



**Addendum No. 2**  
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**DATE: March 13, 2024**

Joliet Junior College  
1215 Houbolt Road  
Joliet, IL 60431

**TO:** Prospective Bidders  
**SUBJECT:** Addendum No. 2  
**PROJECT NAME:** Building H HVAC Unit Replacement  
**JJC PROJECT NO.:** B24015

This Addendum forms a part of the Bidding and Contract Documents and modifies the original bidding document as posted on the JJC website. Acknowledge receipt of this addendum in the space provided on the Bid Form. FAILURE TO DO SO MAY SUBJECT BIDDER TO DISQUALIFICATION.

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**Changes to the Specifications: (See attached revised sections at the end of this document)**

1. Section 23 07 13 – DUCT INSULATION
  - a. Added subparagraph D Under Article 3.03 Schedules – Refer to attached revised section 23 07 13.
2. Section 28 46 00 – FIRE DETECTION AND ALARM
  - a. Added Article 1.04 EXISTING CONDITIONS – Refer to attached revised section 28 46 00.

**Questions Received:**

1. Will the ceiling be removed for new duct installation by others?

***Answer: Please review drawings M210 and M310 for associated ceiling work.***

2. Will this be on regular hours?

***Answer: Work can be performed during regular hours. Also review sample of the Preconstruction Checklist under coordination of work item #4.***

3. And can we please clarify the scope as the engineer was under the impression that more was being done?

***Answer: Please review all bid documents for complete scope of work.***

4. And will the customer be responsible for disposing the removed duct?

***Answer: The contractor shall be responsible for the disposal of all materials.***

5. Will duct installation be internal or external?

***Answer: The contractor or their sub-contractor shall be responsible for the installation of duct. (If your question was in regard to duct insulation being installed internal or external, refer to specifications, Section 23 07 13 for duct insulation requirements.)***

6. Is there pre-read on balancer or just final read?

***Answer: A pre-test of the equipment is not required.***

7. There are (2) heat pumps on the drawing – are they both being replaced?

***Answer: Please review the bid documents, there are no heat pumps on the drawings.***

8. Please provide roofers information since note calls for original roofer. If we can use anyone please let me know. Please provide this information:

EMPLOY ORIGINAL INSTALLING ROOFING CONTRACTOR TO PERFORM ROOFING WORK ON THIS PROJECT, TO ENSURE WORK IS PERFORMED IN ACCORDANCE WITH ROOFING SYSTEM MANUFACTURER'S REQUIREMENTS AND SO AS NOT TO VOID EXISTING ROOFING SYSTEM WARRANTY.

***Answer: The installing roofing contractor was Knickerbocker Roofing and Paving Company (Harvey, IL). The roof is currently under warranty – Sika Sarnafil. Any roofing contractor that is certified to install Sika Sarnafil roofing can perform the work in order to maintain the existing warrantee.***

9. Note on drawing M320 states that we should employ the original installing roofing contractor to perform roofing work on this project. Can you verify that this is required? Can you provide the installers name and system required?

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***Answer: See answer to Question 8.***

10. As per the bid requirements, it is stated that all bidders and subcontractors must participate in apprenticeship and training programs approved by the United States Department of Labor Bureau of Apprenticeship and Training. These programs should be in the same trade in which the firm will be performing work under the contract. Additionally, bidders are required to be a member of an approved apprenticeship program prior to bid opening on the project.

Could you kindly provide information on whether your facility offers apprenticeship and training programs that align with these requirements? We are keen on ensuring compliance with the stipulated criteria and would appreciate any details or guidance you can offer regarding participation in such programs at your facility.

***Answer: JJC does not provide the apprenticeship and training requirements. The awarded contractor must be signatory to the appropriate labor affiliations to meet the requirements of the PLA.***

**End of Addendum #2**

**SECTION 23 07 13  
DUCT INSULATION**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Duct insulation.

**1.02 REFERENCE STANDARDS**

- A. ASTM C518 - Standard Test Method for Steady-State Thermal Transmission Properties by Means of the Heat Flow Meter Apparatus; 2021.
- B. ASTM C553 - Standard Specification for Mineral Fiber Blanket Thermal Insulation for Commercial and Industrial Applications; 2013 (Reapproved 2019).
- C. ASTM C916 - Standard Specification for Adhesives for Duct Thermal Insulation; 2020.
- D. ASTM C1071 - Standard Specification for Fibrous Glass Duct Lining Insulation (Thermal and Sound Absorbing Material); 2019.
- E. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials; 2023c.
- F. ASTM E96/E96M - Standard Test Methods for Water Vapor Transmission of Materials; 2016.
- G. SMACNA (DCS) - HVAC Duct Construction Standards Metal and Flexible; 2005 (Revised 2009).
- H. UL 723 - Standard for Test for Surface Burning Characteristics of Building Materials; Current Edition, Including All Revisions.

