

<b>AMENDMENT OF SOLICITATION/MODIFICATION OF CONTRACT</b>			1. CONTRACT ID CODE	PAGE OF PAGES 1   13
2. AMENDMENT/MODIFICATION NO. 0001	3. EFFECTIVE DATE 20-Dec-2024	4. REQUISITION/PURCHASE REQ. NO. W13G86429848020001		5. PROJECT NO.(If applicable)
6. ISSUED BY U S ARMY ENGR DISTRICT, NEW ENGLAND 696 VIRGINIA RD CONCORD MA 01742-2751	CODE W912WJ	7. ADMINISTERED BY (If other than item 6)  <b>See Item 6</b>		
8. NAME AND ADDRESS OF CONTRACTOR (No., Street, County, State and Zip Code)		X	9A. AMENDMENT OF SOLICITATION NO. W912WJ25Q0024	
		X	9B. DATED (SEE ITEM 11) 12-Dec-2024	
			10A. MOD. OF CONTRACT/ORDER NO.	
			10B. DATED (SEE ITEM 13)	
CODE	FACILITY CODE			
11. THIS ITEM ONLY APPLIES TO AMENDMENTS OF SOLICITATIONS				
<input checked="" type="checkbox"/> The above numbered solicitation is amended as set forth in Item 14. The hour and date specified for receipt of Offer <input checked="" type="checkbox"/> is extended, <input type="checkbox"/> is not extended. Offer must acknowledge receipt of this amendment prior to the hour and date specified in the solicitation or as amended by one of the following methods: (a) By completing Items 8 and 15, and returning <u>1</u> copies of the amendment; (b) By acknowledging receipt of this amendment on each copy of the offer submitted; or (c) By separate letter or telegram which includes a reference to the solicitation and amendment numbers. FAILURE OF YOUR ACKNOWLEDGMENT TO BE RECEIVED AT THE PLACE DESIGNATED FOR THE RECEIPT OF OFFERS PRIOR TO THE HOUR AND DATE SPECIFIED MAY RESULT IN REJECTION OF YOUR OFFER. If by virtue of this amendment you desire to change an offer already submitted, such change may be made by telegram or letter, provided each telegram or letter makes reference to the solicitation and this amendment, and is received prior to the opening hour and date specified.				
12. ACCOUNTING AND APPROPRIATION DATA (If required)				
13. THIS ITEM APPLIES ONLY TO MODIFICATIONS OF CONTRACT ORDERS. IT MODIFIES THE CONTRACT/ORDER NO. AS DESCRIBED IN ITEM 14.				
A. THIS CHANGE ORDER IS ISSUED PURSUANT TO: (Specify authority) THE CHANGES SET FORTH IN ITEM 14 ARE MADE IN THE CONTRACT ORDER NO. IN ITEM 10A.				
B. THE ABOVE NUMBERED CONTRACT/ORDER IS MODIFIED TO REFLECT THE ADMINISTRATIVE CHANGES (such as changes in paying office, appropriation date, etc.) SET FORTH IN ITEM 14, PURSUANT TO THE AUTHORITY OF FAR 43.103(B).				
C. THIS SUPPLEMENTAL AGREEMENT IS ENTERED INTO PURSUANT TO AUTHORITY OF:				
D. OTHER (Specify type of modification and authority)				
E. IMPORTANT: Contractor <input type="checkbox"/> is not, <input type="checkbox"/> is required to sign this document and return _____ copies to the issuing office.				
14. DESCRIPTION OF AMENDMENT/MODIFICATION (Organized by UCF section headings, including solicitation/contract subject matter where feasible.)  Amendment is necessary to provide a response to a question from industry and to revise the Statement of Work.  Closing is extended until January 7, 2025 at 5:00 PM Eastern.  All other terms and conditions remain unchanged.				
Except as provided herein, all terms and conditions of the document referenced in Item 9A or 10A, as heretofore changed, remains unchanged and in full force and effect.				
15A. NAME AND TITLE OF SIGNER (Type or print)		16A. NAME AND TITLE OF CONTRACTING OFFICER (Type or print) JENNIFER M SAMELA / ADDED BY UPASS TEL: 978-318-8324 EMAIL: jennifer.m.samela@usace.army.mil		
15B. CONTRACTOR/OFFEROR  _____ (Signature of person authorized to sign)	15C. DATE SIGNED	16B. UNITED STATES OF AMERICA  BY _____ (Signature of Contracting Officer)	16C. DATE SIGNED  20-Dec-2024	

