



CITY OF ANN ARBOR, MICHIGAN
Public Services Area/Water Treatment
919 Sunset Road
Ann Arbor, Michigan 48103

Web: www.a2gov.org

May 8, 2015

To: All Contract Document Holders

**RE: Addendum to the Contract Documents for the Manchester Tank Coating Project
Bid No. ITB-4382**

Attached is a copy of Addendum Number One for the Manchester Tank Coating Project. This Addendum supersedes and updates the Contract Document information for Bid No. ITB-4382. All Bidders shall acknowledge receipt and acceptance of this Addendum Number One by so indicating on the Invitation to Bid Form located in the existing Contract Documents. Bids submitted without acknowledgment of receipt of this Addendum will be considered informal. If you have any questions regarding the Contract Documents or this Addendum, please contact Brian Rubel, PE, Tetra Tech, Project Engineer by email at brian.rubel@tetrattech.com.

Sincerely,

Glen Wiczorek, P.E.
Utilities Engineer
City of Ann Arbor Water Treatment Plant

enc.

May 8, 2015

**ADDENDUM NO. 1
TO
BID DOCUMENTS
FOR
MANCHESTER TANK COATING PROJECT
FOR THE
CITY OF ANN ARBOR, MICHIGAN**

The following changes, additions, and/or deletions shall be made to the Bid Documents for the Manchester Tank Coating Project for the City of Ann Arbor, Michigan, Bid No. ITB – 4382 on which bids are to be received, on or before, 2:00 P.M. Thursday, May 14, 2015.

The information contained herein shall take precedence over the original documents and all previous addenda, and is appended thereto.

All Bidders shall acknowledge receipt and acceptance of this Addendum No. 1, including all attachments, by so indicating on page ITB-1 of the Invitation to Bid Form. Bids submitted without acknowledgement of receipt of this addendum will be considered informal.

Changes in the Bid Documents which are outlined below are referenced to a page or drawing in which they appear conspicuously. The Bidder is to take note in its review of the documents and include these changes as they affect work or details in other areas not specifically referenced here. Changes to the original text are bolded, underlined and italicized.

DETAILED SPECIFICATIONS

1. Table of Contents, Page TC-3, Division 15 – Mechanical, add: **Section 15 76 80 Thermal Heating Units.**
2. Specification 15 11 00 – Process Valves, revise paragraph 2.05.A per the following:
 - a. Delete lines 2.05.A.5, 6 and 8 – 10.
 - b. Revise 2.05.A.7 to: **Provide hand wheel to operate 2-inch square operating nut. Hand wheels shall be fabricated steel. They shall be a maximum of 30 inches in diameter, a minimum of 24 inches in diameter and keyed to the 2-inch operating nut.**
3. Include the Terminal Heating Units – Mechanical Specification, Section 15 76 80 (Sheets 1-3) covering heat-tracing systems.

QUESTIONS AND ANSWERS

Q: On drawing ED-102 note #7: Reuse conduit where appropriate. Will we need to remove and replace the conduit for the painters or can the existing conduit that we plan on reusing, be left in place?

A: The mounting hardware and conduit shall be removed and the tank surface painted beneath

both. Hardware shall be reinstalled upon completion of painting. Contractor shall be responsible for storage of conduit to be reused during this period.

Q: What is the overflow elevation of the tank?

A: Approximately 1010.

Q: Who is responsible to remove the electrical power supply?

A: The Contractor is responsible to coordinate removal with Detroit Edison. Contractor will be reimbursed for Detroit Edison costs through the contract allowance.

Q: Who is responsible for disconnecting fiber optic from the security control panel?

A: The Contractor is responsible to make this disconnection and protect the fiber optic line through the duration of the project.

Q: Will the City trim tree limbs around the tank prior to installing painting containment curtains?

A: The Contractor will be responsible for any necessary tree trimming and obtaining any necessary approvals prior to the trimming.

Q: Please note, drawing C-301 requires the fill pipe insulation be replaced as per the specifications. We did not see this insulation schedule in section 15 08 00. Please provide a specification for the piping insulation.

A: The insulation for the fill pipe is specified in Part 2 of Specification Section 05 00 00.

Q: Please note, drawing D-103 states to replace the flanged joint bolts and nuts on the fill line but does not specify if this is in the piping pit only or the complete line. Please clarify.

A: The bolts and nuts to be replaced refer to the pit piping only.

Q: Please note, drawing D-500 shows a new 16" stainless steel expansion joint on the fill line. Please provide a specification for this joint including pressure rating, grade of stainless steel, length and if control rods are required.

A: The specification for this is located in Part 2 of Specification Section 05 00 00.