**1.03 SUBMITTALS**

- A. Product Data: Provide product description, thermal characteristics, list of materials and thickness for each service, and locations.

**1.04 QUALITY ASSURANCE**

- A. Manufacturer Qualifications: Company specializing in manufacturing products of the type specified in this section with not less than three years of documented experience.
- B. Applicator Qualifications: Company specializing in performing the type of work specified in this section, with minimum three years of experience and approved by manufacturer.

**1.05 DELIVERY, STORAGE, AND HANDLING**

- A. Accept materials on site in original factory packaging, labelled with manufacturer's identification, including product density and thickness.
- B. Protect insulation from weather and construction traffic, dirt, water, chemical, and mechanical damage, by storing in original wrapping.

**1.06 FIELD CONDITIONS**

- A. Maintain ambient temperatures and conditions required by manufacturers of adhesives, mastics, and insulation cements.

B. Maintain temperature during and after installation for minimum period of 24 hours.

## **PART 2 PRODUCTS**

### **2.01 REGULATORY REQUIREMENTS**

A. Surface Burning Characteristics: Flame spread index/Smoke developed index of 25/50, maximum, when tested in accordance with ASTM E84 or UL 723.

### **2.02 GLASS FIBER, FLEXIBLE**

A. Manufacturer:

1. Knauf Insulation.:
2. Johns Manville.:
3. Owens Corning Corporation.:
4. CertainTeed Corporation.:

B. Insulation: ASTM C553; flexible, noncombustible blanket.

1. 'K' value: 0.25 at 75 degrees F, when tested in accordance with ASTM C518.
2. Minimum installed R-Value: 6.0.
3. Maximum Service Temperature: 450 degrees F.
4. Maximum Water Vapor Absorption: 5.0 percent by weight.

C. Vapor Barrier Jacket:

1. Kraft paper with glass fiber yarn and bonded to aluminized film.
2. Moisture Vapor Permeability: 0.02 perm inch, when tested in accordance with ASTM E96/E96M.
3. Secure with pressure sensitive tape.

D. Vapor Barrier Tape:

1. Kraft paper reinforced with glass fiber yarn and bonded to aluminized film, with pressure sensitive rubber based adhesive.

E. Tie Wire: Annealed steel, 16 gage, 0.0508 inch diameter.

## **PART 3 EXECUTION**

### **3.01 EXAMINATION**

A. Verify that ducts have been tested before applying insulation materials.

B. Verify that surfaces are clean, foreign material removed, and dry.

### **3.02 INSTALLATION**

A. Install in accordance with manufacturer's instructions.

B. Install in accordance with NAIMA National Insulation Standards.

C. Insulated ducts conveying air below ambient temperature:

1. Provide insulation with vapor barrier jackets.
2. Finish with tape and vapor barrier jacket.
3. Continue insulation through walls, sleeves, hangers, and other duct penetrations.

4. Insulate entire system including fittings, joints, flanges, fire dampers, flexible connections, and expansion joints.
- D. Insulated ducts conveying air above ambient temperature:
1. Insulate fittings and joints. Where service access is required, bevel and seal ends of insulation.
- E. External Duct Insulation Application:
1. Secure insulation with vapor barrier with wires and seal jacket joints with vapor barrier adhesive or tape to match jacket.
  2. Secure insulation without vapor barrier with staples, tape, or wires.
  3. Install without sag on underside of duct. Use adhesive or mechanical fasteners where necessary to prevent sagging. Lift duct off trapeze hangers and insert spacers.
  4. Seal vapor barrier penetrations by mechanical fasteners with vapor barrier adhesive.
  5. Stop and point insulation around access doors and damper operators to allow operation without disturbing wrapping.

### 3.03 SCHEDULES

- A. Exhaust Ducts withing 10ft of the exterior:
1. Flexible Glass Fiber Duct Insulation: 2 inches thick.
- B. Outside Air Intake Ducts:
1. Flexible Glass Fiber Duct Insulation: 2 inches thick.
- C. Supply Ducts:
1. Flexible Glass Fiber Duct Insulation: 2 inches thick.
- D. **Supply Ducts/Terminal Units Reheat Coils:**
1. **Flexible Glass Fiber Duct Insulation: 2 inches thick. [Addendum No. 2]**

END OF SECTION

**SECTION 28 46 00  
FIRE DETECTION AND ALARM**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Replacement and removal of existing fire alarm system components, wiring, and conduit indicated.