## SECTION SF 30 BLOCK 14 CONTINUATION PAGE

**SUMMARY OF CHANGES**

## SECTION SF 30 - BLOCK 14 CONTINUATION PAGE

The following have been added by full text:

REQUEST FOR INFORMATION

QUESTION 1: The existing duct work that goes from the mechanical room to the inside of the space will not support a 2.5 ton system. Is the intent for the awarded Contractor to upgrade all duct work in the mechanical room and attic to support a 2.5 ton system?

RESPONSE 1: Please refer to the revised Statement of Work. Revisions have been made to include replacement of the existing duct work in the HVAC (mechanical) room and the attic to support the 2.5 ton system.

## SECTION A - SOLICITATION/CONTRACT FORM

The required response date/time has changed from 24-Dec-2024 05:00 PM to 07-Jan-2025 05:00 PM.

## SECTION C - DESCRIPTIONS AND SPECIFICATIONS

The following have been modified:

STATEMENT OF WORK

**HVAC SYSTEM UPGRADES  
U.S. ARMY CORPS OF ENGINEERS  
HODGES VILLAGE DAM  
OXFORD, MA  
STATEMENT OF WORK**

**REVISED**

**I. GENERAL****1. Summary:**

The Contractor shall provide all labor, materials, and equipment necessary to install a new air source heat pump, air handler, **ductwork, intake grille, supply diffuser grilles**, hydronic heat coil, thermostat, and refrigerant line sets that is compatible with existing oil boiler in the Hodges Village Dam conference building. All work shall be completed in accordance with the following Statement of Work.

See separately attached informational photos for more information.

**2. Location:**

Hodges Village Dam is located at 30 Howarth Rd. in Oxford, MA 01540.

3. Site Visits and Requests for Information:

Site visits are strongly recommended to gauge the full scope of work and provide an accurate quote. No extra payment will be considered for perceived additional work caused by unfamiliarity with the site conditions and requirements. Contact the Technical Point of Contact (TPOC) to arrange a site visit. To arrange a site visit, contact the TPOC Jared Gagnon: (508) 635-7545 (cell) or via email at [jared.s.gagnon@usace.army.mil](mailto:jared.s.gagnon@usace.army.mil).

4. Schedule:

The period of performance shall be 90 days from contract award. Work shall be performed Monday through Friday between the hours of 7:00 AM and 3:30 PM unless otherwise approved by the TPOC. Any proposed changes to an approved schedule must be submitted to the TPOC in writing and are not finalized until approved. No work shall be done on weekends or Government holidays.

All preconstruction submittals shall be submitted within 21 days of contract award. The Government reserves up to 21 days for review and acceptance on each submittal/resubmittal from the date of receipt. If revisions are necessary to the submittals, the Contractor shall make such revisions and shall be resubmitted to the Government in an acceptable form within 14 days of the Government's response, unless additional time is granted by the Government in writing. No field work may proceed prior to the acceptance of preconstruction submittals.

5. Safety Requirements:

- a. General: All work shall be conducted in accordance with the U.S. Army Corps of Engineers (USACE) Safety and Occupational Health Requirements (EM 385-1-1, most recent edition), and all applicable Occupational Safety and Health Administration (OSHA), federal, state, and local safety and health requirements. A copy of EM 385-1-1 can be accessed electronically at the following link: <https://www.publications.usace.army.mil/Portals/76/EM%20385-1-1%20EFFECTIVE%2015March2024.pdf>

Project staff reserve the right to cease work at any time should the safety of employees, Contractors, and/or the public become jeopardized.

- b. Accident Prevention Plan (APP): The Contractor shall prepare a site-specific Accident Prevention Plan. The APP must be written by a Competent Person (CP) and document the specific work processes, equipment, materials to be used, hazards and applicable control measures.

