and installing door hardware.

1. Prior to installation of door hardware, conduct a project specific training meeting to instruct the installing contractors' personnel on the proper installation and adjustment of their respective products. Product training to be attended by installers of door hardware (including electromechanical hardware) for aluminum, hollow metal and wood doors. Training will include the use of installation manuals, hardware schedules, templates and physical product samples as required.

2. Inspect and discuss electrical roughing-in, power supply connections, and other preparatory work performed by other trades.

3. Review sequence of operation narratives for each unique access controlled opening.

4. Review and finalize construction schedule and verify availability of materials.

5. Review the required inspecting, testing, commissioning, and demonstration procedures.

I. At completion of installation, provide written documentation that components were applied to manufacturer's instructions and recommendations and according to approved schedule.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Inventory door hardware on receipt and provide secure lock-up and shelving for door hardware delivered to Project site. Do not store electronic access control hardware, software or accessories at Project site without prior authorization.

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, as applicable, permanent keys, cylinders, cores, access control credentials, software and related accessories directly to Owner via registered mail or overnight package service. Instructions for delivery to the Owner shall be established at the "Keying Conference".

1.6 COORDINATION

A. Templates: Obtain and distribute to the parties involved templates for doors, frames, and other work specified to be factory prepared for installing standard and electrified hardware. Check Shop Drawings of other work to confirm that adequate provisions are made for locating and installing hardware to comply with indicated requirements.

B. Door and Frame Preparation: Doors and corresponding frames are to be prepared, reinforced and pre-wired (if applicable) to receive the installation of the specified electrified, monitoring, signaling and access control system hardware without additional in-field modifications.

1.7 WARRANTY

A. General Warranty: Reference Division 01, General Requirements. Special warranties specified in this Article shall not deprive Owner of other rights Owner may have under other provisions
of the Contract Documents and shall be in addition to, and run concurrent with, other warranties made by Contractor under requirements of the Contract Documents.

B. Warranty Period: Written warranty, executed by manufacturer(s), agreeing to repair or replace components of standard and electrified door hardware that fails in materials or workmanship within specified warranty period after final acceptance by the Owner. Failures include, but are not limited to, the following:

1. Structural failures including excessive deflection, cracking, or breakage.
2. Faulty operation of the hardware.
3. Deterioration of metals, metal finishes, and other materials beyond normal weathering.
4. Electrical component defects and failures within the systems operation.

C. Standard Warranty Period: One year from date of Substantial Completion, unless otherwise indicated.

D. Special Warranty Periods:

1. Ten years for mortise locks and latches.
2. Five years for exit hardware.
3. Twenty five years for manual overhead door closer bodies.

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 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.

B. 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:

1. 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.

C. 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 Division 01,
Substitution Procedures. Approval of requests is at the discretion of the architect, owner, and their designated consultants.

2.2 HANGING DEVICES

A. Hinges: ANSI/BHMA A156.1 butt hinges with number of hinge knuckles and other options as specified in the Door Hardware Sets.

1. Quantity: Provide the following hinge quantity:
   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 or oil impregnated bearing hinges unless Hardware Sets indicate standard weight.
   b. Interior Doors: Standard weight, steel, ball bearing or oil impregnated bearing hinges unless Hardware Sets indicate heavy weight.

4. Hinge Options: Comply with the following:
   a. Non-removable Pins: With the exception of electric through wire hinges, 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 all out-swinging lockable doors.

5. Manufacturers:
   a. McKinney (MK) - TA/T4A Series, 5 knuckle.

2.3 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. Interchangeable Cores: Provide small format interchangeable cores as specified, core insert, removable by use of a special key; usable with other manufacturers' cylinders.

C. Keying System: Each type of lock and cylinders to be factory keyed.
1. Supplier shall conduct a "Keying Conference" to define and document keying system instructions and requirements.
2. Furnish factory cut, nickel-silver large bow permanently inscribed with a visual key control number as directed by Owner.
3. New System: Key locks to a new key system as directed by the Owner.

D. Key Quantity: Provide the following minimum number of keys:
   1. Change Keys per Cylinder: Two (2)
   2. Master Keys (per Master Key Level/Group): Five (5).
   4. Construction Control Keys (where required): Two (2).
   5. Permanent Control Keys (where required): Two (2).

