227 N. Fourth Street
Geneva, Illinois 60134
630/463-3000
630/463-3020
Fax: 630/463-3029

Community Unit
School District 304

Scott K. Ney
Director, Facility Operations

TO: Dr. Kent Mutchler

FROM: Scott Ney

RE: 2021-22 Johnson Controls, Inc. Direct Digital Control (DDC) Upgrade for Geneva Middle School North

DATE: November 8, 2021

The Facilities Task Force is requesting project approval from Geneva CUSD #304 School Board to upgrade the existing outdated temperature control system (Metasys LON) to the ASHRAE standard Metasys BACnet control. This would be consistent with the other district buildings. Geneva Middle School North would be the last phase to be updated in 2021-22.

I recommend moving forward with the Johnson Controls, Inc. Metasys BACnet Systems proposals for the following:

Geneva Middle School North: $475,873.00

I also recommend including a 5% contingency as recommended by CS2 Engineers. The contingency amount of $23,793.65 brings the total project cost to $499,666.65.

November 4, 2021

Mr. Scott Ney
Geneva CUSD 304
227 N 4th Street
Geneva, IL 60134

Re: Bid Analysis and Contractor Recommendation for:
Upgrade Existing BAS System in Geneva Middle School North

CS2 Job No.: 819-C-4

Dear Mr. Ney:

CS2 Design Group has investigated the question of what limitations a third-party temperature control contractor would have regarding the school district's existing Johnson Controls Incorporated (JCI) Metasys Extended Architecture system.

Per your direction, CS2 has reviewed the project scope dated September 29, 2021 for the Upgrade the Existing Metasys LON Building Automation System in Geneva Middle School North to Metasys BACnet with Mr. Steve Green the district's Account Executive at Johnson Controls, Inc (JCI). Steve said he fully understands project requirements and is comfortable with their bid submission of $475,873.00 to perform the temperature controls upgrade (see attached). Since this is work is an upgrade to the existing proprietary JCI system, the local branch of JCI is the only company that can provide all the proprietary software, software upgrades, patches, software tools, etc. for this system.

CS2 also has experience working with Steve and Johnson Controls and finds no reason not to award to them a contract for this work.

If you have any questions, please do not hesitate to contact me.

Sincerely,

CS2 Design Group, LLC

Steven J. Schafer

Steven J. Schafer, P.E., LEED AP

SJS/eb

Encl. Johnson Controls Proposal

Johnson Controls, Inc.
Controls Group
3007 Malmo Drive
Arlington Heights, Illinois 60005
Tel. 847-364-1500
FAX: 847-364-1536

PROPOSAL

TO: Scott Ney
SD 304 Geneva

DATE: September 29, 2021

PROJECT: SD 304 Geneva
Middle School North

SCOPE OF WORK:

Johnson Controls proposes to upgrade the existing Metasys LON building automation system in Geneva Middle School North to Metasys BACnet. JCI will provide all required labor to install and wire new controllers. JCI will furnish all required hardware and technical labor for programming.

1. Furnish and install (2) network automation engines for support of the new BACnet controllers being installed.
    a. Existing communication trunk to be abandoned in place.
    b. Provide new graphics for the systems being upgraded.

2. Input/out wiring in all control panels will be landed on new terminal blocks. All wiring is existing to remain except where specified to be new in scope of work below.
    a. All non-shielded wiring for AHU return air, discharge air, and mixed air sensor will be replaced.

3. Provide and install BACnet field equipment controllers for (6) air handling units.
    a. Pull new wire for all return air, mixed air, and discharge air sensors that are not currently installed in shielded cable. Applies to AHU-2 only.
    b. Furnish and install new return air, mixed air, and discharge air sensors.
        i. Existing combination temperature/humidity sensors will be replaced with temperature only sensors.
    c. All other sensors/end devices are existing to remain.
        i. JCI recommends changing the M9216 actuators to M9220 actuators. This is not included in the proposal.
    d. AHU-1 hot water coil controllers to be upgraded to IOMs in existing control panel.
        i. Furnish and install new zone sensors for each hot water coil.
    e. JCI will furnish and install new carbon dioxide sensors for AHU-1, 5, and 6
    f. Remove AHU-2 W7100 controller for the condensing units. Use the existing wiring for the CU control to provide a 0-10V control signal for CU modulation.
    g. Provide new sequence of operation to include morning warmup and optimal start.
        i. JCI to review the SOO with SD 304 prior to implementation.
    h. VFD wiring to remain.
        i. VFDs will not be integrated into the automation system

4. Provide and install BACnet VMA controls for (126) VAV boxes.
    a. Replace discharge air sensors and room temperature sensors.
    b. Existing valves will be reused.

5. Furnish and install temperature controls on the existing unit heaters, radiant ceiling panels and heating coils. There are (33) controllers that need to be upgraded to control the equipment listed above.
    a. Existing FCU controllers to be replaced with new field equipment controllers
    b. Existing TEC controllers to be replaced with new TECs.

6. Provide and install controls for hydronic systems and upgrade to BACnet field equipment controllers.
    a. All sensors/end devices to remain.

7. Provide and install IOMs for miscellaneous equipment on the existing Metasys system (exhaust fans, etc).
8. Metasys User Interface (MUI)
    a. Provide the new user interface, allowing users to easily navigate by space from any mobile device, laptop, or computer. The new MUI provide a consistent viewing approach to Metasys regardless of what device is used to access to the MUI.
        i. Provide upgraded graphics in the mobile-optimized interface for better visualization on the go
        ii. Alarm management capabilities to prioritize alarms and quickly pinpoint problems
        iii. Improved scheduling capabilities, including the ability to make bulk scheduling changes, to reduce time on task

Clarifications/Exclusions:
1. This proposal excludes all cutting, patching and painting.
2. This proposal is based upon straight time labor.
3. This proposal excludes new end devices unless stated above.
4. This proposal excludes installation, wiring, and terminating controllers/end devices
5. Any additional equipment found during installation not specified above will be an additional cost.
6. SD 304 to assist in generating space based relationships for graphics.

PRICING
OUR PRICE FOR THE SCOPE OF WORK ABOVE: $475,873.00

Sincerely,

Steve Green
Account Executive
Johnson Controls, Building Efficiency Group
(224)325-6210