The mandatory ENG Form 6293 (Accident Prevention Plan Worksheet) must be submitted and accepted prior to beginning on site work:

[https://www.publications.usace.army.mil/Portals/76/Eng\\_Form\\_6293\\_2023Aug31.pdf](https://www.publications.usace.army.mil/Portals/76/Eng_Form_6293_2023Aug31.pdf)

A preparatory meeting shall be conducted by the Prime Contractor to discuss the

APP contents with all effected onsite employees. The Prime Contractor is responsible for informing the subcontractors of the safety provisions under the terms of the contract, the penalties for noncompliance, and inspecting subcontractor operations to ensure that accident prevention responsibilities are being carried out.

Daily safety meetings shall be held and documented. Records shall be available to the TPOC upon request.

- c. Activity Hazard Analysis (AHA): An AHA shall be submitted and accepted for each definable feature of work (DFOW) in accordance with EM 385-1-1, Chapter 2-6. A DFOW is defined as any task, which is separate and distinct from other tasks, has separate control requirements, or is identified as different trades or disciplines. The AHA shall be continuously reviewed and revised to address changing site conditions as appropriate.

For a non-mandatory formatted outline of an AHA, see ENG Form 6206 (Activity Hazard Analysis)

[https://www.publications.usace.army.mil/Portals/76/Eng\\_Form\\_6206\\_2023Aug24.pdf](https://www.publications.usace.army.mil/Portals/76/Eng_Form_6206_2023Aug24.pdf)

- d. Site Safety and Health Officer (SSHO) Requirements: Contractor shall employ a minimum of one person to function as a Level 3, SSHO. A Level 3 SSHO is a designated Qualified Person (QP) or Competent Person (CP) with Safety and Occupational Health (SOH) responsibility that meets the requirements of EM 385-1-1, Chapter 2-3.b and 2-4.b.

Level 3 SSHOs must have training, knowledge, and/or experience identifying hazards and implementing controls for the work being performed.

The SSHO shall be present at the project site and be responsible for overseeing the implementation of the Prime Contractor's SOH program. Contractor shall designate all SSHOs on a mandatory ENG Form 6282 (Site Safety and Health Officer Designation Letter):

[https://www.publications.usace.army.mil/Portals/76/Eng\\_Form\\_6282\\_2023Aug28.pdf](https://www.publications.usace.army.mil/Portals/76/Eng_Form_6282_2023Aug28.pdf)

- e. First-Aid and CPR Personnel Requirements: For shifts with multiple employees, provide at least two employees that are certified to administer First Aid and CPR. When employees work alone, they must be certified in First Aid and be provided an effective means of communication to call for assistance in the event of an emergency. Minimum First Aid and CPR qualifications are outlined in EM 385-1-1, Chapter 3-3.
- f. Additional Personnel Requirements: Other Competent Person (CP) or Qualified Persons (QP) may be required per EM 385-1-1 and/or other sections of this Statement of Work, based on the definable features of work for this project.

- g. **Accident Reporting:** All accidents and near misses shall be investigated by the Contractor and reported to the TPOC in accordance with EM 385-1-1, Table 2-1.

The mandatory ENG Form 3394 shall be completed and submitted to the TPOC within seven (7) days of an incident:

[https://www.publications.usace.army.mil/Portals/76/Publications/EngineerForms/Eng\\_Form\\_3394\\_2021Aug.pdf](https://www.publications.usace.army.mil/Portals/76/Publications/EngineerForms/Eng_Form_3394_2021Aug.pdf)

- h. **Employee Exposure Data:** The Contractor shall electronically report total employee work hours (including subcontractors) to the TPOC by close of business on the 10<sup>th</sup> calendar day of the following month.