E. Construction Keying: Provide temporary keyed construction cores.

F. Key Registration List (Bitting List):
   1. Provide keying transcript list to Owner's representative in the proper format for importing into key control software.
   2. Provide transcript list in writing or electronic file as directed by the Owner.

2.4 MECHANICAL LOCKS AND LATCHING DEVICES

A. Mortise Locksets, Grade 1 (Heavy Duty): ANSI/BHMA A156.13, Series 1000, Operational Grade 1 Certified Products Directory (CPD) listed. Locksets are to be manufactured with a corrosion resistant steel case and be field-reversible for handing without disassembly of the lock body.

   1. Where specified, provide status indicators with highly reflective color and wording for “locked/unlocked” or “vacant/occupied” with custom wording options if required. Indicator to be located above the cylinder with the inside thumb-turn not blocking the visibility of the indicator status. Indicator window size to be a minimum of 2.1” x 0.6” with a curved design allowing a 180 degree viewing angle with protective covering to prevent tampering.

   2. Manufacturers:
      a. Corbin Russwin Hardware (RU) - ML2000 Series.

2.5 LOCK AND LATCH STRIKES

A. 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, and as follows:

   1. Flat-Lip Strikes: For locks with three-piece antifriction latchbolts, as recommended by manufacturer.
2. Extra-Long-Lip Strikes: For locks used on frames with applied wood casing trim.
3. Aluminum-Frame Strike Box: Provide manufacturer's special strike box fabricated for aluminum framing.
4. Double-lipped strikes: For locks at double acting doors. Furnish with retractable stop for rescue hardware applications.

B. Standards: Comply with the following:

2. Strikes for Bored Locks and Latches: BHMA A156.2.
3. Strikes for Auxiliary Deadlocks: BHMA A156.36.
4. Dustproof Strikes: BHMA A156.16.

2.6 CONVENTIONAL EXIT DEVICES

A. General Requirements: All exit devices specified herein shall meet or exceed the following criteria:

1. At doors not requiring a fire rating, provide devices complying with NFPA 101 and listed and labeled for "Panic Hardware" according to UL305. Provide proper fasteners as required by manufacturer including sex nuts and bolts at openings specified in the Hardware Sets.

2. Where exit devices are required on fire rated doors, provide devices complying with NFPA 80 and with UL labeling indicating "Fire Exit Hardware". Provide devices with the proper fasteners for installation as tested and listed by UL. Consult manufacturer’s catalog and template book for specific requirements.

3. Except on fire rated doors, provide exit devices with hex key dogging device to hold the pushbar and latch in a retracted position. Provide optional keyed cylinder dogging on devices where specified in Hardware Sets.

4. Devices must fit flat against the door face with no gap that permits unauthorized dogging of the push bar. The addition of filler strips is required in any case where the door light extends behind the device as in a full glass configuration.

5. Flush End Caps: Provide flush end caps made of architectural metal in the same finish as the devices as in the Hardware Sets. Plastic end caps will not be acceptable.

   a. Lock Trim Design: As indicated in Hardware Sets, provide finishes and designs to match that of the specified locksets.
   b. Where function of exit device requires a cylinder, provide a cylinder (Rim or Mortise) as specified in Hardware Sets.
7. Vertical Rod Exit Devices: Where surface or concealed vertical rod exit devices are used at interior openings, provide as less bottom rod (LBR) unless otherwise indicated. Provide dust proof strikes where thermal pins are required to project into the floor.

8. Narrow Stile Applications: At doors constructed with narrow stiles, or as specified in Hardware Sets, provide devices designed for maximum 2” wide stiles.


10. Rail Sizing: Provide exit device rails factory sized for proper door width application.

11. Through Bolt Installation: For exit devices and trim as indicated in Door Hardware Sets.

B. Conventional Push Rail Exit Devices (Heavy Duty): ANSI/BHMA A156.3, Grade 1 Certified Products Directory (CPD) listed panic and fire exit hardware devices furnished in the functions specified in the Hardware Sets. Exit device latch to be stainless steel, pullman type, with deadlock feature.

1. Manufacturers:
   a. Corbin Russwin Hardware (RU) - ED4000 / ED5000 Series.

2.7 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.

2. Standards: Closers to comply with UL-10C 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 Americans with Disabilities Act, provide units complying with ANSI ICC/A117.1.

