

DATE: February 9, 2018

DEPARTMENT OF GENERAL SERVICES  
BUREAU OF PRE-CONSTRUCTION  
1800 HERR STREETS  
HARRISBURG, PENNSYLVANIA

**ADDENDUM NO. 1**

on

**PROJECT NO. DGS C-0411-0060 PHASE 002**

**PROJECT TITLE - Millersville University - Renovation of Education Instruction Building**

**PROFESSIONAL:**

Century Engineering

'Century Engineering'200 Airport Road"New Cumberland','PA','17070'

New Cumberland, PA, 17070

**If you submitted a bid through e-Builder prior to this Addendum being issued, your bid has been discarded and you must re-submit your bid(s) through e-Builder prior to the bid opening date and time. Please see Section 4.C. of the Instruction to Bidder**

GENERAL CHANGES – ALL CONTRACTS

Item 1 - The drawings that are uploaded are complete.

Item 2 - Signed and sealed drawings for the expansion fittings and/or loops are not required unless otherwise specifically noted in the documents.

Item 3 - The .2 contractor shall install glycol for final system fill. Glycol shall be provided by Millersville University.

Where required for the completion of the work, the .2 contractor shall drain, capture, collect, contain, store, and dispose of glycol in accordance to local, state, and federal regulations.

Item 4 - Calculations of the glycol capacities shall be calculated by the contractor.

Item 5 - The Elevator shall not be used during the construction period.

Item 6 - NRG's Controls Proposal is attached for .2 bidding Contractor's use. See Attached Documents File for

the document named "0411-0060 Phase 2 NRG Controls Proposal". Additional items required for complete

operation of the controls system but not furnished and installed under the NRG proposal shall be

furnished and installed by the .2 contractor.

Item 7 - Refer to the Specifications, Section 013100 Page 2, Paragraph 1.4, B., 2., k.. Revise date to read 8/3/18.

Item 8 - Refer to the Specifications Section 230719 Page 12, Paragraph 3.10, B., 1., a. Delete "Wicking System"

and replace with "Preformed Pipe Insulation: 2" thick" and refer to Paragraph 3.10, C., 1., a. Delete "1" thick",

and replace with "2" thick."

Item #9 - Rigging as necessary for each point contractor shall be provided by the individual point contractor. The .1

contractor shall not provide rigging for the other contractors.

Item #10 - Refer to Section 230519, Page 5 Paragraph 2.8. Delete this paragraph A., and B. in their entirety. Renumber

Paragraph C. to paragraph A.

Item #11 - Refer to Section 230519 Page 9, Paragraph 3.8. Sub-paragraphs A., B., C. Change "Turbine Meters"

to

"Venturi type meters".

Item #12 - Refer to Drawing H-502, delete "Flow Sensor Detail", and delete leader note "Flow sensor to sense system

flow rate" in "Vertical Inline Pump Detail".

The question period for this project is closed. There is insufficient time to receive and answer additional questions and provide an additional addendum prior to the Bid date of Feb 15, 2018.



**NRG Controls, Inc.**  
48 South Harrisburg Street  
Second Floor  
Harrisburg, PA 17113  
(717) 939-2400  
(717) 939-8583 – Fax

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**To: William Glassmyer  
Design Manager, DGS**

**Re: Renovation to Education Building – DGS 0411-0600 Phase 2  
Millersville University  
Building Automation System**

**Date: February 8, 2018**

Dear Mr. Glassmyer,

NRG Controls, Inc. is pleased to propose pricing based on

***Schneider Electric/Invensys***

building automation and energy management systems. NRG shall provide the HVAC control system in accordance with the mechanical drawings, specification 230923, and the following:

1. Provide the following services:
  - a. Expand the existing Invensys IA control system in the Central Plant to serve the new Central Plant equipment, and update sequences accordingly.
  - b. Update existing Graphical User Interface (GUI) for operation of the new control system specified herein, complete with databases, system graphics, and graphical floorplans installed on the existing Campus Web-Server. GUI to be in accordance with existing Millersville standards.
  - c. Existing Universal Network Controllers with applicable drivers shall be used for integration of the new controls into the web browser GUI.
  - d. Provide LON network cabling for the control system. Existing COMM bus may be reused, where existing.
  - e. Provide engineered installation drawings, submittals, as-builts and operating/maintenance manuals.
  - f. Provide installation of controls and control wiring.
  - g. Provide programming of controls and control validation, for controls provided by NRG.
  - h. Provide customer training, warranty and commissioning support.
2. Furnish the following devices, for installation in the duct/pipe by the HVAC Contractor:
  - Central Plant HW 3-Way Valve
  - Central Plant CHW 3-Way Valve
3. Provide HVAC controls for the following mechanical equipment:
  - Central Plant Control System – New Equipment
    - a. 2 Heat Exchangers (Base Bid #2)
    - b. 2 Heat Pump Loop Pumps (Variable Flow)
    - c. 2 3-Way Valves (new)
    - d. 2 Dual-Temp Pumps

- Existing to Remain Equipment – Modify Sequence, Controls are ETR
  - a. 1 ETR Air-Cooled Chiller
  - b. 1 ETR Boiler
  - c. 2 ETR CHW Pumps
  - d. 2 ETR Primary HW Pumps
  - e. 2 ETR Reheat Pumps
- WSHP-C FC Heat Pumps (80)
- WSHP-UV Heat Pumps (14)
- SF-1
- Relief Damper Control (6) – Base Bid #2 Only

**Typical Coordination Items:**

- Heat Pumps to be furnished with standard refrigeration controls & safeties, outside air motorized damper (with 24VAC damper actuator), water level detection device, and automatic isolation valve. NRG to provide DDC controls, including DDC controller, discharge air temperature sensor, and fan status current relay. The following controls shall be reused:
  - Existing Schneider-Electric MN-Series digital thermostats.
  - SLK Thermostat cabling to the FC/UV.
  - DDC controllers for the existing UV's (to be removed and reinstalled).
  - Controller network cabling.
- NRG shall disconnect and remove existing DDC controls on the FCUs and UVs, in preparation for demolition. DDC controllers shall be repurposed/reprogrammed for the new UV's on this project.
- Existing Controls for the East Wing of the building, and for systems NOT identified herein shall remain.
- Automatic isolation valves for the heat pumps furnished with the heat pumps, wired by NRG, installed in the pipe by the HVAC contractor, where specified.
- Motorized dampers with factory installed actuator for the outside air associated with the heat pumps shall be provided by the equipment manufacturer. Wiring of the actuator into the controller shall be by NRG.
- Motorized dampers required for relief air in six zones (Base Bid #2 only) to be furnished by the HVAC contractor. Damper motor and wiring by NRG.
- VFDs and starters are not included in this proposal.
- Smoke detectors (if required) are not included in this proposal.
- Smoke dampers and combination fire-smoke dampers (if required) are not included in this proposal.

**General:**

1. Power wiring is not included in this proposal.
2. Cutting/patching/painting, general trades, and finishing work is not included in this proposal.

**Pricing:**

Pricing for the scope of work as described herein is \$136,400. Pricing for Base Bid #2 (add motorized damper control for six areas) is \$137,900.

If you have any questions, feel free to call me at 939-2400.

Sincerely,  
Tom Dunleavy  
NRG Controls, Inc.