6. Electrical:

- a. General: All electrical work shall comply All electrical work shall comply with EM 385-1-1 (Sections 11 & 12) and applicable National Electrical Safety Code (NESCC), National Electric Code (NEC), National Fire Protection Association (NFPA), OSHA and USCG regulations. In the circumstance there is a discrepancy between the codes and regulations listed above, the most stringent shall apply.
- b. Qualified Person: Electrical work shall be performed by a Qualified Person (QP) with verifiable credentials who are familiar with applicable code requirements. Verifiable credentials consist of State, National and/or Local Certifications or Licenses that a Master or Journeyman Electrician may hold, depending on the work being performed, and should be identified in the appropriate AHA. Journeyman/Apprentice ration shall be in accordance with State, Local and Federal requirements applicable to where the work is being performed.
- c. All electrical wiring and equipment shall be a type listed by a nationally recognized testing laboratory for the specific application for which it is to be used. Appropriate PPE will be worn and/or utilized at all times and adequately match the level of associated risk.
- d. Emergency Procedures and Training: Employees exposed to shock hazard and those employees responsible for taking action in case of emergency shall be trained in accordance with EM 385-1-1 Section 03.A, OSHA 29 CFR 1910.151, and NEPA 70E 110.2c. The training shall include methods to release of victims from contact with exposed energized electrical conductors or circuit parts. Employees shall be regularly instructed in methods of first aid and emergency procedures, such as approved methods of resuscitation.
- e. All equipment and circuits to be worked on shall be de-energized before work is started. Personnel shall be protected by a Hazardous Energy Control Program (HECP) and procedures in accordance with EM 385-1-1, Section 12. Positive means shall be provided for rendering controls or devices inoperative while repairs or adjustments are being made to the machines they control.

- f. If work MUST be performed on an energized system, then the employer must first demonstrate that de-energizing introduces additional or increased hazards or is infeasible due to equipment design or operational limitations (i.e., testing, troubleshooting, etc.).
- g. Energized work may never be performed without prior authorization. Once it has been determined that equipment must be worked on in an energized condition, an energized work permit shall be submitted to the TPOC for acceptance. > See NFPA 70E and EM 385-1-1, Section 11.A.02.c for permit requirements.

7. Preconstruction Conference:

Prior to the start of any work, the TPOC will schedule and conduct a "Preconstruction Conference". The Contractor's Project Manager and Quality Control Personnel shall be physically present at this meeting. The Contractor shall directly oversee all work on the project and the Project Manager and Quality Control Personnel shall have the authority to act on behalf of the Contractor. This conference will be held at the time and location agreeable to the Government and Contractor. No work may be performed under this contract prior to this conference. The purpose of the conference is to enable the TPOC to outline the procedures that will be followed by the Government in its administration of the contract, and to discuss the performance that will be expected from the Contractor. This conference will allow the Contractor an opportunity to ask questions about the Government's administration and inspection of contract work or obtain other pertinent information that might be required. At the Preconstruction Conference the Contractor shall provide the name of the Project Superintendent with a telephone number for project coordination.

The following is a general list of items for discussion during the preconstruction conference:

- Authority of the TPOC
- Contractor's Safety Program (including sub-contractors)
- Accident Prevention Plan and Activity Hazard Analysis
- Daily Safety Meetings (Documented on NED Form 251)
- Accident Reporting (ENG Form 3394)
- Correspondence, Communication and Administrative Procedures
- Invoice and payment

8. Permits:

The Contractor shall, without additional expense to the Government, be responsible for obtaining any necessary licenses, permits, and letters of certification. The Contractor shall comply with any applicable federal, state, county, and municipal laws, codes, and regulations in connection with the performance of the work specified under this contract.

9. Security:

The Contractor will comply with all established security policies at the project. Due to periods of heightened security that may affect the access to the areas covered under this contract, areas may be subject to periodic closures, which in turn may reduce or inhibit the Contractor's ability to access certain areas. During periods of heightened security, the Government reserves the right, at any time, to close any property or portion of property and reschedule and/or cancel any subsequent work in an area. The Contractor shall be given at least 24-hour notice of any such closure.

10. Payment:

After final inspection and acceptance by the Government, the Contractor must submit an invoice to the Technical Point of Contact. The invoice shall include the invoice date, contract number, dates of service, description of work, quantities, process, and total amount due per line item. The invoice must also include the company letterhead, and this must match the data that is registered in the System for Award Management (SAM) registry. For jobs greater than 30 days the contractor may request multiple payments.