4. Closer Arms: Provide heavy duty, forged steel closer arms unless otherwise indicated in Hardware Sets.

5. Closers shall not be installed on exterior or corridor side of doors; where possible install closers on door for optimum aesthetics.

6. Closer Accessories: Provide door closer accessories including custom templates, special mounting brackets, spacers and drop plates as required for proper installation. Provide through-bolt and security type fasteners as specified in the hardware sets.
B. Door Closers, Surface Mounted (Heavy Duty): ANSI/BHMA A156.4, Grade 1 Certified Products Directory (CPD) listed 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 standard.

1. Manufacturers:
   a. Yale Commercial(YA) - 4400 Series.

2.8 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 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. Manufacturers:
   a. Rockwood (RO).

2.9 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 UL10C Standard for Positive Pressure Fire Tests of Door Assemblies, and NPFA 252, Standard Methods of 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.

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. Manufacturers:
   1. Pemko (PE).

2.10 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.

2.11 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.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine scheduled openings, 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. Notify architect of any discrepancies or conflicts between the door schedule, door types, drawings and scheduled hardware. Proceed only after such discrepancies or conflicts have been resolved in writing.

3.2 PREPARATION

A. Hollow Metal Doors and Frames: Comply with ANSI/DHI A115 series.

3.3 INSTALLATION

A. Install each item of mechanical and electromechanical hardware and access control equipment to comply with manufacturer's written instructions and according to specifications.

1. Installers are to be trained and certified by the manufacturer on the proper installation and adjustment of fire, life safety, and security products including: hanging devices; locking devices; closing devices; and seals.

B. Mounting Heights: Mount door hardware units at heights indicated in following applicable publications, unless specifically indicated or required to comply with governing regulations:

3. Where indicated to comply with accessibility requirements, comply with ANSI A117.1 "Accessibility Guidelines for Buildings and Facilities."
4. Provide blocking in drywall partitions where wall stops or other wall mounted hardware is located.

C. Retrofitting: Install door hardware to comply with manufacturer's published templates and 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.

D. Thresholds: Set thresholds for exterior and acoustical doors in full bed of sealant complying with requirements specified in Division 7 Section "Joint Sealants."

E. Storage: Provide a secure lock up for hardware delivered to the project but not yet installed. Control the handling and installation of hardware items so that the completion of the work will not be delayed by hardware losses before and after installation.

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.
3.5 CLEANING AND PROTECTION

A. Protect all hardware stored on construction site in a covered and dry place. Protect exposed hardware installed on doors during the construction phase. Install any and all hardware at the latest possible time frame.

B. Clean adjacent surfaces soiled by door hardware installation.

C. Clean operating items as necessary to restore proper finish. Provide final protection and maintain conditions that ensure door hardware is without damage or deterioration at time of owner occupancy.

3.6 DEMONSTRATION

A. Instruct Owner’s maintenance personnel to adjust, operate, and maintain mechanical and electromechanical door hardware.

3.7 DOOR HARDWARE SETS

A. The hardware sets represent the design intent and direction of the owner and architect. They are a guideline only and should not be considered a detailed hardware schedule. Discrepancies, conflicting hardware and missing items should be brought to the attention of the architect with corrections made prior to the bidding process. Omitted items not included in a hardware set should be scheduled with the appropriate additional hardware required for proper application and functionality.

1. Quantities listed are for each pair of doors, or for each single door.

2. The supplier is responsible for handing and sizing all products.

3. Where multiple options for a piece of hardware are given in a single line item, the supplier shall provide the appropriate application for the opening.

B. Manufacturer’s Abbreviations:

1. MK - McKinney
2. RU - Corbin Russwin
3. BA - Baldwin Hardware Corp
4. BA - Baldwin Hardware Corp
5. HS - HES
6. YA - Yale
7. NO - Norton
8. RO - Rockwood
9. PE – Pemko
10. HAH – House of Antique Hardware
**Hardware Sets**

