ADDENDUM NO. 1 - OUTLINE AND SUMMARY INFORMATION

Project Name: Leon Johnson Redundant Heat Pump Module
Location: Montana State University - Bozeman
Owner: State of Montana, MSU - Bozeman

To: All Plan Holders of Record

The Plans and Specification prepared by Cushing Terrell (fka CTA Architects and Engineers) dated October 15, 2021 shall be clarified and added as follow. The bidder proposes to perform all the following clarifications or changes. It is understood that the Base Bid shall include any modification of Work or Additional Work that may be required by reason of the following change or clarifications.

The Bidders are to acknowledge the receipt of this Addendum by inserting its number and date into their Bid Forms. Failure to acknowledge may subject the Bidder to disqualification and rejection of the bid. This Addendum forms part of the Contract Documents as if bound therein and modifies them as follows:

1. AMENDMENTS TO THE PROJECT MANUAL
   a. SECTION 230523 - GENERAL-DUTY VALVES FOR HVAC PIPING
      i. Part 2, add the following: “2.6 Control Valves shall be fully proportioning and provide near linear control. The valves shall be quiet in operation and fail-safe closed position. Valves shall operate in sequence with another valve when required by the sequence of operations. Control valves as scheduled on the drawings shall be sized by the control manufacturer. Control valves shall be suitable for the system flow conditions and close against the differential pressures involved. Body pressure rating and connection type (sweat, screwed, or flanged) shall conform to the pipe schedule elsewhere in this Specification. Ball valves shall be acceptable for bypass applications up to 4 inch, butterfly valves shall be acceptable for bypass applications greater than 2 inches. Electronic valve actuators shall be manufactured by the valve manufacturer. Each actuator shall have current limiting circuitry incorporated in its design to prevent damage to the actuator. Modulating actuators shall be provided as required by the sequence of operations. Actuators shall provide the minimum torque required for proper valve close-off against the system pressure for the required application. The valve actuator shall be sized based on valve manufacturer's recommendations for flow and pressure differential as scheduled on the drawings. Actuators on valves shall have mechanical spring. The spring return feature shall permit normally open or normally closed positions of the valves, as required. All direct shaft mount rotational actuators shall have external adjustable stops to limit the travel in either direction. Modulating actuators shall accept 24 VAC or VDC and 120 VAC power supply and be UL listed. The control signal shall be 2-10 VDC or 4-20 mA.”
      ii. Part 3, Paragraph 3.2, add the following: “G. Control valves for pump bypass sequence of operation, provide as shown, coordinate with Controls Contractor.”
b. INVITATION TO BID
   i. Change overall completion date from March 15, 2022 to February 15, 2023. Note intermediate completion date of March 1, 2022 for majority of work per Project Phasing Notes on Sheet G001.

2. AMENDMENTS TO THE DRAWINGS (attached)
   a. G001, Revision No. 1 Addendum 1 dated Nov. 3, 2021.
   b. M001, Revision No. 1 Addendum 1 dated Nov. 3, 2021.
   c. M100, Revision No. 1 Addendum 1 dated Nov. 3, 2021.
   d. M101, Revision No. 1 Addendum 1 dated Nov. 3, 2021.
   e. M200, Revision No. 1 Addendum 1 dated Nov. 3, 2021.

3. PRE-BID MEETING INFORMATION (attached)
   a. Pre-bid Meeting Agenda

4. PRE-BID MEETING ATTENDENT LIST (attached)
   a. Pre-bid meeting attendance list
LEON JOHNSON HALL
REDUNDANT HEAT PUMP
MODULE INSTALLATION