**1.02 REFERENCE STANDARDS**

- A. 36 CFR 1191 - Americans with Disabilities Act (ADA) Accessibility Guidelines for Buildings and Facilities; Architectural Barriers Act (ABA) Accessibility Guidelines; current edition.
- B. ADA Standards - Americans with Disabilities Act (ADA) Standards for Accessible Design; 2010.
- C. IEEE C62.41.2 - IEEE Recommended Practice on Characterization of Surges in Low-Voltage (1000 V and less) AC Power Circuits; 2002 (Corrigendum 2012).

**1.03 MAINTENANCE**

- A. Include operating instructions, and maintenance and repair procedures.
- B. Provide a one year full maintenance and inspection service from date of Final Acceptance. Conform to maintenance and inspection service requirements of NFPA 72.

**1.04 EXISTING CONDITIONS**

- A. ***The existing fire alarm system control panel is an Edwards EST3 Addressible System.***
  - 1. ***The existing control panel will be modified and expanded to feed new devices as shown on the floor plans.***
  - 2. ***Provide new equipment compatible with existing devices and system at site. [Addendum No. 2]***

**PART 2 PRODUCTS**

**2.01 FIRE ALARM SYSTEM**

- A. Fire Alarm System: Provide modifications and extensions to the existing automatic fire detection and alarm system:
  - 1. Provide all components necessary, regardless of whether shown in the contract documents or not.
  - 2. Protected Premises: Areas denoted on the drawings.
  - 3. Comply with the following; where requirements conflict, order of precedence of requirements is as listed:
    - a. ADA Standards.
    - b. The requirements of the local authority having jurisdiction, which is City of Joliet.
    - c. Applicable local codes.
    - d. The contract documents (drawings and specifications).
    - e. NFPA 72; where the word "should" is used consider that provision mandatory; where conflicts between requirements require deviation from NFPA 72, identify deviations clearly on design documents.

4. Evacuation Alarm: Single smoke zone; general evacuation of entire premises.
  5. Zoning: Point addressable system with initiating devices being individually zoned.
  6. Existing Control Panel: Make modifications to the existing panel:
- B. Supervising Stations and Fire Department Connections:
1. Existing connections to remain.
- C. Circuits:
1. Initiating Device Circuits (IDC): Class B, Style A.
  2. Signaling Line Circuits (SLC) Within Single Building: Class B, Style 0.5.
  3. Notification Appliance Circuits (NAC): Class B, Style W.
  4. All cabling shall be plenum rated.
- D. Spare Capacity:
1. Initiating Device Circuits: Minimum 25 percent spare capacity.
  2. Notification Appliance Circuits: Minimum 25 percent spare capacity.
  3. Master Control Unit: Capable of handling all circuits utilized to capacity without requiring additional components other than plug-in control modules.
- E. Power Sources:
1. Primary: Dedicated branch circuits of the facility power distribution system.
  2. Secondary: Storage batteries.
  3. Capacity: Sufficient to operate entire system for period specified by NFPA 72.
  4. Each Computer System: Provide uninterruptible power supply (UPS).

## **2.02 EXISTING COMPONENTS**

- A. Clearly label components that are "Not In Service."
- B. Remove unused existing components and materials from site and dispose of properly.

## **2.03 FIRE SAFETY SYSTEMS INTERFACES**

- A. Alarm: Provide alarm initiation in accordance with NFPA 72 for the following:
1. Duct smoke detectors.
- B. HVAC:
1. Duct Smoke Detectors: Close dampers indicated; shut down air handlers indicated.

## **2.04 COMPONENTS**

- A. General:
1. Provide legible, permanent labels for each control device, using identification used in operation and maintenance data.
- B. Fire Alarm Power Supplies, Initiating Devices, and Notification Appliances: Analog, addressable type; listed by Underwriters Laboratories as suitable for the purpose intended.
- C. Initiating Devices:
1. Duct Mounted Smoke Detector: Addressable/Analog photoelectric type, duct sampling tubes extending width of duct, in duct-mounted housing compatible with control panel and air stream velocities. Fan control shall not be hard wired through duct detector. Fan shutdown shall be completed by fan shutdown relay.



- D. Zone Module Interface:
  - 1. Single zone interface module shall provide an addressable input interface to the control panel for monitoring normally open contact devices. Mount inside NEMA 1 enclosure within 10 feet of first monitored device of zone. Compatible with control panel.
- E. Control Relay Module:
  - 1. Programmable control relay shall be located within 10' of device to be controlled. Temporal sound pattern. Audio shall be synchronized.
- F. Circuit Conductors: Copper or optical fiber; provide 200 feet extra; color code and label.
- G. Surge Protection: In accordance with IEEE C62.41.2 category B combination waveform and NFPA 70; except for optical fiber conductors.
  - 1. Signaling Line Circuits: Provide surge protection at each point where circuit exits or enters a building, rated to protect applicable equipment.

