Addendum # 1

Contract Number:   UMA 17-02  
Project Number: 1007581  
Speedtype: 157282  
Title: Hasbrouck Emergency Medium Pressure Steam Project

The attention of the bidders submitting proposals for the above subject project is called to the following addendum to the specifications and drawings. The items set forth herein, whether of omission, addition, substitution, or clarifications, are all to be included in and form a part of the proposal submitted.

The number of this Addendum ( 1 ) must be entered in the appropriate space “B. This bid includes addenda numbered (list all addenda) _____” found on Page 51-Bid Form.

Item# 1 Specification Section 232213.13 - Steam and Condensate Pre-insulated Piping, Paragraph 3.6.F and 3.6.G

The specification is being revised to update the field joint requirements. Replace paragraphs as follows:

F. Field Joints: After service pipe welding has been completed and successfully tested to the factory field service technician’s and Owner’s written sign-off of acceptance; preformed mineral wool insulation shall be stainless steel banded onto the service pipe. Upon insulating the service pipe, the closure sleeve shall be welded in place. After the air and soap tests have been successfully tested to the factory field service technician’s and Owner’s written sign-off of acceptance on the metal closure sleeve; the Installing Contractor shall insulate the sleeve with factory supplied polyurethane foam. A CANUSA SuperCase CSC – X WA wrap around joint sealing system shall be applied over the foam to completely seal the foam. This sealing system consists of the following individual layers:

1. The first layer consists of the inner sealing sleeve (WC20R) that is 23.8” wide and requires at least 2” of sealing are onto the HDPE jacket.
2. Second Sealing Layer consists of 35.43” wide CANUSA SuperSeal, “L” thickness with bimodal PE backing with closure tab. Overlap should be at least 8” in length when the sleeve is wrapped around the pipe.
Specified product shall be used on HDPE cutbacks not exceeding 19.8". Joint sealing system shall be fully tested and certified to EN 489 standards. Once this is installed, for each field joint, provide and install two additional 11.8" wide CANUSA SuperSeal layers, “L” thickness with bimodal PE backing with closure tab, each centered at either end of the prior CANUSA SuperCase CSC – X WA wrap around. Tubular products and electrofusion pressure testable joint closure systems shall not be used. This solution shall be permitted on service pipe and conduit field miters up to 8 degrees, where permitted elsewhere in this specification. An equivalent alternate manufacturer’s product shall require pre-approval in writing from the UMA project manager. The preinsulated piping manufacturer shall furnish all field joint materials. All field joints shall be completed per the Manufacturer’s written instructions.

G. Backfilling shall not begin until both the moisture test documentation and the survey data of the pre-insulated piping installed by this project have been submitted and accepted by the UMass project manager and Utility Steam Design Engineer.

Item #2 Specification Section 232213.13 - Steam and Condensate Pre-insulated Piping, Paragraph 3.1.A and 3.1.B.

The specification is being revised to provide the moisture test method and acceptance criteria. Contractor shall still submit the moisture test documentation. Replace paragraphs as follows:

A. It is crucial that the interior components of the pipe system be kept dry at all times, to include all stages of the process: (1) the manufacturing facility, (2) shipping, (3) storage at the job site, and (4) during installation in the trench.

1. The following moisture test method shall be conducted by the installing contractor on all pre-insulated piping immediately upon completion of the field joints but prior to backfilling. The description below is general in nature and does not identify every component required. Contractor shall follow these basic concepts and shall provide everything needed to complete the moisture tests. The moisture test method is similar to the manufacturers’ conduit drying procedure (available from the manufacturers,) but the intent is only to take dew point measurements, and not to be run long enough to dry out the conduit system.

