



Innovative Solutions for Healthier Environments

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February 14, 2020

Raymore Peculiar R-II School District
Mr. Scott Dobson
Director of Facilities

Location: Stonegate Elementary
900 South Foxridge Drive Raymore, Mo.

Project Title: "Controls Upgrade"

We propose to provide "Parts and Smarts" for the facility listed above. Our pricing and scope are based on our "As Built" drawings and on our conversations with you regarding the upcoming changes.

Our price to complete the Base scope of work listed below is: \$143,562.00. For bonds add: \$2,650.00

General Scope of Work:

- Demo of the existing system. All parts will be retained and turned over to the district. This includes the LGR, all ZN551s serving RTUs, integration and arc-net cabling.
- Installation of a new Automated Logic Controls System. The points list and equipment counts were taken from Web CNTRL and our As Built plans. New or additional items listed were taken from our meeting.
- Provide new As Built drawings and Panel designations.
- Provide labor for Design, software and updated graphics.
- Provide Start-up and commissioning of our system is included.

Our Base price includes providing controls for the following equipment:

- Removal of 5 Temperature Control Panels #s 1 & 3-6. Installation of 2 new enclosures for locations #3 and 4. 1 & 2 and #5 and 6 will be combined. The enclosure for TCP 2 is of sufficient size and construction and will remain in the Server Room to be reused. TCP 1's enclosure can be reused for TCP 5 and 6 which are located in the Electrical Closet across from Classroom 108.
- Installation of 4 new **OFBBC controllers** into the new TCPs. These have the ability to run with arc-net between them or off individual data drops. If the arc-net option is chosen the one located in the Server Room will be tied to the existing data drop to establish a remote connection.
- **19) Lennox RTUs** integration only. We have included labor to install 2 factory devices per unit that may ship loose.
- **19) BAPI** space sensors 1 for each Lennox RTU. Part # BA/LNX-BS3X-ACD-20 plus an adaptor plate and a VC350a voltage converter.
- **20) Automated Logic space sensors** each equipped with **Temp/humidity and CO2**. These will be installed in the existing openings currently being occupied by our averaging sensors.

- **2) New Automated Logic space sensors** each equipped with T/H/CO2. These will be installed in the Lounge and new Office Space by the Computer Lab.
- **6) New wall mounted CO sensors.** 4) to be mounted in hallways or common spaces and 2 in mechanical rooms. Final location will be determined by the customer.
- **1) Make Up Air Unit.** Disconnect the existing hardwired points and provide integration to the new unit. The bac-net card will be supplied with the new equipment.
- **6) Radiant panels-** Points will include start/stop and status. Contactors will be mounted and wired by the jobsite EC hired by the district and the coils will match our control voltage. Locations are in the hallways above the ceiling by Rooms 103, 104, 111, 112, 119, and 120. Points will be wired back to the nearest TCP with available points. No controllers will be mounted above the ceiling.
- Integration to both **domestic water heaters.** Bac-net cards will come with the unit from the factory.
- **1) Unit heater** located in the main mechanical Room which contains a door leading to the exterior. This was identified during the walk thru with Joe Coons. Points will include start/stop/status and a space temp which will be programmed to control the heater and alarm if the space falls outside of the set-point.
- 1) New **outside air temp/humidity sensor-Cabling will be reused.**

The following points will be disconnected from the existing controllers located in TCPs 1-6 then re-terminated onto the new OFBBCs. There field devices and wiring will be reused.

- 2) **Lighting control points-**Exterior and Parking Lot
- 2) Points to monitor the **cooler and freezer.** Sensors will be removed, reused and reinstalled by the district when the boxes are replaced.
- 10) **Exhaust Fans**
- 3) Domestic **Hot Water Pumps** A-C
- 1) Space sensor monitoring the **server room**

Alternate 1 \$8,250.00. For bonds add: \$150.00

- 1) Electric Meter to be installed onto the main service for monitoring. Provide integration to the ALC system.

Alternate 2 \$6,350.00. For bonds add: \$105.00

- 5) Vestibule Heaters-Start/stop/status and a space sensor.

General Clarifications:

- Taxes and bonds are not included.
- Relay, CTs and field devices for exhaust fans, freezers, and pumps will be reused.
- Pricing is valid for a period of 30 days.
- Bac-Net cards will be provided by the equipment manufacturer.
- Controls and wiring for equipment not listed in this proposal are excluded.
- Pricing is based on completing the work during normal business hours and when the building is unoccupied over the summer of 2020.

Respectfully submitted,

Jeffrey Daniels