Invoice/Forms shall be mailed to:

U.S. Army Corps of Engineers

48 Old Oxford Rd.

Charlton, MA 01507

or emailed to [Jared.s.gagon@usace.army.mil](mailto:Jared.s.gagon@usace.army.mil)

11. Damage to Government and Private Property:

The Contractor shall be responsible for restoring any Government facilities or structures damaged outside the scope of this contract because of the firm's operation. The Contractor shall also be responsible for any damage to private property or injury to any person as a result of the firm's operations. The Contractor shall notify the TPOC immediately of damage to Government and private property and injury to any person resulting from the firms' operation.

12. Point of Contact Requirements:

The Contractor shall provide to the TPOC a telephone number and a point of contact for discussion of any contractual matters.

13. Contractor's Personnel:

- a. **Minimum Personnel Requirements** - The Contractor shall provide an adequate number of fully qualified personnel to perform the specified work properly and efficiently within the time limits specified. The Contractor shall provide a list of the names and contact phone numbers for all employees prior to them working on Government Property.

**Note:** At least one (1) of the Contractor employees on site shall be able to communicate effectively and efficiently with project staff.

- b. **Employee Conduct** - The Contractor shall be responsible for seeing that the Contractor's employees strictly comply with Code of Federal Regulations Title 36,

Chapter III, Part 327, and all federal, state, and municipal laws. Any personnel activity, which, in the opinion of the Government, is deemed detrimental to the performance of the contract may result in the removal of Contractor employee/employees.

Examples of unbecoming actions or conduct include but are not limited to the following:

- i. Cursing, harassment, or discrimination of and/or unwarranted physical contact with visitors, USACE personnel, or other contractors
  - ii. Recurring written and/or verbal complaints from visitors, USACE personnel, or other Contractors.
  - iii. Unsafe operation of vehicles while on USACE property.
- c. Removal of Contractor's Employees - The TPOC may require the Contractor to immediately remove from the work site any employee of the Contractor or subcontractor, who, in the opinion of the TPOC, who endangers persons or property, or whose physical or mental condition is such that it would impair the employee's ability to satisfactorily perform assigned work. Notification to the Contractor shall be promptly made in writing if time and circumstances permit. Otherwise, notification shall be verbal or by telephone, and shall be confirmed in writing as soon as possible. No such removal, however, will reduce the Contractor's obligation to perform all work required under this contract, and immediate replacement will be made as required. This requirement shall not be made the basis of any claim for compensation or damages against the United States or any of its officers or agents.

## II. TECHNICAL

### 1. Submittals:

Although the Government reviews submissions required by this statement of work, it is emphasized that the Contractor's work must be completed using proper internal controls and review procedures. The Government reserves up to 21 days for review and acceptance on each submittal/resubmittal from the date of receipt. If revisions are necessary to the submittals, the Contractor shall make such revisions and shall resubmit to the Government in acceptable form within 14 days of the Government's response, unless additional time is granted by the Government in writing.

The documents identified below must be prepared in accordance with the applicable standards, submitted to the TPOC for review and accepted by the Government.

- a. Preconstruction Submittals: Submitted within 21 days of Contract Award. Submittals must be accepted before the commencement of any field work.
  - ENG Form 6293, Accident Prevention Plan Worksheet
  - Activity Hazard Analysis
  - ENG Form 6282 (Site Safety and Health Officer Designation Letter)



- Valid Massachusetts Electrician License
- First Aid/CPR Certification
- Environmental Protection Agency (EPA) 608 certification
- Product specification sheets (Prior to ordering)
- Manufacturer Warranty for any products and hardware

b. Post Construction Submittals:

- Provide documentation to TPOC that refrigerant from existing equipment was legally disposed of at an EPA certified facility

2. Clean Up:

The Contractor shall practice good housekeeping to maintain a safe job site. The Contractor shall keep the work area, including any storage areas, free from the accumulation of waste materials. Upon completing work in an area, the Contractor shall remove any tools, equipment, and materials that are not the property of the Government. Upon completion of work, the Contractor shall clean up the job site to the satisfaction of the Government.

