

BROGDEN MIDDLE SCHOOL CHILLER & CONTROLS

**DPS Project #306-09
RFP # 179-2223-677-Brogden_HVAC**

**DURHAM PUBLIC SCHOOLS
DURHAM, NORTH CAROLINA**

May 16, 2023

ADDENDUM NO.2

General and Contractual

1. Can you provide a Plan Holders list for this project?

Answer: Addendum #1 has the Pre-Bid Sign In sheet.

2. Is there a cost estimate or budget?

Answer: None available at this time.

3. Is there a start date for the project to begin? Is there an end date as well?

Answer: Refer to the Bid Form in Addendum #1.

Mechanical Specifications

1. Specification Section 23 09 00 Digital Controls and Instrumentation: Corrections are needed for references given.

- a. Paragraph 2.16.B.1: Delete sentence and replace with the following “Comply with requirements in Section 230530.”
- b. Paragraph 2.19.A: Delete paragraph and replace with the following “Electronic and fiber-optic cables for control wiring shall comply with Section 230530 and Division 26. All new Conduit will be blue in color. All communication wire will have a purple jacket.”
- c. Paragraph 2.20.B: Delete sentence and replace with the following “Comply with the requirements of Section 230530 and Division 26.”
- d. Paragraph 3.2.H: Delete sentence and replace with the following “Install labels and nameplates to identify control components according to Section 230590.”
- e. Paragraph 3.2.I: Delete sentence and replace with the following “Install hydronic instrument wells, valves, and other accessories according to Sections 230520, 230523, and 232010.”

4. Question: A contractor “would like clarification on the type of piping for the underground piping portion of the above referenced project. It isn’t clear on the drawings or in the specifications.”

Answer: Refer to attached revised Specification Section 23 20 10 – Water Piping Systems and

Hydronic Specialties.

5. Question: Since two heat trace cables per pipe are called out and assuming this is for redundancy, are two heat trace controllers required?

Answer: Yes, these are for redundancy. Consult your heat trace manufacturer for number of controllers needed to control this length of cabling and to provide redundancy in case a cable fails (or gets cut or broken).

6. Will you please list Patterson Pumps as an approved pump manufacturer for specification section 23 21 23 – Pumps?

Answer: Yes. Specification section 23 21 23, paragraph 2.1.L. – add Patterson Pumps as an acceptable manufacturer.

7. A contractor asked: Existing JACE/ Controls replacement - Dual Temp System Sequence of Ops (M-604) claims “existing DT Plant control system consists of a Niagara 4 Jace 8000 controller” and “the existing DT Water Plant controls will be modified to interface and integrate the control of the [Qty 2] new chillers and [Qty 2] chilled water pumps”. Sheet M-601 keyed note 1 states “provide New DDC controls for the Dual Temperature Water Plant.” Please clarify if the DT Plant has existing controls or if new are to be provided.

Answer: The existing dual temperature JACE 8000 controller may be re-used to the extent possible. The contractor is expected to take ownership of it and warranty it with the rest of the system.

8. A contractor asked: Valve & Damper sizes - Mechanical sheets M-601 & 602 keyed notes call for New DTW control valves/actuators and Damper Actuators for listed AHUs and HR units. Pipe sizes and damper sizes are not listed with a call for field verification of size and type. Are prior control plans available with valve schedules and/or damper schedules?

Answer: Actuators are to be replaced. The valves and dampers themselves would not be replaced unless they are found not to work, in which case there would be change orders. As for sizing, all we have are the 1998 HVAC design drawings which are attached for reference. The unit serving the auditorium (AHU-3) is believed to have been updated since then, and a second energy recovery unit in the room next to the boiler room was added. These old plans only show one chiller, and there two. The boilers and hot water pumps have been replaced recently. There may have been other changes, but those are what we are aware of.

Mechanical and Electrical Drawings

1. Questions involving both mechanical and electrical drawings:

- a. Wiring & Starters/Disconnects - Mechanical Demolition plan General Notes call for re-use of wiring, conduit and electrical devices where associated. Mechanical Demolition plan Keyed Notes call for existing chiller fused electrical disconnect switches to be re-used. Mechanical Demolition plan Keyed Notes call for preservation of 2.5” electrical conduit and wiring serving chiller for reuse. M-500 detail 7 Electrical Equipment Connection shows Feeder Circuit wiring and conduit as well as line side wiring to junction boxes by the Electrical Contractor. M-600 HVAC Pump Schedule notes provision of a Variable Speed Drive with bypass disconnect for system balancing. M-600 Air Cooled Chiller Schedule notes provision of a single point power connection. E-100 General Notes for all electrical sheets notes “Provide all conduit and wire terminations to equipment.” Please confirm that the line side wiring to the equipment is existing and

being reused and/or is by the EC for the New Chillers and CHW Pumps. It appears the connections to the new chillers are existing and being remade by the EC and the CHW Pumps will be getting VFDs (to have a set speed at TAB, without DDC speed modulation per M-605) but the electrical connections to the new drives for the pumps are unclear.

Answer: Detail 7 on M-500 is geared more toward new installations – please delete from this project. The intent is as follows.

Chiller: You are correct that the connections to the new chillers are existing and being remade by the EC. If a Megger test indicates the conductors are not good, then the conductors are to be replaced as described in Unit Price #2 on the Bid Form. The existing fused disconnects for the chillers are being reused, but are to get new fuses per Keyed Note 9 on E-101.

Chilled Water Pumps: Keyed Note 5 on M-102 references a detail on M-500. This is meant to be Detail 8 End Suction Pump with Suction Diffuser Detail. Electrical equipment and connections are to be as indicated in Keyed Notes 4, 5, 6, and 7 on Sheet E-101.