2. Provide rental or temporary portable equipment as follows, all suitable for delivering range of airflows noted below to the conduits:
   a. Air Compressor
   b. Aftercooler with desiccant dehumidifier and filter, capable of delivering not higher than -20° F dewpoint compressed air. A refrigerant dryer will be unacceptable.
   c. 2” diameter compressed air hoses. Use between the air compressor and aftercooler, and from the aftercooler to a reducing fitting at conduit vents.
   d. 3” compressed air flow meter and 3” gate valve located upstream of the conduit, for regulating flow.
   e. 3” diffuser suitable for discharging air from conduit at a slow enough velocity to permit dew point measurement with a handheld meter in close proximity.
   f. Above equipment should be available for rent from Sunbelt Rentals, Inc. Contact Douglas Tarnawa, 508-925-1630 (office), 508-335-5925 (mobile.) Other rental sources meeting the criteria are acceptable.
3. Connect a pressure gage on the upstream conduit drain. Be certain that conduit pressure never exceeds 15 psig during the test, and preferably no higher than 12 psig to provide a margin of error. To further reduce the risk of over pressurizing the conduit:
   a. Install no valves downstream of conduit.
   b. Twin the vent and drain connections on downstream conduit to the diffuser using additional compressed air hose.
   c. Consider use of a temporary compressed air safety valve.
4. Adjust the compressed air rate (scfm) to obtain gas velocity through the conduit annular space between 10 and 20 ft/sec, as noted below for this project:
   a. 4"MPS: 175 – 349 scfm
   b. 2"CR: 69 – 138 scfm
5. Moisture acceptance criteria. Conduit discharge shall be not higher than +20° F dew point.
6. Additional testing may be done at the sole discretion of the manufacturer and contractor.

B. The objective of the moisture test is to further assure the University that the completed installation will have a long life, well beyond the warranty period. The moisture acceptance criteria shall involve the use of calibrated instrumentation to detect moisture levels and shall not involve the use of a mirror. All such testing done at the job site shall be scheduled at least 48 hours in advance and shall be witnessed by UMass. The University shall be given the opportunity to use their instrumentation for verification of acceptance, however, that does not relieve the contractor of this responsibility. All such testing results shall be documented in writing. The associated costs for all pipe system moisture testing shall be included in the bid.

Item #3 Specification Section 232213.13 - Steam and Condensate Pre-insulated Piping, Paragraph 2.10.A

The specification is being revised to provide and monitor two ERM Leak Detection wires rather than one wire in each section of pipe. Replace paragraph as follows:

A. The system shall be made with a pair of Leak Detection monitoring wires by means of installing bare copper wires between the conduit and the HDPE jacket. The piping system manufacturer shall install the wires in a manner that has the wire embedded in the conduit foam insulation and incorporated into each piece of pre-insulated pipe and fittings. The two wires shall be installed approximately 180 degrees apart within the foam, at the 12 and 6 o’clock positions or in a spiral configuration over the length of pipe. Contractor shall check continuity and electrical isolation of both wires for each piece of insulated pipe and fittings with a standard ohmmeter as it arrives at the jobsite. Contractor shall connect the copper wires together at each field joint with the supplied insulated jumper cable and recommended crimping tool as per manufacturer’s instructions. This shall be done for both wires at every field joint. Contractor shall then check for continuity and electrical isolation using a standard ohmmeter over the length of the installed piping system before insulating straight run joint kits. When required contractor will have to make provisions for running the wire in and out of steam manholes.

Item #4 Drawing C-1 – The Contractor shall note the likely presence of mastic on the foundation when coring wall to install MPS and CR piping.
Item #5 Drawing M-2 – The Contractor shall note that the section of domestic water line indicated for relocation and the heating/chilled water lines to the cabinet unit heater has mudded fitting insulation. Mudded fitting insulation is classified as suspect material and shall be tested prior to demolition. Up to eight (8) fittings are located above the ceiling and up to six (6) fittings located at the cabinet unit heater connection. UMass On-Call Abatement Contractor shall be responsible for testing and disposal of this material.

Item #6 Drawings M-6 and M-8 – Condensate Cooler System

Delete the proposed condensate cooler system scope shown on drawing M-6 plan and drawing M-8 schedule. A condensate cooler system is presently being installed by another project. The proposed sump pump system shown on drawing M-6 plan (drawing notes 1 through 4) shall remain in this project scope.

End of Addendum #1

By: John O. Martin
Director of Procurement