**Set: 1B**
Doors: 108A, 202A

<table>
<thead>
<tr>
<th>Item</th>
<th>Model</th>
<th>Finish</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 Hinge, Full Mortise</td>
<td>TA2714</td>
<td>US4</td>
<td>MK</td>
</tr>
<tr>
<td>1 Passage Latch</td>
<td>ML2010 ZSL</td>
<td>606</td>
<td>RU</td>
</tr>
<tr>
<td>1 Surface Closer</td>
<td>4400 / PA 4400</td>
<td>696</td>
<td>YA</td>
</tr>
<tr>
<td>1 Wall Stop</td>
<td>402</td>
<td>US4</td>
<td>RO</td>
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**Set: 1C**
Doors: 209D

<table>
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<tr>
<td>1 Knob (Single Dummy)</td>
<td>Porcelain Knob RS-01NW-702189</td>
<td>ANTB</td>
<td>HAH</td>
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**Set: 1Cx2**
Doors: 108D, 111A

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<td>ANTB</td>
<td>HAH</td>
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Notes: 2 Dummy knobs required

**Set: 2A**
Doors: 111D, 114B

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<tr>
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<td>US4</td>
<td>MK</td>
</tr>
<tr>
<td>1 Office Lock</td>
<td>ML2051 ZSL CT6SB</td>
<td>606</td>
<td>RU</td>
</tr>
<tr>
<td>1 Small Format Inter Core</td>
<td>CR8200 VKC2</td>
<td>606</td>
<td>RU</td>
</tr>
<tr>
<td>1 Electric Strike Body w/Card Reader</td>
<td>ES100-15-BIPSXXXXX</td>
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<td>HS</td>
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<tr>
<td>1 Surface Closer</td>
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<td>YA</td>
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**Set: 2B**
Doors: 105A, 105B, 204B

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<td>4400 / PA 4400</td>
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<td>YA</td>
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<tr>
<td>Door Hardware</td>
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<tr>
<td>1 Wall Stop</td>
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<td>US4</td>
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<td>087100</td>
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Doors: 120A

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<td>1 Gasketing</td>
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Doors: 105C, 115C, 116C

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<td>1 Gasketing</td>
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<tr>
<td>3 Hinge, Full Mortise</td>
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Doors: 001B, ST2-B

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<tr>
<td>1 Gasketing</td>
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<tr>
<td>3 Hinge, Full Mortise</td>
<td>TA2714</td>
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<tr>
<td>1 Storeroom Lock</td>
<td>ML2051 ZSL CT6SB</td>
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Doors: 206B

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<td>1 Gasketing</td>
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Doors: **118B, 121B, 122B, 124A**

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<td>3 Hinge, Full Mortise</td>
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**Set: 3A**

Doors: **114A, 116B**

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<tr>
<td>3 Hinge, Full Mortise</td>
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<td>1 Storeroom Lock</td>
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<td>1 Small Format Inter Core</td>
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<tr>
<td>1 Wall Stop</td>
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<td>US4</td>
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</tr>
<tr>
<td>1 Threshold</td>
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<tr>
<td>1 Door Bottom</td>
<td>216BDGFG TKSP</td>
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<td>PE</td>
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<tr>
<td>1 Astragal</td>
<td>303GS TKSP</td>
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**Set: 3A.ss**

Doors: **117A, 117B**

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<tr>
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<tr>
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<td>1 Gasketing</td>
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<td>1 Door Bottom</td>
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**Set: 3B**

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<tr>
<td>3 Hinge, Full Mortise</td>
<td>TA2714</td>
<td>US4</td>
<td>MK</td>
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<tr>
<td>1 Storeroom Lock</td>
<td>ML2057 ZSL CT6SB</td>
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<td>1 Small Format Inter Core</td>
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<td>1 Electric Strike w/Card Reader</td>
<td>ES100-16L-BIPSXXXXX</td>
<td>606</td>
<td>HS</td>
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</table>
DOOR HARDWARE 087100 - 17
**Set: 4B.ss**

Doors: **001E**

- 1 Deadbolt: DL2211 CT6SB
- 1 Small Format Inter Core: CR8200 VKC2

**Set: 5Ass**

Doors: **005A**

- 3 Hinge, Full Mortise: TA2714
- 1 Passage Latch: ML2010 ZSL
- 1 Wall Stop: 402

**Set: 5Bss**

Doors: **005B**

- 3 Hinge, Full Mortise: TA2714
- 1 Passage Latch: ML2010 ZSL
- 1 Surface Closer: 4400 / PA 4400
- 1 Wall Stop: 402