## **PART 3 EXECUTION**

### **3.01 EXAMINATION AND PREPARATION**

- A. Field inspect existing fire alarm system installation to determine all required interface components necessary for fire alarm system replacement and relocation.
- B. Perform repair work on existing system to eliminate trouble conditions.

### **3.02 INSTALLATION**

- A. Install in accordance with applicable codes, NFPA 72, NFPA 70, and the contract documents.
- B. Install fire alarm system in accordance with manufacturer's instructions.
  - 1. Mount end-of-line device in separate box adjacent to sprinkler flow switch.
  - 2. Make conduit and wiring connections to fire suppression system at fire sprinkler riser and elevator tamper switches and duct smoke detectors.
  - 3. Install manual station with operating handle 4 feet above floor. Install horn strobe units 7.5 feet above floor.
- C. Conceal all wiring, conduit, boxes, and supports where installed in finished areas.
- D. Obtain Owner's approval of locations of devices, before installation.
- E. Install instruction cards and labels.

### **3.03 INSPECTION AND TESTING FOR COMPLETION**

- A. Perform field inspection and testing of fire alarm system.
- B. Notify Owner 7 days prior to beginning completion inspections and tests.
- C. Notify authorities having jurisdiction and comply with their requirements for scheduling inspections and tests and for observation by their personnel.
- D. Provide the services of the installer's supervisor or person with equivalent qualifications to supervise inspection and testing, correction, and adjustments.
- E. Prepare for testing by ensuring that all work is complete and correct; perform preliminary tests as required.

- F. Provide all tools, software, and supplies required to accomplish inspection and testing.
- G. Perform inspection and testing in accordance with NFPA 72 and requirements of local authorities; document each inspection and test.
  - 1. Include description of testing and results in test report.
  - 2. Perform 100 percent acceptance test to NFPA 72 standards on system.
- H. Correct defective work, adjust for proper operation, and retest until entire system complies with contract documents.

### **3.04 MANUFACTURER'S FIELD SERVICES**

- A. Include services of technician to supervise installation, adjustments, final connections, and system testing.

### **3.05 CLOSEOUT**

- A. Closeout Demonstration: Demonstrate proper operation of all functions to Owner.
  - 1. Be prepared to conduct any of the required tests.
  - 2. Have at least one copy of operation and maintenance data, preliminary copy of project record drawings, input/output matrix, and operator instruction chart(s) available during demonstration.
  - 3. Have authorized technical representative of control unit manufacturer present during demonstration.
  - 4. Demonstration may be combined with inspection and testing required by authority having jurisdiction; notify authority having jurisdiction in time to schedule demonstration.
  - 5. Repeat demonstration until successful.
- B. Substantial Completion of the project cannot be achieved until inspection and testing is successful and:
  - 1. Approved operating and maintenance data has been delivered.
  - 2. Spare parts, extra materials, and tools have been delivered.
  - 3. All aspects of operation have been demonstrated to Owner.
  - 4. Final acceptance of the fire alarm system has been given by authorities having jurisdiction.
- C. Perform post-occupancy instruction within 3 months after Substantial Completion.

### **3.06 MAINTENANCE**

- A. Perform routine inspection, testing, and preventive maintenance required by NFPA 72, including:
  - 1. Maintenance of fire safety interface and supervisory devices connected to fire alarm system.
  - 2. Repairs required, unless due to improper use, accidents, or negligence beyond the control of the maintenance contractor.
  - 3. Record keeping required by NFPA 72 and authorities having jurisdiction.
- B. Provide trouble call-back service upon notification by Owner:
  - 1. Provide on-site response within 2 hours of notification.
  - 2. Include allowance for call-back service during normal working hours at no extra cost to Owner.
  - 3. Owner will pay for call-back service outside of normal working hours on an hourly basis, based on actual time spent at site and not including travel time; include hourly rate and definition of normal working hours in maintenance contract.

- C. Provide a complete description of preventive maintenance, systematic examination, adjustment, cleaning, inspection, and testing, with a detailed schedule.
- D. Maintain a log at each fire alarm control unit, listing the date and time of each inspection and call-back visit, the condition of the system, nature of the trouble, correction performed, and parts replaced. Submit duplicate of each log entry to Owner's representative upon completion of site visit.
- E. Comply with Owner's requirements for access to facility and security.

**END OF SECTION**