OCTOBER 15, 2021

LEON JOHNSON HALL
BOZEMAN, MT 59715

VICINITY MAP: Locator

LEON JOHNSON HALL

OWNER
Montana State University
Bozeman, MT 59715

MECHANICAL
CUSHING TERRELL
PO Box 3208
Bozeman, MT 59773
(406) 587-6121

ELECTRICAL
CUSHING TERRELL
202 N. Main St.
Bozeman, MT 59715
(406) 585-8600

SHEET INDEX

0001 COVER SHEET

MECHANICAL

0001 MECHANICAL ELEVATIONS AND DETAILS
0002 MECHANICAL PIPE PLAN
0003 MECHANICAL WATCH LIST
0004 MECHANICAL FLOOR PLANS

ELECTRICAL

0001 ELECTRICAL PAGES AND SCHEDULES

1 N. WASHINGTON ST.
BOZEMAN, MT 59715
FAX: 406-586-3934

Redundant Heat Pump Module Installation
BOZEMAN, MT 59715

Leon Johnson Hall
1 October 15, 2021

1. REDUNDANT HEAT PUMP INSTALLATION COMPLIANCE WITH CODE REQUIREMENTS


B. THE INSTALLATION OF THE REDUNDANT HEAT PUMP MODULE WILL OCCUR BETWEEN THE HOURS OF 7 AM AND 5 PM AND WILL BE ACCOMPLISHED SUCH THAT THE HOURS OF CONSTRUCTION WILL NOT INTERFERENCE WITH NORMAL OPERATING SCHEDULES.

C. THE INSTALLATION OF THE REDUNDANT HEAT PUMP MODULE WILL BE PERFORMED IN SUCH A MANNER THAT THE EXISTING GREEN BUILDING MANAGEMENT SYSTEM WILL NOT BE IMPACTED.

D. THE INSTALLATION OF THE REDUNDANT HEAT PUMP MODULE WILL BE PERFORMED IN SUCH A MANNER THAT THE EXISTING GREEN BUILDING MANAGEMENT SYSTEM WILL NOT BE IMPACTED.

2. OWNER EXPECTS TO TAKE DELIVERY OF THE REDUNDANT HEAT PUMP MODULES AFTER MARCH 1, 2022.


4. IN ORDER FOR THE FREE COOLING TO BE EFFECTIVE, THE OUTSIDE HEAT PUMP PLANT CONTROL SEQUENCE, PARAGRAPHS E. AND F. ON DRAWING M001.

5. PROVIDE HEAT FOR THE BUILDINGS. REFER TO THE EXISTING HEAT PUMP PLANT CONTROL SEQUENCE, PARAGRAPHS E. AND F. ON DRAWING M001.

6. THE NEW HEAT PUMP MODULES ARE TO BE CLOSED, THE HEAT FUNCTION OF THE HEAT PUMP MODULES IS TO BE DISABLED, THE HEAT PUMP BYPASS VALVE OPENED.

7. INSTALLATION OF THE REDUNDANT HEAT PUMP MODULE WILL BE PERFORMED IN SUCH A MANNER THAT THE EXISTING GREEN BUILDING MANAGEMENT SYSTEM WILL NOT BE IMPACTED.

8. OWNER EXPECTS TO TAKE DELIVERY OF THE REDUNDANT HEAT PUMP MODULES AFTER MARCH 1, 2022.

9. CONTRACTOR SHALL NOTIFY THE OWNER OF THE INSTALLATION OF THE REDUNDANT HEAT PUMP MODULES PRIOR TO THE INSTALLATION BEING COMPLETED.

10. OWNER EXPECTS TO TAKE DELIVERY OF THE REDUNDANT HEAT PUMP MODULES AFTER MARCH 1, 2022.

11. OWNER EXPECTS TO TAKE DELIVERY OF THE REDUNDANT HEAT PUMP MODULES AFTER MARCH 1, 2022.

12. OWNER EXPECTS TO TAKE DELIVERY OF THE REDUNDANT HEAT PUMP MODULES AFTER MARCH 1, 2022.
THE STEAM HEAT EXCHANGER MODULATES 1/3 AND 2/3 VALVES TO MAINTAIN VAC T.C. TONS GALLONS PER HOUR.

EXPECTED OUTPUT RELAY.