END OF ADDENDUM

SECTION 15 76 80 - TERMINAL HEATING UNITS - ELECTRICAL

PART 1 - GENERAL

1.01 SUMMARY

- A. Section Includes: Heating terminal work as indicated by Drawings and Schedules and as specified in this Section.
- B. Types of electrical heating terminals in this Section include:
 - 1. Heat-tracing System.
- C. Related Documents: Drawings and general provisions of Contract, including General and Supplementary Conditions and Division 1, apply to Work of this Section.

1.02 SUBMITTALS

- A. Shop Drawings: Submit in accordance with Section 01 33 00, Shop Drawings covering the items included under this Section. Shop Drawing submittals shall include:
 - 1. Product Data: Submit manufacturer's product data and installation instructions for electric heating terminals.
 - 2. Submit Wiring Diagrams for electrical heating terminals showing connections to electrical power feeders, and associated control wiring. Clearly differentiate between wiring which is manufacturer installed and that which is field installed.

1.03 QUALITY ASSURANCE

- A. Manufacturer's Qualifications: Firms regularly engaged in manufacture of electric heating terminal units, of types, ratings, and capacities required, whose products have been in satisfactory use in similar service for not less than 5 years.
- B. Codes and Standards:
 - 1. Electrical Code Compliance: Comply with applicable local electrical code requirements of the authority having jurisdiction, and NEC as applicable to construction and installation of electric heating terminals.
 - 2. NEMA Compliance: Provide heating terminal accessories which comply with NEMA standards.
 - 3. UL 515 Compliance: Provide heating terminal accessories which comply with UL standards for Electrical Resistance Heat Tracing for Commercial and Industrial Applications.

1.04 DELIVERY, STORAGE, AND HANDLING:

- A. Store electric heating terminals in original packaging and protect from weather and construction traffic. Wherever possible, store indoors. Where necessary to store outdoors, store above grade and enclose with watertight wrapping.
- B. Handle electric heating terminal units carefully to prevent damage, breaking, and scoring of finishes. Do not install damaged units or components; replace with new.

PART 2 - PRODUCTS

2.01 MANUFACTURERS

- A. Subject to compliance with specified requirements, manufacturers offering products which may be incorporated in Work include:
 - 1. Heat-Tracing System:
 - a. Raychem.
 - b. Chromalox.
 - c. Thermon.

2.10 HEAT-TRACING SYSTEM

- A. Provide a heat-trace system as shown on Drawings. Provide heat-trace at valves, meters, etc., in accordance with manufacturer's recommendations.
- B. Heating Capacity: Cable heating size shall be based on 1-inch fiberglass pipe insulation with a K value of 0.3 (Btu) (in) (h) (degrees F) (Ft²) and a temperature differential of 80 degrees F. Cable shall be 8 watts per foot minimum unless otherwise recommended by the manufacturer or indicated on the drawings.
- C. Heating Cable: Provide 240 volt self-regulating type heating cable constructed of 16-gauge buss wires, a semiconductive polymer core, a flame-retardant insulation jacket, a tinned-copper braid, and a fluoropolymer overcoat over the braid. Similar to Chromalox SRL. Power shall match electrical feed circuits as indicated on the drawings. When only 120VAC power is available, supply heat trace that will work with available power.
- D. Controls: Cable shall be controlled by an ambient sensing local controller set to allow the cable to heat at 40 degrees F. Similar to Chromalox Type RTAS.

PART 3 - EXECUTION

3.01 EXAMINATION

- A. Examine areas and conditions under which electric heating terminals are to be installed and notify OWNER/ENGINEER in writing of conditions detrimental to proper completion of the Work. Do not proceed with the Work until unsatisfactory conditions have been corrected in a manner acceptable to Installer.

3.02 INSTALLATION OF HEATING TERMINALS

- A. Install electric heating terminal units including components as indicated, in accordance with equipment manufacturer's written instructions, and with recognized industry practices; complying with applicable installation requirements of NEC and NECA's "Standard of Installation."
- B. Coordinate with other electrical work, including wiring/cabling, as necessary to properly interface installation of heating terminal units with other work.

- C. Tighten connectors and terminals, including screws and bolts, in accordance with equipment manufacturer's published torque-tightening values for equipment connectors. Where manufacturer's torquing requirements is not indicated, tighten connectors and terminals to comply with tightening torques specified in UL Standard 486A.

3.03 GROUNDING

- A. Provide equipment grounding connections for electric heating terminals as indicated. Tighten connections to comply with tightening torque values specified in UL Standard 486A to ensure permanent and effective grounding.

3.04 FIELD QUALITY CONTROL

- A. Upon completion of installation of electric heating terminals, and after building circuitry has been energized, test heating terminals to demonstrate capability and compliance with requirements. Where possible, field-correct malfunctioning units, then retest to demonstrate compliance; otherwise, remove and replace with new units and proceed with retesting.
- B. Replace electric heating terminals and accessories which are damaged and remove damaged items from Site.

END OF SECTION