

City of Lynchburg
Procurement Division
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**Addendum for Invitation for Bids
City Hall HVAC Controls**

13-845

Date: 6/14/2013
From: Lisa Moss, Buyer VCA
RE: Addendum No. 2

This Addendum supplements and amends the original Plans and Specifications and shall be taken into account in preparing proposals and shall become a part of the Contract Documents. The Bidder shall indicate receipt of this Addendum and all previously issued Addenda on the Bid Form.

1. **The Deadline for Submission of Bids has been extended to Wednesday, July 17, 2013 at 3:00 P.M.**
2. **The Deadline for Submission of Questions has been extended to Monday, July 8, 2013 at 9:00 A.M.**
3. Attached are the clarifications and revisions to drawings as prepared by 2RW.

Company Name: _____ *Address:* _____ *Date:* _____

Authorized Signature: _____ *Title:* _____

Print Name: _____ *Telephone No.:* _____

Fax No.: _____

1) Is it permissible for the installing contractor to use BACnet MSTP field controllers in lieu of LON field controllers?

It is permissible for the installing contractor to use BACnet MSTP field controllers in lieu of LON field controllers. Contractor is required to provide appropriate NiagraAX JACE to facilitate the use of BACnet field controllers and the JACE shall communicate seamlessly with the City's existing system and be able to meet all requirements of a fully functioning system which operates in accordance with the contract documents.

2) We would like to use characterized ball control valves instead of globe control valves.

- a. Advise acceptability of characterized ball control valves 2" and smaller.
 - i. 23900-14, C Control Valves states "... All control valves less than 2 inch shall be globe valves".
 - ii. Current common practice 2" and smaller is to use the characterized ball control valve due extremely high rangeability "Greater than 500:1". This allows a much wider range of flows and pressure drops with greater resolution and sensitivity.
 - iii. 2-Way valves are equal percentage control characteristic
 - iv. 3-Way valves are equal percentage on port A (inlet) and linear on port B (Bypass).
 - v. ANSI Class 4 shut-off
 - vi. Compatible with state of the art electronic actuators modulating, spring return/non spring return, drive open – drive close with manual override and position indication, 100,000 full stroke cycles, 250,000 repositions.

The use of characterized ball control valves shall be acceptable for pipe sizes two inches and smaller. See Specification 23 900 Addendum 1 for details.

3) Advise coil flows on AHU's HW & CHW

Contractor is responsible for confirming information as required to provide a fully functioning system. See General Note 1 on MSK-1.

AHU	Cooling Coil Flow Rate	Heating Coil Flow Rate
1	22 GPM	Heating coil to be disconnected and VAV-mounted reheat coils installed per contract documents.
2	50 GPM	No heating coil.
3	59 GPM	Heating coil to be disconnected and VAV-mounted reheat coils installed per contract documents.
4	132 GPM	No heating coil
5	25 GPM	12 GPM
6	22 GPM	13.5 GPM

Source: City Hall Alterations and Additions, Contract Documents, May, 1980.

4) Advise coil flow on HV-1 HW

Contractor is responsible for confirming information as required to provide a fully functioning system. See General Note 1 on MSK-1. The heating coil flow rate is 4.5 GPM. Source: City Hall Alterations and Additions, Contract Documents, May, 1980.

- 5) **Clarify VAV valve actuator.**
- a. **Spec calls for drive open, drive close... 2 position. Detail drawing (schematics show AO (modulating) control signal to actuator.**
 - b. **Advise spring return or non spring return.**

The VAV valve actuator shall be modulating per the drawings. Non spring return is acceptable.

- 6) **Have all the changes been made to the Motor Control Center that are shown on Drawing E-1. I understand this is a new MCC that was recently installed. One of my guys thought he heard in the pre-bid that those changes were made when they changed the MCC.**

The "Motor Control Center – Existing" schedule republished the schedule from the design from which the now-current motor control center was built. This may not reflect the as-built conditions if any field changes were required during or after the installation of the now-current motor control center subsequent to when these bid documents were published. The "Motor Control Center – Modifications" schedule indicates changes that will be required to the now-current motor control center as a result of the controls replacement project currently being bid. These modifications shall be incorporated into the contractor's bids.