HIGH PRESSURE MINIMUM RUNTIME IS 1/2 HOUR: THIS IS THE MINIMUM RUNTIME OF THE HEAT FPS STANDARD MINIMUM RUNTIME: 51 2 1/2" MODULATING VALVE TYPE

REMARKS

CODE

Remarks

HEAT PUMP SCHEDULE

PUMP SCHEDULE

CONTROL VALVE SCHEDULE (SEE DETAILS)
Leon Johnson Hall
Redundant Heat Pump Module Installation

MONTANA STATE UNIVERSITY

CUSHING TERRELL
400 MAIN STREET, SUITE 101
PO BOX 865300
BOZEMAN, MT 59715

FAX: 406.585.3031
PH: 406.556.7100

DATE
DESCRIPTION
REV.

FLOOR

REV.

FLOOR

1/4" = 1'-0"

7

7

EIGHTH FLOOR MECHANICAL PLAN

SEVENTH FLOOR MECHANICAL PLAN

Drawing by
SB

Reviewed by
RD

10-15-2021

M101

1900149

MONTANA STATE UNIVERSITY

ADDENDUM 1

CONTRACTOR: CUSHING TERRELL

10-15-2021

M101

1900149
PRE-BID MEETING AGENDA

Project: LEON JOHNSON HEAT PUMP MODULE
From: TODD COOK, FACILITIES ENGINEER, PHONE 406-995-55480
Date: 10-26-2021

1. Recommended Attendees:
   a. OFS Design/Consulting Staff,
   b. OFS Construction Manager,
   c. Safety and Risk Management
   d. Outside consultants
   e. Clients
   f. MSU-ITC

2. Route sign-in sheet. Introductions

3. Availability of Contract Documents

4. Arrangement of Work:
   a. Related work being performed by MSU or other contractors.
   b. Owner furnished equipment.
   c. Use of building areas for construction

5. Bidding Considerations:
   a. Plan review fees paid by owner, permit fees paid by contractor. Status.
   b. Bid opening date, time.
   c. Bid Security of 10% of bid for all projects
   d. Deadline for Substitution, and Addenda
   e. Performance, labor, and material bonds for 100%, for projects over $25,000.
   f. State tax of 1% for projects over $5000.
   g. Prevailing wages for projects over $25,000.
   h. General liability, Owner protective liability, and property insurance, in MSU name.
   i. Completion of project ___ days after Notice to Proceed.
   j. Liquidated damages of ___ per day.
   k. Project meetings.

6. Review drawings and technical specifications

7. Questions that have been raised since bid documents sent out.

8. Open discussion of project and related questions.

9. Project walk-through.

Encl: List of Attendees, Notes from Meeting

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<thead>
<tr>
<th>Name</th>
<th>Organization</th>
<th>Email</th>
<th>Phone #</th>
</tr>
</thead>
<tbody>
<tr>
<td>Todd Cook</td>
<td>MSU</td>
<td><a href="mailto:Todd.Cook1@montana.edu">Todd.Cook1@montana.edu</a></td>
<td>406-974-5480</td>
</tr>
<tr>
<td>Neil Johnson</td>
<td></td>
<td><a href="mailto:Neil.Johnson1@msu.coop">Neil.Johnson1@msu.coop</a></td>
<td>406-987-1234</td>
</tr>
<tr>
<td>Rick Demarinis</td>
<td>CET</td>
<td><a href="mailto:rick.demarinis@cushing.com">rick.demarinis@cushing.com</a></td>
<td>406-431-9458</td>
</tr>
<tr>
<td>Blake Bracher</td>
<td>Venco</td>
<td><a href="mailto:blake.b@vencoinc.com">blake.b@vencoinc.com</a></td>
<td>406-551-1226</td>
</tr>
<tr>
<td>Don BoKma</td>
<td>WPH</td>
<td><a href="mailto:dbokma@willplumb.com">dbokma@willplumb.com</a></td>
<td>406-922-5415</td>
</tr>
<tr>
<td>Loras O'Toole</td>
<td>MSU</td>
<td><a href="mailto:loras@montana.edu">loras@montana.edu</a></td>
<td>994-7092</td>
</tr>
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