3. Government Resources:

The Contractor is responsible for providing all materials to complete the project. Unless specified in the contract, the Government will not provide any equipment, telephone services. The government will supply any electricity necessary for the project work from points of existing outlets when available. The contractor shall carefully conserve the use of electricity provided.

4. Omissions:

This contract may not cover all specified activities, steps, and procedures required to supply the contract product. In case of omission, the normal industry, state, or federal standards, practices, specifications, and/or guides shall prevail. In no instance shall an omission be reason to produce less than an acceptable product.

5. Quality Assurance:

The Contractor is responsible for the quality control of the contract work. The Government has the right to inspect and test all items called for by the contract, to the extent practicable at all times and at all places during the term of the contract.

6. Other Contracts:

The Government may undertake or award other contracts for additional work not related to this contract, and the Contractor shall fully cooperate with other Contractors and Government employees. The Contractor shall not commit or permit any act, which will interfere with the performance of work by another Contractor, or by Government employees.

7. Environmental Protection:

Containers for excess and/ or waste materials, rubbish, etc. shall be provided by the

Contractor at the site, and the site will be inspected/ cleaned on a daily basis. No burning is permissible. Water, air, and land resources shall not be adversely impacted during the course of the work. Contractor will take necessary steps to ensure all federal, state, and local environmental regulatory requirements are met.

8. Sustainability:

Under the Comprehensive Procurement Guidelines (CPG) program, the Environmental Protection Agency (EPA) designates products that are or can be made with recovered materials and recommends practices for buying these products. Any designated product that is being offered or supplied under this contract shall meet the minimum recommended content levels as identified under the CPG program. Visit <https://www.epa.gov/smm/comprehensive-procurement-guideline-cpg-program> for a complete list of designated products and the associated recommended contents levels. Offerors must be able to demonstrate that each offered products meets minimum content levels upon request.

As required in clause 52.223-23 Sustainable Products and Services, <https://www.acquisition.gov/far/52.223-23> the Contractor shall only provide products that earn the ENERGY STAR label and meet ENERGY STAR specifications for energy efficiency. The Contractor is encouraged to visit <http://www.energystar.gov> for complete product specifications and updated lists of qualifying products.

Furthermore, the contractor should also meet the BioPreferred Program requirements. The United States Department of Agriculture (USDA) designates certain bio-based products for federal procurement and specifies minimum bio-based content levels for those products. Any designated product that is being offered or supplied under this contract shall meet USDA BioPreferred's minimum bio-based content level. Visit the BioPreferred web site.

9. Receiving and Storing Materials:

The Contractor is responsible for protecting any stored material until it is placed in service. The Contractor is responsible for receiving and unloading of delivered goods. Government employees will not receive material or supplies for the Contractor and will not be responsible for damage to Contractor equipment or material.

10. Existing Conditions:

The Hodges Village Dam conference building currently has three sources for heating and one for air conditioning. One heat source is provided by slab floor heating, one is provided by the air handlers hydronic heat coil in the air handler, and one is provided by forced hot water baseboard heating. These are all supplied by the existing oil boiler controlled by three separate thermostats. The current AC condenser is seized up and does not work. The air conditioning is controlled by the same thermostat that controls the hydronic heat coil in the air handler. **The air handler return consists of 12" rigid ductwork and the supply consists of 12" flexible ductwork with 6 drop ceiling diffuser grilles.** The interior space of the conference building is approximately 1,312 square feet. See below and informational photos in separate document for more information on existing equipment.