- 7) **The electrical drawings do not show any new circuits going to the equipment. Do we use the existing circuits and tie in VFD's to them or run new circuits for the equipment that gets VFD's.**

There are no new circuits for the equipment receiving VFDs. The existing circuits are to remain for reuse. Per drawing E0.0, the conductors for AC-2 are being replaced.

- 8) **On drawing E-2 it just shows a riser on the corner of the page, is there anymore to this drawing that may show circuits.**

The riser diagram is the extension of drawing E0.1. Per key note 18 on sheet M1.0, contractor is to provide 24V electric conductors and connections for new VAV boxes. The source of power is intended to be from 120V to 24V transformer(s) powered from the new panel L-C1 per general note 11 on drawing E0.0.

- 9) **On drawing M1.0 note 20 is suppose to show the location of the new panel L-C1. I can't find it on the drawing, is it suppose to be the panel that is labeled 15?**

The panel location is mislabeled with key note 15. The panel shown adjacent to the new BAS panel should be labeled with key note 20 to indicate the location for panel L-C1. See MSK-1 for clarification.

- 10) **Drawing M.1 shows installing vav boxes in the mechanical room at ceiling height. Boxes are tagged as AC3-1 and AC3-2 and it appears not to be enough room to accommodate these boxes for installation and service of them. Has this been verified and confirmed they will fit and if not where do they get located.**

Based upon visual observation of the proposed location for the VAV box installation, the new equipment will fit. The basis of design VAV box is a Titus DESV size 7 which has nominal dimensions of 12 inches wide by 12 inches high with the controller protruding an additional six inches on one side. The boxes are 15 inches long. The drawings show the VAV boxes in approximate locations and the boxes should be rotated such that the controller faces the direction which is most convenient for maintenance of the box. Additionally, the boxes may be positioned slightly closer to the new transition to a seven inch round duct as long as the installation requirement of the flow controllers are satisfied. It will be acceptable for sections of ducts below to

be temporarily removed to facilitate installation of the new boxes. Please note that if the removal of the duct sections requires the units to be shut down, the work will need to be schedule during unoccupied hours.

- 11) Drawing M1.4 shows installing a new 3-way control valve for the cooling tower. Upon our site visit and conversation with Randy Dalton this valve has been replaced and is only about 2 years old. Does it still require replacing?**

The valve was not replaced with the cooling tower. It shall be replaced as part of this project as indicated in the drawings.

SPECIFICATION SECTION 23 0900 ADDENDUM 1:

Specification section 23 0900, shall be modified for control valves as follows:

REPLACE 23 0900 2.07 C:

Control Valves: Control valves shall be 2-way or 3-way pattern as shown and constructed for tight shutoff at the pump shut-off head or steam relief valve pressure. Control valves shall operate satisfactorily against system pressures and differentials. Two-position valves shall be 'line' size. Proportional control valves shall be sized for a maximum pressure drop of 5.0 psi at rated flow (unless otherwise noted or scheduled on the drawings). Valves with sizes up to and including 2 inches shall be "screwed" configuration and 2-1/2 inch and larger valves shall be "flanged" configuration. All control valves, including terminal unit valves, less than 2 inch shall be globe valves. Electrically-actuated control valves shall include spring return type actuators sized for tight shut-off against system pressures (as specified above) and, when specified, shall be furnished with integral switches for indication of valve position (open-closed). Pneumatic actuators for valves, when utilized, shall be sized for tight shut-off against system pressures (as specified above).

With:

Control Valves: Control valves shall be 2-way or 3-way pattern as shown and constructed for tight shutoff at the pump shut-off head or steam relief valve pressure. Control valves shall operate satisfactorily against system pressures and differentials. Two-position valves shall be 'line' size. Proportional control valves shall be sized for a maximum pressure drop of 5.0 psi at rated flow (unless otherwise noted or scheduled on the drawings). Valves with sizes up to and including 2 inches shall be "screwed" configuration and 2-1/2 inch and larger valves shall be "flanged" configuration. All control valves, including terminal unit valves, 2 inches or less shall be globe valves or characterized ball valves with replaceable balls. Electrically-actuated control valves shall include spring return type actuators sized for tight shut-off against system pressures (as specified above) and, when specified, shall be furnished with integral switches for indication of valve position (open-closed). Pneumatic actuators for valves, when utilized, shall be sized for tight shut-off against system pressures (as specified above).