**Set: -**


END OF SECTION 087100
Fire Extinguisher Wall Cabinets

Features
- Heavy-gauge, galvanized steel construction
- Tempered safety glass – far safer than standard plate glass during emergencies, and in case of accidental breakage
- Patented Break Rite™ non-removable handle – eliminates the need for hammer or breaker-bar
- Electrostatically-applied, thermally-fused, recoatable finish, for longer life
- 9700 Series: Vandal-resistant, unitized assembly with provision for optional padlock
- 7000 Series: Keyed steel cam lock

Benefits
- Longer life in outdoor applications
- Safe tempered glass
- Resists chipping, peeling and flaking like enamel
- Contents kept safe and secure
- Reduced accidental breakage

Compact, Value-oriented Cabinets.
Ideal for apartments, condos and strip malls.
## SPECIFICATIONS AND ORDER INFORMATION
### Fire Extinguisher Wall Cabinets

#### Surface Mount Cabinets

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Model No.</th>
<th>Wall Mounting</th>
<th>Inside Box W x H x D</th>
<th>For Use With Extinguishers (max. size)</th>
</tr>
</thead>
<tbody>
<tr>
<td>468041</td>
<td>KF9721-C</td>
<td>Surface</td>
<td>6 x 18 x 6</td>
<td>5 lb. Dry Chemical</td>
</tr>
<tr>
<td>468042</td>
<td>KF9722-C</td>
<td>Surface</td>
<td>6 x 23 x 7 1/2</td>
<td>10 lb. Dry Chemical</td>
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<tr>
<td>468043</td>
<td>KF9723-C</td>
<td>Surface</td>
<td>10 x 28 x 8</td>
<td>20 lb. Dry Chemical, 2.5 Gallon Water</td>
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</table>

#### Semi-recessed Cabinets

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Model No.</th>
<th>Wall Mounting</th>
<th>Inside Box Dimension W x H x D</th>
<th>Overall Frame W x H</th>
<th>Wall Opening Required W x H x D</th>
<th>For Use With Extinguishers (max. size)</th>
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</thead>
<tbody>
<tr>
<td>468044</td>
<td>KF9731-C</td>
<td>Semi-recessed</td>
<td>9 x 18 1/4 x 6</td>
<td>12 1/2 x 21 5/8</td>
<td>10 x 19 x 4</td>
<td>5 lb. Dry Chemical</td>
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<tr>
<td>468045</td>
<td>KF9732-C</td>
<td>Semi-recessed</td>
<td>9 x 24 x 6</td>
<td>12 1/2 x 27 1/2</td>
<td>10 x 25 x 4</td>
<td>10 lb. Dry Chemical</td>
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#### Semi-recessed Cabinets/Keyed Steel Cam Lock

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Model No.</th>
<th>Wall Mounting</th>
<th>Inside Box Dimension W x H x D</th>
<th>Overall Frame W x H x D</th>
<th>Wall Opening Required W x H x D</th>
<th>For Use With Extinguishers (max. size)</th>
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</thead>
<tbody>
<tr>
<td>468046</td>
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<td>9 x 18 x 5</td>
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<td>5 lb. Dry Chemical</td>
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<tr>
<td>468047</td>
<td>HF7022-B</td>
<td>Semi-recessed</td>
<td>9 x 24 x 5 3/4</td>
<td>11 3/4 x 26 3/4</td>
<td>10 x 25 x 4</td>
<td>10 lb. Dry Chemical</td>
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### VRF Heat Pump Indoor Unit Schedule

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<th>Location</th>
<th>Model</th>
<th>ESP (V)</th>
<th>Volt</th>
<th>HP</th>
<th>Rpm</th>
<th>MCA</th>
<th>FLA</th>
<th>MOP</th>
<th>REN</th>
<th>W</th>
<th>BASIS OF DESIGN</th>
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<td>1</td>
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<td>586</td>
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<tr>
<td>2</td>
<td>RFG-1 LATTICE GRILLE RETURN</td>
<td>8x8 6x6</td>
<td>60% 20%</td>
<td>100</td>
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### VRF Heat Pump Outdoor Unit Schedule

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### Energy Recovery Unit Schedule

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### Diffuser, Register & Grille Schedule

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### Circulating Pump Schedule

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