1. Existing AC Condenser
    - i. Goodman Model CKL18-1L (1.5-ton)
  2. Existing Air Handler and Hydronic Heat
    - i. Advanced Distributor Products (ADP) Multi-position 1.5-ton 3 Row Water Heat, R22, Model BCRMA12153N3, Serial Number 6004K52392
  3. Existing Oil Boiler
    - i. Crown Model Number TWZ003WCSHORTY
11. Products:
- a. Air condensing/Heat Pump and Air Handler
    - i. One (1) 2.5-ton Inverter Variable Speed Air Source Heat Pump.
    - ii. One (1) 2.5-ton multi-position air handler.
    - iii. Ultra-High Efficiency system, Seasonal Energy Efficiency Ratio (SEER2) with a rating of at least 14.3, Energy Efficiency Ratio (EER2) with a rating of at least 10.6, and Heating Seasonal Performance Factor (HSPF2) with a rating of at least 7.5.
    - iv. New heat pump and air handler must be compatible with existing oil boiler for hydronic heat (hydronic heat has separate thermostat).
    - v. Easy service access and refrigerant connections.
    - vi. Insulated refrigerant line set.
    - vii. Energy Star Rated.
    - viii. Liquid line filter drier
    - ix. Full coil protection.
    - x. Automatic pressure switch.
    - xi. Must be capable of having a wired thermostat for heating/cooling.
    - xii. New insulated rigid 14" ductwork in HVAC room, twenty-six (26) gauge steel insulated with R8 insulation.
    - xiii. New return intake grille.
    - xiv. New Insulated flexible 14" supply ductwork in attic.
    - xv. New drop ceiling diffuser grilles.
    - xvi. New electrical wiring, and liquid tight conduit in accordance with local electrical regulations.
    - xvii. Waterproof expandable foam sealant to fill any holes or voids created from construction activities.
    - xviii. Heat pump pad made from durable hard plastic.
  - b. Hydronic coil
    - i. Must be compatible with existing oil boiler and sized accordingly to fit within the new 2.5-ton multi-position air handler.
  - c. Thermostat
    - i. Shall be hard wired and not a WIFI enabled thermostat.
    - ii. Thermostat must be programmable.
    - iii. Must have heating and cooling options that work with the new heat pump.

- iv. If the current AC thermostat wiring isn't sufficient for the new heat pump, new thermostat wires will need to be ran in their place.

### III. EXECUTION:

#### 1. Demolition

- a. The Contractor shall de-energize the electrical system and follow the applicable lock out/tag out requirements.
- b. Shut off water supply and turn off oil boiler.
- c. The Contractor shall remove the existing AC condenser, air handler, wall thermostat, AC condenser pad and electrical conduit, wiring.
- d. The Contractor shall remove all existing refrigerant lines, piping, and fittings.
- e. The Contractor shall remove all insulated duct work ~~in HVAC room~~.
- f. The Contractor shall recover and legally dispose of the refrigerant from the existing equipment at an EPA certified facility by a person(s) certified by the EPA through Section 608 for this task and provide documentation to TPOC.
- g. The Contractor shall drain, remove, and legally dispose offsite the existing air conditioning condenser, air handler, duct work, refrigerant line sets, and any associated insulation, piping, fittings, and electrical wiring currently in place.

#### 2. Installation

- a. Contractor shall install all products of system to manufacturer's recommendations in conformance with state and local building codes. The Contractor's installation shall meet Energy Star Quality Installation Guidelines and following requirements:
  - i. All electrical work shall be performed by a Commonwealth of Massachusetts licensed electrician.
  - ii. Install heat pump ground pad.
  - iii. Install heat pump and wire it to existing exterior disconnect.
  - iv. Install air handler insulated duct work, and hydronic coil.
  - v. Connect hydronic coil to oil boiler.
  - vi. Install refrigerant line sets.
  - vii. All insulated refrigerant line sets between units with refrigerant shall be charged with approved refrigerant to manufacturer's recommendations.
  - viii. Seal all penetrations made and existing one for current pipes in exterior building walls with waterproof expanding foam sealant.
  - ix. Install one new programmable thermostat, with heating and cooling options, to the heat pump according to the manufacturer guidelines and in location approved by technical point of contact.
- c. Test all equipment for heating (including hydronic coil) and cooling for a minimum of 2 hours each to verify proper operation.
- d. Any issues identified during test shall be corrected and a new test performed.
- e. Provide training for control operations & system maintenance. The date and time of the training shall be coordinated with the TPOC.

- f. Although work is not specifically shown or specified, contract shall include miscellaneous items, appurtenances, devices, and materials obviously necessary for a sound, secure and complete installation.

(End of Summary of Changes)